Glu Mobile Inc.

Combined Proxy Statement & Annual Report for the 2019 Annual Meeting of Stockholders

glu

April 26, 2019

Dear Stockholders,

2018 was a productive and successful year for Glu and our stockholders. After a year of significant change in processes, structure and culture in 2017, in 2018 we embarked on a journey to solidify our gains as well as our new way of running the business. The results were beyond our expectations and, more importantly, we believe we are now positioned for future growth and further improvements in the years ahead. We have built a solid foundation and proven that we can execute, which we believe bodes well for our future.

Our Growth Titles, *Design Home*, our *Tap Sports Baseball* franchise and *Covet Fashion*, all had meaningful year-over year bookings growth in 2018 and collectively ended the year representing 74% of our bookings. We view this concentration in three game franchises as a strength, not a weakness, as these games are representative of the new focus for Glu – games that grow bookings year-over-year. These titles allowed us to grow annual bookings to $384.6M, up 20% year over year, with no contribution from new launches. This really speaks to the foundational strength of our core business.

Design Home, which is based on the core mechanic of decorating a room and submitting it for voting, grew annual bookings by 61% to $157.7M. In 2019, we will be adding and integrating "meta" game features and systems that we believe should help to grow the franchise even further. These features and systems are designed to deepen the experience and should help to drive greater engagement and stronger long-term retention.

Covet Fashion generated $53.4M in bookings for 2018, which was up from $41.8M in 2017. The team has been enhancing social layers, adding breadth and hosting real-world community events like Covet Con, bringing players together to share their experiences. This title will celebrate its 6th anniversary in 2019 and is going stronger than ever. We are very optimistic about the future for Covet Fashion and love what the team continues to do each and every day to enhance the game experience.

Finally, our *Tap Sports Baseball* franchise had a banner year, growing annual bookings by 57% from the previous year. The team has hit their stride in terms of running live events and creating content that clearly delivers significant value for the audience. We are very excited about the 2019 version, which is off to a fantastic start.

Our mission at Glu is to create and nurture Growth Games that delight our players. The strategy to achieve this is to enable our teams to innovate by building expertise through rapid prototyping, sharing their knowledge and learning from each other. As we seek to develop and publish new Growth Games on top of the existing ones, we believe that we can significantly grow our business in a healthy and predictable way. To that end, we spent many of our development cycles in 2018 preparing for three key product launches in 2019: *WWE Universe*, *Diner DASH Adventures* and *Disney Sorcerer's Arena*. Each game progressed over the course of the year and we enter 2019 with the belief that we will be able to further diversify and strengthen our Growth Game portfolio. We are focused on Growth Games because we believe that they can provide predictable, repeatable and growing revenue streams that allow us to better plan our roadmap as well as meet the needs of the business.

On the logistical side, we completed the relocation of our Crowdstar studio from Burlingame, CA to our state-of-the-art headquarters in San Francisco, CA. The Crowdstar studio is responsible for two of our three Growth Games – *Covet Fashion* and *Design Home*, so having them co-located with two of our other studios is a huge win for Glu. When our teams work with each other on a day-to-day basis, it gives us the ability to foster and focus on learning and sharing, one of our core values and something that helps us create more entertaining and deeper games. We are finding our San Francisco headquarters that we opened in December 2017 to be all we hoped for in terms of being a place where creative people thrive and do their best work. We will continue to provide top gaming talent with the freedom to create and work on great interactive entertainment.

2018 was truly a wonderful year for Glu Mobile. We believe that we have established a solid, growing and predictable core business. As we enter 2019, we believe we are on the path to launch new hit Growth Games that will create even more growth ahead. We are grateful for the support of our stockholders and appreciate the trust you have placed in the management team as we continue our efforts to establish Glu as one of the preeminent mobile game creators.

Sincerely yours,

Nick Earl
President and Chief Executive Officer

These proxy materials contain forward-looking statements, including those statements in this Letter to Stockholders, that are not historical or are described on the page facing the inside back cover of these proxy materials. Forward-looking statements are subject to material risks and uncertainties that could cause actual results to differ materially. Investors should consider important risk factors, which include those listed on the page facing the inside back cover of these proxy materials and those detailed under the caption "Risk Factors" beginning on page 16 of our 2018 Annual Report on Form 10-K included with these proxy materials and the risk factors described in our other SEC filings.

GLU MOBILE INC.

875 Howard Street, Suite 100

San Francisco, California 94103

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

NOTICE IS HEREBY GIVEN that an Annual Meeting of Stockholders of Glu Mobile Inc., a Delaware corporation ("Glu," "we," "our" and similar terms), will be held on Thursday, June 6, 2019, at 10:00 a.m. Pacific Time, at 875 Howard Street, Suite 100, San Francisco, California (the "Annual Meeting"). At the Annual Meeting, our stockholders will be asked to consider and vote upon:

1. The election of three Class III directors to Glu's Board of Directors (the "Board"), each to serve until Glu's annual meeting of stockholders to be held in 2022 and until his or her successor is elected and qualified, or until his or her death, resignation or removal.

2. Approval of the amendment and restatement of our 2007 Equity Incentive Plan to increase the aggregate number of shares of common stock authorized for issuance under the plan by 4,600,000 shares and make certain other changes as described in more detail in the proxy statement.

3. An advisory vote to approve the compensation paid to Glu's named executive officers.

4. The ratification of the appointment of PricewaterhouseCoopers LLP as Glu's independent registered public accounting firm for the year ending December 31, 2019.

5. The transaction of such other business as may properly come before the Annual Meeting or before any adjournment(s) or postponement(s) thereof.

Proposals 1 through 4 are more fully described in the attached proxy statement. We have not received notice of other matters that may be properly brought before the Annual Meeting.

Only stockholders who owned our common stock at the close of business on April 10, 2019 may vote at the Annual Meeting, or at any adjournment or postponement of the meeting.

This year, we are again using the Internet as our primary means of furnishing proxy materials to stockholders. Consequently, most stockholders will not receive paper copies of our proxy materials. We will instead send these stockholders a Notice of Internet Availability of Proxy Materials with instructions for accessing the proxy materials and voting via the Internet. The Notice also provides information on how stockholders can obtain paper copies of our proxy materials if they so choose.

Your vote is important. Whether or not you plan to attend the Annual Meeting, please cast your vote, as instructed in the Notice of Internet Availability of Proxy Materials, over the Internet or by telephone, as promptly as possible. You may also request a paper proxy card to submit your vote by mail, if you prefer. **We encourage you to vote via the Internet**. We believe it is convenient for our stockholders, while significantly lowering the cost of our Annual Meeting and conserving natural resources.

By Order of the Board,

Scott J. Leichtner
Vice President, General Counsel and Corporate Secretary

San Francisco, California

April 26, 2019

IMPORTANT NOTICE REGARDING INTERNET AVAILABILITY OF PROXY MATERIALS:

Glu's combined Proxy Statement for the 2019 Annual Meeting of Stockholders and the Annual Report to Stockholders for the year ended December 31, 2018 are available online at www.proxyvote.com. You will need your control number found on your Notice of Internet Availability to access these materials.

GLU MOBILE INC.

PROXY STATEMENT FOR THE 2019 ANNUAL MEETING OF STOCKHOLDERS

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The information contained in the Compensation Committee Report and the Audit Committee Report of this proxy statement shall not be deemed to be "soliciting material," to be "filed" with the Securities and Exchange Commission ("SEC"), or to be subject to Regulation 14A or Regulation 14C (other than as provided in Item 407 of Regulation S-K) or to the liabilities of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and shall not be deemed to be incorporated by reference in future filings with the SEC except to the extent that we specifically incorporate it by reference into a document filed under the Securities Act of 1933, as amended, or the Exchange Act.

GLU MOBILE INC.

875 Howard Street, Suite 100

San Francisco, California 94103

PROXY STATEMENT FOR THE
2019 ANNUAL MEETING OF STOCKHOLDERS

INFORMATION ABOUT THE MEETING, MEETING MATERIALS, VOTING AND PROXIES

Date, Time and Place of Meeting

The Board of Directors (the "Board") of Glu Mobile Inc., a Delaware corporation ("Glu," "we," "our" and similar terms), is asking for your proxy for use at the 2019 Annual Meeting of Stockholders (the "Annual Meeting") and at any adjournments or postponements of the meeting. We are holding the meeting on Thursday, June 6, 2019, at 10:00 a.m. Pacific Time, at our principal executive offices at 875 Howard Street, Suite 100, San Francisco, California. We first released this proxy statement to our stockholders on or about April 26, 2019.

Internet Availability of Proxy Materials

We are pleased to again furnish proxy materials to our stockholders on the Internet, rather than mailing printed copies to each stockholder. If you received a Notice of Internet Availability of Proxy Materials ("Notice of Internet Availability") by mail, you will not receive a printed copy of the proxy materials unless you request one. Instead, the Notice of Internet Availability provides instructions for accessing and reviewing the proxy materials and casting your vote on the Internet. If you received a Notice of Internet Availability by mail and would like to receive a printed copy of our proxy materials, please follow the instructions included in the Notice of Internet Availability. We encourage stockholders to take advantage of the electronic availability of the proxy materials to help reduce the expense and environmental impact of the Annual Meeting. We anticipate that the Notice of Internet Availability will be mailed to stockholders on or about April 26, 2019.

Record Date; Outstanding Shares; Quorum

Only holders of record of our common stock at the close of business on April 10, 2019 (the "Record Date") will be entitled to notice of and to vote at the Annual Meeting. As of the close of business on the Record Date, there were 145,180,574 shares of our common stock outstanding and entitled to vote, held of record by approximately 47 stockholders and held beneficially by thousands of additional stockholders.

Pursuant to our Amended and Restated Bylaws (our "Bylaws"), a majority of the outstanding shares of common stock, present in person or by proxy, will constitute a quorum at the Annual Meeting. We must have a quorum to transact business. Each stockholder is entitled to one vote for each share of common stock held as of the Record Date. For ten days before the Annual Meeting, a complete list of stockholders entitled to vote at the Annual Meeting will be available for examination by any stockholder, for any purpose germane to the meeting, during ordinary business hours at our principal executive offices at 875 Howard Street, Suite 100, San Francisco, California 94103.

Voting Via the Internet, by Telephone or By Mail

Holders of shares of our common stock whose shares are registered in their own name with our transfer agent, American Stock Transfer and Trust Company, are record holders. As an alternative to voting in person at the Annual Meeting, record holders may vote via the Internet, by telephone or, for those stockholders who receive a paper proxy card in the mail, by mailing a completed proxy card.

For those record holders who receive a paper proxy card, instructions for voting via the Internet, telephone or by mail are set forth on the proxy card. Stockholders who elect to vote by mail should sign and mail the proxy card in the addressed, postage paid envelope that was enclosed with the proxy materials, and their shares will be voted at the Annual

Meeting in the manner they direct. All properly executed, returned and unrevoked proxies will be voted in accordance with the instructions indicated on the proxy card.

For those stockholders who receive a Notice of Internet Availability, the notice provides information on how to access the proxy and contains instructions on how to vote via the Internet or by telephone. If you received a Notice of Internet Availability, you can request a printed copy of your proxy materials by following the instructions contained in the notice. Stockholders who have elected to receive the 2019 Proxy Statement and Annual Report to Stockholders for the year ending December 31, 2018 electronically will receive an email on or about April 26, 2019 with information on how to access stockholder information and instructions for voting.

Signed but unmarked proxies will be voted FOR each director nominee listed on the proxy card, FOR the approval of the amendment and restatement of our 2007 Equity Incentive Plan, FOR the compensation of our Named Executive Officers (defined in "Compensation Discussion and Analysis" below), and FOR the ratification of our independent registered public accounting firm for the year ending December 31, 2019. The Board does not know of, and does not intend to bring, any business before the Annual Meeting other than that referred to in this proxy statement and specified in the Notice of Annual Meeting. As to any other business that may properly come before the Annual Meeting, including any motion made for adjournment of the Annual Meeting (including for purposes of soliciting additional votes), signing and returning the proxy card will confer discretionary authority on the proxies (Nick Earl and Eric R. Ludwig, who have been designated by the Board) to vote all shares covered by the proxy card in their discretion.

Revoking a Proxy

Any stockholder who has given a proxy may revoke it at any time before it is exercised at the Annual Meeting by (1) filing a written notice of revocation with, or delivering a duly executed proxy bearing a later date to, our Corporate Secretary at 875 Howard Street, Suite 100, San Francisco, California 94103 or (2) attending the Annual Meeting and voting in person (although attending the Annual Meeting will not, by itself, revoke a proxy).

Votes Required

Director elections (Proposal No. 1) will be determined by a plurality of shares of common stock present in person or represented by proxy at the Annual Meeting and entitled to vote on such proposal. Approval of each of the proposals to approve the amendment and restatement of our 2007 Equity Incentive Plan (Proposal No. 2), the advisory vote on the compensation of our Named Executive Officers (Proposal No. 3) and the ratification of the selection of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2019 (Proposal No. 4) requires the affirmative vote of a majority of the shares of common stock present in person or represented by proxy at the Annual Meeting and voted for or against the matter.

Effect of Abstentions

If a signed proxy is returned and the stockholder has specifically abstained from voting on any matter, the shares represented by such proxy will be considered present at the Annual Meeting for purposes of determining a quorum, but will not be considered to have been voted for or against such matter. As such, an abstention will have no effect on any of the proposals.

Effect of "Broker Non-Votes"

Brokers, banks or other agents holding shares in street name have discretionary authority to vote shares held for a beneficial owner on "routine" matters, such as the ratification of our independent registered public accounting firm, without instructions from the beneficial owner of those shares. However, absent instructions from the beneficial owner of such shares, brokers, banks or other agents holding shares in street name do not have discretionary authority to vote shares held for a beneficial owner on certain "non-routine" matters, such as Proposals No. 1 through No. 3.

If a signed proxy is returned by a broker, bank or other agent holding shares in street name that indicates that the broker does not have discretionary authority as to certain shares to vote on a proposal ("broker non-votes"), such shares

will be considered present at the Annual Meeting for purposes of determining a quorum on all proposals, but will not be entitled to vote on and thus will have no effect on the outcome of any proposal.

Solicitation of Proxies and Expenses

We will bear the cost of soliciting proxies from our stockholders. Our directors, officers and employees, without additional compensation, may solicit proxies by mail, telephone, letter, facsimile, electronically or in person. Following the original mailing of the proxies and other soliciting materials, we will request that brokers, custodians, nominees and other record holders forward copies of the proxy and other soliciting materials to persons for whom they hold shares of common stock and request authority for the exercise of proxies. In such cases, we will reimburse such record holders for their reasonable expenses incurred for forwarding such materials.

Voting Results

The preliminary voting results will be announced at the Annual Meeting. The final voting results will be tallied by our Inspector of Elections and published in a Current Report on Form 8-K to be filed with the SEC within four business days of the Annual Meeting.

Delivery of Voting Materials to Stockholders Sharing an Address

To reduce the expense of delivering duplicate materials to stockholders sharing the same address, we have adopted a procedure approved by the SEC called "householding." Under this procedure, certain stockholders of record who have the same address and last name will receive only one copy of the proxy materials sent to stockholders until such time as one or more of these stockholders notifies us that they wish to continue receiving individual copies. This procedure will reduce duplicate mailings and save printing costs and postage fees, as well as natural resources.

Stockholders who currently receive multiple copies of the proxy statement at their address and would like to request "householding" of their communications should contact their broker.

How to Obtain a Separate Set of Voting Materials

Stockholders who received a householded mailing this year, and would like to have additional copies of the proxy materials mailed to them, may submit their request to Investor Relations, Glu Mobile Inc., 875 Howard Street, Suite 100, San Francisco, California 94103 or by email to IR@glu.com. Stockholders may also contact us at the address or email above if they received multiple copies of the Annual Meeting materials and would prefer to receive a single copy in the future. Stockholders who would like to opt out of householding for future mailings may send a written request to Investor Relations at the above physical address or email address.

Annual Report on Form 10-K

A copy of our Annual Report on Form 10-K for the year ended December 31, 2018, including the financial statements, list of exhibits and any exhibit specifically requested, is available without charge upon written request to: Corporate Secretary, Glu Mobile Inc., 875 Howard Street, Suite 100, San Francisco, California 94103.

PROPOSAL NO. 1 –
ELECTION OF CLASS III DIRECTORS

Our Board currently consists of ten directors. Our Restated Certificate of Incorporation and Bylaws provide for a classified Board, divided into three classes. At each annual meeting of stockholders, successors to the class of directors whose term expires at that annual meeting will be elected for a term to expire at the third succeeding annual meeting. The individuals so elected will serve until their successors are elected and qualified.

This year, the terms of our three Class III directors, Niccolo de Masi, Greg Brandeau and Gabrielle Toledano, will expire at the Annual Meeting.

The Board has nominated Niccolo de Masi, Greg Brandeau and Gabrielle Toledano to serve as Class III directors, each for a three-year term that is expected to expire at our annual meeting in 2022 or until his or her earlier resignation or removal (the "Board's Nominees"). Our Nominating and Governance Committee reviewed the qualifications of the Board's Nominees and unanimously recommended to the Board that they be submitted to stockholders for election. You can find the principal occupation and other information about the Board's Nominees, as well as other Board members, below.

Four of our continuing directors are Class I directors, whose terms will expire at our 2020 annual meeting, and three of our continuing directors are Class II directors, whose terms will expire at our 2021 annual meeting. On March 4, 2019, the Board increased its size from nine to ten directors and appointed Darla Anderson to the Board as a Class I director.

The election of our Class III directors will be determined by the three nominees receiving the greatest number of votes from shares eligible to vote on the matter. Unless a stockholder signing a proxy withholds authority to vote for one or more of the Board's Nominees in the manner described on the proxy card, each proxy received will be voted for the election of each of the Board's Nominees. If any nominee is unable or declines to serve as a director at the time of the Annual Meeting, the proxies will be voted for the nominee or nominees who shall be designated by the present Board to fill the vacancy. We are not aware that any of the Board's Nominees will be unable or will decline to serve as a director.

There are no family relationships between any of our directors, nominees or executive officers.

On April 29, 2015, Glu agreed to issue in a private placement offering to a wholly-owned subsidiary of Tencent Holdings Limited ("Tencent") an aggregate of 21,000,000 shares of Glu's common stock at a purchase price of $6.00 per share, for aggregate proceeds of $126 million (the "Offering"). In connection with the Offering, Glu and Tencent became parties to a voting and standstill agreement (the "Voting Agreement"), pursuant to which Glu agreed to cause a representative of Tencent to be elected and appointed as a new member of the Board as a Class I director, and to subsequently nominate for future director elections a designee of Tencent on the Board. Benjamin Feder has served as the Tencent representative on the Board since January 26, 2017.

Tencent will continue to have a right to appoint one member to the Board so long as (1) Tencent and its controlled affiliates, continue to hold a net long ownership position of at least 5% of Glu's outstanding shares and (2) Tencent or Tencent's designee to the Board does not materially breach any material obligation to Glu under the Voting Agreement and a separate confidentiality agreement between the parties related to confidentiality and use limitations for information Mr. Feder (or a subsequent Tencent designee to the Board) obtains by virtue of serving on the Board, which breach is not cured within 30 days following Tencent's receipt of written notice of such breach. Tencent, through its controlled affiliates, held 19.42% of Glu's outstanding shares as of April 10, 2019. Other than the appointment of Mr. Feder by Tencent, there are no arrangements or understandings between any director, nominee or executive officer and any other person pursuant to which he or she has been or will be selected as a director and/or executive officer.

The Board recommends that stockholders vote "FOR" the election of Niccolo de Masi, Greg Brandeau and Gabrielle Toledano as Class III Directors.

Information Regarding Our Nominees and Directors

Nominees for Class III Directors (whose terms expire at the Annual Meeting)

Niccolo de Masi (Age 38)
President (Products & Solutions) and Chief Innovation Officer, Resideo Technologies, Inc.
Executive Chairman, Glu Mobile Inc.

Mr. de Masi has served as our Executive Chairman since November 2016, President and Chief Executive Officer from January 2010 to November 2016, as one of our directors since January 2010, as interim Chairman of our board of directors from July 2014 to December 2014 and as the Chairman of our board of directors since December 2014. Since February 2019, Mr. de Masi has served as the President of the Products and Solutions segment and Chief Innovation Officer of Resideo Technologies, Inc., a provider of residential comfort and security solutions. Previously, Mr. de Masi served as the President of Essential, a mobile phone hardware company, from November 2016 to October 2018. Prior to joining Glu, Mr. de Masi was the Chief Executive Officer and President of Hands-On Mobile, a mobile technology company and developer and publisher of mobile entertainment, from October 2009 to December 2009, and previously served as the President of Hands-On Mobile from March 2008 to October 2009. Prior to joining Hands-On Mobile, Mr. de Masi was the Chief Executive Officer of Monstermob Group PLC, a mobile entertainment company, from June 2006 to February 2007. Mr. de Masi joined Monstermob in 2004 and, prior to becoming its Chief Executive Officer, held positions as its Managing Director and as its Chief Operating Officer, where he was responsible for formulating and implementing Monstermob's growth and product strategy. Prior to joining Monstermob, Mr. de Masi worked in a variety of corporate finance and operational roles within the technology, media and telecommunications (TMT) sector, beginning his career with JP Morgan on both the TMT debt capital markets and mergers and acquisitions teams in London. He has also worked as a physicist with Siemens Solar and within the Strategic Planning and Development divisions of Technicolor. Mr. de Masi has served as a director of Resideo since October 2018 and previously served as a director of Xura, Inc. from November 2015 until its sale in August 2016. Mr. de Masi holds an M.A. degree in physics and an MSci. degree in electronic engineering—both from Cambridge University.

Mr. de Masi's successful tenure as our President and Chief Executive Officer and current position as Executive Chairman, which gives him unique insights into our challenges, opportunities and operations, and his strong background of senior management and executive experience in the mobile gaming and content sectors led the Board to conclude that he should serve as a director.

Greg Brandeau (Age 57)
Managing Partner, Paradox Strategies

Mr. Brandeau has served as one of our directors since August 2015. Since May 2014, Mr. Brandeau has served as Managing Partner of Paradox Strategies (fka Slices of Genius), a consulting organization founded by Mr. Brandeau. He served as President and Chief Operating Officer of Maker Media, Inc., a global platform for connecting makers with each other, with products and services, and with partner organizations, from September 2013 to April 2014. Prior to Maker Media, Mr. Brandeau served as Chief Technology Officer of The Walt Disney Studios, a motion picture studio, from November 2009 to April 2012. Prior to that, he served as Senior Vice President of Technology for Pixar Animation Studios, a computer animation studio, from February 2004 to November 2009. Mr. Brandeau is an Advisory Board Member for Infrascale, Inc. and the California Institute for Telecommunications and Information Technology, and a member of the Visiting Committee for the Humanities at the Massachusetts Institute of Technology. In addition to his prior technology management roles at Maker Media, The Walt Disney Studios and Pixar, he has served in various technology management roles for Walt Disney Animation Studios, Perlegen Sciences Inc., NeXT Computer, Inc. and Mountain Network Solutions, Inc. He is the co-author of *Collective Genius: The Art and Practice of Leading Innovation*. Mr. Brandeau holds B.S and M.S degrees in electronic engineering from the Massachusetts Institute of Technology, and an M.B.A. from Duke University.

Mr. Brandeau's strong background in technology management, particularly through his experiences in senior technology management roles at dynamic and innovative companies like Disney, Pixar, and NeXT Computer, led the Board to conclude that he should serve as a director.

Gabrielle Toledano (Age 52)
Executive in Residence, Comcast Ventures

Ms. Toledano has served as one of our directors since December 2017. Since January 2019, Ms. Toledano has served as an Executive in Residence for Comcast Ventures, a corporate venture capital firm. From May 2017 to October 2018, Ms. Toledano served as the Chief People Officer of Tesla Inc., a manufacturer of electric vehicles and energy storage products. From December 2016 to May 2017, Ms. Toledano served as an Advisor to, and from February 2006 to December 2016 as the Chief Talent Officer and Executive Vice President at, Electronic Arts Inc., an interactive entertainment software company. From February 2017 to March 2017, she served as a consultant to Slack Technologies, Inc., a software company. Prior to joining Electronic Arts, from 2002 to 2006 Ms. Toledano served as Chief Human Resources Officer at Siebel Systems, Inc., a supplier of customer software solutions and services. From 1991 to 2002, Ms. Toledano served in various human resources positions at Microsoft Corporation and Oracle Corporation. Ms. Toledano has served as a director of Namely, Inc. since February 2019 and Visier Inc. since May 2014, and previously served as a director of TalentSky from January 2015 to January 2019, Jhana from November 2016 to July 2017, Jive Software from November 2015 to June 2017, Big City Mountaineers from May 2011 to September 2014, and the Society of Human Resource Management from February 2009 to July 2011. In addition, Ms. Toledano has advised several technology companies in the Human Capital Management space, including Collective Health, a healthcare platform company, Espresa, an employee programs automation platform provider, and Betterworks, an enterprise collaboration platform provider. Ms. Toledano holds a B.A. in modern thought and literature and an M.A. in education from Stanford University.

Ms. Toledano's strong background in gaming and technology management, including her extensive experience as an executive in the Human Resources field of various public companies, and her broad experience as a director of technology companies led the Board to conclude that she should serve as a director.

Continuing Class I Directors (whose terms expire at the 2020 Annual Meeting of Stockholders)

Darla Anderson (Age 59)
Movie Producer

Ms. Anderson has served as one of our directors since March 2019. In January 2019, Ms. Anderson signed a multi-year development and production deal with Netflix to develop and produce new animated and live-action projects. From 1993 until March 2018, Ms. Anderson held various positions at Pixar Animation Studios, a computer animation film studio, most recently as a Producer. While at Pixar, Ms. Anderson contributed to a number of Pixar's hit movies, including *A Bug's Life*, *Monsters, Inc.*, *Cars* and *Toy Story 3*, and she produced *Coco* for which she earned an Academy Award for Best Animated Feature. Prior to joining Pixar, she served as the Executive Producer of the commercial division of Angel Studios, a video game developer. Since July 2008, Ms. Anderson has served on the Producers Council Board of the Producers Guild of America. Ms. Anderson holds a B.A. in art from San Diego State University.

Ms. Anderson's proven track record in successfully producing high-caliber entertainment projects, her expertise in developing engaging and unique experiences to delight audiences and her ability to provide guidance to our creative leaders led the Board to conclude that she should serve as a director.

Ben Feder (Age 55)
President, International Partnerships (North America) of Tencent Holdings Limited

Mr. Feder has served as one of our directors since January 2017 and was appointed to our board by Tencent. Since October 2016, Mr. Feder has served as President, International Partnerships (North America) of Tencent, which is a leading Internet and gaming company in China. From 2001 to October 2016, Mr. Feder served in various positions at ZelnickMedia Corporation., a media investment and management firm, including as co-founder, partner and vice chairman. From April 2007 to April 2010, Mr. Feder served as a member of the board of directors of Take Two Interactive Software Inc., or Take Two, a leading developer and publisher of video games, and from April 2007 to December 2010 he also served as Chief Executive Officer of Take Two. Prior to co-founding ZelnickMedia in 2001, Mr. Feder was Chief Executive Officer of MessageClick, Inc., a leading provider of voice messaging technology for next-generation telephone

networks, and held a senior position with News Corporation. Mr. Feder received a B.A. in history from Columbia University and an M.B.A. from the Harvard Business School.

Mr. Feder's deep knowledge of the gaming industry, including his leadership experience at both Tencent and Take Two, led the Board to conclude that he should serve as a director.

Hany M. Nada (Age 50)
Co-Founder and Partner, ACME Capital

Mr. Nada has served as one of our directors since April 2005. Mr. Nada co-founded ACME Capital, a venture capital firm, in January 2019 and serves as one of the firm's partners. Prior to co-founding ACME Capital, Mr. Nada co-founded GGV Capital (formerly Granite Global Ventures) in 2000 and served as a Managing Director until October 2016 and as a Venture Partner from November 2016 until October 2018. Prior to co-founding GGV Capital, Mr. Nada served as Managing Director and Senior Research Analyst at Piper Jaffray & Co., specializing in Internet software and e-infrastructure. Mr. Nada serves on the boards of directors of several privately held companies, including DraftKings, Inc., Phoenix Labs, and WildTangent, Inc, and was previously on the board of directors of Vocera Communications, Inc., a publicly traded company. In addition, Mr. Nada is an observer on the board of directors of Houzz, Inc. Mr. Nada holds a B.S. in economics and a B.A. in political science from the University of Minnesota.

Mr. Nada's experience in the venture capital industry, which includes a focus on software, wireless applications, and multimedia, his expertise and insights into high technology companies that he gained during his tenure as Managing Director and Senior Research Analyst at Piper Jaffray & Co., his experience as a director of high technology companies and his relationship with entities owning a significant percentage of our common stock led the Board to conclude that he should serve as a director.

Benjamin T. Smith, IV (Age 51)
Senior Partner, A.T. Kearney

Mr. Smith has served as one of our directors since November 2010, interim co-Lead Director from July 2014 to December 2014 and Lead Director since April 2016. Mr. Smith has been a Senior Partner at the strategic consulting firm, A.T. Kearney, since October 2016 and prior to that served as the Chief Executive Officer of Wanderful Media, a new media shopping company, from April 2012 to June 2016. Prior to joining Wanderful Media, Mr. Smith served as an independent director of and advisor to technology companies, including in his role as a Venture Partner at Accelerator Venture Capital, where he has served since December 2011. Previously, Mr. Smith served as the Chairman and Chief Executive Officer of WYBS, Inc. d/b/a MerchantCircle, a leading social network of small business owners, from when he co-founded the company in August 2004 until the company was sold to Reply.com in May 2011. Mr. Smith served as the Senior Vice President of Corporate Development and a strategic advisor to Borland Software Corporation, a vendor of Open Application Lifecycle Management solutions, from March 2005 to October 2007 and the Chief Executive Officer of, and an advisor to, CodeGear, a division of Borland, from November 2006 to October 2007. Mr. Smith previously co-founded Spoke Software, Inc., a provider of social networking software that connects business professionals, in 2002, and served as its Chief Executive Officer from 2002 to 2004. Mr. Smith also served the Bush Administration as the Senior Advisor for Strategy and Planning to the Secretary of Transportation from 2001 to 2002. Prior to then, Mr. Smith was a Vice President and Partner at A.T. Kearney, and Vice President, Venture Development at Electronic Data Systems Corporation (EDS) after A.T. Kearney was purchased by EDS. In addition, Mr. Smith serves as an advisor or investor in several other private companies and provides advisory services to a number of high-technology companies. He also advised and led the board of directors of Tapulous Inc., a mobile social gaming company, from its founding in 2009 until its sale to The Walt Disney Company in July 2010. Mr. Smith holds a B.S. in mechanical engineering from the University of California at Davis and an M.B.A. from Carnegie Mellon University's Tepper School of Business.

Mr. Smith's extensive operating and investment experience in the social networking and gaming industries, which includes having co-founded two social networking companies, and his experience as a director of and strategic consultant to high-technology companies led the Board to conclude that he should serve as a director.

Continuing Class II Directors (whose terms expire at the 2021 Annual Meeting of Stockholders)

Eric R. Ball (Age 55)
General Partner, Impact Venture Capital

Dr. Ball has served as one of our directors since October 2013. Dr. Ball serves as General Partner of Impact Venture Capital, a technology investment firm, a position he has held since August 2016. Before joining Impact Venture Capital, Dr. Ball was Chief Financial Officer of C3, Inc. (doing business as C3 IoT), a full-stack development platform for the "Internet of Things," from August 2015 to May 2016. Prior to then, Dr. Ball served as Senior Vice President and Treasurer of Oracle Corporation, a global computer technology company, from May 2005 to September 2015. Before joining Oracle, Dr. Ball worked in a variety of headquarters and operating finance roles at Flextronics, Inc., Cisco Systems, Inc., Avery Dennison, and AT&T Inc. Dr. Ball serves as an advisor to Kyriba Corporation and SineWave Ventures, and since March 2017 as a board member to Answers Corporation. Dr. Ball holds an B.A. in economics from the University of Michigan, an M.A in economics/finance and an M.B.A. from the University of Rochester and a Ph.D. in management from the Drucker-Ito School of Management.

Dr. Ball's more than 20 years of experience in finance and operations with technology companies, particularly those larger than Glu, led the Board to conclude that he should serve as a director. In addition, our Board's determination in light of his experience as a finance executive and director overseeing or assessing the performance of companies and public accountants, that Dr. Ball is an "audit committee financial expert" lends further support to his financial acumen and qualifications for serving on our Board.

Nick Earl (Age 53)
President and Chief Executive Officer, Glu Mobile Inc.

Mr. Earl has served as our President and Chief Executive Officer since November 2016 and prior to that was our President of Global Studios from November 2015 to November 2016. Before joining us, from November 2014 to September 2015, Mr. Earl served as President of Worldwide Studios at Kabam. From September 2001 to October 2014, Mr. Earl served in several management positions at Electronic Arts, including most recently as Senior Vice President & General Manager of EA Mobile. From 1999 to 2001, Mr. Earl served as VP Product Development at Eidos. From April 1993 to March 1999, Mr. Earl served as an executive producer / GM at The 3DO Company. Mr. Earl holds a B.A. in economics from the University of California at Berkeley.

Mr. Earl's experience as our President and Chief Executive Officer, which gives him unique insights into our challenges, opportunities and operations, and his strong background of senior management in the mobile gaming sector led the Board to conclude that he should serve as a director.

Ann Mather (Age 59)
Independent Director of and Advisor to Technology and Media Companies

Ms. Mather has served as one of our directors since September 2005. She has also served as a member of the board of directors of: Alphabet Inc. since November 2005 and serves as chair of its audit committee; Netflix, Inc. since July 2010 and serves as chair of its audit committee; MGM Holdings Inc. since December 2010 and serves as lead independent director; Shutterfly, Inc. since May 2013 and serves on its audit committee; Arista Networks, Inc. since July 2013 and serves as chair of its audit committee and Airbnb, Inc. since August 2018. Ms. Mather has also been an independent trustee to the Dodge & Cox Funds board of trustees since May 2011. During the last five years, she also served as a director of MoneyGram International, Inc. from May 2010 to May 2013 and Solazyme, Inc. from April 2011 to November 2014. From 1999 to 2004, Ms. Mather was Executive Vice President and Chief Financial Officer of Pixar, Inc. Prior to her service at Pixar, Ms. Mather was Executive Vice President and Chief Financial Officer of Village Roadshow Pictures, the film production division of Village Roadshow Limited. Ms. Mather holds an M.A. in geography from Cambridge University in England.

Ms. Mather's experience as the chief financial officer of two companies, including a publicly traded company, her international experience gained through several executive positions in Europe and her experience as a director of high technology companies led the Board to conclude that she should serve as a director.

CORPORATE GOVERNANCE

Our Board has adopted Corporate Governance Principles that are designed to assist the Board in observing practices and procedures that serve the best interests of Glu and our stockholders. The Nominating and Governance Committee oversees these Corporate Governance Principles and periodically makes recommendations to the Board regarding any changes. These Corporate Governance Principles address, among other things, our policy on succession planning and senior leadership development, retirement, Board performance evaluations and committee structure.

We maintain a corporate governance page on our company website that includes key information about corporate governance matters, including copies of our Corporate Governance Principles, our Code of Business Conduct and Ethics for all employees, including our senior executive and financial officers, and the charter for each Board committee. The link to this corporate governance page can be found at www.glu.com/investors.

Board Responsibilities and Leadership Structure

Our Board oversees management's performance on behalf of our stockholders. The Board's primary responsibilities are to (1) select, oversee and determine compensation for our President and Chief Executive Officer who, with senior management, manages our day-to-day operations, (2) monitor management's performance to assess whether we are operating in an effective, efficient and ethical manner to create value for our stockholders and (3) periodically review our long-term plans, business initiatives, capital projects and budget matters.

The Board and its committees meet throughout the year on a set schedule, and also hold special meetings and act by written consent from time to time as appropriate. The Board held four meetings during 2018 and acted by unanimous written consent two times. The independent directors meet without management present at regularly scheduled executive sessions, and in 2018 the independent directors held executive sessions at a total of four Board meetings. The Board has delegated certain responsibilities and authority to the committees described below. Committees report regularly to the full Board on their activities and actions.

The Board designated Mr. de Masi as its interim Chairman in July 2014, as its Chairman in December 2014 and as its Executive Chairman in November 2016. The Board believes that it should maintain flexibility to select its Chairman and board leadership structure from time to time. The Board believes that it is currently in the best interest of Glu and its stockholders for Mr. de Masi to serve as Executive Chairman in light of his knowledge of our company and our industry, his previous role as Chief Executive Officer, his relationships with many of our celebrity licensors, his experience executing successful strategic acquisitions and investments, and his ability to support Mr. Earl in his role as the chief executive officer.

The Board has also established a Lead Director position, which the Board believes provides an appropriate balance in our leadership. In April 2016, the Nominating and Governance Committee recommended to the Board the appointment of Mr. Smith as the Lead Director which was subsequently approved by the Board.

The role given to the Lead Director helps ensure a strong independent and active Board. The Lead Director presides over executive sessions of non-management or independent directors, serves as a liaison between the Executive Chairman and the independent directors, is available, under appropriate circumstances, for consultation and direct communication with stockholders and performs such other functions and responsibilities as requested by the Board from time to time. The Lead Director will also encourage direct dialogue between all directors (particularly those with dissenting views) and management.

Insider Trading, Hedging, Pledging and Short-Selling Policies

Our Insider Trading Policy prohibits our directors, officers, employees and contractors from purchasing or selling Glu securities while in possession of material, non-public information. In order to ensure that trading is conducted only at times when our directors, officers and certain employees with regular access to confidential information about Glu or our business are not aware of material nonpublic information about us, our Insider Trading Policy requires that each such person pre-clear any proposed trades of our stock with our General Counsel.

In addition, our Insider Trading Policy prohibits all directors, officers and employees from short-selling Glu stock, or engaging in hedging transactions, such as where they may acquire, sell, or trade in any interest or position relating to the future price of Glu securities, such as a put option or a call option. These policies were established in part because there is often a conflict of interest involved when an employee bets against our performance. Our officers and directors

are also prohibited from pledging any Glu securities as collateral in a margin account or for a loan unless such pledge (or any modification of an existing pledge) is approved by Glu's Insider Trading Compliance Officer and the Nominating and Governance Committee.

Role of the Board in Risk Oversight

One of our Board's key functions is providing oversight of our risk management process. The Board does not have a standing risk management committee but rather administers this oversight function directly through the Board as a whole, as well as through the Board's standing committees that each address risks inherent in their respective areas of oversight. In particular, our Audit Committee has the responsibility to consider and discuss our major financial risk exposures and the steps our management has taken to monitor and control these exposures, our Compensation Committee assesses and monitors whether any of our compensation policies and programs have the potential to encourage excessive risk-taking, our Nominating and Governance Committee monitors our major legal compliance risk exposures and our program for promoting and monitoring compliance with applicable legal and regulatory requirements, and our Board is responsible for monitoring and assessing strategic risk exposure and other risks not covered by our committees.

The full Board (or the appropriate committee in the case of risks that are under the purview of a particular committee) receives reports on the risks we face from our Executive Chairman, Chief Executive Officer or other members of management to enable us to understand our risk identification, risk management and risk mitigation strategies regarding strategic and operational risks, including but not limited to cybersecurity risk. When a committee receives the report, the chairman of that committee reports on the discussion to the full Board at the next Board meeting. However, the committee chairs are responsible for reporting findings regarding material risk exposures to the Board as quickly as possible. We believe that our Board's leadership structure supports effective risk management because it allows our Lead Director and the independent directors on our committees to exercise oversight over management.

Director Independence

Our Board currently includes seven independent directors, two of whom are standing for election at the Annual Meeting. To be considered independent under the rules of The Nasdaq Stock Market, referred to as the Nasdaq listing rules, a director may not be employed by Glu or engage in certain types of business dealings with us. In addition, as required by the Nasdaq listing rules, the Board has made a determination as to each independent director currently serving on the Board or who served on the Board during 2018 that no relationship exists which, in the opinion of the Board, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In making these determinations, the Board reviewed and discussed information provided by the directors and by our management with regard to each director's business and personal activities as they relate to Glu and our management. In assessing director independence under the Nasdaq listing rules, the Nominating and Governance Committee and the full Board reviewed relevant transactions, relationships and arrangements that may affect the independence of our Board members, including that:

- Mr. Feder is an officer of Tencent, and wholly-owned subsidiaries of Tencent own in the aggregate, approximately 19.42% of our outstanding capital stock; and
- Ms. Mather was during 2018, and currently is, a director of Alphabet Inc., the parent company of Google Inc., with which we conduct business in the ordinary course and revenues from which represented 31.3% of our total revenues in 2018.

After reviewing these transactions and other relevant standards, the Board determined that each of Ms. Anderson, Dr. Ball, Mr. Brandeau, Ms. Mather, Mr. Nada, Mr. Smith and Ms. Toledano is an independent director.

Attendance at Board, Committee and Annual Stockholders Meetings

The Board expects that each director will prepare for, attend and participate in all Board and applicable committee meetings and that each Board member will see that other commitments do not materially interfere with his or her service on the Board. Our Corporate Governance Principles provide that non-employee directors may not serve on the boards of more than five public companies, and our Chief Executive Officer may not serve on the boards of more than two public companies, in each case including Glu.

No director attended fewer than 75% of the aggregate number of meetings of the Board and the committees on which he or she served in 2018. None of our directors attended the 2018 Annual Meeting of Stockholders. Under our Corporate Governance Principles, all directors are encouraged to attend the annual meetings of our stockholders.

Board Committees and Charters

The Board currently has a standing Audit Committee, Compensation Committee, Nominating and Governance Committee and Strategy Committee. The members of each committee are appointed by the Board based on recommendations of the Nominating and Governance Committee. Each committee member of the Audit Committee, the Compensation Committee and the Nominating and Governance Committee is an independent director as determined by the Board in accordance with the Nasdaq listing rules. On the Strategy Committee, each of Messrs. de Masi, Earl and Feder are considered non-independent under the Nasdaq listing. Each of the Audit Committee, Compensation Committee and Nominating and Governance Committee has a charter and annually reviews its charter and makes recommendations to our Board for revision to reflect changes in laws and regulations and evolving best practices. Copies of each charter can be found on our website at http://www.glu.com/investors (by clicking on the "corporate governance" link). Current committee members are as follows:

Director	Audit Committee	Compensation Committee	Nominating and Governance Committee	Strategy Committee
Darla Anderson	—	—	—	—
Eric R. Ball	Chair	—	—	—
Greg Brandeau	—	Member	Chair	—
Niccolo M. de Masi	—	—	—	Member
Nick Earl	—	—	—	Member
Ben Feder	—	—	—	Member
Ann Mather	—	—	Member	—
Hany M. Nada	Member	Member	—	Member
Benjamin T. Smith, IV	Member	Member	Member	Chair
Gabrielle Toledano	—	Chair	—	—

Audit Committee

The Audit Committee currently consists of three of our outside directors, Dr. Ball, who is the committee chair, and Messrs. Nada and Smith. The composition of our Audit Committee meets the requirements for independence under the current Nasdaq listing rules and rules and regulations of the SEC. Each member of our Audit Committee is financially literate. Our Board has determined that Dr. Ball is an "audit committee financial expert" as defined in Item 407(d) of Regulation S-K. The Audit Committee met eight times during 2018, including holding an executive session with our independent registered public accounting firm at each of those meetings. The Audit Committee's responsibilities and activities are described in greater detail in the section titled "Audit Committee Report" in this proxy statement and the committee's charter, which was most recently revised in April 2018 and is available on our website at http://www.glu.com/investors (by clicking on the "corporate governance" link).

Compensation Committee

The Compensation Committee currently consists of four of our outside directors, Ms. Toledano, who is the committee chair, and Mr. Brandeau, Mr. Nada and Mr. Smith; Ms. Toledano joined the Compensation Committee in April 2018 and succeeded Mr. Smith as the committee chair in April 2019. The composition of the Compensation Committee meets the requirements for independence under the current Nasdaq listing rules, rules and regulations of the SEC and the Internal Revenue Code (the "Code"). The Compensation Committee, which met seven times and acted by written consent five times during 2018, discharges the responsibilities of our Board relating to compensation of our executive officers and oversees our company-wide cash and equity compensation programs. The Compensation Committee's responsibilities and activities are described in greater detail in the section titled "Compensation Discussion and Analysis" in this proxy statement and in the Compensation Committee's charter, which was most recently revised in April 2018 and is available on our website at http://www.glu.com/investors (by clicking on the "corporate governance" link).

Nominating and Governance Committee

The Nominating and Governance Committee currently consists of three of our outside directors, Mr. Brandeau, who is the committee chair, and Ms. Mather and Mr. Smith. The composition of our Nominating and Governance Committee meets the requirements for independence under the current Nasdaq listing rules and rules and regulations of the SEC. Our Nominating and Governance Committee, which met two time during 2018, makes recommendations to the Board regarding Board and committee composition and appropriate corporate governance standards, reviews related party transactions, and administers our Code of Business Conduct and Ethics and Corporate Governance Principles, among other things. The Nominating and Governance Committee's responsibilities and activities are described in greater detail in the committee's charter, which was most recently revised in April 2018, and is available on our website at http://www.glu.com/investors (by clicking on the "corporate governance" link).

Strategy Committee

The Strategy Committee currently consists of five of our directors, Mr. Smith, who is the committee chair, and Messrs. de Masi, Earl, Feder, and Nada. Our Strategy Committee assists the Board and senior management in refining our strategic vision and growth initiatives.

Compensation Committee Interlocks and Insider Participation

During 2018, Messrs. Brandeau, Nada and Smith and Ms. Toledano each served on the Compensation Committee. None of these individuals is or has been an officer or employee of Glu or any of our subsidiaries. There are no other relationships between committee members and Glu or any other company that are required by SEC regulations to be disclosed under this caption.

Risk Analysis of Performance-Based Compensation Plans

The Compensation Committee believes that our executive compensation programs do not encourage excessive and unnecessary risk-taking. The design of these compensation programs is intended to encourage our executive officers to remain focused on both our short-and long-term financial goals in several key respects. Focusing on a strong pay-for-performance culture for our executive compensation program, the Compensation Committee decided in October 2018 to continue (1) replacing cash bonuses for each of our executive officers other than our General Counsel with performance-based stock options ("*PSOs*") for 2019 and (2) having a significant portion of each executive officer's annual equity award be comprised of either PSOs or performance-based restricted stock units ("*PSUs*") in addition to standard time vesting stock options. The committee believed that this focus will better align the interests of our executive officers with our stockholders and is consistent with our strategic goals of realizing significant bookings and Adjusted EBITDA growth in 2019 and beyond. All equity awards granted to our executive officers in 2018 (other than the PSOs granted in lieu of annual cash bonuses) vest over three years (for the PSOs and PSUs granted as a portion of each executive officer's annual equity award) or four years (for time vesting stock options), encouraging executive officers to focus on sustained stock price appreciation over the long term. Additionally, our Board adopted a clawback policy in 2017 which authorizes our Board to recoup past incentive compensation paid to executive officers in certain situations and our Board is able to include clawback provisions in award agreements for our executive officers. Finally, our system of internal controls over financial reporting, standards of business conduct and compliance programs, among other things, reduce the likelihood of manipulation of our financial performance to enhance payments under our executive bonus plan.

Corporate Social Responsibility

Sustainability

We are focused on sustainability initiatives that reduce energy, waste and materials consumption and strive to engage our employees and suppliers in our sustainability efforts. We are focused on reducing our use of disposable materials in our office space and strive to find cost-effective and environmentally friendly office solutions.

Diversity and Inclusion

We believe that a diverse, inclusive culture yields a more creative and innovative workplace that drives business objectives forward. For this reason, we encourage, support, and celebrate the diverse voices of our employees, believing that all forms of diversity provide value at Glu. To attract the best talent, we need to promote an organization in which

everyone feels accepted and valued as their authentic selves. For example, we actively partner with organizations to drive inclusiveness of women in the gaming industry. Additionally, we actively investigate the makeup of our organization and make adjustments to our recruiting sources to address opportunities. We also pursue diversity at the Board level; three of our members of the Board are female.

Community Involvement and Awareness

We support community initiatives and encourage our employees to participate in volunteer days, particularly those focused on environmental and sustainability issues. In addition, we partner with various organizations on in-game events and campaigns to drive awareness and in certain cases donate to charitable causes. Furthermore, we partner with advertising networks to support initiatives focusing on environmental and social good issues.

DIRECTOR COMPENSATION

Overview

The Compensation Committee and the Nominating and Governance Committee evaluate the appropriate level and form of compensation for non-employee directors on an annual basis and recommend changes to the Board when appropriate. Our non-employee director compensation program is set forth below and was most recently amended in April 2019:

Cash Compensation

- Non-employee directors receive an annual cash retainer of $40,000;
- The Lead Director receives an additional annual cash retainer of $25,000;
- The chair of the Audit Committee receives additional annual cash compensation of $20,000;
- The chair of the Compensation Committee receives additional annual cash compensation of $15,000;
- The chair of the Nominating and Governance Committee receives additional annual cash compensation of $10,000;
- The chair of the Strategy Committee receives additional cash compensation of $20,000; and
- Each non-employee director receives additional annual cash compensation of $10,000 for service on the Audit Committee, $7,500 for service on the Compensation Committee and $5,000 for service on each of the Nominating and Governance Committee or Strategy Committee, other than as chair.

All cash compensation to directors is paid in arrears in quarterly installments. We also reimburse our directors for reasonable expenses in connection with attendance at Board and committee meetings.

Equity Compensation

Annual Equity Grants

Since 2014, each year immediately following our annual meeting of stockholders, each non-employee director has received an equity award of (1) a restricted stock unit ("RSU") award covering 25,000 shares of our common stock and (2) an option to purchase 50,000 shares of our common stock. Both the stock option and RSU award have vested on the earlier to occur of (a) the first anniversary of the grant date and (b) the date of our next annual meeting of stockholders that follows the grant date.

In April 2019, our Board amended the annual equity award such that each year immediately following our annual meeting of stockholders, each non-employee director will receive the lesser in value of (1) stock options and RSUs having an aggregate grant date fair value of $235,000, with the number of stock options and RSUs allocated to provide an equal value of each equity instrument, or (2) the aggregate grant date fair value of (a) an RSU covering 25,000 shares of our

common stock and (b) a stock option to purchase 50,000 shares of our common stock. Both the stock option and RSU awards will vest on the earlier to occur of (a) the first anniversary of the grant date and (b) the date of our next annual meeting of stockholders that follows the grant date.

New Director Equity Grants

Historically, at the time he or she joins the Board, each new independent non-employee director has received an initial equity award of, at that director's discretion, either (a) a grant of 20,000 RSUs or (b) an immediately exercisable option to purchase 60,000 shares of our common stock. The RSU vested as to 33⅓% of the total number of shares subject to the RSUs on the first anniversary of the grant date and thereafter vested in equal quarterly installments over the next two years following the first vesting date on the same day of each third month. The stock option vested as to 33⅓% of the underlying shares on the first anniversary of the grant date and thereafter vested pro rata monthly over the next 24 months.

In April 2019, our Board amended the equity award provided to new directors such that each new non-employee director will receive the lesser in value of (1) stock options and RSUs having an aggregate grant date fair value of $352,500, with the number of stock options and RSUs allocated to provide an equal value of each equity instrument, or (2) the aggregate grant date fair value of (a) an RSU covering 37,500 shares of our common stock and (b) a stock option to purchase 75,000 shares of our common stock. The RSU will vest as to 33⅓% of the total number of shares subject to the RSUs on the first anniversary of the grant date and thereafter vest in equal quarterly installments over the next two years following the first vesting date on the same day of each third month. The stock option will vest as to 33⅓% of the underlying shares on the first anniversary of the grant date and thereafter vest pro rata monthly over the next 24 months.

Other Equity Matters

Our 2007 Equity Incentive Plan, under which we grant equity awards to our non-employee directors, provides that each of the equity awards held by our non-employee directors will accelerate in full immediately prior to a change in control of Glu.

Since Mr. de Masi and Mr. Earl are each executive officers and since the Voting Agreement provides that Tencent's designee to Glu's board of directors shall not receive any compensation for his or her board service, we do not provide, and have not provided, Messrs. de Masi, Earl, or Feder any compensation for service on our Board. We also do not provide any compensation to Messrs. de Masi, Earl or Feder for their service on the Strategy Committee.

Director Summary Compensation Table

The following table sets forth certain information with respect to compensation awarded to, earned by or paid to each person who served as a non-employee director during 2018.

Name	Fees Earned or Paid in Cash ($)	Stock Awards[(1)(2)(3)] ($)	Option Awards[(1)(2)(3)] ($)	Total ($)
Eric R. Ball	52,500	141,750	132,350	326,600
Greg Brandeau	47,610	141,750	132,350	321,710
Ben Feder[(4)]	—	—	—	—
Ann Mather	37,500	141,750	132,350	311,600
Hany M. Nada	52,610	141,750	132,350	326,710
Benjamin T. Smith, IV	102,157	141,750	132,350	376,257
Gabrielle Toledano	37,610	141,750	132,350	311,710

(1) Amounts shown in this column do not reflect dollar amounts actually received by the non-employee director. Instead, these amounts reflect the grant date fair value calculated in accordance with FASB ASC Topic 718 of each RSU award or stock option award, as applicable. See Note 11 — Stock Option and Other Benefit Plans — in the notes to consolidated financial statements contained in our Annual Report on Form 10-K for the year ended December 31, 2018 for a description of the ASC Topic 718 methodology and assumptions.

(2) On June 7, 2018, following our 2018 Annual Meeting of Stockholders, each of Dr. Ball, Mr. Brandeau, Ms. Mather, Mr. Nada, Mr. Smith and Ms. Toledano received an option to purchase 50,000 shares of our common stock at an exercise price of $5.67 per share and an RSU award for 25,000 shares.

(3) The aggregate number of outstanding stock options and unvested RSU awards held by each of our non-employee directors as of December 31, 2018 was as follows:

Name	Stock Options	RSU Awards
Eric R. Ball	310,000	25,000
Greg Brandeau	210,000	25,000
Ben Feder	—	—
Ann Mather	200,000	25,000
Hany M. Nada	300,000	25,000
Benjamin T. Smith, IV	250,000	25,000
Gabrielle Toledano	110,000	25,000

(4) Mr. Feder does not receive compensation for service on our Board pursuant to the terms of the Voting Agreement we entered into with Tencent.

Stock Ownership Guidelines

In April 2018, our Board adopted stock ownership guidelines for our non-employee directors in order to better align the long-term interests of our non-employee directors with our stockholders and to further promote a long-term perspective in overseeing our company. Under these stock ownership guidelines, each of our non-employee directors is required to hold at least $100,000 of our common stock. In determining the value of a non-employee director's stock ownership, only shares actually held by the director are counted, not vested but unexercised stock options. Each non-employee director is required to comply with these stock ownership guidelines by April 1, 2023 or within five years from his or her election to our Board. Compliance with these stock ownership guidelines is measured once per year based on a non-employee director's year end holdings and our 30-day average stock price. If a non-employee director fails to comply with these stock ownership guidelines within the time frame specified above, such non-employee director will be expected to achieve compliance by retaining 100% of the shares acquired from his or her next RSU vest and/or exercising his or her vested stock options.

STOCKHOLDER MATTERS

Stockholder Communications with Directors

Stockholders may communicate with the Board by sending an email to bod@glu.com, or by sending written correspondence to: Board, c/o Corporate Secretary, Glu Mobile Inc., 875 Howard Street, Suite 100, San Francisco, California 94103. Communications are distributed to the Board, or to any individual directors as appropriate, depending on the facts and circumstances outlined in the communication. The Board has instructed the Corporate Secretary to review all correspondence and to determine, in his discretion, whether matters submitted are appropriate for Board consideration. In particular, the Board has directed that communications such as product or commercial inquiries or complaints, resume and other job inquiries, surveys and general business solicitations or advertisements should not be forwarded to the Board. In addition, material that is unduly hostile, threatening, illegal, patently offensive or similarly inappropriate or unsuitable will be excluded, with the provision that any communication that is filtered out must be made available to any non-management director upon request. The Corporate Secretary may forward certain communications to another person or department for review and possible response.

Stockholder Recommendations of Director Candidates

The Nominating and Governance Committee will consider nominees recommended by stockholders for election as directors. If a stockholder would like to recommend a director candidate for our 2020 Annual Meeting of Stockholders, the stockholder must deliver notice in writing to the Corporate Secretary, Glu Mobile Inc., 875 Howard Street, Suite 100, San Francisco, California 94103. Such notice must set forth the information required under our Bylaws to be included in the notice. A copy of our Bylaws, which we most recently amended on March 7, 2014, may be obtained from the SEC's website.

Evaluations of candidates generally involve a review of background materials, internal discussions and interviews with selected identified candidates as appropriate. In conducting its review and evaluation, the Nominating and Governance Committee may solicit the views of management, other members of the Board and other individuals it believes may have insight into a candidate's qualifications and the needs of the Board and its committees. Candidates for the Board are generally selected based on desired skills and experience in the context of the existing composition of the Board and needs of the Board and its committees at that time, including the requirements of applicable rules and regulations of the SEC and The Nasdaq Stock Market. The Nominating and Governance Committee will consider these needs and further evaluate each candidate's qualifications based on their independence, integrity, collegiality, diversity, skills, financial, technical, operational and other expertise and experience, breadth of experience, practical wisdom, judgment, knowledge about our business or industry, personal and professional ethics, availability and commitment to representing and enhancing the long-term interests of our stockholders. From time to time, the Nominating and Governance Committee may also identify and consider other factors that reflect our environment as it evolves or that it believes will otherwise contribute to the Board's overall effectiveness and our success. Although the Nominating and Governance Committee does not have a specific policy on diversity, the committee considers the criteria noted above in selecting nominees for directors, including members from diverse backgrounds who combine a broad spectrum of experience and expertise. The Nominating and Governance Committee does not assign specific weights to particular criteria, and no particular criterion is necessarily applicable to all candidates, and will choose candidates to recommend for nomination based on the specific needs of the Board and Glu at that time. Although the Nominating and Governance Committee uses these and other criteria as appropriate to evaluate candidates, the Nominating and Governance Committee has no stated minimum criteria for candidates. All candidates, including those nominated by stockholders, are evaluated in the manner described above. Final approval of nominees to be presented for election is determined by the full Board.

Stockholder Proposals for the 2020 Annual Meeting of Stockholders

Under SEC Rule 14a-8, any stockholder who intends to present a proposal for inclusion in our 2020 proxy statement and form of proxy must submit the proposal, in writing, so that the Corporate Secretary receives it at our principal executive offices by December 26, 2019. Any stockholder who wishes to bring a proposal or nominate a person for election to the Board at the 2020 Annual Meeting of Stockholders must provide written notice of the proposal or nomination to our Corporate Secretary, at our principal executive offices, between February 6, 2020 and March 8, 2020. In addition, our stockholders must comply with the other procedural requirements in our Bylaws, including that such stockholders must have continuously beneficially owned at least 1% of our outstanding common stock for a period of one year prior to the date of the submission of the proposal or nomination and continue to be a stockholder of record at the time of the annual meeting, entitled to vote at such meeting and otherwise comply with the requirements in our Bylaws. Any notice delivered by a stockholder in connection with a nomination or proposal must include, among other things, (a) a written consent to the public disclosure of information provided by such persons pursuant to our Bylaws; (b) a description of (i) any agreement with respect to the nomination or proposal between or among such stockholder and associated person(s) and any of their respective affiliates or associates, and (ii) as to each person whom such stockholder or associated person proposes to nominate for election or re-election as a director, a description of any agreement of such person with any other person or entity (other than Glu) with respect to any compensation, reimbursement or indemnification in connection with service or action as a director known to such stockholder or associated person; and (c) a representation that the stockholder has continuously beneficially owned at least 1% of our outstanding common stock for the one-year period before giving such notice, is entitled to vote at such meeting and intends to appear at the meeting to propose such business or nomination.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding ownership of our common stock as of April 10, 2019 by:

- Each Named Executive Officer (defined in "Compensation Discussion and Analysis" below);
- Each of our directors;
- All current executive officers and directors as a group; and
- All persons known to us to beneficially own 5% or more of our common stock.

We calculated the "Percent of Class" based on 145,180,574 shares of common stock outstanding on April 10, 2019. In accordance with SEC regulations, we also included shares subject to equity awards that are currently vested or will become vested by June 9, 2019 (i.e., within 60 days of April 10, 2019). We deem those shares outstanding and beneficially owned by the person holding the award for computing that person's percentage ownership, but they are not treated as outstanding for computing any other person's percentage ownership. Unless otherwise indicated, each person has sole voting and investment power with respect to the shares each person beneficially owns, and the address of each person is: c/o Glu Mobile Inc., 875 Howard Street, Suite 100, San Francisco, California 94103.

Name of Beneficial Owner	Amount and Nature of Beneficial Ownership	Percent of Class
5% Stockholders		
Red River Investment Limited[1]	28,194,690	19.42%
Vanguard Group Inc.[2]	9,886,860	6.81%
BlackRock Inc.[3]	7,694,965	5.3%
Named Executive Officers and Directors		
Niccolo M. de Masi[4]	907,654	*
Nick Earl[5]	3,218,361	2.17%
Eric R. Ludwig[6]	2,424,735	1.64%
Chris Akhavan[7]	1,237,662	*
Scott Leichtner[8]	895,678	*
Darla Anderson[9]	—	—
Eric R. Ball[10]	410,000	*
Greg Brandeau[11]	260,000	*
Ben Feder[12]	—	*
Ann Mather[13]	278,666	*
Hany M. Nada[14]	465,200	*
Benjamin T. Smith, IV[15]	285,000	*
Gabrielle Toledano[16]	104,998	*
All directors and executive officers as a group (13 persons)[17]	10,487,954	6.84%

*Represents beneficial ownership of less than 1% of the outstanding shares of our common stock.

(1) The information is based solely upon a Schedule 13D/A filed with the SEC on February 26, 2016 by Tencent Holdings Limited ("Tencent"), Red River Investment Limited, a wholly-owned subsidiary of Tencent ("Red River"), and THL E Limited, a wholly-owned subsidiary of Tencent ("THL"). The principal address of Tencent is Cricket Square, Hutchins Drive, P.O. Box 2681, Grand Cayman KY1-1111, Cayman Islands. The principal address of each of Red River and THL is P.O. Box 957, Offshore Incorporations Centre, Road Town, Tortola, British Virgin Islands. Consists of 21,000,000 shares held directly by Red River and 7,194,690 shares held directly by THL. Tencent Holdings Limited, Red River and THL are each reported as a beneficial owner of the aforementioned shares. The individual officers and directors of each of Tencent, Red River and THL are listed on Appendix A to the Schedule 13D/A.

(2) The information is based solely upon a Schedule 13G/A filed with the SEC on February 11, 2019 by Vanguard Group Inc. ("Vanguard") on its own behalf and on behalf of its wholly-owned subsidiaries Vanguard Fiduciary Trust Company ("VFTC") and Vanguard Investments Australia, Ltd. ("VIA"). Vanguard has sole voting power over

232,726 shares, shared voting power over 10,900 shares, sole dispositive power over 9,655,793 shares and shared dispositive power over 231,067 shares. VFTC is the beneficial owner of 220,167 shares and VIA is the beneficial owner of 23,459 shares. The address for Vanguard is 100 Vanguard Boulevard, Malvern, Pennsylvania 19355.

(3) The information is based solely upon a Schedule 13G/A filed with the SEC on February 4, 2019 by BlackRock, Inc. on its own behalf and on behalf of certain of its subsidiaries specified on Exhibit A to the Schedule 13G/A. BlackRock Inc. has sole voting power over 7,455,695 shares and sole dispositive power over 7,694,965 shares. The address for BlackRock Inc. is 55 East 52nd Street, New York, New York 10055.

(4) Includes 46,875 shares that will settle pursuant to RSU awards within 60 days of April 10, 2019.

(5) Includes 1,955,764 shares subject to options that are exercisable, 805,620 shares subject to PSOs that are exercisable, and 31,250 shares that will settle pursuant to RSU awards within 60 days of April 10, 2019.

(6) Includes (a) 320,589 shares held by The Ludwig McKillop Trust, of which Mr. Ludwig and his spouse, Mary Elizabeth McKillop, are the co-trustees, (b) 8,880 shares held by Mr. Ludwig's minor children, and (c) 1,240,243 shares subject to options that are exercisable, 777,085 shares subject to PSOs that are exercisable, and 20,938 shares that will settle pursuant to RSU awards within 60 days of April 10, 2019.

(7) Includes 556,033 shares subject to options that are exercisable, 664,622 shares subject to PSOs that are exercisable and 6,875 shares that will settle pursuant to RSU awards within 60 days of April 10, 2019.

(8) Includes 495,831 shares subject to options that are exercisable, 201,592 shares subject to PSOs that are exercisable and 6,875 shares that will settle pursuant to RSU awards within 60 days of April 10, 2019.

(9) Ms. Anderson joined our Board on March 4, 2019 and received 20,000 RSUs. None of her RSUs has vested or will vest within 60 days of April 10, 2019.

(10) Includes 310,000 shares subject to options that are exercisable and 25,000 shares that will settle pursuant to RSU awards within 60 days of April 10, 2019.

(11) Includes 210,000 shares subject to options that are exercisable and 25,000 shares that will settle pursuant to RSU awards within 60 days of April 10, 2019.

(12) Mr. Feder was appointed to the Board by a greater than 10% stockholder and we do not provide him with any compensation for his services on the Board or on the Strategy Committee.

(13) Includes 200,000 shares subject to options that are exercisable and 25,000 shares that will settle pursuant to RSU awards within 60 days of April 10, 2019.

(14) Includes 250,000 shares subject to options that are exercisable and 25,000 shares that will settle pursuant to RSU awards within 60 days of April 10, 2019.

(15) Includes 250,000 shares subject to options that are exercisable and 25,000 shares that will settle pursuant to RSU awards within 60 days of April 10, 2019.

(16) Includes 79,998 shares subject to options that are exercisable and 25,000 shares that will settle pursuant to RSU awards within 60 days of April 10, 2019.

(17) Includes 5,547,869 shares subject to options that are exercisable, 2,448,919 shares subject to PSOs that are exercisable and 262,813 shares that will settle pursuant to RSU awards within 60 days of April 10, 2019.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16 of the Exchange Act requires our directors and certain of our officers, and persons who own more than 10% of our common stock, to file initial reports of ownership and reports of changes in ownership with the SEC. Such persons are required by SEC regulations to furnish us with copies of all Section 16(a) forms they file. Based solely on our review of the copies of such forms furnished to us and written representations from these officers and directors, we believe that all Section 16(a) filing requirements were met during 2018, except for one late Form 4 filing for each of Glu's Named Executive Officers (as defined in the Compensation Discussion and Analysis section below) and Gordon Lee, our former Vice President of Accounting, reporting the vesting of RSUs and the surrender of shares of our common stock to satisfy

tax withholding obligations in connection with such vesting. The Forms 4 for each of these individuals was required to be filed with the SEC on Friday, August 17, 2018, but due to an administrative error by one of Glu's vendors, they were filed one business day late on Monday, August 20, 2018.

COMPENSATION DISCUSSION AND ANALYSIS

Our Compensation Committee, comprised of four independent members of our Board, oversees our compensation plans and policies, approves the compensation of our executive officers and administers our equity compensation plans. This Compensation Discussion and Analysis ("CD&A") contains a discussion and analysis of the compensation approved by the Compensation Committee and earned by or paid in 2018 to the executive officers named below and who are also included in the "Summary Compensation Table" below:

- Niccolo M. de Masi, our Executive Chairman;
- Nick Earl, our President and Chief Executive Officer;
- Eric R. Ludwig, our Executive Vice President, Chief Operating Officer and Chief Financial Officer;
- Chris Akhavan, our Chief Revenue Officer; and
- Scott J. Leichtner, our Vice President, General Counsel and Corporate Secretary.

We refer to these individuals collectively as our "Named Executive Officers," and we refer to our Named Executive Officers excluding Mr. de Masi, who is not eligible to receive bonus payments or equity awards per the terms of his Executive Chairman Agreement, as our "Eligible Officers."

Executive Summary

Fiscal 2018 Executive Compensation Program Highlights

Our Compensation Committee revised our executive compensation program in October 2017 in order to emphasize a pay-for-performance culture by rewarding our executives for strong company performance and financial results. The committee believes that these changes to our executive compensation program better align the interests of the Eligible Officers with our stockholders, and the committee continued these program changes in 2018. During 2018, we achieved significant year-over-year growth in bookings and Adjusted EBITDA, which is reflected in the compensation of our Eligible Officers. Highlights of our 2018 executive compensation program, as discussed and analyzed in detail in this CD&A, include the following:

- ***Strong Bookings and Adjusted EBITDA Results Led to Maximum Achievement of Performance-Based Stock Options Issued in Lieu of Cash Bonus Payouts in 2018 and Maximum Achievement of the First Tranche of our Multi-Year Performance-Based Stock Options and RSUs***. Our Eligible Officers received PSOs in October 2017 in lieu of cash bonus payments for 2018 performance. Based on our 2018 Adjusted EBITDA and 2018 bookings results (both as described below in this CD&A), each Eligible Officer earned the maximum number of PSOs with respect to 2018 performance that he could have potentially received. These earned PSOs vested in February 2019, which aligned with what would have been the payment date for any earned 2018 cash bonus under the annual incentive program. In addition, based on our 2018 Adjusted EBITDA and 2018 bookings results, our Eligible Officers also earned the maximum of the first tranche of the multi-year PSOs and/or PSUs granted to our Eligible Officers in October 2017.
- ***Long-Term Strategy and Pay-for-Performance Culture***. To support our pay-for-performance culture, reinforce changes in our business strategy and culture and provide meaningful compensation opportunities for delivering results that significantly exceed our strategic plan, in October 2018 the Compensation Committee awarded each of the Eligible Officers' equity awards in performance-based equity. This included a portion of equity in the form of time vesting options, which the Compensation Committee considers to be performance-based, as the option holder will only realize compensation if our stock price appreciates. The remaining portion of the equity awards was granted as either PSOs (in addition to PSOs granted in lieu of cash bonuses) or PSUs for which vesting was tied to achievement of multi-year bookings and Adjusted EBITDA goals. No time vesting RSUs were granted to our Named Executive Officers in 2018.

- ***Selective Base Salary Adjustments***. Salaries in effect during fiscal 2018 were established by the Compensation Committee as part of its annual review of executive compensation in October 2017. At that time, the committee determined that the annual base salary for Mr. Akhavan should be increased from $280,000 to $400,000, reflecting the additional duties that Mr. Akhavan had assumed in connection with Glu's restructuring in August 2017 in which certain central technology functions, including business intelligence and SDK development, were consolidated under Mr. Akhavan's organization to better align these departments with Glu's user acquisition and advertising revenue teams. The committee also decided to increase Mr. Leichtner's annual base salary by approximately 5% to better align it with salaries paid to similarly situated executives at our peer companies.

Compensation and Pay-for-Performance Philosophy and Objectives

The Compensation Committee has established a compensation program for executive officers designed to attract individuals with the skills necessary for us to achieve our strategic business plans, to motivate and reward those individuals fairly over time and to retain those individuals who continue to perform at or above the levels that we expect. Our compensation program for executive officers is also designed to reinforce a sense of ownership, urgency, innovation and overall entrepreneurial spirit and to link rewards to measurable corporate and, where appropriate, individual performance. We believe that the most effective executive compensation program is one that rewards the achievement of specific long-term and strategic goals, and which aligns executive officers' interests with those of our stockholders by rewarding achievement of established performance goals, with the ultimate objective of creating stockholder value. The Compensation Committee evaluates compensation to ensure that we maintain the ability to attract and retain talented employees in key positions and that we provide compensation to our executive officers that remains competitive relative to the compensation paid to similarly situated executive officers of our peer companies. Accordingly, the Compensation Committee believes that executive compensation packages provided by us to our executive officers should include equity-based compensation that rewards performance and that multi-year goals create a strong pay-for-performance mechanism to drive sustained long-term performance and create meaningful upside for delivering results that exceed expectations.

Fiscal 2018 Policies and Practices

We endeavor to maintain sound governance standards consistent with our executive compensation policies and practices. The Compensation Committee evaluates our executive compensation program on an ongoing basis to ensure that it is consistent with our pay-for-performance philosophy and business objectives, as well as the competitive market in which we compete for talent. The following policies and practices were in effect during fiscal 2018:

- ***Independent Compensation Committee***. The Compensation Committee is comprised solely of independent directors.
- ***Independent Compensation Committee Advisors***. The Compensation Committee retained Compensia until July 2018, and then engaged Aon Radford ("Radford") to replace Compensia in July 2018 (collectively, the "Compensation Committee Consultants") to assist the committee regarding executive officer compensation, including helping us to select appropriate peer companies to review and compare against in determining our executive compensation.
- ***Annual Executive Compensation Review***. The Compensation Committee conducts an annual review and approval of our compensation strategy, including a review of our compensation peer group used for comparative purposes.
- ***Executive Compensation Policies and Practices***. Our compensation philosophy and related corporate governance policies and practices are complemented by several specific compensation practices that are designed to promote good compensation governance and to align our executive compensation with long-term stockholder interests, including the following:
    - ***Compensation At-Risk***. Our executive compensation program is designed so that a significant portion of our executive officers' compensation is "at-risk" based on our financial and/or share price performance.

- ***No Pension or Nonqualified Deferred Compensation Plans***. We do not currently offer, nor do we have plans to provide, pension arrangements or nonqualified deferred compensation plans or arrangements for our executive officers.
- ***No Special Health or Welfare Benefits***. Our Named Executive Officers participate in broad-based company-sponsored health and welfare benefits programs on the same basis as our non-executive full-time, salaried employees.
- ***No Guaranteed Bonuses***. We do not provide any guaranteed bonuses for any of our Named Executive Officers with the exception of "sign on" bonuses that may be negotiated as part of an executive officer's new hire package. As noted above, the Compensation Committee eliminated cash bonuses for the Eligible Officers for 2018 and replaced the executive cash bonus plan with PSOs.
- ***No Perquisites***. We do not provide any perquisites or other personal benefits to our Named Executive Officers aside from general health and welfare benefit programs described above.
- ***No Tax Reimbursements***. We do not provide any tax reimbursement payments (including "gross-ups") on any severance or change-in-control payments or benefits.
- ***No Hedging, Margining or Pledging of Equity Securities***. Our insider trading policy prohibits our directors and executive officers from engaging in hedging activities, the shorting of our equity securities or holding our equity securities in a margin account. Our insider trading policy also prohibits our directors and executive officers from pledging our equity securities as collateral for loans unless the pledge has been approved by our Insider Trading Compliance Officer and our Nominating and Governance Committee.
- ***Annual Say on Pay Vote***. We conduct an annual, non-binding stockholder advisory vote on the compensation of our Named Executive Officers (a "say on pay vote"), and the Compensation Committee considers the outcome of this vote when making future compensation decisions for our executive officers.
- ***Ongoing Stockholder Outreach***. We engage in stockholder outreach throughout the year to discuss our business, including discussions with stockholders about the structure of our executive compensation program. The Compensation Committee considers the feedback we receive from stockholders about our executive compensation program when making future compensation decisions for our executive officers. For further information, including with respect to stockholder outreach in response to our 2018 Say on Pay Vote, see section "*—2018 Say on Pay Results and Consideration of Stockholder Support*."
- ***Clawback or Recovery of Incentive Compensation Policy***. As discussed further below, we maintain a Clawback Policy, that permits us to seek recovery of some or all of incentive compensation paid or awarded to executive officers, our Vice President of Accounting and our corporate controller in the event of the restatement by Glu of any financial results required to be reported under the U.S. federal securities laws because one or more executive officers and our Vice President of Accounting engaged in fraud or intentional misconduct.

2018 Say on Pay Results and Consideration of Stockholder Support

At our 2018 Annual Meeting of Stockholders, we conducted a stockholder advisory vote, or say-on-pay vote, on the compensation of the Named Executive Officers. At that meeting, our stockholders approved the compensation of our Named Executive Officers, as disclosed in our 2018 annual proxy statement, with approximately 87% of the votes cast in favor of the proposal.

Our Compensation Committee has noted the support of our stockholders in the 2018 say-on-pay vote and considered this result in their decision-making regarding our executive compensation. We value the opinions of our stockholders and will continue to consider the outcome of future say-on-pay votes, as one element in the process, when making compensation decisions for our executive officers.

At our 2017 Annual Meeting of Stockholders, our stockholders approved advisory voting every year on our executive compensation. Please see Proposal No. 3 concerning an advisory say-on-pay vote on the compensation of our Named Executive Officers, as disclosed in this proxy statement.

Components of Executive Compensation

In 2018, our Eligible Officers' compensation consisted of three primary elements:

Component	Key Features	Objective
Base Salary	Fixed base salary established at market competitive rates based on factors such as the executive's role, level experience and performance	Attract and retain experienced executives
Annual Incentive Awards	In lieu of a cash bonus with respect to 2018 performance, PSOs were granted to our Eligible Officers and tied to Adjusted EBITDA and bookings generated during 2018. Based on our Adjusted EBITDA and bookings results for 2018, the maximum number of PSOs vested and became exercisable in February 2019 In October 2018, we again granted PSOs in lieu of cash bonuses for our Eligible Officers (other than Mr. Leichtner). Mr. Leichtner is instead eligible to earn a cash bonus with respect to 2019 performance	Motivate executives to achieve our annual financial plan and strategic goals. In addition, PSOs align executives' interests with stockholders by encouraging sustained stock price appreciation
Long-Term Equity Incentive Awards	Long-term incentives granted to our Eligible Officers were comprised of a mix of time vesting options and PSOs (in addition to the PSOs issued in lieu of cash bonuses) and/or PSUs, each with multi-year performance metrics These PSOs and PSUs will vest, if at all, based on our level of bookings and Adjusted EBITDA in each of 2019, 2020 and 2021	Support a strong pay-for-performance profile, with an emphasis on options to drive a focus on meaningful and sustained stock price appreciation

The Compensation Committee views these three components of compensation as related but distinct. Although the Compensation Committee reviews total compensation, it does not believe that significant compensation derived from one component of compensation should necessarily negate or reduce compensation from other components. The committee determines the appropriate level for each compensation component using as guidance our overall compensation philosophy described above. The Compensation Committee has not adopted any formal or informal policies or guidelines for allocating compensation between long-term and short-term compensation, between cash and non-cash compensation, or among different forms of compensation. However, our Eligible Officers have the ability to directly influence our overall performance, so a greater portion of their pay is tied to short and long-term incentive programs than is the case for most of our other employees. In addition, one of the tenets of our Compensation Committee's philosophy is that the percentage of an employee's compensation which is performance-based should increase as he or she becomes more senior, and therefore more able to affect the performance of our company through his or her actions, providing each executive with an opportunity to be well rewarded through short and long-term incentive programs if we perform well, consistent with our pay-for-performance culture.

Compensation Process

Determination of Executive Compensation

The Compensation Committee works within the framework of a pay-for-performance philosophy to determine each component of an executive officer's compensation package based on numerous factors, including:

- the individual's particular background and circumstances, including training and prior relevant work experience;
- the individual's role with us and the compensation paid to similar persons in the companies represented in the compensation data that the Compensation Committee reviews;
- the demand for personnel with the individual's specific expertise and experience at the time of hire or review;
- performance goals and other expectations for the position, where appropriate;
- comparison to other executives within our company having similar levels of expertise and experience; and
- compensation data of peer companies for similar positions.

The Compensation Committee performs at least annually a strategic review of our executive officers' compensation levels to determine whether they provide adequate incentives and motivation and whether they appropriately compensate our executive officers relative to comparable executive officers in other companies with which we compete for executives. Historically, in making compensation decisions and in reviewing non-equity incentive compensation, the Compensation Committee has given significant weight to, among other things, our financial performance relative to our operating plan approved by the Board. With respect to equity compensation, the committee also considers the value of existing equity awards held by our executive officers.

Role of the Compensation Consultant

The Compensation Committee's charter provides that the committee has the authority to retain experts and advisors of its choice to assist the committee in performing its functions. The Compensation Committee selected the Compensation Committee Consultants based on their expertise in executive compensation, particularly with respect to compensation practices of technology companies in the San Francisco Bay Area. The Compensation Committee Consultants provided the following services to the committee in 2017 (with respect to 2018 compensation matters) and in 2018:

- reviewed and provided recommendations regarding the composition of our peer group, and provided compensation data relating to executives at the selected peer group companies;
- provided research and recommendations relating to the short- and long-term incentive plans applicable to our Eligible Officers;
- conducted a comprehensive review of the total compensation arrangements for our Eligible Officers and other members of senior leadership and provided advice on our compensation of these individuals;
- conducted a comprehensive review of compensation paid to the members of our Board and its committees, and provided advice on our director compensation program;
- assisted the Compensation Committee in finalizing the terms of the Amended and Restated 2007 Equity Incentive Plan in our efforts to gain stockholder approval of the plan at the 2018 Annual Meeting of Stockholders;
- updated the Compensation Committee on emerging trends/best practices in the area of executive and Board compensation; and
- participated in Compensation Committee meetings, as requested, and provided ad hoc advice and support.

In selecting the Compensation Committee Consultants, the Compensation Committee considered the factors required by SEC Rule 10C-1(b)(2)(4) and Nasdaq Rule 5605(d)(3)(D) and certain factors related to the Compensation

Committee Consultants' independence, including (a) that the Compensation Committee Consultants did not provide other services to us, except as set forth below; (b) the fact that the fees we paid to the Compensation Committee Consultants in each of 2017 and 2018 represented less than one percent of each of the Compensation Committee Consultants' total revenues for those years; (c) the Compensation Committee Consultants' policies and procedures that are designed to prevent conflicts of interest; and (d) the fact that the Compensation Committee Consultants had neither any business or personal relationship with any member of the Compensation Committee nor owned any of our stock. The Compensation Committee does not believe the retention of, and the work performed by, the Compensation Committee Consultants creates any conflict of interest.

In addition, in 2019, Radford assisted the committee with Proposal No. 2 below, which is the proposal to amend and restate our 2007 Equity Incentive Plan to, among other things, increase the aggregate number of shares of common stock authorized for issuance under the plan by 4,600,000 shares.

Role of Executive Officers in Compensation Decisions

For compensation decisions for 2018, Mr. Earl, as the manager of Messrs. Ludwig and Akhavan, assessed each individual's contributions to their respective goals and made a recommendation to the Compensation Committee regarding any merit-based adjustment to salary, the number of PSOs to be issued in lieu of cash bonuses and replenishment equity compensation grants. With respect to compensation decisions for Mr. Leichtner, both Mr. Ludwig, to whom Mr. Leichtner reports, and Mr. Earl made recommendations to the Compensation Committee. The committee typically evaluates, discusses and modifies or approves these recommendations and conducts a similar evaluation of our Chief Executive Officer's contributions to corporate goals and his overall performance in managing Glu. Our Chief Executive Officer (and Mr. Ludwig, in the case of Mr. Leichtner) bases his recommendations in part upon annual performance reviews of our executive officers. Committee meetings during 2018 typically included, for all or a portion of each meeting, not only the Compensation Committee members but also Messrs. de Masi, Earl, Ludwig and Leichtner, our Vice President of Global People and Workplace, representatives from the applicable Compensation Committee Consultant and other members of our Board. Any executive officer attending a Compensation Committee meeting excused himself for those portions of the meeting in which his own compensation or performance was discussed or considered.

Peer Group Data

Our executive compensation is typically established annually during the fourth quarter of each fiscal year. Compensation decisions, including the magnitude of equity awards for the current fiscal year and levels of cash compensation, which is inclusive of base salary, annual cash incentive targets (to the extent applicable) and annual PSOs in lieu of cash bonuses, for the upcoming fiscal year, have historically been finalized at an October meeting of the Compensation Committee. As described in more detail below, compensation data from a peer group established in 2017 was relied upon by the Compensation Committee to finalize cash compensation for the 2018 fiscal year, while the peer group identified in 2018 and the related competitive assessment was relied upon by the Compensation Committee to finalize the executive equity awards granted in October 2018.

Determination of 2017 Peer Group

In September 2017, the Compensation Committee, with input from Compensia, reviewed the peer group that was used in 2016 and approved changes to better reflect our then-current market capitalization and revenues. The peer group selection criteria for purposes of determining our 2017 peer group, which was used in guiding compensation decisions made in October 2017, targeted companies with the following characteristics:

- in the gaming and internet software and services sectors;
- headquartered in the San Francisco Bay Area, as well as other high technology centers (Boston, Seattle, Austin and New York);
- annual revenue between approximately $155 million and $620 million (Glu's last four quarters of revenue at the time the peer group was determined were approximately $310 million); and

- market capitalization of between approximately $100 million and $1.4 billion (Glu's market capitalization at the time the peer group was determined was approximately $481 million).

Zynga fell outside of both the market capitalization range and the target revenue range, but the committee believed it was appropriate to include Zynga in the group of peer companies due to it being the most similar company to Glu in terms of it being a developer and publisher of mobile games located in San Francisco and thus a primary competitor for executive talent.

Based on the criteria above, the Compensation Committee approved the below peer companies in September 2017 (companies listed in bold were also included in the prior year's set of peer companies), which were used in guiding compensation decisions made in October 2017. The committee removed companies that had been used in the 2016 set of peer companies either because they no longer fit within the established criteria for annual revenue and/or market capitalization or because they had been acquired.

- A10 Networks
- **Bazaarvoice**
- **Blucora**
- Carbonite
- Care.com
- **LivePerson**
- MobileIron
- Monotype Imaging Holdings
- **PROS Holdings**
- **QAD**
- **QuinStreet**
- Rapid7
- Shutterstock
- Silver Spring Network
- Telenav
- **XO Group**
- **Zynga**

Determination of 2018 Peer Group

In September 2018, the Compensation Committee, with input from Radford, reviewed the peer group that was used in 2017 and approved changes to better reflect our then-current market capitalization and revenues. The peer group selection criteria for purposes of determining our 2018 peer group which was used in guiding compensation decisions made in October 2018 targeted companies with the following characteristics:

- in the gaming as well as internet and application software and services sectors;
- headquartered in the San Francisco Bay Area, as well as other high technology centers;
- annual revenue between approximately $155 million and $800 million (Glu's last four quarters of revenue at the time the peer group was determined were approximately $333 million); and
- market capitalization of between approximately $300 million and $3.6 billion (Glu's market capitalization at the time the peer group was determined was approximately $894 million).

As in 2017, Zynga fell outside of the target revenue range, but the committee believed it was appropriate to include Zynga in the group of peer companies for the same reasons noted above.

Based on the criteria above, the Compensation Committee approved the below peer companies in August 2018, which were used in guiding compensation decisions made in October 2018. Compared to the 2017 peer group, BazaarVoice and Silver Spring Networks were excluded due to acquisition and Telenav because it no longer fit the revenue or market capitalization criteria. Companies listed in bold were included in the 2017 peer group.

- **A10 Networks**
- **Bazaarvoice**
- **Blucora**
- **Carbonite**
- **Care.com**
- Lending Tree
- **LivePerson**
- **MobileIron**
- **Monotype Imaging Holdings**
- **PROS Holdings**
- **QAD**
- **QuinStreet**
- Quotient Technology
- **Rapid7**
- **Shutterstock**
- TrueCar
- **XO Group**
- **Zynga**

The Compensation Committee Consultants have historically provided the Compensation Committee competitive market data regarding executive officer compensation using the most recently approved peer group as well as with information from select cuts of the Radford Global Technology Survey. Data from the Radford survey was filtered to reflect companies having similar industry and financial profiles as the companies included in our peer group. The Compensation Committee considers this data when making compensation decisions.

When analyzing the competitiveness of the compensation of our Eligible Officers, the Compensation Committee reviewed the percentile information provided by the Compensation Committee Consultants, as measured against the

market data described above. The committee reviewed this percentile information to determine whether it was compensating our Eligible Officers at a level commensurate with similarly situated executives.

In addition to reviewing the market data contained in the Compensation Committee Consultants' respective reports, the Compensation Committee also considered a number of additional factors in making executive compensation decisions, including our overall performance, each executive officer's overall performance, the scope of responsibility of each executive officer, and the then-current compensation and equity holdings of each executive officer.

We believe that, given the industry in which we operate and the dynamic corporate culture that we have created, the executive compensation levels that we have established are appropriate.

2018 Elements of Compensation

Base Salary

The Compensation Committee reviews executive salaries annually, typically in the fourth quarter, and adjusts them as appropriate to reflect each executive's competitive positioning at the time of the review, changes in executive compensation trends in the peer group companies, individual performance and responsibility, prior experience, salary history and the mix between short- and long-term incentives, as well as cash and equity compensation. Base salaries may be increased to reflect promotions, the assumption of increased responsibilities or to address competitive pressure or retention issues, should they arise.

The Compensation Committee generally fixes executive officer base salaries at levels it believes will enable us to hire and retain individuals in a competitive environment and to reward individual performance and a level of contribution that is in-line with and in furtherance of our overall business goals. The committee's philosophy is to make a greater percentage of an executive's compensation performance-based compared to fixed compensation as he or she becomes more senior, consistent with our pay-for-performance culture. Where applicable, the Compensation Committee takes into account the market data provided by its advisors. The committee may also take into account the base compensation payable by other companies it believes we generally compete with for executive officer talent or how increases to base salary at Glu could offset some of the total compensation packages offered by startup companies, where an executive may be offered a significant equity stake in the startup. The base salaries of executive officers are determined at the time of hiring by evaluating the responsibilities of the position held and the experience and performance of the individual.

The table below sets forth the annual base salaries for each of the Named Executive Officers as of December 31, 2017 and 2018.

Component	2017 Salary ($)	2018 Salary ($)
Niccolo M. de Masi	375,000	375,000(1)
Nick Earl	450,000	475,000(2)
Eric R. Ludwig	375,000	375,000(3)
Chris Akhavan	400,000	400,000(3)
Scott J. Leichtner	320,000	345,000(4)

(1) Mr. de Masi's base salary was determined in connection with negotiating his Executive Chairman Agreement in November 2016, and no increases have been approved since. The Compensation Committee believed that Mr. de Masi's relationships with many of our celebrity licensors, his experience executing successful strategic acquisitions and investments and his ability to support Mr. Earl in his first role as the chief executive officer of a public company warranted Mr. de Masi's compensation as Executive Chairman.

(2) In October 2018, in connection with the Compensation Committee's annual review of executive compensation, the committee increased Mr. Earl's annual base salary to $475,000, effective as of October 1, 2018, which brought Mr. Earl's salary to approximately the 25th percentile of our peer companies. This was consistent with the committee's pay-for-performance philosophy in which Mr. Earl's overall compensation, including incentive-based equity compensation, could meaningfully exceed the 50th percentile of our peer companies if Glu met or exceeded its annual bookings and Adjusted EBITDA goals, with Mr. Earl having a significant ability to influence Glu's ability to meet

these financial goals. Our Compensation Committee uses the peer group information in determining, with the assistance of its Compensation Consultants, the appropriate salary and overall compensation level.

(3) The Compensation Committee decided to keep the 2018 base salary of each of Messrs. Ludwig and Akhavan at the 2017 level. For Mr. Ludwig, the committee determined to keep his salary at approximately the 25th percentile of our peer companies, consistent with how the committee evaluated Mr. Earl. For Mr. Akhavan, the committee had significantly increased his salary in October 2017, from $280,000 to $400,000, reflecting the additional duties that Mr. Akhavan had assumed in connection with Glu's restructuring in August 2017, and the committee did not believe that a further increase was warranted given that his base salary was at approximately the 60th percentile of our peer companies.

(4) In October 2018, in connection with the Compensation Committee's annual review of executive compensation, the committee increased Mr. Leichtner's annual base salary to $345,000, effective as of October 1, 2018, which brought Mr. Leichtner's salary to approximately the 50th percentile of our peer companies.

Annual Incentives: Performance Stock Options in Lieu of Cash Bonuses & Cash Bonuses

Achievement of Performance Stock Options in Lieu of Cash Bonuses for 2018 Performance

Prior to 2018, Glu provided its executive officers with the opportunity to earn annual cash bonuses based on the achievement of company financial targets. The Compensation Committee determined that, for 2018, it would not provide our Eligible Officers with a cash-based bonus plan, but instead would provide them with the opportunity to earn an equivalent value of PSOs to the extent that Glu achieved certain bookings and Adjusted EBITDA (defined as non-GAAP operating income excluding depreciation and royalty impairments) targets during 2018 (the "2018 Annual PSOs"). The Compensation Committee believes that this change better aligned the interests of the Eligible Officers with our stockholders, as the PSOs would only have value if Glu achieved significant annual bookings and Adjusted EBITDA growth and our stock price increased. The committee chose bookings and Adjusted EBITDA because it believed that these measures would best reflect whether we had achieved financial performance that would lead to company success. The committee believed that significantly increasing bookings from the prior year would be the best way to increase stockholder value, but that we needed to achieve that growth while generating meaningful positive Adjusted EBITDA for the year. Consistent with prior years, the committee decided to use bookings rather than revenue because GAAP accounting rules require that we recognize our in-app purchase revenue over four to eight months, depending on the game, and defer such amounts into future periods, and the committee believed that bookings would be a better indicator of our success during 2018. The committee decided to use Adjusted EBITDA, rather than GAAP profit/(loss), because GAAP accounting rules require that we take into account various non-cash expenses, such as stock-based compensation, that do not reflect whether Glu generated cash during 2018. Any earned 2018 Annual PSOs vested in February 2019, which aligned with what would have been the payment date for cash bonuses had we provided the Eligible Officers with a cash bonus plan for 2018.

Pursuant to his Executive Chairman Agreement, Mr. de Masi is not eligible to receive bonus payments or equity awards.

The Compensation Committee awarded the 2018 Annual PSOs to the Eligible Officers on October 10, 2017. The committee determined the maximum number of 2018 Annual PSOs that each Eligible Officer could potentially earn by calculating the maximum cash bonus that each Eligible Officer could have otherwise received in 2018, based on the historical maximum bonus percentages and annual base salaries for each Eligible Officer, and then converting such maximum bonus value into a maximum number of 2018 Annual PSOs, using a conversion ratio that took into account both Glu's stock price on the date the Compensation Committee approved the 2018 Annual PSOs and the Black-Scholes value of the 2018 Annual PSOs, as illustrated in the table below.

Named Executive Officer	Target Bonus Percentage	Maximum Bonus Percentage	Base Salary for Determining # of 2018 Annual PSOs	2018 Target Bonus Value	2018 Maximum Bonus Value	Target Bonus Value Converted into 2018 Annual PSOs(3)	Maximum Bonus Value Converted into 2018 Annual PSOs(3)	Actual Earned 2018 Annual PSOs
Nick Earl	100%	200%	$525,000(1)	$525,000	$1,050,000	325,000(2)	650,000(2)	650,000
Eric Ludwig	100%	200%	$450,000(1)	$450,000	$900,000	283,488	566,976	566,976
Chris Akhavan	100%	200%	$400,000	$400,000	$800,000	251,989	503,979	503,979
Scott Leichtner	50%	100%	$320,000	$160,000	$320,000	100,796	201,592	201,592

(1) Based on Mr. Earl's and Mr. Ludwig's recommendation, the Compensation Committee did not increase the annual base salaries of either Mr. Earl or Mr. Ludwig for 2018, which remained $450,000 and $375,000, respectively. However, the committee utilized a higher annual base salary for Mr. Earl and Mr. Ludwig, as noted in the table above, which was based on an analysis of the annual base salaries of similarly positioned executives at Glu's peer companies, to determine the number of 2018 Annual PSOs to grant these Eligible Officers.

(2) Because of a limitation that was previously contained in our 2007 Equity Incentive Plan that provided that no Glu employee may receive more than 1,500,000 shares subject to awards pursuant to the plan in any calendar year (the "Plan Limitation"), Mr. Earl could only receive 2018 Annual PSOs covering a maximum of 650,000 shares, rather than the approximately 661,000 2018 Annual PSOs he would have received based on the methodology utilized for the other Eligible Officers. Our stockholders approved the amendment of our 2007 Equity Incentive Plan in June 2018, which included the removal of the Plan Limitation.

(3) The 2018 Annual PSOs have 10-year terms and have an exercise price equal to $3.59, the closing price of Glu's common stock on The Nasdaq Global Select Market on the October 10, 2017 grant date.

The Eligible Officers would only earn the maximum amount of 2018 Annual PSOs if Glu both (1) achieved the Adjusted EBITDA threshold for 2018 set forth below (the "Adjusted EBITDA Threshold") and (2) generated bookings for 2018 that equaled or exceeded the specified maximum level of performance set forth below (the "Maximum Bookings Goal"). If Glu did not achieve the Maximum Bookings Goal, the Eligible Officers could have earned (1) 50% of the maximum amount of 2018 Annual PSOs if Glu achieved the Adjusted EBITDA Threshold in 2018 and generated 2018 bookings that equaled the "Target Bookings Goal" and (2) 25% of the maximum amount of 2018 Annual PSOs if Glu achieved the Adjusted EBITDA Threshold in 2018 and generated 2018 bookings that the minimum level of performance set forth below (the "Minimum Bookings Goal"). If Glu did not achieve the Adjusted EBITDA Threshold or the Minimum Bookings Goal, no Annual PSOs would be earned. To the extent that Glu achieved the Adjusted EBITDA Threshold in 2018 and generated bookings between two of the goals, the number of PSOs earned by the Eligible Officer would be calculated on a linear basis.

The Compensation Committee, at its October 5, 2017, meeting established the following targets for 2018 performance relating to the 2018 Annual PSOs:

- Adjusted EBITDA Threshold of $25.0 million
- Maximum Bookings Goal of $370.0 million
- Target Bookings Goal of $350.0 million
- Minimum Bookings Goal of $330.0 million

Each of these targets represented a significant increase over Glu's 2017 results – we generated $320.4 million of bookings and reported negative Adjusted EBITDA in 2017.

For 2018, the Eligible Officers earned the maximum number of 2018 Annual PSOs that they could earn because our Adjusted EBITDA for 2018 was $41.7 million, which exceeded the Adjusted EBITDA Threshold, and we generated bookings of $384.6 million for 2018, which exceeded the Maximum Bookings Goal. The 2018 Annual PSOs became fully vested and exercisable as of February 15, 2019.

Grant of Performance Options in Lieu of Cash Bonus for 2019 Performance

Consistent with the prior year, the Compensation Committee determined that for 2019 it would not provide Messrs. Earl, Ludwig and Akhavan with a cash-based bonus plan, but instead would provide them with the opportunity to earn an equivalent value of PSOs (the "2019 Annual PSOs") to the extent that Glu achieves certain bookings and Adjusted EBITDA (again defined as non-GAAP operating income excluding depreciation and royalty impairments) targets during 2019 (the "2019 Targets"). The 2019 Annual PSOs were issued in October 2018 and, to the extent earned, will vest in February 2020, which aligns with what would have been the payment date for cash bonuses had we provided these Eligible Officers with a cash bonus plan for 2019.

The Compensation Committee determined the maximum number of 2019 Annual PSOs that Messrs. Earl, Ludwig and Akhavan can potentially earn by calculating the maximum cash bonus that each of these Eligible Officers could have otherwise received in 2019, based on the historical maximum bonus percentages and annual base salaries for each Eligible Officer and then converting such maximum bonus value into a maximum number of 2019 Annual PSOs using a conversion ratio that took into account both Glu's stock price on the date the Compensation Committee approved the 2019 Annual PSOs and the Black-Scholes value of the 2019 Annual PSOs, as illustrated in the table below.

Named Executive Officer	2019 Target Bonus Percentage	2019 Maximum Bonus Percentage	Base Salary for Determining # of 2019 Annual PSOs	2019 Target Bonus Value	2019 Maximum Bonus Value	Target Bonus Value Converted into 2019 Annual PSOs	Maximum Bonus Value Converted into 2019 Annual PSOs
Nick Earl	100%	200%	$475,000[(1)]	$475,000	$950,000	150,709	301,418
Eric Ludwig	100%	200%	$375,000	$375,000	$750,000	118,981	237,962
Chris Akhavan	100%	200%	$400,000	$400,000	$800,000	126,913	253,826

(1) In October 2018, the Compensation Committee decided to increase Mr. Earl's annual base salary to $475,000, effective as of October 1, 2018.

Given constraints in the number of shares available for issuance under Glu's 2007 Equity Incentive Plan, the Compensation Committee decided that Mr. Leichtner, together with Glu's other corporate vice presidents, would not receive a 2019 Annual PSO but would instead be eligible for a cash-based bonus for 2019 performance, which bonus would be determined based on the achievement of the same 2019 Targets.

Named Executive Officer	2019 Target Bonus Percentage	2019 Maximum Bonus Percentage	2019 Target Cash Bonus	2019 Maximum Cash Bonus
Scott Leichtner	50%	100%	$172,500	$345,000

The Eligible Officers will only earn the maximum amount of 2019 Annual PSOs, and Mr. Leichtner will only earn the maximum cash bonus, if Glu both (1) achieves a minimum Adjusted EBITDA threshold for 2019 (the "Adjusted EBITDA Threshold") and (2) generates bookings for 2019 that equal or exceed a specified maximum level of performance (the "Maximum Bookings Goal"). If Glu does not achieve the Maximum Bookings Goal, the Eligible Officers can earn (1) 50% of the maximum amount of 2019 Annual PSOs or, for Mr. Leichtner, 50% of the maximum bonus, if Glu achieves the Adjusted EBITDA Threshold in 2019 and generates 2019 bookings that are approximately 4% below the Maximum Bookings Goal (the "Target Bookings Goal") and (2) 25% of the maximum amount of 2019 Annual PSOs or, for Mr. Leichtner, 25% of the maximum bonus, if Glu achieves the Adjusted EBITDA Threshold in 2019 and generates 2019 bookings that are approximately 8% below the Maximum Bookings Goal (the "Minimum Bookings Goal"). If Glu does not achieved the Adjusted EBITDA Threshold or the Minimum Booking Goal, no 2019 Annual PSOs or, for Mr. Leichtner, no cash bonus will be earned. To the extent that Glu achieves the Adjusted EBITDA Threshold in 2019 and generates bookings between two of the goals, the number of 2019 Annual PSOs earned or, for Mr. Leichtner, the amount of the cash bonus, will be calculated on a linear basis. Each of the Maximum Bookings Goal, Target Bookings Goal and the Minimum Bookings Goal represents a significant increase over our 2018 bookings.

The table below illustrates the number of 2019 Annual PSOs that each of the Eligible Officers, other than Mr. Leichtner, could potentially earn based on Glu's Adjusted EBITDA and bookings for 2019:

Named Executive Officer	2019 Annual PSOs Earned if Glu Achieves Adjusted EBITDA Threshold and Maximum Bookings Goal	2019 Annual PSOs Earned if Glu Achieves Adjusted EBITDA Threshold and Target Bookings Goal	2019 Annual PSOs Earned if Glu Achieves Adjusted EBITDA Threshold and Minimum Bookings Goal	2019 Annual PSOs Earned if Glu Fails to Achieve Adjusted EBITDA Threshold or Minimum Bookings Goal
Nick Earl	301,418	150,709	75,354	0
Eric Ludwig	237,962	118,981	59,490	0
Chris Akhavan	253,826	126,913	63,456	0

The 2019 Annual PSOs were granted on October 25, 2018, have 10 year terms and have an exercise price equal to $6.42, the closing price of Glu's common stock on The Nasdaq Global Select Market on such date. Glu will determine its 2019 Adjusted EBITDA and 2019 bookings in early 2020, and to the extent that the Eligible Officers earn any 2019 Annual PSOs, or Mr. Leichtner earns any cash bonus, based on Glu's 2019 bookings and 2019 Adjusted EBITDA, such 2019 Annual PSOs will fully vest, and for Mr. Leichtner, such cash bonus will be paid, in February 2020 (consistent with the timing of when Glu historically paid cash bonuses to executive officers).

Long-Term Incentives: Equity Compensation

Philosophy Regarding Equity Grants

We use equity awards to reward long-term performance, with strong corporate performance and extended executive officer tenure producing potentially significant value for each executive officer. Generally, a significant equity award is granted to the executive officer when he or she joins Glu. In addition, Glu has historically granted its executive officers annual refresh equity awards on the second Tuesday of October of each year.

In October 2017, emphasizing our pay-for-performance culture for our executive compensation program, the Compensation Committee revised our annual refresh grant program for our executives, and the committee continued this program in October 2018, as follows:

(1) no time vesting RSUs were granted to Eligible Officers in 2018;

(2) a significant portion of each Eligible Officer's annual equity award granted in 2018 was in the form of PSUs or PSOs with multi-year performance vesting goals tied to our Adjusted EBITDA and bookings;

(3) the remaining target value of each Eligible Officer's annual equity award granted in 2018 was in time vesting stock options; and

(4) as discussed above under "Annual Incentives," 2019 Annual PSOs were granted in October 2018 to our Eligible Officers other than Mr. Leichtner in lieu of a cash bonus plan for 2019.

The size of executive equity awards is generally set at a level that the Compensation Committee deems appropriate to create a meaningful opportunity for significant compensation if we achieve the applicable performance goals of the PSOs and PSUs and our stock price appreciates and is based upon market data presented by the applicable Compensation Committee Consultant, the individual's position with us and the individual's potential for future responsibility and promotion. The relative weight given to each of these factors varies from individual to individual at the committee's discretion. The committee may make adjustments to the size of the awards that it deems reasonable to attract and retain executives.

The Compensation Committee believes that this pay-for-performance focus in Glu's executive compensation program aligns the interests of the Eligible Officers with Glu's stockholders and is consistent with Glu's strategic goals of realizing significant bookings and Adjusted EBITDA growth. This approach to equity compensation applied to all Named Executive Officers other than Mr. de Masi, who was not eligible to receive an annual equity award pursuant to the terms of his Executive Chairman Agreement.

2018 Refresh Grants

In October 2018, the Compensation Committee determined the value of each Eligible Officer's refresh equity awards by considering market data provided by Radford (including the compensation of similarly situated executives at Glu's peer companies), past performance and future potential performance of each executive, as well as each Eligible Officer's current equity holdings vested. The committee determined to award Mr. Earl and Mr. Ludwig refresh equity awards with a value

equal to approximately the 60th percentile of similarly situated executives at Glu's peer companies, Mr. Akhavan refresh equity awards with a value equal to approximately the 75th percentile of similarly situated executives at Glu's peer companies and Mr. Leichtner refresh equity awards with a value equal to approximately the 50th percentile of similarly situated executives at Glu's peer companies. This was consistent with the committee's pay-for-performance philosophy in which the overall compensation of Messrs. Earl, Ludwig and Akhavan, including incentive-based equity compensation, could meaningfully exceed the 50th percentile of our peer companies if Glu met or exceeded its annual bookings and Adjusted EBITDA goals, with each of these Eligible Officers having a significant ability to influence Glu's ability to meet these financial goals. The Compensation Committee utilized the 75th percentile for Mr. Akhavan rather than the 60th percentile that was utilized for Messrs. Earl and Ludwig due to there being fewer precise matches for Mr. Akhavan's Chief Revenue Officer role at our peer companies and to have his refresh equity award be more consistent with the refresh equity awards he received in previous years. Since Mr. Leichtner in his role as General Counsel had less ability than the other Eligible Officers to influence Glu's ability to meet its financial goals, his incentive compensation was established at a lower percentile level.

The committee determined to award 60% of the value of each of Messrs. Earl's, Ludwig's and Akhavan's refresh equity award in PSOs (excluding the 2019 Annual PSOs issued in lieu of cash bonuses for 2019 performance) and 40% of the value of Mr. Leichtner's annual equity award in PSUs, each with multi-year performance goals. Each of these Eligible Officers received the balance of their refresh equity awards in the form of time vesting stock options.

Each of the multi-year PSOs and PSUs granted in October 2018 contain Adjusted EBITDA thresholds and bookings goals for each of 2019, 2020 and 2021, with one-third of the maximum shares subject to the PSOs and PSUs earnable in each of those years. The thresholds and goals for 2020 and 2021 increase significantly from the prior year's thresholds.

Each Eligible Officer will only earn the maximum amount of PSOs and/or PSUs for a given year if Glu both (1) achieves the Adjusted EBITDA threshold for the respective year and (2) generates bookings for such year that equal or exceed the Maximum Bookings Goal for such year, with the Adjusted EBITDA and the Maximum Bookings Goals increasing every year. If Glu does not achieve the Maximum Bookings Goal for a given year, the Eligible Officer can earn (1) 66.7% of the maximum amount of PSOs and/or PSUs for such year if Glu achieves the Adjusted EBITDA Threshold for such year and generates bookings that equal the Target Bookings Goal for such year and (2) 33.3% of the maximum amount of PSOs and PSUs for such year if Glu achieves the Adjusted EBITDA threshold for such year and generates bookings that equal the Minimum Bookings Goal for such year. Each of the Maximum Bookings Goal, Target Bookings Goal and the Minimum Bookings Goal for 2019 represents a significant increase over our 2018 bookings, with the thresholds and goals for 2020 and 2021 increasing approximately 20% from the prior year's thresholds. To the extent that Glu achieves the Adjusted EBITDA threshold for a given year and generates bookings between two of the goals, the number of PSOs and/or PSUs earned by the Eligible Officer for such year will be calculated on a linear basis. If Glu does not achieve an Adjusted EBITDA threshold or bookings goals in any year and less than the full amount of shares are earned for such year, the Eligible Officer cannot recapture those shares through overachievement of the maximum Adjusted EBITDA thresholds and bookings goals in subsequent years.

The table below illustrates the number of PSOs or PSUs that each of the Eligible Officers could potentially earn based on Glu's Adjusted EBITDA and bookings for 2019, 2020 and 2021:

Named Executive Officer	Target PSOs and PSUs Earnable	Maximum Total PSOs and PSUs Earnable	Target PSOs/PSUs Eligible to be Earned for Performance During:			PSOs/PSU's Earned in Each Year for Performance Equal to: (% of Target)		
			FY19	FY20	FY21	Threshold	Target	Maximum
Nick Earl	539,336[(1)]	809,000	179,778	179,779	179,779	50%	100%	150%
Eric Ludwig	287,335[(1)]	431,000	95,778	95,778	95,779	50%	100%	150%
Chris Akhavan	105,334[(1)]	158,000	35,111	35,111	35,112	50%	100%	150%
Scott Leichtner	40,000[(2)]	60,000	13,333	13,333	13,334	50%	100%	150%

(1) Represents PSOs.

(2) Represents PSUs

Each of the PSOs and PSUs were granted on October 25, 2018. The PSOs have ten-year terms and an exercise price equal to $6.42, the closing price of Glu's common stock on The Nasdaq Global Select Market on October 25, 2018. Glu will determine its Adjusted EBITDA and bookings for each of 2019, 2020 and 2021 early in 2020, 2021 and 2022, respectively, and to the extent that the Eligible Officers earn any PSOs or PSUs based on Glu's bookings and EBITDA for such years, the shares earned will fully vest in February 2020, 2021 and 2022, respectively.

In addition to the PSOs and PSUs described above, the Compensation Committee also granted in October 2018 the following time-based vesting stock option awards to the Eligible Officers as part of the 2018 annual refresh grant:

Named Executive Officer	Options
Nick Earl	359,000(1)
Eric R. Ludwig	191,000(1)
Chris Akhavan	70,000(1)
Scott Leichtner	58,000(1)

(1) These stock options have a ten-year term, an exercise price of $6.42 (the closing price of our common stock on The Nasdaq Global Select Market on October 25, 2018, which was the grant date) and vests with respect to 25% of the underlying shares on October 25, 2019 and as to $^{1}/_{48}$th of the shares monthly thereafter.

The committee believed that the awards to the Eligible Officers were merited based on the success that these executives had achieved during 2018 in helping Glu to achieve record bookings and putting the company on the path to sustainable profitability, and the Compensation Committee wished to ensure that these executives were properly incented to remain with us and were focused on achieving our long-term strategic goals and creating stockholder value. The committee determined that the size and mix of their equity awards appropriately balanced both retention and motivational objectives of executive pay.

Achievement of 2017 PSOs and PSUs

In October 2017, and in January 2018 with respect to our Chief Executive Officer, as part of the refresh equity awards provided to the Eligible Officers, the Compensation Committee granted the Eligible Officers PSOs (in addition to the 2018 Annual PSOs issued in lieu of a 2018 cash bonus) and PSUs. These PSOs and PSUs were structurally identical to the 2018 annual refresh grants described above, in that the awards would be earned based on Glu achieving certain Adjusted EBIDTA and booking targets over a three-year period, with one-third of the underlying shares earnable each year. However, the Adjusted EBIDTA and booking targets for these awards were for 2018, 2019 and 2020, and the targets for each of those years were established by the Compensation Committee in October 2017 and thus the targets for 2019 and 2020 differ from the targets for those years in the multi-year refresh PSOs and PSUs issued in October 2018.

The Adjusted EBITDA Threshold and Maximum Bookings Goal for the 2018 performance year for these PSO and PSUs were the same as those discussed above for the 2018 Annual PSOs issued in lieu of cash bonuses. As discussed above under "*Annual Incentives: Performance Stock Options in Lieu of Cash Bonuses & Cash Bonuses-Achievement of Performance Stock Options in Lieu of Cash Bonuses for 2018 Performance,"* Glu exceeded both the Adjusted EBITDA Threshold and Maximum Bookings Goal for 2018. Accordingly, the Eligible Officers earned the following amounts of PSOs (in addition to the 2018 Annual PSOs issued in lieu of a 2018 cash bonus) and PSUs for 2018:

- Mr. Earl: 155,620 PSOs and 155,620 PSUs
- Mr. Ludwig: 210,109 PSOs
- Mr. Akhavan: 160,643 PSOs
- Mr. Leichtner: 26,525 PSUs

These earned PSOs and PSUs became vested on February 15, 2019.

For additional information regarding the achievement of the Adjusted EBITDA Threshold and Maximum Bookings Goal for the 2018 performance year, please see "*Annual Incentives: Performance Stock Options in Lieu of Cash Bonuses & Cash Bonuses-Achievement of Performance Stock Options in Lieu of Cash Bonuses for 2018 Performance*" above.

The PSOs have ten-year terms and an exercise price equal to $3.59, the closing price of Glu's common stock on The Nasdaq Global Select Market on October 10, 2017, for Messrs. Ludwig's and Akhavan's PSOs, and $3.63, the closing price of Glu's common stock on The Nasdaq Global Select Market on January 2, 2018, for Mr. Earl's PSOs.

As discussed above, the balance of these PSOs and PSUs remain subject to performance metrics for 2019 and 2020.

CEO's 2017 Equity Refresh Grants

As set forth above, while our Eligible Officers were granted refresh equity awards consisting of PSOs, PSUs and time-based options in October 2017, we were unable to grant these refresh equity awards to Mr. Earl until January 2018 due to the Plan Limitation. Although granted in January 2018, we refer to these awards as "*Mr. Earl's 2017 Refresh Equity Awards*" in this summary. We considered these January 2018 awards as Mr. Earl's 2017 equity refresh and they were not in lieu of his 2018 equity refresh granted in October 2018 that is discussed above. Although we discussed Mr. Earl's 2017 Refresh Equity Awards in our 2018 proxy statement along with the October 2017 awards, for the sake of completeness, we are again describing these awards here to provide additional context and information regarding all of the equity awards Mr. Earl received during the calendar year ended December 31, 2018.

The Compensation Committee determined the value of each the Mr. Earl's 2017 Refresh Equity Awards by, among other factors, comparing his compensation with the 60th percentile compensation of similarly situated executives at Glu's peer companies. Due to the constraints of the Plan Limitation, the committee awarded 60% of the value of Mr. Earl's 2017 Refresh Equity Awards in a combination of PSOs and PSUs and he received the balance in the form of time vesting stock options.

Each of the PSOs and PSUs included in Mr. Earl's 2017 Refresh Equity Awards contain Adjusted EBITDA thresholds and bookings goals for each of 2018, 2019 and 2020, with one-third of the maximum shares subject to the PSOs and PSUs earnable in each of those years. Mr. Earl, along with the other Eligible Officers, will only earn the maximum amount of PSOs and/or PSUs for a given year if Glu both (1) achieves the Adjusted EBITDA threshold for such year and (2) generates bookings for such year that equal or exceed the Maximum Bookings Goal for such year. If Glu does not achieve the Maximum Bookings Goal for a given year, Mr. Earl, along with the other Eligible Officers, can earn (1) 50% of the maximum amount of PSOs and/or PSUs for such year if Glu achieves the Adjusted EBITDA Threshold for such year and generates bookings that equal the Target Bookings Goal for such year and (2) 25% of the maximum amount of PSOs and PSUs for such year if Glu achieves the Adjusted EBITDA threshold for such year and generates bookings that equal the Minimum Bookings Goal for such year. Each of the Maximum Bookings Goal, Target Bookings Goal and the Minimum Bookings Goal for 2018 represented a significant increase over forecasted 2018 bookings that was included in our 2018 annual operating plan that was approved by our Board in December 2017, with the thresholds and goals for 2019 and 2020 increasing meaningfully from the prior year's thresholds. To the extent that Glu achieves the Adjusted EBITDA threshold for a given year and generates bookings between two of the goals, the number of PSOs and/or PSUs earned by Mr. Earl, along with the other Eligible Officers, for such year will be calculated on a linear basis. If Glu does not achieve an Adjusted EBITDA threshold or bookings goals in any year and less than the full amount of shares are earned for such year, Mr. Earl, along with the other Eligible Officers, cannot recapture those shares through overachievement of the maximum Adjusted EBITDA thresholds and bookings goals in subsequent years.

The table below illustrates the number of PSOs or PSUs the PSOs and PSUs included in Mr. Earl's 2017 Refresh Equity Awards that Mr. Earl could potentially earn based on Glu's Adjusted EBITDA and bookings for 2018, 2019 and 2020:

Type of Award	Target PSOs and PSUs Earnable	Maximum Total PSOs and PSUs Earnable	Target PSOs/PSUs Eligible to be Earned for Performance During:			PSOs/PSU's Earned in Each Year for Performance Equal to: (% of Target)		
			FY18	FY19	FY20	Threshold	Target	Maximum
PSOs	311,241	466,861	103,747	103,747	103,747	50%	100%	150%
PSUs	311,241	466,861	103,747	103,747	103,747	50%	100%	150%

Each of the PSOs and PSUs were granted on January 2, 2018. The PSOs have ten-year terms and an exercise price equal to $3.63, the closing price of Glu's common stock on The Nasdaq Global Select Market on January 2, 2018. Glu will determine its EBITDA and bookings for each of 2018, 2019 and 2020 early in 2019, 2020 and 2021, respectively, and

to the extent that Mr. Earl earn any PSOs or PSUs based on Glu's bookings and EBITDA for such years, the shares earned will fully vest in February 2019, 2020 and 2021, respectively.

The achievement of Mr. Earl's 2017 Refresh Equity Awards for fiscal year 2018 are discussed above under "*Achievement of 2017 Performance Options and Performance RSUs.*"

In addition to the PSOs and PSUs described above, the Compensation Committee also granted Mr. Earl 566,277 shares subject to time-based vesting stock option awards as part of Mr. Earl's 2017 Refresh Equity Awards. This stock option has a ten-year term, an exercise price of $3.63 (the closing price of our common stock on January 2, 2018, which was the grant date) and vested with respect to 25% of the underlying shares on January 2, 2019 and as to 1/48th of the shares monthly thereafter.

Severance and Change of Control Payments

Messrs. Earl, Ludwig, Akhavan and Leichtner each have an agreement with us that provides for payments and benefits if the individual is terminated under certain circumstances within 12 months following a change of control of Glu (a "double trigger" termination). In addition, Mr. Earl's employment agreement provides for payments and benefits if he is terminated under certain circumstances in the absence of our change of control. Mr. de Masi's Executive Chairman Agreement provides that all of his unvested equity awards will immediately vest in the event of a change of control of Glu. In addition, Mr. de Masi will receive certain payments and benefits if he is terminated under enumerated circumstances prior to November 2, 2019, in the absence of a change of control of Glu. For a description of these agreements and quantification of these severance and change of control benefits, please see the discussion under "*Payments Upon Termination or Change in Control*" below. Other than as set forth in these agreements, no executive officer is entitled upon termination to either equity vesting acceleration or cash severance payments.

The Compensation Committee decided to provide these arrangements to mitigate some of the risk that exists for executives working in a small public company, an environment where there is a meaningful likelihood that we may be acquired. These arrangements are also intended to mitigate a potential disincentive for executives to consider and execute on an acquisition where the acquirer may not require the services of these executives following the acquisition.

The Compensation Committee decided to provide Mr. de Masi with severance benefits in the absence of a change in control transaction to retain his service as our Executive Chairman and in light of the fact that Mr. de Masi had this arrangement in place as our President and Chief Executive Officer.

Other Benefits

Executive officers are eligible to participate in all of our employee benefit plans, such as medical, dental, vision, group life, disability, and accidental death and dismemberment insurance and our employee stock purchase plan and 401(k) plan, in each case on the same basis as other employees. There were no special benefits or perquisites provided to any Named Executive Officer in 2018.

Clawback Policy (Recovery of Incentive Compensation Policy)

In July 2017, we adopted an executive compensation recovery policy that permits us to seek recovery of some or all of incentive compensation paid or awarded to executive officers, our Vice President of Accounting and our corporate controller in the event of the restatement by Glu of any financial results required to be reported under the U.S. federal securities laws after January 1, 2018 because one or more executive officers, our Vice President of Accounting and/or our corporate controller engaged in fraud or intentional misconduct. In such cases, the Compensation Committee may review all incentive-based cash compensation and equity compensation paid, granted or for which our executive officers, our Vice President of Accounting and our corporate controller are eligible on or after January 1, 2018 ("*Incentive Compensation*") on the basis of having met or exceeded performance goals during the period covered by the restatement and will, to the extent practicable and in the best interests of stockholders, instruct Glu to seek to recover or cancel such Incentive Compensation from our executive officers and our corporate controller to the extent that performance goals would not have been met under such restated financial result. In addition, as a public company subject to the provisions of Section 304 of the Sarbanes-Oxley Act of 2002, if we are required as a result of misconduct to restate our financial results due to our material noncompliance with any financial reporting requirements under the federal securities laws, our Chief

Executive Officer and Chief Financial Officer may be legally required to reimburse us for any bonus or other incentive-based or equity-based compensation they receive.

Equity Granting Policy

Equity awards are typically either granted at regularly scheduled Stock Option Administration Committee meetings or via unanimous written consent, with the effective date of such grant being the second Tuesday of each month. The primary exceptions are for new hire or promotion equity grants that require Compensation Committee approval, which grants are generally approved on the second Tuesday of each month following the date the individual is hired or promoted, or for new hire awards made to individuals in connection with an acquisition. The Stock Option Administration Committee does not have discretion to set other grant dates for awards made pursuant to its delegated authority. Our annual equity awards for our executive officers are generally made at the Compensation Committee meeting held during our fourth quarter, at which the Compensation Committee reviews executive compensation for the upcoming year.

Other than as described in the section of this proxy statement titled “Director Compensation,” we do not have any program, plan or obligation that requires us to grant new equity compensation on specified dates.

The exercise price of a newly granted option is the closing price of our common stock on the date the option is granted.

Tax and Accounting Treatment of Compensation

In designing our compensation programs, the Compensation Committee considers the financial accounting and tax consequences to us, as well as the tax consequences to our employees. We account for equity compensation paid to our employees under the rules of FASB ASC Topic 718, which requires us to estimate and record an expense for each equity compensation award over the service period of the award. Accounting rules also require us to record cash compensation as an expense at the time the obligation is accrued. Management considers the FASB ASC Topic 718 cost of outstanding equity awards as part of our equity grant recommendations to the Compensation Committee.

Section 162(m) of the Tax Code generally disallows public companies a tax deduction for federal income tax purposes of remuneration in excess of $1 million paid to certain executive officers. While our Compensation Committee may consider the deductibility of awards as one factor in determining executive compensation, our Compensation Committee also looks at other factors in making its decisions and retains the flexibility to award compensation that it determines to be consistent with the goals of our executive compensation program, even if the awards are not deductible by us for tax purposes.

Changes to Section 162(m) in connection with the passage of the Tax Cuts and Jobs Act repealed exceptions to the deductibility limit that were previously available for “qualified performance-based compensation” (including stock option grants, performance-based cash bonuses and performance-based equity awards, such as performance-based restricted stock units), effective for taxable years after December 31, 2017. As a result, any compensation paid to certain of our executive officers in excess of $1 million will be non-deductible, unless it qualifies for transition relief afforded by the Tax Cuts and Jobs Act to compensation payable pursuant to certain binding arrangements in effect on November 2, 2017 (including performance-based restricted stock units that were intended to qualify as performance-based compensation for purposes of Section 162(m) that were granted to our executive officers who were “covered employees” within the meaning of Section 162(m)). We believe that compensation expense incurred in respect of our stock options, PSUs and PSOs granted prior to November 2, 2017, will continue to be deductible pursuant to this transition rule. However, because of uncertainties in the interpretation and implementation of the changes to Section 162(m) in the Tax Cuts and Jobs Act, including the scope of the transition relief, we can offer no assurance of such deductibility.

Sections 280G and 4999 of the Code provide that executive officers and directors who hold significant equity interests and certain other service providers may be subject to an excise tax if they receive payments or benefits in connection with a change in control that exceeds certain prescribed limits and that the payor company, or a successor, may forfeit a deduction on the amounts subject to this additional tax. Section 409A of the Code also imposes additional significant taxes on the individual in the event that an executive officer, director or other service provider receives “deferred compensation” that does not meet the requirements of Section 409A of the Code. We did not provide any executive officer, including any Named Executive Officer, with a “gross-up” or other reimbursement payment for any tax

liability that he or she might owe as a result of the application of Sections 280G, 4999, or 409A of the Code during 2018, and we have not agreed and are not otherwise obligated to provide any Named Executive Officers with such a "gross-up" or other reimbursement.

We also consider the tax impact to employees in designing our compensation programs, including our equity compensation programs. For example, employees generally control the timing of taxation with respect to stock options but do not control the timing with respect to RSUs and PSUs in which income is recognized upon vesting and settlement. To assist employees (including our executives) in satisfying their tax obligations for RSUs and PSUs, we withhold shares from the vesting RSUs and PSUs to cover applicable taxes. We structure cash bonus compensation so that it is taxable to our employees at the time it is paid to them.

COMPENSATION COMMITTEE REPORT

The Compensation Committee has reviewed and discussed the Compensation Disclosure and Analysis set forth above with Glu's management. Based on its review and these discussions, the Compensation Committee recommended to our Board that the Compensation Discussion and Analysis be included in this proxy statement which is incorporated by reference into our Annual Report on Form 10-K filed with the SEC on February 28, 2019.

Gabrielle Toledano (Chair)
Greg Brandeau
Hany M. Nada
Benjamin T. Smith, IV

EXECUTIVE COMPENSATION

Please see the section titled "Executive Officers" at the end of Item 1 of our Annual Report on Form 10-K for the year ended December 31, 2018, which accompanies these proxy materials, regarding the identity of our executive officers and their respective business experience.

Summary Compensation Table

The following table shows compensation earned during 2018 by our Named Executive Officers. For information about employment contracts, termination of employment and change-of-control arrangements between us and the Named Executive Officers, see "Potential Payments upon Termination or Change in Control" below.

Name and Principal Position	Fiscal Year	Salary ($)	Bonus ($)	Stock Awards[1][3] ($)	Option Awards ($)	Non-Equity Incentive Plan Compensation[4] ($)	All other compensation	Total ($)
Niccolo M. de Masi *Executive Chairman*	2018	375,000	—	—	—	—	—	375,000
	2017	375,000	—	—	—	—	—	375,000
	2016	483,750[5]	—	—	—	—	14,768[6]	498,518
Nick Earl *President and Chief Executive Officer*	2018	455,769[7]	—	1,694,705[13]	7,162,611[9]	—	—	9,313,086
	2017	450,000	—	—	1,454,246[10]	702,000	—	2,606,246
	2016	365,000[8]	—	—	1,314,640	—	—	1,679,640
Eric R. Ludwig *Executive Vice President, Chief Operating Officer and Chief Financial Officer*	2018	375,000	—	—	3,040,889[9]	—	—	3,415,890
	2017	375,000	—	—	2,117,652[10]	585,000	—	3,077,652
	2016	375,000	—	—	749,530	—	—	1,124,530
Chris Akhavan *Chief Revenue Officer*	2018	400,000	—	—	1,705,320[9]	—	—	2,105,320
	2017	307,692[11]	—	—	1,702,157[10]	436,800	—	2,446,649
	2016	280,000	—	—	396,810	—	—	676,810
Scott J. Leichtner *Vice President, General Counsel and Corporate Secretary*	2018	325,769[12]	—	385,200[13]	172,985[9]	—	—	883,954
	2017	308,462[12]	—	204,733[14]	552,256[10]	237,900	—	1,303,351
	2016	281,923[12]	—	—	308,630	—	—	590,553

(1) Stock Awards represent PSU awards.

(2) Option Awards represent stock option and PSO awards.

(3) Amounts shown in this column do not reflect dollar amounts actually received by the officer. Instead, these amounts reflect the aggregate full grant date fair value calculated in accordance with FASB ASC Topic 718. See Note 11 — Stock Option and Other Benefit Plans — in the notes to consolidated financial statements contained in our Form 10-K for the year ended December 31, 2018 for a description of the ASC Topic 718 methodology and assumptions. The number of shares subject to stock options and RSUs granted in 2018 to our Named Executive Officers is shown in the "Grants of Plan-Based Awards in 2018" table below.

(4) The amounts received by the Eligible Officers in 2017 represent total performance-based cash bonuses that were earned during 2017 and paid in 2018 pursuant to our 2017 Executive Bonus Plan. In October 2017, our Compensation Committee decided to grant PSOs with respect to 2018 performance goals to the Eligible Officers in lieu of a cash bonus for 2018. See the "Compensation Discussion and Analysis" section of this proxy statement and the "Grants of Plan-Based Awards in 2018" table below for further information regarding the 2018 grants of PSOs in lieu of a 2018 cash bonus.

(5) Prior to Mr. de Masi appointment as our Executive Chairman effective November 1, 2016, he served as our President and Chief Executive Officer and received an annual base salary of $500,000.

(6) Represents payment of Mr. de Masi's legal fees incurred in connection with negotiating his Executive Chairman Agreement.

(7) In October 2018, in connection with the Compensation Committee's annual review of executive compensation, the committee increased Mr. Earl's annual base salary to $475,000, effective as of October 1, 2018.

(8) Mr. Earl joined us in November 2015 as President of Global Studios and was appointed President and Chief Executive Officer effective November 10, 2016. Mr. Earl's annual base salary was increased to $375,000 effective October 3, 2016 in connection with the Compensation Committee's annual review of executive compensation and to $450,000 effective November 4, 2016 in connection with his appointment as President and Chief Executive Officer.

(9) Represents time-based stock option and PSO awards. The grant date fair value of the time-based stock option awards were as follows: $968,560 for Mr. Earl's January 2018 grant, $1,070,718 for Mr. Earl's October 2018 grant, $569,658 for Mr. Ludwig, $208,775 for Mr. Akhavan, and $172,985 for Mr. Leichtner. The table reflects the full fair market value of the PSO awards taking into account the probable outcome of the performance conditions as of December 31, 2018. The grant date fair value of the maximum shares issuable under the PSO awards are as follows: $999,689 for Mr. Earl's January 2018 grant, $4,123,644 for Mr. Earl's October 2018 grant, $2,471,232 for Mr. Ludwig and $1,496,545 for Mr. Akhavan. See the "Compensation Discussion and Analysis" section of this proxy statement and the "Grants of Plan-Based Awards in 2018" table below for further information regarding the performance conditions of the PSOs.

(10) Represents time-based stock option and PSO awards. The grant date fair value of the time-based stock option awards were as follows: $688,245 for Mr. Earl, $466,471 for Mr. Ludwig, $356,649 for Mr. Akhavan, and $314,687 for Mr. Leichtner. The table reflects the full fair market value of the PSO awards taking into account the probable outcome of the performance conditions as of December 31, 2017. The grant date fair value of the maximum shares issuable under the PSO awards were as follows: $1,332,175 for Mr. Earl, $2,533,674 for Mr. Ludwig, $2,081,631 for Mr. Akhavan and $413,163 for Mr. Leichtner.

(11) In October 2017, in connection with the Compensation Committee's annual review of executive compensation, the committee increased Mr. Akhavan's annual base salary to $400,000, effective as of October 1, 2017.

(12) In October 2016, 2017 and 2018, in connection with the Compensation Committee's annual review of executive compensation, the committee increased Mr. Leichtner's annual base salary to $305,000, effective as of October 3, 2016, to $320,000, effective as of October 1, 2017, and to $345,000, effective October 1, 2018.

(13) The table reflects the full fair market value of the PSU award taking into account the probable outcome of the performance conditions as of December 31, 2018. This value equals the grant date fair values of the maximum shares issuable under the PSU award.

(14) The table reflects the full fair market value of the PSU award taking into account the probable outcome of the performance conditions as of December 31, 2017. The grant date fair value of the maximum shares issuable under the PSU award was $285,674.

Grants of Plan-Based Awards in 2018

The following table provides information for the Named Executive Officers about equity awards granted during 2018. All stock options, PSOs and PSUs were awarded under our 2007 Equity Incentive Plan.

Name	Grant Date	Estimated Future Payouts Under Equity Plan Incentive Awards (#) Threshold	Target	Maximum	Number of Securities Underlying Option Awards (#)	Exercise Price of Option Awards ($)	Grant Date Fair Value of Stock and Option Awards ($)[1]
Niccolo M. de Masi[2]	—	—	—	—	—	—	—
Nick Earl	1/2/18[5]	—	—	—	566,277	3.63	968,560
	1/2/18[6]	155,619	311,241	466,861	—	3.63	999,689
	1/2/18[6]	155,619	311,241	466,861	—	—	1,694,705
	10/25/18	—	—	—	359,000	6.42	1,070,718
	10/25/18[3]	75,354	150,709	301,418	—	6.42	1,068,617
	10/25/18[4]	269,664	539,336	809,000	—	6.42	3,055,027
Eric R. Ludwig	10/25/18	—	—	—	191,000	6.42	569,658
	10/25/18[3]	59,490	118,981	237,962	—	6.42	843,647
	10/25/18[4]	143,665	287,335	431,000	—	6.42	1,627,585
Chris Akhavan	10/25/18	—	—	—	70,000	6.42	208,775
	10/25/18[3]	63,456	126,913	253,826	—	6.42	899,899
	10/25/18[4]	52,666	105,334	158,000	—	6.42	596,655
Scott J. Leichtner	10/25/18	—	—	—	58,000	6.42	172,985
	10/25/18[4]	20,000	40,000	60,000	—	—	385,200

(1) Amounts shown in this column do not reflect dollar amounts actually received by the officer. Instead, these amounts reflect the aggregate full grant date fair value calculated in accordance with FASB ASC Topic 718. See Note 11 — Stock Option and Other Benefit Plans — in the notes to consolidated financial statements contained in our Form 10-K for the year ended December 31, 2018 for a description of the ASC Topic 718 methodology and assumptions. The performance awards reflected in this column reflect the full fair market value of the award taking into account the probable outcome of the performance conditions.

(2) Mr. de Masi is ineligible to earn any cash incentive bonuses or receive any equity awards under the terms of his Executive Chairman Agreement entered into in November 2016.

(3) On October 25, 2018, our Compensation Committee determined to award each of Messrs. Earl, Ludwig, and Akhavan PSOs in lieu of a cash bonus plan for 2019. The shares indicated represent the threshold, target and maximum number of shares to be issued depending on the achievement of certain Adjusted EBITDA thresholds and booking goals during 2019. Mr. Leichtner participates in a cash bonus plan for 2018 as further described in the "Compensation Discussion and Analysis" section above.

(4) Represents the threshold, target and maximum number of shares to be issued depending on the achievement of certain Adjusted EBITDA thresholds and booking goals during 2019, 2020 and 2021 as further described below in footnotes 13 and 14 to the "Outstanding Equity Awards at the End of 2018" Table. For Messrs. Earl, Ludwig, and Akhavan, these awards represent PSOs, and for Mr. Leichtner his award was a PSU.

(5) On January 2, 2018, our Compensation Committee issued Mr. Earl (i) an option to purchase 566,277 shares, which vests over four years with 25% vesting on January 2, 2019 and 1/48th of the underlying shares vesting monthly thereafter and (ii) PSO and PSU awards described in footnote (6) below, both of which represented Mr. Earl's annual refresh awards that would have otherwise been granted in October 2017. However, due to a limitation that was previously contained in our 2007 Equity Incentive Plan that provided that no Glu employee may receive more than 1,500,000 shares subject to awards pursuant to the plan in any calendar year (the "Plan Limitation"), our Compensation Committee was unable to issue these awards in 2017 and instead granted Mr. Earl these awards on the first business day of 2018.

(6) On January 2, 2018, our Compensation Committee issued Mr. Earl a PSO award to purchase up to 466,861 shares and a PSU award for up to 466,861 shares. The shares indicated represent the threshold, target and maximum number of shares to be issued depending on the achievement of certain Adjusted EBITDA thresholds and booking goals during 2018, 2019 and 2020 as further described below in footnotes 10 and 11 to the "Outstanding Equity Awards at the End of 2018" Table.

Outstanding Equity Awards at the End of 2018

The following table provides information with respect to outstanding stock options, RSUs, PSOs and PSUs held by our Named Executive Officers as of December 31, 2018.

		Option Awards				Stock Awards	
		Number of Securities Underlying Options(1)(2)					
Name	Grant Date	Exercisable	Unexercisable	Option Exercise Price(3)	Option Expiration Date	Number of Shares or Units of Stock that Have not Vested(2)(4)	Market Value of Shares or Unites of Stock That Have Not Vested(5)
Niccolo M. de Masi	06/04/15	—	—	—	—	46,875	378,281
	10/13/15	—	—	—	—	187,500	1,513,125
Nick Earl	12/09/15(6)	231,250	68,750	2.92	12/09/25	—	—
	12/09/15(6)	—	—	—	—	125,000	1,008,750
	10/11/16	460,416	389,584	2.13	10/11/26	—	—
	11/14/16(7)	338,541	311,459	2.10	11/14/26	—	—
	01/03/17(7)	442,708	407,292	2.00	01/02/27	—	—
	10/10/17(8)	—	650,000(9)	3.59	10/10/27	—	—
	01/02/18(8)	—	566,277	3.63	01/02/28	—	—
	01/02/18(8)(11)	—	—	—	—	466,861	3,767,568
	01/02/18(8)(10)	—	466,861	3.63	01/02/28	—	—
	10/25/18	—	359,000	6.42	10/25/28	—	—
	10/25/18(12)	—	301,418	6.42	10/25/28	—	—
	10/25/18(13)	—	809,000	6.42	10/25/28	—	—
Eric R. Ludwig	10/08/13	138,000	—	2.91	10/08/19	—	—
	10/14/14	205,000	—	4.10	10/14/20	—	—
	10/13/15	—	—	—	—	83,750	675,863
	10/13/15	209,791	55,209	4.09	10/13/25	—	—
	10/11/16	460,416	389,584	2.13	10/11/26	—	—
	10/10/17	81,708	198,438	3.59	10/10/27	—	—
	10/10/17(9)	—	566,976	3.59	10/10/27	—	—
	10/10/17(10)	—	630,328	3.59	10/10/27	—	—
	10/25/18	—	191,000	6.42	10/25/28	—	—
	10/25/18(12)	—	237,962	6.42	10/25/28	—	—
	10/25/18(13)	—	431,000	6.42	10/25/28	—	—
Chris Akhavan	10/14/14	100,000	—	4.10	10/14/20	—	—
	10/13/15	—	—	—	—	27,500	221,925
	10/13/15	71,250	18,750	4.09	10/13/25	—	—
	10/11/16	243,750	206,250	2.13	10/11/26	—	—
	10/10/17	62,471	151,720	3.59	10/10/27	—	—
	10/10/17(9)	—	503,979	3.59	10/10/27	—	—
	10/10/17(10)	—	481,929	3.59	10/10/27	—	—
	10/25/18	—	70,000	6.42	10/25/28	—	—
	10/25/18(12)	—	253,826	6.42	10/25/28	—	—
	10/25/18(13)	—	158,000	6.42	10/25/28	—	—
Scott J. Leichtner	10/08/13	54,357	—	2.91	10/08/19	—	—
	10/14/14	60,000	—	4.10	10/14/20	—	—
	10/13/15	—	—	—	—	27,500	221,925
	10/13/15	71,250	18,750	4.09	10/13/25	—	—
	10/11/16	189,583	160,417	2.13	10/11/26	—	—
	10/10/17	55,121	133,869	3.59	10/10/27	—	—
	10/10/17(9)	—	201,592	3.59	10/10/27	—	—
	10/10/17(11)	—	—	—	—	79,575	642,170
	10/25/18	—	58,000	6.42	10/25/28	—	—
	10/25/18(14)	—	—	—	—	60,000	484,200

(1) Except as otherwise described in these footnotes, each award in this column is a time-vesting stock option that was granted under our 2007 Equity Incentive Plan. Except as otherwise described in these footnotes, each stock option

vests with respect to 25% of the underlying shares on the first anniversary of the grant date and as to $^{1}/_{48}{}^{th}$ of the shares of common stock underlying it monthly thereafter.

(2) We have entered into the severance agreements described under "Potential Payments upon Termination or Change in Control" below, which provide for acceleration of vesting of each equity award made or to be made to our Named Executive Officers if certain events occur following a change of control of Glu, or as to our Executive Chairman, absent a change of control.

(3) Represents the fair market value of a share of our common stock, which is equal to the closing price of our common stock on The Nasdaq Global Select Market on the grant date.

(4) Except as otherwise described in these footnotes, each award in this column is a time-vesting RSU award that was granted under our 2007 Equity Incentive Plan. Except as otherwise noted, each RSU vests as to 25% of the total number of shares on the applicable quarterly vesting date that is at least one year from the grant date (the "RSU First Vesting Date"), with the remaining 75% of the shares vesting in equal quarterly installments over the next three years following the RSU First Vesting Date on the same day of each third month (e.g., if the RSU First Vesting Date is February 15, the first quarterly vesting date will be May 15, the next quarterly vesting date will be August 15, etc.); provided, however, that if any portion of the RSU vests on a date that is a non-trading day on The Nasdaq Global Select Market, then the award will vest on the next trading day.

(5) Represents the product of the maximum number of shares subject to the RSU or PSU, as applicable, that have not vested multiplied by the closing price of our common stock on The Nasdaq Global Select Market on December 31, 2018, the last trading day of 2018, which was $8.07.

(6) On December 7, 2015, our Compensation Committee approved an award to Mr. Earl of an option to purchase 300,000 shares of our common stock and 500,000 RSUs under our 2008 Equity Inducement Plan in connection with our hiring of Mr. Earl.

(7) On November 14, 2016, our Compensation Committee approved an award to Mr. Earl of an option to purchase 1,500,000 shares of our common stock. However, due to the Plan Grant Limitation, we were only able to award Mr. Earl an option to purchase 650,000 shares of our common stock at such time. Due to the Plan Grant Limitation, our Compensation Committee on November 14, 2016 approved a bifurcation of this grant, and Mr. Earl was awarded the 850,000 shares balance of his option on January 3, 2017, the first trading day of 2017, with identical vesting to the option granted on November 14, 2017 (i.e., 25% of the underlying shares vested on November 14, 2017 and $^{1}/_{48}{}^{th}$ of the underlying shares vest monthly thereafter).

(8) On October 10, 2017, our Compensation Committee approved a PSO award under our 2007 Equity Incentive Plan to Mr. Earl to purchase up to a maximum of 650,000 shares of our common stock. However, due to the Plan Grant Limitation, we were not able to grant Mr. Earl further equity awards in 2017. On January 2, 2018, our Compensation Committee approved a PSO award to purchase up to 466,861 shares, a PSU award covering up to 466,861 shares, and an option to purchase 566,277 shares, each issued under our 2007 Equity Incentive Plan.

(9) On October 10, 2017, our Compensation Committee determined to award each of Messrs. Earl, Ludwig, Akhavan and Leichtner PSOs in lieu of a cash bonus plan for 2018. The number of shares subject to the PSOs that would become vested and exercisable, if any, depended on the achievement of certain Adjusted EBITDA thresholds and booking goals during 2018. Since we met the required Adjusted EBITDA goal and generated more than the maximum level of bookings during 2018, the maximum number of PSOs that Messrs. Earl, Ludwig, Akhavan and Leichtner could earn, as indicated in the table, vested and became exercisable in February 2019.

(10) Represents PSOs granted under our 2007 Equity Incentive Plan containing Adjusted EBITDA thresholds and bookings goals for each of 2018, 2019 and 2020, with one-third of the maximum shares subject to the PSOs earnable in each of those years. Since we met the required Adjusted EBITDA goal and generated more than the maximum level of bookings for 2018, the maximum number of PSOs that Messrs. Earl, Ludwig, and Akhavan could earn for 2018 (which is one-third of the shares indicated in the table) vested and became exercisable in February 2019. For 2019 and 2020, Glu will determine its EBITDA and bookings for each of these years in early 2020 and 2021, respectively, and to the extent that these Named Executive Officers earn any PSOs based on Glu's bookings and EBITDA for such years, the shares earned will fully vest in February 2020 and 2021, respectively.

(11) Represents PSUs granted under our 2007 Equity Incentive Plan containing Adjusted EBITDA thresholds and bookings goals for each of 2018, 2019 and 2020, with one-third of the maximum shares subject to the PSUs earnable in each of those years. Since we met the required Adjusted EBITDA goal and generated more than the maximum level of bookings for 2018, the maximum number of PSUs that Messrs. Earl and Leichtner could earn for 2018 (which is one-third of the shares indicated in the table) vested and became exercisable in February 2019. For 2019 and 2020, Glu will determine its EBITDA and bookings for each of these years in early 2020 and 2021, respectively, and to the extent that Messrs. Earl and Leichtner earn any PSUs based on Glu's bookings and EBITDA for such years, the shares earned will fully vest in February 2020 and 2021, respectively.

(12) On October 25, 2018, our Compensation Committee determined to award each of Messrs. Earl, Ludwig and Akhavan PSOs under our 2007 Equity Incentive Plan in lieu of a cash bonus plan for 2019. The shares indicated represent the maximum number of shares to be issued depending on the achievement of certain Adjusted EBITDA thresholds and booking goals during 2019. Glu will determine its 2019 Adjusted EBITDA and bookings in early 2020, and to the extent that these Named Executive Officers earn any PSOs based on Glu's 2019 bookings and Adjusted EBITDA, such PSOs will fully vest in February 2020.

(13) Represents PSOs granted under our 2007 Equity Incentive Plan containing Adjusted EBITDA thresholds and bookings goals for each of 2019, 2020 and 2021, with one-third of the maximum shares subject to the PSOs earnable in each of those years. Glu will determine its EBITDA and bookings for each of 2019, 2020 and 2021 early in 2020, 2021 and 2022, respectively, and to the extent that these Named Executive Officers earn any PSOs based on Glu's bookings and EBITDA for such years, the shares earned will fully vest in February 2020, 2021 and 2022, respectively.

(14) Represents PSUs granted under our 2007 Equity Incentive Plan containing Adjusted EBITDA thresholds and bookings goals for each of 2019, 2020 and 2021, with one-third of the maximum shares subject to the PSOs earnable in each of those years. Glu will determine its EBITDA and bookings for each of 2019, 2020 and 2021 early in 2020, 2021 and 2022, respectively, and to the extent that these Named Executive Officers earn any PSOs based on Glu's bookings and EBITDA for such years, the shares earned will fully vest in February 2020, 2021 and 2022, respectively.

Option Exercises and Stock Vested in 2018

The following table shows information about stock option exercises and RSU award settlements for each of the Named Executive Officers during 2018, including the value realized upon exercise or settlement. Other than RSUs, we have not granted any stock awards (as opposed to other forms of equity compensation) to any of our employees that settled during 2018.

Name	Number of Shares Acquired on Exercise of Options	Value Realized on Exercise of Options[1] ($)	Number of Shares Acquired On Settlement of RSUs[2]	Value Realized on Settlement of RSUs[3] ($)
Niccolo M. de Masi	742,000[4]	2,562,750	468,750	2,691,704
Nick Earl	—	—	125,000	730,313
Eric R. Ludwig	285,000	1,024,632	148,750	859,811
Chris Akhavan	339,145	768,146	56,250	328,642
Scott J. Leichtner	105,000	305,426	46,250	270,217

(1) The value realized on exercise of option awards is calculated as the difference between the price at which the exercised shares were sold (excluding brokerage commissions) and the exercise price of the options.

(2) Amounts reported in this column include shares relinquished by the Named Executive Officer and cancelled by Glu in exchange for Glu's agreement to pay federal and state tax withholding obligations of the Named Executive Officer resulting from the vesting of RSUs, including withholding of 233,314 shares from Mr. de Masi, 62,698 shares from Mr. Earl, 77,802 shares from Mr. Ludwig, 28,733 shares from Mr. Akhavan and 23,651 shares from Mr. Leichtner.

(3) The value realized on settlement of RSUs is calculated by multiplying the number of RSUs settled by the closing price of Glu's common stock on the settlement date.

(4) Amounts reported in this column include 547,064 shares relinquished by Mr. de Masi and cancelled by Glu in exchange for Glu's agreement to pay federal and state tax withholding obligations of Mr. de Masi resulting from the cashless exercise of the options.

Pension Benefits and Nonqualified Deferred Compensation

We do not provide any defined benefit plan pension benefits or a nonqualified deferred compensation plan to our Named Executive Officers.

Potential Payments upon Termination or Change in Control

Mr. de Masi

In connection with the appointment of Niccolo de Masi as our Executive Chairman effective as of November 2, 2016, we entered into an Executive Chairman Agreement with Mr. de Masi.

The Executive Chairman Agreement provides that in the event of a "cessation," or if Mr. de Masi's employment is terminated other than for "cause," death or disability, prior to the third anniversary of the Executive Chairman Agreement, and Mr. de Masi delivers to us a signed agreement and general release, then he will be entitled to the following severance benefits:

- any then unearned portion of his salary, payable based on an annual amount of $375,000, had he continued to provide services through the third anniversary of the Executive Chairman Agreement, payable in a lump sum;
- each of his outstanding and not fully vested equity awards become fully vested and exercisable through all vesting tranches that would otherwise occur prior to November 16, 2019; and
- continuation of coverage for him (and any eligible dependents) pursuant to COBRA for the balance of the period until November 2, 2019.

The Executive Chairman Agreement also provides that in the event of a "corporate transaction" as defined in the 2007 Equity Incentive Plan, the vesting of all of Mr. de Masi's outstanding and not fully vested equity awards shall fully accelerate, and such awards shall become exercisable (as applicable) and free of all restrictions (other than those set forth in our insider trading policies then in effect or imposed by applicable law) in full prior to the consummation of such corporate transaction.

The following definitions apply to the Executive Chairman Agreement:

"Cause" is defined to mean (i) Mr. de Masi committing an act of gross negligence, including misappropriation, embezzlement or fraud, that materially adversely affects us or any of our customers, suppliers or partners, (ii) willful misconduct in the performance of services for us or breach of fiduciary duty involving personal profit (other than unintentional, immaterial breaches that are promptly cured after written notice to Mr. de Masi), (iii) his being convicted of, or pleading no contest to, any felony, (iv) any material breach of any agreement with us by him that remains uncured for thirty (30) days after written notice by us to Mr. de Masi, unless that breach is incapable of cure, in which case no cure period shall be permitted, or any other material unauthorized use or disclosure of our confidential information or trade secrets involving personal benefit, or (v) his failure to follow the lawful and reasonable directions of the Board; provided that, at any point when Mr. de Masi no longer serves as Executive Chairman, principal executive officer, or otherwise as an employee of Glu, and serves only as a member of the Board, "Cause" shall instead mean a breach of fiduciary duties as a director such that he would not be entitled to indemnification under applicable law.

"Cessation" means (a) Mr. de Masi ceases to serve as a member of the Board at any time prior to the third anniversary of entry into the Executive Chairman Agreement, provided that such cessation is (I) at the written request of the majority of the members of the Board (or made by a majority of the Board at a properly called meeting thereof), (II) due to Mr. de Masi not being recommended by us or the Board for reelection or not being reelected to the Board by our stockholders, (III) following a material breach of the Executive Chairman Agreement by us of which Mr. de Masi has notified us within 90 days after such breach in writing that Glu has materially breached the Executive Chairman Agreement (specifying the provision(s) breached and the circumstances constituting such breach), we have failed to cure such breach within 30 days

following such notice, and Mr. de Masi has resigned and ceased service within fifteen (15) days of such failure to cure, or (IV) following a material diminution in Mr. de Masi's assigned duties as Executive Chairman, provided that he first notifies us within 30 days after such material diminution in writing that such event has occurred and we have failed to cure such diminution within 30 days following such notice, and Mr. de Masi has resigned and ceased service within fifteen (15) days of such failure to cure (a resignation fulfilling all of the requirements of clause (a) (III) or (a) (IV) shall be deemed for "Good Reason"), or (b) Mr. de Masi ceases to serve as Executive Chairman at the written request of the majority of the members of the Board (or made by a majority of the Board at a properly called meeting thereof). For the avoidance of doubt, (i) except as provided above, any voluntary termination of Mr. de Masi's service or termination of his service due to his death or disability or (ii) termination of Mr. de Masi's status as a "principal executive officer" while still serving as Executive Chairman or as a member of the Board shall, in each case, not constitute a cessation under the Executive Chairman Agreement.

If we had been subject to a corporate transaction as of December 31, 2018, Mr. de Masi would have received $1,891,406 upon the full acceleration of all of his unvested shares subject to outstanding equity awards held by him on December 31, 2018. The table below estimates the payments that Mr. de Masi would have received in the event of a cessation, or if his employment was terminated other than for cause, death or disability, as of December 31, 2018:

Name	**Benefits**	**Cessation or Termination Other Than for Cause or Disability ($)**
Niccolo M. de Masi	Severance	324,519
	Equity Acceleration[1]	1,891,406[3][4]
	COBRA Premium[2]	25,020
	Total Value:	**2,240,945**

(1) These amounts are calculated by aggregating the sums determined by multiplying, for each award the number of shares accelerated by (a) the positive difference, if any, between the closing price per share of our common stock on The Nasdaq Global Select Market on December 31, 2018, the last trading day of 2018, which was $8.07, and the option exercise price per share for stock options, and (b) $8.07 per share in the case of RSUs.

(2) COBRA payout amounts are estimated based on the cost of the monthly premium and represent coverage for medical, dental and vision insurance for the executive and his eligible dependents, if any.

(3) Reflects full acceleration of all unvested shares subject to outstanding equity awards held by Mr. de Masi on December 31, 2018.

(4) These amounts are calculated by aggregating the sums determined by multiplying, for each award the number of shares accelerated by (a) the positive difference, if any, between the closing price per share of our common stock on The Nasdaq Global Select Market on December 31, 2018, which was $8.07, and the option exercise price per share for stock options, and (b) $8.07 per share in the case of RSUs.

Mr. Earl

On November 10, 2016, we entered into both an employment agreement and a Change of Control Severance Agreement with Nick Earl, our President and Chief Executive Officer.

The employment agreement provides that should Mr. Earl terminate his employment based on an "involuntary termination" or be terminated, other than for "cause" or disability, at any time, other than within twelve months after a "change in control transaction," and Mr. Earl delivers to us a signed agreement and general release, then Mr. Earl will be entitled to the following severance benefits:

- 12 months of his then-current annual base salary, payable in lump-sum; and
- up to 12 months of continuation coverage for him (and any eligible dependents) pursuant to COBRA.

The Change of Control Severance Agreement provides that if Mr. Earl terminates his employment based on an "involuntary termination" or if he is terminated, other than for "cause" or disability, within 12 months after a "change in

control transaction," and Mr. Earl delivers to us a signed agreement and general release, he would receive the same benefits set forth above pursuant to his employment agreement, except that he will also receive:

- a lump-sum payment of his annual bonus for such calendar year, based on the target potential amount; and
- full vesting for all of his outstanding and unvested equity awards that were granted after November 10, 2016 (with vesting of performance-based equity to be based upon target-level achievement).

Outstanding and unvested equity awards that were granted prior to November 10, 2016 remain subject to the severance agreement we entered into with Mr. Earl on February 8, 2016. Such severance agreement provides that if Mr. Earl terminates his employment based on an "involuntary termination" or is terminated, other than for "cause" or disability, within 12 months after a "change in control transaction," he would receive an additional 36 months of vesting with respect to each of his then outstanding and not fully vested equity awards.

Mr. Ludwig

On October 10, 2008, we entered into a severance agreement with Eric R. Ludwig, our Executive Vice President, Chief Operating Officer and Chief Financial Officer, which was amended on July 7, 2011. Under this agreement, as amended, if Mr. Ludwig terminates his employment based on an "involuntary termination" or if he is terminated, other than for "cause" or disability, within 12 months after a "change in control transaction," he would receive 12 months of his then-current annual base salary, payable in lump-sum. Mr. Ludwig would also receive a lump-sum payment of his annual bonus for such calendar year, based on the target potential amount. Additionally, Mr. Ludwig's then outstanding and unvested equity awards would become fully vested (with vesting of performance-based equity to be based upon target-level achievement). Finally, Mr. Ludwig would receive reimbursement for up to 12 months of COBRA premiums.

Messrs. Akhavan and Leichtner

On July 7, 2011, we entered into a change of control severance agreement with Scott Leichtner, our Vice President, General Counsel and Corporate Secretary, and on June 3, 2013, we entered into a change of control severance agreement with Chris Akhavan. Each of these agreements provides that if the executive terminates his employment based on an "involuntary termination" or is terminated, other than for "cause" or disability, within 12 months after a "change in control transaction," he would receive six months of his then-current annual base salary, payable in lump-sum. Each officer would also receive 50% of his annual bonus for such calendar year, based on the target potential amount. Additionally, each officer would receive an additional 36 months of vesting with respect to each of his then outstanding and not fully vested equity awards (with vesting of performance-based equity to be based upon target-level achievement). Finally, each officer would receive reimbursement for up to six months of COBRA premiums.

The following definitions are used in the severance agreements and retention arrangements described for the Named Executive Officers (other than the definition of "Cause" for Mr. de Masi which is defined above):

"Cause" is defined to mean (1) the executive's committing an act of gross negligence, gross misconduct or dishonesty, or other willful act, including misappropriation, embezzlement or fraud, that materially adversely affects us or any of our customers, suppliers or partners, (2) his personal dishonesty, willful misconduct in the performance of services for us, or breach of fiduciary duty involving personal profit, (3) his being convicted of, or pleading no contest to, any felony or misdemeanor involving fraud, breach of trust or misappropriation or any other act that our Board reasonably believes in good faith has materially adversely affected, or upon disclosure will materially adversely affect, us, including our public reputation, (4) any material breach of any agreement with us by him that remains uncured for 30 days after written notice by us to him, unless that breach is incapable of cure, or any other material unauthorized use or disclosure of our confidential information or trade secrets involving personal benefit or (5) his failure to follow the lawful directions of our Board or, if he is not the Chief Executive Officer, the lawful directions of the Chief Executive Officer, in the scope of his employment unless he reasonably believes in good faith that these directions are not lawful and notifies our Board or Chief Executive Officer, as the case may be, of the reasons for his belief.

A "change in control transaction" is defined to mean the closing of (1) a merger or consolidation in one transaction or a series of related transactions, in which our securities held by our stockholders before the merger or consolidation represent less than 50% of the outstanding voting equity securities of the surviving corporation after the transaction or series of related transactions, (2) a sale or other transfer of all or substantially all of our assets as a going concern, in one

transaction or a series of related transactions, followed by the distribution to our stockholders of any proceeds remaining after payment of creditors or (3) a transfer of more than 50% of our outstanding voting equity securities by our stockholders to one or more related persons or entities other than Glu in one transaction or a series of related transactions.

"Involuntary Termination" is defined to mean the executive's resignation of employment from Glu expressly based on the occurrence of any of the following conditions, without the executive's informed written consent, provided, however, that with respect to each of the following conditions, the executive must (1) within 90 days following its occurrence, deliver to us a written notice explaining the specific basis for the executive's belief that he is entitled to terminate his employment due to an Involuntary Termination and (2) give us an opportunity to cure any of the following within 30 days following delivery of such notice and explanation: (1) a material reduction in his duties, position or responsibilities, or his removal from these duties, position and responsibilities, unless he is provided with a position of substantially equal or greater organizational level, duties, authority and compensation; provided, however, that a change of title, in and of itself, or a reduction of duties, position or responsibilities solely by virtue of our being acquired and made part of a larger entity will not constitute an "Involuntary Termination," (2) a greater than 15% reduction in his then current annual base compensation that is not applicable to our other executive officers or (3) without his express written consent, a relocation to a facility or a location more than 30 miles from his then current location of employment. Involuntary Termination does not include a termination of employment for death or permanent disability.

The table below estimates as of December 31, 2018 the potential payments to Messrs. Earl, Ludwig, Akhavan and Leichtner should such officer terminate his employment based on an "involuntary termination" or be terminated other than for "cause" or disability either (1) within 12 months following a "change in control transaction" or (2) or in the absence of a "change in control transaction."

Name	Benefits	Termination Other Than for Cause or Disability or by Named Executive Officer Based on an Involuntary Termination Within 12 Months Following Change in Control Transaction($)	Termination Other Than for Cause or Disability or by Named Executive Officer Based on an Involuntary Termination Absent a Change in Control Transaction($)
Nick Earl	Severance	475,000	475,000
	Equity Acceleration[1]	16,735,083[3]	
	COBRA Premium[2]	16,973	16,973
	Total Value	**17,227,056**	**491,973**
Eric R. Ludwig	Severance	375,000	
	Equity Acceleration[1]	8,236,904[4]	
	COBRA Premium[2]	27,294	
	Total Value	**8,639,198**	
Chris Akhavan	Severance	200,000	
	Equity Acceleration[1]	5,268,360[5]	
	COBRA Premium[2]	4,342	
	Total Value	**5,472,702**	
Scott J. Leichtner	Severance	172,500	
	Equity Acceleration[1]	3,147,341[5]	
	COBRA Premium[2]	11,590	
	Total Value	**3,331,431**	

(1) These amounts are calculated by aggregating the sums determined by multiplying, for each award the number of shares accelerated by (a) the positive difference, if any, between the closing price per share of our common stock on The Nasdaq Global Select Market on December 31, 2018, the last trading day of 2018, which was $8.07, and the option exercise price per share for stock options, and (b) $8.07 per share in the case of RSUs and PSUs.

(2) COBRA payout amounts are estimated based on the cost of the monthly premium and represent coverage for medical, dental and vision insurance for the executive and his eligible dependents, if any.

(3) Reflects (i) full acceleration of all unvested shares subject to outstanding equity awards held by Mr. Earl on December 31, 2018 and granted after November 10, 2016 and (ii) an additional 36 months of vesting of all outstanding equity awards held by Mr. Earl on December 31, 2018 and granted prior to November 10, 2016. PSOs and PSUs will accelerate free of all restrictions (other than those set forth in our insider trading policies then in effect or imposed by applicable law) based on the target amount.

(4) Reflects full acceleration of all unvested shares subject to outstanding equity awards held by Mr. Ludwig on December 31, 2018. PSOs will accelerate free of all restrictions (other than those set forth in our insider trading policies then in effect or imposed by applicable law) based on the target amount.

(5) Reflects an additional 36 months of vesting of all outstanding time-based equity awards and outstanding performance-based equity awards (at the target level of performance achievement) held by the executive officer on December 31, 2018. PSOs and PSUs will accelerate free of all restrictions (other than those set forth in our insider trading policies then in effect or imposed by applicable law) based on the target amount.

Chief Executive Officer Pay Ratio Disclosure

Our ratio of the annual total compensation of our CEO to the median of the annual total compensation of all our employees (excluding our CEO) for 2018 is 118 to 1. We believe this ratio, which was calculated in a manner consistent with Item 402(u) of Regulation S-K, to be a reasonable estimate, based upon the assumptions and adjustments described below. As disclosed in the 2018 Summary Compensation Table above, the annual total compensation for 2018 for our CEO was $9,313,086. The median of the annual total compensation for 2018 for all our employees was $78,847. In identifying the median employee under Item 402(u), reporting companies are permitted to use reasonable estimates, assumptions and methodologies based on their own facts and circumstances. As a result, the disclosure regarding the compensation of our median employee may not be directly comparable to similar disclosure by other reporting companies.

Calculation Methodology

We identified the employee with compensation at the median of the compensation of all of our employees (the "median employee") by considering our employee population as of October 31, 2018 (the "employee population determination date").

We considered all individuals, excluding our CEO, who were employed by us on a world-wide basis (including our consolidated subsidiaries) on the employee population determination date, whether employed on a full-time, part-time, seasonal or temporary basis, including employees on a partial year leave of absence.

The compensation measures used for purposes of identifying the median employee included the following: (x) cash compensation paid between January 1, 2018 and October 31, 2018, including, as applicable, salary or wages plus overtime, cash bonuses, and (y) the grant date fair value of equity awards granted between January 1, 2018 and October 31, 2018, calculated in each case using the same methodology we use for calculating the compensation, including the value of equity awards, of our Named Executive Officers to be reported in our Summary Compensation Table. The equity awards included in this calculation include all new hire and "refresh" equity awards granted in 2018 to our employees who were employed as of the employee population determination date. The cash compensation paid during the period between January 1, 2018 and October 31, 2018, as described above, includes annual bonus payments with respect to the 2017 performance period that were paid in 2018.

For employees paid other than in U.S. dollars, we converted their compensation to U.S. dollars using FX rates in effect on the employee population determination date. We did not make any cost-of-living adjustments for employees outside of the United States. For employees hired between January 1, 2018 and the employee population determination date, we calculated their cash compensation described above as if they had been employed for the entire measurement period.

We believe our methodology represents a consistently applied compensation measure that strikes a balance in terms of administrative burden while consistently treating the primary compensation components for our worldwide employee population.

Using this methodology, we identified the median employee who was in the United States.

We calculated the 2018 annual total compensation for the median employee using the same methodology we use to calculate the 2018 amount reported for our Named Executive Officers in the "Total" column of the Summary Compensation Table.

As discuss in the "Compensation Discussion and Analysis" section of this proxy statement, we were unable to grant to our CEO the full amount of his intended 2017 "refresh" equity awards in October 2017 due to the Plan Limitation. Instead, a significant portion of our CEO's 2017 "refresh" equity awards were granted to him in January 2018. In October 2018, we granted 2018 "refresh" equity awards to our CEO at the same time as we granted them to our other NEOS. Accordingly, our CEO received a larger amount of equity compensation in 2018 than he would have otherwise received because of the impact of the Plan Limitation on our ability to grant awards in 2017, which increased his 2018 total compensation and impacted the ratio of his 2018 compensation against that of our median employee.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Review, Approval or Ratification of Transactions with Related Persons

Our Nominating and Governance Committee has adopted a written related-person transactions policy. The Nominating and Governance Committee reviews transactions that may be "related-person transactions," which are transactions between us and related persons in which the aggregate amount involved exceeds or may be expected to exceed $120,000 and in which a related person has or will have a direct or indirect material interest. For purposes of the policy, a related person is a director, executive officer, nominee for director, or a greater than 5% beneficial owner of our common stock and their immediate family members, in each case as of January 1, 2018, the beginning of our last fiscal year.

This policy provides that, barring special facts or circumstances, a related person does not have a direct or indirect material interest in the following categories of transactions:

- employment-related compensation to executive officers that is approved by the Compensation Committee;
- compensation to non-employee directors that is reported in our proxy statement;
- any transaction with another company to which the related party's only relationship is as a director, beneficial owner of less than 10% of that company's shares, or employee (other than an executive officer), if the aggregate amount involved does not exceed the greater of $500,000 or 2% of that company's total annual revenues;
- any transaction where the related party's interest arises solely from the ownership of our common stock and all holders of our common stock receive the same benefit on a pro rata basis (e.g., a dividend); and
- ordinary course business travel and expenses, advances and reimbursements.

In determining whether to approve or ratify a related-person transaction, the Nominating and Governance Committee will take into account, among other factors it deems appropriate, whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances, the extent of the related party's interest in the transaction, the benefits to us of the transaction, the potential impact on a director's independence and whether the transaction would impair the judgment of a director or executive officer to act in our best interests and those of our stockholders.

Tencent Transaction

On April 29, 2015, Glu agreed to issue in a private placement offering to Red River Investments Limited ("Red River"), a wholly-owned subsidiary of Tencent, an aggregate of 21,000,000 shares of Glu's common stock at a purchase

price of $6.00 per share, for aggregate proceeds of $126 million (the “Offering”). The shares of Glu’s common stock were issued in two separate closings on each of April 29, 2015 and June 3, 2015. In connection with the Offering, Red River became a greater than 5% owner of Glu, and Glu and Tencent became parties to a voting and standstill agreement, pursuant to which Glu agreed to cause a representative of Tencent to be elected and appointed as a new member of the Board as a Class I director, and to subsequently nominate for future director elections a representative of Tencent to the Board. Mr. Feder, the current representative of Tencent on the Board was elected on January 26, 2017 pursuant to the voting and standstill agreement. Tencent, through Red River and another of its controlled affiliates, held 19.42% of Glu’s outstanding shares as of April 10, 2019.

Indemnification Agreements

We have entered into indemnity agreements with each of our directors and executive officers that may be broader than the specific indemnification provisions contained in the Delaware General Corporation Law. These indemnity agreements may require us, among other things, to indemnify our directors and executive officers against liabilities that may arise by reason of their status or service. These indemnity agreements may also require us to advance all expenses incurred by the directors and executive officers in investigating or defending any such action, suit or proceeding. We believe that these agreements are necessary to attract and retain qualified individuals to serve as directors and executive officers. We have obtained insurance policies under which, subject to the limitations of the policies, coverage is provided to our directors and officers against loss arising from claims made by reason of breach of fiduciary duty or other wrongful acts as a director or officer, including claims relating to public securities matters, and to us with respect to payments that may be made by us to these officers and directors pursuant to our indemnification obligations or otherwise as a matter of law.

Other than the indemnification agreements and the compensation arrangements that are described in this proxy statement under the headings “Compensation Discussion and Analysis,” “Executive Compensation” and “Director Compensation,” since January 1, 2018, we have not been a party to any transaction or series of similar transactions in which the amount involved exceeded or will exceed $120,000 and in which any director, nominee for director, executive officer, holder of more than 5% of our common stock or certain persons or entities affiliated with them had or will have a material interest.

See also “Corporate Governance — Director Independence” for information the Board considered in determining the independence of our non-employee directors.

PROPOSAL NO. 2 –
APPROVAL OF THE AMENDMENT AND RESTATEMENT OF OUR 2007 EQUITY INCENTIVE PLAN

On April 25, 2019, the Board, upon recommendation of the Compensation Committee, adopted the Fifth Amended and Restated 2007 Equity Incentive Plan (the "Restated Plan"), subject to stockholder approval. The Restated Plan is an amendment and restatement of the Glu Mobile Inc. Fourth Amended and Restated 2007 Equity Incentive Plan (the "2007 Plan"), which was last amended in June 2018. If our stockholders do not approve this Proposal, then the 2007 Plan will continue without the amendments in accordance with its terms.

The principal terms of the Restated Plan are summarized below. This summary is not a complete description of the Restated Plan, and it is qualified in its entirety by reference to the complete text of the Restated Plan document. The Restated Plan, marked to show changes from the 2007 Plan, is attached as Appendix A to this proxy statement.

Amendments to the 2007 Plan

The following are the primary amendments to the 2007 Plan contained in the Restated Plan:

- an increase to the available share reserve by 4,600,000 shares of our common stock (for a cumulative aggregate share authorization of 51,573,191 shares);
- a provision that shares used to satisfy the tax withholding obligations related to any award other than a stock option or stock appreciation right will become available for future grant or sale under the Plan; provided, however, that such number of shares will be limited to the number of shares used to satisfy minimum statutory tax withholding obligations;
- a provision allowing Glu to suspend the vesting of equity grants held by employees upon a reduction in their hours-worked; and
- minor clarifying changes including with respect to Section 409A of the Internal Revenue Code.

Rationale For and Reasons Why the Board Recommends a Vote FOR the Restated Plan

Equity Compensation Is a Critical Element of Our Compensation Policy.

We believe that long-term incentive compensation programs align the interests of management, employees and stockholders to create long-term stockholder value. We strongly believe that the approval of the Restated Plan is essential to our continued success, because we otherwise may not have sufficient shares available under our 2007 Plan to attract and retain new employees or to motivate and retain our existing employees. This is particularly critical since our employees are our most valuable asset. In addition, in October 2018 our Compensation Committee determined to continue its practice of replacing cash bonuses with PSOs for Messrs. Earl, Ludwig and Akhavan as well as replacing 50% of the cash bonuses for our creative leaders with PSOs. We expect that the Compensation Committee will similarly utilize performance-based equity awards in lieu of cash bonuses for at least some our senior leadership team for 2020, which will impact our utilization of shares from the Restated Plan during the next 12 months.

Accordingly, approving the Restated Plan is in the best interest of our stockholders because equity awards help us to:

- attract, motivate and retain talented employees;
- align employee and stockholder interests;
- link employee compensation with company performance; and
- maintain a culture based on employee stock ownership.

After carefully forecasting our anticipated growth, hiring plans and retention needs and considering our historical grant and forfeiture rates and the expectation that the Compensation Committee will utilize performance-based equity awards in lieu of cash bonuses for many of our executives for 2020, we anticipate the 4,600,000 shares that we seek to add to the Restated Plan — combined with shares currently reserved under, or that we may add to, our 2018 Inducement Plan

(which we may use for certain newly hired employees and to grant equity awards in connection with acquisitions) will be sufficient to attract and retain key employees through June 2020, at which point we expect to again ask for stockholder approval for an increase to the number of shares available under the Restated Plan. However, a change in business conditions or our strategy could alter this projection.

We are also including a provision in the Restated Plan to allow Glu to suspend the vesting of equity grants held by employees upon a reduction in their hours-worked. This provision will give us flexibility to choose the appropriate terms to accommodate employees' requests for changes in their work schedules.

The Restated Plan Conforms to Best Practices in Equity Incentive Plans.

The Restated Plan conforms to best practices in equity incentive plans in that it:

- contains:
  - a limitation providing that no equity awards will vest, in whole or in part, prior to one year from the date of grant (subject to a 5% carve-out as described below);
  - a limitation of $600,000 on the grant date fair value of equity awards that may be granted to any non-employee director in any calendar year, plus an additional $600,000 in grant date fair value for one-time awards to a newly appointed or elected non-employee director;
  - a provision providing that any equity awards issued to our executive officers will be subject to any clawback or recoupment policies in effect or as may be amended or adopted from time to time;
  - a restriction that the following shares will not be available for future grant under the Restated Plan: (1) shares used in connection with the exercise of a stock option or stock appreciation right to pay the exercise price or purchase price of such award or satisfy applicable tax withholding obligations and (2) the gross number of shares subject to stock appreciation rights that are exercised;
  - if the Restated Plan is approved, a restriction that only shares used to satisfy applicable minimum tax withholding obligations on any award other than a stock option or a stock appreciation right will be available for future grant under the Restated Plan;
  - a prohibition against repricing or certain other exchanges of stock options and stock appreciation rights without stockholder approval;
  - a limitation on the transferability of awards, since generally awards may not be sold, assigned, transferred, pledged or otherwise encumbered by the person to whom they are granted, except by will or the laws of descent and distribution; and
  - a provision prohibiting the grant of discounted options or stock appreciation rights.
- does not contain:
  - single-trigger vesting acceleration rights, other than on a limited basis for non-employee directors;
  - tax gross-ups; and
  - an evergreen provision to automatically increase the number of shares available under it.

Our Use of Equity Supports a Strong Pay-for-Performance Culture and Has Been Managed to Stay within Industry Norms.

We have carefully managed our annual equity award dilution over the past three years by, among other things, limiting equity awards to high-performing employees, determining the appropriate size of awards based on our review of market data and reviewing market practices for equity burn rates in our industry.

Period	Options Granted	RSUs Granted	PSUs Granted	PSOs Granted	PSUs Earned	PSOs Earned	Burn Rate[(1)]
Fiscal 2016	10,347	5,094	0	0	0	0	15.58%
Fiscal 2017	5,346	2,360	661	4,246	0	0	7.42%
Fiscal 2018	6,092	278	2,909	2,737	0	0	4.70%
3-Yr. Average							**9.23%**

(1) "Burn Rate" means the sum of the number of shares subject to time-vesting equity awards granted and the number of performance-vesting shares earned in the fiscal year (using a 2x multiplier for each RSU or PSU award), divided by basic weighted average common shares outstanding during the fiscal year. All share-based amounts in this table are displayed in thousands.

Beginning in October 2017, we modified our executive compensation program to incorporate a heavy weighting on performance-based equity. As a result, our equity program is strongly aligned with stockholders' interests given that our leadership will only be eligible to earn shares subject to PSUs and PSOs if challenging performance targets are achieved and they remain with Glu for the time-vesting period applicable to each award. In particular, a significant number of the PSOs granted during 2017 and 2018 reflect a change in our compensation strategy to replace, for key members of our senior leadership team, the annual cash bonus plan with PSOs that vest based on our achievement of pre-established annual bookings and EBITDA goals. In addition, the annual equity awarded to our senior leadership team in each of October 2017 and October 2018 consisted of a mix of multi-year PSUs, PSOs and time vesting stock options, with no time vesting RSUs granted. The Compensation Committee, our Board of Directors and management team supported these changes in our compensation strategy to reinforce our business objectives and to drive a focus on sustained stockholder value creation.

The increase in our burn rate during fiscal 2016 was largely attributable to our acquisition of Crowdstar Inc. ("*Crowdstar*") in November 2016. This acquisition was effected as a direct stock purchase of the shares directly from certain of Crowdstar's stockholders, including through a drag-along procedure utilized with respect to certain of these stockholders, and did not involve the cooperation of Crowdstar management. As a result of the unique nature of this transaction, we believed that we needed to issue significant equity awards to Crowdstar's existing employees in order to retain these employees and not disrupt Crowdstar's operations and revenues. Accordingly, we issued 1,100,000 RSUs and stock options to purchase an aggregate of 5,007,000 shares from our 2008 Inducement Plan (the predecessor to our 2018 Inducement Plan) to 79 acquired Crowdstar employees. The grants made to the Crowdstar employees were a key part of their compensation package and ensuring that our acquisition of Crowdstar would be successful. Excluding such grants, our burn rate would have been 10.11% for 2016 instead of 15.58%.

We will continue to review our compensation plans and strategies as our business evolves and will continue to use equity and performance-based incentives to drive accountability by our leadership team and to reward for sustained strong performance. We believe that increasing the number of shares available for grant under the Restated Plan will enable us to continue to provide competitive equity compensation to our employees and directors while continuing to comply with best practices for equity incentive plan grant practices.

We Broadly Distribute Equity Awards.

Our equity awards are widely spread among our employees. For example, during 2018, our Named Executive Officers received an aggregate of restricted stock units (only performance-based) and options (time-based and performance based) for 4,429,205 shares, or approximately 36.9% of aggregate equity awards we granted to all employees in 2018. In 2018, a majority of our North American employees who started with us during the year received an RSU and/or stock option award in the month following their start date, and approximately 280 of our global employees (representing 42.5% of all existing global employees as of December 31, 2018) received a refresh stock option award.

Conclusion

If our stockholders do not approve the Restated Plan, our plans to operate our business would be materially adversely affected because we otherwise may not have sufficient shares available under our 2007 Plan to attract and retain new employees or to motivate and retain our existing employees. Additionally, if the shares available for grant under the 2007 Plan are not increased, we may need to use our 2018 Inducement Plan — which is a non-stockholder approved plan — to grant awards to newly hired employees, directors and consultants and find other ways to retain our current employees, as they are not eligible to receive awards under the 2018 Inducement Plan due to rules put in place by Nasdaq with respect to non-stockholder approved plans. This could require us to offer material cash-based incentives to compete for talent as well as to revert back to annual cash incentive bonus plans for most of our senior leadership rather than utilizing PSOs and PSUs, which could have a significant impact upon our quarterly results of operations and balance sheet. Moreover, this would not be competitive with most other technology companies in the San Francisco Bay Area with which we compete for talent or our peer companies. We believe that a cash-based incentive program would not have significant long-term retention value and would not serve to align our employees' interests as closely with those of our stockholders in the absence of equity incentives.

Our future success depends heavily on our ability to attract and retain high caliber employees. The ability to grant equity awards is a necessary and powerful recruiting and retention tool for us to hire and motivate the quality personnel we need to compete.

For these reasons, we request that our stockholders approve the Restated Plan. If the Restated Plan is not approved, we do not expect to be able to offer competitive equity packages to retain our current employees and hire new employees.

General

The Restated Plan provides for the grant of incentive stock options, nonstatutory stock options, restricted stock awards, stock appreciation rights, RSUs and stock bonuses and performance shares (collectively, the "stock awards"). The Restated Plan also provides the ability to grant performance shares that may qualify the compensation attributable to those awards as performance-based compensation for purposes of the Internal Revenue Code (or the "Code"), as explained in greater detail below.

Incentive stock options granted under the Restated Plan are intended to qualify as "incentive stock options" within the meaning of Section 422 of the Code; nonstatutory stock options granted are not intended to qualify as incentive stock options under the Code. See "Federal Income Tax Information" for a discussion of the tax treatment of the various stock awards.

Purpose

Our Board adopted the Restated Plan to provide a means to retain the services of our employees, directors, consultants, independent contractors and advisors, and those of any parent or subsidiary of ours, to attract and retain the new talent to our company that we will require to execute our strategy and grow our business, and to provide a means by which these eligible individuals may be given an opportunity to benefit from increases in the value of our common stock through the grant of equity awards, thereby aligning the long-term compensation and interests of those individuals with our stockholders.

Administration

The Restated Plan is administered by our Compensation Committee, all of the members of which are non-employee directors under applicable federal securities laws and outside directors as defined under applicable federal tax laws. Our Compensation Committee has the authority to construe and interpret the Restated Plan, grant and determine the terms of each award, including the exercise price, the number of shares subject to the award, the exercisability of the award and the form of consideration payable upon exercise of the award, and make all other determinations necessary or advisable for the administration of the Restated Plan.

Eligibility

The Restated Plan provides for the grant of incentive stock options only to our employees and employees of any parent or subsidiary of ours. All awards other than incentive stock options may be granted to our employees, directors, consultants, independent contractors and advisors, and those of any parent or subsidiary of ours. As of March 31, 2019, we had a total of 678 employees and seven non-employee directors who would be eligible to receive awards from the Restated Plan. Our executive officers and directors have an interest in this Proposal insofar as they are eligible to receive awards under the Restated Plan.

Shares Subject to the Restated Plan

If stockholders approve the Restated Plan, then the shares reserved under the Restated Plan will increase by 4,600,000 shares of our common stock, and the cumulative aggregate share authorization under the Restated Plan will increase to 51,573,191 shares, which includes 2,461,644 shares that have been added to the plan pursuant to the "pour over" provision of our 2001 Second Amended and Restated Stock Option Plan (the "2001 Plan," which plan expired when we adopted the 2007 Plan); this pour over provision allowed us to add to the 2007 Plan any shares that were subject to a stock option granted under our 2001 Plan that were cancelled, expired or terminated. The following table summarizes information regarding awards outstanding and shares of our Common Stock remaining available for grant as of March 31, 2019:

Stock Options Outstanding*	20,702,963
Weighted Average Exercise Price of Stock Options Outstanding	$3.64
Weighted Average Remaining Term of Stock Options Outstanding	8.01 years
Full Value Awards Outstanding (RSUs and PSUs)	6,428,612
Shares Available for Grant under the 2007 Plan and 2018 Inducement Plan	4,561,980

*Excludes all PSOs paid in lieu of earned annual incentive cash compensation.

The closing price of Glu's common stock on The Nasdaq Global Select Market on April 10, 2019 was $11.48 per share.

In addition, the following shares will again be available for grant and issuance under our Restated Plan:

- shares surrendered pursuant to an exchange program;
- shares subject to an option or stock appreciation right granted under our Restated Plan that cease to be subject to the option or stock appreciation right for any reason other than exercise of the option or stock appreciation right;
- shares used to satisfy the tax withholding obligations for RSU awards; provided, however, that if the Restated Plan is approved, only shares used to satisfy the minimum tax withholding obligations for RSU awards will again be available for future grant and issuance under the Restated Plan;
- shares subject to an award granted under our Restated Plan that are subsequently forfeited or repurchased by us at the original issue price; and
- shares subject to an award granted under our Restated Plan that otherwise terminates without shares being issued.

Full-Value Awards

A Full Value Award is an award — other than an option or stock appreciation right — that is settled in shares of common stock. The Restated Plan provides that any shares that are subject to awards of options or stock appreciation rights will be counted against the share reserve limit as one share for every one share granted. Additionally, the Restated Plan provides that any shares that are subject to Full Value Awards will be counted against the share reserve limit as 1.32

shares for every one share granted. Paying dividend equivalents in cash in connection with any outstanding award will not be counted against the shares available for issuance under the Restated Plan.

If an award previously granted under the Restated Plan terminates, expires or lapses for any reason, any shares subject to the award may be used again for new grants under the Restated Plan. The Restated Plan also reflects the share counting principle described above when determining the number of shares that may be re-granted after an award expires. If an award terminates, expires or lapses for any reason, any share that again becomes available for future grant shall be added back to the Restated Plan (1) as one share if the share was subject to an option or a stock appreciation right, and (2) as 1.32 shares if such share was subject to a Full Value Award.

Vesting/Acceleration Restrictions

The Restated Plan mandates that awards shall not provide for any vesting prior to at least twelve (12) months from grant. In addition, the Compensation Committee will generally not permit the discretionary vesting of awards. Notwithstanding the foregoing, the Compensation Committee may permit (i) acceleration of vesting of awards in the event of a participant's death, disability or a significant corporate transaction and (ii) vesting of awards on any basis prior to twelve (12) months from grant or any acceleration of vesting of awards representing up to an aggregate of five percent (5%) of the shares reserved and available for grant under the Restated Plan as of the date of its approval by our stockholders. For purposes of awards to non-employee directors, a vesting period will be deemed to be one year if it runs from the date of one annual meeting of our stockholders to the next annual meeting of our stockholders. We are also including a provision in the Restated Plan to allow Glu to suspend the vesting of equity grants held by employees upon a reduction in their hours-worked.

Terms of Options

The Restated Plan provides for the grant of nonstatutory stock options, incentive stock options or a combination of each. Incentive stock options may only be granted to our employees and employees of any parent or subsidiary of ours. Subject to adjustment as provided in the Restated Plan, in no event shall more than 16,666,666 shares of our common stock be available for issuance pursuant to the exercise of incentive stock options granted under the Restated Plan.

Each stock option granted under the Restated Plan must be evidenced by a written agreement between us and the optionee specifying the number of shares subject to the stock option and the other terms and conditions of the stock option, consistent with the requirements of the Restated Plan. The exercise price of each stock option may not be less than the fair market value of a share of our common stock on the date of grant (except in connection with the assumption or substitution for another stock option in a manner qualifying under Sections 409A and 424(a) of the Code). In addition, any incentive stock option granted to a person who at the time of grant owns stock possessing more than 10% of the total combined voting power of all classes of our stock or any subsidiary corporation of Glu (a "Ten Percent Stockholder") must have an exercise price equal to at least 110% of the fair market value of a share of our common stock on the date of grant.

The Restated Plan provides that the stock option exercise price may be paid in cash or by check or, where expressly approved by our Compensation Committee (and to the extent not otherwise set forth in the applicable award agreement) and permitted under applicable law, by means of:

- cancellation of indebtedness;
- surrender of shares of our common stock owned by the optionee having a fair market value not less than the aggregate exercise price of the shares being exercised;
- waiver of compensation due or accrued to the optionee for services rendered or to be rendered to Glu or a parent or subsidiary of Glu;
- a broker-assisted cashless exercise;

- by any combination of the above methods; or
- any other method of payment permitted by applicable law.

Our Compensation Committee may provide for options to be exercised only as they vest or to be immediately exercisable with any shares issued on exercise being subject to our right of repurchase that lapses as the shares vest. Options may vest based on time or achievement of performance conditions, as is the case with PSOs. In general, our time-based vesting employee stock options vest over a four-year period, with 25% of the underlying shares vesting on the first anniversary of the grant date and the remaining shares vesting in equal monthly installments thereafter for the following three years. However, stock options granted to our employees located in India generally vest over a four-year period, with 25% of the underlying shares vesting on the first anniversary of the grant date and the remaining shares vesting in equal annual installments thereafter for the following three years.

The Restated Plan allows us to grant stock options with a term of up to ten years. Subject to the term of the stock option, a stock option generally will remain exercisable for three months following the optionee's termination of service, except that if service terminates as a result of an optionee's death or disability, the stock option generally will remain exercisable for 12 months, and, if an employee optionee's service is terminated for cause, the stock option will expire on the date of termination. The Committee, in its discretion, may provide different post-termination exercise periods, but in any event the stock option must be exercised no later than the original expiration of its term.

Unless otherwise determined by our Compensation Committee, stock options are not assignable or transferable by the optionee other than by will or by the laws of descent and distribution.

Terms of Stock Appreciation Rights, or "SARs"

SARs provide for a payment, or payments, in cash or shares of our common stock, to the participant based upon the increase in the fair market value of our common stock on the date of exercise from the stated exercise price. SARs may vest based on time or achievement of performance conditions. Each SAR awarded under the Restated Plan must be evidenced by a written agreement between us and the participant specifying the terms and conditions of the SAR, consistent with the requirements of the Restated Plan.

Our Compensation Committee will determine the terms of each SAR, including the number of shares subject to the SAR, the exercise price and the time or times during which the SAR may be settled, the consideration to be distributed on settlement of the SAR and the effect of the participant's termination on his or her SAR. The exercise price of SAR may be less than the fair market value of the underlying shares of common stock.

A SAR may be awarded upon satisfaction of performance factors that are set out in advance in the participant's individual award agreement. If the participant earns the SAR upon the satisfaction of performance factors, then the Compensation Committee will determine the performance factors to be used, as well as the nature, length and starting date of the performance period.

The Restated Plan will still allow us to grant SARs with a term of up to ten years. Except as may be set forth in the participant's individual award agreement, vesting ceases upon the participant's termination of service unless determined otherwise by the Compensation Committee.

Terms of Restricted Stock Unit Awards, or "RSUs"

RSUs represent the right to receive shares of our common stock at a specified date in the future, subject to forfeiture of that right because of termination of the participant's services to us or the failure to achieve certain performance conditions. If an RSU has not been forfeited, then on the date specified in the RSU agreement, we will deliver to the holder of the RSU whole shares of our common stock, which may be subject to additional restrictions, cash or a combination of our common stock and cash.

Our Compensation Committee will determine the terms of each RSU, including the number of shares subject to the RSU award, the time or times during which the RSU may be settled, the consideration to be distributed on settlement of the RSU and the effect of the participant's termination on his or her RSU.

An RSU may be granted upon satisfaction of performance factors that are set out in advance in the participant's individual award agreement, as is the case with PSUs. If the RSU is being earned upon the satisfaction of performance factors, then the Compensation Committee will determine the performance factors to be used, the nature, length and starting date of the performance period and the number of shares that will be subject to the RSU.

Except as may be set forth in the participant's individual award agreement, vesting ceases upon the participant's termination of service unless determined otherwise by the Compensation Committee.

Terms of Stock Bonus Awards

Stock bonuses are awards of shares of our common stock, which may be restricted stock or RSUs that are granted as additional compensation for service and/or performance. Payment from the participant is not required for stock bonuses, and stock bonuses are generally not subject to vesting.

Our Compensation Committee will determine the number of shares to be awarded to a participant under a stock bonus award and any restrictions thereon. These restrictions may be based upon completion of a specified number of years of service with Glu or upon satisfaction of performance goals as specified in the participant's individual award agreement. Prior to the grant of any stock bonus award, our Compensation Committee will determine the performance factors to be used, the nature, length and starting date of the performance period and the number of shares that will be awarded to the participant.

Except as may be set forth in the participant's individual award agreement, vesting ceases upon the participant's termination of service unless determined otherwise by the Compensation Committee.

Terms of Performance Shares

Performance shares are awards denominated in shares of our common stock that may be settled in cash or by issuance of those shares only if performance goals established by our Compensation Committee have been achieved. Each performance share will have an initial value equal to the fair market value of a share of our common stock on the date of grant. After the applicable performance period has ended or the applicable metric satisfied, the holder of performance shares will generally be entitled to receive a payout of the number of performance shares earned by the participant, to be determined as a function of the extent to which the corresponding performance factors or other vesting provisions have been achieved.

Before granting any performance share award, our Compensation Committee will determine the terms of each performance share award, including the number of shares subject to the award, the performance factors and performance period that will determine the time and extent to which each award of performance shares will be settled, the consideration to be distributed on settlement of the award and the effect of the participant's termination on his or her performance share award. Before settlement, the Compensation Committee determines the extent to which the performance shares have been earned.

Terms of Performance Options

Performance stock options are stock options that vest and or become exercisable upon achievement of performance goals established by our Compensation Committee. The exercise price of each performance stock option may not be less than the fair market value of a share of our common stock on the date of its grant. After the applicable performance period has ended or the applicable metric satisfied, the holder of a performance stock option may vest in that option or that option may then convert to a time-based vesting stock option.

Before granting any performance stock options, our Compensation Committee will determine the terms of each performance stock option award, including the number of shares subject to the option, the exercise price, the performance factors and performance period that will determine the time and extent to which the performance stock option is earned. The Compensation Committee determines the extent to which the performance stock options have been earned.

Awards to Non-Employee Directors

Non-employee members of our Board of Directors are eligible to receive any type of award offered under the Restated Plan except incentive stock options, which can only be granted to employees. Non-employee directors may not be granted any award or awards denominated in shares that exceed in the aggregate $600,000 in value (based on the financial accounting value of such awards) in any fiscal year, plus an additional $600,000 in value for one-time awards to a newly appointed or elected non-employee director. If stock options or SARs are granted to our non-employee directors, their exercise price may not be less than the fair market value of our common stock when the option or SAR is granted. In the event of a corporate transaction, all awards held by our non-employee directors will accelerate fully and become vested and exercisable or settled, as the case may be. Our Non-Employee Director Compensation Program provides for equity awards to our non-employee directors both on joining our board and on an annual basis. Since the 2007 Plan was adopted, all of our equity awards to our non-employee directors have been stock options or RSUs that were awarded under the 2007 Plan, except for one award of 3,666 shares of restricted stock to Ms. Mather made in 2007. Under our Non-Employee Director Compensation Program as currently in effect, equity awards are granted to our continuing directors on the date of the annual stockholders meeting and vest upon the one year anniversary of the grant or at the next annual stockholder's meeting. Equity awards granted to new directors vest with respect to 33⅓% of the underlying shares after one year. Thereafter, stock options vest in equal monthly installments over the next 24 months and RSUs vest in equal quarterly installments over the next two years following the first vesting date on the same day of each third month. Please see "Director Compensation" above for more information.

Changes to Capital Structure

If there is any change to the outstanding shares of our common stock without our receipt of consideration (whether through stock dividend, recapitalization, stock split, reverse stock split, subdivision, combination, reclassification or similar change in our capital structure), appropriate adjustments will be made to: (a) the maximum number of securities issuable under the Restated Plan, (b) the exercise prices of and number of shares subject to outstanding options and stock appreciation rights, (c) the number of shares subject to RSUs and other outstanding awards, (d) the maximum number of shares that may be issued as incentive stock options, (e) the maximum number of shares that may be awarded to an individual or new employee in a calendar year and (f) the number of shares that are granted as awards to our non-employee directors.

Corporate Transactions; Changes in Control

In the event of certain significant corporate transactions, any or all outstanding awards under the Restated Plan may be assumed or replaced by the successor corporation. In the alternative, the successor corporation may substitute equivalent awards or provide substantially similar consideration to award holders as was provided to stockholders after taking into account the existing provisions of the awards. The successor corporation may also issue, in place of outstanding Glu shares held by the award holder, substantially similar shares or other property subject to repurchase restrictions no less favorable to the holder. In the event such successor corporation refuses to assume, convert, replace or substitute awards, then such awards will expire on such transaction at such time and on such conditions as the Board will determine. However, our Board or Compensation Committee may accelerate the vesting of such awards in connection with certain significant corporate transactions.

In the event of certain significant corporate transactions, the vesting of all awards granted to non-employee members of our Board of Directors will accelerate and such awards will become exercisable (as applicable) in full prior to the consummation of such corporate transaction at such times and on such conditions as the Compensation Committee determines.

A significant corporate transaction means the occurrence of any of the following events: (a) any person becomes the beneficial owner of Glu securities representing 50% or more of the total voting power represented by our then-outstanding voting securities; (b) our consummation of the sale or disposition of all or substantially all of our assets; (c) the consummation of a merger or consolidation of Glu with any other corporation, other than a merger or consolidation which would result in our voting securities outstanding immediately prior to such merger or consolidation continuing to represent 50% of the total voting power represented by the voting securities of Glu or such surviving entity or its parent outstanding immediately after such merger or consolidation.

Restrictions on Repricing

Unless our stockholders first approve such action, the Restated Plan provides that we may not (1) reprice (i.e., reduce the exercise price of) stock options or stock appreciation rights, (2) implement an option exchange or award transfer program, or (3) reduce the exercise price of stock options or stock appreciation rights without the consent of the holder of such options or rights.

Provisions for Foreign Participants

Our Compensation Committee may modify awards granted to participants who are foreign nationals or employed outside the United States or establish subplans or procedures under the Restated Plan to recognize differences in laws, rules, regulations or customs of such foreign jurisdictions with respect to tax, securities, currency, employee benefit or other matters.

Duration, Termination and Amendment

Our Compensation Committee may terminate or amend the Restated Plan at any time; provided, however, that the committee will not, without the approval of our stockholders, amend the Restated Plan in any manner that requires stockholder approval. Unless sooner terminated, the Restated Plan will expire on June 4, 2025.

Federal Income Tax Information

The following summary is intended only as a general guide to the current U.S. federal income tax consequences of participation in the Restated Plan and does not attempt to describe all possible federal or other tax consequences of such participation or tax consequences based on particular circumstances. Furthermore, the tax consequences are complex and subject to change, and a taxpayer's particular situation may be such that some variation of the described rules is applicable.

Incentive Stock Options

A participant recognizes no taxable ordinary income as a result of the grant or exercise of an incentive stock option qualifying under Section 422 of the Code. However, the exercise of an incentive stock option may increase the participant's alternative minimum tax liability, if any.

If a participant holds stock acquired through exercise of an incentive stock option for more than two years from the date on which the stock option was granted and more than one year after the date the stock option was exercised for those shares, any gain or loss on a disposition of those shares (a "qualifying disposition") will be a long-term capital gain or loss. Upon such a qualifying disposition, we will not be entitled to any income tax deduction.

Generally, if the participant disposes of the stock before the expiration of either of those holding periods (a "disqualifying disposition"), then at the time of such disqualifying disposition, the participant will realize taxable ordinary income equal to the lesser of (i) the excess of the stock's fair market value on the date of exercise over the exercise price, or (ii) the participant's actual gain, if any, on the purchase and sale. The participant's additional gain or any loss upon the disqualifying disposition will be a capital gain or loss, which will be long-term or short-term depending on whether the stock was held for more than one year. To the extent the participant recognizes ordinary income by reason of a disqualifying disposition, generally we will be entitled to a corresponding income tax deduction in the tax year in which the disqualifying disposition occurs.

Nonstatutory Stock Options

Stock options not designated or qualifying as incentive stock options are nonstatutory stock options having no special tax status. A participant generally recognizes no taxable ordinary income as the result of the grant of such a stock option. Upon exercise of a nonstatutory stock option, the participant normally recognizes ordinary income in the amount of the difference between the stock option exercise price and the fair market value of the shares on the date of purchase. Generally, we will be entitled to an income tax deduction in the tax year in which such ordinary income is recognized by the participant.

Upon the disposition of stock acquired by the exercise of a nonstatutory stock option, any gain or loss, based on the difference between the sale price and the fair market value on the exercise date, will be taxed as capital gain or loss.

Stock Appreciation Rights

A participant recognizes no taxable ordinary income upon the receipt of a SAR. Upon the exercise of a SAR, the participant will recognize ordinary income in an amount equal to the excess of the fair market value of the underlying shares of common stock on the exercise date over the exercise price. If the participant is an employee, such ordinary income generally is subject to withholding of income and employment taxes. We generally should be entitled to a deduction equal to the amount of ordinary income recognized by the participant in connection with the exercise of the stock appreciation right, except to the extent such deduction is limited by applicable provisions of the Code.

Restricted Stock Units

A participant recognizes no taxable income upon receipt of an RSU. In general, the participant will recognize ordinary income in the year in which the shares subject to that award vest and are actually issued to the participant in an amount equal to the fair market value of the shares on the date of issuance. Generally, we will be entitled to an income tax deduction equal to the amount of ordinary income recognized by the participant at the time the shares are issued. In general, the deduction will be allowed for the taxable year in which such ordinary income is recognized by the participant.

Stock Bonuses

A participant acquiring restricted stock generally will recognize ordinary income equal to the difference between the fair market value of the shares on the "determination date" (as defined below) and the participant's purchase price, if any. If the participant is an employee, such ordinary income generally is subject to withholding of income and employment taxes. The "determination date" is the date on which the participant acquires the shares unless they are subject to a substantial risk of forfeiture and are not transferable, in which case the determination date is the earlier of (a) the date on which the shares become transferable or (b) the date on which the shares are no longer subject to a substantial risk of forfeiture. If the determination date is after the date on which the participant acquires the shares, the participant may elect, pursuant to Section 83(b) of the Code, to have the date of acquisition be the determination date by filing an election with the Internal Revenue Service no later than 30 days after the date the shares are acquired. Upon the sale of shares acquired pursuant to a restricted stock award, any gain or loss, based on the difference between the sale price and the fair market value on the determination date, will be taxed as a capital gain or loss. Such gain or loss will be long-term or short-term depending on whether the stock was held for more than one year. Generally, we will be entitled to a corresponding income tax deduction in the year in which ordinary income is recognized by the participant.

Performance Shares

A participant generally will recognize no income upon the grant of a performance share award. Upon the settlement of a performance share award, participants normally will recognize ordinary income in the year of receipt in an amount equal to the cash received, if any, and the fair market value of any unrestricted shares received. If the participant is an employee, such ordinary income generally is subject to withholding of income and employment taxes. If the participant receives shares of restricted stock, the participant generally will be taxed in the same manner as described above in "Stock Bonuses." Upon the sale of any shares received, any gain or loss, based on the difference between the sale price and the fair market value on the "determination date," will be taxed as a capital gain or loss. We generally should be entitled to a deduction equal to the amount of ordinary income recognized by the participant on the determination date.

Awards Granted in 2018 under the 2007 Plan

We cannot currently determine the benefits or number of shares subject to awards that may be granted in 2019 to participants under the 2007 Plan; therefore, the following table sets forth information with respect to equity awards made in fiscal year 2018 under the 2007 Plan to each of the Named Executive Officers, our non-employee directors and our employees generally.

Name	Stock Unit Awards: Number of Shares: Time-Based (RSUs)	Stock Unit Awards: Number of Shares: Performance-Based (PSUs)	Stock Options: Number of Shares: Time-Based	Stock Options: Number of Shares: Performance-Based (PSOs	Stock Options: Weighted Avg. Exercise Price ($)
Niccolo M. de Masi *Executive Chairman*	—	—	—	—	—
Nick Earl *President and Chief Executive Officer*	—	466,861	925,277	1,577,279	5.27
Eric R. Ludwig *EVP, Chief Operating Officer and Chief Financial Officer*	—	—	191,000	668,962	6.42
Chris Akhavan *Chief Revenue Officer*	—	—	70,000	411,826	6.42
Scott J. Leichtner *VP, General Counsel and Secretary*	—	60,000	58,000	—	6.42
Non-Employee Directors (8 persons)	125,000	—	310,000	—	5.67
Non-Executive Officer Employee Group	125,333	2,382,210	4,547,395	78,757	4.66

EQUITY COMPENSATION PLAN INFORMATION

Equity Compensation Plan Table

The following table sets forth certain information, as of December 31, 2018, concerning securities authorized for issuance under all of our equity compensation plans: our 2001 Plan, which terminated when we adopted the 2007 Plan, 2007 Employee Stock Purchase Plan (the "ESPP") and 2008 Inducement Plan, which terminated on March 13, 2018 and was replaced by the 2018 Inducement Plan, effective April 2, 2018. The ESPP contained an "evergreen" provision, pursuant to which on January 1st of each year we automatically added 1% of our shares of common stock outstanding on the preceding December 31st to the shares reserved for issuance under the ESPP; this evergreen provision expired after the increase on January 1, 2015. In addition, pursuant to a "pour over" provision in our 2007 Plan, options that were cancelled, expired or terminated under the 2001 Plan were added to the number of shares reserved for issuance under our 2007 Plan.

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights[(1)] (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a) (c)
Equity compensation plans approved by security holders	27,321,781	$ 3.90	8,281,340[(2)]
Equity compensation plans not approved by security holders	4,470,992[(3)]	2.49	373,600[(4)]
Total	31,792,773	$	8,654,940

(1) The weighted average exercise price does not take into account the shares subject to outstanding RSUs and PSUs, which have no exercise price.

(2) Represents 4,766,182 shares available for issuance under our the 2007 Plan, which plan permits the grant of incentive and non-qualified stock options (including PSOs), stock appreciation rights, restricted stock, stock awards and RSUs; and 3,515,158 shares available for issuance under the ESPP.

(3) Represents outstanding options under the 2008 Inducement Plan.

(4) Represents shares available for issuance under the 2018 Inducement Plan, under which we may only grant non-qualified stock options and RSUs.

Equity Compensation Plans Not Approved by Securityholders

In March 2008, in connection with our acquisition of Superscape Group plc, our Board of Directors adopted the 2008 Inducement Plan to augment the shares available under our then existing 2007 Plan. We have not sought stockholder approval for the 2008 Inducement Plan. As such, awards under the 2008 Inducement Plan were granted in accordance with Nasdaq Listing Rule 5635(c)(4) and only to persons not previously an employee or director, or following a bona fide period of non-employment, as an inducement material to such individuals entering into employment with us. The 2008 Inducement Plan, which had a ten-year term and expired on March 13, 2018, did not require the approval of our stockholders. We initially reserved 600,000 shares of our common stock for issuance under the 2008 Inducement Plan. On December 28, 2009, the Compensation Committee of our Board of Directors increased the number of shares reserved for issuance under the 2008 Inducement Plan by 819,245 shares. We used all of the 1,250,000 shares then available for a stock option grant to Niccolo de Masi in connection with his appointment as our new President and Chief Executive Officer.

Furthermore, in connection with the acquisitions of Griptonite, Inc. and Blammo Games Inc., the Compensation Committee increased the number of shares reserved for issuance under our 2008 Inducement Plan by 1,050,000 shares to grant stock options to certain of the new non-executive officer employees of Griptonite and Blammo. In November 2012, the Compensation Committee further increased the number of shares available for issuance by an additional 300,000 shares, all of which we used to award a stock option grant to our newly hired President of Studios. In May 2013, the Compensation Committee amended the 2008 Inducement Plan to increase the number of shares available for grant by 200,000 shares in order to issue shares to new hires, including Chris Akhavan, our current Chief Revenue Officer who was at that time hired as our President of Publishing. In December 2015, the Compensation Committee approved an increase in the number of authorized shares of common stock available for grant by 1,000,000 shares in connection with grants made to Nick Earl upon his hiring as President of Global Studios.

Finally, in November 2016, the Compensation Committee approved an increase in the number of authorized shares of common stock available for grant by 6,000,000 to grant stock options and RSUs to employees of Crowdstar in connection with our acquisition of Crowdstar. Accordingly, as of December 31, 2018, we had reserved a total of 9,969,245 shares of our common stock for grant and issuance under the 2008 Inducement Plan since its inception, of which, 4,470,992 shares were subject to outstanding stock options and RSUs and no shares remained available for issuance. The remaining 5,498,253 shares represent shares that were subject to previously granted stock options under the 2008 Inducement Plan that have been exercised by the option holders. On March 13, 2018, the 2008 Inducement Plan expired and was replaced by the 2018 Inducement Plan effective April 2, 2018. As of December 31, 2018, we had reserved a total of 400,000 shares under the 2018 Inducement Plan, of which 26,400 shares were subject to outstanding stock options and 373,600 shares remained available for issuance.

The 2018 Inducement Plan, which replaced the 2008 Inducement Plan, permits us to grant non-qualified stock options and RSUs. We may grant non-qualified stock options under the 2018 Inducement Plan at prices less than 100% of the fair value of the shares on the date of grant, at the discretion of our Board of Directors. The fair value of our common stock is determined by the last sale price of our stock on The Nasdaq Global Market on the date of determination. If any option granted under the 2018 Inducement Plan expires or terminates for any reason without being exercised in full, the unexercised shares will be available for grant under the 2018 Inducement Plan. All outstanding awards are subject to adjustment for any future stock dividends, splits, combinations, or other changes in capitalization as described in the 2008 and 2018 Inducement Plans. If we were acquired and the acquiring corporation did not assume or replace the awards granted under the 2008 or 2018 Inducement Plans, or if we were to liquidate or dissolve, all outstanding awards will expire on such terms as our Board of Directors determines.

The Board recommends that stockholders vote "FOR" the proposal to amend and restate our 2007 Equity Incentive Plan.

PROPOSAL NO. 3 –
ADVISORY VOTE ON EXECUTIVE COMPENSATION

In accordance with Section 14A of the Exchange Act, we are including in this proxy statement the opportunity for our stockholders to vote to approve, on a non-binding, advisory basis, the compensation of our Named Executive Officers as disclosed in this proxy statement. This non-binding advisory vote is commonly referred to as a “say on pay” vote. At our 2017 Annual Meeting of Stockholders, our stockholders approved advisory voting on our executive compensation on an annual basis. Accordingly, we are requesting that stockholders vote, in an advisory capacity, on our Named Executive Officer compensation as disclosed in the “Compensation Discussion and Analysis” and “Executive Compensation” sections of this proxy statement at the Annual Meeting.

We strongly encourage stockholders to review the information contained in the “Compensation Discussion and Analysis” and “Executive Compensation” sections of this proxy statement, which discuss how our executive compensation policies and procedures implement our compensation philosophy and contain tabular information and narrative discussion about the compensation of our Named Executive Officers. The Compensation Committee and the Board believe that these policies and procedures are effective in implementing our compensation philosophy and in achieving its goals.

While the results of this advisory vote are not binding, the Compensation Committee will consider the outcome of the vote in deciding whether to take any action as a result of the vote and when making future compensation decisions for our Named Executive Officers.

The Board recommends that stockholders vote “FOR” the following advisory resolution:

RESOLVED, that the stockholders approve, on an advisory basis, the compensation of our named executive officers as described in the “Compensation Discussion and Analysis” and “Executive Compensation” sections and the accompanying tabular and narrative disclosures in this proxy statement pursuant to the compensation disclosure rules of the SEC.

PROPOSAL NO. 4 –
RATIFICATION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM, PRICEWATERHOUSECOOPERS LLP, FOR THE FISCAL YEAR ENDING DECEMBER 31, 2019

Our Audit Committee has selected, and is submitting for ratification by the stockholders its selection of, PricewaterhouseCoopers LLP ("PwC") to serve as our independent registered public accounting firm for the year ending December 31, 2019. Although stockholder approval of this proposal is not required by law, the Audit Committee has determined that it is desirable to request that stockholders ratify this selection. Notwithstanding the selection, the Audit Committee, in its discretion, may appoint a different independent registered public accounting firm at any time, if the Audit Committee feels that such a change would be in the best interests of us and our stockholders. If our stockholders do not approve this Proposal No. 4, the Audit Committee will reconsider the selection of PwC as our independent registered public accounting firm for 2018.

The following table sets forth the aggregate fees and related expenses for which we were billed by PwC for professional services provided by them during 2018 and 2017. The Audit Committee considered the provision of the services corresponding to these fees, and the Audit Committee believes that the provision of these services is compatible with PwC maintaining its independence. The Audit Committee's pre-approval policies and procedures require prior approval by the Audit Committee of each engagement of PwC to perform services. All of the professional services listed below were approved in accordance with these policies.

	2018	2017
Audit fees	$ 1,562,976	$ 2,108,033
Audit-related fees	—	—
Tax fees	74,700	102,310
All other	2,700	2,700
Total	**$ 1,640,376**	**$ 2,213,043**

Audit Fees

These fees consist of amounts for professional services rendered in connection with the audit of our financial statements, reviews of the interim financial statements included in our quarterly reports on Form 10-Q, for attestation services related to compliance with the Sarbanes-Oxley Act of 2002, and statutory and regulatory filings or engagements. In 2017, these fees also included costs for audit work related to restructuring and divestiture of our Moscow-based game development studio.

Audit-Related Fees

These fees consist of amounts for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements that are not reported under "Audit Fees."

Tax Fees

These fees consist of professional services rendered for tax advice, planning and compliance (domestic and international). These services include the preparation and review of income tax returns and international returns and assistance regarding transfer pricing; federal, state and international tax compliance; acquisitions; and general international tax planning.

All Other Fees

In both years, these fees consist of amounts paid for an annual subscription to PwC's online accounting and auditing research tool.

For more information about PwC, please see the "Audit Committee Report" contained in this proxy statement.

Representatives of PwC are expected to attend the Annual Meeting. These representatives will be given the opportunity to make a statement if they desire to do so, and they will be available to respond to appropriate questions.

The Board recommends that stockholders vote "FOR" the ratification of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2019.

AUDIT COMMITTEE REPORT

The Audit Committee of the Board is composed of Dr. Ball and Messrs. Nada and Smith, each of whom is an independent director, as independence for audit committee members is defined in The Nasdaq Stock Market's listing standards.

The members of the Audit Committee assist the Board in fulfilling its responsibilities relating to the oversight of the accounting, financial reporting, internal controls, financial practices and audit activities of Glu and our subsidiaries.

In fulfilling its oversight role, the Audit Committee has reviewed and discussed our audited financial statements with management and our independent registered public accounting firm. The Audit Committee met eight times during 2018, including meetings with our independent registered public accounting firm, PricewaterhouseCoopers LLP, to review our quarterly and annual results. It is not the duty of the Audit Committee to plan or conduct audits or to determine that the financial statements are complete and accurate and conform to generally accepted accounting principles. Management is responsible for the preparation, presentation and integrity of our financial statements, accounting and financial reporting principles, internal controls and procedures designed to ensure compliance with accounting standards, applicable laws and regulations. PricewaterhouseCoopers LLP is responsible for expressing an opinion on the conformity of our audited financial statements to generally accepted accounting principles.

The Audit Committee discussed with our independent registered public accounting firm the matters required to be discussed by Statement on Auditing Standards No. 1301, as amended (Communication with Audit Committees). The Audit Committee has received from the independent registered public accounting firm the written disclosures and the letter required by the applicable requirements of the Public Company Accounting Oversight Board regarding the independent registered public accounting firm's communications with the Audit Committee concerning independence and has discussed with the independent registered public accounting firm that firm's independence.

Based upon the Audit Committee's review and discussions referred to above, the Audit Committee recommended to the Board that our audited consolidated financial statements be included in our Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC on February 28, 2019.

Submitted by the Audit Committee of the Board,

Eric R. Ball (Chair)
Hany M. Nada
Benjamin T. Smith, IV

TRANSACTION OF OTHER BUSINESS

At the date of this proxy statement, the Board knows of no other business that will be conducted at the 2019 Annual Meeting of Stockholders, other than as described in this proxy statement. If any other matter or matters are properly brought before the Annual Meeting, or any adjournment or postponement of the Annual Meeting, the persons named in the accompanying form of proxy intend to vote the proxy on such matters in accordance with their best judgment.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC's rules allow us to incorporate by reference into this proxy statement the information we file with the SEC. This means that we can disclose important information to you by referring you to another document without restating that information in this document. Any information incorporated by reference into this proxy statement is considered to be part of this proxy statement from the date we file that document. Any reports filed by us with the SEC after the date of this proxy statement will automatically update and, where applicable, supersede any information contained in this proxy statement or incorporated by reference in this proxy statement.

APPENDIX A

GLU MOBILE INC.

Amended & Restated 2007 Equity Incentive Plan

(As Amended through June __, 2019 ~~7, 2018~~)

1. PURPOSE. The purpose of this Plan is to provide incentives to attract, retain and motivate eligible persons whose present and potential contributions are important to the success of the Company, and any Parents and Subsidiaries that exist now or in the future, by offering them an opportunity to participate in the Company's future performance through the grant of Awards. Capitalized terms not defined elsewhere in the text are defined in Section 27.

2. SHARES SUBJECT TO THE PLAN.

2.1 Number of Shares Available. Subject to Sections 2.5 and 22 and any other applicable provisions hereof, the total number of Shares reserved and available for grant and issuance pursuant to this Plan is Fifty-One ~~Forty Six~~ Million Five~~Nine~~ Hundred Seventy-Three Thousand One Hundred Ninety-One (51~~46~~,~~9~~573,191) Shares plus (i) any reserved shares not issued or subject to outstanding grants under the Company's 2001 Stock Option Plan (the "***Prior Plan***") on the Effective Date (as defined below), (ii) shares that are subject to stock options granted under the Prior Plan that cease to be subject to such stock options after the Effective Date and (iii) shares issued under the Prior Plan before or after the Effective Date pursuant to the exercise of stock options that are, after the Effective Date, forfeited or shares issued under the Prior Plan that are repurchased by the Company at the original issue price.

2.2 Lapsed, Returned Awards. Shares subject to Awards, and Shares issued upon exercise of Awards, will again be available for grant and issuance in connection with subsequent Awards under this Plan to the extent such Shares: (i) are subject to issuance upon exercise of an Option or SAR granted under this Plan but which cease to be subject to the Option or SAR for any reason other than exercise of the Option or SAR; (ii) are subject to Awards granted under this Plan that are forfeited or are repurchased by the Company at the original issue price; (iii) are surrendered pursuant to an Exchange Program; (iv) are subject to Awards granted under this Plan that otherwise terminate without such Shares being issued; or (v) are used to satisfy applicable tax withholding obligations with respect to all types of Awards, except for Options and SARs. Any Award other than an Option or a SAR shall reduce the number of Shares available for issuance by 1.32 Shares. With respect to SARs, the gross number of Shares subject to a SAR will cease to be available under the Plan. Shares used to pay the exercise price of an Award or to satisfy the tax withholding obligations related to an Option or SAR will not become available for future grant or sale under the Plan. Shares used to satisfy up to the minimum statutory tax withholding obligations related to any Award other than an Option or SAR will become available for future grant or sale under the Plan. To the extent an Award under the Plan is paid out in cash rather than Shares, such cash payment will not result in reducing the number of Shares available for issuance under the Plan. To the extent that any Award other than an Option or a SAR is forfeited, repurchased or terminates without Shares being issued pursuant to this Section 2.2, Shares may again be available for issuance under this Plan at the rate of 1.32 Shares for every such Share returned to the Plan.

2.3 Minimum Share Reserve. At all times the Company shall reserve and keep available a sufficient number of Shares as shall be required to satisfy the requirements of all outstanding Awards granted under this Plan and all other outstanding but unvested Awards granted under this Plan.

2.4 Limitations. No more than Sixteen Million Six Hundred Sixty-Six Thousand Sixty-Six (16,666,666) Shares shall be issued pursuant to the exercise of ISOs.

2.5 Adjustment of Shares. If the number of outstanding Shares is changed by a stock dividend, recapitalization, stock split, reverse stock split, subdivision, combination, reclassification or similar change in the capital structure of the Company, without consideration, then (a) the number of Shares reserved for issuance and future grant under the Plan set forth in Section 2.1, (b) the Exercise Prices of and number of Shares subject to outstanding Options and SARs, (c) the number of Shares subject to other outstanding Awards, (d) the maximum number of shares that may be issued as ISOs set forth in Section 2.4~~,~~ and (e) ~~the maximum number of Shares that may be issued to an individual or to a new Employee in any one calendar year set forth in Section 3 and (f)~~ the number of Shares that are granted as Awards to Outside Directors as set forth in Section 12, shall be proportionately adjusted, subject to any required action by the Board or the stockholders of the Company and in compliance with applicable securities laws; provided that fractions of a Share will not be issued.

2.6. Limitation on Outside Director Awards. No Outside Director may be granted any Awards or Awards denominated in shares that exceed in the aggregate six hundred thousand dollars ($600,000) in value (such value computed as of the date of grant in accordance with applicable financial accounting rules) in any calendar year, plus an additional aggregate six hundred thousand dollars ($600,000) in value for one-time awards to a newly appointed or elected Outside Director. The foregoing limit shall not apply to any Award made pursuant to deferred compensation arrangements in lieu of all or a portion of cash retainers.

2.7. Vesting/Acceleration Restriction. No portion of any Award shall vest prior to the first anniversary of the date of grant of the Award; provided, that vesting may accelerate in connection with death, Disability, or a Corporate Transaction. For purposes

of Awards to Outside Directors, a vesting period will be deemed to be one year if it runs from the date of one annual meeting of the Company's stockholders to the next annual meeting of the Company's stockholders provided that such annual meetings are at least 50 weeks apart. Notwithstanding the foregoing, up to 5% of the Shares authorized for grant pursuant to Section 2.1may be granted with a minimum vesting schedule of less than one year.

3. ELIGIBILITY. ISOs may be granted only to Employees. All other Awards may be granted to Employees, Consultants, Directors and Outside Directors of the Company or any Parent or Subsidiary of the Company; provided such Consultants, Directors and Outside Directors render bona fide services not in connection with the offer and sale of securities in a capital-raising transaction.

4. ADMINISTRATION.

4.1 Committee Composition; Authority. This Plan will be administered by the Committee or by the Board acting as the Committee. Subject to the general purposes, terms and conditions of this Plan, and to the direction of the Board, the Committee will have full power to implement and carry out this Plan, except, however, the Board shall establish the terms for the grant of an Award to Outside Directors. The Committee will have the authority to:

(a) construe and interpret this Plan, any Award Agreement and any other agreement or document executed pursuant to this Plan;

(b) prescribe, amend and rescind rules and regulations relating to this Plan or any Award;

(c) select persons to receive Awards;

(d) determine the form and terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder. Such terms and conditions include, but are not limited to, the exercise price, the time or times when Awards may be exercised (which may be based on performance criteria), any vesting acceleration or waiver of forfeiture restrictions, and any restriction or limitation regarding any Award or the Shares relating thereto, based in each case on such factors as the Committee will determine;

(e) determine the number of Shares or other consideration subject to Awards;

(f) determine the Fair Market Value in good faith, if necessary;

(g) determine whether Awards will be granted singly, in combination with, in tandem with, in replacement of, or as alternatives to, other Awards under this Plan or any other incentive or compensation plan of the Company or any Parent or Subsidiary of the Company;

(h) grant waivers of Plan or Award conditions;

(i) determine the vesting, exercisability and payment of Awards;

(j) correct any defect, supply any omission or reconcile any inconsistency in this Plan, any Award or any Award Agreement;

(k) determine whether an Award has been earned;

(l) determine the terms and conditions of any, and to institute any Exchange Program;

(m) reduce or waive any criteria with respect to Performance Factors;

(n) adjust Performance Factors to take into account changes in law and accounting or tax rules as the Committee deems necessary or appropriate to reflect the impact of extraordinary or unusual items, events or circumstances to avoid windfalls or hardships provided that such adjustments are consistent with the regulations promulgated under Section 162(m) of the Code with respect to persons whose compensation is subject to Section 162(m) of the Code; and

(o) make all other determinations necessary or advisable for the administration of this Plan.

4.2 Committee Interpretation and Discretion. Any determination made by the Committee with respect to any Award shall be made in its sole discretion at the time of grant of the Award or, unless in contravention of any express term of the Plan or Award, at any later time, and such determination shall be final and binding on the Company and all persons having an interest in any Award under the Plan. Any dispute regarding the interpretation of the Plan or any Award Agreement shall be submitted by the Participant or Company to the Committee for review. The resolution of such a dispute by the Committee shall be final and binding on the Company and the Participant. The Committee may delegate to one or more executive officers the authority to review and resolve disputes with respect to Awards held by Participants who are not Insiders, and such resolution shall be final and binding on the Company and the Participant.

4.3 [intentionally left blank]

4.4 Awards subject to Company Clawback or Recoupment Policy. All Awards granted after the adoption of the Company's Compensation Recovery Policy (the "***Policy***") and subject to applicable law, shall be subject to clawback or recoupment pursuant to the Policy or any other compensation clawback or recoupment policy that may be adopted by the Board (or its Compensation Committee) from time to time thereafter or required by law during the term of Participant's employment or other service with the Company that is applicable to executive officers, employees, directors or other service providers of the Company, and in addition to any other remedies available under such policy and applicable law, may require the cancellation of outstanding Awards and the recoupment of any gains realized with respect to Awards.

5. OPTIONS. The Committee may grant Options to Participants and will determine whether such Options will be Incentive Stock Options within the meaning of the Code ("***ISOs***") or Nonqualified Stock Options ("***NQSOs***"), the number of Shares subject to the Option, the Exercise Price of the Option, the period during which the Option may be exercised, and all other terms and conditions of the Option, subject to the following:

5.1 Option Grant. Each Option granted under this Plan will identify the Option as an ISO or an NQSO. An Option may be, but need not be, awarded upon satisfaction of such Performance Factors during any Performance Period as are set out in advance in the Participant's individual Award Agreement. If the Option is being earned upon the satisfaction of Performance Factors, then the Committee will: (x) determine the nature, length and starting date of any Performance Period for each Option; and (y) select from among the Performance Factors to be used to measure the performance, if any. Performance Periods may overlap and Participants may participate simultaneously with respect to Options that are subject to different performance goals and other criteria.

5.2 Date of Grant. The date of grant of an Option will be the date on which the Committee makes the determination to grant such Option, or a specified future date. The Award Agreement and a copy of this Plan will be delivered to the Participant within a reasonable time after the granting of the Option.

5.3 Exercise Period. Options may be exercisable within the times or upon the conditions as set forth in the Award Agreement governing such Option; provided, however, that no Option will be exercisable after the expiration of ten (10) years from the date the Option is granted; and provided further that no ISO granted to a person who, at the time the ISO is granted, directly or by attribution owns more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or of any Parent or Subsidiary of the Company ("***Ten Percent Shareholder***") will be exercisable after the expiration of five (5) years from the date the ISO is granted. The Committee also may provide for Options to become exercisable at one time or from time to time, periodically or otherwise, in such number of Shares or percentage of Shares as the Committee determines.

5.4 Exercise Price. The Exercise Price of an Option will be determined by the Committee when the Option is granted; provided that: (i) the Exercise Price of any Option (both ISOs and NQOs) will be not less than one hundred percent (100%) of the Fair Market Value of the Shares on the date of grant and (ii) the Exercise Price of any ISO granted to a Ten Percent Shareholder will not be less than one hundred ten percent (110%) of the Fair Market Value of the Shares on the date of grant. Payment for the Shares purchased may be made in accordance with Section 11. Notwithstanding the foregoing, NQSOs may be granted with an exercise price of less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant solely pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code.

5.5 Method of Exercise. Any Option granted hereunder will be exercisable according to the terms of the Plan and at such times and under such conditions as determined by the Committee and set forth in the Award Agreement. An Option may not be exercised for a fraction of a Share. An Option will be deemed exercised when the Company receives: (i) notice of exercise (in such form as the Committee may specify from time to time) from the person entitled to exercise the Option, and (ii) full payment for the Shares with respect to which the Option is exercised (together with applicable withholding taxes). Full payment may consist of any consideration and method of payment authorized by the Committee and permitted by the Award Agreement and the Plan. Shares issued upon exercise of an Option will be issued in the name of the Participant. Until the Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder will exist with respect to the Shares, notwithstanding the exercise of the Option. The Company will issue (or cause to be issued) such Shares promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 2.5 of the Plan. Exercising an Option in any manner will decrease the number of Shares thereafter available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

5.6 Termination. The exercise of an Option will be subject to the following (except as may be otherwise provided in an Award Agreement):

(a) If the Participant is Terminated for any reason except for Cause or the Participant's death or Disability, then the Participant may exercise such Participant's Options only to the extent that such Options would have been exercisable by the Participant on the Termination Date no later than three (3) months after the Termination Date (or such shorter time period or longer time

period not exceeding five (5) years as may be determined by the Committee, with any exercise beyond three (3) months after the Termination Date deemed to be an NQSO), but in any event no later than the expiration date of the Options.

(b) If the Participant is Terminated because of the Participant's death (or the Participant dies within three (3) months after a Termination other than for Cause or because of the Participant's Disability), then the Participant's Options may be exercised only to the extent that such Options would have been exercisable by the Participant on the Termination Date and must be exercised by the Participant's legal representative, or authorized assignee, no later than twelve (12) months after the Termination Date (or such shorter time period not less than six (6) months or longer time period not exceeding five (5) years as may be determined by the Committee, with any exercise beyond (a) three (3) months after the Termination Date when the Termination is for any reason other than the Participant's death, or (b) twelve (12) months after the Termination Date when the Termination is for the Participant's death, deemed to be an NQSO), but in any event no later than the expiration date of the Options.

(c) If the Participant is Terminated because of the Participant's Disability, then the Participant's Options may be exercised only to the extent that such Options would have been exercisable by the Participant on the Termination Date and must be exercised by the Participant (or the Participant's legal representative or authorized assignee) no later than twelve (12) months after the Termination Date (with any exercise beyond (a) three (3) months after the Termination Date when the Termination is for a Disability that is not a "permanent and total disability" as defined in Section 22(e)(3) of the Code, or (b) twelve (12) months after the Termination Date when the Termination is for a Disability that is a "permanent and total disability" as defined in Section 22(e)(3) of the Code, deemed to be exercise of an NQSO), but in any event no later than the expiration date of the Options.

(d) If the Participant is terminated for Cause, then Participant's Options shall expire on such Participant's Termination Date, or at such later time and on such conditions as are determined by the Committee, but in any no event later than the expiration date of the Options.

5.7 Limitations on Exercise. The Committee may specify a minimum number of Shares that may be purchased on any exercise of an Option, provided that such minimum number will not prevent any Participant from exercising the Option for the full number of Shares for which it is then exercisable.

5.8 Limitations on ISOs. With respect to Awards granted as ISOs, to the extent that the aggregate Fair Market Value of the Shares with respect to which such ISOs are exercisable for the first time by the Participant during any calendar year (under all plans of the Company and any Parent or Subsidiary) exceeds one hundred thousand dollars ($100,000), such Options will be treated as NQSOs. For purposes of this Section 5.8, ISOs will be taken into account in the order in which they were granted. The Fair Market Value of the Shares will be determined as of the time the Option with respect to such Shares is granted. In the event that the Code or the regulations promulgated thereunder are amended after the Effective Date to provide for a different limit on the Fair Market Value of Shares permitted to be subject to ISOs, such different limit will be automatically incorporated herein and will apply to any Options granted after the effective date of such amendment.

5.9 Modification, Extension or Renewal. The Committee may modify, extend or renew outstanding Options and authorize the grant of new Options in substitution therefor, provided that any such action may not, without the written consent of a Participant, impair any of such Participant's rights under any Option previously granted. Any outstanding ISO that is modified, extended, renewed or otherwise altered will be treated in accordance with Section 424(h) of the Code. Subject to Section 18 of this Plan, by written notice to affected Participants, the Committee may reduce the Exercise Price of outstanding Options without the consent of such Participants; provided, however, that the Exercise Price may not be reduced below the Fair Market Value on the date the action is taken to reduce the Exercise Price.

5.10 No Disqualification. Notwithstanding any other provision in this Plan, no term of this Plan relating to ISOs will be interpreted, amended or altered, nor will any discretion or authority granted under this Plan be exercised, so as to disqualify this Plan under Section 422 of the Code or, without the consent of the Participant affected, to disqualify any ISO under Section 422 of the Code.

6. RESTRICTED STOCK AWARDS.

6.1 Awards of Restricted Stock. A Restricted Stock Award is an offer by the Company to sell to a Participant Shares that are subject to restrictions ("***Restricted Stock***"). The Committee will determine to whom an offer will be made, the number of Shares the Participant may purchase, the Purchase Price, the restrictions under which the Shares will be subject and all other terms and conditions of the Restricted Stock Award, subject to the Plan.

6.2 Restricted Stock Purchase Agreement. All purchases under a Restricted Stock Award will be evidenced by an Award Agreement. A Participant accepts a Restricted Stock Award by signing and delivering to the Company an Award Agreement with full payment of the Purchase Price, within thirty (30) days from the date the Award Agreement was delivered to the Participant. If the Participant does not accept such Award within thirty (30) days, then the offer of such Restricted Stock Award will terminate, unless the Committee determines otherwise.

6.3 Purchase Price. The Purchase Price for a Restricted Stock Award will be determined by the Committee and may be less than Fair Market Value on the date the Restricted Stock Award is granted. Payment of the Purchase Price must be made in accordance with Section 11 of the Plan, and the Award Agreement.

6.4 Terms of Restricted Stock Awards. Restricted Stock Awards will be subject to such restrictions as the Committee may impose or are required by law. These restrictions may be based on completion of a specified number of years of service with the Company or upon completion of Performance Factors, if any, during any Performance Period as set out in advance in the Participant's Award Agreement. Prior to the grant of a Restricted Stock Award, the Committee shall: (a) determine the nature, length and starting date of any Performance Period for the Restricted Stock Award; (b) select from among the Performance Factors to be used to measure performance goals, if any; and (c) determine the number of Shares that may be awarded to the Participant. Performance Periods may overlap and a Participant may participate simultaneously with respect to Restricted Stock Awards that are subject to different Performance Periods and having different performance goals and other criteria.

6.5 Termination of Participant. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee).

7. STOCK BONUS AWARDS.

7.1 Awards of Stock Bonuses. A Stock Bonus Award is an award to an eligible person of Shares (which may consist of Restricted Stock or Restricted Stock Units) for services to be rendered or for past services already rendered to the Company or any Parent or Subsidiary. All Stock Bonus Awards shall be made pursuant to an Award Agreement. No payment from Participant will be required for Shares awarded pursuant to a Stock Bonus Award.

7.2 Terms of Stock Bonus Awards. The Committee will determine the number of Shares to be awarded to the Participant under a Stock Bonus Award and any restrictions thereon. These restrictions may be based upon completion of a specified number of years of service with the Company or upon satisfaction of performance goals based on Performance Factors during any Performance Period as set out in advance in the Participant's Stock Bonus Agreement. Prior to the grant of any Stock Bonus Award the Committee shall: (a) determine the nature, length and starting date of any Performance Period for the Stock Bonus Award; (b) select from among the Performance Factors to be used to measure performance goals; and (c) determine the number of Shares that may be awarded to the Participant. Performance Periods may overlap and a Participant may participate simultaneously with respect to Stock Bonus Awards that are subject to different Performance Periods and different performance goals and other criteria.

7.3 Form of Payment to Participant. Payment may be made in the form of cash, whole Shares, or a combination thereof, based on the Fair Market Value of the Shares earned under a Stock Bonus Award on the date of payment.

7.4 Termination of Participation. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee).

8. STOCK APPRECIATION RIGHTS.

8.1 Awards of SARs. A Stock Appreciation Right ("***SAR***") is an award to a Participant that may be settled in cash, or Shares (which may consist of Restricted Stock), having a value equal to (a) the difference between the Fair Market Value on the date of exercise over the Exercise Price multiplied by (b) the number of Shares with respect to which the SAR is being settled (subject to any maximum number of Shares that may be issuable as specified in an Award Agreement). All SARs shall be made pursuant to an Award Agreement.

8.2 Terms of SARs. The Committee will determine the terms of each SAR including, without limitation: (a) the number of Shares subject to the SAR; (b) the Exercise Price and the time or times during which the SAR may be settled; (c) the consideration to be distributed on settlement of the SAR; and (d) the effect of the Participant's Termination on each SAR. The Exercise Price of the SAR will be determined by the Committee when the SAR is granted, and may not be less than Fair Market Value. A SAR may be awarded upon satisfaction of Performance Factors, if any, during any Performance Period as are set out in advance in the Participant's individual Award Agreement. If the SAR is being earned upon the satisfaction of Performance Factors, then the Committee will: (x) determine the nature, length and starting date of any Performance Period for each SAR; and (y) select from among the Performance Factors to be used to measure the performance, if any. Performance Periods may overlap and Participants may participate simultaneously with respect to SARs that are subject to different Performance Factors and other criteria.

8.3 Exercise Period and Expiration Date. A SAR will be exercisable within the times or upon the occurrence of events determined by the Committee and set forth in the Award Agreement governing such SAR. The SAR Agreement shall set forth the expiration date; provided that no SAR will be exercisable after the expiration of ten (10) years from the date the SAR is granted. The Committee may also provide for SARs to become exercisable at one time or from time to time, periodically or otherwise (including, without limitation, upon the attainment during a Performance Period of performance goals based on Performance Factors), in such number of Shares or percentage of the Shares subject to the SAR as the Committee determines. Except as may be set forth in the

Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee). Notwithstanding the foregoing, the rules of Section 5.6 also will apply to SARs.

8.4 Form of Settlement. Upon exercise of a SAR, a Participant will be entitled to receive payment from the Company in an amount determined by multiplying (i) the difference between the Fair Market Value of a Share on the date of exercise over the Exercise Price; times (ii) the number of Shares with respect to which the SAR is exercised. At the discretion of the Committee, the payment from the Company for the SAR exercise may be in cash, in Shares of equivalent value, or in some combination thereof.

9. RESTRICTED STOCK UNITS.

9.1 Awards of Restricted Stock Units. A Restricted Stock Unit ("***RSU***") is an award to a Participant covering a number of Shares that may be settled in cash, or by issuance of those Shares (which may consist of Restricted Stock). All RSUs shall be made pursuant to an Award Agreement.

9.2 Terms of RSUs. The Committee will determine the terms of an RSU including, without limitation: (a) the number of Shares subject to the RSU; (b) the time or times during which the RSU may be settled; and (c) the consideration to be distributed on settlement, and the effect of the Participant's Termination on each RSU. An RSU may be awarded upon satisfaction of such Performance Factors (if any) during any Performance Period as are set out in advance in the Participant's Award Agreement. If the RSU is being earned upon satisfaction of Performance Factors, then the Committee will: (x) determine the nature, length and starting date of any Performance Period for the RSU; (y) select from among the Performance Factors to be used to measure the performance, if any; and (z) determine the number of Shares deemed subject to the RSU. Performance Periods may overlap and participants may participate simultaneously with respect to RSUs that are subject to different Performance Periods and different performance goals and other criteria.

9.3 Form and Timing of Settlement. Payment of earned RSUs shall be made as soon as practicable after the date(s) determined by the Committee and set forth in the Award Agreement. The Committee, in its sole discretion, may settle earned RSUs in cash, Shares, or a combination of both.

9.4 Termination of Participant. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee).

10. PERFORMANCE SHARES.

10.1 Awards of Performance Shares. A Performance Share Award is an award to a Participant denominated in Shares that may be settled in cash, or by issuance of those Shares (which may consist of Restricted Stock). Grants of Performance Shares shall be made pursuant to an Award Agreement.

10.2 Terms of Performance Shares. The Committee will determine, and each Award Agreement shall set forth, the terms of each award of Performance Shares including, without limitation: (a) the number of Shares deemed subject to such Award; (b) the Performance Factors and Performance Period that shall determine the time and extent to which each award of Performance Shares shall be settled; (c) the consideration to be distributed on settlement, and the effect of the Participant's Termination on each award of Performance Shares. In establishing Performance Factors and the Performance Period the Committee will: (x) determine the nature, length and starting date of any Performance Period; (y) select from among the Performance Factors to be used; and (z) determine the number of Shares deemed subject to the award of Performance Shares. Prior to settlement the Committee shall determine the extent to which Performance Shares have been earned. Performance Periods may overlap and Participants may participate simultaneously with respect to Performance Shares that are subject to different Performance Periods and different performance goals and other criteria.

10.3 Value, Earning and Timing of Performance Shares. Each Performance Share will have an initial value equal to the Fair Market Value of a Share on the date of grant. After the applicable Performance Period has ended, the holder of Performance Shares will be entitled to receive a payout of the number of Performance Shares earned by the Participant over the Performance Period, to be determined as a function of the extent to which the corresponding Performance Factors or other vesting provisions have been achieved. The Committee, in its sole discretion, may pay earned Performance Shares in the form of cash, in Shares (which have an aggregate Fair Market Value equal to the value of the earned Performance Shares at the close of the applicable Performance Period) or in a combination thereof.

10.4 Termination of Participant. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee).

11. PAYMENT FOR SHARE PURCHASES.

Payment from Participant for Shares purchased pursuant to this Plan may be made in cash or by check or, where expressly approved for the Participant by the Committee and where permitted by law (and to the extent not otherwise set forth in the applicable Award Agreement):

(a) by cancellation of indebtedness of the Company to the Participant;

(b) by surrender of shares of the Company held by the Participant that have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which said Award will be exercised or settled;

(c) by waiver of compensation due or accrued to the Participant for services rendered or to be rendered to the Company or a Parent or Subsidiary of the Company;

(d) by consideration received by the Company pursuant to a broker-assisted and/or same day sale (or other) cashless exercise program implemented by the Company in connection with the Plan;

(e) by any combination of the foregoing; or

(f) by any other method of payment as is permitted by applicable law.

12. GRANTS TO OUTSIDE DIRECTORS.

12.1 Types of Awards. Outside Directors are eligible to receive any type of Award offered under this Plan except ISOs. Awards pursuant to this Section 12 may be automatically made pursuant to policy adopted by the Board, or made from time to time as determined in the discretion of the Board.

12.2 Eligibility. Awards pursuant to this Section 12 shall be granted only to Outside Directors. An Outside Director who is elected or re-elected as a member of the Board will be eligible to receive an Award under this Section 12.

12.3 Vesting, Exercisability and Settlement. Except as set forth in Section 21, Awards shall vest, become exercisable and be settled as determined by the Board. With respect to Options and SARs, the exercise price granted to Outside Directors shall not be less than the Fair Market Value of the Shares at the time that such Option or SAR is granted.

13. WITHHOLDING TAXES.

13.1 Withholding Generally. Whenever Shares are to be issued in satisfaction of Awards granted under this Plan, the Company may require the Participant to remit to the Company an amount sufficient to satisfy applicable federal, state, local and international withholding tax requirements prior to the delivery of Shares pursuant to exercise or settlement of any Award. Whenever payments in satisfaction of Awards granted under this Plan are to be made in cash, such payment will be net of an amount sufficient to satisfy applicable federal, state, local and international withholding tax requirements.

13.2 Stock Withholding. The Committee, in its sole discretion and pursuant to such procedures as it may specify from time to time, may require or permit a Participant to satisfy such tax withholding obligation, in whole or in part by (without limitation) (i) paying cash, (ii) electing to have the Company withhold otherwise deliverable cash or Shares having a Fair Market Value equal to up to the maximum statutory amount permitted to be withheld, including withholding from the proceeds of the sale of otherwise deliverable Shares acquired pursuant to an Award either through a voluntary sale or through a mandatory sale arranged by the Company, or (iii) delivering to the Company already-owned Shares having a Fair Market Value equal to up to the maximum statutory amount permitted to be withheld. The Fair Market Value of the Shares to be withheld or delivered will be determined as of the date that the taxes are required to be withheld.

14. TRANSFERABILITY. Unless determined otherwise by the Committee, an Award may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution. If the Committee makes an Award transferable, such Award will contain such additional terms and conditions as the Committee deems appropriate. Notwithstanding the foregoing, in no event shall the Committee institute an Award Transfer Program without first receiving the consent of the Company's stockholders. All Awards shall be exercisable: (i) during the Participant's lifetime only by (A) the Participant, or (B) the Participant's guardian or legal representative; and (ii) after the Participant's death, by the legal representative of the Participant's heirs or legatees.

15. PRIVILEGES OF STOCK OWNERSHIP; RESTRICTIONS ON SHARES.

15.1 Voting and Dividends. No Participant will have any of the rights of a shareholder with respect to any Shares until the Shares are issued to the Participant. After Shares are issued to the Participant, the Participant will be a shareholder and have all the rights of a shareholder with respect to such Shares, including the right to vote and receive all dividends or other distributions made or paid with respect to such Shares; provided, that if such Shares are Restricted Stock, then any new, additional or different securities the Participant may become entitled to receive with respect to such Shares by virtue of a stock dividend, stock split or any other change in the corporate or capital structure of the Company will be subject to the same restrictions as the Restricted Stock; provided, further, that the Participant will have no right to retain such stock dividends or stock distributions with respect to Shares that are repurchased at the Participant's Purchase Price or Exercise Price, as the case may be, pursuant to Section 15.2. The Committee may not provide for the current payment of dividends with respect to any shares of Common Stock subject to an outstanding award granted under the Plan (or portion thereof) that has not vested. For any such award, the Committee may provide only for the accrual of dividends

that will not be payable to the Participant unless and until, and only to the extent that, such award vests. No dividends shall be paid on Options or Stock Appreciation Rights.

15.2 Restrictions on Shares. At the discretion of the Committee, the Company may reserve to itself and/or its assignee(s) a right to repurchase (a "***Right of Repurchase***") a portion of any or all Unvested Shares held by a Participant following such Participant's Termination at any time within ninety (90) days after the later of the Participant's Termination Date and the date the Participant purchases Shares under this Plan, for cash and/or cancellation of purchase money indebtedness, at the Participant's Purchase Price or Exercise Price, as the case may be.

16. CERTIFICATES. All certificates for Shares or other securities delivered under this Plan will be subject to such stock transfer orders, legends and other restrictions as the Committee may deem necessary or advisable, including restrictions under any applicable federal, state or foreign securities law, or any rules, regulations and other requirements of the SEC or any stock exchange or automated quotation system upon which the Shares may be listed or quoted.

17. ESCROW; PLEDGE OF SHARES. To enforce any restrictions on a Participant's Shares, the Committee may require the Participant to deposit all certificates representing Shares, together with stock powers or other instruments of transfer approved by the Committee, appropriately endorsed in blank, with the Company or an agent designated by the Company to hold in escrow until such restrictions have lapsed or terminated, and the Committee may cause a legend or legends referencing such restrictions to be placed on the certificates. Any Participant who is permitted to execute a promissory note as partial or full consideration for the purchase of Shares under this Plan will be required to pledge and deposit with the Company all or part of the Shares so purchased as collateral to secure the payment of the Participant's obligation to the Company under the promissory note; provided, however, that the Committee may require or accept other or additional forms of collateral to secure the payment of such obligation and, in any event, the Company will have full recourse against the Participant under the promissory note notwithstanding any pledge of the Participant's Shares or other collateral. In connection with any pledge of the Shares, the Participant will be required to execute and deliver a written pledge agreement in such form as the Committee will from time to time approve. The Shares purchased with the promissory note may be released from the pledge on a pro rata basis as the promissory note is paid.

18. REPRICING; EXCHANGE AND BUYOUT OF AWARDS. Provided that stockholder approval is first obtained, the Committee (a) may reprice (i.e., reduce the Exercise Price) of) Options or SARs; (b) may, at any time or from time to time, implement an Exchange Program; or (c) may reduce the Exercise Price of outstanding Options or SARs without the consent of affected Participants by a written notice to them.

19. SECURITIES LAW AND OTHER REGULATORY COMPLIANCE. An Award will not be effective unless such Award is in compliance with all applicable federal and state securities laws, rules and regulations of any governmental body, and the requirements of any stock exchange or automated quotation system upon which the Shares may then be listed or quoted, as they are in effect on the date of grant of the Award and also on the date of exercise or other issuance. Notwithstanding any other provision in this Plan, the Company will have no obligation to issue or deliver certificates for Shares under this Plan prior to: (a) obtaining any approvals from governmental agencies that the Company determines are necessary or advisable; and/or (b) completion of any registration or other qualification of such Shares under any state or federal law or ruling of any governmental body that the Company determines to be necessary or advisable. The Company will be under no obligation to register the Shares with the SEC or to effect compliance with the registration, qualification or listing requirements of any state securities laws, stock exchange or automated quotation system, and the Company will have no liability for any inability or failure to do so.

20. NO OBLIGATION TO EMPLOY. Nothing in this Plan or any Award granted under this Plan will confer or be deemed to confer on any Participant any right to continue in the employ of, or to continue any other relationship with, the Company or any Parent or Subsidiary of the Company or limit in any way the right of the Company or any Parent or Subsidiary of the Company to terminate Participant's employment or other relationship at any time.

21. CORPORATE TRANSACTIONS.

21.1 Assumption or Replacement of Awards by Successor. In the event of a Corporate Transaction any or all outstanding Awards may be assumed or replaced by the successor corporation, which assumption or replacement shall be binding on all Participants. In the alternative, the successor corporation may substitute equivalent Awards or provide substantially similar consideration to Participants as was provided to stockholders (after taking into account the existing provisions of the Awards). The successor corporation may also issue, in place of outstanding Shares of the Company held by the Participant, substantially similar shares or other property subject to repurchase restrictions no less favorable to the Participant. In the event such successor or acquiring corporation (if any) refuses to assume, convert, replace or substitute Awards, as provided above, pursuant to a Corporate Transaction, then notwithstanding any other provision in this Plan to the contrary, such Awards will expire on such transaction at such time and on such conditions as the Board will determine; the Board (or, the Committee, if so designated by the Board) may, in its sole discretion, accelerate the vesting of such Awards in connection with such a Corporate Transaction in which the successor or acquiring corporation (if any) refuses to assume, convert, replace or substitute Awards. In addition, in the event such successor or acquiring corporation (if

any) refuses to assume, convert, replace or substitute Awards, as provided above, pursuant to a Corporate Transaction, the Committee will notify the Participant in writing or electronically that such Award will be exercisable for a period of time determined by the Committee in its sole discretion, and such Award will terminate upon the expiration of such period. Awards need not be treated similarly in a Corporate Transaction.

Notwithstanding anything to the contrary in this Section 21.1, the Committee, in its sole discretion, may grant Awards that provide for acceleration upon a Corporate Transaction or in other events in the specific Award Agreements.

21.2 Assumption of Awards by the Company. The Company, from time to time, also may substitute or assume outstanding awards granted by another company, whether in connection with an acquisition of such other company or otherwise, by either; (a) granting an Award under this Plan in substitution of such other company's award; or (b) assuming such award as if it had been granted under this Plan if the terms of such assumed award could be applied to an Award granted under this Plan. Such substitution or assumption will be permissible if the holder of the substituted or assumed award would have been eligible to be granted an Award under this Plan if the other company had applied the rules of this Plan to such grant. In the event the Company assumes an award granted by another company, the terms and conditions of such award will remain unchanged (except that the Purchase Price or the Exercise Price, as the case may be, and the number and nature of Shares issuable upon exercise or settlement of any such Award will be adjusted appropriately pursuant to Section 424(a) of the Code).

21.3 Outside Directors' Awards. Notwithstanding any provision to the contrary herein, in the event of a Corporate Transaction, the vesting of all Awards granted to Outside Directors shall accelerate and such Awards shall become exercisable (as applicable) in full prior to the consummation of such event at such times and on such conditions as the Committee determines.

22. ADOPTION AND SHAREHOLDER APPROVAL. This Plan shall be submitted for the approval of the Company's shareholders, consistent with applicable laws, within twelve (12) months before or after the date this Plan is adopted by the Board.

23. TERM OF PLAN. Unless earlier terminated as provided herein, this Plan will become effective on the Effective Date and will terminate on June 4, 2025. This Plan and all Awards granted hereunder shall be governed by and construed in accordance with the laws of the State of Delaware.

24. AMENDMENT OR TERMINATION OF PLAN. The Board may at any time terminate or amend this Plan in any respect, including, without limitation, amendment of any form of Award Agreement or instrument to be executed pursuant to this Plan; provided, however, that the Board will not, without the approval of the shareholders of the Company, amend this Plan in any manner that requires such shareholder approval; provided further, that a Participant's Award shall be governed by the version of this Plan then in effect at the time such Award was granted.

25. NONEXCLUSIVITY OF THE PLAN. Neither the adoption of this Plan by the Board, the submission of this Plan to the shareholders of the Company for approval, nor any provision of this Plan will be construed as creating any limitations on the power of the Board to adopt such additional compensation arrangements as it may deem desirable, including, without limitation, the granting of stock awards and bonuses otherwise than under this Plan, and such arrangements may be either generally applicable or applicable only in specific cases.

26. INSIDER TRADING POLICY. Each Participant who receives an Award shall comply with any policy adopted by the Company from time to time covering transactions in the Company's securities by Employees, officers and/or directors of the Company.

27. DEFINITIONS. As used in this Plan, and except as elsewhere defined herein, the following terms will have the following meanings:

"***Award***" means any award under the Plan, including any Option, Restricted Stock, Stock Bonus, Stock Appreciation Right, Restricted Stock Unit or award of Performance Shares.

"***Award Agreement***" means, with respect to each Award, the written or electronic agreement between the Company and the Participant setting forth the terms and conditions of the Award, which shall be in substantially a form (which need not be the same for each Participant) that the Committee has from time to time approved, and will comply with and be subject to the terms and conditions of this Plan.

"Award Transfer Program" means any program instituted by the Committee that would permit Participants the opportunity to transfer for value any outstanding Awards to a financial institution or other person or entity approved by the Committee. A transfer for "value" shall not be deemed to occur under this Plan where an Award is transferred by a Participant for bona fide estate planning purposes to a trust or other testamentary vehicle approved by the Committee.

"***Board***" means the Board of Directors of the Company.

"***Cause***" means (a) the commission of an act of theft, embezzlement, fraud, dishonesty, (b) a breach of fiduciary duty to the Company or a Parent or Subsidiary, or (c) a failure to materially perform the customary duties of Employee's employment.

“***Code***” means the United States Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.

“***Committee***” means the Compensation Committee of the Board or those persons to whom administration of the Plan, or part of the Plan, has been delegated as permitted by law.

“***Company***” means Glu Mobile Inc., or any successor corporation.

“***Consultant***” means any person, including an advisor or independent contractor, engaged by the Company or a Parent or Subsidiary to render services to such entity.

“***Corporate Transaction***” means the occurrence of any of the following events: (i) any “person” (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the “beneficial owner” (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company’s then-outstanding voting securities; (ii) the consummation of the sale or disposition by the Company of all or substantially all of the Company’s assets; (iii) the consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation. Notwithstanding the foregoing, to the extent that any amount constituting deferred compensation (as defined in Section 409A of the Code) would become payable under this Plan by reason of a Corporate Transaction, such amount shall become payable only if the event constituting a Corporate Transaction would also qualify as a change in ownership or effective control of the Company or a change in the ownership of a substantial portion of the assets of the Company, each as defined within the meaning of Code Section 409A, as it has been and may be amended from time to time, and any proposed or final Treasury Regulations and IRS guidance that has been promulgated or may be promulgated thereunder from time to time.

“***Director***” means a member of the Board.

“***Disability***” means total and permanent disability as defined in Section 22(e)(3) of the Code, provided, however, that except with respect to Awards granted as ISOs, the Committee in its discretion may determine whether a total and permanent disability exists in accordance with non-discriminatory and uniform standards adopted by the Committee from time to time, whether temporary or permanent, partial or total, as determined by the Committee.

“***Effective Date***” means the date of the underwritten initial public offering of the Company’s Common Stock pursuant to a registration statement is declared effective by the SEC.

“***Employee***” means any person, including Officers and Directors, employed by the Company or any Parent or Subsidiary of the Company. Neither service as a Director nor payment of a director’s fee by the Company will be sufficient to constitute “employment” by the Company.

“***Exchange Act***” means the United States Securities Exchange Act of 1934, as amended.

“***Exercise Price***” means the price at which a holder of an Option or SAR may purchase the Shares issuable upon exercise of an Option or SAR.

“***Exchange Program***” means a program pursuant to which (i) outstanding Awards are surrendered, cancelled or exchanged for cash, the same type of Award or a different Award (or combination thereof) or (ii) Participants would have the opportunity to participate in an Award Transfer Program.

“***Fair Market Value***” means, as of any date, the value of a share of the Company’s Common Stock determined as follows:

(a) if such Common Stock is then quoted on the Nasdaq Global Select Market, the Nasdaq Global Market or the Nasdaq Capital Market (collectively, the “***Nasdaq Market***”), its closing price on the Nasdaq Market on the date of determination, or if there are no sales for such date, then the last preceding business day on which there were sales, as reported in *The Wall Street Journal* or such other source as the Board or the Committee deems reliable;

(b) if such Common Stock is publicly traded and is then listed on a national securities exchange, its closing price on the date of determination on the principal national securities exchange on which the Common Stock is listed or admitted to trading as reported in *The Wall Street Journal* or such other source as the Board or the Committee deems reliable;

(c) if such Common Stock is publicly traded but is neither quoted on the Nasdaq Market nor listed or admitted to trading on a national securities exchange, the average of the closing bid and asked prices on the date of determination as reported in *The Wall Street Journal* or such other source as the Board or the Committee deems reliable;

(d) in the case of an Option or SAR made on the Effective Date, the price per share at which shares of the Company's Common Stock are initially offered for sale to the public by the Company's underwriters in the initial public offering of the Company's Common Stock pursuant to a registration statement filed with the SEC under the Securities Act; or

(e) if none of the foregoing is applicable, by the Board or the Committee in good faith.

"***Insider***" means an officer or director of the Company or any other person whose transactions in the Company's Common Stock are subject to Section 16 of the Exchange Act.

"***Option***" means an award of an option to purchase Shares pursuant to Section 5.

"***Outside Director***" means a Director who is not an Employee of the Company or any Parent or Subsidiary.

"***Parent***" means any corporation (other than the Company) in an unbroken chain of corporations ending with the Company if each of such corporations other than the Company owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

"***Participant***" means an Employee, Consultant or Director (including Outside Directors) who receives an Award under this Plan.

"***Performance Factors***" means the factors selected by the Committee, which may include, but are not limited to the, the following measures (whether or not in comparison to other peer companies) to determine whether the performance goals established by the Committee and applicable to Awards have been satisfied:

- Net revenue and/or net revenue growth;
- Earnings per share and/or earnings per share growth;
- Earnings before income taxes and amortization and/or earnings before income taxes and amortization growth;
- Operating income and/or operating income growth;
- Net income and/or net income growth;
- Total stockholder return and/or total stockholder return growth;
- Return on equity;
- Operating cash flow return on income;
- Adjusted operating cash flow return on income;
- Economic value added;
- Individual business objectives; and
- Company specific operational metrics.

"***Performance Period***" means the period of service determined by the Committee, not to exceed five (5) years, during which years of service or performance is to be measured for the Award.

"***Performance Share***" means an Award granted pursuant to Section 10 of the Plan.

"***Plan***" means this Glu Mobile Inc. 2007 Equity Incentive Plan.

"***Purchase Price***" means the price to be paid for Shares acquired under the Plan, other than Shares acquired upon exercise of an Option or SAR.

"***Restricted Stock Award***" means an award of Shares pursuant to Section 6 of the Plan, or issued pursuant to the early exercise of an Option.

"***Restricted Stock Unit***" means an Award granted pursuant to Section 9 of the Plan.

"***SEC***" means the United States Securities and Exchange Commission.

"***Securities Act***" means the United States Securities Act of 1933, as amended.

"***Shares***" means shares of the Company's Common Stock, as adjusted pursuant to Sections 2 and 21, and any successor security.

"***Stock Appreciation Right***" means an Award granted pursuant to Section 8 of the Plan.

"***Stock Bonus***" means an Award granted pursuant to Section 7 of the Plan.

"***Subsidiary***" means any corporation (other than the Company) in an unbroken chain of corporations beginning with the Company if each of the corporations other than the last corporation in the unbroken chain owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

"***Termination***" or "***Terminated***" means, for purposes of this Plan with respect to a Participant, that the Participant has for any reason ceased to provide services as an employee, officer, director, consultant, independent contractor or advisor to the Company or a Parent or Subsidiary of the Company. An employee will not be deemed to have ceased to provide services in the case of (i) sick leave, (ii) military leave, or (iii) any other leave of absence approved by the Committee; provided, that such leave is for a period of not more than 90 days, unless reemployment upon the expiration of such leave is guaranteed by contract or statute or unless provided otherwise pursuant to formal policy adopted from time to time by the Company and issued and promulgated to employees in writing. In the case of any employee on an approved leave of absence or upon a reduction in hours worked (for illustrative purposes only, a change in schedule from that of full-time to part-time), the Committee may make such provisions respecting suspension of vesting of the Award while on leave from the employ of the Company or a Parent or Subsidiary of the Company or during such change in working hours as it may deem appropriate, except that in no event may an Award be exercised after the expiration of the term set forth in the applicable Award Agreement. The Committee will have sole discretion to determine whether a Participant has ceased to provide services and the effective date on which the Participant ceased to provide services (the "***Termination Date***").

"***Unvested Shares***" means Shares that have not yet vested or are subject to a right of repurchase in favor of the Company (or any successor thereto).

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

(Mark One)

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2018

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission file number: 001-33368

Glu Mobile Inc.

(Exact name of registrant as specified in its charter)

Delaware *(State or Other Jurisdiction of Incorporation or Organization)*	**91-2143667** *(IRS Employer Identification No.)*
875 Howard Street, Suite 100 **San Francisco, California** *(Address of Principal Executive Offices)*	**94103** *(Zip Code)*

(415) 800-6100
(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, par value $0.0001 per share	Nasdaq Global Select Market

Securities registered pursuant to Section 12(g) of the Act:
None
(Title of Class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☑

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically, every Interactive Data File required to be submitted pursuant to Rule 405 Regulation S-T (§ 232.405 of this chapter during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☑	Accelerated filer ☐
Non-accelerated filer ☐	Smaller reporting company ☐
	Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

The aggregate market value of the voting stock held by non-affiliates of the registrant as of June 30, 2018, the last business day of the registrant's most recently completed second fiscal quarter, based upon the closing price of such stock on such date as reported by The Nasdaq Global Select Market, was approximately $713,370,079. Shares of common stock held by each executive officer and director of the registrant and by each person who owns 10% or more of the registrant's outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

The number of outstanding shares of the registrant's common stock as of February 15, 2019 was 144,120,408.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement for registrant's 2019 Annual Meeting of Stockholders to be filed pursuant to Regulation 14A within 120 days after registrant's fiscal year ended December 31, 2018 are incorporated by reference into Part III of this Annual Report on Form 10-K.

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Forward-Looking Statements

The information in this Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Such statements are based upon current expectations that involve risks and uncertainties. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements. For example, words such as "may," "will," "should," "estimates," "predicts," "potential," "continue," "strategy," "believes," "anticipates," "plans," "expects," "intends" and similar expressions are intended to identify forward-looking statements. Our actual results and the timing of certain events may differ significantly from the results discussed in the forward-looking statements. Factors that might cause or contribute to such differences include, but are not limited to, those discussed elsewhere in this report, particularly in the section titled "Risk Factors," and the risks discussed in our other Securities and Exchange Commission, or SEC, filings. We undertake no obligation to update the forward-looking statements after the date of this report, except as required by law.

PART I

Item 1. *Business*

General

Glu Mobile develops, publishes and markets a portfolio of free-to-play mobile games designed to appeal to a broad cross section of users who download and make purchases within our games through direct-to-consumer digital storefronts, such as the Apple App Store, Google Play Store, and others. Free-to-play games are games that a player can download and play for free, but which allow players to access a variety of additional content and features for a fee and to engage with various advertisements and offers that generate revenue for us. We have a portfolio of compelling games based on our own intellectual property such as *Cooking Dash*, *Covet Fashion*, *Deer Hunter*, *Design Home* and *QuizUp*, as well as games based on or significantly incorporating third party licensed brands including *Kim Kardashian: Hollywood*, *MLB Tap Sports Baseball* and *Restaurant Dash with Gordon Ramsay*. We are headquartered in San Francisco, California, with another U.S. office in San Mateo, California, and international locations in Toronto, Canada and Hyderabad, India.

We were incorporated in Nevada in May 2001 as Cyent Studios, Inc. and changed our name to Sorrent, Inc. later that year. In November 2001, we incorporated a wholly owned subsidiary in California, and, in December 2001, we merged the Nevada corporation into this California subsidiary to form Sorrent, Inc., a California corporation. In May 2005, we changed our name to Glu Mobile Inc. In March 2007, we completed our initial public offering and our common stock is traded on the Nasdaq Global Select Market under the symbol "GLUU." Except where the context requires otherwise, in this Annual Report on Form 10-K, references to "Company," "Glu," "Glu Mobile," "we," "us" and "our" refer to Glu Mobile Inc., and where appropriate, its subsidiaries.

Available Information

We file annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements and other reports, and amendments to these reports, required of public companies with the SEC. The public can read and copy the materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549 and can obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains a website at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. We make available free of charge on the Investor Relations section of our corporate website all of the reports we file with the SEC as soon as reasonably practicable after they are filed. Our internet website is located at www.glu.com and our Investor Relations website is located at www.glu.com/investors. The information on our website is not incorporated into this report, unless otherwise expressly stated. **Copies of our Annual Report on Form 10-K for the year ended December 31, 2018 may also be obtained, without charge, by contacting Investor Relations, Glu Mobile Inc., 875 Howard Street, Suite 100, San Francisco, California 94103 or by emailing IR@glu.com.**

Strategy and Business Developments

Our Strategy

Our goal is to become the leading developer and publisher of free-to-play mobile games. Our strategy for achieving this goal is comprised of three parts:

- Building Growth Games and Maximizing the Value of Evergreen Games;
- Attracting and Fostering Creative Leaders; and
- Cultivating Highly Creative Environments.

Building Growth Games and Maximizing the Value of Evergreen Games

The first prong of our strategy is to build growth games for smartphones and tablets as well as maximize the value we derive from our evergreen games. Growth games are titles that we continue to update with additional content and features and which grow revenue year over year. We believe a key component of driving revenue growth year over year from a growth game is the inclusion of community features which may involve users competing with each other, forming clubs or groups to cooperate in completing goals or events, or contributing their own original content to the game. *Covet Fashion*, *Design Home* and *MLB Tap Sports Baseball* are our existing growth games. We are focused on building growth games in what we refer to as "blue oceans," meaning that we seek to identify genres that are not oversaturated with competitive titles and where we believe we can become the leader in that genre. We currently publish titles primarily in four genres: home décor, sports and action, fashion and celebrity, and time management. We believe these are genres in which we have already established a leadership position, are otherwise aligned with our strengths or are conducive to the establishment of a growth game.

Evergreen games are similar to growth games in that we continue to update them with additional content and features, but differ from growth games in that our focus is to reduce and potentially reverse their year over year revenue declines; to the extent that we succeed in our efforts to grow annual revenue from an evergreen game and expect such title's revenues to continue to grow on an annual basis, we would then consider such evergreen game to be a growth game. For example, we succeeded in growing annual revenues from 2017 to 2018 for *Kim Kardashian: Hollywood*, a title that we first released in June 2014, though we do not expect revenues from this title to continue to grow in 2019. *Cooking Dash*, *Deer Hunter 2018*, *Kim Kardashian: Hollywood* and *Restaurant Dash with Gordon Ramsay* are examples of our existing evergreen games.

While we have generally designed our games to incorporate social features that enhance the user's gameplay experience, as part of our product strategy we are emphasizing adding new social and community-based features, systems, and modes into our growth games. For example, *Covet Fashion* allows users to join "Fashion Houses" with other users and then borrow each others' clothes, receive advice on their looks, chat and work together to unlock additional rewards in special style challenges, and our *Tap Sports Baseball* franchise allow players to challenge their friends to head-to-head matchups and to join clubs that compete in daily events against other clubs. We intend to continue to innovate to further enable our titles' ability to function as successful growth or evergreen titles. For example, we plan to introduce a new meta game experience to *Design Home* during 2019 which is designed to deepen the experience for the game's long-term players.

We have begun to emphasize developing new titles based on original intellectual property. Reflecting this strategy, revenue from games based on our own intellectual property increased from 59.1% of our total revenues in 2017 to 65.7% of our total revenues in 2018. However, we also seek to selectively license and utilize key brands within our titles if we believe this will maximize their consumer appeal and revenue potential. For example, in 2017, we added content from Major League Baseball, or MLB, for the first time in our Tap Sports Baseball franchise, which helped us to meaningfully grow revenue from this franchise year over year. In addition, in 2019 we intend to release WWE Universe, a title featuring WWE Superstars, logos and marks, and Disney Sorcerer's Arena in collaboration with Disney Consumer Products and Interactive Media. We have also worked with our celebrity licensors to engage their social media audiences

and build games that will resonate with their unique fan bases. In particular, Kim Kardashian: Hollywood utilizes transmedia storytelling, leveraging Ms. Kardashian West's built-in social media fan base to drive installs and awareness of the game, and then attempts to surprise and delight those fans with real-world events and other game content based on her life. Our Restaurant Dash with Gordon Ramsay title utilizes Gordon Ramsay's personality to guide users to become a restaurateur in the image of Mr. Ramsay. We believe that we can continue to drive installs and awareness of our games through our licensing efforts with recognized brands, celebrities and social influencers that resonate with potential players of our games. Partnering with desirable licensing partners and renewing our existing licenses requires that we continue to develop successful games based on licensed content and are able to compete with other mobile gaming companies on financial and other terms in signing such partners. We also plan to continue introducing third-party licensed brands, properties and personalities into our games as additional licensed content, for cameo appearances or for limited time events in order to drive awareness and monetization.

We also plan to continue monitoring the successful aspects of our games to drive downloads and enhance monetization and retention as part of our product strategy, whether by optimizing advertising revenue within each title, including deeper meta game features, building enhanced and more complex core gameplay, adding additional social features, tournaments and events or otherwise.

Attracting and Fostering Creative Leaders

The second prong of our strategy is to attract, cultivate and retain proven creative leaders who will develop and update our growth and evergreen games. Each creative leader is responsible for the long-term planning of his or her titles and to identify and invest in long-term opportunities and concepts that have the potential to become growth games. Our talent model is to attract the industry's finest and provide them with world-class infrastructure, tools, funding and the support to create hit games. We have made, and plan to make, significant investment in our creative leaders.

We have worked with our creative leaders to instill financial discipline and operational excellence in our organization by revamping our prototyping and greenlight processes. Prior to developing a new game, a creative leader works with a small team to rapidly prototype new ideas that have the potential to become growth games. We expect our creative leaders to fail fast and to either continue to iterate on a game concept or to move on to rapidly prototyping a new concept. Once the creative leader and his or her team have sufficiently iterated on their concept and are satisfied that their game has the potential to be a growth game, the creative leader will submit a playable version of the game for greenlighting. If the game is greenlit, we then commit larger investments in terms of headcount and resources.

Cultivating Highly Creative Environments

We believe a key part of building growth games and attracting and cultivating creative leaders is providing them with highly creative environments that are optimal for creating hit games. In December 2017, we moved into our new headquarters in San Francisco that were designed to foster collaboration among our game teams and focus the company around our core values and creative-led vision. Creative environments that support our creative leaders and other game development personnel are also needed to attract the level of talent that will support our growth and evergreen games. We not only consolidated our studio footprint by moving into our creative center in San Francisco and relocating our Burlingame studio to our San Francisco headquarters, but have also significantly increased our investment in our low-cost, scaled center in Hyderabad, India which provides live operations for some of our evergreen games, insourced art, quality assurance and low cost repeatable sales, marketing and general and administrative functions. As part of this consolidation, in the last several years, we closed or sold development studios in Beijing, China; Bellevue, Washington; Portland, Oregon; San Mateo and Long Beach, California; and Moscow, Russia.

Business Developments

Since January 1, 2018, we have taken the following actions to support our business:

- We continued to focus our efforts on developing and publishing games for smartphones and tablet devices.

Our significant achievements related to these efforts include the following:

- We generated total revenue of $366.6 million for the year ended December 31, 2018, a 27.8% increase compared to total revenue of $286.8 million for the year ended December 31, 2017.

- In December 2018, we had approximately 3.2 million daily active users and 21.1 million monthly active users of our games on our primary distribution platforms, including Apple's App Store and the Google Play Store.

- As of December 31, 2018, we had approximately 1.9 billion cumulative installs of our games on our primary distribution platforms, including approximately 29.0 million installs during the fourth quarter of 2018.

We grew revenues on an annual basis from each of our growth games, as follows:

- Revenues from *Design Home* increased from $71.4 million in 2017 to $145.7 million in 2018;

- Revenues from *Covet Fashion* increased from $35.7 million in 2017 to $49.0 million in 2018; and

- Revenues from our *Tap Sports Baseball* franchise increased from $42.1 million in 2017 to $69.1 million in 2018.

- In February 2018, we announced that we are collaborating with Disney Consumer Products and Interactive Media ("Disney") on the development of an upcoming mobile game that is expected to include characters and stories from across Disney and Pixar franchises.

Across the globe our industry is experiencing a trend where hit titles generally remain higher in the top grossing charts for longer. We believe this is due to the continued specialization and investment of teams and companies in their hit titles, and the live, social nature of certain games. Our strategy and the measures we have implemented to support our business position us to take advantage of these trends. We plan to continue to regularly update and otherwise support our growth and evergreen games in order to ensure that those games monetize and retain users for even longer periods of time. In addition, we plan to continue to invest in our creative leaders and the creative environments in which they and their teams work to increase our likelihood of creating significant hit growth games in 2019 and beyond.

Our Products

We develop and publish a portfolio of mobile games designed to appeal to a broad cross section of the users of smartphones and tablet devices. Our portfolio of growth and evergreen games is spread across the following genres:

- *Home Décor*

  - *Design Home*, which launched in November 2016 and was acquired as part of our acquisition of Crowdstar, has become our most successful growth game. *Design Home* allows users to participate in daily Design Challenges in which they style three dimensional spaces with real, high-end furniture and décor. We are planning key updates for *Design Home* in 2019, including the introduction of a deeper meta loop and e-commerce functionality.

- *Sports and Action*

  - *MLB Tap Sports Baseball 2018*, which launched in March 2018, was the fifth installment in our popular Tap Sports Baseball franchise in which we partnered with the MLB, MLBPA and MLBPAA to include real-world baseball stars from each of the MLB's 30 teams. *MLB Tap Sports Baseball 2018* was our second largest revenue contributor and the highest ranked baseball title in the Apple App Store's U.S.

iPhone top grossing games rankings during 2018. We expect to launch *MLB Tap Sports Baseball 2019* in March 2019.

  - *Deer Hunter 2018*, originally launched in September 2015 as *Deer Hunter 2016*, remained as one of our top action titles during 2018. We released a new Hunting Tournament feature in 2018 along with three major updates to this title in 2016 and 2017, which updates have helped slow the annual revenue declines from this title.

  - We expect to add to our portfolio of sports and action titles through the worldwide release of *WWE Universe* in 2019 and the next iteration of our *Deer Hunter* franchise in 2020.

- *Fashion and Celebrity*

  - *Covet Fashion*, which we acquired as part of our acquisition of Crowdstar, is a top grossing fashion title that was our third largest revenue contributor during 2018. *Covet Fashion* features continually changing content and daily Style Challenges to help drive engagement and monetization of its users. During 2018, we entered into an agreement with Disney which has enabled us to introduce a series of Disney-themed Style Challenges.

  - *Kim Kardashian: Hollywood* is a narrative role playing game featuring Kim Kardashian-West's likeness, voice and creative influence as she guides players on their journey to success in Hollywood. We globally launched *Kim Kardashian: Hollywood* in June 2014, and it continues to be one of our top revenue-generating titles on an annual basis. In fact, we grew revenue from this title on an annual basis from $26.6 million in 2017 to $34.0 million in 2018.

- *Time Management*

  - *Cooking Dash*, while launched in June 2015, continued to be one of our top revenue-generating titles during 2018. We released a significant update to this title at the end of 2017 and have continued to introduce new cooking venues through regular content updates, which we believe will maintain this title's position as one of our top evergreen games into 2019.

  - *Restaurant Dash with Gordon Ramsay*, launched in June 2016, utilizes Gordon Ramsay's personality to guide users to become a restaurateur in the image of Mr. Ramsay. We are no longer developing content updates for this title, but have streamlined our live operations in an effort to maximize revenue and reduce costs from this title in 2019.

  - We expect to add to our portfolio of time management titles with the release of *Diner DASH Adventures* in 2019. *Diner DASH Adventures* will offer world decoration, a deep story, and an exciting consolidation of different Dash time-management styles.

In addition, our portfolio of evergreen games also includes *QuizUp*, which is a multiplayer trivia game where users can challenge friends to trivia games and create their own trivia competitions. *QuizUp* was released in 2013 by Plain Vanilla and acquired by us in December 2016.

Across genres, we view our titles as either growth games or catalog games, and within the catalog group, our titles are either classified as evergreen games or legacy games. Legacy games are those titles that are still published by us and earn revenue, but on which we expend little to no investment in terms of updates and enhancements.

We work to ensure that our games have consistently high production values, are visually appealing and have engaging core gameplay. These characteristics have typically helped to drive installs and awareness of our games and resulted in highly positive consumer reviews.

We have continued to improve monetization in our games, with our most popular games remaining successful for longer periods of time. The longevity of our most successful games derives from strong core gameplay, deep meta

game features, regular content updates and social and community features, such as the ability to join clans or clubs, tournaments, player-versus-player gameplay and live events.

Our games historically have had "thick clients" due to their high production values and, in some cases, 3-D graphics. A thick client game means that our games have a large file size, often 150 megabytes or more, that resides on the player's device. Because of the inherent limitations of the digital platforms and telecommunications networks, which, at best, only allow applications that are less than 150 megabytes to be downloaded over a carrier's wireless network, users often must download one of our games either via a wireless Internet (wifi) connection or initially to their computer and then load the game to their device.

Our Revenue

We generate the majority of our revenue through "in-app-purchases," with the balance of our revenue primarily generated by offers and in-game advertising. When we incorporate licensed content into our games, we share a portion of our revenue with the licensors featured in these titles.

In-App Purchases

Although users can download and play our games free of charge, they can purchase virtual currency, virtual items, other virtual benefits like time and energy or subscriptions of any of these categories, to enhance their gameplay experience – we refer to these as "in-app purchases" or "micro-transactions." Some of the benefits that players receive from their in-app purchases include:

- *Play Longer Through Better Equipment* – We generally design our games to become significantly more challenging as the player advances through the game. For a game like *Cooking Dash*, players can purchase higher-quality ingredients and various boosts that can help them complete increasingly difficult levels more easily.
- *Play Longer Through Energy Replenishment* – We design some of our games, such as *Deer Hunter 2018* and *Kim Kardashian: Hollywood*, to have short playing sessions, the duration of which are limited by the energy available for each session. Players of *Deer Hunter 2018* and *Kim Kardashian: Hollywood* can use their virtual currency to purchase items that will replenish their energy and enable them to extend their gameplay session.
- *Accelerate Game Progress* – Although some players are content to slowly "grind" their way through progressing in a game, others are willing to purchase items to accelerate their progression. For example, our *Tap Sports Baseball* titles enable players to spend their virtual currency to upgrade their roster of players and boost the effectiveness of such players, thus allowing the player to more quickly assemble a winning team.
- *Customization* – Our games generally enable players to express themselves by customizing their character, the world the character inhabits or a room. For example, *Covet Fashion* and *Design Home* each allow users to customize the look of their avatar or room, respectively, by purchasing clothing or home design elements. While in *Covet Fashion* users own a clothing or accessory item indefinitely after it is purchased and can use it in multiple events, *Design Home* limits the player to five uses of any purchased design element.

We sell virtual currency to consumers at various prices ranging from $0.99 to $400.00 depending on the available storefront pricing (adjusted for local currencies for sales to players in foreign countries) with the significant majority of player purchases occurring at the lower price points. The digital storefronts generally share with us 70% of the consumers' payments for in-app purchases; we do not have any special agreement or arrangement with respect to pricing or terms with any of the digital storefronts. Consumers may also acquire virtual currency, other virtual items or virtual benefits through gameplay or by completing offers, as described below.

Offers and In-Game Advertising

In addition to in-app purchases of virtual currency, we also monetize our games through offers and in-game advertising. Optimizing advertising revenue within our games requires us to continue taking advantage of positive trends

in the mobile advertising industry, particularly as brands continue to migrate budgets from web to mobile. Offers enable users to acquire virtual currency without paying cash but by instead taking specified actions, such as downloading another application, watching a short video, subscribing to a service or completing a survey. We work with third parties to provide these offers to players of our games, and we receive a payment from the third party offer provider based on consumer response to these offers. We also work with third party advertising aggregators who embed advertising, such as incented video ads, ads appearing within the game between content transitions and as pop-up ads; the aggregators typically pay us based on the number of impressions, which is the number of times an advertisement is shown to a player, or conversions, which is the number of times players complete an advertiser's desired action. In addition, from time to time we work directly with other application developers to include advertising for their applications in our games, and the developers pay us based on either the number of impressions in our games or the number of users who download the developer's application. We also sometimes include virtual product integrations of goods directly into certain of our titles such as *Design Home*, *Covet Fashion* and *Kim Kardashian: Hollywood* and expect that we may generate increasing advertising revenue from these types of product integrations in the future.

Licensed Content

Following the success of *Kim Kardashian: Hollywood* and games incorporating licensed third-party brands and properties, like our *Tap Sports Baseball* franchise, we increased our licensing efforts, both in terms of securing licenses to develop games based upon or significantly featuring celebrities and other third-party intellectual property and for cameo appearances or to otherwise incorporate third-party intellectual property into our games. However, we have more recently begun to emphasize developing new titles based on original intellectual property. In 2018, 2017, and 2016, games based on our own intellectual property accounted for approximately 65.7%, 59.1%, and 39.7% of our revenue, respectively. The increase from 2017 to 2018 was due primarily to the success of *Design Home,* the *Tap Sports Baseball* franchise, and *Covet Fashion,* as well as the continued strength of some of our evergreen games, such as *Cooking Dash* and our *Deer Hunter* franchise. The increase from 2016 to 2017 was due primarily to the success of *Design Home* and *Covet Fashion* as well as the continued strength of *Cooking Dash*. We expect to launch three new titles in 2019, *MLB Tap Sports Baseball 2019*, *WWE Universe* and *Disney Sorcerer's Arena*, each of which will include third-party licensed content. We intend to continue to selectively license and utilize key brands within our titles if we believe this will maximize their consumer appeal and revenue potential.

For games based on or significantly incorporating licensed brands, properties or other content, we share a portion of our revenue with the respective licensors. The average royalty rate that we paid on games based on licensed content (such as *Kim Kardashian: Hollywood* and *Restaurant Dash with Gordon Ramsay*) or significantly incorporating licensed content (such as *MLB Tap Sports Baseball 2018*) was approximately 20.2% of gross revenue in 2018, 18.2% in 2017, and 21.9% in 2016. However, the individual royalty rates that we pay can be meaningfully above or below the average based on a variety of factors, such as the strength of the licensed brand, our development and porting obligations, and the platforms on which we are permitted to distribute the licensed content.

Sales, Marketing and Distribution

We market, sell and distribute our games primarily through direct-to-consumer digital storefronts, such as Apple's App Store and the Google Play Store. In addition to publishing our smartphone games on direct-to-consumer digital storefronts, we also publish some of our titles on other platforms, such as the Mac App Store and Facebook. The significant majority of our smartphone revenue has historically been derived from Apple's iOS platform, which accounted for approximately 63.1%, 63.0%, and 62.4% of our total revenue in 2018, 2017, and 2016, respectively. We generated the majority of these iOS-related revenue from the Apple App Store, which represented 54.7%, 54.2%, and 52.7% of our total revenue in 2018, 2017, and 2016, respectively, with the significant majority of such revenue derived from in-app purchases. We generated the balance of our iOS-related revenue from offers and advertisements in games distributed on the Apple App Store and, to a far lesser extent, sales of premium games. In addition, we generated approximately 36.6%, 36.0%, and 36.1% of our total revenue in 2018, 2017, and 2016, respectively, from the Android platform. We generated the majority of our Android-related revenue from in-app purchases and sales of premium games made through the Google Play Store, which represented 31.3%, 30.3%, and 27.6% of our total revenue in 2018, 2017, and 2016, respectively. No other customer or digital storefront accounted for more than 10% of our total revenue in 2018, 2017, and 2016.

As part of our efforts to successfully market our games on the direct-to-consumer digital storefronts, we attempt to educate the storefront owners about our title roadmap and seek to have our games featured or otherwise prominently placed within the storefront. We believe that the featuring or prominent placement of our games facilitates organic user discovery and is likely to result in our games achieving a greater degree of commercial success. We believe that a number of factors may influence the featuring or placement of a game, including:

- the perceived attractiveness and quality of the title, brand, or licensed intellectual property;
- the level of critical or commercial success of the game or of other games previously introduced by a publisher;
- incorporation of the storefront owner's latest technology in the publisher's title;
- how strong the consumer experience is on all of the devices that discover titles using any given digital storefront;
- the publisher's relationship with the applicable storefront owner and future pipeline of quality titles for it; and
- the current market share of the publisher.

The majority of our games have been featured on the Apple and Google storefronts when they were commercially released, which we believe is in part due to our efforts to be a consistently good partner with Apple and Google. In addition to our efforts to secure prominent featuring or placement for our games, we have also undertaken a number of marketing initiatives designed to acquire players and increase downloads of our games and increase sales of virtual currency, including:

- using social networking websites, such as Facebook and Twitter, to build a base of fans and followers to whom we can quickly and easily provide information about our games;
- paying third parties, including advertising networks, social media channels and social influencers, to advertise or incentivize consumers to download our games through offers or recommendations;
- using "push" notifications to alert users of sales on virtual currency or items in our games; and
- cross-promoting our games through banner advertisements in our other games, as well as advertising our games in our competitors' games;

In addition, certain of our games featuring celebrities or other licensed content like *Kim Kardashian: Hollywood* generate significant attention through word of mouth, particularly through social media channels. We look to leverage existing social media presences in order to increase the virality and commercial success of our games. Furthermore, social-based methods for promoting our games include in-game events where players compete with and against each other, in-game social promotions and regular content updates, including in-game content that leverages real world events, such as holiday promotions or current events in the life of our celebrity partners.

We have sought to deepen player engagement by fostering a sense of community in our games. As part of these efforts, we have organized player councils for certain of our games where we have invited some of our most dedicated players to special events to engage with the development teams and share their feedback about our games. For example, we held a CovetCon event in 2018 where 10 VIP players were chosen to participate in a multi-day event focusing on *Covet Fashion*, and we are planning additional CovetCon events in 2019.

Development Studios

Our creative leaders have primary responsibility for overseeing game development for our growth and evergreen games. The internal studios that develop our games are located in San Francisco and San Mateo, California; and Toronto, Canada. In addition, as part of our restructuring activities in 2016 and 2017 and the acquisition of *QuizUp* from Plain Vanilla in December 2016, we moved certain of our catalog games to our Hyderabad, India location to run live operations and produce content updates for these games.

Our studios are generally supported by central services personnel in our San Francisco, California headquarters who provide expertise with respect to areas such as user experience, analytics and marketing, with each studio leveraging these services to varying degrees. In August 2017, we consolidated certain central technology functions, including analytics and software development kit (SDK) development, under our Chief Revenue Officer's organization to better align these departments with Glu's user acquisition and advertising revenue teams.

Our game development process involves a significant amount of creativity, particularly with respect to developing original intellectual property franchises or games in which we license intellectual property from celebrities, Hollywood studios or other owners of brands, properties and other content. Creative and technical studio expertise is necessary to design games that appeal to players who typically play in short sessions and to develop games that work well on mobile phones and tablets with their inherent limitations, such as small screen sizes and control buttons. During 2019, we plan to hire additional game development personnel and invest in technical studio expertise to drive content and features in our growth games and to prototype ideas that we believe can become hit growth games.

Despite our efforts to reduce our geographical footprint and consolidate studios, our development personnel are located in four cities in three different countries, which results in certain inherent complexities. To address these issues, we instituted our Glu University training program. Glu University is designed to increase interaction among our studio teams, including having international studio team members regularly spend time in our U.S. studios. The goal of this program is to ensure that we increase the uniformity, quality and commercial success of our games. In addition, we believe that our strategy of focusing our development efforts on building and maintaining growth and evergreen games will help ensure more efficient use of our talent and resources across our studios and further promote the sharing of expertise and best practices.

Product Development

Since the markets for our products are characterized by rapid technological change, particularly in the technical capabilities of mobile phones and tablets, and changing end-user preferences, continuous investment is required to innovate and publish new games, regularly update our games, and modify existing games for distribution on new platforms.

We have continued to utilize measures designed to ensure that we publish and launch games that have a greater likelihood of being commercially successful, while identifying earlier in the development process game concepts and designs that are unlikely to produce hits. Prior to developing a new game, a creative leader works with a small team to rapidly prototype new ideas that have the potential to become growth games. We expect our creative leaders to fail fast and to either continue to iterate on a game concept or to move on to rapidly prototyping a new concept. Once the creative leader and his or her team have sufficiently iterated on their concept and are satisfied that their game has the potential to be a hit title, the creative leader will submit a playable version of the game for greenlighting. If the game is greenlit, only at that point will we commit larger investments in terms of headcount and resources.

In addition, we plan to continue holding detailed post-mortems for all products to review and analyze the positive and negative results from each new game launch. These are in addition to our Glu University training sessions where we formally share best practices and learnings amongst the leadership of all functions of our global studios.

We use third-party development tools to create our games, including a game development engine licensed from Unity Technologies to create most of our newest games and our games in development. In addition, we rely on our own servers and third-party infrastructure to operate our games and to maintain and provide our analytics data. In particular, a

significant portion of game traffic is hosted by Amazon Web Services, which provides us server redundancy by using multiple locations on various distinct power grids, and we expect to continue utilizing Amazon for a significant portion of our hosting services for the foreseeable future.

Furthermore, we have made significant investments in building out a personalization and experimentation engine that seamlessly integrates with our proprietary analytics system, advertisement related activities, and game environment. We believe this new capability will greatly enhance our ability to segment and personalize our players' in-game experience with a focus on further monetizing our highest spending and most engaged players. We aim to connect the data, insights and knowledge gained from our analytics and monetization techniques to every element of our business – from marketing to merchandising – in order to improve player retention and monetization.

Seasonality

Many new smartphones and tablets are released in, or shortly before, the fourth calendar quarter to coincide with the holiday shopping season. Because many players download our games soon after they purchase or receive their new devices, we generally experience seasonal sales increases based on the holiday selling period. Although we believe that the majority of this holiday impact occurs during the fourth quarter, some of this seasonality also occurs for us in our first calendar quarter due to some lag between device purchases and game purchases. However, the impact of this seasonality on our operating results is significantly affected by our title release schedule. For example, we have historically released each year's new version of our *Tap Sports Baseball* franchise late in the first quarter, which has resulted in revenues from this title peaking in the second or third quarter, with declining revenues in the fourth quarter and the first quarter of the following year leading up to the launch of the next version of the title. In addition, companies' advertising budgets are generally highest during the fourth quarter and decline significantly in the first quarter of the following year, which affects the revenue we derive from advertisements and offers in our games. Conversely, our marketing expenses also increase in the fourth quarter, since demand for marketing is higher during the holiday season and this increased demand drives up marketing costs.

Competition

Developing, distributing and selling mobile games is a highly competitive business, characterized by frequent product introductions and rapidly emerging new platforms, technologies and storefronts. For players, we compete primarily on the basis of game quality, brand and customer reviews. We compete for space on user's smartphones and tablet devices in terms of the number of applications on their device and the amount of storage consumed by such applications. We also compete more generally for the time, attention and discretionary spending of users of smartphones and tablet devices who are spending ever-increasing amounts of time on social media, messaging and music, movie and television streaming applications, personal computer and console games, sports and the Internet. We compete for promotional and digital storefront placement based on our relationship with the digital storefront owner, historical performance, game quality, perception of sales potential, customer reviews and relationships with celebrities and other licensors of brands and other content. For content licensors, we compete based on royalty and other economic terms, historical financial performance of prior licensed content titles, perceptions of development quality, speed of execution, distribution breadth and relationships with storefront owners. We also compete for experienced and talented employees.

We compete with a continually increasing number of companies, including Activision (the parent company of King Digital Entertainment), DeNA, Disney, Electronic Arts (EA Mobile), Gameloft, Gamevil, GREE, GungHo Online Entertainment, Netease, Netmarble, Nexon, Rovio, Warner Brothers, and Zynga and many well-funded private companies, including DoubleDown, Epic Games, Jam City, Machine Zone, Miniclip, Niantic, Peak Games, Playrix, Pocket Gems, Scopely, Storm 8/Team Lava, and Supercell. We also face competition from online game developers and distributors who are primarily focused on specific international markets. We could also face increased competition if those companies choose to compete more directly in the United States or the other markets that are significant to us or if large companies with significant online presences such as Apple, Google, Amazon, Facebook, Microsoft or Verizon, choose to enter or expand in the games space or develop competing games. In addition, we also face competition from mobile applications and websites focused on the home design market, which may include games, e-commerce titles, design applications and others seeking to displace our *Design Home* title which is a leading title in the currently unsaturated home design application market. Competitors in this space include, or may include, established game

developers, established real estate companies, interior design companies, e-commerce companies and other well-funded private companies looking to enter the home design market.

In addition, given the open nature of the development and distribution for smartphones and tablets and the relatively low barriers to entry, we also compete or will compete with a vast number of small companies and individuals who are able to create and launch games and other content for these devices using relatively limited resources and with relatively limited start-up time or expertise. As an example of the competition that we face, it has been estimated that more than 3.3 million applications, including more than 800,000 active games, were available on Apple's U.S. App Store as of January 31, 2019. The proliferation of titles in these open developer channels makes it difficult for us to differentiate ourselves from other developers and to compete for players without substantially increasing our marketing expenses and development costs.

We also compete for downloads and time spent on mobile devices with companies that develop popular social media and messaging applications, such as Facebook (with its Facebook, Facebook Messenger, Instagram, WhatsApp and other applications), Pinterest, Reddit, Snapchat, Twitter, Vevo and YouTube, companies that develop streaming music, movie and television applications, such as Pandora, Spotify, Tidal, HBO Go, Netflix, Amazon Prime and Hulu, and with companies that create other non-gaming related software applications, for example for celebrities, such as Kim Kardashian West's own personal media application.

Some of our competitors and our potential competitors have one or more advantages over us, either globally or in particular geographic markets, which include:

- significantly greater financial resources;
- greater experience with free-to-play games, building and maintaining growth or evergreen games, and building social and community features into mobile games, as well as more effective game monetization;
- stronger brand and consumer recognition regionally or worldwide;
- the capacity to leverage their marketing expenditures across a broader portfolio of mobile and non-mobile products;
- larger installed user bases from their existing mobile games;
- larger installed user bases from related platforms, such as console gaming or social networking websites, to which they can market and sell mobile games;
- more substantial intellectual property of their own from which they can develop games without having to pay royalties;
- lower labor and development costs and better overall economies of scale;
- greater platform-specific focus, experience and expertise;
- broader global distribution and presence; and
- greater talent, both in overall headcount and in terms of experience in creating successful titles.

Intellectual Property

Our intellectual property is an essential element of our business. We use a combination of trademark, copyright, trade secret and other intellectual property laws, confidentiality agreements and license agreements to protect our intellectual property. Our employees and independent contractors are required to sign agreements acknowledging that all

inventions, trade secrets, works of authorship, developments and other processes generated by them on our behalf are our property, and assigning to us any ownership that they may claim in those works. We also vigorously defend our intellectual property. Despite our precautions, it may be possible for third parties to obtain and use without our consent intellectual property that we own or license. Unauthorized use of our intellectual property by third parties, including piracy, and the expenses incurred in protecting our intellectual property rights, may adversely affect our business. In addition, some of our competitors have in the past released games that are nearly identical to successful games released by their competitors in an effort to confuse the market and divert users from the competitor's game to the copycat game. To the extent that these tactics are employed with respect to any of our games, it could reduce our revenue.

Our trademarks that have been registered with the U.S. Patent and Trademark Office include Glu, Crowdstar, our 2-D 'g' character logo, our 3-D 'g' character logo and several of our game titles, including *Blood & Glory, Contract Killer, Cooking Dash, Deer Hunter, Diner Dash, Eternity Warriors, Frontline Commando, Gun Bros, QuizUp*, and *Tap Sports*. In addition, we have trademark applications pending with the U.S. Patent and Trademark Office for other of our game titles. For certain titles we do not yet have, and do not intend to seek, trademark registration. We also own, or have applied to own, one or more registered trademarks in certain foreign countries, depending on the relevance of each brand to other markets. Registrations of both U.S. and foreign trademarks are renewable every ten years.

We have eleven patents issued by the U.S. Patent and Trademark Office and have five patent applications pending. In addition, we have one international patent issued through the Patent Cooperation Treaty (PCT), which corresponds to one of our pending U.S. patent applications. We also have patent applications in Canada, China, and Europe that correspond to one of our eleven issued U.S. patents, and we also have patent applications pending in Canada and Europe that correspond to another of our eleven issued U.S. patents.

We also use third-party development tools to create many of our games, including a game development engine licensed from Unity Technologies to create most of our newest games.

From time to time, we encounter disputes over rights and obligations concerning intellectual property. If we do not prevail in these disputes, we may lose some or all of our intellectual property protection, be enjoined from further sales of our games or other applications determined to infringe the rights of others, and/or be forced to pay substantial royalties to a third party, any of which would have a material adverse effect on our business, financial condition and results of operations.

Government Regulation

We are subject to various federal, state and international laws and regulations that affect our business, including those relating to the privacy and security of customer and employee personal information and those relating to the Internet, behavioral tracking, mobile applications, advertising and marketing activities, sweepstakes and contests, and gambling. Additional laws in all of these areas are likely to be passed in the future, which could result in significant limitations on or changes to the ways in which we can collect, use, host, store or transmit the personal information and data of our customers or employees, communicate with our customers, and deliver products and services, or may significantly increase our compliance costs. As our business expands to include new uses or collection of data that are subject to privacy or security regulations, our compliance requirements and costs will increase and we may be subject to increased regulatory scrutiny.

Financial Information about Segments and Geographic Areas

We manage our operations and allocate resources as a single reportable segment. Financial information about our segment and geographic areas is incorporated into this section by reference to Note 13 of Notes to Consolidated Financial Statements contained in Item 8 of this report. In addition, financial information regarding our operations, assets and liabilities, including our total net revenue and net loss for the years ended December 31, 2018, 2017, and 2016, and our total assets as of December 31, 2018 and 2017, is included in our Consolidated Financial Statements contained in Item 8 of this report.

Employees

As of December 31, 2018, we had 659 employees, of which 425 were based in the United States and Canada, and 234 were based in India. We have not experienced any employment-related work stoppages and consider relations with our employees to be good. We believe that our future success depends in part on our continued ability to hire, assimilate and retain qualified employees.

Executive Officers

The following table shows Glu's executive officers as of February 28, 2019 and their areas of responsibility. Their biographies follow the table.

Name	Age	Position
Niccolo M. de Masi	38	Executive Chairman
Nick Earl	53	President and Chief Executive Officer
Eric R. Ludwig	49	Executive Vice President, Chief Operating Officer and Chief Financial Officer
Chris Akhavan	36	Chief Revenue Officer
Scott J. Leichtner	48	Vice President, General Counsel and Corporate Secretary

Niccolo M. de Masi has served as our Executive Chairman since November 2016, President and Chief Executive Officer from January 2010 to November 2016, as one of our directors since January 2010, as interim Chairman of our board of directors from July 2014 to December 2014 and as the Chairman of our board of directors since December 2014. Mr. de Masi served as the President of Essential, a mobile phone hardware company from November 2016 to October 2018. Prior to joining Glu, Mr. de Masi was the Chief Executive Officer and President of Hands-On Mobile, a mobile technology company and developer and publisher of mobile entertainment, from October 2009 to December 2009, and previously served as the President of Hands-On Mobile from March 2008 to October 2009. Prior to joining Hands-On Mobile, Mr. de Masi was the Chief Executive Officer of Monstermob Group PLC, a mobile entertainment company, from June 2006 to February 2007. Mr. de Masi joined Monstermob in 2004 and, prior to becoming its Chief Executive Officer, held positions as its Managing Director and as its Chief Operating Officer, where he was responsible for formulating and implementing Monstermob's growth and product strategy. Prior to joining Monstermob, Mr. de Masi worked in a variety of corporate finance and operational roles within the technology, media and telecommunications (TMT) sector, beginning his career with JP Morgan on both the TMT debt capital markets and mergers and acquisitions teams in London. He has also worked as a physicist with Siemens Solar and within the Strategic Planning and Development divisions of Technicolor. Mr. de Masi has served as a director of Resideo since October 2018 and of Xura, Inc. from November 2015 to August 2016. Mr. de Masi holds an M.A. degree in Physics and an MSci. degree in Electronic Engineering—both from Cambridge University.

Nick Earl has served as our President and Chief Executive officer since November 2016 and prior to that was our President of Global Studios from November 2015 to November 2016. Before joining us, from November 2014 to September 2015, Mr. Earl served as President of Worldwide Studios at Kabam. From September 2001 to October 2014, Mr. Earl served in several management positions at Electronic Arts, including most recently as Senior Vice President & General Manager of EA Mobile. From 1999 to 2001, Mr. Earl served as VP Product Development at Eidos. From April 1993 to March 1999, Mr. Earl served as an executive producer / GM at The 3DO Company. Mr. Earl holds a B.A. in Economics from the University of California at Berkeley.

Eric R. Ludwig has served as our Chief Operating Officer since October 2014, as our Executive Vice President since October 2011, and as our Chief Financial Officer since August 2008. Mr. Ludwig previously held the position of Senior Vice President, Chief Financial Officer and Chief Administrative Officer from September 2010 to October 2011. Prior to becoming our Chief Financial Officer, Mr. Ludwig served as our Vice President, Finance, Interim Chief Financial Officer from May 2008 to August 2008, served as our Vice President, Finance from April 2005 to May 2008 and served as our Director of Finance from January 2005 to April 2005. In addition, Mr. Ludwig has served as our Assistant Secretary since July 2006. Prior to joining us, from January 1996 to January 2005, Mr. Ludwig held various positions at Instill Corporation, a software as a service company, most recently as Chief Financial Officer, Vice President, Finance and Corporate Secretary. Prior to Instill, Mr. Ludwig was Corporate Controller at Camstar Systems, Inc., an enterprise

manufacturing execution and quality systems software company, from May 1994 to January 1996. He also worked at Price Waterhouse L.L.P. from May 1989 to May 1994. Mr. Ludwig holds a B.S. in Commerce from Santa Clara University and is a Certified Public Accountant (inactive).

Chris Akhavan has served as our Chief Revenue Officer since May 2016. Prior to this, Mr. Akhavan served as our President of Publishing from April 2013 to May 2016. Before joining us, from January 2010 to April 2013, Mr. Akhavan served in several management positions at Tapjoy, Inc., a provider of mobile advertising, most recently as Senior Vice President, Partnerships. From April 2009 to January 2010, Mr. Akhavan was a Manager, Publisher Network at RockYou!, a social gaming company, and from October 2007 to November 2008, he served as a Strategic Partner Manager at VideoEgg (now SAY Media), an advertising inventory and platform provider. Mr. Akhavan holds a B.A. in Economics from the University of California at Santa Cruz.

Scott J. Leichtner has served as our Vice President, General Counsel and Corporate Secretary since September 2010. Mr. Leichtner joined Glu in June 2009 as our Senior Corporate Counsel. Prior to joining us, Mr. Leichtner was a corporate attorney at Fenwick & West LLP, a law firm focused on serving technology clients, from October 1997 to May 2009. Mr. Leichtner holds an A.B. in Political Science from Duke University and a J.D. from the University of Michigan.

Item 1A. *Risk Factors*

Our business is subject to many risks and uncertainties, which may affect our future financial performance. If any of the events or circumstances described below occurs, our business and financial performance could be harmed, our actual results could differ materially from our expectations and the market value of our stock could decline. The risks and uncertainties discussed below are not the only ones we face. There may be additional risks and uncertainties not currently known to us or that we currently do not believe are material that may harm our business and financial performance. Because of the risks and uncertainties discussed below, as well as other variables affecting our operating results, past financial performance should not be considered as a reliable indicator of future performance and investors should not use historical trends to anticipate results or trends in future periods.

If we fail to develop and timely publish new high-quality, engaging games and continue to enhance our existing games, particularly our most successful games, our revenue would suffer.

Our business depends on developing and publishing mobile games that consumers will download and spend time and money playing. We must continue to invest significant resources in research and development, technology, analytics and marketing to introduce new games and continue to update our successful growth and evergreen games, and we often must make decisions about these matters well in advance of a product's release to timely implement them. Our success depends, in part, on unpredictable and volatile factors beyond our control, including consumer preferences and the number of applications they are willing to download to and maintain on their devices, competing gaming and non-gaming related applications, new mobile platforms and the availability of other entertainment activities. If our games do not meet consumer expectations, or they are not brought to market in a timely and effective manner, our business, operating results and financial condition would be harmed. It can be difficult for us to predict with certainty when we will launch a new game as games may require longer development schedules or beta testing periods to meet our quality standards and our players' expectations. For example, we experienced delays in the development and commercial release of *The Swift Life*, and, following global launch, the title did not generate significant revenue. We also decided to delay the worldwide launch dates of *WWE Universe* and *Diner DASH Adventures* in order to give the development teams additional time to work on these titles so that they can meet our expectations for a potential growth game. The worldwide launch of these titles might get delayed further than we anticipate, or they may not be successful when and if launched, which would likely harm our business, operating results and financial condition.

Even if our games are successfully introduced in a timely fashion and initially adopted, a failure to continually update them with compelling content or a subsequent shift in the entertainment preferences of consumers could cause a decline in our games' popularity that could materially reduce our revenue and harm our business, operating results and financial condition, which effect would be magnified for our most successful games and, in particular, *Design Home*. In connection with our product strategy, we have committed significant resources to updating, adding new features to and enhancing our existing titles as opposed to launching as many new titles as we have in prior years. However, we may not

be successful in doing so, such as was the case with our update of *Covet Fashion* in the first quarter of 2017 or as may be the case with our plan to add new features to *Design Home*, including a deep meta game and e-commerce functionality. It is difficult to predict when and how quickly the popularity and revenue of one of our games will decline, and if any of our key growth games experience any such unexpected declines, we may not meet our expectations or the expectations of securities analysts or investors for a given quarter. In addition, our *Kim Kardashian: Hollywood* game benefitted significantly from awareness of the game through media coverage and social media channels, and such viral success can be difficult to predict or to repeat in the future. Furthermore, we compete for the discretionary spending of consumers, who face a vast array of entertainment choices, including social media and other non-gaming related apps, games played on personal computers and consoles, television, movies, sports and the Internet. If we are unable to sustain sufficient interest in our games compared to other forms of entertainment, our business and financial results would be seriously harmed.

In addition to the market factors noted above, our ability to successfully develop and launch games for mobile devices and their ability to achieve and maintain commercial success will depend on our ability to:

- minimize launch delays and cost overruns on the development of new games and features;
- successfully enhance and increase the revenue we generate from our existing growth games;
- effectively market and monetize our games;
- achieve a positive return on investment from our marketing and user acquisition efforts;
- sustain sufficient interest in our games compared to other forms of entertainment for our players
- adapt to new technologies and feature sets for mobile and other devices;
- attract and retain experienced and talented employees
- compete successfully against a large growing number of existing market participants;
- minimize and quickly resolve bugs and outages; and
- acquire and successfully integrate high quality mobile game assets, personnel or companies

These and other uncertainties make it difficult to know whether we will succeed in continuing to develop, launch and enhance successful mobile games in accordance with our operating plan. If we do not succeed in doing so, our business, financial condition, results of operations and reputation will suffer.

Successfully developing and monetizing free-to-play games is a challenging business model.

We face significant challenges in achieving our goal of become the leading developer and publisher of free-to-play mobile games. The most successful free-to-play games tend to include socio-competitive gameplay, deep meta game features, player versus player activities, regularly updated content and other complex technological and creative attributes. While we are working to include such features in our games, we may not successfully update our games to include these features or they may not be well received by our players. For example, the significant update to *Racing Rivals* that we released in the fourth quarter of 2016 was poorly received by players, led to a significant decline in revenue and ultimately contributed to our decision to sunset this title. If we are unable to successfully implement our product strategy, or if we incur excessive expenses in this effort, our financial performance and ability to grow revenue would be negatively affected. Additionally, our existing games compete with our new offerings and the offerings of our competitors, and revenue from our existing catalog games have declined over time, a trend that we expect to continue.

Our efforts to develop new growth games and enhance our existing growth games may prove unsuccessful or, even if successful, it may take more time than we anticipate to achieve significant revenue because, among other reasons:

- our strategy assumes that a large number of players will download our games because they are free and that we will then be able to effectively monetize the games; however, players may not widely download our games for a variety of reasons, including

  - competition for downloads not only with other mobile games but also with social media and other non-gaming related applications;

  - limits on the number of mobile applications players are willing to download to and maintain on their devices;

  - poor consumer reviews or other negative publicity;

  - ineffective or insufficient marketing efforts;

  - lack of sufficient social and community features;

  - lack of prominent storefront featuring;

  - failure to reach and maintain Top Free App Store rankings;

  - the relatively large file size of some of our games, which has been exacerbated due to Apple's requirement that games released on the Apple App Store include 64-bit support; in particular, our games often utilize a significant amount of the available memory on a user's device and tend to consume additional space as players advance through our games, which may cause players to delete our games once the file size grows beyond the capacity of their devices' storage limitations; and

  - the inherent limitations of the smartphone platforms and telecommunications networks, which at most only allow applications that are less than 150 megabytes to be downloaded over a carrier's wireless network; as a result, players must download our games that exceed 150 megabytes either via a wireless Internet (wifi) connection or initially to their computer and then side-load them to their device;

- even if our games are widely downloaded, we may fail to retain users or optimize the monetization of these games, such as occurred with our *Kendall & Kylie* title after its initial global launch in January 2016; this may occur for a variety of reasons, including poor game design or quality, lack of social and community features, gameplay issues such as game unavailability, long load times or an unexpected termination of the game due to data server or other technical issues, lack of differentiation from predecessor games or other competitive games, lack of innovative features that surprise and delight our players, differences in user demographics and purchasing power or our failure to effectively respond and adapt to changing user preferences through game updates;

- future games that we release may fail to resonate with consumers and games that incorporate licensed property may not be financially successful due to the minimum guaranteed royalty payments to our licensors;

- we intend to continue to develop games based upon our own intellectual property, in addition to well-known licensed brands and properties, and we may encounter difficulties in generating sufficient consumer interest in and downloads of our original intellectual property games;

- many well-funded public and private companies have released, or plan to release, games in the same genres as our growth games or games incorporating the same licensed brands that we intend to use in our games

(e.g., *WWE* and *Disney Sorcerer's Arena*), and this competition will make it more difficult for us to differentiate our games and derive significant revenue from them;

- we may have difficulty hiring the experienced monetization, live operations, server technology, user experience and product management personnel that we require to develop our new games and support our existing growth games , or may face difficulties in developing our technology platform and incorporating it into our products or developing unique gameplay;

- we depend on the proper and continued functioning of our own servers and third-party infrastructure to operate our connected games that are delivered as a service; and

- the impact of potential regulatory issues, including:

  - the Federal Trade Commission, or the FTC, has previously indicated that it intends to review issues related to in-app purchases, particularly with respect to games that are marketed primarily to minors (for example, the FTC reached a settlement with Apple in January 2014 and with Google in September 2014 on this issue, and in April 2016, a federal court granted summary judgment in favor of the FTC finding Amazon liable for unfairly billing consumers for unauthorized in-app purchases by minors), and the FTC might issue rules significantly restricting or even prohibiting in-app purchases or name us as a defendant in a future class-action lawsuit;

  - various jurisdictions are assessing the legality of "loot boxes," which are commonly used in some of our top games, and Apple has recently updated its terms of service to require publishers to publish the odds of winning the items contained in loot boxes, which could harm the monetization of our games that utilize loot boxes; and

  - various legislators, administrative bodies and courts, primarily in Europe, have taken actions (including imposing fines) or may be considering taking actions (including antitrust enforcement) against Apple and Google, which are our primary distribution platforms, and Facebook, which is our primary user acquisition channel.

If we do not achieve a sufficient return on our investment with respect to our free-to-play business model, it will negatively affect our operating results and may require us to formulate a new business strategy.

The markets in which we operate are highly competitive, many of our competitors have significantly greater resources than we do and our players may prefer our competitors' products or competing forms of entertainment.

Developing, distributing and selling mobile games is a highly competitive business, characterized by frequent product introductions and rapidly emerging new platforms, technologies and storefronts. For players, we compete primarily on the basis of game quality, brand and customer reviews. We compete for space on user's smartphones and tablet devices in terms of the number of applications on their device and the amount of storage consumed by such applications. We also compete more generally for the time, attention and discretionary spending of users of smartphones and tablet devices who are spending ever-increasing amounts of time on social media, messaging and music, movie and television streaming applications, personal computer and console games, sports and the Internet. We compete for promotional and digital storefront placement based on our relationship with the digital storefront owner, historical performance, game quality, perception of sales potential, customer reviews and relationships with celebrities and other licensors of brands and other content. For content licensors, we compete based on royalty and other economic terms, historical financial performance of prior licensed content titles, perceptions of development quality, speed of execution, distribution breadth and relationships with storefront owners. We also compete for experienced and talented employees.

We compete with a continually increasing number of companies, including Activision (the parent company of King Digital Entertainment), DeNA, Disney, Electronic Arts (EA Mobile), Gameloft, Gamevil, GREE, GungHo Online Entertainment, Netease, Netmarble, Nexon, Nintendo, Rovio, Warner Brothers, and Zynga and many well-funded private companies, including DoubleDown, Epic Games, Jam City, Machine Zone, Miniclip, Niantic, Peak Games, Playrix,

Pocket Gems, Scopely, Storm 8/Team Lava, and Supercell. We also face competition from online game developers and distributors who are primarily focused on specific international markets. We could also face increased competition if those companies choose to compete more directly in the United States or the other markets that are significant to us or if large companies with significant online presences such as Apple, Google, Amazon, Facebook, Microsoft or Verizon, choose to enter or expand in the games space or develop competing games. In addition, we also face competition from mobile applications and websites focused on the home design market, which may include games, e-commerce titles, design applications and others seeking to displace our Design Home title which is a leading title in the currently unsaturated home design application market. Competitors in this space include, or may include, established game developers, established real estate companies, interior design companies, e-commerce companies and other well-funded private companies looking to enter the home design market. Given the open nature of the development and distribution for smartphones and tablets and the relatively low barriers to entry, we also compete or will compete with a vast number of small companies and individuals who are able to create and launch games and other content for these devices using relatively limited resources and with relatively limited start-up time or expertise. As an example of the competition that we face, it has been estimated that more than 3.3 million applications, including more than 800,000 active games, were available on Apple's U.S. App Store as of January 31, 2019. The proliferation of titles in these open developer channels makes it difficult for us to differentiate ourselves from other developers and to compete for players without substantially increasing our marketing expenses and development costs.

We also compete for downloads and time spent on mobile devices with companies that develop popular social media and messaging applications, such as Facebook (with its Facebook, Facebook Messenger, Instagram, WhatsApp and other applications), Pinterest, Reddit, Snapchat, Twitter, Vevo and YouTube, companies that develop streaming music, movie and television applications, such as Pandora, Spotify, Tidal, HBO Go, Netflix, Amazon Prime and Hulu, and with companies that create other non-gaming related software applications, for example for celebrities, such as Kim Kardashian West's own personal media application.

Some of our competitors and our potential competitors have one or more advantages over us, either globally or in particular geographic markets, which include:

- significantly greater financial resources;
- greater experience with free-to-play games, building and maintaining growth or evergreen games, and building social and community features into mobile games, as well as more effective game monetization;
- stronger brand and consumer recognition regionally or worldwide;
- the capacity to leverage their marketing expenditures across a broader portfolio of mobile and non-mobile products;
- larger installed user bases from their existing mobile games;
- larger installed user bases from related platforms, such as console gaming or social networking websites, to which they can market and sell mobile games;
- more substantial intellectual property of their own from which they can develop games without having to pay royalties;
- lower labor and development costs and better overall economies of scale;
- greater platform-specific focus, experience and expertise;
- broader global distribution and presence; and
- greater talent, both in overall headcount and in terms of experience in creating successful titles.

If we are unable to compete effectively or we are not as successful as our competitors in our target markets, our sales could decline, our margins could decline and we could lose market share, any of which would materially harm our business, operating results and financial condition.

We rely on a very small portion of our total players for nearly all of our revenue that we derive from in-app purchases.

We rely on a very small portion of our total players for nearly all of our revenue derived from in-app purchases (as opposed to advertisements and incentivized offers) and installation rates and user-growth have declined for us with many of our most recent product launches. The percentage of unique paying players for our largest revenue-generating free-to-play games has typically been less than 5%, when measured as the number of unique paying users on a given day divided by the number of unique users on that day, though this percentage fluctuates, and it may be higher than 5% for some of our games during specific, relatively short time periods, such as immediately following worldwide launch, during special events or following content updates or marketing campaigns. To significantly increase our revenue, we must increase the number of downloads of our games, increase the number of players who convert into paying players by making in-app purchases or enrolling in subscriptions, increase the amount that our paying players spend in our games and/or increase the length of time our players generally play our games. We might not succeed in our efforts to increase the monetization rates of our users, particularly if we do not increase the amount of social features in our games or otherwise improve our games though updates and live operations. If we are unable to convert non-paying players into paying players, or if we are unable to retain our paying players or if the average amount of revenue that we generate from our players does not increase or declines, our business may not grow, our financial results will suffer, and our stock price may decline.

We have depended on a small number of growth games for a significant portion of our revenue in recent fiscal periods. If these games do not continue to grow or we do not release highly successful new games, our revenue would decline.

In the mobile gaming industry, new games are frequently introduced, but a relatively small number of games account for a significant portion of industry sales. Similarly, a significant portion of our revenue comes from a limited number of games, although the games in that group have shifted over time. Our top three titles for 2018, *Design Home*, the *Tap Sports Baseball* franchise, and *Covet Fashion,* each accounted for greater than 10% of our revenue in 2018 and collectively generated approximately 72.0% of our revenue during the period, compared to 52.0% in 2017; no other game generated more than 10% of our revenue during these respective periods. We expect our dependency on a small number of games for a majority of our revenue will continue for the foreseeable future. In particular, our growth game *Design Home* has accounted for a successively larger percentage of our revenues since its launch which has increased our reliance on the success of this title. We intend to globally launch *WWE Universe*, *Diner DASH Adventures* and *Disney Sorcerer's Arena* in 2019, and if one or more of these titles is unsuccessful, it could result in an overall decline in our revenues and cause us to continue to rely primarily on our existing growth games for a significant majority of revenues during 2019.

We derive the majority of our revenue from Apple's App Store and the Google Play Store, and if we are unable to maintain a good relationship with each of Apple and Google or if either of these storefronts were unavailable for any prolonged period of time, our business will suffer.

The majority of our smartphone revenue has historically been derived from Apple's iOS platform, which accounted for 63.1% of our total revenue for 2018 compared with 63.0% and 62.4% of our total revenue for 2017 and 2016, respectively. We generated the majority of this iOS-related revenue from the Apple App Store, which represented 54.7%, 54.2% and 52.7% of our total revenue for 2018, 2017 and 2016, respectively, with the significant majority of such revenue derived from in-app purchases. We generated the balance of our iOS-related revenue from offers and advertisements in games distributed on the Apple App Store. In addition, we derived approximately 36.6%, 36.0% and 36.1% of our total revenue for 2018, 2017 and 2016, respectively, from the Android platform. We generated the majority of our Android-related revenue from the Google Play Store, which represented 31.3%, 30.3% and 27.6% of our total revenue for 2018, 2017 and 2016, respectively, with the significant majority of such revenue derived from in-app purchases. We believe that we have good relationships with each of Apple and Google, which have contributed to the majority of our games released in the last several years being featured on their respective storefronts upon worldwide commercial release. If we do not continue to receive prominent featuring, users may find it more difficult to discover our

games and we may not generate significant revenue from them. We may also be required to spend significantly more on marketing campaigns to generate substantial revenue on these platforms. Additionally, our efforts to advertise through search advertisements in the Apple App Store may not be successful and may not result in additional users or monetization. In addition, currently neither Apple nor Google charge a publisher when it features one of their apps. If either Apple or Google were to charge publishers to feature an app, it could cause our marketing expenses to increase considerably. Accordingly, any change or deterioration in our relationship with Apple or Google could materially harm our business and likely cause our stock price to decline.

We also rely on the continued functioning of the Apple App Store and the Google Play Store. In the past these digital storefronts have been unavailable for short periods of time or experienced issues with their in-app purchasing functionality. If such events recur on a prolonged basis or other similar issues arise that impact our ability to generate revenue from these storefronts, it would have a material adverse effect on our revenue and operating results. In addition, if the storefront operators fail to provide high levels of service, our players' ability to access our games may be interrupted or players may not receive the virtual currency or goods for which they have paid, which may adversely affect our brand, revenue and operating results.

The operators of digital storefronts on which we publish our free-to-play games and the advertising channels through which we acquire some of our players in many cases have the unilateral ability to change and interpret the terms of our and others' contracts with them.

We distribute our free-to-play games through direct-to-consumer digital storefronts, for which the distribution terms and conditions are often "click through" agreements that we are not able to negotiate with the storefront operator. For example, we are subject to each of Apple's and Google's standard click-through terms and conditions for application developers, which govern the promotion, distribution and operation of apps, including our games, on their storefronts. Each of Apple and Google can unilaterally change its standard terms and conditions, including platform commission fees, with no prior notice to us. In addition, the agreement terms can be vague and subject to changing interpretations by the storefront operator. Further, these storefront operators typically have the right to prohibit a developer from distributing its applications on its storefront if the developer violates its standard terms and conditions. For example, in the fourth quarter of 2017, Apple updated its terms of service to require publishers to disclose a player's odds of winning the various items contained within loot boxes. Glu utilizes loot boxes in many of its current games and the games it intends to release in the future, and it is possible that this new disclosure requirement will negatively impact the monetization of these titles. Furthermore, in January 2018, Apple enforced new guidelines relating to offerwalls which negatively impacted our revenues from offers in *Design Home*. If Apple or Google, or any other key storefront operator, determines that we or one of our key vendors are violating its standard terms and conditions, by a new interpretation or otherwise, or prohibits us from distributing our games on its storefront, it would materially harm our business and likely cause our stock price to significantly decline.

Furthermore, any changes to the advertising channels through which we acquire some of our players, including any changes by Facebook of its advertising platform, which we rely on for a majority of our user acquisition activities, could negatively impact our revenue or otherwise materially harm our business, and we may not receive significant or any advance warning of such changes.

We have a history of net losses, may incur substantial net losses in the future and may not achieve and sustain profitability or growth in future periods.

We have incurred significant losses since inception, including a net loss of $13.2 million in 2018 and a net loss of $97.6 million in 2017. As of December 31, 2018, we had an accumulated deficit of $440.5 million. While we conducted several restructurings and divested our Moscow game development studio during 2017, which measures were aimed at reducing our fixed costs and operating more efficiently, our costs may continue to rise as we implement additional initiatives designed to increase revenue, potentially including: investing more heavily in our existing titles as part of our product strategy; increasing our spending on user acquisition efforts, particularly for our growth games; hiring additional staff in our San Francisco Bay Area and Hyderabad, India locations; developing new games with greater complexity, higher production values and deeper social features; running live operations on our games; and taking other steps to strengthen our company. We anticipate that the costs of acquiring new players and otherwise marketing our new

titles will continue to rise, particularly since advertising costs in our industry have generally been rising and we have encountered increasing difficulties in generating downloads of our games as users spend more time on alternative software applications, such as social media, messaging, and streaming applications. We may also continue to incur significant costs to acquire rights to third party intellectual property, including incurring significant minimum guaranteed royalty payments. If our revenue does not increase at a rate sufficient to offset these additional expenses, if the launch dates for our games are delayed, if we do not realize a sufficient return on our user acquisition spending for our growth games, if we experience unexpected significant increases in operating expenses or if we are required to take additional charges related to impairments or restructurings, we will continue to incur losses. For example, during the fiscal years ended December 31, 2018 and 2017, we recorded impairments of $0.7 million and $27.3 million, respectively, related to certain contractual minimum guarantee payments made to certain of our celebrity licensors and other prepaid royalties. Additionally, we have taken restructuring charges in the past, including $6.0 million during 2017 related to headcount reductions and other restructuring activities and a $2.7 million charge relating to impairment of acquired in process research and development during the third quarter of 2018. Furthermore, given the significant amount of time and attention users are dedicating to social media and other non-gaming applications, increasing revenue has been, and may continue to be, challenging. This industry trend has been negatively impacting us, as the number of downloads of sequels to certain of our most successful franchises, including the launch of *Deer Hunter 2016* (which we have rebranded *Deer Hunter 2018*), have downloaded at significantly lower rates as compared to previous new titles, which could negatively impact the success of the next iteration of our *Deer Hunter* franchise which we expect to launch in 2020.

Our financial results could vary significantly from quarter to quarter and are difficult to predict, which in turn could cause volatility in our stock price.

Our revenue and operating results could vary significantly from quarter to quarter due to a variety of factors, many of which are outside of our control. As a result, comparing our operating results on a period-to-period basis may not be meaningful. In addition, we may not be able to accurately predict our future revenue or results of operations. We base our current and future expense levels on our internal operating plans and sales forecasts, and our operating costs are to a large extent fixed. As a result, we may not be able to reduce our costs sufficiently to compensate for an unexpected shortfall in revenue, and even a small shortfall in revenue could disproportionately and adversely affect financial results for that quarter.

In addition to other factors discussed in this section, factors that may contribute to the variability of our quarterly results and the volatility in our stock price include:

- our ability to increase the number of our paying players and the amount that each paying player spends in our games;
- the popularity and monetization rates of our new games released during the quarter and the ability of games released in prior periods to sustain their popularity and monetization rates;
- the number and timing of new games released by us and our competitors, which timing can be impacted by internal development delays, longer than anticipated beta testing periods, shifts in product strategy and how quickly digital storefront operators review and approve our games for commercial release;
- changes in the prominence of storefront featuring for our games and those of our competitors;
- the loss of, or changes to, one of our distribution platforms;
- changes to the Apple iOS platform or the Google Android platform to which we are not able to adapt our game offerings;
- fluctuations in the size and rate of growth of overall consumer demand for smartphones, tablets, games and related content;

- the amount and timing of charges related to any future impairments of goodwill, intangible assets, prepaid royalties and guarantees; for example, in 2018 and 2017, we impaired $0.7 million and $27.3 million, respectively, related to contractual minimum guarantee royalty payments made to certain celebrity licensors and other prepaid royalties, and in future periods we may be required to impair our goodwill due to further declines in our business and/or stock price, or take additional large impairments related to contractual minimum guarantee commitments if the associated games we are developing are not successful;

- changes in the mix of revenue derived from games based on original intellectual property versus licensed intellectual property;

- changes in the mix of revenue derived from in-app purchases, advertisements and offers, which mix often depends on the nature of new titles launched during the quarter;

- changes in the amount of money we spend marketing our titles in a particular quarter, including the average amount we pay to acquire each new user, as well as changes in the timing of these marketing expenses within the quarter;

- decisions by us to incur additional expenses, such as increases in research and development, restructuring expenses, or unanticipated increases in vendor-related costs, such as hosting fees;

- the timing of successful mobile device launches;

- the seasonality of our industry;

- changes in accounting rules, such as those governing recognition of revenue, including the period of time over which we recognize revenue for in-app purchases of virtual currency and goods within some of our games, as well as estimates of average playing periods and player life;

- the activities, announcements and performance of our commercial partners: and

- macro-economic fluctuations in the United States and global economies, including those that impact discretionary consumer spending.

We may not, or may be unable to, renew our existing content licenses when they expire and may not choose to obtain additional licenses or be able to obtain new licenses on favorable terms, which could negatively impact our revenue if we fail to replace such revenue with revenue from games based on our own intellectual property.

In 2018, we generated 34.3% of our revenue from games that are based on or substantially incorporate third-party intellectual property, such as the Tap Sports Baseball franchise, Kim Kardashian: Hollywood, and Restaurant Dash with Gordon Ramsay. We expect to continue to derive significant revenue from these titles in 2019, particularly the Tap Sports Baseball franchise, and expect to continue to develop new titles featuring third-party intellectual property, such as WWE Universe and Disney Sorcerer's Arena. Certain of our licenses expire at various times during the next several years, and we may be unable to renew these licenses on terms favorable to us or at all, and we may have difficulties obtaining licenses from new content owners on terms acceptable to us, if at all. In addition, these licensors could decide to license to our competitors or develop and publish their own mobile games, competing with us in the marketplace. We also license certain brands and their assets for our Covet Fashion and Design Home titles without the provision of a license fee or royalty. These licensors could decide to no longer license their assets under the current terms, and to instead charge a one-time payment, ongoing royalty or both, which may adversely affect the profitability of these titles. Failure to maintain or renew our existing licenses or to obtain additional licenses would prevent us from continuing to offer our current licensed games and introducing new mobile games based on such licensed content, which could harm our business, operating results and financial condition.

Securing license agreements to develop, publish and market games based on or significantly incorporating celebrities, third-party licensed brands, properties, and other content typically requires that we make minimum guaranteed royalty and other payments to such licensors, and to the extent such payments become impaired, our operating results would be harmed.

In connection with partnerships with celebrities and other licensors of third-party brands, properties and content, we have incurred and may continue to incur significant minimum guaranteed royalty and other payments. As a result, we may incur impairments on such payments if our forecasts for these games are lower than we anticipated at the time we entered into the agreements. For example, in 2018 and 2017, we impaired $0.7 million and $27.3 million, respectively, related to contractual minimum guaranteed royalty payments made to certain of our celebrity licensors and other prepaid royalties; as of December 31, 2018 we had remaining prepaid royalty balances totaling $10.2 million. We expect to continue to selectively license third-party licensed brands, properties and other content and to pay minimum guaranteed royalty payments in connection with such deals. As a result, we may be required to take impairments in future periods if the games we are developing that have significant contractual minimum guarantee commitments associated with them are not successful.

If we do not successfully establish and maintain awareness of our brand and games, if we fail to develop high-quality, engaging games that are differentiated from our prior games, if we incur excessive expenses maintaining and promoting our brand or our games or if our games contain defects or objectionable content, our operating results and financial condition could be harmed.

We believe that establishing and maintaining our brand is critical to establishing, developing and maintaining favorable relationships with players, distributors, content licensors, platform providers, advertisers and key talent. Increasing awareness of our brand and recognition of our games is particularly important in connection with our strategic focus of developing games based on our own intellectual property. Our ability to promote the Glu brand and increase recognition of our games depends on our ability to develop high-quality, engaging games, including integrating the level of social and community features appropriate for a game's target audience and partnering with brands with fan bases that can support successful mobile games. If consumers, digital storefront owners and branded content owners do not perceive our existing games as high-quality or if we introduce new games that are not favorably received by them, then we may not succeed in building brand recognition and brand loyalty in the marketplace. In addition, globalizing and extending our brand and recognition of our games is costly and involves extensive management time to execute successfully. Although we make significant sales and marketing expenditures in connection with the launch of our games, these efforts may not succeed in increasing awareness of our brand or the new games. If we fail to maintain and increase brand awareness and consumer recognition of our games, our potential revenue could be limited, our costs could increase and our business, operating results and financial condition could suffer.

In addition, if a game contains objectionable content, we could experience damage to our reputation and brand. Our games may contain violence or other content that some consumers may find objectionable. For example, many of our shooter games have a 17-and-older rating due to its violence. In addition, Google required us to submit two versions of our *Blood & Glory* and *Contract Killer*: *Zombies* games, one of which did not depict blood. Despite these ratings and precautions, consumers may be offended by some of our game content and children to whom these games are not targeted may choose to play them without parental permission nonetheless. In addition, our employees or employees of outside developers could include hidden features in our games without our knowledge, which might contain profanity, graphic violence, sexually explicit or otherwise objectionable material. Users of our games, particularly games with social messaging features, may utilize these features for illegal purposes or target certain users through these features. If consumers believe that a game we published contains objectionable content or may expose them to nefarious individuals, it could harm our brand, consumers could refuse to download it or demand a refund for any in-app purchases and could pressure the digital storefront operators to no longer allow us to publish the game on their platforms. Similarly, if any of our games are introduced with defects, vulnerabilities or have playability issues, we may receive negative user reviews, our brand may be damaged and our operating results and revenue negatively affected. For example, our *Racing Rivals* title experienced playability and user interface issues after the release of an update in the fourth quarter of 2016 that introduced new graphics, which particularly affected users of some Android devices and harmed monetization of the game, and our attempt to relaunch the game in the second quarter of 2018 by introducing new features and resetting the economy of the game resulted in the game crashing and not being available to most users for several days. As a result, the daily active users of *Racing Rivals* and the revenue that we generate from this title significantly decreased from peak levels which

contributed to our decision to shut down the game effective March 31, 2019. In addition, any issues relating to our games could be exacerbated if our customer service department does not timely and adequately address issues that our players have encountered with our games.

We rely on a combination of our own servers and technology and third party infrastructure to operate our games. A significant portion of our game traffic is hosted by a single vendor and if we experience any system or network failures, unexpected technical problems, cyber attacks or any other interruption to our games, it could reduce our sales, increase costs, or result in a loss of revenue or loss of end users of our games.

We rely on our own servers and third-party infrastructure to operate our games, and we expect that our reliance on such third-party infrastructure and our technology platform will increase as we continue to add additional social features and functionality into our games. We do not control these third parties and replacing them might require significant time and expense. In particular, a significant portion of our game traffic is hosted by Amazon Web Services, which service provides server redundancy and uses multiple locations on various distinct power grids. Amazon may terminate its agreement with us upon 30 days' notice. In addition, Amazon has experienced brief power outages on occasion during the past several years that have affected the availability of certain of our games during such outages. While none of these events adversely impacted our business, a similar outage of a longer duration could. Any technical problem with, cyber attack on, or loss of access to these third parties' or our systems, servers or other technologies, including our technology platform, could result in the inability of end users to download or play our games, cause interruption to gameplay, prevent the completion of billing for a game or result in the loss of users' virtual currency or other in-app purchases, interfere with access to some aspects of our games or result in the theft of end-user personal information. For example, in the second quarter of 2018, our efforts to relaunch *Racing Rivals* resulted in the game crashing and not being available to most users for several days. In addition, in the second quarter of 2017, we experienced technical issues with our *Covet Fashion* title that caused an extended outage and resulted in certain users receiving in-game currency erroneously. If users are unable to access and play our games for any period of time, if virtual assets are lost, or if users do not receive their purchased virtual currency, we may receive negative publicity and game ratings, we may lose players of our games, we may be required to issue refunds, and we may become subject to regulatory investigation or class action litigation, any of which would negatively affect our business. Any of these problems could require us to incur substantial repair costs, distract management from operating our business and result in a loss of revenue. Furthermore, our disaster recovery systems and those of third-parties with which we do business may not function as intended or may fail to adequately protect our critical business information in the event of a significant business interruption, which may cause interruption in service of our games, security breaches or the loss of data or functionality, which could negatively affect our business, financial condition or results of operations.

Cyber attacks, security breaches, and computer viruses could harm our business, reputation, brand and operating results.

Cyber attacks, security breaches, and computer viruses have occurred on our systems in the past and may occur on our systems in the future. We store sensitive information, including personal information about our employees. In addition, our games involve the storage and transmission of players' personal information in our facilities and on our equipment, networks and corporate systems run by us or managed by third-parties including Apple, Google, Facebook, Microsoft, and Amazon. Our player data, corporate systems, third-party systems and security measures may be breached due to the actions of outside parties, employee error, malfeasance, a combination of these, or otherwise, and, as a result, an unauthorized party may obtain access to our data, our employees' data, our players' data or any third party data we may possess. In addition, outside parties may attempt to fraudulently induce employees to disclose information in order to gain access to this data. For example, in January 2016 a cyber attack caused us to take down our user forums for nearly a week and in May 2016, one of our employees fell victim to a spear phishing attack in which the employee uploaded sensitive employee information to a third party website. Although these incidents did not result in a material loss of revenue, any future incidents, particularly of longer duration, could damage our brand and reputation and result in a material loss of revenue. Given the global nature of our business and the low cost, relative ease and proliferation of internet enabled devices, we may be at increased risk for cyber attacks and, specifically, denial of service attacks, such as the denial of service attacks that affected Dyn in October 2016. In addition, as highlighted by reports that ISIS terrorists may have used Sony's PlayStation 4 network to plan attacks, the chat and other social features in our games could potentially be used by terrorist organizations or other criminals to communicate or for other nefarious purposes, which

could severely damage our brand and reputation. If an actual or perceived security breach of our or a third-party system on which we rely occurs, the market perception of the effectiveness of our security measures could be harmed, we could lose players and advertisers, and we could suffer significant legal and financial harm including loss of revenue due to such events or in connection with remediation efforts and costs, investigation costs or penalties, litigation, regulatory and enforcement actions, compliance with notification obligations, changed security and system protection measures. Any of these actions could have a material and adverse effect on our business, reputation and operating results.

We use a game development engine licensed from Unity Technologies to create many of our games. If we experience any prolonged technical issues with this engine or if we lose access to this engine for any reason, it could delay our game development efforts and cause our financial results to fall below expectations for a quarterly or annual period, which would likely cause our stock price to decline.

We use a game development engine licensed from Unity Technologies to create many of our games, and we expect to continue to use this engine for the foreseeable future. Because we do not own this engine, we do not control its operation or maintenance, nor do we control how the engine is updated or upgraded. As a result, any prolonged technical issues with this engine might not be resolved quickly, despite the fact that we have contractual service level commitments from Unity. In addition, to the extent that we require any functionality that is not offered by Unity we are dependent on Unity to update or upgrade its engine to offer such functionality. Furthermore, although Unity cannot terminate our agreement absent an uncured material breach of the agreement by us, we could lose access to this engine under certain circumstances, such as a natural disaster that impacts Unity or a bankruptcy event. If we experience any prolonged issues with the operation of the Unity game development engine, if the Unity game development engine does not offer the functionality we require or if we lose access to this engine for any reason, it could delay our game development efforts and cause us to not meet revenue expectations for a quarterly or annual period, which would likely cause our stock price to decline. For example, in the first quarter of 2016, we were unable to implement a significant update to our *Racing Rivals* title due to programming bugs in the Unity game development engine, which update we believe could have helped to increase revenue for that title during the quarter. Further, if one of our competitors acquired Unity, the acquiring company would be less likely to renew our agreement, which expires in October 2019, which could impact our game development efforts in the future, particularly with respect to sequels to games that were created on the Unity engine.

We derive a significant portion of our revenue from advertisements and offers that are incorporated into our free-to-play games through relationships with third parties. If we lose the ability to provide these advertisements and offers for any reason, if we become victim to advertising fraud or if any events occur that negatively impact the revenue we receive from these sources, it would negatively impact our operating results.

In addition to in-app purchases, we derive a significant portion of our revenue from our free-to-play games through advertisements and offers. We incorporate advertisements and offers into our games by implementing third parties' software development kits. In order for us to increase our advertising and offers revenues, we need to continue to demonstrate the reach of our player network and success of our advertising partners. We rely on these third parties to provide us with a sufficient inventory of advertisements and offers to meet the demand of our user base. If we exhaust the available inventory of these third parties, it will negatively impact our revenue. If our relationship with any of these third parties terminates for any reason, or if the commercial terms of our relationships do not continue to be renewed on favorable terms, we would need to locate and implement other third party solutions, which could negatively impact our revenue, at least in the short term. We may also be susceptible to various types of advertising fraud, which could reduce the effectiveness of our advertising campaigns or cause us to pay money to advertising firms for installations that were wrongly attributed to such firms. While we have implemented measures to detect and prevent advertising fraud, such measures may not prove effective, which would harm our user acquisition efforts and could harm our revenues. In addition, internet-connected devices and operating systems controlled by third parties increasingly contain features that allow device users to disable functionality allowing for the delivery of advertising on their devices. If a great number of users elect to utilize this feature, our ability to deliver effective advertising campaigns on behalf of our advertisers and our revenue might suffer. Furthermore, the revenue that we derive from advertisements and offers is subject to seasonality, as companies' advertising budgets are generally highest during the fourth quarter and decline significantly in the first quarter of the following year, which negatively impacts our revenue in the first quarter (and conversely tends to significantly increase our marketing expenses in the fourth quarter).

The actions of the storefront operators can also negatively impact the revenue that we generate from advertisements and offers. For example, in January 2018, Apple enforced new guidelines relating to certain types of incented offers which negatively impacted our revenues from offers in *Design Home* starting the first quarter of 2018. Any similar changes in the future that impact our revenue that we generate from advertisements and offers could materially harm our business.

We rely on assumptions and estimates to calculate certain of our key metrics, and real or perceived inaccuracies in such metrics may harm our reputation and negatively affect our business.

Certain of our key metrics, including the number of our daily and monthly active users, our average revenue per daily user and the average useful life of our paying players, is calculated using internal company data from multiple analytics systems that have not been independently verified. The calculation of these metrics is described in detail under the heading titled "Management's Discussion and Analysis of Financial Condition and Results of Operations—*Key Operating Metrics*." While these numbers are based on what we believe to be reasonable calculations for the applicable period of measurement, there are inherent challenges in measuring these metrics across our large user base around the world. We regularly review and may adjust our processes for calculating our internal metrics to improve their accuracy, but these efforts may not prove successful and we may discover material inaccuracies. In addition, our methodology for calculating these metrics may differ from the methodology used by other companies to calculate similar metrics. For example, we currently treat an individual who plays two different Glu games on the same day or who plays the same game on two different devices during the same day (e.g., iPhone and an iPad) as two active users for each such day when we average or aggregate active users over time. As such, the calculations of our active users may not precisely reflect the actual number of people using our titles. We may also discover unexpected errors in our internal data that resulted from technical or other errors. Furthermore, our Crowdstar studio utilizes a separate analytics system from the rest of our company, which could result in internal inconsistencies or errors. If we determine that any of our metrics are not accurate, we may be required to revise or cease reporting such metrics and it may harm our reputation and business.

Our business and growth may suffer if we are unable to hire and retain key personnel.

Our future success will depend, to a significant extent, on our ability to attract, retain and motivate our key personnel, namely our management team, creative leaders and experienced game development personnel. In particular, we experienced a change in our management team in November 2016 which included the appointment of Nick Earl as our President and Chief Executive Officer. Mr. Earl is critical to our vision, strategic direction, products and technology, and the continued retention of the other members of our senior management team is important to our continued success. In addition, to grow our business, execute on our business strategy and replace departing employees, we must identify, hire and retain qualified personnel, particularly monetization, live operations, server technology, user experience and product management personnel to develop and support our growth games. Attracting and retaining key personnel and other staff is difficult in a competitive hiring market, particularly in the San Francisco Bay Area where we are headquartered, and we may not succeed in doing so. The gaming and technology industries are also traditionally male dominated, so it may be difficult for us to recruit and retain talented female personnel who may be needed to help us optimize our games that are targeted to a more female-focused audience, including our games in the home décor, fashion and time management genres. Volatility of our stock price, changes in our compensation structure for our executive officers that significantly relies on performance linked stock awards, and previous headcount reductions may make it more difficult for us to attract and retain top talent. In particular, should our stock price decline it might be difficult for us to attract and retain qualified personnel, since individuals may elect to seek employment with other companies that they believe have better long-term prospects or that present better opportunities for earning equity-based compensation. Competitors have in the past and may in the future attempt to recruit our employees, and our management and key employees are not bound by agreements that could prevent them from terminating their employment at any time. In addition, we do not maintain a key-person life insurance policy on any of our officers. Our business and growth may suffer if we are unable to hire and retain key personnel.

Any restructuring actions and cost reduction initiatives that we undertake may not deliver the results we expect, and these actions may adversely affect our business.

During the last several years we have implemented restructuring actions and cost reduction initiatives to streamline operations and improve cost efficiencies. Our most recent restructurings included reductions in personnel in Bellevue, Washington; San Francisco, California; Long Beach, California; Portland, Oregon; and Beijing, China, as well as the divestiture of our Moscow, Russia game development studio. Any future restructurings or divestitures could result in disruptions to our operations and adversely affect our business. For example, in connection with the divestiture of our Moscow studio, we transitioned certain titles that were developed or operated by the Moscow studio, including *Deer Hunter 2018*, to our Hyderabad, India studio. We have seen a decline in revenues from *Deer Hunter 2018*, which may in part be related to this transition. In addition, we cannot be sure that the cost reduction and streamlining initiatives will be as successful in reducing our overall expenses as we expect or that additional costs will not offset any such reductions or streamlining. If our operating costs are higher than we expect or if we do not maintain adequate control of our costs and expenses, our operating results will suffer.

We may not realize the benefits expected through our strategic relationship with Tencent and other aspects of the relationship could have adverse effects on our business.

In April 2015, we entered into a strategic relationship with Tencent, a leading Internet company in China and arguably the world's largest gaming company. Tencent, through a controlled affiliate, agreed to invest $126.0 million in exchange for approximately 16.3% of our total outstanding common stock on a post-transaction basis. In November 2015, we entered into an agreement with an affiliate of Tencent to license and publish its game, *WeFire*, in the United States and international markets outside of Asia under the name *Rival Fire,* which we launched in July 2016. In light of the poor performance of the title in terms of monetization and downloads, and the related contractual prepaid royalty commitments and license fees under our agreement with the affiliate of Tencent, we impaired $14.5 million in the third quarter of 2016. In addition, we may not succeed in entering into any other agreements or operating partnerships with Tencent in the future. Even if we do enter into additional operational partnerships, it could take months to years to fully realize the benefits of such partnerships and, to the extent such agreements involve publishing our games in China, some of our platform partners in China and other parts of Asia may view such a partnership negatively.

Tencent, through its controlled affiliates, held approximately 19.6% of the aggregate voting power of our common stock as of December 31, 2018, and could acquire up to 25.0% of the voting power through open-market purchases of our common stock. While Tencent has agreed to cause these shares to be voted with the majority recommendation of the independent members of our board of directors on most matters, Tencent could have considerable influence over matters such as approving a potential acquisition of us. Tencent was also granted the right to designate a member of our board of directors, initially appointing Tencent Senior Vice President, Steven Ma, and in January 2017 appointing Ben Feder, Tencent's President of International Partnerships (North America), as Mr. Ma's replacement on our board of directors. Mr. Feder or any future Tencent designee could have an actual or apparent conflict of interest in such matters. Tencent's investment in and position with us could also discourage others from pursuing any potential acquisition of us, which could have the effect of depriving the holders of our common stock of the opportunity to sell their shares at a premium over the prevailing market price.

Our reported financial results could be adversely affected by changes in financial accounting standards or by the application of existing or future accounting standards to our business as it evolves.

Our reported financial results are impacted by the accounting policies promulgated by the SEC and accounting standards bodies and the methods, estimates and judgments that we use in applying our accounting policies. The frequency of accounting policy changes may accelerate, including conversion to unified international accounting standards. Policies affecting revenue recognition have affected, and could further significantly affect, the way we account for revenue. For example, the accounting for revenue derived from free-to-play games, particularly with regard to revenue generated from online digital storefronts, is still evolving and, in some cases, uncertain. In particular, we were required to file an amendment to our Annual Report on Form 10-K for the year ended December 31, 2012 and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2013 to restate or revise the financial statements contained in those reports (including for the year ended December 31, 2011) because we did not correctly apply the

applicable revenue recognition accounting guidance relating to our smartphone revenue. While we believe that we are now correctly accounting for our revenues, this is an area that continues to involve significant discussion among accounting professionals and the future changes to the standard may cause our operating results to fluctuate. In addition, we currently defer revenue related to virtual goods and currency over the average playing period of paying users, which approximates the estimated weighted average useful life of the transaction. While we believe our estimates are reasonable based on available game player information, we may revise such estimates in the future as our games' operation periods change. Any adjustments arising from changes in the estimates of the lives of these virtual items would be applied to the current quarter and prospectively on the basis that such changes are caused by new information indicating a change in the game player behavior patterns of our paying users. Any changes in our estimates of useful lives of these virtual items may result in our revenue being recognized on a basis different from prior periods' and may cause our operating results to fluctuate. As we enhance, expand and diversify our business and product offerings, the application of existing or future financial accounting standards could have a significant adverse effect on our reported results although not necessarily on our cash flows.

If we are unable to maintain effective internal control over financial reporting, the accuracy and timeliness of our financial reporting may be adversely affected.

Maintaining effective internal control over financial reporting is necessary for us to produce reliable financial statements. If we are unable to maintain such internal controls, or if our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal controls as required pursuant to the Sarbanes-Oxley Act, it could result in a material misstatement of our financial statements that would require a restatement, and investor confidence in the accuracy and timeliness of our financial reports and the market price of our common stock could be negatively impacted.

Conversion of key internal systems and processes, particularly our ERP system, and problems with the design or implementation of these systems and processes could interfere with, and therefore harm, our business and operations.

We recently underwent a multi-phase project to convert certain key internal systems and processes, including our enterprise resource planning, or ERP, system to a cloud based system. In connection with the transition to our new ERP system, we shutdown certain of our legacy ERP systems in the third quarter of 2016, which affected certain of our processes in the second half of 2016 and may continue to impact our processes. While we have transitioned to our new ERP system, we may need to resolve issues that arise in connection with this transition. We have invested, and will continue to invest, significant capital and human resources in the design and implementation of these systems and processes. Any problems in the functioning of the new systems or processes, particularly any that impact our operations, could adversely affect our ability to process payments, record and transfer information in a timely and accurate manner, recognize revenue, file SEC reports in a timely manner, or otherwise run our business. Even if we encounter these adverse effects, as noted above, the design and implementation of these new systems and processes may be more time consuming than we anticipated and could negatively impact our business, financial condition, and results of operations.

Our business will suffer if our acquisition and strategic investment activities are unsuccessful or disrupt our ongoing business, which may involve increased expenses and may present risks not contemplated at the time of the transactions.

We have acquired and invested in, and may continue to acquire and invest in, companies, products and technologies that complement our strategic direction. Acquisitions and investments involve significant risks and uncertainties, including:

- diversion of management's time and a shift of focus from operating the business to issues related to negotiation of acquisition or investment terms, integration and administration;
- our ability to successfully integrate acquired technologies and operations into our business and maintain uniform standards, controls, policies and procedures;

- potential employee morale and retention issues resulting from any changes in compensation, management, reporting relationships, or future prospects;

- potential product development delays resulting from any changes and disruptions that may follow the acquisition;

- significant competition from other acquirers and investors as the gaming industry consolidates and challenges in offering attractive consideration given the volatility of our stock price and potential difficulties in obtaining alternative financing;

- challenges retaining the key employees, customers and other business partners of the acquired or investee business;

- our ability to realize synergies expected to result from an acquisition or strategic investment;

- an impairment of acquired goodwill and other intangible assets or investments in future periods would result in a charge to earnings in the period in which the write-down occurs;

- the internal control environment of an acquired or investee entity may not be consistent with our standards and may require significant time and resources to improve;

- in the case of foreign acquisitions or strategic investments, the need to integrate operations across different cultures and languages and to address the particular economic, currency, political and regulatory risks associated with specific countries;

- liability for activities of the acquired or investee companies before the acquisition or investment, including violations of laws, rules and regulations, commercial disputes, tax liabilities, intellectual property and other litigation claims or disputes, accounting standards and other known and unknown liabilities;

- harm to our brand and reputation; and

- harm to our existing business relationships with business partners and advertisers as a result of the acquisition.

In particular, we acquired Crowdstar in the fourth quarter of 2016 in a multi-step transaction that did not involve the cooperation of Crowdstar's management, where the former Chief Executive Officer of Crowdstar did not continue with the company post-acquisition and where we did not receive customary representations, warranties or indemnities from the acquired company. While we successfully integrated Crowdstar into our company and Crowdstar's top titles, *Covet Fashion* and *Design Home*, are generating significant revenue, we still face risks and uncertainties in connection with this acquisition. For example, we may not be able to retain key Crowdstar employees for a variety of reasons, including the fact that we relocated the Crowdstar team from Burlingame, California to our new San Francisco headquarters during the fourth quarter of 2018, and the loss of key Crowdstar employees, or any disruption to *Covet Fashion* and *Design Home* due to this move, could affect revenue derived from *Covet Fashion* and *Design Home*. In addition, we continue to face other risks related to the Crowdstar acquisition, including related to the lawsuit filed by Crowdstar's former Chief Executive Officer in March 2018. For more information regarding this lawsuit, see Part II, Item 1 "Legal Proceedings."

In addition, if we issue equity securities as consideration in an acquisition or strategic investment, as we did for our acquisitions of Griptonite, Inc., Blammo Games Inc., GameSpy Industries, Inc., PlayFirst, Inc. and Cie Games, Inc., our current stockholders' percentage ownership and earnings per share would be diluted. We may also need to raise additional capital in the event we use a significant amount of cash as consideration in an acquisition. Because acquisitions and strategic investments are inherently risky, our transactions may not be successful and may, in some cases, harm our operating results or financial condition.

Changes in foreign exchange rates and limitations on the convertibility of foreign currencies could adversely affect our business and operating results.

We currently transact business in more than 100 countries and in dozens of different currencies, with the Euro, Canadian Dollar and Indian Rupee being the primary international currencies in which we transact business. Conducting business in currencies other than U.S. Dollars subjects us to fluctuations in currency exchange rates that could have a negative impact on our reported operating results. We experienced significant fluctuations in currency exchange rates in 2016 and 2017, and may experience continued significant fluctuations in the future. We incur expenses for employee compensation and other operating expenses at our non-U.S. locations in the local currency, and an increasing percentage of our international revenue is from customers who pay us in currencies other than the U.S. Dollar. Fluctuations in the exchange rates between the U.S. Dollar and those other currencies could result in the U.S. Dollar equivalent of these expenses being higher and/or the U.S. Dollar equivalent of the foreign-denominated revenue being lower than would be the case if exchange rates were stable. This could negatively impact our operating results. To date, we have not engaged in exchange rate hedging activities, and we do not expect to do so in the foreseeable future.

We face added business, political, regulatory, operational, financial and economic risks as a result of our international operations and distribution, any of which could increase our costs and adversely affect our operating results.

International sales represented approximately 23.5%, 24.5%, and 25.7% of our revenue during 2018, 2017 and 2016, respectively. To target international markets, we develop games that are customized for consumers in those markets. We have international offices located in Canada and India. We expect to increase our international presence, as we intend to increase the number of our employees in our Hyderabad, India office. Risks affecting our international operations include:

- our ability to develop games that appeal to the tastes and preferences of consumers in international markets;
- difficulties developing, staffing, and simultaneously managing a large number of varying foreign operations as a result of distance, language, and cultural differences;
- multiple and conflicting laws and regulations, including complications due to unexpected changes in these laws and regulations;
- our ability to develop, customize and localize games that appeal to the tastes and preferences of consumers in international markets;
- competition from local game developers that have significant market share in certain foreign markets and a better understanding of local consumer preferences;
- potential violations of the Foreign Corrupt Practices Act and local laws prohibiting improper payments to government officials or representatives of commercial partners;
- regulations that could potentially affect the content of our products and their distribution, particularly in China where multiple governmental bodies must review and approve of any gaming application before it may be published;
- foreign exchange controls that might prevent us from repatriating income earned in countries outside the United States;
- potential adverse foreign tax consequences, since due to our international operations, we must pay income tax in numerous foreign jurisdictions with complex and evolving tax laws;
- political, economic and social instability;

- restrictions on the export or import of technology;
- trade and tariff restrictions and variations in tariffs, quotas, taxes and other market barriers; and
- difficulties in enforcing intellectual property rights in certain countries.

These risks could harm our international operations, which, in turn, could materially and adversely affect our business, operating results and financial condition.

We may also liquidate or cease operating some of our foreign subsidiaries in the future which may raise additional risks. For example, we are in the process of winding down and liquidating our subsidiary in China. These liquidation efforts will require us to obtain approvals from various government agencies in China, which could impose taxes and penalties upon us related to such liquidations.

If we fail to deliver our games at the same time as new mobile devices are commercially introduced, our revenue may suffer.

Our business depends, in part, on the commercial introduction of new mobile devices with enhanced features, including larger, higher resolution color screens, improved audio quality, and greater processing power, memory, battery life and storage. For example, the introduction of new and more powerful versions of Apple's iPhone and iPad and devices based on Google's Android operating system, have helped drive the growth of the mobile games market. In addition, consumers generally purchase the majority of content, such as our games, for a new device within a few months of purchasing it. We do not control the timing of these device launches. The mobile games market could also be disrupted by new technologies, such as the introduction of next generation virtual reality devices. Some manufacturers give us access to their new devices prior to commercial release. If one or more major manufacturers were to stop providing us access to new device models prior to commercial release, we might be unable to introduce games that are compatible with the new device when the device is first commercially released, and we might be unable to make compatible games for a substantial period following the device release. If we do not adequately build into our title plan the demand for games for a particular mobile device or experience game launch delays, we miss the opportunity to sell games when new mobile devices are shipped or our end users upgrade to a new mobile device, our revenue would likely decline and our business, operating results and financial condition would likely suffer.

If the use of smartphones and tablet devices as game platforms and the proliferation of mobile devices generally do not increase, our business could be adversely affected.

While the number of people using mobile Internet-enabled devices, such as smartphones and tablet devices, has increased dramatically in the past few years, the mobile market, particularly the market for mobile games, is still emerging, and it may not grow as we anticipate. Our future success is substantially dependent upon the continued growth of use of mobile devices for games, as opposed to social media applications or other uses. The proliferation of mobile devices may not continue to develop at historical rates and consumers may not continue to use mobile Internet-enabled devices as platforms for games. We believe that historic rates of adoption and download of new applications in the United States will not continue to rise, and will instead decline, as the U.S. mobile application market enters a mature state. In addition, new and emerging technologies could make the mobile devices on which our games are currently released obsolete, requiring us to transition our business model to develop games for other next-generation platforms.

Changes to digital platforms' rules relating to "loot boxes," or the potential adoption of regulations or legislation impacting loot boxes, could require us to make changes to some of our games' economies or design, which could negatively impact the monetization of these games and harm our revenues.

In December 2017, Apple updated its terms of service to require publishers of applications that include "loot boxes" to disclose the odds of receiving each type of item within the loot box to customers prior to purchase. Loot boxes are a commonly used monetization technique in free-to-play mobile games in which a player can acquire a virtual loot box, typically through game play or by using virtual currency, but the player does not know which virtual item he or she will receive (which may be a common, rare or extremely rare item, and may be a duplicate of an item the player already has in

his or her inventory) until the loot box is opened. The player will always receive one or more virtual items when he or she opens the loot box, but the player does not know exactly which item(s) until the loot box is opened. We utilize loot boxes in some of our top games including our *Tap Sports Baseball* franchise and *Kim Kardashian Hollywood*, and we intend to use loot boxes in our upcoming *WWE Universe* title. We have updated our applicable games to comply with Apple's new rules relating to loot boxes and do not believe that this has had a material impact on the monetization of our games that utilize loot boxes. However, in the event that Apple changes its terms of service to include more onerous requirements or if Apple (or Google) were to prohibit the use of loot boxes in games distributed on its digital platform, it would require us to redesign the economies of the affected games and would likely cause our revenues generated from these games to decline. In April 2018, each of the Belgian Gaming Commission and the Dutch Gambling Authority declared that loot boxes as implemented in certain of the games that they reviewed constituted illegal gambling under its respective laws. While neither of these bodies reviewed any of our games, we may be required to modify the implementation of loot boxes to continue utilizing loot boxes in these jurisdictions, remove loot boxes from our games published in these jurisdictions or cease publishing games containing loot boxes in these jurisdictions. In addition, various other jurisdictions, including Australia, the United Kingdom, and the states of Hawaii, Minnesota and Washington, are reviewing or have indicated that they intend to review the legality of loot boxes and whether they constitute gambling. To the extent that one or more jurisdictions determine that loot boxes constitute gambling or they otherwise elect to regulate the use of loot boxes, it could require us to stop utilizing loot boxes within our games that are distributed in such territories, which would negatively impact our revenues.

Our business is subject to increasing governmental regulation. If we do not successfully respond to these regulations, our business may suffer.

We are subject to a number of domestic and foreign laws and regulations that affect our business. Not only are these laws constantly evolving, which could result in their being interpreted in ways that could harm our business, but legislation is also continually being introduced that may affect both the content of our products and their distribution. In the United States, for example, numerous federal and state laws have been introduced which attempt to restrict the content or distribution of games. Legislation has been adopted in several states, and proposed at the federal level, that prohibits the sale of certain games to minors. If such legislation is adopted, it could harm our business by limiting the games we are able to offer to our customers or by limiting the size of the potential market for our games. We may also be required to modify certain games or alter our marketing strategies to comply with new and possibly inconsistent regulations, which could be costly or delay the release of our games, for example to comply with labeling requirements for our free-to-play games. Additionally, if the FTC or any other significant regulatory body issues rules significantly restricting or even prohibiting in-app purchases or any other key aspect of our business, it would significantly impact our business strategy. In addition, two self-regulatory bodies in the United States (the Entertainment Software Rating Board) and in the European Union (Pan European Game Information (PEGI)) provide consumers with rating information on various products such as entertainment software similar to our products based on the content (for example, violence, sexually explicit content, language). Furthermore, the Chinese government has adopted measures designed to eliminate violent or obscene content in games, along with regulations that may require us to obtain approval from certain government agencies in China, including the Ministry of Culture and General Administration of Press and Publication, in order to continue to publish any of our games in China. Any one or more of these factors could harm our business by limiting the products we are able to offer to our customers, by limiting the size of the potential market for our products, or by requiring costly additional differentiation between products for different territories to address varying regulations.

Furthermore, the growth and development of free-to-play gaming and the sale of virtual goods may prompt calls for more stringent consumer protection laws that may impose additional burdens on companies such as ours. We anticipate that scrutiny and regulation of our industry will increase and that we will be required to devote legal and other resources to addressing such regulation. For example, existing laws or new laws regarding the regulation of currency and banking institutions may be interpreted to cover virtual currency or goods. If that were to occur we may be required to seek licenses, authorizations or approvals from relevant regulators, the granting of which may depend on us meeting certain capital and other requirements and we may be subject to additional regulation and oversight, all of which could significantly increase our operating costs. Changes in current laws or regulations or the imposition of new laws and regulations in the United States or elsewhere regarding these activities may dampen the growth of free-to-play gaming and impair our business.

We sometimes offer our players various types of sweepstakes, giveaways and promotional opportunities, and have allowed players to compete against each other in tournaments for cash prizes. We have also in the past through a partnership with Probability PLC offered a suite of Glu branded mobile slots games in the United Kingdom and might continue to explore opportunities with respect to social casino games. We are subject to laws in a number of jurisdictions concerning the operation and offering of such activities and games, many of which are still evolving and could be interpreted in ways that could harm our business. For example, a March 2018 ruling from the 9th Circuit found that the mobile social casino game *Big Fish Casino* constituted gambling under Washington state law, which ruling could impact our ability to publish a planned social casino game in Washington state. Any future court ruling or other governmental action that imposes liability on providers of online services could result in criminal or civil liability and could harm our business.

In addition, because our services are available worldwide, certain foreign jurisdictions and others may claim that we are required to comply with their laws, including in jurisdictions where we have no local entity, employees or infrastructure.

The laws and regulations concerning data privacy and data security are continually evolving, and our actual or perceived failure to comply with these laws and regulations could harm our business.

We are subject to federal, state and foreign laws regarding privacy and the protection of the information that we collect regarding our users, which laws are currently in a state of flux and likely to remain so for the foreseeable future. The U.S. government, including the FTC and the Department of Commerce, is continuing to review the need for greater regulation over collecting information concerning consumer behavior on the Internet and on mobile devices. The European Union's General Data Protection Regulation, which became effective in May 2018, the California Consumer Privacy Act of 2018, which will become effective in January 2020, and other laws, like the Brazilian Personal Data Protection Bill of Law, create new individual privacy rights and impose worldwide obligations on companies handling personal data, which has resulted, or will result, in a greater compliance burden for us and other companies and could result in us incurring substantial monetary penalties if we are found to be in violation of these laws and regulations. Various U.S. state and federal regulators have also continued to expand the scope of data elements worthy of, and subject to, privacy protections, creating a multi-layered regulation regime that may be applicable to our business and will require time and resources to address. Additionally, the Children's Online Privacy Protection Act requires companies to obtain parental consent before collecting personal information from children under the age of 13. In January 2014, the FTC announced a settlement with Apple related to in-app purchases made by minors. In April 2016, the FTC was also successful in a lawsuit against Amazon, with a Federal District Court granting summary judgment in favor of the FTC, finding Amazon liable for unfairly billing consumers for unauthorized in-app purchases by minors. If we do not follow existing laws and regulations, as well as the rules of the smartphone platform operators, with respect to privacy-related matters, or if consumers raise any concerns about our privacy practices, even if unfounded, it could damage our reputation and operating results. Furthermore, new or the interpretation of existing laws, policies, or industry codes could prevent us from offering, or make it costlier or more difficult to offer services in certain jurisdiction.

All of our games are subject to our privacy policy and our terms of service located on our corporate website. If we fail to comply with our posted privacy policy, terms of service or privacy-related laws and regulations, including with respect to the information we collect from users of our games, it could result in proceedings against us by governmental authorities or others, which could harm our business. In addition, interpreting and applying data protection laws to the mobile gaming industry is often unclear. These laws may be interpreted and applied in conflicting ways from state to state, country to country, or region to region, and in a manner, that is not consistent with our current data protection practices. Complying with these varying requirements could cause us to incur additional costs and change our business practices. Additionally, a violation of applicable data privacy or data security laws by third parties we work with might also have an adverse effect on our business, financial condition or results of operations. Further, if we fail to adequately protect our users' privacy and data, it could result in a loss of player confidence in our services and ultimately in a loss of users, which could adversely affect our business.

In the area of information security and data protection, many states and foreign jurisdictions have passed laws requiring notification to users when there is a security breach for personal data or requiring the adoption of minimum information security standards that are often vaguely defined and difficult to implement. Costs to comply with these laws

may increase as a result of changes in interpretation. Furthermore, any failure on our part to comply with these laws may subject us to significant liabilities. The security measures we have in place to protect our data and the personal information of our employees, customers and partners could be breached due to cyber-attacks initiated by third party hackers, employee error or malfeasance, fraudulent inducement of our employees to disclose sensitive information or otherwise. Because the techniques used to obtain unauthorized access, disable or degrade service or sabotage systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures. Any breach or unauthorized access could materially interfere with our operations or our ability to offer our services or result in significant legal and financial exposure, damage to our reputation and a loss of confidence in the security of our data, which could have an adverse effect on our business and operating results.

"Cheating" programs, scam offers, black-markets and other offerings or actions by unrelated third parties that seek to exploit our games and players affect the game-playing experience and may lead players to stop playing our games or divert revenue to unrelated third parties.

Unrelated third parties have developed, and may continue to develop, "cheating" programs, scam offers, black-markets and other offerings that may decrease our revenue generated from our virtual economies, divert our players from our games or otherwise harm us. Cheating programs enable players to exploit vulnerabilities in our games to obtain virtual currency or other items that would otherwise generate in-app purchases for us, play the games in automated ways or obtain unfair advantages over other players who do play fairly. Unrelated third parties attempt to scam our players with fake offers for virtual goods or other game benefits. We devote resources to discover and disable these programs and activities, but if we are unable to do so in a prompt and timely manner, our operations may be disrupted, our reputation damaged and players may play our games less frequently or stop playing our games altogether. This may lead to lost revenue from paying players, increased cost of developing technological measures to combat these programs and activities, legal claims, and increased customer service costs needed to respond to disgruntled players.

Some of our players may make sales or purchases of virtual goods used in our games through unauthorized or fraudulent third-party websites, which may reduce our revenue.

Virtual goods in our games have no monetary value outside of our games. Nonetheless, some of our players may make sales and/or purchases of our virtual goods, such as virtual currency for our *Tap Sports Baseball* games, through unauthorized third-party sellers in exchange for real currency. These unauthorized or fraudulent transactions are usually arranged on third-party websites and the virtual goods offered may have been obtained through unauthorized means such as exploiting vulnerabilities in our games, from scamming our players with fake offers for virtual goods or other game benefits, or from credit card fraud. We do not generate any revenue from these transactions. These unauthorized purchases and sales from third-party sellers could reduce our revenues by, among other things:

- decreasing revenue from authorized transactions;
- creating downward pressure on the prices we charge players for our virtual currency;
- increasing chargebacks from unauthorized credit card transactions;
- causing us to lose revenue from dissatisfied players who stop playing a particular game;
- increasing costs we incur to develop technological measures to curtail unauthorized transactions;
- resulting in negative publicity or harm our reputation with players and partners; and
- increasing customer support costs to respond to dissatisfied players.

To discourage unauthorized purchases and sales of our virtual goods, we state in our terms of service that the buying or selling of virtual currency and virtual goods from unauthorized third party sellers may result in bans from our games or legal action. We have banned players as a result of such activities. We have also employed technological

measures to help detect unauthorized transactions and continue to develop additional methods and processes by which we can identify unauthorized transactions and block such transactions. However, there can be no assurance that our efforts to prevent or minimize these unauthorized or fraudulent transactions will be successful.

If we do not adequately protect our intellectual property rights, it may be possible for third parties to obtain and improperly use our intellectual property and our business and operating results may be harmed.

Our intellectual property is essential to our business. We rely on a combination of patent, copyright, trademark, trade secret and other intellectual property laws and contractual restrictions on disclosure to protect our intellectual property rights. To date, we have only eleven issued U.S. patents and five U.S. patent applications currently outstanding, including two that we inherited through acquisitions, so we will not be able to protect the majority of our technologies from independent invention by third parties. In addition, we have filed foreign patent applications on two of the issued U.S. patents.

Despite our efforts to protect our intellectual property rights, unauthorized parties may attempt to copy or otherwise to obtain and use our technology and games, and some parties have distributed “jail broken” versions of our games where all of the content has been unlocked and made available for free. Further, some of our competitors have released games that are nearly identical to successful games released by their competitors in an effort to confuse the market and divert users from the competitor’s game to the copycat game. To the extent third parties copy our games, it could reduce the amount of revenue we are able to generate from any infringed games. Monitoring unauthorized use of our games is difficult and costly, and we cannot be certain that the steps we have taken will prevent piracy and other unauthorized distribution and use of our technology and games, particularly in certain international jurisdictions, such as China, where the laws may not protect our intellectual property rights as fully as in the United States. We may institute litigation to enforce our intellectual property rights, which could result in substantial costs and divert our management’s attention and our resources.

In addition, although we require our third-party developers to sign agreements not to disclose or improperly use our trade secrets, to acknowledge that all inventions, trade secrets, works of authorship, developments and other processes generated by them on our behalf are our property and to assign to us any ownership they may have in those works, it may still be possible for third parties to obtain and improperly use our intellectual properties without our consent. This could harm our brand, business, operating results and financial condition.

We are, and in the future may become, involved in intellectual property disputes, which may disrupt our business, require us to pay significant damage awards and could limit our ability to use certain technologies in the future.

Third parties may sue us for intellectual property infringement, or initiate proceedings to invalidate our intellectual property, which, if successful, could disrupt our business, cause us to pay significant damage awards or require us to pay licensing fees. For example, in July 2018, SwiftLife, Inc. filed a complaint in the U.S. District Court for the Eastern District of New York against us, our wholly owned subsidiary Glu Games Inc., and Taylor Swift, Taylor Swift Productions, Inc. and TAS Rights Management, LLC. The complaint alleges eight causes of action, including that Glu and the other defendants infringe the plaintiff’s federally registered trademark, SwiftLife. While we believe that the allegations asserted against us are without merit and we intend to vigorously defend ourselves in this matter, the outcome of any litigation is uncertain and, regardless of outcome, litigation can have an adverse impact on us because of defense costs, potential negative publicity, diversion of management resources and other factors. In addition, any claims brought against us in the future could result in our being enjoined from using our intellectual property or licensed intellectual property, and we might incur significant licensing fees and could be forced to develop alternative technologies. We may also be required to pay penalties, judgments, royalties or significant settlement costs. If we fail or are unable to develop non-infringing technology or games or to license the infringed or similar technology or games on a timely basis, we may be forced to withdraw games from the market or be prevented from introducing new games. We might also incur substantial expenses in defending against third-party claims, regardless of their merit.

In addition, we use open source software in some of our games and expect to continue to use open source software in the future. We may face claims from companies that incorporate open source software into their products, claiming ownership of, or demanding release of, the source code, the open source software and/or derivative works that

were developed using such software, or otherwise seeking to enforce the terms of the applicable open source license. These claims could also result in litigation, require us to purchase a costly license or require us to devote additional research and development resources to change our games, any of which would have a negative effect on our business and operating results.

We are, and in the future may become a party to litigation and regulatory inquiries, which could result in an unfavorable outcome and have an adverse effect on our business, financial condition, results of operation and cash flows.

We are, and may become in the future, subject to various legal proceedings, claims and regulatory inquiries that arise out of the ordinary conduct of our business. For example, on March 14, 2018, Jeffrey Tseng, the former Chief Executive Officer of Crowdstar, filed a complaint in the Superior Court of the State of California for the County of Santa Clara against Glu and other defendants alleging certain claims arising out of our acquisition of Crowdstar. Mr. Tseng is seeking compensatory damages and exemplary damages, each in an amount to be determined at trial, along with costs of suit, reasonable attorneys' fees and such other relief as the Court may deem proper. While we believe that the allegations asserted against us are without merit and we intend to vigorously defend ourselves in this matter, the outcome of any litigation is uncertain and, regardless of outcome, litigation can have an adverse impact on us because of defense costs, potential negative publicity, diversion of management resources and other factors. In addition, events may occur that give rise to a potential risk of litigation. The number and significance of regulatory inquiries have increased as our business has grown and evolved. Any proceedings, claims or inquiries initiated by or against us, whether successful or not, may be time consuming; result in costly litigation, damage awards, consent decrees, injunctive relief or increased costs of doing business, require us to change our business practices or products, require significant amounts of management time, result in diversion of significant operations resources or otherwise harm our business and future financial results.

Unanticipated changes in our income tax rates or exposure to additional tax liabilities may affect our future financial results.

Our future effective income tax rates may be favorably or unfavorably affected by unanticipated changes in the valuation of our deferred tax assets and liabilities, or by changes in tax laws or their interpretation. Determining our worldwide provision for income taxes requires significant judgments. The estimation process and applicable laws are inherently uncertain, and our estimates are not binding on tax authorities. Our effective tax rate could also be adversely affected by a variety of factors, many of which are beyond our control. Recent and contemplated changes to U.S. tax laws, including limitations on a taxpayer's ability to claim and utilize foreign tax credits and defer certain tax deductions until earnings outside of the United States are repatriated to the United States, could impact the tax treatment of our foreign earnings. Further, the taxing authorities of the jurisdictions in which we operate may challenge our methodologies for valuing developed technology or intercompany arrangements, including our transfer pricing, or determine that the manner in which we operate our business is not consistent with the manner in which we report our income to the jurisdictions, which could increase our worldwide effective tax rate and harm our financial position and results of operations. Foreign tax authorities may also interpret or change tax regulations such that we may be subject to tax liabilities upon closure or liquidation of a foreign subsidiary. In addition, we are subject to the continuous examination of our income tax returns by the Internal Revenue Service and other tax authorities. We regularly assess the likelihood of adverse outcomes resulting from these examinations to determine if our provision for income taxes is adequate. These continuous examinations may result in unforeseen tax-related liabilities, which may harm our future financial results.

We must charge, collect and/or pay taxes other than income taxes, such as payroll, value-added, sales and use, net worth, property and goods and services taxes, in both the United States and foreign jurisdiction. If tax authorities assert that we have taxable nexus in a jurisdiction, they may seek to impose past as well as future tax liability and/or penalties. Any such impositions could also cause significant administrative burdens and decrease our future sales. Moreover, state and federal legislatures have been considering various initiatives that could change our tax position regarding sales and use taxes.

Finally, as we change our international operations, adopt new products and new distribution models, implement changes to our operating structure or undertake intercompany transactions in light of changing tax laws, our tax expense could increase.

Our facilities are located near known earthquake fault zones, and the occurrence of an earthquake or other natural disaster could damage our facilities and equipment, which could require us to curtail or cease operations.

Our principal offices are located in the San Francisco Bay Area, an area known for earthquakes. We are also vulnerable to damage from other types of disasters, including power loss, fires, explosions, floods, communications failures, terrorist attacks and similar events. If any natural or other disaster were to occur, our ability to operate our business could be impaired.

Our stock price has fluctuated and declined and may continue to do so. Our stock price may be affected by third party data regarding our games.

The trading price of our common stock has fluctuated in the past and is expected to continue to fluctuate in the future, as a result of a number of factors, many of which are outside our control, such as changes in the operating performance and stock market valuations of other technology companies generally, or those in our industry in particular, such as Activision, Electronic Arts and Zynga. We also experience stock price volatility as security analysts or investors base their views and monitor the performance of our games on third party data, like App Annie, AppData, comScore or SensorTower. Third parties publish daily data about us and other mobile gaming companies with respect to downloads of our games, daily and monthly active users and estimated revenue generated by our games. These metrics can be volatile, particularly for specific games, and in many cases do not accurately reflect the actual levels of usage of our games across all platforms or the revenue generated by our games.

In addition, the Nasdaq Global Select Market on which our common stock is listed has in the past experienced extreme price and volume fluctuations that have affected the market prices of many companies, some of which appear to be unrelated or disproportionate to their operating performance. These broad market fluctuations could adversely affect the market price of our common stock. In the past, following periods of volatility in the market price of a particular company’s securities, securities class action litigation has often been brought against that company. Securities class action litigation against us could result in substantial costs and divert our management’s attention and resources.

If securities or industry analysts do not publish research about our business, or publish negative or misinformed reports about our business, our share price and trading volume could decline and/or become more volatile.

The trading market for our common stock is affected by the research and reports that securities or industry analysts publish about our business. We do not have any control over these analysts. If one or more of the analysts who cover us downgrade our shares or lower their opinion of our shares, our share price would likely decline. If one or more of these analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our share price or trading volume to decline. In addition, our share price and the volatility of our shares can be affected by misinformed or mistaken research reports on our business.

Sales of substantial amounts of our common stock in the public markets, or the perception that such sales might occur, could reduce the price that our common stock might otherwise attain and may dilute existing stockholders’ voting power and ownership interest in us.

The market price of shares of our common stock could decline as a result of substantial sales of our common stock, particularly sales by our directors and their affiliates, executive officers, employees and significant stockholders, under our current shelf registration statements, through a large number of shares of our common stock becoming available for sale, or the perception in the market that holders of a large number of shares intend to sell their shares. For example, Tencent is free to sell the 21,000,000 shares it acquired from us in the second quarter of 2015 on the open-market, subject only to our black-out periods and other limitations under our insider trading policy.

Some provisions in our certificate of incorporation and bylaws, as well as Delaware law, may deter third parties from seeking to acquire us.

Our certificate of incorporation and bylaws contain provisions that may make the acquisition of our company more difficult without the approval of our board of directors, including the following:

- our board of directors is classified into three classes of directors with staggered three-year terms;
- only our chairman of the board, our lead independent director, our Chief Executive Officer, our president or a majority of our board of directors is authorized to call a special meeting of stockholders;
- our stockholders are able to take action only at a meeting of stockholders and not by written consent;
- only our board of directors and not our stockholders is able to fill vacancies on our board of directors;
- our certificate of incorporation authorizes undesignated preferred stock, the terms of which may be established and shares of which may be issued without stockholder approval; and
- advance notice procedures apply for stockholders to nominate candidates for election as directors or to bring matters before a meeting of stockholders.

In addition, as a Delaware corporation, we are subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation Law, which prevents certain stockholders holding more than 15% of our outstanding common stock from engaging in certain business combinations without approval of the holders of at least two-thirds of our outstanding common stock not held by such 15% or greater stockholder, although our board of directors waived this provision with respect to Tencent’s potential acquisition of greater than 15% of our shares in connection with the transaction in which we initially sold shares of our common stock to an affiliate of Tencent.

We have no plans to pay dividends for the foreseeable future.

We have never declared or paid any cash dividends on our common stock and do not have any plans to pay cash dividends in the foreseeable future. Any determination to pay dividends in the future will be at the discretion of our board of directors. Accordingly, investors must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

Item 1B. *Unresolved Staff Comments*

None.

Item 2. *Properties*

We lease our San Francisco, California corporate headquarters, an office building of approximately 57,000 square feet. The San Francisco facility currently accommodates our principal executive, marketing, business development, human resources, finance, legal, information technology and administrative activities, two of our development studios, and other development activities.

We lease additional domestic office space in Burlingame and San Mateo, California. We lease offices for our foreign operations in: Toronto, Canada and Hyderabad, India. These additional domestic and international facilities primarily accommodate development studios, and customer care activities, and total approximately 61,000 square feet.

We believe our space is adequate for our current needs and that suitable additional or substitute space will be available to accommodate the foreseeable expansion of our operations. See Note 9 of the Notes to Consolidated Financial Statements in Item 8 of this report for more information about our lease commitments.

Item 3. ***Legal Proceedings***

On March 14, 2018, Jeffrey Tseng, the former Chief Executive Officer of Crowdstar, filed a complaint in the Superior Court of the State of California for the County of Santa Clara against Time Warner Inc., Rachel Lam, Intel Capital Corporation, Middlefield Ventures Inc. and Jose Blanc (collectively, the "Non-Glu Defendants"), Glu and additional yet-to-be-named defendants. The complaint alleges (i) breach of fiduciary duty by the Non-Glu Defendants, (ii) aiding and abetting breach of fiduciary duty by Glu and (iii) intentional interference with contract, intentional interference with prospective economic advantage, negligent interference with prospective economic advantage and unfair competition by each of the defendants, in each case relating to circumstances arising from our acquisition of Crowdstar and the events leading up to the acquisition. Mr. Tseng is seeking compensatory damages and exemplary damages, each in an amount to be determined at trial, along with costs of suit, reasonable attorneys' fees and such other relief as the Court may deem proper. The first Case Management Conference, was held on July 20, 2018. Glu and the Non-Glu Defendants filed demurrers in response to Mr. Tseng's complaint on August 17, 2018, Mr. Tseng filed responses to these demurrers on September 17, 2018, and Glu and the Non-Glu Defendants filed reply briefs in support of their demurrers on October 15, 2018. A hearing with respect to the demurrers was held on November 30, 2018. On January 24, 2019, the judge issued an order sustaining the demurrers on all six claims and gave Mr. Tseng 10 days' leave to amend his complaint. We believe that the allegations against us are without merit and intend to continue to vigorously defend ourselves in this matter.

From time to time, we are subject to various claims, complaints and legal actions in the normal course of business. We are not currently party to any pending litigation, the outcome of which will have a material adverse effect on our operations, financial position or liquidity. However, the ultimate outcome of any litigation is uncertain and, regardless of outcome, litigation can have an adverse impact on us because of defense costs, potential negative publicity, diversion of management resources and other factors.

Item 4. ***Mine Safety Disclosures***

Not applicable.

PART II

Item 5. ***Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities***

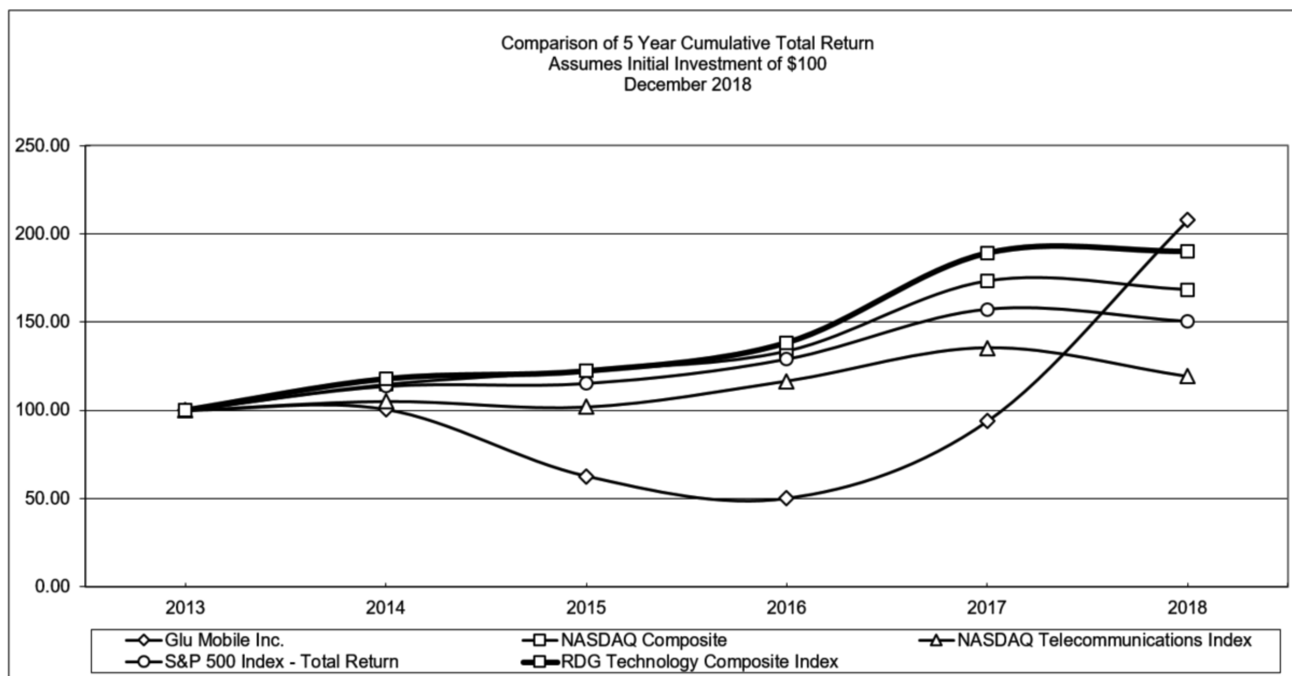
Market Information for Common Stock

Our common stock has been listed on The Nasdaq Global Select Market under the symbol "GLUU" since our initial public offering in March 2007.

Stock Price Performance Graph

The following graph shows a comparison from December 31, 2013 through December 31, 2018 of the cumulative total return for an investment of $100 (and the reinvestment of dividends) in our common stock, the Nasdaq Composite Index, NASDAQ Telecommunications Index, S&P 500 Index, and RDG Technology Composite Index. Such returns are based on historical results and are not intended to suggest future performance. We have historically utilized the NASDAQ Telecommunications Index in our stock price performance graph. However, we believe the RDG Technology Composite Index is a better indicator of how Glu's stock price performance compares to other companies in the overall

technology industry and, as a result, intend to no longer utilize the NASDAQ Telecommunications Index in our stock price performance graph in future Annual Reports on Form 10-K.



The information under the heading "Stock Price Performance Graph" shall not be deemed "soliciting material" or to be "filed" for purposes of Section 18 of the Exchange Act of 1934, and shall not be incorporated by reference into any registration statement or other document filed by us with the SEC, whether made before or after the date of this report, regardless of any general incorporation language in such filing, except as expressly set forth by specific reference in such filing.

Stockholders

As of February 15, 2019, we had approximately 46 record holders of our common stock and thousands of additional beneficial holders.

Dividend Policy

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain any future earnings and do not expect to pay any dividends in the foreseeable future. Any future determination related to our dividend policy will be made at the discretion of our Board of Directors.

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

Item 6. ***Selected Financial Data***

The following selected consolidated financial data should be read in conjunction with Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," Item 8, "Financial Statements and

Supplementary Data," and other financial data included elsewhere in this report. Our historical results of operations are not necessarily indicative of results of operations to be expected for any future period.

	Year Ended December 31,				
	2018	2017	2016	2015	2014
	(In thousands, except per share amounts)				
Consolidated Statements of Operations Data:					
Revenue	$ 366,561	$ 286,827	$ 200,581	$ 249,900	$ 223,146
Cost of revenue:					
Platform commissions, royalties and other	128,445	103,499	75,239	95,682	80,736
Impairment of prepaid royalties and guarantees	711	27,323	30,107	2,502	256
Impairment and amortization of intangible assets	9,119	10,331	14,792	9,553	4,767
Total cost of revenue	138,275	141,153	120,138	107,737	85,759
Gross profit	228,286	145,674	80,443	142,163	137,387
Operating expenses (1):					
Research and development	94,934	92,420	81,879	72,856	64,284
Sales and marketing	113,860	104,356	48,050	48,240	45,076
General and administrative	31,667	34,425	30,225	26,092	25,019
Amortization of intangible assets	—	—	—	201	508
Restructuring charge	240	6,019	2,279	1,075	435
Total operating expenses	240,701	237,220	162,433	148,464	135,322
(Loss)/Income from operations	(12,415)	(91,546)	(81,990)	(6,301)	2,065
Interest and other expense, net	(235)	(6,850)	(5,751)	(743)	(1,472)
(Loss)/Income before income taxes	(12,650)	(98,396)	(87,741)	(7,044)	593
Income tax benefit (provision)	(549)	826	301	(141)	7,555
Net (loss)/income	(13,199)	(97,570)	(87,440)	(7,185)	8,148
Net (loss)/income per share:					
Basic	$ (0.09)	$ (0.72)	$ (0.66)	$ (0.06)	$ 0.09
Diluted	$ (0.09)	$ (0.72)	$ (0.66)	$ (0.06)	$ 0.08
Weighted average common shares outstanding:					
Basic	141,402	135,715	131,804	118,775	91,826
Diluted	141,402	135,715	131,804	118,775	96,922

(1) Includes stock-based compensation expense as follows:

	2018	2017	2016	2015	2014
Research and development	$ 12,807	$ 6,460	$ 4,567	$ 3,563	$ 7,422
Sales and marketing	2,795	1,289	1,091	1,082	701
General and administrative	8,990	7,314	7,605	7,041	3,510

	As of December 31,				
	2018	2017	2016	2015	2014
	(In thousands)				
Cash and cash equivalents and short-term investments	$ 97,834	$ 63,764	$ 102,102	$ 180,542	$ 70,912
Total assets	314,433	299,298	339,504	402,986	251,663
Total long-term liabilities	7,191	12,534	22,350	25,932	3,936
Total stockholder's equity	$ 177,313	$ 153,860	$ 232,814	$ 306,428	$ 171,706

Please see Note 1, Note 3 and Note 9 of our Notes to Consolidated Financial Statements for a discussion of factors such as impairment of prepaid royalties and guarantees, divestiture, and any material uncertainties that may materially affect the comparability of the information reflected in selected financial data, described in Item 6 of this report.

Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our consolidated financial statements and the related notes included in Item 8, "Financial Statements and Supplementary Data" of this report. In addition to our historical consolidated financial information, the following discussion contains forward-looking statements that reflect our plans, estimates, and beliefs. Our actual results and the timing of certain events could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include, but are not limited to, those discussed below and elsewhere in this report, particularly in Item 1A, "Risk Factors."

Our Management's Discussion and Analysis of Financial Condition and Results of Operations, or MD&A, includes the following sections:

- An Overview that discusses at a high level our operating results and some of the trends that affect our business;
- Critical Accounting Policies and Estimates that we believe are important to understanding the assumptions and judgments underlying our financial statements;
- Recent Accounting Pronouncements;
- Results of Operations, including a more detailed discussion of our revenue and expenses; and
- Liquidity and Capital Resources, which discusses key aspects of our statements of cash flows, changes in our balance sheets and our financial commitments.

Overview

This overview provides a high-level discussion of our operating results and some of the trends that affect our business. We believe that an understanding of these trends is important to understanding our financial results for fiscal 2018, as well as our future prospects. This summary is not intended to be exhaustive, nor is it intended to be a substitute for the detailed discussion and analysis provided elsewhere in this report, including our consolidated financial statements and accompanying notes.

Financial Results and Trends

Revenue for 2018 was $366.6 million, a 27.8% increase compared to 2017, in which we reported revenue of $286.8 million. The increase in total revenue was primarily related to a $71.8 million increase in our revenue from micro-transactions (in-app purchases) and a $9.0 million increase in our revenue from advertisements and offers. The increase was primarily related to an increase in revenue from *Design Home*, *Covet Fashion*, the *Tap Sports Baseball* franchise and *Kim Kardashian: Hollywood*. These increases were partially offset by declining revenue on a year over year basis from catalog games such as *Restaurant Dash with Gordon Ramsay, Deer Hunter 2018 (originally launched as Deer Hunter 2016), Deer Hunter Classic, Cooking Dash, Kendall & Kylie, Contract Killer Sniper* and *Racing Rivals.*

Revenue for 2017 was $286.8 million, a 43.0% increase compared to 2016, in which we reported revenue of $200.6 million. The increase in total revenue was primarily related to a $79.7 million increase in our revenue from micro-transactions (in-app purchases) and a $7.4 million increase in our revenue from advertisements and offers. The increase was primarily related to an increase in revenue from the launch of *MLB Tap Sports Baseball 2017* in March 2017, the launch of *Restaurant Dash with Gordon Ramsay* in June 2016 and the addition of *Covet Fashion* and *Design Home* through our acquisition of Crowdstar in November 2016. This increase was partially offset by declining revenue on a year over year basis from catalog titles such as *Tap Sports Baseball 2016, Kendall & Kylie, Kim Kardashian: Hollywood*, *Racing Rivals,* and *Cooking Dash.*

We have concentrated our product development efforts towards developing games for smartphone and tablet devices. We generate the majority of our revenue from Apple's iOS platform, which accounted for 63.1%, 63.0%, and 62.4% of our total revenue for the years ended December 31, 2018, 2017, and 2016, respectively. We generated the majority of this iOS-related revenue through the Apple App Store, which represented 54.7%, 54.2%, and 52.7% of our total revenue for the years ended December 31, 2018, 2017, and 2016, respectively, with the significant majority of such revenue derived from in-app purchases. We generated the balance of our iOS-related revenue from offers and advertisements in games distributed on the Apple App Store. In addition, we generated approximately 36.6%, 36.0%, and 36.1% of our total revenue for the years ended December 31, 2018, 2017, and 2016, respectively, from the Android platform. We generated the majority of our Android-related revenue through the Google Play Store, which represented 31.3%, 30.3%, 27.6% of our total revenue for the years ended December 31, 2018, 2017, and 2016, respectively, with the significant majority of such revenue derived from in-app purchases. We generated the balance of our Android-related revenue from other platforms that distribute apps that run the Android operating system (e.g., the Amazon App Store) and through offers and advertisements in games distributed through the Google Play Store and other Android platforms.

We currently publish titles primarily in four genres: home décor, sports and action, fashion and celebrity, and time management. We believe these are genres in which we have already established a leadership position, are otherwise aligned with our strengths or are conducive to the establishment of a strong growth title. Across genres, we view our titles as either growth games or catalog games, and within the catalog group, our titles are either classified as evergreen games or legacy games. Growth games are titles that we continue to update with additional content and features and which grow revenue year over year. Evergreen games are similar to growth games in that we continue to update them with additional content and features, but differ from growth games in that our focus is to reduce and potentially reverse their year over year revenue declines; to the extent that we succeed in our efforts to grow annual revenue from an evergreen game and expect such title's revenues to continue to grow on an annual basis, we would then consider such evergreen game to be a growth game. Legacy games are those titles that are still published by us and earn revenue, but on which we expend little to no investment in terms of updates and enhancements.

We established our leadership position in the home décor genre with our release of *Design Home* in November 2016, which was the first title launched by Crowdstar following the acquisition. We introduced key updates for *Design Home* in 2018, including elite events for elder players, improved series challenges and language localization in German, French and Spanish, and are planning key updates for this title in 2019, including the introduction of a deeper meta loop and e-commerce functionality. Our leadership in the sports and action category remains strong with our *Tap Sports Baseball* and *Deer Hunter* franchises, and we furthered our leadership with the launch of *MLB Tap Sports Baseball 2018* in March 2018 which includes licensed content from Major League Baseball, or MLB, together with current and former MLB players pursuant to our continuing agreements with the Major League Baseball Players Association, or MLBPA, and Major League Baseball Players Alumni Association, or MLBPAA. We expect to launch *MLB Tap Sports Baseball 2019* in March 2019 and expect to add to our portfolio of sports and action titles through the worldwide release of *WWE Universe* in 2019 and the next iteration of our *Deer Hunter* franchise in 2020. We established our leadership in the fashion and celebrity gaming genre when we launched *Kim Kardashian: Hollywood* in June 2014, and extended our leadership position through our acquisition of Crowdstar in November 2016 and its successful *Covet Fashion* title. The time management genre includes our *Cooking Dash* and *Diner Dash* franchises, and our leadership position in this genre was bolstered by our successful release of *Restaurant Dash with Gordon Ramsay* (which was originally branded as *Gordon Ramsay DASH*) in June 2016. We expect to add to our portfolio of time management titles through the release of *Diner DASH Adventures* in 2019.

We believe that our games consistently have high production values, are visually appealing and have engaging core gameplay. These characteristics have typically helped to drive installs and awareness of our games and resulted in highly positive consumer reviews. The majority of our games have been featured on Apple and Google storefronts when they were commercially released, which we believe is the result of us being a good partner of Apple and Google.

We work closely with our celebrity and brand licensors to engage their social media audiences and build games that will resonate with their unique fan bases. For example, our *Kim Kardashian: Hollywood* title utilizes transmedia storytelling, leveraging Ms. Kardashian West's built-in social media fan base to drive installs and awareness of the game, and then attempting to surprise and delight those fans with real-world events and other game content based on her life. Our goal is for the game content to become entwined with Ms. Kardashian West's persona and social media

presence, and to otherwise enhance interaction with her fans. We also leverage the strength of well-known brands and licensors to provide users with more realistic experiences, such as the case with *MLB Tap Sports Baseball 2018* which features all MLB clubs and uniforms and current and former MLB players. We also work to build and nurture social communities in and around the games themselves, creating a new vehicle for strong, personal engagement with the brand or celebrity's fan base.

For us to continue driving installs and awareness of our games and to improve monetization and retention of our players, we must ensure that each of our games, has compelling gameplay and a core monetization loop that incentivizes players to make in-app purchases. In addition, we must regularly update our games with compelling new content, deliver socio-competitive features like tournaments, contests, player-versus-player gameplay and live events and build and nurture social media communities around our franchises both in-game and holistically via community features such as dedicated social channels.

We also plan to continue monitoring the successful aspects of our games to drive downloads and enhance monetization and retention as part of our product strategy, whether by optimizing advertising revenue within each title, securing additional compelling licensing arrangements, building enhanced and more complex core gameplay, adding deep meta game features and additional social features, tournaments and events, offering subscriptions for in game durables and consumables to players or otherwise. Optimizing advertising revenue within our games requires us to continue taking advantage of positive trends in the mobile advertising space, particularly as brands continue to migrate budgets from web to mobile. Continuing to drive installs and awareness of our games through licensing efforts requires that we continue to partner with brands, celebrities, and social influencers that resonate with potential players of our games. Partnering with desirable licensing partners and renewing our existing licenses with our most successful partners requires that we continue to develop successful games based on licensed content and are able to compete with other mobile gaming companies on financial and other terms in signing such partners. We also plan to continue introducing third-party licensed brands, properties and personalities into our games as additional licensed content, for cameo appearances or for limited time events in order to drive awareness and monetization.

Across the globe our industry is evidencing that hit titles generally remain higher in the top grossing charts for longer. We believe this is due to the continued specialization and investment of teams and companies in their hit titles, and the live, social nature of certain games. Our strategy and the measures we have implemented to support our business position us to take advantage of these trends, as evidenced by the continued strength of our *Design Home*, *Covet Fashion*, and *Kim Kardashian: Hollywood* titles and the year over year growth of our *Tap Sports Baseball* franchise. We continue to regularly update and otherwise support our growth and evergreen games in order to ensure that those games monetize and retain users for even longer periods of time. In addition, we plan to continue to invest in our creative leaders and the creative environments in which they and their teams work to increase our likelihood of creating significant hit growth games in 2019 and beyond.

Our net loss in the year ended December 31, 2018 was $13.2 million versus a net loss of $97.6 million in the year ended December 31, 2017. This change was primarily due to an increase in revenue of $79.7 million, a decrease in cost of sales of $2.9 million, a decrease in general and administrative expense of $2.8 million and a decrease in restructuring charges of $5.8 million. These changes were partially offset by an increase in sales and marketing expense of $9.5 million, an increase in research and development expense of $2.5 million and a decrease in other expense of $6.1 million related to the loss recorded on the divestiture of our Moscow studio in December 2017. See "—Results of Operations—Comparison of the Years Ended December 31, 2018 and 2017" below for further details. Our operating results were also affected by fluctuations in foreign currency exchange rates of the currencies in which we incurred meaningful operating expenses (principally the Canadian Dollar, and Indian Rupee), and our customers' reporting currencies.

Our net loss in the year ended December 31, 2017 was $97.6 million versus a net loss of $87.4 million in the year ended December 31, 2016. This change was primarily due to an increase in cost of revenue of $21.0 million, an increase of $56.3 million in sales and marketing expenses and a net increase in interest and other expenses of $1.1 million. These increases were partially offset by an increase in revenue of $86.2 million. See "—Results of Operations—Comparison of the Years Ended December 31, 2017 and 2016" below for further details. Our operating results were also affected by fluctuations in foreign currency exchange rates of the currencies in which we incurred meaningful operating

expenses (principally the British Pound Sterling, Euro, Chinese Renminbi, Russian Ruble, Canadian Dollar, and Indian Rupee), and our customers' reporting currencies, which fluctuated significantly in 2016 and 2017. We expect our sales and marketing expense will slightly decrease as a percent of revenue in 2019.

Our ability to achieve and sustain profitability depends not only on our ability to grow our revenue, but also on our ability to manage our operating expenses. We significantly increased our sales and marketing expenditures beginning in the second quarter of 2017, which was primarily related to *Design Home*, as we sought to leverage the game's momentum, and we further increased our overall sales and marketing spending during 2018. The increase in 2018 expense compared to 2017 largely related to higher marketing spend for *Covet Fashion*, the *Tap Sports Baseball* franchise and *Kim Kardashian: Hollywood*, partially offset by lower marketing expense for some of our catalog titles. We expect our sales and marketing expenses to increase in 2019 primarily due to higher user acquisition expenditures, including related to the launch of *WWE Universe*, *Diner DASH Adventures* and *Disney Sorcerer's Arena* in 2019. Additionally, the largest component of our recurring expenses is personnel costs, which consist of salaries, benefits and incentive compensation, including bonuses and stock-based compensation. We have conducted several restructurings since 2016. However, the cost reductions from these restructurings were largely offset by personnel costs related to our acquisition of Crowdstar in November 2016. In December 2017, we sold our wholly owned subsidiary in Moscow and transitioned the catalog games developed and/or operated by the Moscow studio to a more cost-effective location in Hyderabad, India. In 2019, we intend to focus on reducing our operating costs to be more efficient. These efforts may be partially offset by our plans to continue hiring additional development personnel in the San Francisco Bay Area and in Hyderabad, India.

Cash and cash equivalents at December 31, 2018 totaled $97.8 million, an increase of $34.0 million from the $63.8 million balance at December 31, 2017. This increase was primarily related to $32.3 million of cash generated from operations and $2.2 million of cash generated from financing activities, which was partially offset by $636,000 of cash used in investing activities.

Key Operating Metrics

We manage our business by tracking various non-financial operating metrics that give us insight into user behavior in our games. The three metrics that we use most frequently are Daily Active Users (DAU), Monthly Active Users (MAU), and Average Revenue Per Daily Active User (ARPDAU). Our methodology for calculating DAU, MAU, and ARPDAU may differ from the methodology used by other companies to calculate similar metrics.

DAU is the number of individuals who played a particular smartphone game on a particular day. An individual who plays two different games on the same day is counted as two active users for that day when we aggregate DAU across games. In addition, an individual who plays the same game on two different devices during the same day (e.g., an iPhone and an iPad) is also counted as two active users for each such day when we average or aggregate DAU over time. Average DAU for a particular period is the average of the DAUs for each day during that period. We use DAU as a measure of player engagement with the titles that our players have downloaded.

MAU is the number of individuals who played a particular smartphone game in the month for which we are calculating the metric. An individual who plays two different games in the same month is counted as two active users for that month when we aggregate MAU across games. In addition, an individual who plays the same game on two different devices during the same month (e.g., an iPhone and an iPad) is also counted as two active users for each such month when we average or aggregate MAU over time. Average MAU for a particular period is the average of the MAUs for each month during that period. We use the ratio between DAU and MAU as a measure of player retention.

ARPDAU is total free-to-play smartphone revenue – consisting of micro-transactions, advertisements and offers – for the measurement period divided by the number of days in the measurement period divided by the DAU for the measurement period. ARPDAU reflects game monetization. Under our revenue recognition policy, we recognize this revenue over the estimated average playing period of a user, but our methodology for calculating our DAU does not align with our revenue recognition policy for micro-transactions and offers, under which we defer revenue. For example, if a title is introduced in the last month of a quarter, we defer a substantial portion of the micro-transaction and offer revenue to future months, but the entire DAU for the newly released title is included in the month of launch.

We calculate DAU, MAU and ARPDAU primarily from our main distribution platforms: Apple's App Store, Google's Play Store, and Amazon's Appstore, as well as from Facebook for certain titles; we are not able to calculate these metrics across all of our distribution channels. In addition, the platforms that we include for purposes of this calculation have changed over time, and we expect that they will continue to change as our business evolves, but we do not expect that we will adjust prior metrics to take any such additions or deletions of distribution platforms into account. We believe that calculating these metrics for only our primary distribution platforms at a given period is generally representative of the metrics for all of our distribution platforms. Moreover, we rely on the data analytics software that we incorporate into our games to calculate and report the DAU, MAU and ARPDAU of our games, and we make certain adjustments to the analytics data to address inconsistencies between the information as reported and our DAU and MAU calculation methodology.

We have estimated the DAU and MAU for certain older titles because the analytics tools incorporated into those titles are incompatible with newer device operating systems (e.g., iOS 12), preventing us from collecting complete data. For these titles, we estimate DAU and MAU by extrapolating from each affected title's historical data using a fixed decay rate in light of the behavior of similar titles for which complete data is available. The table below sets forth our aggregate DAU, MAU and ARPDAU for all of our then-active smartphone titles for the periods specified, followed by a qualitative discussion of the changes in these metrics. Aggregate DAU and MAU include users of both our free-to-play and premium titles, whereas aggregate ARPDAU is calculated based only on revenue from our free-to-play games. Aggregate DAU and MAU for each period presented represents the aggregate metric for the last month of the period. For example, DAU for the three months ended December 31, 2018 is aggregate daily DAU for the month of December 2018 calculated for all active smartphone free-to-play and premium titles in that month across the distribution platforms for which we calculate the metric.

	Three Months Ended,							
	2018				2017			
	March 31	June 30	September 30	December 31	March 31	June 30	September 30	December 31
Aggregate DAU	3,585	3,627	3,408	3,214	4,098	4,627	3,903	3,801
Aggregate MAU	24,787	22,817	19,415	21,113	32,523	32,192	27,585	28,646
Aggregate ARPDAU	$ 0.25	$ 0.27	$ 0.32	$ 0.32	$ 0.15	$ 0.16	$ 0.23	$ 0.23

The decrease in aggregate DAU and MAU for the three months ended December 31, 2018 as compared to the same period of the prior year was primarily related to fewer downloads across our portfolio of games.

Our aggregate ARPDAU increased for the three months ended December 31, 2018 as compared to the same period of the prior year, as we improved monetization on certain titles, particularly through increased content updates and use of social features in those games. Future increases in our aggregate DAU, MAU and ARPDAU will depend on our ability to retain current players, attract new paying players, launch new games and expand into new markets and distribution platforms.

We rely on a very small portion of our total users for nearly all of our revenue derived from in-app purchases. Since the launch of our first free-to-play titles in the fourth quarter of 2010, the percentage of unique paying users for our largest revenue-generating free-to-play games has typically been less than 5%, when measured as the number of unique paying users on a given day divided by the number of unique users on that day, though this percentage fluctuates. It may be higher than 5% for some of our games while for certain other games it may be higher during specific, relatively short time periods, such as immediately following worldwide launch, during special events or following content updates, marketing campaigns or certain other events.

Significant Transactions

Divestiture of Moscow Studio

On December 31, 2017, we entered into the following agreements related to the divestiture of our Moscow-based game development studio (the "Moscow Studio") through the sale of our wholly-owned UK subsidiary Glu Mobile (Russia) Limited ("GMRL"):

- Share Purchase Agreement (the “SPA”) between Glu and Saber Interactive (“Saber”);
- Transitional Services Agreement (the “TSA”) among Glu, Saber and MGL. My.com (Cyprus) Limited (“MGL”); and
- Asset Purchase and License Agreement (the “APLA”) between Glu and MGL.

Pursuant to the SPA, Saber purchased all the issued and outstanding share capital of GMRL. Saber also assumed all obligations under the office lease for the Moscow Studio.

Under the TSA, Saber agreed to transition certain legacy titles from the Moscow Studio to our Hyderabad studio. Upon successful completion of the transition (i) Saber paid the employees of the Moscow Studio and GMRL bonus payments of $500,000 in the aggregate and reduced the cash consideration by the amount of the bonus, and (ii) certain employees of the Moscow Studio and GMRL had the vesting of an aggregate of approximately 147,000 shares subject to equity awards accelerated.

Pursuant to the APLA, we sold four mobile games (and related intellectual property and other rights) developed by the Moscow Studio: (i) *Last Day Alive*, (ii) *Heroes of Destiny*, (iii) a game that was in development featuring a male celebrity, and (iv) *Furiosa*. We transferred all of our rights and obligations under certain contracts related to the game featuring a male celebrity, including, but not limited to, the obligation to pay the remaining approximately $1.5 million in minimum guarantee and other payments under these contracts. We also agreed to provide MGL with a non-exclusive, perpetual, worldwide, irrevocable, non-transferrable, royalty-free license to certain development tools and technology necessary to use, develop, publish, exploit and sell the purchased games and that MGL and/or its affiliates may use for the development of other of its products.

The total cash consideration under the SPA and APLA was $3.2 million, of which we received $1.7 million in January 2018. The remaining $1.5 million, net of a transition bonus payment of $500,000, was received in April 2018 upon completion of the transition of the legacy titles from the Moscow Studio to our Hyderabad studio.

In connection with the divestiture, we recorded a loss of $6.5 million in the year ended December 31, 2017, which is included in other expense on the consolidated statement of operations. This was primarily comprised of a $10.0 million charge related to the assignment of one of the contracts related to the male celebrity, a $1.2 million charge related to the write-off of goodwill associated with the Moscow Studio and a $0.5 million charge related to the write-off of net assets associated with the Moscow Studio. These charges were partially offset by $3.2 million in cash paid by Saber and MGL, $1.5 million related to the assumption of obligations by MGL under the contract related to the male celebrity, and $0.5 million related to the transition services provided by Saber.

In connection with the activities related to the transition under the TSA that occurred in 2018, we recorded the following expenses in the year ended December 31, 2018:

- $500,000 related to bonuses that became due to the employees of the Moscow Studio and GMRL;
- $514,000 related to the vesting of 147,000 shares subject to equity awards held by certain employees of the Moscow Studio and GMRL; and
- $515,000 related to the amortization of transition services assets that were capitalized as part of the transaction consideration.

Our divestiture of the Moscow studio was part of our efforts to consolidate our studio locations, focusing on a new scaled creative center in San Francisco and a low cost, repeatable location in Hyderabad, India. This divestiture was not presented as discontinued operations in the consolidated statements of operations, because it did not represent a strategic shift in our business and is not expected to have a significant effect on our operations or financial results, as we continued operating similar businesses after the divestiture.

Crowdstar Acquisition

On November 2, 2016, we, through a wholly owned subsidiary, acquired shares representing approximately 80.6% of the issued and outstanding voting power of Crowdstar, for consideration of approximately $40.8 million in cash pursuant to a transfer agreement by and among us, Crowdstar and certain stockholders of Crowdstar. Crowdstar, which was based in Burlingame, California, develops fashion and home décor genre games for mobile devices.

Following the initial acquisition of shares of Crowdstar by us, we exercised the right, as the holder of a majority of each of the preferred stock and the capital stock of Crowdstar, to appoint each of the five members of the board of directors of Crowdstar. In addition, certain drag-along provisions specified in a voting agreement by and among Crowdstar and certain stockholders of Crowdstar were triggered. Pursuant to the drag-along provisions, certain other stockholders of Crowdstar were required to tender their Crowdstar capital stock to us on the same terms as those specified in the transfer agreement.

On December 6, 2016, we acquired the remaining issued and outstanding shares of Crowdstar pursuant to a short-form merger and now have 100% ownership of Crowdstar. We paid an aggregate of approximately $45.5 million of cash ($40.8 million for the initial purchase of shares and an aggregate of $4.7 million in connection with purchasing shares in connection with exercising the drag-along provisions and effecting the short-form merger) to acquire 100% ownership of Crowdstar.

Our first title created by Crowdstar, *Design Home*, was released in November 2016.

Related Party Transaction

In November 2015, we entered into an agreement with an affiliate of Tencent pursuant to which we agreed, subject to certain conditions, to pay in the aggregate, up to $15.0 million in recoupable advanced royalties and non-recoupable license fees. As of December 31, 2016, we had paid the full amount of $15.0 million, as all payment milestones were achieved.

During the year ended December 31, 2016, we recorded an impairment of approximately $14.5 million for un-recouped advanced royalties and non-recoupable license fees that were paid to an affiliate of Tencent, due to the underperformance of our *Rival Fire* title which launched during the third quarter of 2016 and the negligible cash flows anticipated for the remaining contractual life of these assets.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with United States generally accepted accounting principles, or GAAP. These accounting principles require us to make certain estimates and judgments that can affect the reported amounts of assets and liabilities as of the dates of the consolidated financial statements, the disclosure of contingencies as of the dates of the consolidated financial statements, and the reported amounts of revenue and expenses during the periods presented. Although we believe that our estimates and judgments are reasonable under the circumstances existing at the time these estimates and judgments are made, actual results may differ from those estimates, which could affect our consolidated financial statements.

We believe the following to be critical accounting policies because they are important to the portrayal of our financial condition or results of operations and they require critical management estimates and judgments about matters that are uncertain:

- revenue recognition;
- prepaid or guaranteed licensor royalties;
- business combinations – purchase accounting;
- goodwill; and

- stock-based compensation.

Revenue Recognition

We generate revenue through in-app purchases within our games on smartphones and tablets, such as Apple's iPhone and iPad and mobile devices utilizing Google's Android operating system. Smartphone and tablet games are distributed primarily through Digital Storefronts. We also have relationships with certain advertising service providers for advertisements within smartphone games and revenue from these advertising providers is generated through impressions, clickthroughs, banner ads and offers.

Users can download our free-to-play games within the Digital Storefronts and pay to acquire virtual currency which can be redeemed in the game for virtual goods. We sell both consumable and durable virtual goods and receive reports from the Digital Storefronts, which breakdown the various purchases made from our games over a given time period. We review these reports and determine on a per-item basis whether the purchase was a consumable virtual good or a durable virtual good. Consumable goods are items that can be purchased directly by the player through the Digital Storefront and are consumed at a predetermined time or otherwise have limitations on repeated use, while durable goods are items that remain in the game for as long as the player continues to play. Our revenue from consumable virtual goods has been insignificant. Revenue from durable virtual goods are generated through the purchase of virtual coins by users through a Digital Storefront. Players convert the virtual coins within the game to durable virtual goods such as furniture, clothes, players or other items to enhance their game-playing experience.

We adopted ASC 606 and its related amendments effective January 1, 2018 using a modified retrospective method. The reported results for 2018 reflect the application of ASC 606 guidance while the reported results for 2017 were prepared under the guidance of ASC 605, Revenue Recognition (ASC 605), which is also referred to herein as "legacy GAAP" or the "previous guidance". The adoption of ASC 606 represents a change in accounting principle that will more closely align revenue recognition with the delivery of our services and will provide financial statement readers with enhanced disclosures.

In accordance with ASC 606, revenue is recognized when a customer obtains control of promised services. The amount of revenue recognized reflects the consideration we expect to receive in exchange for these services. A contract with a customer exists when (i) we enter into an enforceable contract with a customer that defines each party's rights regarding the services to be transferred and identifies the payment terms related to these services, (ii) the contract has commercial substance and, (iii) we determine that collection of substantially all consideration for services that are transferred is probable based on the customer's intent and ability to pay the promised consideration. We apply judgment in determining the customer's ability and intention to pay, which is based on a variety of factors including the customer's historical payment experience or, in the case of a new customer, published credit and financial information pertaining to the customer.

Micro-Transactions

We distribute our games for smartphones and tablets to the end customer through Digital Storefronts. Within these Digital Storefronts, users can download our free-to-play games and pay to acquire virtual currency which can be redeemed in the game for virtual goods. The initial download of the mobile game from the Digital Storefront does not create a contract under ASC 606 because of the lack of commercial substance; however, the separate election by the player to make an in-application purchase satisfies the criteria thus creating a contract under ASC 606. We have identified the following performance obligations in these contracts:

(1) Ongoing game related services such as hosting of game play, storage of customer content, when and if available content updates, maintaining the virtual currency management engine, tracking gameplay statistics, matchmaking as it relates to multiple player gameplay, etc.

(2) Obligation to the paying player to continue displaying and providing access to the purchased virtual goods within the game.

Neither of these obligations are considered distinct since the actual mobile game and the related ongoing services are both required to purchase and benefit from the related virtual goods. As such, our performance obligations represent a single combined performance obligation which is to make the game and the ongoing game related services available to the players. The transaction price, which is the amount paid for virtual currency/goods by the player, is allocated entirely to this single combined performance obligation. We recognize revenue from in-application purchases of durable virtual currency/goods over the estimated average playing period of paying users. Our revenue from consumable virtual goods has been insignificant over the previous three years. Based on our analysis, the estimated weighted average useful life of a paying user ranges from four to eight months.

Advertisements and Offers

We have relationships with certain advertising service providers for advertisements within our mobile games. Revenue from these advertising service providers is generated through impressions, clickthroughs, offers and banner ads. Offers are the type of advertisements where the players are rewarded with virtual currency for completing specified actions, such as downloading another application, watching a short video, subscribing to a service or completing a survey. We have determined the advertising buyer to be our customer and displaying the advertisements within the mobile games is identified as the single performance obligation. Revenue from advertisements and offers are recognized at the point-in-time the advertisements are displayed in the game or the offer has been completed by the user as the customer simultaneously receives and consumes the benefits provided from these services.

Other Estimates and Judgments

We compute our estimated average playing period of paying users at least twice each year. We have examined the playing patterns of paying users across a representative sample of our games across various genres.

We use the “survival analysis” model to estimate the average playing period for paying users. This model provides for a singular approach to estimating the average playing period of paying users on a title by title basis for our diverse portfolio of games. It is a statistical model that analyzes time duration until one or more events happens and is commonly used in various industries for estimating lifespans. We believe this is an appropriate model to estimate the average playing period of paying users for our titles as this model statistically estimates the average playing period of each title by analyzing the historical behavior patterns of paying users.

This model requires the stratification of user data into active and inactive monetizing users on a per title basis. Active users are those who are active in the game for the past 30 days as of the evaluation date. The remaining users are considered inactive and deemed to have churned from the game. These users are treated mathematically differently in the model than those who are still active. A distribution curve is then fit to the user data to estimate the average playing period of paying users on a per title basis.

We have selected a threshold of 120 days from the commercial launch of a title as the minimum number of days of data required for this model. This threshold was deemed to be appropriate as we tested the model using lower thresholds which resulted in inconsistencies in the estimate of the average playing period of paying users. For new titles with less than 120 days of data that share similar attributes with an existing title and/or prequel titles, the average playing period is determined based on the average playing period of that existing title or prequel title, as applicable. For all other titles with less than 120 days of data, the average playing period is determined based on the average playing period of all other remaining existing titles.

While we believe our estimates to be reasonable based on available game player information, we may revise such estimates in the future if a titles’ user characteristics change. Any adjustments arising from changes in the estimates of the average playing period for paying users would be applied to the current quarter and prospectively on the basis that such changes are caused by new information that indicates a change in user behavior patterns compared to historical titles. Any changes in our estimates of the useful life of virtual goods in a certain title may result in revenue being recognized on a basis different from prior periods’ and may cause our operating results to fluctuate.

Principal Agent Considerations

We evaluated our Digital Storefront and advertising service provider agreements under ASC 606 in order to determine if we are acting as the principal or as an agent when selling virtual items or advertisements within our games. We primarily use Digital Storefronts for distributing our smartphone games and for enabling players to purchase virtual items and advertising service providers to serve advertisements within our games. We evaluated the following factors to assess whether we control each specified good or service before that good or service is transferred to the customer:

- the party responsible for the fulfillment of the virtual items, game related services, or serving of advertisements;
- the party having the discretion to set pricing with the end-users; and
- the party having inventory risk before the specified good or service have been transferred to a customer.

Based on the evaluation of the above indicators, we determined that we have control of the services before they are transferred to the end-user. Thus, we are generally acting as a principal and are the primary obligor to end-users for games distributed through Digital Storefronts and advertisements served through our advertising service providers. Therefore, we recognize revenue related to these arrangements on a gross basis, when the necessary information about the gross amounts or platform fees charged, before any adjustments, are made available by the Digital Storefronts and advertising service providers. In situations where the price paid by the end-user of the advertising service provider is not known, we account for these transactions on a net basis.

Deferred Platform Commissions and Royalties

Digital Storefronts retain platform commissions and fees on each purchase made by the paying players through the Digital Storefront. We are also obligated to pay ongoing licensing fees in the form of royalties related to the games developed based on or significantly incorporating licensed brands, properties or other content, and our plans to incorporate additional licensed content in some of its own originally branded games. As revenue from sales to paying players through Digital Storefronts are deferred, the related direct and incremental platform commissions and fees as well as third-party royalties are also deferred on the consolidated balance sheets. The deferred platform commissions and royalties are recognized in the consolidated statements of operations in “Cost of revenue” in the period in which the related sales are recognized as revenue.

Prepaid or Guaranteed Licensor Royalties

Our royalty expenses consist of fees that we pay to content owners for the use of their brands, properties and other licensed content, including trademarks and copyrights, in the development of our games. Royalty-based obligations are either paid in advance and capitalized on the balance sheet as prepaid royalties or accrued as incurred and subsequently paid. These royalty-based obligations are expensed to cost of revenue at the greater of the revenue derived from the relevant game multiplied by the applicable contractual rate or an effective royalty rate based on expected net product sales.

Our contracts with certain licensors include minimum guaranteed royalty payments, which are payable regardless of the ultimate volume of sales to end users, in accordance with ASC 440-10, *Commitments*, or ASC 440. When no significant performance remains with the licensor, we initially record each of these guarantees as an asset and as a liability at the contractual amount. We believe that the contractual amount represents the fair value of the liability. When significant performance remains with the licensor, we record royalty payments as an asset when actually paid and as a liability when incurred, rather than upon execution of the contract. The classification of minimum royalty payment obligations between long-term and short-term is determined based on the expected timing of recoupment of earned royalties calculated on projected revenue for the games that include content licensed from third parties.

Each quarter, we evaluate the realization of our prepaid and guaranteed royalties as well as any unrecognized guarantees not yet paid to determine amounts that we deem unlikely to be realized through product sales. We use estimates of undiscounted revenue and net margins to evaluate the future realization of prepaid royalties, license fees, and guarantees. This evaluation is performed at the title level and considers multiple factors, such as, the term of the agreement, forecasted demand, game life cycle status, game development plans, level of social media activity, and current

and anticipated sales levels, as well as other qualitative factors such as the success of similar games and similar genres on mobile devices published by us and our competitors and/or other game platforms (e.g., consoles and personal computers) utilizing the intellectual property. To the extent that this evaluation indicates that the remaining prepaid and guaranteed royalty payments are not recoverable, we record an impairment charge to cost of revenue in the period that impairment is indicated.

Business Combinations

We apply ASC 805, *Business Combinations*, or ASC 805, which is the accounting guidance related to business combinations. The standard requires:

- recognition of assets acquired, liabilities assumed, and contingent consideration at their fair value on the acquisition date with subsequent changes recognized in earnings;
- acquisition-related expenses and restructuring costs to be recognized separately from the business combination and expensed as incurred;
- in-process research and development to be capitalized at fair value as an indefinite-lived intangible asset until completion or abandonment; and
- that changes in accounting for deferred tax asset valuation allowances and acquired income tax uncertainties after the measurement period be recognized as a component of provision for taxes.

We account for acquisitions of entities that include inputs and processes and have the ability to create outputs as business combinations. The purchase price of the acquisition is allocated to tangible assets, liabilities, and identifiable intangible assets acquired based on their estimated fair values. The excess of the purchase price over those fair values is recorded as goodwill. Acquisition-related expenses and restructuring costs are expensed as incurred. While we use our best estimates and assumptions as a part of the purchase price allocation process to accurately value assets acquired and liabilities assumed at the business combination date, these estimates and assumptions are inherently uncertain and subject to refinement. Our key assumptions used have included projected revenue, cost of goods sold, and operating expenses for our acquired entities, the future amortization tax benefit of legacy titles, and discount rates. As a result, during the preliminary purchase price allocation period, which may be up to one year from the business combination date, we may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. After the preliminary purchase price allocation period, we record adjustments to assets acquired or liabilities assumed subsequent to the purchase price allocation period in our operating results in the period in which the adjustments were determined.

Goodwill

In accordance with ASC 350, *Intangibles – Goodwill and Other*, or ASC 350, we do not amortize goodwill or other intangible assets with indefinite lives but rather test them for impairment. We perform our annual impairment test as of September 30th each year, at the reporting unit level, which is at the company level as a whole, since we operate in a single reporting segment. We also perform an evaluation of impairment whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable.

We evaluate qualitative factors and overall financial performance to determine whether it is necessary to perform the first step of the two-step goodwill test. This step is referred to as "Step 0." Step 0 involves, among other qualitative factors, weighing the relative impact of factors that are specific to the reporting unit as well as industry and macroeconomic factors. After assessing those various factors, if it is determined that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, then the entity will need to proceed to the first step of the two-step goodwill impairment test. ASC 350 requires a multiple-step approach to testing goodwill for impairment for each reporting unit annually, or whenever events or changes in circumstances indicate the fair value of a reporting unit is below its carrying amount. The first step measures for impairment by applying the fair value-based tests at the reporting unit level. The second step (if necessary) measures the amount of impairment by applying the fair value-based tests to individual assets and liabilities within each reporting unit. The fair value of the reporting units is estimated using a combination of the market approach, which utilizes comparable companies' data, and/or the income approach, which uses discounted cash flows.

During the third quarters of fiscal 2018 and 2017 we performed a "Step 0" qualitative assessment for our reporting unit. Based on the assessment, we concluded that it was more likely than not that the fair value of the reporting unit was greater than its carrying amount, and as a result, did not proceed to further impairment testing. Accordingly, we did not recognize an impairment of goodwill during the years ended December 31, 2018 and December 31, 2017.

During the three months ended December 31, 2017, we recorded a prepaid royalty impairment charge of $26.1 million. However, our market capitalization remained well above our carrying value during that period. Based on the results of the interim goodwill impairment test, as of December 31, 2017, we concluded that goodwill was not impaired.

We performed our annual goodwill impairment assessment as of September 30, 2016 and determined a Step 1 analysis was necessary due to a significant decline in our market capitalization and the significant impairment of prepaid royalties recorded during the three months ended September 30, 2016. Based on the results of the Step 1 analysis, we concluded that the fair value of the reporting unit was greater than the carrying value of the reporting unit based on a methodology that utilized both an income approach and a market approach. The income approach was based on projected future (debt-free) cash flows that were discounted to present value. For the market approach, we used both the guideline company and similar transaction methods. The guideline company method analyzed market multiples of bookings for a group of comparable public companies. Under the similar transactions method, valuation multiples were calculated utilizing actual transaction prices and revenue/EBITDA data from target companies deemed similar to us. The revenue and profitability forecasts used in valuation considered recent performance and trends, strategic initiatives and relevant industry trends. Assumptions used in the valuation were similar to those that would be used by market participants performing independent valuations of similar businesses.

Key assumptions used in the quantitative analysis included:

- 4% long-term revenue growth rate and the Gordon Growth model to calculate the terminal value;
- A gradual return to historical profitability rates over the remaining forecast period;
- Royalty rates based on active license agreements of the brand; and
- A market-based discount rate of 12% which takes into consideration the characteristics of relevant peer companies, market observable data, and company-specific risk factors.

Any material impairment of prepaid royalty and license fee assets in the future periods may require us to perform a goodwill impairment assessment. Such assessment could result in impairments to our goodwill, which could adversely impact our results of operations.

Stock-Based Compensation

We apply the fair value provisions of ASC 718, Compensation-Stock Compensation ("ASC 718"). ASC 718 requires the recognition of compensation expense, using a fair-value based method, for costs related to all share-based payments including stock options, restricted stock units ("RSUs"), performance-based stock units ("PSUs"), and performance-based stock options ("PSOs"). The number of PSUs and PSOs earned and eligible to vest will be determined based on achievement of specified financial performance measures. ASC 718 requires companies to estimate the fair value of stock-option awards on the grant date using an option pricing model. The fair value of stock options and PSOs and stock purchase rights granted pursuant to our equity incentive plans and 2007 Employee Stock Purchase Plan ("ESPP"), respectively, is determined using the Black-Scholes valuation model. The determination of fair value is affected by the stock price, as well as assumptions regarding subjective variables such as expected employee exercise behavior and expected stock price volatility over the expected term of the award. Generally, these assumptions are based on historical information and judgment is required to determine if historical trends may be indicators of future outcomes.

Effective January 1, 2017 we no longer estimate forfeitures but account for them as and when they occur. Changes to the assumptions used in the Black-Scholes option valuation calculation, as well as future equity granted or assumed through acquisitions could significantly impact the compensation expense we recognize. The cost of RSUs and PSUs is

determined using the fair value of the common stock based on the quoted closing price of our common stock on the date of grant. Compensation cost for stock options and RSUs is amortized ratably over the requisite service period. For performance-based awards that have multiple vesting dates, the compensation cost is recognized ratably over the requisite service period for each tranche, whereby each vesting tranche is treated as a separate award for determining the requisite service period. The compensation cost for performance-based awards may be adjusted over the vesting period based on interim estimates of performance against the pre-set financial performance measures.

Results of Operations

The following sections discuss and analyze the changes in the significant line items in our statements of operations for the comparison periods identified.

Comparison of the Years Ended December 31, 2018 and 2017

Revenue

	Year Ended December 31,	
	2018	2017
Revenue by Type	(In thousands)	
Micro-Transactions	$ 316,157	$ 244,314
Advertisements and Offers	50,121	41,154
Other	283	1,359
Total revenue	$ 366,561	$ 286,827

Our revenue increased $79.7 million, or 27.8%, from $286.8 million for the year ended December 31, 2017 to $366.6 million for the year ended December 31, 2018, which was primarily related to a $71.8 million increase in our revenue from micro-transactions (in-app purchases) and a $9.0 million increase in our revenues from advertisements and offers. The increase in revenue was primarily related to *Design Home, Covet Fashion,* the *Tap Sports Baseball* franchise, and *Kim Kardashian: Hollywood*. Revenue from these titles increased by $122.1 million during the year ended December 31, 2018 compared to the year ended December 31, 2017. These increases were partially offset by a $35.5 million aggregate decline in revenue from catalog titles such as *Restaurant Dash with Gordon Ramsay, Deer Hunter 2018 (originally launched as Deer Hunter 2016), Deer Hunter Classic, Cooking Dash 2016, Kendall & Kylie, Contract Killer Sniper and Racing Rivals*.

In 2018, *Design Home*, the *Tap Sports Baseball* franchise, and *Covet Fashion* were our top three revenue-generating games and comprised 39.7%, 18.9% and 13.4%, respectively, of our revenue for the period. In 2017, *Design Home,* the *Tap Sports Baseball* franchise and *Covet Fashion* were our top three revenue-generating games and comprised 24.9%, 14.7% and 12.4%, respectively, of our revenue for the period. No other game generated more than 10% of revenue during the period.

International revenue (defined as revenue generated from distributors and advertising service providers whose principal operations are located outside the United States or, in the case of the Digital Storefronts, the revenue generated from end-user purchases made outside of the United States) increased by $15.9 million, from $70.4 million in the year ended December 31, 2017 to $86.3 million in the year ended December 31, 2018. This was primarily related to an $8.4 million increase in our EMEA revenue, a $5.9 million increase in our revenue from Americas, excluding the United States, and a $1.6 million increase in our APAC revenue. These increases were primarily related to increased revenue from our growth titles.

Cost of Revenue

	Year Ended December 31,	
	2018	2017
	(In thousands)	
Cost of revenue:		
Platform commissions, royalties and other	$ 128,445	$ 103,499
Impairment of prepaid royalties and minimum guarantees	711	27,323
Impairment and amortization of intangible assets	9,119	10,331
Total cost of revenue	$ 138,275	$ 141,153
Revenue	$ 366,561	$ 286,827
Gross margin	62.3 %	50.8 %

Our cost of revenue decreased by $2.9 million, or 2.0%, from $141.2 million in the year ended December 31, 2017 to $138.3 million in the year ended December 31, 2018. This decrease was primarily due to a $26.6 million decrease in impairment charges related to certain of our celebrity licensors and other prepaid royalties, a $1.2 million decrease in impairment and amortization of intangible assets and a $1.0 million decrease in hosting costs. These decreases were partially offset by a $21.6 million increase in platform commission fees due to a higher volume of revenue transactions through the Digital Storefronts and a $4.1 million increase in royalties associated with an increase in royalty-burdened revenue.

The royalties we paid to licensors increased by $4.1 million, or 19.3%, from $21.3 million in the year ended December 31, 2017 to $25.4 million in the year ended December 31, 2018. The increase was due to the growth in revenue from royalty burdened titles. However, the rate of increase of our royalty payments was lower than the increase in our revenue of 27.8% from $286.8 million in the year ended December 31, 2017 to $366.6 million in the year ended December 31, 2018. This was due to a larger percentage of our revenue being attributable to titles, such as *Design Home* and *Covet Fashion*, that are not royalty burdened.

	Year Ended December 31,	
	2018	2017
	(In thousands)	
Research and development expenses	$ 94,934	$ 92,420
Percentage of revenue	25.9 %	32.2 %

Our research and development expenses increased $2.5 million, or 2.7%, from $92.4 million in the year ended December 31, 2017 to $94.9 million in the year ended December 31, 2018. This was primarily attributable to an increase in stock compensation expense of $6.3 million, an increase of $2.1 million in allocated charges for equipment, facilities and depreciation, an increase of $933,000 in tax expense due to a tax credit we received related to research and development activities for one of our foreign subsidiaries in the year ended December 31, 2017 and an increase of $662,000 in professional fees. The increase in stock based compensation was primarily related to performance-based equity awards granted to our executives, creative leaders and certain employees, and acceleration of equity awards in connection with the transition services provided by certain former employees of our Moscow studio that we divested in December 2017. These increases were partially offset by a $4.8 million decrease in payroll related costs and a $2.7 million decrease in outside services mainly due to lower external development costs and server expenses. The decrease in payroll related costs was mainly due to performance-based equity awards issued to executives and creative leaders in lieu of cash bonuses, divestiture of our Moscow studio, and higher severance and bonus costs incurred during the year ended December 31, 2017 in relation to our acquisition of Crowdstar. As a percentage of revenue, research and development expenses decreased from 32.2% in the year ended December 31, 2017 to 25.9% in the year ended December 31, 2018. We expect our research and development expenditures to increase in 2019 primarily due to an increase in headcount.

	Year Ended December 31,	
	2018	2017
	(In thousands)	
Sales and marketing expenses	$ 113,860	$ 104,356
Percentage of revenue	31.1 %	36.4 %

Our sales and marketing expenses increased $9.5 million, or 9.1%, from $104.4 million in the year ended December 31, 2017 to $113.9 million in the year ended December 31, 2018. This was primarily attributable to an increase of $7.0 million in user acquisition and other marketing expenditures on *Design Home*, *Covet Fashion*, *MLB Tap Sports Baseball 2018* and *Kim Kardashian: Hollywood*, partially offset by lower user acquisition expenditures on our other titles, an increase in stock compensation expense of $1.5 million primarily related to performance-based equity awards granted to our executives and certain employees, and a $1.5 million increase in allocated charges for equipment, facilities and depreciation. These increases were partially offset by a $644,000 decrease in payroll related costs mainly related to performance-based equity awards issued to executives in lieu of cash bonuses, and higher bonus costs incurred during the year ended December 31, 2017 in relation to our acquisition of Crowdstar. As a percentage of revenue, sales and marketing expenses decreased from 36.4% in the year ended December 31, 2017 to 31.1% in the year ended December 31, 2018. We expect our sales and marketing expenses to increase in 2019 primarily due to higher user acquisition expenditures, including related to the launch of *WWE Universe*, *Diner DASH Adventures* and *Disney Sorcerer's Arena* during 2019.

General and Administrative Expenses

	Year Ended December 31,	
	2018	2017
	(In thousands)	
General and administrative expenses	$ 31,667	$ 34,425
Percentage of revenue	8.6 %	12.0 %

Our general and administrative expenses decreased $2.8 million, or 8.0%, from $34.4 million in the year ended December 31, 2017 to $31.7 million in the year ended December 31, 2018. This was primarily attributable to a $2.6 million decrease in payroll related costs, a $1.7 million decrease in allocated charges for equipment, facilities and depreciation and a $613,000 decrease in professional fees mainly due to lower accounting and consulting costs in the year ended December 31, 2018 partially offset by higher legal expenses incurred for the lawsuit filed against us by the former CEO of Crowdstar in connection with our acquisition of Crowdstar. The decrease in payroll related costs was mainly due to performance-based awards issued to executives in lieu of cash bonuses, turnover of some senior level employees during the year ended December 31, 2018 and higher bonus and severance costs incurred during the year ended December 31, 2017 in relation to our acquisition of Crowdstar. These decreases were partially offset by an increase of $1.7 million in stock-based compensation expense primarily related to performance-based equity awards granted to our executives. As a percentage of revenue, general and administrative expenses decreased from 12.0% in the year ended December 31, 2017 to 8.6% in the year ended December 31, 2018. We expect our general and administrative expenses to increase slightly in 2019 as compared to 2018.

Restructuring Charges

During the year ended December 31, 2018, we recorded $240,000 of restructuring charges related to certain employee termination costs and lease termination costs in our Long Beach, California office. During the year ended December 31, 2017, we recorded $6.0 million of restructuring charges related to employee termination and lease termination costs in our Bellevue, Washington, Long Beach, California, San Francisco, California, Portland, Oregon, and Beijing, China, offices.

Interest and Other Expense, Net

Interest and other expense, net during the year ended December 31, 2018 was $235,000, which primarily consisted of an expense of $581,000 of currency losses for the revaluation of certain account balances including accounts receivable

and an expense of $160,000 related to amortization of transition service assets in connection with transitioning of certain legacy titles from our Moscow studio to our Hyderabad studio. These charges were offset by income of $505,000 primarily attributable to interest from our money market investment accounts. Interest and other expense, net during the year ended December 31, 2017 was $6.9 million, and was primarily attributable to a $6.5 million loss related to the sale of our Moscow game development studio.

Income Tax Benefit/(Provision)

Our income tax benefit changed from $826,000 in 2017 to an income tax expense of $549,000 in 2018. The income tax expense in 2018 was mainly due to changes in pre-tax income in the United States and certain foreign entities. The provision for income taxes differs from the amount computed by applying the statutory U.S. federal rate principally due to the effect of our non-U.S. operations, non-deductible stock-based compensation expense, and change in foreign withholding taxes.

Our effective income tax rates for future periods will depend on a variety of factors, including changes in the deferred tax valuation allowance, as well as changes in our business such as intercompany transactions, any acquisitions, any changes in our international structure, any changes in the geographic location of our business functions or assets, changes in the geographic mix of our income, any changes in or termination of our agreements with tax authorities, changes in applicable accounting rules, applicable tax laws and regulations, rulings and interpretations thereof, developments in tax audit and other matters, and variations in our annual pre-tax income or loss. We incur certain tax expenses that do not decline proportionately with declines in our pre-tax consolidated income or loss. As a result, in absolute dollar terms, our tax expense will have a greater influence on our effective tax rate at lower levels of pre-tax income or loss than at higher levels. In addition, at lower levels of pre-tax income or loss, our effective tax rate will be more volatile.

Comparison of the Years Ended December 31, 2017 and 2016

Revenue

	Year Ended December 31,	
	2017	2016
Revenue by Type	(In thousands)	
Micro-Transactions	$ 244,314	$ 164,569
Advertisements and Offers	41,154	33,738
Other	1,359	2,274
Total revenue	$ 286,827	$ 200,581

Our revenue increased $86.2 million, or 43.0%, from $200.6 million for the year ended December 31, 2016 to $286.8 million for the year ended December 31, 2017, which was primarily related to a $79.7 million increase in our revenue from micro-transactions (in-app purchases) and a $7.4 million increase from advertisements and offers. These increases in revenues were primarily related to new title launches such as the releases of *Design Home* in November 2016, *MLB Tap Sports Baseball 2017* in March 2017 and *Restaurant Dash with Gordon Ramsay* in June 2016, as well as the addition of *Covet Fashion* through our acquisition of Crowdstar in the fourth quarter of 2016. Revenues from our Crowdstar titles, *Design Home* and *Covet Fashion*, increased by $106.6 million during the year ended December 31, 2017 compared to the prior year given that we both acquired Crowdstar and initially launched *Design Home* in November 2016. These increases were partially offset by a $49.6 million aggregate decline in revenue from *Tap Sports Baseball 2016, Kendall and Kylie*, *Racing Rivals, Kim Kardashian: Hollywood,* and *Cooking Dash.*

In 2017, *Design Home, MLB Tap Sports Baseball* franchise and *Covet Fashion* were our top three revenue-generating games and comprised 24.9%, 14.7% and 12.4%, respectively, of our revenue for the period. In 2016, *Kim Kardashian: Hollywood, Cooking Dash, Tap Sports Baseball* franchise and *Racing Rivals* were our top four revenue-generating games and comprised 17.8% , 15.7%, 13.1% and 11.7%, respectively, of revenue for the year. No other game generated more than 10% of revenue during either year.

International revenue increased by $18.8 million, from $51.6 million in the year ended December 31, 2016 to $70.4 million in the year ended December 31, 2017. This was primarily related to an $8.9 million increase in our EMEA revenue, a $6.8 million increase in our revenue from Americas, excluding the United States, and a $3.1 million increase in our APAC revenue. These increases were primarily related to increased revenue from new title launches.

Cost of Revenue

	Year Ended December 31,	
	2017	2016
	(In thousands)	
Cost of revenue:		
Platform commissions, royalties and other	$ 103,499	$ 75,239
Impairment of prepaid royalties and minimum guarantees	27,323	30,107
Impairment and amortization of intangible assets	10,331	14,792
Total cost of revenue	$ 141,153	$ 120,138
Revenue	$ 286,827	$ 200,581
Gross margin	50.8 %	40.1 %

Our cost of revenue increased by $21.0 million, or 17.5%, from $120.1 million in the year ended December 31, 2016 to $141.2 million in the year ended December 31, 2017. This increase was primarily due to a $24.3 million increase in platform commission fees due to a higher volume of revenue transactions through the Digital Storefronts and a $2.5 million increase in royalties associated with an increase in royalty-burdened revenue. This increase was partially offset by a $4.5 million decrease in amortization of intangible assets and a $2.8 million decrease in impairment charges related to certain of our celebrity licensors and other prepaid royalties during 2017.

The royalties we paid to licensors increased by $2.5 million, or 13.3%, from $18.8 million in the year ended December 31, 2016 to $21.3 million in the year ended December 31, 2017. The rate of increase of our royalty payments was lower than the increase in our revenue of 43.0% from $200.5 million in December 31, 2016 to $286.8 million in December 31, 2017. This was mainly due to the fact that revenue attributable to games based upon original intellectual property increased as a percentage of revenue from 39.7% in the year ended December 31, 2016 to 59.1% in the year ended December 31, 2017. This increase was primarily due to the release of original intellectual property *Design Home* in November 2016 and the addition of *Covet Fashion* through our acquisition of Crowdstar. Also, the average royalty rate that we paid on games based on licensed intellectual property, excluding royalty impairments, decreased from 21.9% in the year ended December 31, 2016 to 18.2% in the year ended December 31, 2017. Overall royalties, including impairment of prepaid royalties and guarantees, as a percentage of total revenue decreased from 25.0% in the year ended December 31, 2016 to 17.0% in the year ended December 31, 2017 due to lower royalty impairments in the year ended December 31, 2017 as well as a larger percentage of our revenue being attributable to titles that are not royalty burdened.

Research and Development Expenses

	Year Ended December 31,	
	2017	2016
	(In thousands)	
Research and development expenses	$ 92,420	$ 81,879
Percentage of revenue	32.2 %	40.8 %

Our research and development expenses increased $10.5 million or 12.9%, from $81.9 million in the year ended December 31, 2016 to $92.4 million in the year ended December 31, 2017. The increase in research and development costs was primarily due to a $7.4 million increase in payroll and other compensation costs mainly related to our acquisition of Crowdstar, partially offset by reduction in force measures implemented during the year ended December 31, 2017, and a $3.4 million increase in outside services primarily related to external development. As a percentage of revenue, research and development expenses decreased from 40.8% in the year ended December 31, 2016 to 32.2% in the year ended December 31, 2017.

Sales and Marketing Expenses

	Year Ended December 31,	
	2017	2016
	(In thousands)	
Sales and marketing expenses	$ 104,356	$ 48,050
Percentage of revenue	36.4 %	24.0 %

Our sales and marketing expenses increased $56.3 million, or 117.2%, from $48.1 million in the year ended December 31, 2016 to $104.4 million in the year ended December 31, 2017. This was primarily attributable to an increase of $51.2 million in user acquisition expenditures primarily related to *Design Home*, a $3.9 million increase in payroll and other compensation costs primarily related to our acquisition of Crowdstar and an $800,000 increase in allocated charges for equipment, facilities, and depreciation. As a percentage of revenue, sales and marketing expenses increased from 24.0% in the year ended December 31, 2016 to 36.4% in the year ended December 31, 2017.

General and Administrative Expenses

	Year Ended December 31,	
	2017	2016
	(In thousands)	
General and administrative expenses	$ 34,425	$ 30,225
Percentage of revenue	12.0 %	15.1 %

Our general and administrative expenses increased $4.2 million, or 13.9%, from $30.2 million in the year ended December 31, 2016 to $34.4 million in the year ended December 31, 2017. The increase in general and administrative expenses was primarily due to a $2.8 million increase in payroll and other compensation costs primarily related to our acquisition of Crowdstar and increase in variable compensation and a $1.6 million increase in professional services fees. As a percentage of revenue, general and administrative expenses decreased from 15.1% in the year ended December 31, 2016 to 12.0% in the year ended December 31, 2017.

Restructuring Charges

We incurred a restructuring charge of $6.0 million in the year ended December 31, 2017 related to employee and lease termination costs in our Bellevue, Washington; Long Beach, California; San Francisco, California; Portland, Oregon; and Beijing, China offices. We incurred a restructuring charge of $2.3 million in the year ended December 31, 2016, primarily due to costs associated with employee terminations in our Long Beach, San Francisco, Bellevue, and Beijing, China offices, and lease termination costs for our Bellevue and Beijing, China offices, in the year ended December 31, 2016.

Interest and Other Expense, Net

Interest and other expense, net during the year ended December 31, 2017 was $6.9 million, and was primarily attributable to a $6.5 million loss related to sale of our Moscow game development studio. Interest and other expense, net during the year ended December 31, 2016 was $5.8 million, and was primarily attributable to a $2.4 million impairment charge related to our call option for Plain Vanilla, which impairment charge was due to a decline in Plain Vanilla's forecasted revenue and future cash flow outlook, a $1.9 million charge related to the change in fair value of our investment in promissory notes issued to us by Plain Vanilla, and an $838,000 charge related to the write-off of a cumulative translation adjustment upon liquidation of one of our United Kingdom subsidiaries.

Income Tax Benefit/(Provision)

Our income tax benefit increased from $301,000 in 2016 to $826,000 in 2017. The income tax benefit in 2017 was due to the release of income tax reserves in relation to winding down a foreign subsidiary, the release of a portion of our valuation allowance of $294,000 resulting from the acquisition of Dairy Free Games Inc. in August 2017, and changes in pre-tax income in the United States and certain foreign entities. The provision for income taxes differs from the amount

computed by applying the statutory U.S. federal rate principally due to the effect of our non-U.S. operations, non-deductible stock-based compensation expense, and change in foreign withholding taxes.

Liquidity and Capital Resources

	Year Ended December 31,		
	2018	2017	2016
		(In thousands)	
Consolidated Statement of Cash Flows Data:			
Cash flows generated from / (used in) operating activities	32,286	(28,236)	(19,784)
Cash flows used in investing activities	(636)	(14,413)	(51,730)
Cash flows generated from / (used in) financing activities	2,181	3,763	(6,785)

Since our inception, we have generally incurred recurring losses and negative annual cash flows from operating activities. As of December 31, 2018, we had an accumulated deficit of $440.5 million.

Operating Activities

In 2018, net cash generated from operating activities was $32.3 million, which was primarily due to an increase in deferred revenue of $17.9 million mainly attributable to an increase in revenue from titles with longer useful lives, a $7.0 million decrease in accounts receivable due to the timing of payments from our customers, a $1.3 million decrease in other prepaid expenses and other assets and adjustments for non-cash items including stock based compensation expense of $24.6 million, amortization and impairment of intangible assets of $9.1 million, depreciation of $3.9 million and warrant expense of $1.0 million. These changes were partially offset by $13.2 million of net loss, a $10.2 million decrease in accounts payable and other accrued liabilities mainly due to the timing of payments to our vendors, a $5.4 million increase in deferred platform commission fees attributable to higher bookings, a $2.7 million decrease in accrued compensation, a $1.8 million increase in prepaid and deferred royalties and a $947,000 decrease in accrued royalties.

In 2017, net cash used in operating activities was $28.2 million, which was primarily due to a $97.6 million net loss, an $18.9 million increase in prepaid royalties, an $8.9 million increase in deferred platform commission fees, a $4.2 million increase in prepaid expenses and other assets, a $1.1 million increase in deferred royalties, and a $13.1 million increase in accounts receivable due to the timing of payments from our customers. These amounts were partially offset by a $32.5 million increase in deferred revenue mainly attributable to an increase in revenue from titles with longer useful lives, an increase in accrued compensation of $8.1 million, a $4.7 million increase in accounts payable and other accrued liabilities, a $4.1 million increase in accrued royalties, a $4.0 million increase in non-current liabilities, and a $488,000 increase in accrued restructuring. Adjustments for non-cash items included a $27.3 million impairment of prepaid royalties and minimum guarantees, stock-based compensation expense of $15.1 million, $10.3 million of amortization of intangible assets, net loss from the sale of a foreign subsidiary of $6.5 million, and depreciation expense of $3.2 million.

In 2016, net cash used in operating activities was $19.8 million, which was primarily due to an $87.4 million net loss, a $16.7 million increase in prepaid royalties and a $3.9 million increase in deferred platform commission fees. These amounts were partially offset by a $12.3 million increase in deferred revenue, an increase in accrued compensation of $4.6 million, a $3.2 million increase in accounts payable and other accrued liabilities, and a $2.2 million decrease in other prepaids and other assets. Adjustments for non-cash items included a $30.1 million impairment of prepaid royalties and minimum guarantees, a $14.8 million impairment and amortization of intangible assets, stock-based compensation expense of $13.3 million, impairment of the Plain Vanilla call option of $2.4 million, a $1.9 million decrease in fair value of the Plain Vanilla promissory notes, and depreciation expense of $2.9 million.

Investing Activities

Our primary investing activities have consisted of acquisitions of mobile gaming companies and purchases of property and equipment and leasehold improvements for our offices.

In 2018, we used $636,000 of cash for investing activities primarily related to property and equipment purchases of $3.4 million partially offset by proceeds of $2.7 million from the divestiture of our Moscow studio.

In 2017, we used $14.4 million of cash for investing activities primarily related to property and equipment purchases of $11.3 million which mainly comprised of leasehold improvements for our new San Francisco headquarters, $1.7 million net cash paid for acquisitions, and other investing activities of $1.4 million.

In 2016, we used $51.8 million of cash for investing activities primarily related to net cash paid of $36.7 million for the acquisition of 80.6% of the outstanding voting interest in Crowdstar, investments in Plain Vanilla and Dairy Free of $9.5 million in the aggregate, purchases of intangible assets of $2.5 million, and property and equipment purchases of $3.1 million.

Financing Activities

In 2018, net cash generated from financing activities was $2.2 million which was primarily due to $9.3 million in proceeds received from option exercises and purchases under our employee stock purchase plan. These cash inflows were partially offset by $7.1 million of taxes paid related to net share settlement of RSUs.

In 2017, net cash generated from financing activities was $3.8 million, which was due primarily to $4.1 million in proceeds received from option exercises and purchases under our employee stock purchase plan and $3.0 million of proceeds received from the exercise of warrants. These inflows were partially offset by $3.4 million of taxes paid related to net share settlement of RSUs.

In 2016, net cash used in financing activities was $6.8 million due primarily to $4.7 million paid to acquire the remaining outstanding interest in Crowdstar, $2.4 million of taxes paid related to the net share settlement of RSUs, and $1.9 million related to payments on an acquired line of credit and term loan from the Crowdstar acquisition. These outflows were partially offset by $2.2 million in proceeds we received from option exercises and purchases under our employee stock purchase plan.

Sufficiency of Current Cash and Cash Equivalents

Our cash and cash equivalents were $97.8 million as of December 31, 2018. Cash and cash equivalents held outside of the U.S. in various foreign subsidiaries were $1.7 million as of December 31, 2018, most of which were held by our Canadian and Indian subsidiaries. Under current tax laws and regulations, if cash and cash equivalents held outside the U.S. are distributed to the U.S. in the form of dividends or otherwise, we may be subject to additional U.S. income taxes and foreign withholding taxes. We have not provided deferred taxes on unremitted earnings attributable to foreign subsidiaries, excluding China, because their earnings are intended to be reinvested indefinitely. However, if any such balances were to be repatriated, additional U.S. federal income tax payments could result. Computation of the potential deferred tax liabilities associated with unremitted earnings deemed to be indefinitely reinvested is not practicable.

We expect to fund our operations, grow our business and satisfy our contractual obligations during the next 12 months primarily through our cash and cash equivalents and cash generated by our operations. We believe our cash and cash equivalents and cash generated by our operations will be sufficient to meet our anticipated cash needs for at least the next 12 months from the date of this report; however, our cash requirements for the next 12 months may be greater than we anticipate due to, among other reasons, revenue that is lower than we currently anticipate, greater than expected operating expenses, particularly with respect to our research and development and sales and marketing initiatives, use of cash to pay minimum guaranteed royalties, use of cash to fund our foreign operations and the impact of foreign currency rate changes, unanticipated limitations or timing restrictions on our ability to access funds that are held in our non-U.S. subsidiaries or any investments or acquisitions that we may decide to pursue. We expect to continue to use cash to fund minimum guaranteed royalty payments during 2019 as milestone payments become due on games we publish and/or develop that incorporate licensed property, as well as to fund the purchase price of any acquisitions. If the games we develop based on such licensing arrangements fail to perform in accordance with our expectations, we may not fully recoup these minimum guaranteed royalty payments.

If our cash sources are insufficient to satisfy our cash requirements, we may seek to raise additional capital. However, we may be unable to do so on terms that are favorable to us or at all.

Contractual Obligations

The following table is a summary of our contractual obligations as of December 31, 2018:

	Payments Due by Period from December 31, 2018				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
			(In thousands)		
Operating lease obligations	$ 44,845	$ 5,486	$ 9,828	$ 9,412	$ 20,119
Guaranteed royalties (1)	7,304	5,004	2,300	—	—
Total contractual obligations (2)	$ 52,149	$ 10,490	$ 12,128	$ 9,412	$ 20,119

(1) We have entered into license and publishing agreements with various celebrities and other owners of brands, properties and other content to develop and publish games and other software applications for mobile devices. These agreements typically require us to make non-refundable, but recoupable payments of minimum guaranteed royalties or license fees as up-front payments or over the term of the agreement.

(2) We have omitted uncertain income tax liabilities from this table due to the inherent uncertainty regarding the timing of potential issue resolution. Specifically, either the underlying positions have not been fully developed enough under audit to quantify at this time or the years relating to the issues for certain jurisdictions are not currently under audit. At December 31, 2018, we had $334,000 of gross unrecognized tax benefits, included in "Other long-term Liabilities" in the consolidated balance sheet.

Off-Balance Sheet Arrangements

At December 31, 2018, we did not have any significant off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of Regulation S-K, that are not already disclosed in this report.

Inflation

We do not believe that inflation has had a material effect on our business, financial condition or results of operations. If our costs were to become subject to significant inflationary pressures, we might not be able to fully offset these higher costs through price increases. Our inability or failure to do so could harm our business, operating results and financial condition.

Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (FASB) issued ASU 2014-09, Revenue from Contracts with Customers (Topic 606). We adopted ASU 2014-09 and its related amendments effective on January 1, 2018 using the modified retrospective method. See Note 5 "Revenue from Contracts with Customers" for the required disclosures related to the impact of adopting this standard and a discussion of our updated policies related to revenue recognition.

In May 2017, the FASB issued ASU 2017-09, Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting, which clarifies when to account for a change to the terms or conditions of a share-based payment award as a modification. Under the new guidance, modification accounting is required only if the fair value, the vesting conditions, or the classification of the award (as equity or liability) changes as a result of the change in terms or conditions. It is effective prospectively for the annual period ending December 31, 2018 and interim periods within that annual period. We adopted this guidance in the first quarter of 2018. The adoption of this standard did not have a material impact on our consolidated financial statements.

In November 2016, the FASB issued ASU No. 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash, which requires amounts generally described as restricted cash and restricted cash equivalents be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown in the statement of cash flows. We adopted this guidance in the first quarter of 2018. The adoption of this standard did not have a material

impact on our consolidated financial statements. Please see *Reclassifications* under Note 1 of Notes to Consolidated Financial Statements.

In October 2016, the FASB issued ASU No. 2016-16, Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory. ASU No. 2016-16 requires that an entity recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017. We adopted this guidance in the first quarter of 2018. The adoption of this standard did not have a material impact on our consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments. ASU No. 2016-15 addresses eight specific cash flow issues with the objective of reducing existing diversity in practice. The guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017. We adopted this guidance in the first quarter of 2018. The adoption of this standard did not have a material impact on our consolidated financial statements.

In January 2016, the FASB issued ASU No. 2016-01, Financial Instruments - Overall - Recognition and Measurement of Financial Assets and Financial Liabilities. The guidance requires entities to measure equity investments that do not result in consolidation and are not accounted for under the equity method at fair value and recognize any changes in fair value in net income unless the investments qualify for a practicability exception. The updated standard is effective for interim and annual reporting periods beginning after December 15, 2017. We adopted this guidance in the first quarter of 2018. The adoption of this standard did not have a material impact on our consolidated financial statements.

In March 2018, the FASB issued ASU 2018-05, *Income Taxes (Topic 740), Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118*. The ASU adds various SEC paragraphs pursuant to the issuance of the December 2017 *SEC Staff Accounting Bulletin No. 118, Income Tax Accounting implications of the Tax Cuts and Jobs Act* ("SAB 118"), which was effective immediately. The SEC issued SAB 118 to address concerns about reporting entities' ability to timely comply with the accounting requirements to recognize all of the effects of the Tax Cuts and Jobs Act in the period of enactment. The guidance specifies that, for income tax effects of the Tax Cuts and Jobs Act that can be reasonably estimated but for which the accounting and measurement period is not yet complete, entities should report provisional amounts in the reporting period that includes the enactment date and those provisional amounts can be adjusted for a measurement analysis not to exceed one year from the enactment date. We have accounted for the tax effects of the Tax Cuts and Jobs Act under the guidance of SAB 118, on a provisional basis, in our consolidated financial statements for the year ended December 31, 2017. Immaterial adjustments made to the provisional amounts allowed under SAB 118 were identified and recorded as discrete adjustments during the year ended December 31, 2018. Our accounting was completed in the fourth quarter of 2018.

Recently Issued Accounting Pronouncements Not Yet Adopted

In January 2017, the FASB issued ASU No. 2017-04, Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment. This new accounting standard update simplifies the measurement of goodwill by eliminating the Step 2 impairment test. Step 2 measures a goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill. The new guidance requires an entity to compare the fair value of a reporting unit with its carrying amount and recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value. Additionally, an entity should consider income tax effects from any tax deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable. The new guidance becomes effective for goodwill impairment tests in fiscal years beginning after December 15, 2019, though early adoption is permitted. We are currently assessing the impact of this new guidance.

In January 2017, the FASB issued ASU No. 2017-01, Business Combinations (Topic 805), which clarifies the definition of a business to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The standard will be effective in the first quarter of fiscal 2019. Early adoption is permitted. We do not expect the adoption of this guidance to have a material impact on our consolidated financial statements.

In February 2018, the FASB issued ASU 2018-02, Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income. The standard provides financial statement preparers with an option to reclassify stranded tax effects within Accumulated Other Comprehensive Loss to retained earnings in each period in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Cuts and Jobs Act (or portion thereof) is recorded. ASU 2018-02 is effective for us beginning in fiscal 2019, including interim periods within that fiscal year. Early adoption is permitted. We do not expect the adoption of this guidance to have a material impact on our consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting. The guidance simplifies the accounting for share-based payments made to non-employees so the accounting for such payments is substantially the same as those made to employees. The guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. We do not expect the adoption of this guidance to have a material impact on our consolidated financial statements.

In July 2018, the FASB issued ASU 2018-09, Codification Improvements. This amendment makes changes to a variety of topics to clarify, correct errors in, or make minor improvements to the Accounting Standards Codification (ASC). The transition and effective date guidance is based on the facts and circumstances of each amendment. Some of the amendments do not require transition guidance and are effective upon issuance of the guidance. However, many of the amendments do have transition guidance with effective dates for annual periods beginning after December 15, 2018. We do not expect the adoption of this guidance to have a material impact on our consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement. This guidance adds, modifies and removes several disclosure requirements relative to the three levels of inputs used to measure fair value in accordance with Topic 820, Fair Value Measurement. This guidance is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted. We are currently evaluating the impact that this standard will have on our consolidated financial statements.

In August 2018, the FASB issued Accounting Standards Update (“ASU”) 2018-15, *Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*. This ASU clarifies the accounting treatment for implementation costs for cloud computing arrangements (hosting arrangements) that are service contracts. This guidance is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted. We are currently evaluating the impact that this standard will have on our consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, *Leases*. In July 2018, the FASB issued ASU 2018-11, *Leases (Topic 842): Targeted Improvements* and ASU 2018-10, *Codification Improvements to Topic 842, Leases*. ASU 2016-02 and the subsequent modifications are identified as “ASC 842”. ASC 842 requires lessees to recognize most leases as assets and liabilities on the balance sheet. Qualitative and quantitative disclosures will be enhanced to better understand the amount, timing and uncertainty of cash flows arising from leases. This guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. We adopted this new standard on January 1, 2019.

A modified retrospective transition approach requires applying the new standard to all leases existing at the date of initial application. An entity may choose to use either account for the impacts of the adoption as of (1) its effective date or (2) the beginning of the earliest comparative period presented in the financial statements as its date of initial application. If an entity chooses the second option, the transition requirements for existing leases also apply to leases entered into between the date of initial application and the effective date and will require the entity to recast its comparative period financial statements and provide the disclosures required by the new standard for the comparative periods. We expect to use the effective date as our date of initial application. Consequently, financial information will not be updated and the disclosures required under the new standard will not be provided for dates and periods before January 1, 2019.

The new standard provides a number of optional practical expedients in transition. We expect to elect the 'package of practical expedients', which permits us to not reassess under the new standard our prior conclusions about lease identification, lease classification, and initial direct costs.

We have completed the evaluation of the impact of the new standard in relation to the lease standard of all of our material lease arrangements. Based on this evaluation, we have determined that upon adoption, we will recognize Right of Use ("ROU") asset, net of deferred rent balance, ranging from $26.5 million to $30.0 million, and lease liability ranging from $32.0 million to $36.0 million, related to our office leases. The new standard will also increase the level of financial statement disclosures related to leases. We do not expect that adoption will have a material impact on our consolidated statement of operations and statement of cash flows.

The new standard also provides practical expedients for an entity's ongoing accounting. We currently expect to elect the short-term lease recognition exemption for all leases that qualify. This means, for those leases that qualify, we will not recognize ROU assets or lease liabilities, and this includes not recognizing ROU assets or lease liabilities for existing short-term leases of those assets in transition. We also currently expect to elect the practical expedient to not separate lease and non-lease components for all of our leases.

We do not anticipate that our internal control framework will materially change, but rather existing internal controls will be modified and augmented as necessary to implement the new lease standard. We are currently in the process of evaluating the required financial statement disclosures to allow users of our financial statements to understand the nature, amount, and uncertainty for existing and any new potential leases.

Item 7A. *Quantitative and Qualitative Disclosures about Market Risk*

Interest Rate and Credit Risk

Our exposure to interest rate risk relates primarily to our investment portfolio and the potential losses arising from changes in interest rates.

We are potentially exposed to the impact of changes in interest rates as they affect interest earned on our investment portfolio. As of December 31, 2018, $97.8 million of our cash and cash equivalents was held in operating bank accounts earning nominal interest. Accordingly, we do not believe that a 10% change in interest rates would have a significant impact on our interest income, operating results or liquidity related to these amounts.

The primary objectives of our investment activities are, in order of importance, to preserve principal, provide liquidity and maximize income without significantly increasing risk. We do not currently use or plan to use derivative financial instruments in our investment portfolio.

As of December 31, 2018 and December 31, 2017, our cash and cash equivalents were maintained by financial institutions in the United States, the United Kingdom, Canada, China, Hong Kong, India, and Russia, and our current deposits are likely in excess of insured limits.

Our accounts receivable primarily relate to revenue earned from Digital Storefront operators and advertising platforms. We perform ongoing credit evaluations of our customers' and the Digital Storefronts' financial condition but generally require no collateral from them. At December 31, 2018, Apple Inc., or Apple, accounted for 40.8%, Google Inc., or Google, accounted for 30.3% and Tapjoy Inc., or Tapjoy accounted for 21.1% of total accounts receivable. At December 31, 2017, Apple accounted for 58.0%, Google accounted for 17.1% of total accounts receivable. No other customer or Digital Storefront represented more than 10% of our total accounts receivable as of these dates.

Foreign Currency Exchange Risk

We transact business in 100 countries in more than 30 different currencies, and in 2018 and 2017, some of these currencies fluctuated significantly. Our operations outside of the United States are maintained in their local currency, with

the significant operating currencies consisting of the Indian Rupee and Canadian Dollar. Although recording operating expenses in the local currency of our foreign operations mitigates some of the exposure of foreign currency fluctuations, variances among the currencies of our customers and our foreign operations relative to the United States Dollar, or USD, could have and have had a material impact on our results of operations.

Our foreign currency exchange gains and losses have been generated primarily from fluctuations in the Russian Ruble versus the USD, the Euro versus the British Pound, the Indian Rupee versus the USD and the Canadian Dollar versus the USD. At month-end, non-functional currency-denominated accounts receivable and intercompany balances are marked to market and unrealized gains and losses are included in interest and other expense, net. Translation adjustments arising from the use of differing exchange rates are included in accumulated other comprehensive income in stockholders' equity. We have in the past experienced, and in the future expect to experience, foreign currency exchange gains and losses on our accounts receivable and intercompany receivables and payables. Foreign currency exchange gains and losses could have a material adverse effect on our business, operating results and financial condition.

To date, we have not engaged in exchange rate hedging activities, and we do not expect to do so in the foreseeable future.

Item 8. ***Financial Statements and Supplementary Data***

GLU MOBILE INC.
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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Glu Mobile Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Glu Mobile Inc. and its subsidiaries as of December 31, 2018 and 2017, and the related consolidated statements of operations, of comprehensive loss, of stockholders' equity and of cash flows for each of the three years in the period ended December 31, 2018, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for revenue in 2018.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP
San Francisco, California
February 28, 2019

We have served as the Company's auditor since 2003, which includes periods before the Company became subject to SEC reporting requirements.

GLU MOBILE INC.

CONSOLIDATED BALANCE SHEETS
(in thousands, except per share data)

	December 31, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 97,834	$ 63,764
Accounts receivable, net	27,325	34,673
Prepaid royalties	8,520	2,994
Deferred royalties	4,410	4,364
Deferred platform commission fees	25,862	20,446
Restricted cash	110	602
Prepaid expenses and other assets	6,940	10,733
Total current assets	171,001	137,576
Property and equipment, net	13,888	14,630
Long-term prepaid royalties	1,667	9,302
Other long-term assets	2,505	3,299
Intangible assets, net	9,145	18,264
Goodwill	116,227	116,227
Total assets	$ 314,433	$ 299,298
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 10,480	$ 21,203
Accrued liabilities	1,384	1,154
Accrued compensation	17,896	20,603
Accrued royalties	14,139	11,782
Accrued restructuring	294	759
Deferred revenue	85,736	77,403
Total current liabilities	129,929	132,904
Long-term accrued royalties	1,649	7,300
Other long-term liabilities	5,542	5,234
Total liabilities	137,120	145,438
Commitments and contingencies (Note 9)		
Stockholders' equity:		
Preferred stock, $0.0001 par value; 5,000 shares authorized at December 31, 2018 and December 31, 2017; no shares issued and outstanding at December 31, 2018 and December 31, 2017	—	—
Common stock, $0.0001 par value; 250,000 shares authorized at December 31, 2018 and December 31, 2017; 143,870 and 138,745 shares issued and outstanding at December 31, 2018 and December 31, 2017	14	14
Additional paid-in capital	617,781	589,962
Accumulated other comprehensive income/(loss)	1	(6)
Accumulated deficit	(440,483)	(436,110)
Total stockholders' equity	177,313	153,860
Total liabilities and stockholders' equity	$ 314,433	$ 299,298

The accompanying notes are an integral part of these consolidated financial statements.

GLU MOBILE INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)

	Year Ended December 31,		
	2018	2017	2016
Revenue	$ 366,561	$ 286,827	$ 200,581
Cost of revenue:			
Platform commissions, royalties and other	128,445	103,499	75,239
Impairment of prepaid royalties and minimum guarantees (including impairment of prepaid royalties and minimum guarantees paid to a related party of $0, $0, and $9,866 for the year ended December 31, 2018, December 31, 2017, and December 31, 2016, respectively)	711	27,323	30,107
Impairment and amortization of intangible assets (including impairment and amortization of intangible assets acquired from a related party of $0, $0, and $5,000 for the year ended December 31, 2018, December 31, 2017, and December 31, 2016, respectively)	9,119	10,331	14,792
Total cost of revenue	138,275	141,153	120,138
Gross profit	228,286	145,674	80,443
Operating expenses:			
Research and development	94,934	92,420	81,879
Sales and marketing	113,860	104,356	48,050
General and administrative	31,667	34,425	30,225
Restructuring charge	240	6,019	2,279
Total operating expenses	240,701	237,220	162,433
Loss from operations	(12,415)	(91,546)	(81,990)
Interest and other expense, net	(235)	(6,850)	(5,751)
Loss before income taxes	(12,650)	(98,396)	(87,741)
Income tax (provision)/benefit	(549)	826	301
Net loss	$ (13,199)	$ (97,570)	$ (87,440)
Net loss per common share - basic and diluted			
	$ (0.09)	$ (0.72)	$ (0.66)
Weighted average common shares outstanding - basic and diluted			
Basic	141,402	135,715	131,804
Diluted	141,402	135,715	131,804

The accompanying notes are an integral part of these consolidated financial statements.

GLU MOBILE INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in thousands)

	Year Ended December 31,		
	2018	2017	2016
Net loss	$ (13,199)	$ (97,570)	$ (87,440)
Other comprehensive income/(loss):			
Foreign currency translation adjustments	7	(252) (1)	331 (1)
Other comprehensive income/(loss)	7	(252)	331
Comprehensive loss	$ (13,192)	$ (97,822)	$ (87,109)

(1) Includes release of cumulative translation adjustment upon substantial liquidation / winding down of the Company's foreign subsidiaries which is recognized in interest and other expense, net in the Company's consolidated statement of operations for the years ended December 31, 2017, and December 31, 2016.

The accompanying notes are an integral part of these consolidated financial statements.

GLU MOBILE INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands)

	Common Stock		Additional Paid-In	Accumulated Other Compre-hensive Income	Accumulated	Total Stockholders' Equity
	Shares	Amount	Capital	(loss)	Deficit	Deficit
			(In thousands, except per share data)			
Balances at December 31, 2015	131,580	$ 13	$ 557,748	$ (85)	$ (251,248)	$ 306,428
Net loss	-	-	-	-	(87,440)	(87,440)
Stock-based compensation expense	-	-	13,263	-	-	13,263
Issuance of common stock upon exercise of stock options	270	-	294	-	-	294
Taxes paid related to net share settlement of equity awards	1,401	-	(2,405)	-	-	(2,405)
Issuance of common stock pursuant to Employee Stock Purchase Plan	750	-	1,878	-	-	1,878
Non-cash warrant expense	-	-	465	-	-	465
Other comprehensive income	-	-	-	331	-	331
Balances at December 31, 2016	134,001	$ 13	$ 571,243	$ 246	$ (338,688)	$ 232,814
Net loss	-	-	-	-	(97,570)	(97,570)
Stock-based compensation expense	-	-	14,845	-	-	14,845
Issuance of common stock upon exercise of stock options	1,083	-	2,564	-	-	2,564
Issuance of common stock upon exercise of warrants	1,000	-	3,000	-	-	3,000
Taxes paid related to net share settlement of equity awards	1,767	1	(3,369)	-	-	(3,368)
Issuance of common stock pursuant to Employee Stock Purchase Plan	894	-	1,567	-	-	1,567
Non-cash warrant expense	-	-	260	-	-	260
Cumulative effect adjustment from adoption of ASU 2016-09	-	-	(148)	-	148	-
Other comprehensive loss	-	-	-	(252)	-	(252)
Balances at December 31, 2017	138,745	$ 14	$ 589,962	$ (6)	$ (436,110)	$ 153,860
Net loss	-	-		-	(13,199)	(13,199)
Stock-based compensation expense	-	-	24,592	-	-	24,592
Issuance of common stock upon exercise of stock options	2,721	-	6,922	-	-	6,922
Taxes paid related to net share settlement of equity awards	1,634	-	(7,097)	-	-	(7,097)
Issuance of common stock pursuant to Employee Stock Purchase Plan	770	-	2,356	-	-	2,356
Non-cash warrant expense	-	-	1,046	-	-	1,046
Cumulative effect adjustment from adoption of ASU 2014-09	-	-	-	-	8,826	8,826
Other comprehensive income	-	-	-	7	-	7
Balances at December 31, 2018	143,870	$ 14	$ 617,781	$ 1	$ (440,483)	$ 177,313

The accompanying notes are an integral part of these consolidated financial statements.

GLU MOBILE INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,		
	2018	2017	2016
Cash flows from operating activities:			
Net loss	$ (13,199)	$ (97,570)	$ (87,440)
Adjustments to reconcile net loss to net cash (used in) / generated from operating activities:			
Depreciation	3,855	3,195	2,947
Impairment and amortization of intangible assets (including impairment and amortization of intangible assets acquired from a related party of $0, $0, and $5,000 for the year ended December 31, 2018, December 31, 2017, and December 31, 2016, respectively)	9,119	10,331	14,792
Change in fair value of investments	—	—	1,900
Other non-cash adjustments	1,095	(1,577)	879
Stock-based compensation	24,592	15,063	13,263
Non-cash warrant expense/(benefit)	1,046	631	(55)
Impairment of investments	—	—	2,600
Net loss from the sale of a foreign subsidiary	—	6,468	—
Impairment of prepaid royalties and minimum guarantees (including impairment of prepaid royalties and minimum guarantees paid to a related party of $0, $0, and $9,866 for the year ended December 31, 2018, December 31, 2017, and December 31, 2016, respectively)	711	27,323	30,107
Changes in operating assets and liabilities, net of effect of acquisitions:			
Accounts receivable	7,028	(13,061)	402
Prepaid royalties	(947)	(18,868)	(16,675)
Deferred royalties	(835)	(1,088)	(608)
Deferred platform commission fees	(5,416)	(8,876)	(3,896)
Prepaid expenses and other assets	1,345	(4,151)	2,168
Accounts payable and other accrued liabilities	(10,244)	4,735	3,200
Accrued compensation	(2,707)	8,094	4,577
Accrued royalties and license fees	(947)	4,125	55
Deferred revenue	17,947	32,539	12,251
Accrued restructuring	(465)	488	(70)
Other long-term liabilities	308	3,963	(181)
Net cash generated from / (used in) from operating activities	32,286	(28,236)	(19,784)
Cash flows from investing activities:			
Purchase of property and equipment	(3,362)	(11,344)	(3,070)
Proceeds from divestiture of Moscow studio	2,726	—	—
Net cash paid for acquisitions	—	(1,659)	(36,660)
Investments in Plain Vanilla Corp and Dairy Free Games, Inc.	—	—	(9,500)
Purchase of intangible assets (including purchase of intangible assets from a related party of $0, $0, and $2,500 for the year ended December 31, 2018, December 31, 2017, and December 31, 2016, respectively)	—	—	(2,500)
Other investing activities	—	(1,410)	—
Net cash used in investing activities	(636)	(14,413)	(51,730)
Cash flows from financing activities:			
Crowdstar payments on acquired line of credit and term loan	—	—	(1,885)
Proceeds from exercise of stock options and purchases under the ESPP	9,278	4,131	2,172
Taxes paid related to net share settlement of equity awards	(7,097)	(3,368)	(2,405)
Cash paid to acquire non-controlling interest in Crowdstar	—	—	(4,667)
Proceeds from exercise of stock warrants and issuance of common stock	—	3,000	—
Net cash generated from / (used in) from financing activities	2,181	3,763	(6,785)
Effect of exchange rate changes on cash	(253)	(162)	(327)
Net increase / (decrease) in cash and cash equivalents	33,578	(39,048)	(78,626)
Cash, cash equivalents and restricted cash at beginning of period	64,366	103,414	182,040
Cash, cash equivalents and restricted cash at end of period	$ 97,944	$ 64,366	$ 103,414
Supplemental disclosures of cash flow information			
Purchases of property and equipment included in accounts payable and accrued liabilities and other current liabilities	$ 1,101	$ 1,350	$ 11
Income taxes paid	$ 382	$ 365	$ 174

The accompanying notes are an integral part of these consolidated financial statements.

GLU MOBILE INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Dollar and share amounts in thousands, except per share data)

NOTE 1 — THE COMPANY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Company

Glu Mobile Inc. (the "Company" or "Glu") was incorporated in Nevada in May 2001 and reincorporated in the state of Delaware in March 2007. The Company develops, publishes, and markets a portfolio of games designed for users of smartphones and tablet devices who download and make purchases within its games through direct-to-consumer digital storefronts, such as the Apple App Store, Google Play Store, and others ("Digital Storefronts"). The Company creates games based on its own original brands, as well as third-party licensed brands, properties and other content.

Basis of Presentation

The Company's consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States.

Basis of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All material intercompany balances and transactions have been eliminated.

Use of Estimates

The preparation of financial statements and related disclosures in conformity with U.S. generally accepted accounting principles ("U.S. GAAP") requires the Company's management to make judgments, assumptions and estimates that affect the amounts reported in its consolidated financial statements and accompanying notes. Management bases its estimates on historical experience and on various other assumptions it believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Significant estimates and assumptions reflected in the financial statements include, but are not limited to, the estimated lives that the Company uses for revenue recognition, the allowance for doubtful accounts, useful lives of property and equipment and intangible assets, valuation and realizability of deferred tax assets and uncertain tax positions, fair value of stock awards issued, fair value of warrants issued, accounting for business combinations, evaluating goodwill, long-lived assets for impairment, realization of prepaid royalties and fair value of investments. Actual results may differ from these estimates and these differences may be material.

Reclassifications

In 2018, the Company adopted Accounting Standards Update ("ASU") 2016-18, *Restricted Cash* and ASU 2016-15, *Classification of Certain Cash Receipts and Cash Payments*. In addition, the Company condensed certain line items on the current period cash flow statement. Accordingly, the consolidated statement of cash flow for the twelve months ended December 31, 2017, and 2016, respectively, has been reclassified to conform with the current period presentation under this new guidance. The Company adopted ASU 2016-18 by removing the line item "Decrease in restricted cash" from cash flows from investing activities for the twelve months ended December 31, 2017 and 2016. This resulted in an increase in net cash used in investing activities of $710 and $186 in 2017 and 2016, respectively, reflecting the reclassification of the change in restricted cash during the twelve months ended December 31, 2017 and 2016, respectively.

Revenue Recognition

The Company generates revenue through in-app purchases within its games on smartphones and tablets, such as Apple's iPhone and iPad and mobile devices utilizing Google's Android operating system. Smartphone and tablet games

are distributed primarily through Digital Storefronts. The Company also has relationships with certain advertising service providers for advertisements within smartphone games and revenue from these advertising providers is generated through impressions, clickthroughs, banner ads and offers.

Users can download the Company's free-to-play games within the Digital Storefronts and pay to acquire virtual currency which can be redeemed in the game for virtual goods. The Company sells both consumable and durable virtual goods and receives reports from the Digital Storefronts, which breakdown the various purchases made from the Company's games over a given time period. The Company reviews these reports and determines on a per-item basis whether the purchase was a consumable virtual good or a durable virtual good. Consumable virtual goods are items that can be purchased directly by the player through the Digital Storefront and are consumed at a predetermined time or otherwise have limitations on repeated use, while durable virtual goods are items that remain in the game for as long as the player continues to play. The Company's revenue from consumable virtual goods has been insignificant. Revenue from durable virtual goods are generated through the purchase of virtual coins by users through a Digital Storefront. Players convert the virtual coins within the game to durable virtual goods such as furniture, clothes, players or other items to enhance their game-playing experience.

The Company adopted Accounting Standard Codification 606 ("ASC 606") and its related amendments effective January 1, 2018 using a modified retrospective method. The reported results for 2018 reflect the application of ASC 606 guidance while the reported results for 2017 were prepared under the guidance of ASC 605, Revenue Recognition (ASC 605), which is also referred to herein as "legacy GAAP" or the "previous guidance". The adoption of ASC 606 represents a change in accounting principle that will more closely align revenue recognition with the delivery of the Company's services and will provide financial statement readers with enhanced disclosures.

In accordance with ASC 606, revenue is recognized when or as a customer obtains control of promised services. The amount of revenue recognized reflects the consideration which the Company expects to receive in exchange for these services. A contract with a customer exists when (i) the Company enters into an enforceable contract with a customer that defines each party's rights regarding the services to be transferred and identifies the payment terms related to these services, (ii) the contract has commercial substance and, (iii) the Company determines that collection of substantially all consideration for services that are transferred is probable based on the customer's intent and ability to pay the promised consideration. The Company applies judgment in determining the customer's ability and intention to pay, which is based on a variety of factors including the customer's historical payment experience or, in the case of a new customer, published credit and financial information pertaining to the customer.

Micro-Transactions

The Company distributes its games for smartphones and tablets to the end customer through Digital Storefronts. Within these Digital Storefronts, users can download the Company's free-to-play games and pay to acquire virtual currency which can be redeemed in the game for virtual goods. The initial download of the mobile game from the Digital Storefront does not create a contract under ASC 606 because of the lack of commercial substance; however, the separate election by the player to make an in-application purchase satisfies the criterion thus creating a contract under ASC 606. The Company has identified the following performance obligations in these contracts:

1. Ongoing game related services such as hosting of game play, storage of customer content, when and if available content updates, maintaining the virtual currency management engine, tracking gameplay statistics, matchmaking as it relates to multiple player gameplay, etc.
2. Obligation to the paying player to continue displaying and providing access to the purchased virtual goods within the game.

Neither of these obligations are considered distinct since the actual mobile game and the related ongoing services are both required to purchase and benefit from the related virtual goods. As such, the Company's performance obligations represent a single combined performance obligation which is to make the game and the ongoing game related services available to the players. The transaction price, which is the amount paid for virtual currency/goods by the player, is allocated entirely to this single combined performance obligation. The Company recognizes revenue from in-application purchases of durable virtual currency/goods over the estimated average playing period of paying users. The Company's

revenue from consumable virtual goods has been insignificant over the previous three years. The Company has estimated the useful life of a paying user of between four and eight months.

Advertisements and Offers

The Company has relationships with certain advertising service providers for advertisements within its mobile games. Revenue from these advertising service providers is generated through impressions, clickthroughs, offers and banner ads. Offers are the type of advertisements where the players are rewarded with virtual currency for completing specified actions, such as downloading another application, watching a short video, subscribing to a service or completing a survey. The Company has determined the advertising buyer to be its customer and displaying the advertisements within the mobile games is identified as the single performance obligation. Revenue from advertisements and offers are recognized at the point-in-time the advertisements are displayed in the game or the offer has been completed by the user as the customer simultaneously receives and consumes the benefits provided from these services.

Other Estimates and Judgments

The Company computes its estimated average playing period of paying users at least twice each year. It has examined the playing patterns of paying users across a representative sample of its games across various genres.

The Company uses the "survival analysis" model to estimate the average playing period for paying users. This model provides for a singular approach to estimating the average playing period of paying users on a title by title basis for the Company's diverse portfolio of games. It is a statistical model that analyzes time duration until one or more events happens and is commonly used in various industries for estimating lifespans. The Company believes this is an appropriate model to estimate the average playing period of paying users for its titles as this model statistically estimates the average playing period of each title by analyzing the historical behavior patterns of paying users.

This model requires the stratification of user data into active and inactive monetizing users on a per title basis. Active users are those who are active in the game for the past 30 days as of the evaluation date. The remaining users are considered inactive and deemed to have churned from the game. These users are treated mathematically differently in the model than those who are still active. A distribution curve is then fit to the user data to estimate the average playing period of paying users on a per title basis.

The Company has selected a threshold of 120 days from the commercial launch of a title as the minimum number of days of data required for this model. This threshold was deemed to be appropriate as the Company tested the model using lower thresholds which resulted in inconsistencies in the estimate of the average playing period of paying users. For new titles with less than 120 days of data that share similar attributes with an existing title and/or prequel titles, the average playing period is determined based on the average playing period of that existing title or prequel title, as applicable. For all other titles with less than 120 days of data, the average playing period is determined based on the average playing period of all other remaining existing titles.

While the Company believes its estimates to be reasonable based on available game player information, it may revise such estimates in the future if a titles' user characteristics change. Any adjustments arising from changes in the estimates of the average playing period for paying users would be applied to the current quarter and prospectively on the basis that such changes are caused by new information that indicates a change in user behavior patterns compared to historical titles. Any changes in the Company's estimates of the useful life of virtual goods in a certain title may result in revenue being recognized on a basis different from prior periods' and may cause its operating results to fluctuate.

Principal Agent Considerations

The Company evaluated its Digital Storefront and advertising service provider agreements under ASC 606 in order to determine if it is acting as the principal or as an agent when selling virtual items or advertisements within its games. The Company primarily uses Digital Storefronts for distributing its smartphone games and for enabling players to purchase virtual items and advertising service providers to serve advertisements within its games. The Company evaluated the

following factors to assess whether it controls each specified good or service before that good or service is transferred to the customer:

- the party responsible for the fulfillment of the virtual items, game related services, or serving of advertisements;
- the party having the discretion to set pricing with the end-users; and
- the party having inventory risk before the specified good or service have been transferred to a customer.

Based on the evaluation of the above indicators, the Company determined that it has control of the services before they are transferred to the end-user. Thus, the Company is generally acting as a principal and is the primary obligor to end-users for games distributed through Digital Storefronts and advertisements served through its advertising service providers. Therefore, the Company recognizes revenue related to these arrangements on a gross basis, when the necessary information about the gross amounts or platform fees charged, before any adjustments, are made available by the Digital Storefronts and advertising service providers. In situations where the price paid by the end-user of the advertising service provider is not known, the Company accounts for these transactions on a net basis.

Deferred Platform Commissions and Royalties

Digital Storefronts retain platform commissions and fees on each purchase made by the paying players through the Digital Storefront. The Company is also obligated to pay ongoing licensing fees in the form of royalties related to the games developed based on or significantly incorporating licensed brands, properties or other content, and the Company plans to incorporate additional licensed content in some of its own originally branded games. As revenue from sales to paying players through Digital Storefronts are deferred, the related direct and incremental platform commissions and fees as well as third-party royalties are also deferred on the consolidated balance sheets. The deferred platform commissions and royalties are recognized in the consolidated statements of operations in “Cost of revenue” in the period in which the related sales are recognized as revenue.

Cash and Cash Equivalents

The Company considers all investments purchased with an original or remaining maturity of three months or less at the date of purchase to be cash equivalents. The Company deposits cash and cash equivalents with financial institutions that management believes are of high credit quality. Deposits held with financial institutions often exceed the amount of insurance on these deposits.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to a concentration of credit risk consist of cash, cash equivalents and accounts receivable.

The Company derives its accounts receivable from revenue earned from customers or through Digital Storefronts located in the United States and other locations outside of the United States. The Company performs ongoing credit evaluations of its customers’ and the Digital Storefronts’ financial condition and, generally, requires no collateral from its customers or the Digital Storefronts. The Company bases its allowance for doubtful accounts on management’s best estimate of the amount of probable credit losses in the Company’s existing accounts receivable. The Company reviews past due balances over a specified amount individually for collectability on a monthly basis. It reviews all other balances quarterly. The Company charges off accounts receivable balances against the allowance when it determines that the amount will not be recovered.

The following table summarizes the revenue from customers or aggregate purchases through Digital Storefronts in excess of 10% of the Company's revenue:

	Year Ended December 31,		
	2018	2017	2016
Apple	54.7 %	54.2 %	52.7 %
Google	31.3 %	30.3 %	27.6 %

At December 31, 2018, Apple Inc. ("Apple"), Google Inc. ("Google"), and Tapjoy Inc. ("Tapjoy") accounted for 40.8%, 30.3%, and 21.1%, respectively, of total accounts receivable. At December 31, 2017, Apple accounted for 58.0%, and Google accounted for 17.1% of total accounts receivable. No other customer or Digital Storefront represented more than 10% of the Company's total accounts receivable as of these dates.

Fair Value

The Company accounts for fair value in accordance with ASC 820, *Fair Value Measurements and Disclosures* ("ASC 820"). Fair value is defined under ASC 820 as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value under ASC 820 must maximize the use of observable inputs and minimize the use of unobservable inputs. The Company uses a three-tier hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1 - Quoted prices in active markets for identical assets or liabilities.

Level 2 - Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The first two levels in the hierarchy are considered observable inputs and the last is considered unobservable. The Company's cash and cash equivalents and restricted cash, which were held in operating bank accounts, are classified within Level 1 of the fair value hierarchy because they are valued using quoted market prices, broker or dealer quotations or alternative pricing sources with reasonable levels of price transparency. The carrying value of accounts receivable and payables approximates fair value due to the short time to expected payment or receipt of cash. Please refer to Note 4 for further details.

Prepaid or Guaranteed Licensor Royalties

The Company's royalty expenses consist of fees that it pays to content owners for the use of their brands, properties and other licensed content, including trademarks and copyrights, in the development of the Company's games. Royalty-based obligations are either paid in advance and capitalized on the balance sheet as prepaid royalties or accrued as incurred and subsequently paid. These royalty-based obligations are expensed to cost of revenue at the greater of the revenue derived from the relevant game multiplied by the applicable contractual rate or an effective royalty rate based on expected net product sales.

The Company's contracts with some licensors include minimum guaranteed royalty payments, which are payable regardless of the ultimate revenue generated from end users. In accordance with ASC 440-10, *Commitments* ("ASC 440"), the Company recorded a minimum guaranteed royalty liability of $7,304 and $11,614 as of December 31, 2018 and 2017, respectively. When no significant performance remains with the licensor, the Company initially records each of these guarantees as an asset and as a liability at the contractual amount. When significant performance remains with the licensor, the Company records royalty payments as an asset when actually paid and as a liability when incurred, rather

than upon execution of the contract. The classification of minimum royalty payment obligations between long-term and short-term is determined based on the expected timing of recoupment of earned royalties calculated on projected revenue for the licensed IP games.

Each quarter, the Company evaluates the realization of its prepaid royalties as well as any recognized guarantees not yet paid to determine amounts that it deems unlikely to be realized through product sales. The Company uses estimates of revenue, cash flows and net margins to evaluate the future realization of prepaid royalties, license fees, and guarantees. This evaluation considers multiple factors such as the term of the agreement, forecasted demand, game life cycle status, game development plans, and current and anticipated sales levels, as well as other qualitative factors such as the success of similar games and similar genres on mobile devices published by the Company and its competitors and/or other game platforms (e.g., consoles and personal computers) utilizing the intellectual property. To the extent that this evaluation indicates that the remaining prepaid and guaranteed royalty payments are not recoverable, the Company records an impairment charge to cost of revenue in the period in which impairment is indicated. The Company recorded impairment charges to cost of revenue of $711, $27,323, and $30,107 related to prepaid guaranteed royalties related to certain of its celebrity license agreements, and certain other prepaid royalties during the years ended December 31, 2018, 2017, and 2016, respectively. The impairment charges recorded during the year ended December 31, 2016 also included impairment of prepaid royalties and license fees paid to an affiliate of Tencent Holdings Limited ("Tencent"), one of the Company's principal stockholders related to the Company's game, *Rival Fire*.

Goodwill and Intangible Assets

In accordance with ASC 350, *Intangibles-Goodwill and Other* ("ASC 350"), the Company's goodwill is not amortized but is tested for impairment on an annual basis or whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. The Company performs its annual impairment test as of September 30th each year, at the reporting unit level, which is at the company level as a whole, since it operates in a single reporting segment. It also performs an impairment test whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. The impairment review involves a multiple-step process as follows:

Step — 0 The Company evaluates qualitative factors and overall financial performance to determine whether it is necessary to perform the first step of the two-step goodwill test. This step is referred to as "Step 0." Step 0 involves, among other qualitative factors, weighing the relative impact of factors that are specific to the reporting unit as well as industry and macroeconomic factors. After assessing those various factors, if it is determined that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, then the entity will need to proceed to the first step of the two-step goodwill impairment test.

Step — 1 The Company compares the fair value of each of its reporting units to the carrying value including goodwill of that unit. For each reporting unit where the carrying value, including goodwill, exceeds the unit's fair value, the Company moves on to step 2. If a unit's fair value exceeds the carrying value, no further work is performed and no impairment charge is necessary.

Step — 2 The Company performs an allocation of the fair value of the reporting unit to its identifiable tangible and intangible assets (other than goodwill) and liabilities. This allows the Company to derive an implied fair value for the unit's goodwill. The Company then compares the implied fair value of the reporting unit's goodwill with the carrying value of the unit's goodwill. If the carrying amount of the unit's goodwill is greater than the implied fair value of its goodwill, an impairment charge would be recognized for the excess.

In 2018, 2017, and 2016, the Company did not record any goodwill impairment charges as it was determined that it was more likely than not that the fair values of the reporting units exceeded their respective carrying values.

Purchased intangible assets with finite lives are amortized using the straight-line method over their useful lives ranging from three to seven years and are reviewed for impairment in accordance with ASC 360, *Property, Plant and Equipment* ("ASC 360").

Long-Lived Assets

The Company evaluates its long-lived assets, including property and equipment and intangible assets with finite lives, for impairment whenever events or changes in circumstances indicate that the carrying value of these assets may not be recoverable in accordance with ASC 360. Factors considered important that could result in an impairment review include significant underperformance relative to expected historical or projected future operating results, significant changes in the manner of use of acquired assets, significant negative industry or economic trends, and a significant decline in the Company's stock price for a sustained period of time. Impairment exists if the carrying amounts of such assets exceed the estimates of future undiscounted cash flows expected to be generated by such assets. Should an impairment exist, the impairment loss would be measured based on the excess carrying value of the asset over the asset's estimated fair value. Fair value is generally measured based on either quoted market prices, if available, or a discounted cash flow analysis.

Property and Equipment

The Company states property and equipment at cost. The Company computes depreciation or amortization using the straight-line method over the estimated useful lives of the respective assets or, in the case of leasehold improvements, the lease term of the respective assets, whichever is shorter.

The depreciation and amortization periods for the Company's property and equipment are as follows:

Computer equipment	Three years
Computer software	Two to Three years
Furniture and fixtures	Three years
Leasehold improvements	Shorter of the estimated useful life or remaining term of lease

Research and Development Costs

The Company charges costs related to research, design and development of products to research and development expense as incurred. The types of costs included in research and development expenses include salaries, third party development cost, contractor fees, and allocated facilities costs.

Software Development Costs

The Company applies the principles of ASC 985-20, *Software-Costs of Computer Software to Be Sold, Leased, or Otherwise Marketed* ("ASC 985-20"). ASC 985-20 requires that software development costs incurred in conjunction with product development be charged to research and development expense until technological feasibility is established. Thereafter, until the product is released for sale, software development costs must be capitalized and reported at the lower of unamortized cost or net realizable value of the related product. The Company has adopted the "tested working model" approach to establishing technological feasibility for its games. Under this approach, the Company does not consider a game in development to have passed the technological feasibility milestone until the Company has completed a model of the game that contains essentially all the functionality and features of the final game and has tested the model to ensure that it works as expected. To date, the Company has not incurred significant costs between the establishment of technological feasibility and the release of a game for sale; thus, the Company has expensed all software development costs as incurred.

Internal Use Software

The Company recognizes internal use software development costs in accordance with ASC 350-40, *Intangibles-Goodwill and Other-Internal Use Software* ("ASC 350-40") and ASU 2015-05, *Cloud Computing Arrangements*. The Company capitalizes software development costs, including costs incurred to purchase third-party software, beginning when it determines certain factors are present including, among others, that technology exists to achieve the performance requirements and/or buy versus internal development decisions, which the Company equates to the application development stage. The Company capitalized certain internal use software costs totaling approximately $65, $924 and

$728 during the years ended December 31, 2018, 2017, and 2016, respectively. The estimated useful life of costs capitalized is generally three years. During the years ended December 31, 2018, 2017 and 2016, the amortization of capitalized software costs totaled approximately $896, $1,031 and $998, respectively. Capitalized internal use software development costs are included in property and equipment, net.

Income Taxes

The Company accounts for income taxes in accordance with ASC 740, *Income Taxes* ("ASC 740"), which requires recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in its financial statements or tax returns. Under ASC 740, the Company determines deferred tax assets and liabilities based on the temporary difference between the financial statement and tax bases of assets and liabilities using the enacted tax rates in effect for the year in which it expects the differences to reverse. The Company establishes valuation allowances when necessary to reduce deferred tax assets to the amount it expects to realize.

The Company accounts for uncertain tax positions in accordance with ASC 740, which requires companies to adjust their financial statements to reflect only those tax positions that are more-likely-than-not to be sustained. ASC 740 prescribes a comprehensive model for the financial statement recognition, measurement, presentation and disclosure of uncertain tax positions taken or expected to be taken in income tax returns. The Company's policy is to recognize interest and penalties related to unrecognized tax benefits in income tax expense.

Restructuring

The Company accounts for costs associated with employee terminations and other exit activities in accordance with ASC 420, *Exit or Disposal Cost Obligations* ("ASC 420"). The Company records employee termination benefits as an operating expense when it communicates the benefit arrangement to the employee and it requires no significant future services, other than a minimum retention period, from the employee to earn the termination benefits.

Stock-Based Compensation

The Company applies the fair value provisions of ASC 718, *Compensation-Stock Compensation* ("ASC 718"). ASC 718 requires the recognition of compensation expense, using a fair-value based method, for costs related to all share-based payments including stock options, restricted stock units ("RSUs"), performance stock units ("PSUs"), and performance stock options ("PSOs"). The number of PSUs and PSOs earned and eligible to vest will be determined based on achievement of specified financial performance measures. ASC 718 requires companies to estimate the fair value of stock-option awards on the grant date using an option pricing model. The fair value of stock options and PSOs and stock purchase rights granted pursuant to the Company's equity incentive plans and 2007 Employee Stock Purchase Plan ("ESPP"), respectively, is determined using the Black-Scholes valuation model. The determination of fair value is affected by the stock price, as well as assumptions regarding subjective variables such as expected employee exercise behavior and expected stock price volatility over the expected term of the award. Generally, these assumptions are based on historical information and judgment is required to determine if historical trends may be indicators of future outcomes.

Effective January 1, 2017, the Company no longer estimates forfeitures but accounts for them as and when they occur. Changes to the assumptions used in the Black-Scholes option valuation calculation, as well as future equity granted or assumed through acquisitions could significantly impact the compensation expense the Company recognizes. The cost of RSUs and PSUs is determined using the fair value of the Company's common stock based on the quoted closing price of the Company's common stock on the date of grant. Compensation cost for stock options, RSUs and performance-based awards with a single vesting date is amortized ratably over the requisite service period. For performance-based awards that have multiple vesting dates, the compensation cost is recognized ratably over the requisite service period for each tranche, whereby each vesting tranche is treated as a separate award for determining the requisite service period. The compensation cost for performance-based awards may be adjusted over the vesting period based on interim estimates of performance against the pre-set financial performance measures.

Advertising Expenses

The Company expenses the production costs of advertising, including direct response advertising, the first time the advertising takes place. Advertising expense was $95,037, $88,775 and $37,408 in the years ended December 31, 2018, 2017, and 2016, respectively.

Comprehensive Loss

Comprehensive loss consists of two components, net loss and other comprehensive income/(loss). Other comprehensive income/(loss) refers to revenue, expenses, gains and losses that under GAAP are recorded as an element of stockholders' equity but are excluded from net loss. The Company's other comprehensive income/(loss) included foreign currency translation adjustments from those subsidiaries not using the U.S. Dollar as their functional currency, and a reclassification to net loss from the write-off of cumulative translation adjustment.

Foreign Currency Translation

In preparing its consolidated financial statements, the Company translates the financial statements of its foreign subsidiaries from their functional currencies, the local currency, into U.S. Dollars. This process resulted in unrealized exchange gains and losses, which are included as a component of accumulated other comprehensive income/(loss) within stockholders' deficit. However, if the functional currency is deemed to be the U.S. Dollar, any gain or loss associated with the translation of these financial statements would be included in other expense within the Company's consolidated statements of operations.

Cumulative foreign currency translation adjustments include any gain or loss associated with the translation of a subsidiary's financial statements when the functional currency of a subsidiary is the local currency. If the Company disposes of any of its subsidiaries, any cumulative translation gains or losses would be realized and recorded in other expense within the Company's consolidated statement of operations in the period during which the disposal occurs. If the Company determines that there has been a change in the functional currency of a subsidiary relative to the U.S. Dollar, any translation gains or losses arising after the date of change would be included in other expense within the Company's consolidated statement of operations.

Business Combinations

The Company applies the accounting standard related to business combinations, ASC 805, *Business Combinations* ("ASC 805'). The standard requires:

- recognition of assets acquired, liabilities assumed, and contingent consideration at their fair value on the acquisition date with subsequent changes recognized in earnings;
- acquisition-related expenses and restructuring costs to be recognized separately from the business combination and expensed as incurred;
- in-process research and development to be capitalized at fair value as an indefinite-lived intangible asset until completion or abandonment; and
- that changes in accounting for deferred tax asset valuation allowances and acquired income tax uncertainties after the measurement period be recognized as a component of provision for taxes.

The Company accounts for acquisitions of entities or assets that include inputs and processes and have the ability to create outputs as business combinations. The purchase price of the acquisition is allocated to tangible assets, liabilities, and identifiable intangible assets acquired based on their estimated fair values. The excess of the purchase price over those fair values is recorded as goodwill. Acquisition-related expenses and restructuring costs are expensed as incurred. While the Company uses its best estimates and assumptions as a part of the purchase price allocation process to accurately value assets acquired and liabilities assumed at the business combination date, these estimates and assumptions are inherently uncertain and subject to refinement. As a result, during the preliminary purchase price allocation period, which may be up to one year from the business combination date, the Company may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. After the preliminary purchase price allocation period,

the Company records adjustments to assets acquired or liabilities assumed subsequent to the purchase price allocation period in its operating results in the period in which the adjustments were determined.

Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (FASB) issued ASU 2014-09, *Revenue from Contracts with Customers* (Topic 606). The Company adopted ASU 2014-09 and its related amendments effective on January 1, 2018 using the modified retrospective method. See Note 5 "Revenue from Contracts with Customers" for the required disclosures related to the impact of adopting this standard and a discussion of the Company's updated policies related to revenue recognition.

In May 2017, the FASB issued ASU 2017-09, *Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting*, which clarifies when to account for a change to the terms or conditions of a share-based payment award as a modification. Under the new guidance, modification accounting is required only if the fair value, the vesting conditions, or the classification of the award (as equity or liability) changes as a result of the change in terms or conditions. It is effective prospectively for the annual period ending December 31, 2018 and interim periods within that annual period. The Company adopted this guidance in the first quarter of 2018. The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

In November 2016, the FASB issued ASU No. 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash*, which requires amounts generally described as restricted cash and restricted cash equivalents be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown in the statement of cash flows. The Company adopted this guidance in the first quarter of 2018. The adoption of this standard did not have a material impact on the Company's consolidated financial statements. Please see *Reclassifications* within this Note.

In October 2016, the FASB issued ASU No. 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory*. ASU No. 2016-16 requires that an entity recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017. The Company adopted this guidance in the first quarter of 2018. The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*. ASU No. 2016-15 addresses eight specific cash flow issues with the objective of reducing existing diversity in practice. The guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017. The Company adopted this guidance in the first quarter of 2018. The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments - Overall - Recognition and Measurement of Financial Assets and Financial Liabilities*. The guidance requires entities to measure equity investments that do not result in consolidation and are not accounted for under the equity method at fair value and recognize any changes in fair value in net income unless the investments qualify for a practicability exception. The updated standard is effective for interim and annual reporting periods beginning after December 15, 2017. The Company adopted this guidance in the first quarter of 2018. The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

In March 2018, the FASB issued ASU 2018-05, *Income Taxes (Topic 740), Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118*. The ASU adds various SEC paragraphs pursuant to the issuance of the December 2017 *SEC Staff Accounting Bulletin No. 118, Income Tax Accounting implications of the Tax Cuts and Jobs Act* ("SAB 118"), which was effective immediately. The SEC issued SAB 118 to address concerns about reporting entities' ability to timely comply with the accounting requirements to recognize all of the effects of the Tax Cuts and Jobs Act in the period of enactment. The guidance specifies that, for income tax effects of the Tax Cuts and Jobs Act that can

be reasonably estimated but for which the accounting and measurement period is not yet complete, entities should report provisional amounts in the reporting period that includes the enactment date and those provisional amounts can be adjusted for a measurement analysis not to exceed one year from the enactment date. The Company has accounted for the tax effects of the Tax Cuts and Jobs Act under the guidance of SAB 118, on a provisional basis, in its consolidated financial statements for the year ended December 31, 2017. Immaterial adjustments made to the provisional amounts allowed under SAB 118 were identified and recorded as discrete adjustments during the year ended December 31, 2018. The accounting was completed in the fourth quarter of 2018.

Recently Issued Accounting Pronouncements Not Yet Adopted

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles—Goodwill and Other (Topic 350)*: *Simplifying the Test for Goodwill Impairment*. This new accounting standard update simplifies the measurement of goodwill by eliminating the Step 2 impairment test. Step 2 measures a goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill. The new guidance requires an entity to compare the fair value of a reporting unit with its carrying amount and recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value. Additionally, an entity should consider income tax effects from any tax deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable. The new guidance becomes effective for goodwill impairment tests in fiscal years beginning after December 15, 2019, though early adoption is permitted. The Company is currently assessing the impact of this new guidance.

In January 2017, the FASB issued ASU No. 2017-01, *Business Combinations (Topic 805)*, which clarifies the definition of a business to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The standard will be effective in the first quarter of fiscal 2019. Early adoption is permitted. The Company does not expect the adoption of this guidance to have a material impact on its consolidated financial statements.

In February 2018, the FASB issued ASU 2018-02, *Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*. The standard provides financial statement preparers with an option to reclassify stranded tax effects within Accumulated Other Comprehensive Loss to retained earnings in each period in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Cuts and Jobs Act (or portion thereof) is recorded. ASU 2018-02 is effective for the Company beginning in fiscal 2019, including interim periods within that fiscal year. Early adoption is permitted. The Company does not expect the adoption of this guidance to have a material impact on its consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07*, Compensation – Stock Compensation (Topic 718)*: *Improvements to Employee Share-Based Payment Accounting*. The guidance simplifies the accounting for share-based payments made to non-employees so the accounting for such payments is substantially the same as those made to employees. The guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company does not expect the adoption of this guidance to have a material impact on its consolidated financial statements.

In July 2018, the FASB issued ASU 2018-09, *Codification Improvements*. This amendment makes changes to a variety of topics to clarify, correct errors in, or make minor improvements to the Accounting Standards Codification (ASC). The transition and effective date guidance is based on the facts and circumstances of each amendment. Some of the amendments do not require transition guidance and are effective upon issuance of the guidance. However, many of the amendments do have transition guidance with effective dates for annual periods beginning after December 15, 2018. The Company does not expect the adoption of this guidance to have a material impact on its consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement.* This guidance adds, modifies and removes several disclosure requirements relative to the three levels of inputs used to measure fair value in accordance with Topic 820, Fair Value Measurement. This guidance is effective for fiscal years beginning after December 15, 2019, including interim

periods within those fiscal years. Early adoption is permitted. The Company is currently evaluating the impact that this standard will have on its consolidated financial statements.

In August 2018, the FASB issued Accounting Standards Update ("ASU") 2018-15, *Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*. This ASU clarifies the accounting treatment for implementation costs for cloud computing arrangements (hosting arrangements) that are service contracts. This guidance is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption of the amendments is permitted, including in interim periods. The Company is currently evaluating the impact that this standard will have on its consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, *Leases*. In July 2018, the FASB issued ASU 2018-11, *Leases (Topic 842): Targeted Improvements* and ASU 2018-10, *Codification Improvements to Topic 842, Leases*. ASU 2016-02 and the subsequent modifications are identified as "ASC 842". ASC 842 requires lessees to recognize most leases as assets and liabilities on the balance sheet. Qualitative and quantitative disclosures will be enhanced to better understand the amount, timing and uncertainty of cash flows arising from leases. This guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company adopted this new standard on January 1, 2019.

A modified retrospective transition approach requires applying the new standard to all leases existing at the date of initial application. An entity may choose to use either account for the impacts of the adoption as of (1) its effective date or (2) the beginning of the earliest comparative period presented in the financial statements as its date of initial application. If an entity chooses the second option, the transition requirements for existing leases also apply to leases entered into between the date of initial application and the effective date and will require the entity to recast its comparative period financial statements and provide the disclosures required by the new standard for the comparative periods. The Company expects to use the effective date as its date of initial application. Consequently, financial information will not be updated and the disclosures required under the new standard will not be provided for dates and periods before January 1, 2019.

The new standard provides a number of optional practical expedients in transition. The Company expects to elect the 'package of practical expedients', which permits the Company to not reassess under the new standard for prior conclusions about lease identification, lease classification, and initial direct costs.

The Company has completed the evaluation of the impact of the new standard in relation to the lease standard of all of its material lease arrangements. Based on this evaluation, the Company has determined that upon adoption, it will recognize Right of Use ("ROU") asset, net of deferred rent balance, ranging from $26,500 to $30,000, and lease liability ranging from $32,000 to $36,000, related to its office leases. The new standard will also increase the level of financial statement disclosures related to leases. The Company does not expect that adoption will have a material impact on its consolidated statement of operations and statement of cash flows.

The new standard also provides practical expedients for an entity's ongoing accounting. The Company currently expects to elect the short-term lease recognition exemption for all leases that qualify. This means, for those leases that qualify, the Company will not recognize ROU assets or lease liabilities, and this includes not recognizing ROU assets or lease liabilities for existing short-term leases of those assets in transition. The Company also currently expects to elect the practical expedient to not separate lease and non-lease components for all of its leases.

The Company does not anticipate that its internal control framework will materially change, but rather existing internal controls will be modified and augmented as necessary to implement the new lease standard. The Company is currently in the process of evaluating the required financial statement disclosures to allow users of its financial statements to understand the nature, amount, and uncertainty for existing and any new potential leases.

NOTE 2 — NET LOSS PER SHARE

The Company computes net loss per share by dividing its net loss for the period by the weighted average number of common shares outstanding during the period less the weighted average common shares subject to restrictions imposed by the Company.

	Year Ended December 31,		
	2018	2017	2016
Net loss	$ (13,199)	$ (97,570)	$ (87,440)
Shares used to compute net loss per share:			
Weighted average common shares outstanding	141,402	135,715	132,808
Weighted average common shares subject to restrictions	—	—	(1,004)
Weighted average shares used to compute basic and diluted net loss per share	141,402	135,715	131,804
Net loss per share - basic and diluted	(0.09)	(0.72)	(0.66)

The following equity awards outstanding at the end of each period presented have been excluded from the computation of net loss per share of common stock for the periods presented because including them would have had an anti-dilutive effect:

	Year Ended December 31,		
	2018	2017	2016
Warrants to purchase common stock	1,600	3,267	4,267
Options to purchase common stock	18,491	16,932	15,813
RSUs	3,021	5,812	8,224
PSOs	3,512	—	—
PSUs	711	—	—
ESPP	283	376	418
	27,618	26,387	28,722

NOTE 3 — BUSINESS COMBINATIONS / DIVESTITURE

Divestiture of Moscow Studio

On December 31, 2017, the Company entered into the following agreements related to the divestiture of its Moscow-based game development studio (the "Moscow Studio") through the sale of its wholly-owned UK subsidiary Glu Mobile (Russia) Limited ("GMRL"):

- Share Purchase Agreement (the "SPA") between the Company and Saber Interactive ("Saber");
- Transitional Services Agreement (the "TSA") among the Company, Saber and MGL My.com (Cyprus) Limited ("MGL"); and
- Asset Purchase and License Agreement (the "APLA") between the Company and MGL.

Pursuant to the SPA, Saber purchased all the issued and outstanding share capital of GMRL. Saber also assumed all obligations under the office lease for the Moscow Studio.

Under the TSA, Saber agreed to transition certain legacy titles from the Moscow Studio to the Company's Hyderabad studio. Upon successful completion of the transition (i) Saber paid the employees of the Moscow Studio and GMRL bonus payments of $500 in the aggregate and reduced the cash consideration by the amount of the bonus, and (ii) certain employees of the Moscow studio and GMRL had the vesting of an aggregate of approximately 150 shares subject to equity awards accelerated.

Pursuant to the APLA, the Company sold four mobile games (and related intellectual property and other rights) developed by the Moscow Studio: (i) *Last Day Alive*, (ii) *Heroes of Destiny*, (iii) a game that was in development featuring a male celebrity, and (iv) *Furiosa*. The Company transferred all rights and obligations under certain contracts related to the

game featuring a male celebrity, including, but not limited to, the obligation to pay the remaining approximately $1,500 in minimum guarantee and other payments under these contracts. The Company also agreed to provide MGL with a non-exclusive, perpetual, worldwide, irrevocable, non-transferrable, royalty-free license to certain development tools and technology necessary to use, develop, publish, exploit and sell the purchased games and that MGL and/or its affiliates may use for the development of other of its products.

The total cash consideration under the SPA and APLA was $3,226, of which $1,726 was received in January 2018. The remaining $1,500, net of a transition bonus payment of $500, was received in April 2018 upon completion of the transition of the legacy titles from the Moscow Studio to the Company's Hyderabad studio.

In connection with the divestiture, the Company recorded a loss of $6,459 in the year ended December 31, 2017, which is included in other expense on the consolidated statement of operations. This was primarily comprised of a $10,000 charge related to the assignment of one of the contract related to the male celebrity, a $1,220 charge related to the write-off of goodwill associated with the Moscow studio and a $479 charge related to the write-off of net assets associated with the Moscow studio. These charges were partially offset by $3,226 in cash paid by Saber and MGL, $1,500 related to the assumption of obligations by MGL under the contract related to the male celebrity, and $514 related to the transition services provided by Saber.

In connection with the activities related to the transition under the TSA, the Company recorded the following expenses in the year ended December 31, 2018:

- $500 related to bonuses that became due to the employees of the Moscow Studio and GMRL;
- $514 related to the vesting of 147 shares subject to equity awards held by certain employees of the Moscow Studio and GMRL; and
- $515 related to the amortization of transition services assets that were capitalized as part of the transaction consideration.

The Company's divestiture of the Moscow Studio was part of the Company's efforts to consolidate its studio locations, focusing on a new scaled creative center in San Francisco and a low cost, repeatable location in Hyderabad, India. This divestiture was not presented in discontinued operations in the consolidated statement of operations, because it did not represent a strategic shift in the Company's business and is not expected to have a significant effect on the Company's operations or financial results, as the Company continued operating similar businesses after the divestiture.

Dairy Free Games, Inc.

On August 1, 2017 (the "Merger Date"), the Company completed the acquisition of Dairy Free Games, Inc. ("Dairy Free") by acquiring 100% of its equity pursuant to an Agreement and Plan of Merger (the "Dairy Free Merger Agreement") by and among the Company, Winterfell Acquisition Corp., a Delaware corporation and wholly owned subsidiary of the Company, and Dairy Free. Dairy Free, which was based in California, was building a mobile real-time strategy game. The Company acquired Dairy Free in order to expand its game offerings on smartphones and tablets.

Pursuant to the terms of the Dairy Free Merger Agreement, the Company paid $2,000 in cash for the outstanding common stock of Dairy Free. The Company had previously acquired from Dairy Free shares of its series A preferred stock ("Series A Preferred Stock"), as further described below, for $2,000. The fair value of the Series A Preferred Stock as of the Merger Date was determined to be equal to the original investment amount of $2,000. The transaction was accounted for as a business combination under the acquisition method of accounting.

The Company allocated the purchase price to the individually identifiable assets acquired and liabilities assumed based on their estimated fair values on the acquisition date. The excess of the purchase price over those fair values was recorded as goodwill. The determination of these fair values was based on estimates and assumptions requiring significant judgments. While the Company believes that its estimates and assumptions underlying the valuations are reasonable, different estimates and assumptions could result in different valuations assigned to the individual assets acquired and liabilities assumed, and the resulting amount of goodwill. The following table summarizes the fair values of assets acquired and liabilities assumed at the date of acquisition:

Assets acquired:		
Cash and cash equivalents	$	341
Intangible assets:		
In-process research and development		2,700
Other current assets		32
Goodwill		573
Total assets		3,646
Liabilities assumed:		
Deferred tax liability		(294)
Other accrued liabilities		(2)
Total liabilities assumed		(296)
Net acquired assets	$	3,350

In-process research and development included in the table above was related to a game that Dairy Free was in process of developing as of the valuation date. During the year ended December 31, 2018, the Company decided not to proceed with further development of that game and recorded an impairment charge of $2,700 for the related in-process research and development in Impairment and amortization of intangible assets expense in its consolidated statements of operations. Pursuant to ASC 805, the Company incurred and expensed a total of $611 in acquisition and transitional costs associated with the acquisition of Dairy Free during the year ended December 31, 2017. These costs consisted of $269 of research and development expense and $342 of general and administrative expense.

The Company allocated the residual value of $573 to goodwill. The goodwill recognized is attributable primarily to expected synergies and the assembled workforce of Dairy Free. Goodwill will not be amortized but will be tested for impairment at least annually. Goodwill created as a result of the Dairy Free acquisition is not deductible for tax purposes.

In January 2016, the Company acquired a minority equity stake and entered into a commercial agreement with Dairy Free. As part of the arrangement, the Company invested $2,000 in Dairy Free's Series A Preferred Stock. The preferred stock investment was recorded at cost. The Company had also agreed to provide up to $1,000 of recoupable and non-refundable development funding for a mobile game under development by Dairy Free. The development funding was payable in installments upon Dairy Free achieving certain milestones. The development funding was fully recognized as research and development expense as the development activities were performed. The Company had recorded $650 in accrued research and development expenses. The accrued research and development expenses balance of $650 was also determined to be equal to the fair market value as of the date of the merger and was offset against the goodwill amount resulting from the acquisition of Dairy Free.

Crowdstar Inc.

On November 2, 2016, the Company, acquired shares representing approximately 80.6% of the issued and outstanding voting power of Crowdstar Inc., a Delaware corporation ("Crowdstar"), from Time Warner Inc., Intel Capital Corporation and certain other stockholders of Crowdstar (the "Participating Stockholders"). Crowdstar is a developer of fashion and home decor genre games for mobile devices based in Burlingame, California. The Company acquired Crowdstar to leverage its casual games expertise, assembled workforce and existing mobile games in order to expand the Company's game offerings on smartphones and tablets. The Company paid approximately $40,794 in cash to the Participating Stockholders in exchange for the acquired shares. In addition, certain drag-along provisions specified in a voting agreement by and among Crowdstar and certain other stockholders of Crowdstar were triggered. Pursuant to the drag-along provisions, certain other stockholders of Crowdstar were required to tender their Crowdstar capital stock to the Company on the same terms as the Participating Stockholders. Upon acquiring over 90% of the issued and outstanding voting power of Crowdstar

pursuant to the drag-along provisions, on December 6, 2016, the Company acquired the remaining issued and outstanding shares of Crowdstar in a short-form merger under the laws of the State of Delaware for an additional $4,667 for a total of $45,461 for 100% ownership of Crowdstar.

The allocation of the purchase price is based on valuations derived from estimated fair value assessments and assumptions used by the Company. While the Company believes that its estimates and assumptions underlying the valuations are reasonable, different estimates and assumptions could result in different valuations assigned to the individual assets acquired and liabilities assumed, and the resulting amount of goodwill. The following table summarizes the fair values of assets acquired and liabilities assumed at the date of acquisition:

Assets acquired:		
Cash and cash equivalents	$	4,492
Accounts receivable		3,905
Prepaid expenses		521
Other current assets		34
Fixed assets		315
Intangible assets:		
Titles, content and technology		16,000
Goodwill		28,776
Total assets		54,043
Liabilities assumed:		
Accounts payable		(584)
Accrued liabilities		(4,284)
Deferred revenue		(1,500)
Note payable - current portion		(1,279)
Long term liabilities		(935)
Total liabilities assumed		(8,582)
Net acquired assets	$	45,461

Acquisition-related intangibles included in the above table are finite-lived and are being amortized on a straight-line basis over their estimated lives of three to five years, which approximates the pattern in which the economic benefits of the intangible assets are expected to be realized. Of the total purchase price, $16,000 was allocated to identifiable intangible assets. Pursuant to ASC 805, the Company incurred and expensed a total of $0, $3,616 and $802 of transitional costs associated with the acquisition of Crowdstar during the years ended December 31, 2018, December 31, 2017 and December 31, 2016, respectively. These costs consisted of $2,936 of research and development expense, and $680 of general and administrative expense for the year ended December 31, 2017 and were primarily general and administrative related expenses for the year ended December 31, 2016.

The Company allocated the residual value of $28,776 to goodwill. Goodwill represents the excess of the purchase price over the fair value of the net tangible and intangible assets acquired. In accordance with ASC 350, goodwill will not be amortized but will be tested for impairment at least annually. Goodwill created as a result of the Crowdstar acquisition is not deductible for tax purposes.

Plain Vanilla, Corp.

On December 19, 2016, the Company acquired substantially all of the intangible assets and certain other assets of Plain Vanilla Corp. ("Plain Vanilla"), the developer of the *QuizUp* interactive software application for mobile devices, based in Reykjavik, Iceland. The Company acquired these assets in order to expand the Company's game offerings on smartphones and tablets. The Company forgave and canceled $7,500 in aggregate principal amount of convertible promissory notes of Plain Vanilla held by the Company, and all interest thereon, in exchange for acquiring the *QuizUp* assets and technology and other receivables. The deemed fair value of the consideration as of the acquisition date was determined to be $3,200. The acquired assets represent a business as defined in ASC 805, *Business Combinations.* The Company has integrated the acquired assets into the Company's existing business. The asset purchase agreement also contained customary representations, warranties and covenants, including non-competition and indemnification provisions.

The allocation of the purchase price is based on valuations derived from estimated fair value assessments and assumptions used by the Company. While the Company believes that its estimates and assumptions underlying the valuations are reasonable, different estimates and assumptions could result in different valuations assigned to the individual assets acquired. The following table summarizes the fair values of assets acquired at the date of acquisition:

Fair value of purchase consideration:	$	3,200
Assets acquired:		
Cash	$	1,200
Accounts receivable		183
Intangible assets:		
Title, content and technology		1,817
Total Assets acquired	$	3,200

Acquisition-related intangibles included in the above table are finite-lived and are being amortized on a straight-line basis over their estimated lives of three years, which approximates the pattern in which the economic benefits of the intangible assets are expected to be realized. Of the total purchase price, $1,817 was allocated to identifiable intangible assets. No residual value was allocated to goodwill.

Valuation Methodology

The Company valued titles, content and technology primarily using the Multi-Period Excess Earnings (“MPEE”) method of the income approach and key assumptions used included: projected revenue, cost of goods sold, and operating expenses for Crowdstar's legacy titles, the future amortization tax benefit of the legacy titles, and a discount rate of between 20% and 35%.

The fair value of the in-process research and development acquired from Dairy Free was determined using the replacement cost method under the cost approach. The replacement cost was estimated based on the historical research and development expenses incurred, adjusted for an estimated developer’s profit and rate of return in accordance with accepted valuation methodologies.

The fair value of Crowdstar’s deferred revenue was determined to be $1,500 as of the valuation date. This was valued using the estimated costs including hosting fees and salaries and benefits to support the contractual obligations associated with these revenue, plus a market participant margin. The deferred revenue will be recognized on a straight-line basis over nine months from the valuation date.

As of the valuation date, Crowdstar was in process of developing *Design Home*, which was launched in the fourth quarter of 2016.

Pro Forma Financial Information

The results of operations for Dairy Free, Crowdstar and Plain Vanilla and the estimated fair market values of the assets acquired and liabilities assumed have been included in the Company’s consolidated financial statements since their respective dates of acquisition. For the year ended December 31, 2017 and since the date of its acquisition, Dairy Free had no impact on the Company’s gross revenue and increased the Company’s net losses by $1,081. For the year ended December 31, 2016 and since the dates of their respective acquisitions, Crowdstar and Plain Vanilla contributed approximately $2,111 to the Company’s gross revenue and increased net losses by $9,194. The unaudited pro forma financial information in the table below summarizes the combined results of the Company’s operations and those of Dairy Free, Crowdstar and Plain Vanilla for the periods shown as if the acquisition of Dairy Free, Crowdstar and Plain Vanilla had each occurred on January 1, 2016. The pro forma financial information includes the business combination accounting effects of the acquisition, including amortization charges from acquired intangible assets. The pro forma financial information presented below is for informational purposes only, and is subject to a number of estimates, assumptions and other uncertainties.

	Year ended December 31, (unaudited)	
	2017	2016
Total pro forma revenue	$ 286,827	$ 245,483
Pro forma net loss	(98,450)	(100,018)
Pro forma net loss per share - basic	(0.73)	(0.76)
Pro forma net loss per share - diluted	(0.73)	(0.76)

NOTE 4 — FAIR VALUE MEASUREMENTS

Fair Value Measurements

The Company accounts for fair value in accordance with ASC 820, *Fair Value Measurements and Disclosures* ("ASC 820"). Fair value is defined under ASC 820 as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value under ASC 820 must maximize the use of observable inputs and minimize the use of unobservable inputs. The Company uses a three-tier hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1 — Quoted prices in active markets for identical assets or liabilities.

Level 2 — Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

As of December 31, 2018, the Company's financial assets and financial liabilities are presented below at fair value and were classified within the fair value hierarchy as follows:

	Level 1	Level 2	Level 3	December 31, 2018
Financial Assets				
Cash and cash equivalents	$ 97,834	$ —	$ —	$ 97,834
Restricted cash	110	—	—	110
Other investments	—	—	1,410	1,410
Total Financial Assets	$ 97,944	$ —	$ 1,410	$ 99,354

As of December 31, 2017, the Company's financial assets and financial liabilities are presented below at fair value and were classified within the fair value hierarchy as follows:

	Level 1	Level 2	Level 3	December 31, 2017
Financial Assets				
Cash and cash equivalents	$ 63,764	$ —	$ —	$ 63,764
Restricted cash	602	—	—	602
Other investments	—	—	1,410	1,410
Total Financial Assets	$ 64,366	$ —	$ 1,410	$ 65,776

The Company's cash and cash equivalents, which were held in operating bank accounts, are classified within Level 1 of the fair value hierarchy because they are valued using quoted market prices, broker or dealer quotations or alternative pricing sources with reasonable levels of price transparency. In addition, the Company's restricted cash is classified within Level 1 of the fair value hierarchy. The carrying value of accounts receivable and payables approximates fair value due to the short time to expected payment or receipt of cash. The carrying value of other investments approximates fair value, as the Company purchased these investments in fiscal 2017 and there have been no

events or changes in circumstances that would have had a significant effect on the fair value of these investments at December 31, 2018.

NOTE 5 – REVENUE FROM CONTRACTS WITH CUSTOMERS

Disaggregation of Revenue

The following table summarizes revenue from contracts with customers for the year ended December 31, 2018:

	Year Ended December 31, 2018
Micro-Transactions (over-time revenue recognition)	$ 316,157
Advertisements (point-in-time revenue recognition)	7,121
Offers (point-in-time recognition)	43,000
Other (point-in-time recognition)	283
Total Revenue	$ 366,561

In the disaggregation above, the Company categorizes revenue by type, and by over-time or point-in-time recognition.

On the date of adoption of ASC 606, the Company had $20,446 in deferred platform commission fees which was fully amortized in the year ended December 31, 2018. On the date of adoption of ASC 606, the Company had $3,575 in deferred royalties which were fully amortized in the year ended December 31, 2018. As of December 31, 2018 the Company had $25,862 and $4,410 in deferred platform commission fees and deferred royalties, respectively.

Financial Statement Impact of Adopting ASC 606

The cumulative effect of applying the new guidance to all contracts with customers that were not completed as of January 1, 2018 was recorded as an adjustment to accumulated deficit as of the adoption date. As a result of applying the modified retrospective method to adopt the new revenue guidance, the following adjustments were made to accounts on the consolidated balance sheet as of January 1, 2018:

Balances	As Reported December 31, 2017	Adjustments	As Adjusted January 1, 2018
Deferred royalties	$ 4,364	$ (789)	$ 3,575
Deferred revenue	$ 77,403	$ (9,615)	$ 67,788
Accumulated deficit	$ (436,110)	$ 8,826	$ (427,284)

Sale of Offer Advertisements

Under the previous guidance, the fees received for offer advertisements were deferred and recognized over the average playing period of paying users. Under ASC 606, the sale of offer advertisements that result in users receiving virtual currency for redemption within a game is recognized at the time such advertisements are delivered and reported to the Company as the performance obligations are deemed to be satisfied when the advertisement has been displayed in the game.

Income Taxes

The adoption of ASC 606 primarily resulted in an acceleration of revenue for the year ended December 31, 2018, which in turn generated additional deferred tax liabilities that ultimately reduced the Company's net deferred tax asset position. As the Company fully reserves its net deferred tax assets in the jurisdictions impacted by the adoption of ASC 606, this impact was offset by a corresponding reduction to the valuation allowance.

Practical Expedients

The Company applied the following expedients available under the cumulative effect method upon adoption of ASC 606:

1. Practical expedient listed under 606-10-65-1(f)(3), and chose not to disclose the amount of consideration allocated to the remaining performance obligations or an explanation of when the Company expects to recognize that amount as revenue for all reporting periods presented before the date of the initial application (i.e., January 1, 2018).
2. Practical expedient listed under 606-10-65-1(h), and chose not to restate contracts that were completed contracts as of the date of initial application (i.e., January 1, 2018).

Impacts on Financial Statement Line Items

The following table compares the reported line items in the balance sheet, statement of operations and cash flows, as of and for the year ended December 31, 2018, to the amounts that the Company would have reported had the previous guidance been in effect:

	As of December 31, 2018		
Balance Sheet	**Amounts based on previous guidance**	**Adjustments**	**As Reported**
Deferred royalties	$ 5,516	$ (1,106)	$ 4,410
Total current assets	172,107	(1,106)	171,001
Total assets	315,539	(1,106)	314,433
Deferred revenue	98,152	(12,416)	85,736
Total current liabilities	142,345	(12,416)	129,929
Total liabilities	149,536	(12,416)	137,120
Accumulated deficit	(451,793)	11,310	(440,483)
Total stockholders' equity	166,003	11,310	177,313
Total liabilities and stockholders' equity	$ 315,539	$ (1,106)	$ 314,433

ASC 606 accelerated the recognition of revenue and royalty costs related to offer advertisements which were previously recognized over the estimated average playing period of paying players. As of December 31, 2018, the deferred revenue and deferred royalties would have been higher by $12,416 and $1,106, respectively had the previous guidance been in effect.

	Year Ended December 31, 2018		
Statement of Operations	**Amounts based on previous guidance**	**Adjustments**	**As Reported**
Revenue	$ 363,759	$ 2,802	$ 366,561
Platform commissions, royalties and other	128,128	317	128,445
Total cost of revenue	137,958	317	138,275
Gross profit	225,801	2,485	228,286
Loss from operations	(14,900)	2,485	(12,415)
Loss before income taxes	(15,135)	2,485	(12,650)
Net loss	$ (15,684)	$ 2,485	$ (13,199)
Net loss per common share - basic and diluted	$ (0.11)		$ (0.09)

The acceleration of revenue recognition and royalty costs related to offer advertisements under ASC 606 increased revenue and royalties by $2,802 and $317, respectively, for the year ended December 31, 2018.

The net impact of accounting for revenue and royalties under the new guidance decreased net loss and net loss per share by $2,485 and $0.02 per basic and diluted share, respectively, for the year ended December 31, 2018.

	Year Ended December 31, 2018		
Statement of Cash Flows	Amounts based on previous guidance	Adjustments	As Reported
Cash flows from operating activities:			
Net loss	$ (15,684)	$ 2,485	$ (13,199)
Adjustments to reconcile net loss to net cash generated from operating activities:			
Deferred royalties	(1,152)	317	(835)
Deferred revenue	20,749	(2,802)	17,947
Net cash generated from operating activities	$ 32,286	$ —	$ 32,286

The adoption of ASC 606 had no impact on the Company's cash flows from operations. The aforementioned impacts resulted in offsetting shifts in cash flows throughout net loss and changes in working capital balances.

Contract Balances

The following table provides information about receivables, contracts assets, and contract liabilities from contracts with customers:

	December 31, 2018	At Adoption
Receivables, which are included in accounts receivable, net	$ 27,325	$ 34,673
Contract assets	-	-
Contract liabilities	$ 85,736	$ 67,788

The Company receives payments from customers based on billing terms established in the Company's contracts. Contract asset relates to the Company's right to consideration for its completed performance under the contract. At December 31, 2018, there were no contract assets recorded in the Company's consolidated balance sheet. Accounts receivable are recorded when the right to consideration becomes unconditional.

Deferred revenue relates to payments received in advance of performance under the contract. Deferred revenue is recognized as revenue as we perform under the contract. On the date of adoption of ASC 606, the Company had $67,788 in deferred revenue, which was all earned in the year ended December 31, 2018.

ASC 606 requires an entity to disclose the revenue recognized in the reporting period from performance obligations satisfied (or partially satisfied) in previous periods (for example, due to changes in transaction price). Revenue recognized relating to performance obligations satisfied in prior periods was $0 for the year ended December 31, 2018.

The Company elects to use the practical expedient under 606-10-50-14 which states an entity need not disclose the information in paragraph 606-10-50-13 for a performance obligation if the following criteria are met:

1. the performance obligation is part of a contract that has an original expected duration of one year or less; and
2. the entity recognizes revenue from the satisfaction of the performance obligation in accordance with paragraph 606-10-55-18 (right to invoice).

Since all of the Company's contracts have an original expected duration of one year or less, the Company elects to use this practical expedient and does not disclose the aggregate transaction price allocated to unsatisfied or partially satisfied performance obligations.

NOTE 6 — BALANCE SHEET COMPONENTS

Accounts Receivable

	December 31, 2018	December 31, 2017
Accounts receivable	$ 27,325	$ 35,510
Less: Allowance for doubtful accounts	—	(837)
	$ 27,325	$ 34,673

Accounts receivable include amounts billed and unbilled as of the respective balance sheet dates, but net of platform commissions to the Company's Digital Storefronts.

The movement in the Company's allowance for doubtful accounts is as follows:

Description	Balance at Beginning of Year	Additions	Deductions	Balance at End of Year
Year ended December 31, 2018	$ 837	$ -	$ (837)	$ -
Year ended December 31, 2017	$ 837	$ -	$ -	$ 837
Year ended December 31, 2016	$ 716	$ 168	$ (47)	$ 837

The Company had no significant write-offs or recoveries during the years ended December 31, 2018, 2017, and 2016.

Property and Equipment

	December 31, 2018	December 31, 2017
Computer equipment	$ 7,281	$ 6,051
Furniture and fixtures	2,076	1,666
Software	3,394	3,294
Leasehold improvements	11,230	9,857
	23,981	20,868
Less: Accumulated depreciation and amortization	(10,093)	(6,238)
	$ 13,888	$ 14,630

Depreciation for the years ended December 31, 2018, 2017 and 2016 was $3,855, $3,195 and $2,947, respectively.

NOTE 7 – CASH, CASH EQUIVALENTS AND RESTRICTED CASH

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the consolidated balance sheets that sum to the total of the same amounts shown in the statements of cash flows:

	Year Ended December 31, 2018	2017	2016
Cash and cash equivalents at beginning of period	$ 63,764	$ 102,102	$ 180,542
Restricted cash at beginning of the period	602	1,312	1,498
Cash, cash equivalents and restricted cash at beginning of period	$ 64,366	$ 103,414	$ 182,040
Cash and cash equivalents at end of period	97,834	63,764	102,102
Restricted cash at end of the period	110	602	1,312
Cash, cash equivalents and restricted cash at end of period	$ 97,944	$ 64,366	$ 103,414

The Company's restricted cash is included in current assets as of December 31, 2018, and 2017, respectively. As of December 31, 2016, the Company's restricted cash is included in long term assets. As of December 31, 2018, restricted cash primarily includes deposits that the Company has provided for lines of credit to secure its obligations under contracts with certain brand licensors.

NOTE 8 — GOODWILL AND INTANGIBLE ASSETS

Intangible Assets

The Company's intangible assets were acquired primarily in various acquisitions as well as in connection with the purchase of certain trademarks, brand assets and licensed content. The carrying amounts and accumulated amortization expense of the acquired intangible assets, including the impact of foreign currency exchange translation, at December 31, 2018 and December 31, 2017 were as follows:

		December 31, 2018			December 31, 2017		
	Estimated Useful Life	**Gross Carrying Value ***	**Accumulated Amortization Expense ***	**Net Carrying Value ***	**Gross Carrying Value ***	**Accumulated Amortization Expense ***	**Net Carrying Value ***
Intangible assets amortized to cost of revenue:							
Titles, content and technology	3 - 5 yrs	$ 21,117	(12,203)	8,914	$ 40,317	$ (27,248)	$ 13,069
Carrier contract and related relationships	5 yrs	700	(648)	52	5,000	(3,398)	1,602
Trademarks	7 yrs	5,000	(4,821)	179	5,000	(4,107)	893
In-process research and development	N/A	—	—	—	2,700	—	2,700
Total intangibles assets		$ 26,817	$ (17,672)	$ 9,145	$ 53,017	$ (34,753)	$ 18,264
* Including impact of foreign exchange							

Acquisition-related intangibles included in the above table are finite-lived and are being amortized on a straight-line basis over their estimated lives, which approximate the pattern in which the economic benefits of the intangible assets are realized. The Company has included amortization of acquired intangible assets directly attributable to revenue-generating activities in cost of revenue.

During the year ended December 31, 2018, the Company decided not to proceed with further development of one of its games and recorded an impairment charge of $2,700 for the related in-process research and development in Impairment and amortization of intangible assets expense in its consolidated statement of operations. During the year ended December 31, 2017, the Company wrote-off fully amortized intangible assets with an aggregate gross book value and accumulated amortization value of $12,629 as these intangible assets were considered obsolete after the winding down of a foreign subsidiary.

During the years ended December 31, 2018, 2017 and 2016, the Company recorded amortization and impairment expense in the amounts of $9,119, $10,331 and $14,792, respectively, in cost of revenue. No amortization expense was recorded in operating expenses for the years ended December 31, 2018, 2017, and 2016.

As of December 31, 2018, the total expected future amortization related to intangible assets was as follows:

Year Ending December 31,	**Amortization to Be Included in Cost of Revenue**
2019	4,387
2020	3,258
2021	1,500
Total intangible assets	9,145

Goodwill

Goodwill for the periods indicated was as follows:

	December 31, 2018	December 31, 2017
Goodwill	$ 189,338	$ 189,943
Accumulated impairment losses	(73,111)	(73,111)
Balance as of January 1	116,227	116,832
Goodwill acquired during the year	—	573
Effects of foreign currency exchange	—	42
Write off from the sale of a foreign subsidiary	—	(1,220)
Balance as of period ended	$ 116,227	$ 116,227

In accordance with ASC 350, the Company's goodwill is not amortized but is tested for impairment on an annual basis or whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. Under ASC 350, the Company performs its annual impairment review of its goodwill balance as of September 30 or more frequently if triggering events occur.

The Company evaluates qualitative factors and overall financial performance to determine whether it is necessary to perform the first step of the two-step goodwill test. This step is referred to as "Step 0." Step 0 involves, among other qualitative factors, weighing the relative impact of factors that are specific to the reporting unit as well as industry and macroeconomic factors. After assessing those various factors, if it is determined that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, then the entity will need to proceed to the first step of the goodwill impairment test. ASC 350 requires a multiple-step approach to testing goodwill for impairment for each reporting unit annually, or whenever events or changes in circumstances indicate the fair value of a reporting unit is below its carrying amount. The first step measures for impairment by applying the fair value-based tests at the reporting unit level. The second step (if necessary) measures the amount of impairment by applying the fair value-based tests to individual assets and liabilities within each reporting unit. The fair value of the reporting units is estimated using a combination of the market approach, which utilizes comparable companies' data, and/or the income approach, which uses discounted cash flows.

During the third quarters of fiscal 2018 and 2017, the Company performed a "Step 0" qualitative assessment for its reporting unit. Based on the assessment, the Company concluded that it was more likely than not that the fair value of the reporting unit was greater than its carrying amount, and as a result, did not proceed to further impairment testing. Accordingly, the Company did not recognize an impairment of goodwill during the years ended December 31, 2018 and December 31, 2017.

During the three months ended December 31, 2017, the Company recorded a prepaid royalty impairment charge of $26,067. However, the Company's market capitalization remained well above its carrying value during that period. Based on the results of the interim goodwill impairment test, as of December 31, 2017, the Company concluded that its goodwill was not impaired.

The Company performed its annual impairment assessment as of September 30, 2016 and determined a Step 1 analysis was necessary due to a significant decline in its market capitalization and the significant impairment of prepaid royalties recorded during the three months ended September 30, 2016. Based on the results of the Step 1 analysis, the Company concluded that the fair value of the reporting unit was greater than the carrying value of the reporting unit based on a methodology that utilized both an income approach and a market approach. The Company considered valuation factors including its market capitalization, future discounted cash flows and an estimated control premium based upon a review of comparable market transactions. Accordingly, the Company did not recognize an impairment of goodwill during the year ended December 31, 2016.

Any material impairment of prepaid royalty and license fee assets in the future periods may require the Company to perform a goodwill impairment assessment. Such assessment could result in impairments to the Company's goodwill, which could adversely impact the Company's results of operations.

NOTE 9 — COMMITMENTS AND CONTINGENCIES

Leases

The Company leases office space under non-cancelable operating facility leases with various expiration dates through December 2027. Rent expense for the years ended December 31, 2018, 2017 and 2016 was $5,759, $4,472 and $4,827, respectively. The terms of the facility leases provide for rental payments on a graduated scale. The Company recognizes rent expense on a straight-line basis over the lease period, and has accrued for rent expense incurred but not paid. The deferred rent balance was $5,284 and $4,940 at December 31, 2018 and 2017, respectively, of which $5,164 and $4,850 was included within other long-term liabilities at December 31, 2018 and 2017, respectively.

In May 2017, the Company entered into a lease for approximately 57,000 square feet of office space for its San Francisco headquarters (the "Lease"). The term of the Lease began on July 1, 2017 and the Company's obligation to pay rent started on December 4, 2017 (the "Rent Commencement Date"). The term of the Lease will expire on the tenth anniversary of the Rent Commencement Date.

At December 31, 2018, future minimum lease payments under non-cancelable operating leases were as follows:

Year Ending December 31,	Minimum Operating Lease Payments
2019	$ 5,486
2020	5,219
2021	4,609
2022	4,637
2023 and thereafter	24,894
	$ 44,845

Minimum Guaranteed Royalties and Developer Commitments

The Company has entered into license and publishing agreements with various celebrities, Hollywood studios, athletes, sports organizations, and other well-known brands and properties to develop and publish games for mobile devices. Pursuant to some of these agreements, the Company is required to make minimum guaranteed royalty payments regardless of revenue generated by the applicable game, which may not be dependent on any deliverables. The significant majority of these minimum guaranteed royalty payments are recoupable against future royalty obligations that would otherwise become payable, or in certain circumstances, where not recoupable, are capitalized and amortized over the lesser of (1) the estimated life of the title incorporating licensed content or (2) the term of the license agreement.

At December 31, 2018, future unpaid minimum guaranteed royalty commitments were as follows:

Year Ending December 31,	Future Minimum Guarantee Commitments
2019	$ 5,004
2020	2,300
	$ 7,304

The amounts represented in the table above reflect the Company's minimum cash obligations for the respective calendar years, but do not necessarily represent the periods in which they will be expensed in the Company's consolidated financial statements.

Licensor commitments include $7,265 of commitments due to licensors that have been recorded in current and long-term liabilities and a corresponding amount in current and long-term assets because payment is not contingent upon

performance by the licensor. The classification of commitments between long-term and short-term is determined based on the timing of recoupment of earned royalties calculated on projected revenue for the licensed intellectual property games.

Income Taxes

As of December 31, 2018, unrecognized tax benefits have been netted against deferred tax assets and potential interest and penalties are classified within "other long-term liabilities" on the Company's consolidated balance sheets. As of December 31, 2018, the settlement of the Company's income tax liabilities could not be determined; however, the liabilities are not expected to become due within the next 12 months.

Indemnification Arrangements

The Company has entered into agreements under which it indemnifies each of its officers and directors during his or her lifetime for certain events or occurrences while the officer or director is or was serving at the Company's request in that capacity. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is unlimited; however, the Company has a director and officer insurance policy that limits its exposure and enables the Company to recover a portion of any future amounts paid. Accordingly, the Company had recorded no liabilities for these agreements as of December 31, 2018, and 2017.

In the ordinary course of its business, the Company includes standard indemnification provisions in most of its commercial agreements with Digital Storefronts and licensors. Pursuant to these provisions, the Company generally indemnifies these parties for losses suffered or incurred in connection with its games, including as a result of intellectual property infringement, viruses, worms and other malicious software, and legal or regulatory violations. The term of these indemnity provisions is generally perpetual after execution of the corresponding license agreement, and the maximum potential amount of future payments the Company could be required to make under these provisions is often unlimited. To date, the Company has not incurred costs to defend lawsuits or settle indemnified claims of these types. As a result, the Company believes the estimated fair value of these indemnity provisions is minimal. Accordingly, the Company had recorded no liabilities for these provisions as of December 31, 2018 and 2017.

Contingencies

From time to time, the Company is subject to various claims, complaints and legal actions in the normal course of business. The Company assesses its potential liability by analyzing specific litigation and regulatory matters using available information. The Company's estimate of losses is developed in consultation with inside and outside counsel, which involves a subjective analysis of potential results and outcomes, assuming various combinations of appropriate litigation and settlement strategies. After taking all of the above factors into account, the Company determines whether an estimated loss from a contingency should be accrued by assessing whether a loss is deemed reasonably probable and the amount can be reasonably estimated. The Company further determines whether an estimated loss from a contingency should be disclosed by assessing whether a material loss is deemed reasonably possible. Such disclosure will include an estimate of the additional loss or range of loss or will state that an estimate cannot be made.

On March 14, 2018, Jeffrey Tseng, the former Chief Executive Officer of Crowdstar, filed a complaint in the Superior Court of the State of California for the County of Santa Clara against Time Warner Inc., Rachel Lam, Intel Capital Corporation, Middlefield Ventures Inc. and Jose Blanc (collectively, the "Non-Glu Defendants"), the Company and additional yet-to-be-named defendants. The complaint alleges (i) breach of fiduciary duty by the Non-Glu Defendants, (ii) aiding and abetting breach of fiduciary duty by the Company and (iii) intentional interference with contract, intentional interference with prospective economic advantage, negligent interference with prospective economic advantage and unfair competition by each of the defendants, in each case relating to circumstances arising from the Company's acquisition of Crowdstar and the events leading up to the acquisition. Mr. Tseng is seeking compensatory damages and exemplary damages, each in an amount to be determined at trial, along with costs of suit, reasonable attorneys' fees and such other relief as the Court may deem proper. The first Case Management Conference, was held on July 20, 2018. The Company and the Non-Glu Defendants filed demurrers in response to Mr. Tseng's complaint on August 17, 2018, Mr. Tseng filed responses to these demurrers on September 17, 2018, and the Company and the Non-Glu Defendants filed reply briefs in support of their demurrers on October 15, 2018. A hearing with respect to the

demurrers was held on November 30, 2018. On January 24, 2019, the judge issued an order sustaining the demurrers on all six claims and gave Mr. Tseng 10 days' leave to amend his complaint. The Company believes that the allegations against it are without merit and intends to continue to vigorously defend itself in this matter.

The Company does not believe it is party to any currently pending litigation, the outcome of which is reasonably possible to have a material adverse effect on its operations, financial position or liquidity. However, the ultimate outcome of any litigation is uncertain and, regardless of outcome, litigation can have an adverse impact on the Company because of defense costs, potential negative publicity, diversion of management resources and other factors.

NOTE 10 — STOCKHOLDERS' EQUITY

Common Stock

At December 31, 2018, the Company was authorized to issue 250,000 shares of common stock. As of December 31, 2018, the Company had reserved 42,048 shares for future issuance under its stock plans and outstanding warrants.

Preferred Stock

At December 31, 2018, the Company was authorized to issue 5,000 shares of preferred stock.

Warrants to Purchase Common Stock

Celebrity Warrants

During 2014 and 2015, the Company issued warrants to celebrity licensors, and entities affiliated with one of the celebrity licensors, to purchase up to an aggregate of 1,600 shares of the Company's common stock, subject to adjustments for dividends, reorganizations and other common stock events (collectively, the "Celebrity Warrants"). With respect to Celebrity Warrants covering 1,000 shares, such warrants vested with respect to 50% of the underlying shares upon public announcement of the related license agreement, with the remaining shares vesting in equal monthly installments over 24 months from September 2017. With respect to warrants covering 500 shares issued in 2014, such warrants vested in equal monthly installments over 60 months term of the license agreement with the applicable celebrity, subject to full acceleration of vesting under specified circumstances, as stipulated in such license agreement. The acceleration condition for these warrants was satisfied in April 2017 which resulted in full vesting of the remaining warrants. With respect to the remaining Celebrity Warrants covering 100 shares issued in 2015, such warrants vest in equal monthly installments over 60 months term of the license agreement with the applicable celebrity.

As of December 31, 2018, Celebrity Warrants covering 1,600 shares of the Company's common stock were outstanding.

During the years ended December 31, 2018 and 2017, the Company recorded $1,046 and $569, respectively, of non-cash warrant related expense in cost of revenue as the mobile games featuring these celebrities licensors were not expected to generate meaningful revenue over their lifetime. The amount recognized as expense with respect to these Celebrity Warrants was immaterial for the year ended December 31, 2016.

MGM Warrants

In July 2013, the Company and MGM Interactive Inc. ("MGM") entered into a warrant agreement that provided MGM the right to purchase up to 3,333 shares of the Company's common stock subject to adjustments for dividends, reorganizations and other common stock events (the "MGM Warrant"). Warrants covering 1,667 shares of the Company's common stock expired in July 2018 as the conditions required for vesting of such warrants were not satisfied. No MGM Warrants were outstanding as of December 31, 2018.

The Company estimated the fair value of the warrants using the Black-Scholes valuation model and the weighted average assumptions noted in the following table:

	Year Ended December 31,		
	2018	2017	2016
Dividend yield	— %	— %	— %
Risk-free interest rate	2.53 %	1.65 %	1.76 %
Expected volatility	56.73 %	51.81 %	57.54 %
Expected term (in years)	3.51	3.52	4.78

Warrants outstanding at December 31, 2018 were as follows:

	Number of Shares Outstanding Under Warrant	Weighted Average Exercise Price per Share	Average Contractual Term
Warrants outstanding, December 31, 2016	4,267	$ 3.61	4.78
Granted	-	-	
Exercised	(1,000)	3.00	
Warrants outstanding, December 31, 2017	3,267	$ 3.79	5.33
Granted	-	-	
Exercised	-	-	
Expired	(1,667)	-	
Warrants outstanding, December 31, 2018	1,600	$ 4.61	5.44

During the years ended December 31, 2018, 2017, and 2016, warrant holders exercised warrants to purchase 0, 1,000, and 0 shares of the Company's common stock, respectively, and the Company received gross proceeds of $0, $3,000, and $0, respectively, in connection with these exercises.

NOTE 11 — STOCK OPTION AND OTHER BENEFIT PLANS

2007 Equity Incentive Plan

In 2007, the Company's Board of Directors adopted, and the Company's stockholders approved, the 2007 Equity Incentive Plan (the "2007 Plan"). The 2007 Plan permits the Company to grant stock options, RSUs, PSUs, PSOs and other stock-based awards to employees, non-employee directors and consultants.

In April 2017, the Company's Board of Directors approved, and in June 2017, the Company's stockholders approved, the Third Amended and Restated 2007 Equity Incentive Plan (the "Third Amended 2007 Plan"). The Third Amended 2007 Plan includes an increase of 8,000 shares in the aggregate number of shares of common stock authorized for issuance under the plan. It also includes (i) a minimum vesting requirement, pursuant to which each share that is subject to a stock-based award may not vest prior to the first anniversary of the date of grant of such stock-based award (subject to a carve-out of 5% of the shares reserved for issuance under the plan) and (ii) a limitation on the value of stock-based awards that may be granted to any non-employee director in any calendar year.

In April 2018, the Company's Board of Directors approved, and in June 2018, the Company's stockholders approved, the Fourth Amended and Restated 2007 Equity Incentive Plan (the "Fourth Amended 2007 Plan"). The Fourth Amended 2007 Plan includes an increase of 10,000 shares in the aggregate number of shares of common stock authorized for issuance under the plan. It also removed the limitation on the number of shares that can be issued in any calendar year to a participant.

The Company may grant options under the 2007 Plan at prices no less than 85% of the estimated fair value of the shares on the date of grant as determined by its Board of Directors, provided, however, that (i) the exercise price of an incentive stock option ("ISO") or non-qualified stock options ("NSO") may not be less than 100% or 85%, respectively, of the estimated fair value of the underlying shares of common stock on the grant date, and (ii) the exercise price of an

ISO or NSO granted to a 10% stockholder may not be less than 110% of the estimated fair value of the shares on the grant date. The fair value of the Company's common stock is determined by the last sale price of such stock on the Nasdaq Global Select Market on the date of determination. The stock options granted to employees generally vest with respect to 25% of the underlying shares one year from the vesting commencement date and with respect to an additional 1/48 of the underlying shares per month thereafter. Stock options granted during 2007 before October 25, 2007 and after June 4, 2015 have a contractual term of ten years and stock options granted on or after October 25, 2007 and before June 4, 2015 have a contractual term of six years.

As of December 31, 2018, 4,766 shares were available for future grants under the Fourth Amended 2007 Plan.

Performance-based equity awards

In 2017, the Company revised its executive compensation program to emphasize a pay-for-performance culture by (1) eliminating annual cash bonus plans for the Company's C-suite executives and corporate vice presidents and eliminating 50% of the annual cash bonus opportunity for the Company's creative leaders for 2018 and replacing these executives' respective annual cash bonus opportunity with PSOs and (2) having a significant portion of each of these executives' annual equity award be comprised of either PSOs and PSUs in addition to standard time vesting stock options.

In 2018, the Committee determined to continue to emphasize a pay-for-performance culture by (1) eliminating cash bonuses for C-Suite members for 2019 and replacing their cash bonus opportunity with PSOs and eliminating 50% of the annual cash bonus opportunity for the Company's creative leaders and replacing their cash bonus opportunity with PSUs; (2) having a significant portion of C-Suite members' annual equity award be comprised of PSOs in addition to standard time vesting stock options; (3) having a significant portion of corporate vice presidents' annual equity award be comprised of PSUs in addition to standard time vesting stock options; and (4) having each creative leader's annual equity award be comprised solely of PSUs.

The Committee awarded PSUs to certain key employees in the Company. These performance-based awards are subject to the achievement of specified annual performance goals. They become eligible to vest only if the applicable performance goals are achieved and will vest only if the grantee remains employed with the Company through each applicable vesting date. The fair value of these awards is estimated on the date of grant. The PSOs have a contractual term of 10 years. If the performance goals are not met as of the end of the performance period, no compensation expense is recognized and any previously recognized expense is reversed. The expected cost is based on the awards that are probable to vest and is recognized over the service period.

The performance-based awards issued in lieu of cash bonuses in 2017 and 2018 will vest, if the applicable performance goals are achieved, on February 15, 2019 and February 15, 2020, respectively. The performance-based awards issued as part of annual equity awards in 2017 and 2018 will vest, if the applicable performance goals are achieved, ratably in three annual tranches starting from February 15, 2019 and February 15, 2020, respectively. The number of shares that may vest under these programs ranges from 0% to 200% of the target amounts and will be determined based on the achievement of specified annual performance goals. The PSUs awarded to certain key non-executive employees will vest in March 2019 and September 2019 based on the achievement of specified annual performance goals.

The awards under these programs were granted under the 2007 Plan.

2007 Employee Stock Purchase Plan

In 2007, the Company's Board of Directors adopted and the Company's stockholders approved, the 2007 Employee Stock Purchase Plan (the "2007 Purchase Plan"). The Company initially reserved 667 shares of its common stock for issuance under the 2007 Purchase Plan. On each January 1 for the first eight calendar years after the first offering date, the aggregate number of shares of the Company's common stock reserved for issuance under the 2007 Purchase Plan was increased automatically by the number of shares equal to 1% of the total number of outstanding shares of the Company's common stock on the immediately preceding December 31, provided that the Board of Directors had the power to reduce the amount of the increase in any particular year and provided further that the aggregate number of shares issued over the

term of this plan may not exceed 5,333. The 2007 Purchase Plan permits eligible employees, including employees of certain of the Company's subsidiaries, to purchase common stock at a discount through payroll deductions during defined offering periods. The price at which the stock is purchased is equal to the lower of 85% of the fair market value of the common stock at the beginning of an offering period or after a purchase period ends.

In January 2009, the 2007 Purchase Plan was amended to provide that the Compensation Committee of the Company's Board of Directors may fix a maximum number of shares that may be purchased in the aggregate by all participants during any single offering period (the "Maximum Offering Period Share Amount"). The Compensation Committee may raise or lower the Maximum Offering Period Share Amount. The Compensation Committee established the Maximum Offering Period Share Amount of 500 shares for the offering period that commenced on February 15, 2009 and ended on August 14, 2009, and a Maximum Offering Period Share Amount of 200 shares for each offering period thereafter. In February 2016, the Committee increased the Maximum Offering Period Share Amount for the offering period that started on February 22, 2016 and for each subsequent offering period to 450 shares.

In April 2017, the Company's Board of Directors approved, and in June 2017, the Company's stockholders approved the Amended and Restated 2007 Employee Stock Purchase Plan (the "Amended 2007 Purchase Plan"). The Amended 2007 Purchase Plan includes an increase of 4,000 shares in the aggregate number of shares of common stock authorized for issuance under the plan and removal of the expiration date of the plan.

As of December 31, 2018, 3,515 shares were available for issuance under the 2007 Purchase Plan.

2008 Equity Inducement Plan

In March 2008, the Company's Board of Directors adopted the 2008 Equity Inducement Plan (the "Inducement Plan") to augment the shares available under its existing 2007 Plan. The Company did not seek stockholder approval for the Inducement Plan. As such, awards under the Inducement Plan were granted in accordance with Nasdaq Listing Rule 5635(c)(4) and only to persons not previously an employee or director of the Company, or following a bona fide period of non-employment, as an inducement material to such individuals entering into employment with the Company.

The Inducement Plan expired by its terms in March 2018. Accordingly, as of December 31, 2018, 0 shares were reserved for future grants under the Inducement Plan.

2018 Equity Inducement Plan

In April 2018, the Compensation Committee of the Company's Board of Directors adopted the 2018 Equity Inducement Plan (the "2018 Plan") to replace the Inducement Plan. The Company did not seek stockholder approval for the 2018 Plan. As such, awards under the Inducement Plan will be granted in accordance with Nasdaq Listing Rule 5635(c)(4) and only to persons not previously an employee or director of the Company, or following a bona fide period of non-employment, as an inducement material to such individuals entering into employment with the Company. The Company may grant NSOs under the Inducement Plan at prices less than 100% of the fair value of the shares on the date of grant, at the discretion of its Board of Directors. The fair value of the Company's common stock is determined by the last sale price of such stock on the Nasdaq Global Select Market on the date of determination. The Company initially reserved 400 shares of common stock for issuance under the 2018 Plan.

As of December 31, 2018, 374 shares were reserved for future grants under the 2018 Inducement Plan.

RSU Activity

A summary of the Company's RSU activity is as follows:

	Number of Units Outstanding	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Awarded and unvested, December 31, 2015	7,344	$ 4.40		
Granted	5,094	$ 2.52		
Vested	(2,422)	$ 4.51		
Forfeited	(1,792)	$ 3.86		
Awarded and unvested, December 31, 2016	8,224	$ 3.33		
Granted	2,360	$ 2.31		
Vested	(2,863)	$ 3.45		
Forfeited	(1,909)	$ 3.01		
Awarded and unvested, December 31, 2017	5,812	$ 2.96		
Granted	278	$ 5.90		
Vested	(2,648)	$ 3.24		
Forfeited	(421)	$ 2.71		
Awarded and unvested, December 31, 2018	3,021	$ 3.01	0.96	$ 24,348

PSU Activity

The following table summarizes the Company's PSU activity:

	Number of Units Outstanding	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Awarded and unvested, December 31, 2016	-	$ -		
Granted	661	$ 3.59		
Vested	-	$ -		
Forfeited	-	$ -		
Awarded and unvested, December 31, 2017	661	$ 3.59		
Granted	2,909	$ 5.85		
Vested	-	$ -		
Forfeited	(40)	$ 4.03		
Awarded and unvested, December 31, 2018	3,530	$ 5.45	1.53	$ 28,481
PSUs expected to vest at December 31, 2018	2,040	5.25	0.80	$ 16,463

PSO Activity

The following table summarizes the Company's PSO activity:

	Number of Share Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Balance as of December 31, 2016	-	$ -		
Granted	4,246	$ 3.60		
Vested	-	$ -		
Forfeited	(76)	$ 3.97		
Balance as of December 31, 2017	4,170	$ 3.59		
Granted	2,737	$ 5.87		
Vested	-	$ -		
Forfeited	(151)	$ 3.59		
Balance as of December 31, 2018	6,756	$ 4.51	9.14	$ 24,025
PSOs expected to vest at December 31, 2018	5,297	4.27	8.83	$ 20,135
PSO exercisable at December 31, 2018	-	-	-	$ -

Stock Option Activity

The following table summarizes the Company's stock option activity:

	Options Outstanding			
	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Balances at December 31, 2015	7,164	$ 3.73		
Options granted	10,347	$ 2.16		
Options canceled	(1,273)	$ 4.04		
Options exercised	(425)	$ 1.55		
Balances at December 31, 2016	15,813	$ 2.74		
Options granted	5,346	$ 3.10		
Options canceled	(2,716)	$ 3.16		
Options exercised	(1,511)	$ 2.73		
Balances at December 31, 2017	16,932	$ 2.78		
Options granted	6,092	$ 4.82		
Options canceled	(1,213)	$ 3.54		
Options exercised	(3,320)	$ 2.88		
Balances at December 31, 2018	18,491	$ 3.39	8.06	$ 86,581
Options exercisable at December 31, 2018	6,303	$ 2.83	6.81	$ 33,010

The Company has computed the aggregate intrinsic value amounts disclosed in the above table based on the difference between the original exercise price of the options and the fair value of the Company's common stock of $8.07 per share at December 31, 2018. The total intrinsic value of awards exercised during the years ended December 31, 2018, 2017 and 2016 was $10,957, $1,732, and $444, respectively.

Stock-Based Compensation

The Company recognizes stock-based compensation expense in accordance with ASC 718, and has estimated the fair value of each option award on the grant date using the Black-Scholes option valuation model and the weighted average assumptions noted in the following tables.

Performance Stock Options

	Year Ended December 31,		
	2018	**2017**	**2016**
Dividend yield	— %	— %	— %
Risk-free interest rate	2.89 %	2.07 %	— %
Expected volatility	60.2 %	63.3 %	— %
Expected term (years)	5.98	5.81	—

Stock Options

	Year Ended December 31,		
	2018	**2017**	**2016**
Dividend yield	— %	— %	— %
Risk-free interest rate	2.63 %	1.76 %	1.39 %
Expected volatility	57.9 %	57.8 %	52.3 %
Expected term (years)	4.00	4.00	4.00

The expected term of stock options gave consideration to early exercises, post-vesting cancellations and the options' contractual term ranging from 6 to 10 years. The Company does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term for the PSOs as the Company has not granted such awards in the past. As a result, the Company used the simplified method to calculate the expected term estimate based on the vesting and contractual terms of the PSOs. Under the simplified method, the expected term is equal to the average of the stock-based awards vesting period and their contractual term. The risk-free interest rate for the expected term of the option is based on the U.S. Treasury Constant Maturity Rate as of the date of grant. The Company based its expected volatility on its own historical volatility for the year ended December 31, 2018 and 2017. For the year ended December 31, 2016, the Company based its expected volatility on its own historical volatility and the historical volatility of a peer group of publicly traded entities. The weighted-average fair value of stock options granted during the year ended December 31, 2018, 2017 and 2016 was $2.25, $1.42, and $0.90 per share, respectively. The weighted average fair value of the PSOs granted during the year ended December 31, 2018 and December 31, 2017 was $3.38 and $2.09, respectively.

The cost of RSUs and PSUs are determined using the fair value of the Company's common stock based on the quoted closing price of the Company's common stock on the date of grant. RSUs typically vest and are settled over approximately a four-year period with 25% of the shares vesting on or around the one-year anniversary of the grant date and the remaining shares vesting quarterly thereafter. Compensation cost is amortized on a straight-line basis over the requisite service period.

For the year ended December 31, 2016, the Company calculated employee stock-based compensation expense based on awards ultimately expected to vest and reduced it for actual forfeitures. After the adoption of ASU 2016-09 on January 1, 2017 the Company accounted for forfeitures as they occurred.

The following table summarizes the consolidated stock-based compensation expense by line items in the consolidated statement of operations:

	Year Ended December 31,		
	2018	**2017**	**2016**
Research and development	$ 12,807	$ 6,460	$ 4,567
Sales and marketing	2,795	1,289	1,091
General and administrative	8,990	7,314	7,605
Total stock-based compensation expense	$ 24,592	$ 15,063	$ 13,263

The following table summarizes total compensation expense related to unvested awards not yet recognized as of December 31, 2018:

	Unrecognized Compensation Expense for Unvested Awards
Stock options	$ 18,089
RSUs	7,739
PSUs (1)	4,515
PSOs (1)	5,767
Total unrecognized compensation expense	$ 36,110

(1) The unrecognized compensation expense for PSOs and PSUs vesting in FY2021 and FY2022 is not included in the table above as the Company does not have a reasonable basis upon which to estimate the vesting probability of such awards in those future periods.

The unrecognized compensation expense related to stock options and RSUs will be recognized over a weighted average period of 2.63 years and 1.76 years, respectively. The unrecognized stock compensation expense related to unvested PSOs and PSUs will be recognized over a weighted average period of 0.46 and 0.72 years, respectively.

Stock-based compensation expense in the year ended December 31, 2018, was approximately $24,592 (comprising approximately $6,386 related to stock options, $9,195 related to performance-based awards, $8,084 related to RSUs and $927 related to the 2007 Purchase Plan).

Stock-based compensation expense in the year ended December 31, 2017, was approximately $15,063 (comprising approximately $3,585 related to stock options, $790 related to performance-based awards, $10,127 related to RSUs and $561 related to the 2007 Purchase Plan).

Stock-based compensation expense in the year ended December 31, 2016, was approximately $13,263 (comprising approximately $2,275 related to stock options, $0 related to performance-based awards, $10,255 related to RSUs and $733 related to the 2007 Purchase Plan).

Consolidated net cash proceeds from option exercises were $5,643, $2,564 and $294 for the year ended December 31, 2018, 2017 and 2016, respectively. The Company realized no significant income tax benefit from stock option exercises during the year ended December 31, 2018, 2017 and 2016. As permitted by ASC 718, the Company has deferred the recognition of its excess tax benefit from non-qualified stock option exercises.

401(k) Defined Contribution Plan

The Company sponsors a 401(k) defined contribution plan covering all employees. The Company does not match the contributions made by its employees.

NOTE 12 — INCOME TAXES

The components of loss before income taxes by tax jurisdiction were as follows:

	Year Ended December 31,		
	2018	2017	2016
United States	$ (12,396)	$ (97,503)	$ (87,085)
Foreign	(254)	(893)	(656)
Loss before income taxes	$ (12,650)	$ (98,396)	$ (87,741)

The components of income tax benefit/(provision) were as follows:

	Year Ended December 31,		
	2018	2017	2016
Current:			
Federal	$ (96)	$ 947	$ 127
State	(8)	(10)	(6)
Foreign	(500)	(521)	(86)
	(604)	416	35
Deferred:			
Federal	—	294	328
Foreign	55	116	(62)
	55	410	266
Total:			
Federal	(96)	1,241	455
State	(8)	(10)	(6)
Foreign	(445)	(405)	(148)
	$ (549)	$ 826	$ 301

The difference between the actual rate and the federal statutory rate was as follows:

	Year Ended December 31,		
	2018	2017	2016
Tax at federal statutory rate	21.0 %	34.0 %	34.0 %
Meals and Entertainment	(2.0)	(0.1)	(0.2)
Research and development credit	21.3	2.5	0.9
Stock-based compensation	17.9	(2.0)	(2.9)
Revenue from contracts with customers	(14.6)	—	—
Others	(3.1)	0.6	(1.3)
Global intangible low-taxed income	(1.7)	—	—
Valuation allowance	(43.1)	(34.2)	(30.2)
Effective tax rate	(4.3)%	0.8 %	0.3 %

Deferred tax assets and liabilities consist of the following:

	December 31, 2018			December 31, 2017		
	US	Foreign	Total	US	Foreign	Total
Deferred tax assets:						
Fixed assets	$ —	$ 35	$ 35	$ 46	$ 36	$ 82
Net operating loss carryforwards	50,119	97	50,216	50,902	608	51,510
Accruals, reserves and other	10,853	172	11,025	14,838	101	14,939
Foreign tax credit	5,118	128	5,246	5,895	151	6,046
Stock-based compensation	4,787	—	4,787	2,476	—	2,476
Research and development credit	17,945	—	17,945	14,317	—	14,317
Capitalized research and development	2,835	—	2,835	—	—	—
Other	2,888	—	2,888	2,646	—	2,646
Total deferred tax assets	$ 94,545	$ 432	$ 94,977	$ 91,120	$ 896	$ 92,016
Deferred tax liabilities:						
Fixed assets	$ (54)	$ (19)	$ (73)	$ —	$ (16)	$ (16)
Intangible assets	(513)	—	(513)	(2,112)	—	(2,112)
Net deferred tax assets	93,978	413	94,391	89,008	880	89,888
Less valuation allowance	(93,978)	(4)	(93,982)	(89,008)	(503)	(89,511)
Net deferred tax assets	$ —	$ 409	$ 409	$ —	$ 377	$ 377

The Company has not provided deferred taxes on unremitted earnings attributable to foreign subsidiaries, excluding China, because their earnings are intended to be reinvested indefinitely. No deferred tax asset was recognized since the Company does not believe the deferred tax asset will be realized in the foreseeable future. The amount of accumulated foreign earnings of the Company’s foreign subsidiaries totaled $2,000 as of December 31, 2018. If the Company's foreign earnings were repatriated, additional tax expense might result. The Company determined that the

calculation of the amount of unrecognized deferred tax liability related to these cumulative unremitted earnings attributable to foreign subsidiaries is not practicable.

The Company recorded a release of its valuation allowance of $0, $294, and $328 during 2018, 2017, and 2016, respectively. The 2017 and 2016 releases were associated with the acquisitions of Dairy Free and Crowdstar in August 2017 and November 2016, respectively. Pursuant to ASC 805-740, changes in the Company's valuation allowance that stem from a business combination should be recognized as an element of the Company's deferred income tax expense or benefit. The Company previously recognized a valuation allowance against its net operating loss carryforwards and determined that it should be able to utilize the benefit of those net operating losses against the deferred tax liabilities of Dairy Free and Crowdstar, respectively; therefore, it has partially released its pre-existing valuation allowance.

In accordance with ASC 740 and based on all available evidence on a jurisdictional basis, the Company believes that it is more likely than not that its deferred tax assets will not be utilized and has recorded a full valuation allowance against its net deferred tax assets in each of its jurisdictions except for entities in Canada, China and India. The Company assesses on a periodic basis the likelihood that it will be able to recover its deferred tax assets. The Company considers all available evidence, both positive and negative, including historical levels of income or losses, expectations and risks associated with estimates of future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for the valuation allowance. If it is not more likely than not that the Company expects to recover its deferred tax assets, the Company will increase its provision for taxes by recording a valuation allowance against the deferred tax assets that it estimates will not ultimately be recoverable. The available negative evidence at December 31, 2018 and 2017 included historical and projected future operating losses. As a result, the Company concluded that an additional valuation allowance of $4,471 and $18,240 net of the described releases, was required to reflect the change in its deferred tax assets prior to valuation allowance during 2018 and 2017, respectively. As of December 31, 2018 and 2017, the Company considered it more likely than not that its deferred tax assets would not be realized within their respective carryforward periods.

At December 31, 2018, the Company had net operating loss carryforwards of approximately $218,163 and $94,641 for federal and state tax purposes, respectively. These carryforwards will expire at various times between 2019 and 2038. In addition, the Company has research and development tax credit carryforwards of approximately $17,473 for federal income tax purposes and $19,346 for California tax purposes. The federal research and development tax credit carryforwards will begin to expire in 2023. The California state research credit will carry forward indefinitely. The Company has approximately $5,108 of foreign tax credits that will begin to expire in 2019. The Company's ability to use its net operating loss carryforwards and federal and state tax credit carryforwards to offset future taxable income and future taxes, respectively, may be subject to restrictions attributable to equity transactions that result in changes in ownership as defined by Internal Revenue Code Section 382.

A reconciliation of the total amounts of unrecognized tax benefits was as follows:

	Year Ended December 31,	
	2018	**2017**
Beginning balance	$ 13,391	$ 11,011
Reductions of tax positions taken during previous years	(59)	(260)
Additions based on uncertain tax positions related to the current period	3,996	2,621
Additions based on uncertain tax positions related to prior periods	3,400	—
Cumulative translation adjustment	(10)	19
Ending balance	$ 20,718	$ 13,391

The total unrecognized tax benefits as of December 31, 2018 and 2017 included approximately $20,548 and $13,152, respectively, of unrecognized tax benefits that have been netted against deferred tax assets. As of December 31, 2018, the Company does not expect the unrecognized tax benefits, if recognized, to have a material impact on its financial statements. At December 31, 2018, the Company does not anticipate that the liability for uncertain tax positions, excluding interest and penalties, that could decrease within the next twelve months due to the expiration of statutes of limitation in foreign jurisdictions in which the Company does business will have a material impact on its financial statements.

The Company's policy is to recognize interest and penalties related to unrecognized tax benefits in income tax expense. The Company has accrued $150 of interest and penalties on uncertain tax positions as of December 31, 2018, as compared to $131 as of December 31, 2017. Approximately $27, $96 and $128 of accrued interest and penalty expense related to estimated obligations for unrecognized tax benefits was recognized during 2018, 2017 and 2016, respectively.

The Company is subject to taxation in the United States and various foreign jurisdictions. The material jurisdictions subject to examination by tax authorities are primarily the State of California, the United States, Canada, China and India. The Company's federal tax returns are open by statute for tax years 1998 and California tax returns are open by statute for tax years 2003 and forward and could be subject to examination by the tax authorities. The Company's China income tax returns are open by statute for tax years 2015 and forward.

On December 22, 2017, the Tax Cuts and Jobs Act ("The Act") was enacted, which made significant changes to various areas of the U.S. federal income tax law, including lowering of the U.S. corporate tax rate from 35 percent to 21 percent. U.S. GAAP accounting for income taxes requires that the Company record the impacts of any tax law change on its deferred income taxes in the quarter that the tax law change is enacted. Due to the complexities involved in accounting for the enactment of the Act, in January 2018, SEC staff issued *Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act* ("SAB 118") to provide guidance for companies that have not completed their accounting for the income tax effects of The Act in the period of enactment. Specifically, *SAB 118* states that companies that have not completed accounting for the effects of The Act by financial reporting deadlines may report provisional amounts based on reasonable estimates for items for which the accounting is incomplete. Those provisional amounts will be subject to adjustment during a measurement period that begins in the reporting period that includes The Act's enactment date and ends when a company has obtained, prepared and analyzed the information needed to complete the accounting requirements under *ASC 740 Income Taxes*. The measurement period should not extend beyond one year from the enactment date. Furthermore, *SAB 118* states that if a company cannot make a reasonable estimate for an income tax effect, it should not account for that effect until it can make such an estimate.

In accordance with *SAB 118,* the Company recorded a provisional amount of a one-time negative adjustment of $34.9 million for the re-measurement of deferred tax assets and liabilities, offset by a one-time positive adjustment of $34.9 million for the re-measurement of valuation allowance maintained on these items in its consolidated financial statements for the year ended December 31, 2017. Immaterial adjustments made to the provisional amounts allowed under SAB 118 were identified and recorded as discrete adjustments during the year ended December 31, 2018. The accounting was completed in the fourth quarter of 2018.

The Act subjects a U.S. shareholder to tax on global intangible low-taxed income ("GILTI") earned by certain foreign subsidiaries. The FASB Staff Q&A, Topic 740, No. 5, Accounting for Global Intangible Low-Taxed Income, states that an entity can make an accounting policy election to either recognize deferred taxes for temporary basis differences expected to reverse as GILTI in future years or to provide for the tax expense related to GILTI in the year the tax is incurred as a period expense. Because the Company was still evaluating the GILTI provisions as of December 31, 2017, no GILTI-related deferred amounts were recorded in 2017. After further consideration in the current year, the Company has elected to account for GILTI as a period cost in the year the tax is incurred.

The one-time Transition Tax is based on the Company's total post-1986 earnings and profits (E&P), which were previously deferred from U.S. income tax under U.S. tax law. As of December 31, 2017, the Company did not expect to have any transition tax liability. Upon further analysis of the Act, Notices and Regulations issued and proposed by the U.S. Department of the Treasury and the Internal Revenue Service, the Company finalized its calculations of the Transition Tax liability and maintains that the Company is not subject to the one-time Transition Tax.

Prior to the enactment of The Act, the Company had asserted indefinite reinvestment on all of its undistributed earnings from foreign subsidiaries. As a result of the enactment of The Act, the Company has reevaluated its historic assertion and continue to assert these earnings to be indefinitely reinvested.

Based on its review of The Act, immaterial adjustments made to the provisional amounts allowed under SAB 118 were identified and recorded as discrete adjustments during the year ended December 31, 2018. In addition, the Company expects that the new legislation will not have a material impact on its future operational results as long as the Company

maintains a full valuation allowance. It is the Company's policy to record valuation allowances when necessary to reduce deferred tax assets to the amount that it expects to realize. Currently, the Company maintains a full valuation allowance for its deferred tax assets in the U.S. and Hong Kong.

NOTE 13 — SEGMENT REPORTING

ASC 280, *Segment Reporting* ("ASC 280"), establishes standards for reporting information about operating segments. It defines operating segments as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision-maker, or decision-making group, in deciding how to allocate resources and in assessing performance. The Company's Chief Executive Officer, who is also chief operating decision maker, makes decisions and manages the Company's operations as one operating segment. The financial information reviewed by him is included within one operating segment for purposes of allocating resources and evaluating financial performance.

	Year Ended December 31,		
	2018	2017	2016
United States of America	$ 280,264	$ 216,468	$ 149,031
Americas, excluding the United States	21,903	15,976	9,127
EMEA	41,585	33,180	24,303
APAC	22,809	21,203	18,120
	$ 366,561	$ 286,827	$ 200,581

The Company attributes its long-lived assets, which primarily consist of property and equipment, to a country primarily based on the physical location of the assets. Property and equipment, net of accumulated depreciation and amortization, summarized by geographic location was as follows:

	December 31,	
	2018	2017
United States of America	$ 12,653	$ 13,030
Rest of the World	1,235	1,600
	$ 13,888	$ 14,630

NOTE 14 — RESTRUCTURING

During the year ended December 31, 2016, the Company recorded $2,279 of restructuring charges related to employee termination costs in the Company's Long Beach, California; San Francisco, California; Bellevue, Washington; and Beijing, China offices, and lease termination costs for the Company's Bellevue, Washington and Beijing, China offices. During the year ended December 31, 2017, the Company recorded $6,019 of restructuring charge related to employee and lease termination costs in the Company's Bellevue, Washington; Long Beach, California; San Francisco, California; Portland, Oregon; and Beijing, China offices. During the year ended December 31, 2018, the Company

recorded $240 of restructuring charges related to employee and lease termination costs in the Company’s Long Beach, California office.

	Restructuring Workforce	Restructuring Facility	Restructuring Other	Restructuring Total
Balance as of December 31, 2015	$ 310	$ —	$ 31	$ 341
Charges to operations	1,491	$ 740	$ 48	$ 2,279
Non-cash charges/adjustments	—	122	—	122
Charges settled in cash	(1,801)	(591)	(79)	(2,471)
Balance as of December 31, 2016	$ —	$ 271	$ —	$ 271
Charges to operations	4,319	1,700	—	6,019
Non-cash charges/adjustments	146	44	—	190
Charges settled in cash	(4,322)	(1,399)	—	(5,721)
Balance as of December 31, 2017	$ 143	$ 616	$ —	$ 759
Charges to operations	160	80	—	240
Charges settled in cash	(303)	(402)	—	(705)
Balance as of December 31, 2018	$ —	$ 294	$ —	$ 294

NOTE 15 – QUARTERLY FINANCIAL DATA (unaudited, in thousands)

The following table sets forth unaudited quarterly consolidated statements of operations data for 2018 and 2017. The Company derived this information from its unaudited consolidated financial statements, which it prepared on the same basis as its audited consolidated financial statements contained in this report. In its opinion, these unaudited statements include all adjustments, consisting only of normal recurring adjustments that the Company considers necessary for a fair statement of that information when read in conjunction with the consolidated financial statements and related notes included elsewhere in this report. The operating results for any quarter should not be considered indicative of results for any future period.

	For the Three Months Ended							
	2018				2017			
	March 31,	June 30,	September 30,	December 31,	March 31,	June 30,	September 30,	December 31,
	(In thousands)							
Revenue	$ 81,443	$ 90,193	$ 99,285	$ 95,640	$ 56,788	$ 68,679	$ 81,148	$ 80,212
Cost of revenue:								
Platform commissions, royalties and other	29,167	32,386	34,384	32,508	20,860	24,761	28,898	28,980
Impairment of prepaid royalties and minimum guarantees	99 (b)	—	—	612 (b)	792	—	464	26,067
Impairment and amortization of intangible assets	1,467	1,468	4,167	2,017	3,262	3,171	2,363	1,535
Total cost of revenue	30,733	33,854	38,551	35,137	24,914	27,932	31,725	56,582
Gross profit	50,710	56,339	60,734	60,503	31,874	40,747	49,423	23,630
Operating expenses:								
Research and development	22,710	22,832	23,839	25,553	25,032	23,989	22,004	21,395
Sales and marketing	26,810	29,741	28,874	28,435	17,287	30,952	29,776	26,341
General and administrative	7,890	7,608	8,095	8,074	8,497	8,678	8,698	8,552
Restructuring charge	80 (a)	—	160 (a)	—	3,712	926	1,402	(21)
Total operating expenses	57,490	60,181	60,968	62,062	54,528	64,545	61,880	56,267
Loss from operations	(6,780)	(3,842)	(234)	(1,559)	(22,654)	(23,798)	(12,457)	(32,637)
Interest and other income/(expense), net	(251)	(366)	96	286	(122)	53	(271)	(6,510)
Loss before income taxes	(7,031)	(4,208)	(138)	(1,273)	(22,776)	(23,745)	(12,728)	(39,147)
Income tax benefit/(provision)	(175)	(207)	(118)	(49)	12	177	1,057	(420)
Net loss	$ (7,206)	$ (4,415)	$ (256)	$ (1,322)	$ (22,764)	$ (23,568)	$ (11,671)	$ (39,567)
Net Loss per share								
Basic	$ (0.05)	$ (0.03)	$ (0.00)	$ (0.01)	$ (0.17)	$ (0.17)	$ (0.09)	$ (0.29)
Diluted	$ (0.05)	$ (0.03)	$ (0.00)	$ (0.01)	$ (0.17)	$ (0.17)	$ (0.09)	$ (0.29)

(a) Includes restructuring charges relating to employee termination costs in the Company’s Long Beach office.

(b) These charges are related to impairment of prepaid guaranteed royalties for certain celebrity license agreements, and certain other prepaid royalties.

NOTE 16 – RELATED PARTY TRANSACTIONS

The Company and an affiliate of Tencent, one of the Company's principal stockholders, entered into an agreement in November 2015 pursuant to which, the Company agreed, subject to certain conditions, to pay in the aggregate, up to $15,000 in recoupable advanced royalties and non-recoupable license fees related to the Company's *Rival Fire* title, which amounts were fully paid by December 31, 2016.

During the year ended December 31, 2016, the Company recorded an impairment of $14,463 for un-recouped advanced royalties and non-recoupable license fees that were paid to an affiliate of Tencent, due to the underperformance of the Company's *Rival Fire* title which launched during the third quarter of 2016 and the negligible cash flows anticipated for the remaining contractual life of these assets.

Item 9. ***Changes in and Disagreements with Accountants on Accounting and Financial Disclosure***

None.

Item 9A. ***Controls and Procedures***

Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15 under the Exchange Act. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Based on our evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2018, our disclosure controls and procedures are designed to provide reasonable assurance and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2018 based on the guidelines established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on the results of this evaluation, our management has concluded that our internal control over financial reporting was effective as of December 31, 2018 to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with generally accepted accounting principles.

The effectiveness of our internal control over financial reporting as of December 31, 2018 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report appearing on page 70.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-

15(f) under the Exchange Act) during the three months ended December 31, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. ***Other Information***

None

PART III

Item 10. ***Directors, Executive Officers and Corporate Governance***

The information required for this Item is incorporated by reference from our Proxy Statement to be filed for our 2019 Annual Meeting of Stockholders. For information with respect to our executive officers, see "Executive Officers" at the end of Part I, Item 1 of this report.

We maintain a Code of Business Conduct and Ethics that applies to all employees, officers and directors. Our Code of Business Conduct and Ethics is published on our website at www.glu.com/investors. We disclose on our website amendments to certain provisions of our Code of Business Conduct and Ethics, or waivers of such provisions granted to executive officers and directors.

Item 11. ***Executive Compensation***

The information required for this Item is incorporated by reference from our Proxy Statement to be filed for our 2019 Annual Meeting of Stockholders.

Item 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters***

The information set forth in the section titled "Security Ownership of Certain Beneficial Owners and Management" contained in our Proxy Statement to be filed for our 2019 Annual Meeting of Stockholders is incorporated herein by reference.

Equity Compensation Plan Information

The following table sets forth certain information, as of December 31, 2018, concerning securities authorized for issuance under all of our equity compensation plans: our 2007 Equity Incentive Plan (the "2007 Plan"), 2007 Employee Stock Purchase Plan (the "ESPP"), 2008 Equity Inducement Plan (the "2008 Inducement Plan"), and 2018 Equity Inducement Plan (the "2018 Inducement Plan").

	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted Average Exercise Price of Outstanding Options, Warrants and Rights (1)	Number of Securities Remaining Available for Future Issuance Under (Excluding Securities Reflected in Column (a))
	(a)	(b)	(c)
Equity compensation plans approved by security holders	$ 27,321,781	$ 3.90	8,281,340 (2)
Equity compensation plans not approved by security holders	4,470,992 (3)	$ 2.49	373,600 (4)
Total	31,792,773		8,654,940

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(1) The weighted average exercise price does not take into account the shares subject to outstanding RSUs and PSUs, which have no exercise price.

(2) Represents 4,766,182 shares available for issuance under our the 2007 Plan, which plan permits the grant of incentive and non-qualified stock options (including PSOs), stock appreciation rights, restricted stock, stock awards and RSUs; and 3,515,158 shares available for issuance under the ESPP.

(3) Represents outstanding options and RSUs under the 2008 Inducement Plan and 2018 Inducement Plan.

(4) Represents shares available for issuance under the 2018 Inducement Plan, under which we may only grant non-qualified

stock options and RSUs.

The Compensation Committee of our Board of Directors adopted the 2008 Inducement Plan in March 2008 to augment the shares available under our 2007 Plan, and in April 2018, the Compensation Committee adopted the 2018 Inducement Plan to replace the 2008 Inducement Plan which expired by its terms in March 2018. We have not sought stockholder approval for either the 2008 Inducement Plan or the 2018 Inducement Plan. As such, awards under these plans have been granted in accordance with Nasdaq Listing Rule 5635(c)(4) and only to persons not previously an employee or director, or following a bona fide period of non-employment, as an inducement material to such individuals entering into employment with us. As of December 31, 2018, we had reserved a total of 400,000 shares under the 2018 Inducement Plan, of which 26,400 shares were subject to outstanding stock options and 373,600 shares remained available for issuance. In addition, as of December 31, 2018 0 shares issued from our 2008 Inducement Plan remained subject to outstanding stock options remained outstanding.

We may grant non-qualified stock options under the 2018 Inducement Plan at prices less than 100% of the fair value of the shares on the date of grant, at the discretion of our Board of Directors. The fair value of our common stock is determined by the last sale price of our stock on The Nasdaq Global Select Market on the date of determination. If any option or RSU granted under the 2018 Inducement Plan expires or terminates for any reason without being exercised in full, are used to satisfy tax withholding obligations with respect to the award, or otherwise terminate without the underlying shares being issued, such unexercised, tax-settled, or otherwise terminated shares will be available for grant under the 2018 Inducement Plan. All outstanding awards are subject to adjustment for any future stock dividends, splits, combinations, or other changes in capitalization as described in the 2018 Inducement Plan. If we were acquired and the acquiring corporation did not assume or replace the awards granted under the 2018 Inducement Plan, or if we were to liquidate or dissolve, all outstanding awards will expire on such terms as our Board of Directors determines.

For more information regarding the 2018 Inducement Plan, see Note 11 of Notes to Consolidated Financial Statements in Item 8 of this report.

Item 13. *Certain Relationships and Related Transactions, and Director Independence.*

The information required for this Item is incorporated by reference from our Proxy Statement to be filed for our 2019 Annual Meeting of Stockholders.

Item 14. *Principal Accounting Fees and Services.*

The information required for this Item is incorporated by reference from our Proxy Statement to be filed for our 2019 Annual Meeting of Stockholders.

PART IV

Item 15. *Exhibits, Financial Statement Schedules*

(a)(1) Financial Statements: The financial statements filed as part of this report are listed on the index to financial statements on page 71.

(2) Financial Schedules: All schedules have been omitted because they are not required, not applicable, not present in amounts sufficient to require submission of the schedule, or the required information is otherwise included.

(b) Exhibits. The exhibits listed on the Exhibit Index (following the Signatures section of this report) are included, or incorporated by reference, in this report.

Item 16. *Form 10-K Summary*

None.

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
2.01	Stock Transfer Agreement by and among Glu Mobile Inc., Time Warner Inc., Intel Capital Corporation and certain other stockholders of Crowdstar Inc., dated November 2, 2016.	8-K	001-33308	2.01	11/03/16	
3.01	Restated Certificate of Incorporation of Glu Mobile Inc.	S-1/A	333-139493	3.02	02/14/07	
3.02	Amended and Restated Bylaws of Glu Mobile Inc., adopted on March 7, 2014.	8-K	001-33368	99.01	03/13/14	
4.01	Form of Registrant's Common Stock Certificate.	S-1/A	333-139493	4.01	02/14/07	
10.01#	Form of Indemnity Agreement entered into between Glu Mobile Inc. and each of its directors and executive officers, effective as of October 24, 2013.	8-K	001-33368	99.01	10/29/13	
10.02(A)#	Amended & Restated 2007 Equity Incentive Plan, as amended and restated through June 7, 2018.	10-Q	001-33368	10.01	08/08/18	
10.02(B)#	For the 2007 Equity Incentive Plan, forms of (a) Notice of Stock Option Grant, Stock Option Award Agreement and Stock Option Exercise Agreement, (b) Notice of Restricted Stock Award and Restricted Stock Agreement, (c) Notice of Stock Appreciation Right Award and Stock Appreciation Right Award Agreement and (d) Notice of Stock Bonus Award and Stock Bonus Agreement.	S-1/A	333-139493	10.03	02/16/07	
10.02(C)#	For the 2007 Equity Incentive Plan, form of Notice of Restricted Stock Unit Award and Restricted Stock Unit Agreement.	10-Q	001-33368	10.08	08/09/13	
10.02(D)#	For the 2007 Equity Incentive Plan, forms of (a) Notice of Performance Stock Option Grant Agreement (One Year Vesting Term), (b) Notice of Performance Stock Option Grant Agreement (Three Year Vesting Term), and (c) Notice of Performance Restricted Stock Unit Award Agreement.	10-K	001-33368	10.02(D)	3/9/18	
10.03#	2007 Employee Stock Purchase Plan, as amended and restated through June 8, 2017.	10-Q	001-33368	10.01	08/07/17	
10.04(A)#	2008 Equity Inducement Plan, as amended effective November 14, 2016.	8-K	001-33368	99.01	11/18/16	
10.04(B)#	For the 2008 Equity Inducement Plan, forms of Notice of Stock Option Grant, Stock Option Award Agreement and Stock Option Exercise Agreement.	10-K	001-33368	10.05	03/21/10	

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.04(C)#	For the 2008 Equity Inducement Plan, form of Notice of Restricted Stock Unit Award and Restricted Stock Unit Award Agreement.	10-K	001-33368	10.05(C)	03/14/14	
10.05(A)#	2018 Equity Inducement Plan	10-Q	001-33368	10.02	08/08/18	
10.05(B)#	For the 2018 Equity Inducement Plan, forms of Notice of Stock Option Grant, Stock Option Award Agreement and Stock Option Exercise Agreement.	10-Q	001-33368	10.03	08/08/18	
10.05(C)#	For the 2008 Equity Inducement Plan, form of Notice of Restricted Stock Unit Award and Restricted Stock Unit Award Agreement.	10-Q	001-33368	10.04	08/08/18	
10.06#	Forms of Stock Option Award Agreement (Immediately Exercisable) and Stock Option Exercise Agreement (Immediately Exercisable) under the Glu Mobile Inc. 2007 Equity Incentive Plan.	10-Q	001-33368	10.05	08/14/08	
10.07#	Executive Chairman Agreement between Glu Mobile Inc. and Niccolo M. de Masi, dated November 2, 2016.	8-K	001-33368	10.01	11/03/16	
10.08#	Summary of Compensation Terms of Nick Earl.	8-K	001-33368		10/29/2018	
10.09#	Executive Employment Agreement, effective as of November 10, 2016, by and between Glu Mobile Inc. and Nick Earl.	10-K	001-33368	10.08	03/10/17	
10.10#	Change of Control Severance Agreement between Glu Mobile Inc. and Nick Earl, effective as of November 10, 2016.	10-K	001-33368	10.09	03/10/17	
10.11#	Summary of Change of Control Severance Agreement between Glu Mobile Inc. and Nick Earl, dated as of February 8, 2016.	10-K	001-33368	10.20	03/04/16	
10.12#	Summary of Compensation Terms of Eric R. Ludwig.	8-K	001-33368		10/29/2018	
10.13#	Change of Control Severance Agreement, dated as of October 10, 2008, between Glu Mobile Inc. and Eric R. Ludwig.	10-K	001-33368	10.09	03/13/09	
10.14#	Amendment, dated as of July 7, 2011, to Change of Control and Severance Agreement between Glu Mobile Inc. and Eric R. Ludwig, dated as of October 10, 2008.	10-Q	001-33368	10.02	11/14/11	
10.15#	Summary of Compensation Terms of Chris Akhavan.	8-K	001-33368		10/29/2018	
10.16#	Change of Control Severance Agreement between Glu Mobile Inc. and Chris Akhavan, dated as of April 22, 2013.	10-Q	001-33368	10.02	08/09/13	

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.17#	Summary of Compensation Terms of Scott J. Leichtner.					X
10.18#	Summary of Change of Control Severance Arrangement between Glu Mobile Inc. and Scott J. Leichtner, dated as of July 7, 2011.	10-K	001-33368	10.15	03/15/13	
10.19#	Non-Employee Director Compensation Program, effective as of October 25, 2018					X
10.20	Lease, dated as of May 9, 2017 between Howard Street Associates LLC and Glu Mobile Inc.	8-K	001-33368	99.01	05/15/17	
10.21	Common Stock Warrant, between Glu Mobile Inc. and MGM Interactive Inc., dated as of July 15, 2013.	S-3	333-190545	4.03	08/09/13	
10.22	iOS Developer Program License Agreement between Glu Games Inc. and Apple Inc., as amended to date.	10-K	001-33368	10.27	03/15/13	
10.23	Android Market Developer Distribution Agreement between Glu Games Inc. and Google Inc., as amended to date.	10-K	001-33368	10.28	03/15/13	
10.24+	License Agreement, dated as of March 31, 2012, by and between Glu Mobile Inc. and Atari, Inc.	10-Q/A	001-33368	10.01	10/12/12	
10.25+	Trademark and Domain Name Assignment and License Agreement, dated as of March 31, 2012, by and between Glu Mobile Inc. and Atari Inc.	10-Q	001-33368	10.02	08/09/12	
10.26+	Unity Technologies Software License Agreement between Glu Mobile Inc. and Unity Technologies ApS, dated as of October 29, 2017.	10-K	001-33368	10.27	03/09/2018	
10.27+	Share Purchase Agreement, dated as of December 31, 2017, by and between Saber Interactive and Glu Mobile Inc.	10-K	001-33368	10.30	03/09/2018	
10.28+	Asset Purchase and License Agreement, dated As of December 31, 2017, by and between MGL My.com (Cyprus) Limited and Glu Mobile Inc.	10-K	001-33368	10.31	03/09/2018	
21.01	List of Subsidiaries of Glu Mobile Inc.					X
23.01	Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm.					X
24.01	Power of Attorney (see the Signature Page to this report).					

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
31.01	Certification of Principal Executive Officer Pursuant to Securities Exchange Act Rule 13a-14(a).					X
31.02	Certification of Principal Financial Officer Pursuant to Securities Exchange Act Rule 13a-14(a).					X
32.01	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350 and Securities Exchange Act Rule 13a-14(a)/15d-14(a).*					X
32.02	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350 and Securities Exchange Act Rule 13a-14(a)/15d-14(a). *					X
101.INS	XBRL Report Instance Document					X
101.SCH	XBRL Taxonomy Extension Schema Document					X
101.CAL	XBRL Taxonomy Calculation Linkbase Document					X
101.LAB	XBRL Taxonomy Label Linkbase Document					X
101.PRE	XBRL Presentation Linkbase Document					X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					X

# Indicates a management compensatory plan or arrangement.

+ Certain portions of this exhibit have been omitted and have been filed separately with the SEC pursuant to an order granting confidential treatment issued by the SEC under Rule 24b-2 as promulgated under the Exchange Act.

* This certification is not deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent that Glu Mobile Inc. specifically incorporates it by reference.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

GLU MOBILE INC.

Date: February 28, 2019	By: /s/ Nick Earl Nick Earl, President and Chief Executive Officer
Date: February 28, 2019	By: /s/ Eric R. Ludwig Eric R. Ludwig, Executive Vice President, Chief Operating Officer and Chief Financial Officer

POWER OF ATTORNEY

By signing this Annual Report on Form 10-K below, I hereby appoint each of Nick Earl, Eric R. Ludwig and Scott J. Leichtner as my attorney-in-fact to sign all amendments to this Form 10-K on my behalf, and to file this Form 10-K (including all exhibits and other documents related to the Form 10-K) with the Securities and Exchange Commission. I authorize each of my attorneys-in-fact to (1) appoint a substitute attorney-in-fact for himself and (2) perform any actions that he believes are necessary or appropriate to carry out the intention and purpose of this Power of Attorney. I ratify and confirm all lawful actions taken directly or indirectly by my attorneys-in-fact and by any properly appointed substitute attorneys-in-fact.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacity and on the dates indicated.

Signature	Title	Date
/s/ Nick Earl Nick Earl	President, Chief Executive Officer and Director (Principal Executive Officer)	February 28, 2019
/s/ Eric R. Ludwig Eric R. Ludwig	EVP, Chief Operating Officer and Chief Financial Officer (Principal Financial Officer)	February 28, 2019
/s/ Gordon Lee Gordon Lee	Vice President of Accounting (Principal Accounting Officer)	February 28, 2019
/s/ Niccolo de Masi Niccolo de Masi	Executive Chairman	February 28, 2019
/s/ Benjamin T. Smith IV Benjamin T. Smith IV	Lead Director	February 28, 2019
/s/ Eric R. Ball Eric R. Ball	Director	February 28, 2019
/s/ Greg Brandeau Greg Brandeau	Director	February 28, 2019
/s/ Ben Feder Ben Feder	Director	February 28, 2019
/s/ Ann Mather Ann Mather	Director	February 28, 2019
/s/ Hany M. Nada Hany M. Nada	Director	February 28, 2019
/s/ Gabrielle Toledano Gabrielle Toledano	Director	February 28, 2019

Forward-Looking Statements:

These proxy materials contain forward-looking statements regarding future events and our future results, which are subject to the safe harbors created under the Securities Act of 1933 and the Securities Exchange Act of 1934, each as amended. These statements are based on current expectations, estimates, forecasts, and projections about our business and the industries in which we operate and our management's beliefs and assumptions. Words such as "expects," "anticipates," "targets," "trend," "goals," "projects," "intends," "plans," "believes," "seeks," "estimates," "continues," "strategy," "may," variations of such words, and similar expressions identify such forward-looking statements. In addition, the following statements, among others, in the Letter to Stockholders included in these proxy materials are forward-looking statements: our belief that we are now positioned for future growth and further improvements in the years ahead; our belief that our solid foundation and proven execution bodes well for our future; our intent to add and integrate "meta" game features and systems into *Design Home* that we believe should help to grow the franchise even further as well as to drive greater user engagement and stronger long-term retention; our optimism about the future for *Covet Fashion* and that we intend to continue to enhance the game experience; our intention to develop and publish new Growth Games on top of the existing ones and our belief that we can significantly grow our business in a healthy and predictable way; that we prepare for three key product launches in 2019: *WWE Universe*, *Diner DASH Adventures* and *Disney Sorcerer's Arena;* that we enter 2019 with the belief that we will be able to further diversify and strengthen our Growth Game portfolio; our belief that Growth Games can provide predictable, repeatable and growing revenue streams; our belief that we have established a solid, growing and predictable core business; our belief that we are on the path to launch new hit Growth Games that will create even more growth ahead; and that we continue our efforts to establish Glu as one of the preeminent mobile game creators.

Investors should consider important risk factors, which include: the risk that consumer demand for smartphones, tablets and next-generation platforms does not grow as significantly as we anticipate or that we will be unable to capitalize on any such growth; the risk that we do not realize a sufficient return on our investment with respect to our efforts to develop free-to-play games for smartphones, tablets and next-generation platforms; the risk that we are unable to recruit and retain key personnel; the risk that our development expenses for games for smartphones, tablets and next-generation platforms are greater than we anticipate; the risk that our newly released games will be of a quality less than desired by reviewers and consumers and do not become Growth Games; the risk that the mobile games market, particularly with respect to freemium gaming, is smaller than anticipated; and the other risks detailed under the caption "Risk Factors" in our 2018 Annual Report on Form 10-K included with these proxy materials and our other SEC filings. We are under no obligation, and expressly disclaim any obligation, to update or alter our forward-looking statements, except as may be required by law.

BOARD OF DIRECTORS

Niccolo M. de Masi[4]
President (Products & Solutions) and Chief Innovation Officer, Resideo Technologies, Inc.
Executive Chairman, Glu Mobile Inc.

Darla Anderson
Movie Producer

Eric R. Ball[1]
General Partner, Impact Venture Capital

Greg Brandeau[2,3]
Managing Partner, Paradox Strategies

Nick Earl[4]
President and Chief Executive Officer, Glu Mobile Inc.

Ben Feder[4]
President, International Partnerships (North America), Tencent Holdings Limited

Ann Mather[3]
Independent Director of and Advisor to Technology and Media Companies

Hany M. Nada[1,2,4]
Co-Founder and Partner, ACME Capital

Benjamin T. Smith, IV[1,2,3,4]
Senior Partner, A.T. Kearney

Gabrielle Toledano[2]
Executive in Residence, Comcast Ventures

EXECUTIVE OFFICERS

Niccolo M. de Masi
Executive Chairman

Nick Earl
President and Chief Executive Officer

Eric R. Ludwig
Executive Vice President, Chief Operating Officer and Chief Financial Officer

Chris Akhavan
Chief Revenue Officer

Scott J. Leichtner
Vice President, General Counsel and Corporate Secretary

[1] Member of the Audit Committee
[2] Member of the Compensation Committee
[3] Member of the Nominating & Governance Committee
[4] Member of the Strategy Committee

CORPORATE HEADQUARTERS

875 Howard Street, Suite 100
San Francisco, California 94103

TRANSFER AGENT AND REGISTRAR

For questions regarding misplaced stock certificates, changes of address or the consolidation of accounts, please contact our transfer agent:

American Stock Transfer & Trust Company
6201 15th Avenue
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