

**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, 2020

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE
TRANSITION PERIOD FROM ____ TO ____

Commission File Number 0-27512

CSG SYSTEMS INTERNATIONAL, INC.

(Exact name of Registrant as specified in its Charter)

Delaware
(State or other jurisdiction
of incorporation or organization)
6175 S. Willow Drive, 10th Floor
Greenwood Village, Colorado
(Address of principal executive offices)

47-0783182
(I.R.S. Employer
Identification No.)

80111
(Zip Code)

Registrant's telephone number, including area code: (303) 200-2000

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

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Stock, Par Value \$0.01 Per Share	CSGS	NASDAQ Stock Market LLC

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

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 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 of 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 whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an 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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>	Non-accelerated filer	<input type="checkbox"/>
Smaller reporting company	<input type="checkbox"/>	Emerging growth company	<input type="checkbox"/>		

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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

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 and non-voting common equity held by non-affiliates of the Registrant, based on the closing price of the shares of common stock on The NASDAQ Stock Market on June 30, 2020, was \$968,792,220.

The number of shares of Registrant's Common Stock outstanding as of February 16, 2021 was 32,642,556.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Definitive Proxy Statement for its 2021 Annual Meeting of Stockholders to be filed on or prior to April 30, 2021, are incorporated by reference into Part III of this Report.

CSG SYSTEMS INTERNATIONAL, INC.

2020 FORM 10-K

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PART I

Item 1. Business

Overview

CSG Systems International, Inc. (the “Company”, “CSG”, or forms of the pronoun “we”) is one of the world’s leading providers of revenue management, customer experience, and payment solutions that enable a growing list of companies around the world to monetize relationships with their customers in an era of rapid change and digital transformation. We leverage more than 35 years of experience to deliver innovative customer engagement solutions that help our customers solve their toughest challenges, helping them make ordinary customer experiences extraordinary. Our 4,800-plus diverse, worldwide workforce draws from real-world knowledge and extensive expertise to design and implement business solutions that make our customers’ hardest decisions simpler so that they can focus on delivering differentiated and real-time experiences to their customers.

Our proven solutions are built on a combination of on-premise, public and private cloud platforms, either customized or pre-integrated, as well as managed services models that adapt to fit our customers’ unique business needs and enable the transformative change required to create personalized experiences that drive loyalty and retention.

Our corporate headquarters is located at 6175 S. Willow Drive, 10th Floor, Greenwood Village, Colorado 80111, and the telephone number at that address is (303) 200-2000.

Our common stock is listed on the NASDAQ Stock Market LLC (“NASDAQ”) under the symbol “CSGS”. We are a member of the S&P Small Cap 600 and Russell 2000 indices.

Industry Overview

Background. We provide software and services solutions that help companies around the world monetize and digitally enable the customer experience. While our heritage is born out of the communications industry, we count among our customers some of the world’s largest and most sophisticated communications, financial services, healthcare, and media and entertainment companies, as well as a long list of governmental entities, with an increasingly diversified revenue mix. Our solutions allow service providers to:

- Monetize new revenue streams through multiple services, across multiple locations and channels, quickly.
- Optimize their business costs to enable the redeployment of capital to support business growth and transformation.
- Protect and maintain existing revenue streams by improving service delivery that drives higher customer satisfaction and increases retention.
- Leverage data and insights to better know and understand their customers and deliver exceptional experiences.
- Enhance their future-readiness so they can adapt quickly and efficiently to industry changes and innovations.

Market Trends of Communications Industry. Our primary market, the global communications industry, continues to undergo rapid change and increasing competitiveness. Some key trends are emerging as communications service providers (“CSPs”) try to evolve and compete in this highly complex ecosystem:

- *Consumer choice:* Customers have an increasing number of choices for information, communications, and entertainment services. This shift in power to the consumer requires service providers to adopt and deliver new technologies and services which enable a more ubiquitous, flexible, and personalized customer experience. Service providers – whether more traditional or digital native – are developing offerings to cultivate a more recurring, loyal, and “branded” customer experience. Increasing importance is placed on “brand” and “experience” as they both now play a larger role in purchasing decisions. Customer experience will determine the winners and losers in this “always connected” digital world.

- *Competitive landscape:* The proliferation of digital native service providers (e.g., Amazon, Apple, Facebook, Google, Netflix, etc.) has changed the competitive landscape forever. This has forced traditional providers to evaluate the viability of their existing business models, including scale, breadth of offerings, speed to react, and customer experience, and to evolve their businesses to remain not only relevant, but competitive, innovative, and thriving. While consolidation continues between traditional Communications Service Providers (“CSPs”) and content providers (e.g., Charter and Time Warner Cable), companies are also scaling their offerings through acquisitions within their respective media (e.g., Comcast and Sky, Starz and Lionsgate) and communications industries (e.g., T-Mobile and Sprint). Direct-to-consumer offerings are becoming more prevalent, (e.g., Disney+, Comcast’s Peacock, and Discovery+) and cooperation not only with new partners, but even among competitors (e.g., Netflix and Amazon Prime Video are now available on certain traditional cable platforms) is accelerating.
- *Technology:* Fueled by the intersection of artificial intelligence, the Internet of Things (“IoT”), cloud technologies, and analytics, service providers are fundamentally changing the way they get their products to market and engage with their customers. 5G technologies will continue to propel the expansion of IoT and sensor-enabled services and devices. IoT will underpin the “service-ification” of offerings — the transition of routine activities and purchases (e.g., checking gas meters, driving a car, buying groceries, etc.) to on demand services and pervasive consumer relationships (e.g., only servicing meters that show faults, optimizing parking spots, recommending dinner meals, etc.). To meet the requirements of this hyper-connected ecosystem, which requires increased speed-to-market, agility, and scalability cost structure, service providers are transitioning their legacy technology infrastructure to a combination of private and public cloud technologies to support billions of device connections. Further, traditional broadband service providers continue to push the boundaries of hybrid-fiber coax and fiber-to-the-home technologies in order to deliver increased bandwidth and customer experiences.
- *New Revenue Sources:* CSPs are facing increased pressure to maintain their current as well as find new revenue sources, while managing their cost structure and quality of service delivery as they transform their business. They are navigating declining revenue and profits associated with their traditional services such as wireline voice and video as a result of new or increased competition. In order to offset these declines, CSPs are increasingly looking for ways to improve their cost structure, grow through acquisitions, and launch new revenue-generating services with minimal capital investment. The result is that many CSPs are cutting costs associated with their traditional systems, integrating disparate acquired business operations, and launching new digital services with more flexible, lower-cost solutions.

Overall, these market trends drive the demand for scalable, flexible, and cost-efficient revenue management, customer experience, and payment solutions, which we believe will provide our customers opportunities to monetize and grow revenue from their customers in this age of digital transformation. As a result, we have historically invested meaningfully in research and development (“R&D”) and have acquired companies that enable us to expand our solutions in a timely and efficient manner. We believe that our scalable, modular, and flexible platform-based offerings, combined with our rich domain expertise and ability to effectively migrate customers to our solutions, provide our customers with proven solutions to improve their profitability and their customers’ experiences. We have specifically built our solutions to offer service providers a phased, incremental approach to transforming their businesses, thereby reducing the business interruption risk associated with this evolution.

A summary of our revenue by industry for the indicated periods was as follows:

	2020	2019	2018
Broadband/Cable/Satellite	58%	58%	64%
Telecommunications	19%	19%	21%
Other	23%	23%	15%
Total revenue	<u>100%</u>	<u>100%</u>	<u>100%</u>

Business Strategy

Our vision is to channel the power of all to make ordinary customer experiences extraordinary. We do this by focusing on three goals:

Energizing and developing our Employees. Our diverse group of employees make us exceptional and separate us from our competition. They are ambassadors of the CSG brand and values; they are the point of connection with our customers, for each other, and within our communities.

Delivering for our Customers. Our customers depend on us to help them achieve their business objectives. We have established a reputation for doing what we say, being easy to do business with, and delivering highly scalable, robust solutions. This reputation has resulted in our becoming a trusted enabler and partner to our customers.

Enhancing stockholder value. One of our key responsibilities is to deliver long-term value creation to shareholders by driving profitable growth. We achieve this through thoughtfully investing in our business and returning an appropriate amount of capital to stockholders through dividends and share repurchases.

We believe the successful execution of our goals will allow us to grow revenue and earnings, and therefore, create long-term value for our customers, employees, and stockholders.

Our strategic focus to accomplish our goals is as follows:

Drive Profitable Growth through Long-Term Relationships: Our relentless focus on our customers is built upon providing market-leading solutions, world-class operations, delivery capabilities and services, and helping our customers solve their toughest challenges. By building strong, long-term relationships based on trust and by delivering on our commitments (i.e., doing what we say), our customers stay and grow with us. Further, we are focused on extending our brand and market presence outside our core global communications industry.

Lead with Technology Innovation: We believe our broad portfolio of on-premise, cloud and pre-integrated solutions give service providers a competitive advantage. These solutions allow service providers to efficiently manage their traditional businesses while being able to quickly deliver new digital services and a more personalized and relevant experience to their consumers. We continually add new relevant capabilities to what we do as a company, both in terms of our people and our solutions.

Deliver an Exceptional Customer Experience: We believe we deliver more business value by having developed a long track record of doing what we say and being easy to do business with. We do this by putting the customer at the heart of our decision-making which is always directed at improving our agility, delivery capabilities, operational excellence, efficiency, and reliability to enable our customers' success.

Attract and Retain Talent: In order to maintain our competitiveness in the market, we foster a culture in which our diverse workforce can do their best work. We do this by investing in our people and programs that foster a culture of diversity, innovation, collaboration, and professional fulfillment.

In short, we believe our strategy is a key enabler to help our customers compete more effectively, efficiently, and successfully in an evolving market.

Description of Business

Key Customers. We work with some of the world's largest and most sophisticated communications, financial services, healthcare, and media and entertainment companies. A partial list of our key customers as of December 31, 2020 is included below:

Airtel Africa	Maximus
América Móvil	Mediacom
AT&T	Microsoft
Charter Communications	Mobily
Comcast	MTN
DISH	New Leaf Service Contracts
Formula 1	State of California DMW
Hutchison 3 Indonesia	TalkTalk
Inmarsat	Telstra
Mastercard	

Customers that represented 10% or more of our revenue for 2020 and 2019 were as follows (in millions, except percentages):

	2020		2019	
	Amount	% of Revenue	Amount	% of Revenue
Comcast	\$ 213	22%	\$ 229	23%
Charter	209	21%	195	20%

See the Significant Customer Relationships section of our Management’s Discussion and Analysis (“MD&A”) for additional information regarding our business relationships with these key customers.

Research and Development. Our customers around the world are facing competition from new entrants and at the same time, are deploying new services at a rapid pace and dramatically increasing the complexity of their business operations. Therefore, we continue to make meaningful investments in R&D to ensure that we stay ahead of our customers’ needs and advance our customers’ businesses as well as our own. We believe our value proposition is to provide scalable solutions that help our customers ensure that each customer interaction is an opportunity to create value and deepen the business relationship.

Our total R&D expenses for 2020 and 2019 were \$122.8 million and \$128.0 million, respectively, or approximately 12% and 13%, respectively, of our total revenue. We anticipate the level of R&D investment in the near-term to be relatively consistent with that of 2020.

There are certain inherent risks associated with significant technological innovations. Some of these risks are described in this report in our Risk Factors section below.

Solutions and Services. Our solutions and services help over 500 companies simplify, automate, and scale complex transaction-centric activities and manage the opportunities and challenges associated with accurately capturing, managing, generating, and optimizing the revenue associated with and manage the intricate nature of those customer relationships. Below is a high-level overview:

- Our solutions provide global service providers with a robust, integrated real-time revenue management framework in either a cloud-based or stand-alone environment to optimize and monetize transactions at every stage of the customer lifecycle. Our flexible, configurable business support systems (also referred to as BSS) help companies worldwide monetize and digitally enable their customer’s experiences. We support more than 555 million end users worldwide on behalf of our customers, managing every aspect from billing to customer care to partner settlement, and we help our customers quickly launch and monetize new services while having the flexibility to keep up with rapidly changing customer demands and markets.
- Our solutions offer a diverse and integrated suite of tools designed to manage and improve every aspect of the customer experience, from onboarding to upgrades, payments to field service management. These solutions allow customers to connect with their customers anytime, anywhere, on any channel, at any stage in their customer experience journey. We are an industry leader in supporting omni-channel communications between our customers and their customers, processing more than 1.5 billion voice, SMS/text, print, and e-mail messages each year. More than 70,000 of our customers’ field technicians and dispatchers complete over 100 million work orders per year by leveraging our field service management solutions to optimize routing and provide real-time insights into arrival times for their customers. We help our customers deliver a unique customer experience across both traditional and digital channels.
- We empower our customers with options to manage and process payments from their customers by offering an advanced, cloud-based, integrated suite of solutions across a variety of industries. Our broad offering and strategic partnerships with more than 65,000 merchants, resellers, and independent software vendors has fueled growth and success in the integrated payments space.
- We leverage our 35+ year history in running highly scalable, complex business support solutions to improve operational efficiencies and effectiveness. For our managed services customers, we assume long-term responsibility for delivering our software solutions and related operations under a defined scope and specified service levels. Under managed services agreements, we may operate software products (primarily our software solutions) on behalf of our customers: (i) out of a customer’s data center; (ii) out of a data center we own and operate; or (iii) out of a third-party data center (including public cloud providers) we contract with for such services.

Historically, a substantial percentage of our total revenue has been generated from our revenue management and customer engagement solutions. These solutions are expected to provide a large percentage of our total revenue in the foreseeable future as well.

Business Acquisitions. Our strategy includes acquiring assets and businesses which provide the technology and personnel to expedite our solutions and services development efforts, provide complementary solutions and services, increase market share, and/or provide access to new markets and customers.

Professional Services. We employ professional services experts globally who bring a wide-ranging expertise – including solution architecture, project management, systems implementation, system integration, and business consultancy – to every project. We apply a structured methodology to each of our engagements, leveraging consistent world-class processes, best-practice programs, and systemized templates in the development of our solutions.

Sales and Marketing. We organize our sales efforts to customers primarily within our geographically dispersed, dedicated account teams, with senior level account managers who are responsible for new revenue and renewal of existing contracts within a customer account. The account teams are supported by sales support personnel who are experienced in the various solutions and services that we provide.

Competition. The market for revenue management solutions and services in the global communications industry, as well as in other industries we serve, is highly competitive. We compete with both independent providers and in-house developers of customer management systems. We believe that our most significant competitors in our primary markets are Amdocs Limited and NEC Corporation (specifically their Netcracker division); network equipment providers such as Ericsson and Huawei; and customer-developed internal solutions. Some of our actual and potential competitors have substantially greater financial, marketing, and technological resources than us and in some instances, we may partner and collaborate with our competitors on large opportunities and projects.

We believe service providers in the multiple industry verticals that we serve use the following criteria when selecting a vendor for the mission critical management of their revenue, customer experience, and digital ecosystem: (i) functionality, scalability, flexibility, interoperability, and architecture of the software assets; (ii) the breadth and depth of pre-integrated product solutions; (iii) solution quality, customer service, and support; (iv) operational excellence and reliability; (v) quality of R&D efforts; and (vi) total cost of ownership. We believe that our solutions allow us to compete effectively in these areas.

Proprietary Rights and Licenses

We rely on a combination of trade secret, copyright, trademark, and patent laws in the United States (“U.S.”) and similar laws in other countries, and non-disclosure, confidentiality, and other types of contractual arrangements to establish, maintain, and enforce our intellectual property rights in our solutions. Despite these measures, any of our intellectual property rights could be challenged, invalidated, circumvented, or misappropriated. Although we hold a select number of patents and patent applications on some of our newer solutions, we do not rely upon patents as a primary means of protecting our rights in our intellectual property. In any event, there can be no assurance that our patent applications will be approved, that any issued patents will adequately protect our intellectual property, or that such patents will not be challenged by third parties. Also, much of our business and many of our solutions rely on key technologies developed or licensed by third parties, and we may not be able to obtain or continue to obtain licenses and technologies from these third parties at all or on reasonable terms. Our failure to adequately establish, maintain, and protect our intellectual property rights could have a material adverse impact on our business, financial position, and results of operations. For a description of the risks associated with our intellectual property rights, see “Item 1A - Risk Factors - Failure to Protect Our Intellectual Property Rights or Claims by Others That We Infringe Their Intellectual Property Rights Could Substantially Harm Our Business, Financial Position and Results of Operations,” and “Item 1A – Risk Factors - We Rely on A Limited Number of Third-Party Vendor Relationships to Execute Our Business Which Exposes Us to Supply Disruptions, Costs Increases, and Cyber-Attacks.”

Regulatory Matters

We are subject to numerous international, federal, state, and local laws and regulations. These laws and regulations govern matters that include environmental and occupational health and safety matters. Additionally, these laws and regulations also require us to obtain and comply with permits, registrations, and other authorizations issued by governmental authorities. These authorities can modify or revoke our permits, registrations, or other authorizations and can enforce compliance through fines and injunctions. We expect to incur ongoing costs to comply with existing and future requirements.

We are also subject to regulation by various U.S. federal regulatory agencies and by the applicable regulatory authorities in countries in which we operate. Additionally, as a U.S. entity operating through subsidiaries in non-U.S. jurisdictions, we are subject to foreign exchange control, transfer pricing, and custom laws that regulated the flow of funds between CSG and its subsidiaries. We are also required to be in compliance with transfer pricing, securities laws, and other statutes and regulations, such as the Foreign Corrupt Practices Act (“FCPA”), and other countries’ anti-corruption and anti-bribery laws.

In addition, we are subject to laws relating to information security, privacy, anti-money laundering, counter-terrorist financing, consumer credit, protection, and fraud. An increasing number of government and industry groups worldwide have established data privacy laws and standards for the protection of personal information, including financial information, social security numbers, and health information. We are also subject to labor and employment laws, including regulations established by the U.S. Department of Labor and other local regulatory agencies, which sets laws governing working conditions, paid leave, workplace safety, wage and hour stands, and hiring and employment practices.

We believe that our operations are in compliance with all applicable laws and regulations in all material respects, and that we hold all necessary permits to operate our business in each jurisdiction in which we operate. Laws and government regulations are subject to change and interpretation. In some cases, compliance with applicable laws and regulations may cause us to make additional capital and operational expenditures. While there are no current regulatory matters that we expect to be material to our results of operations, financial position, or cash flows, there can be no assurances that existing or future environmental laws or other regulations applicable to our operations would not lead to a material adverse impact on our results of operations, financial position, or cash flows.

Human Capital

As of December 31, 2020, we had a total of 4,807 employees, an increase of 468 employees when compared to the number of employees we had as of December 31, 2019. Of our total employees, 2,332 are located in the U.S. and 2,475 are located in 22 foreign countries. We are subject to various foreign employment laws and regulations based on the country in which our employees are located. Based on the results of a recent employee survey, we believe our relations with our employees are good.

Our success is dependent upon our ability to attract, develop, and retain qualified employees. We are dedicated to being an employer of choice by maintaining a work environment that is designed to recruit and motivate top talent. We are committed to building a culture of diversity, professional growth, and high performance through offering our employees challenging and engaging growth opportunities that contribute to their overall career development.

We invest in creating and maintaining a diverse, inclusive, and safe work environment for all employees. Our work environment requires each and every employee be treated with dignity and respect and be free from discrimination and harassment. We expect all of our employees to observe the highest level of business ethics and live our core values – be customer obsessed, be authentic, be bold, be relentless, be agile, and be inclusive.

We believe our culture serves as a competitive differentiator in the marketplace and gives CSG a competitive edge.

Throughout the COVID-19 crisis, we have remained focused on protecting the health and safety of our employees, while meeting the needs of our customers. During the early stages of the COVID-19 pandemic, we formed a COVID-19 Steering Team that has been leading and coordinating our overall response. These efforts included moving a large percentage of our workforce to a remote working environment and significantly reducing travel. For those locations that remain open, such as our statement production centers, we require daily temperature checks and self-assessments. Additionally, we have reconfigured our office spaces to ensure proper social distancing, distributed personal protective equipment, and secured additional cleaning services and supplies. We also enhanced a number of our benefits to support our employees through the challenges arising from the COVID-19 pandemic, to include extended overtime pay and spot bonus awards to those employees at our statement production centers, and a one-time cash bonus given to all CSG employees. We continue to provide work from home options to those employees who are able to conduct business remotely through December 31, 2021, or such later date as conditions warrant.

Available Information

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy materials, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act are available free of charge on our website at www.csgi.com. Additionally, these reports are available on the SEC's website at www.sec.gov.

Code of Conduct and Business Ethics

A copy of our Code of Conduct and Business Ethics (the "Code of Conduct") is maintained on our website. Any future amendments to the Code of Conduct, or any future waiver of a provision of our Code of Conduct, will be timely posted to our website upon their occurrence. Historically, we have had minimal changes to our Code of Conduct and have had no waivers of a provision of our Code of Conduct.

Item 1A. Risk Factors

We or our representatives from time-to-time may make or may have made certain forward-looking statements, whether orally or in writing, including without limitation, any such statements made or to be made in MD&A contained in our various Securities and Exchange Commission (“SEC”) filings or orally in conferences or teleconferences. We wish to ensure that such statements are accompanied by meaningful cautionary statements, so as to ensure, to the fullest extent possible, the protections of the safe harbor established in the Private Securities Litigation Reform Act of 1995.

We operate in rapidly changing and evolving markets throughout the world addressing the complex needs of communication service providers, financial institutions, and many others, and as a result, new risk factors will likely emerge and currently identified risk factors will likely evolve in their scope. Further, as we enter new market sectors as well as new geographic markets, we could be subject to new regulatory requirements that increase the risk of non-compliance and the potential for economic harm to us and our customers. Accordingly, the risk factors and any forward-looking statements are qualified in their entirety by reference to and are accompanied by the following meaningful cautionary statements:

- If any of the following risk factors would occur, it could have a material adverse effect on our business, financial position, results of operations, and/or trading price of our common stock.
- This list of risk factors is not exhaustive and management cannot predict all of the relevant risk factors, nor can it assess the potential impact, if any, of such risk factors on our business or the extent to which any risk factor, or combination of risk factors, may create.
- There can be no assurances that forward-looking statements will be accurate indicators of future actual results, and it is likely that actual results will differ from results projected in the forward-looking statements, and that such differences may be material.

Risks Related to Our Business

We Derive a Significant Portion of Our Revenue from a Limited Number of Customers, and the Loss of the Business of a Significant Customer Could Have a Material Adverse Effect on Our Financial Position and Results of Operations.

Over the past decade, the global communications industry has experienced significant consolidation, resulting in a large percentage of the market being served by a limited number of communication service providers with greater size and scale, and there are possibilities of further consolidation. Consistent with this market concentration, we generate over 40% of our revenue from our two largest customers, which are Comcast and Charter, which each individually accounted for over 10% or more of our total revenue. See the Significant Customer Relationships section of MD&A for key renewal dates and a brief summary of our business relationship with these customers.

There are inherent risks whenever a large percentage of total revenue are concentrated with a limited number of customers. Such risks are that a significant customer could: (i) undergo a formalized process to evaluate alternative providers for solutions and services we provide; (ii) terminate or fail to renew their contracts with us, in whole or in part for any reason; (iii) significantly reduce the number of customer accounts processed on our solutions, the price paid for our solutions and services, or the scope of solutions and services that we provide; or (iv) experience significant financial or operating difficulties.

Our industry is highly competitive, and as a result, it is possible that a competitor could increase its footprint and share of customers serviced at our expense or a customer could develop their own internal solutions. While our customers may incur some costs in switching to our competitors or their own internally developed solutions, they may do so for a variety of reasons, including: (i) price; (ii) dissatisfaction with our solutions or service levels; or (iii) dissatisfaction with our relationships.

The Delivery of Our Solutions is Dependent on a Variety of Computing and Processing Environments and Communications Networks Which May Not Be Available or May Be Subject to Security Attacks.

Our solutions are generally delivered through a variety of sources including public cloud, third-party data center and other service providers, and internally operated computing and processing environments (collectively referred to hereafter in this section as “Systems”). We and/or end users are connected to the Systems through a variety of public and private communications networks, which we will collectively refer to herein as “Networks.” Our solutions are generally considered to be mission critical customer management systems by our customers. As a result, our customers are highly dependent upon the high availability and uncompromised security of the Networks and Systems to conduct their business operations.

Networks and Systems are subject to the risk of an extended interruption, outage, or security breach due to many factors such as: (i) changes to the Systems and Networks for such things as scheduled maintenance and technology upgrades, or conversions to other technologies, service providers, or physical location of hardware; (ii) failures or lack of continuity of services from public cloud or third-party data center and other service providers; (iii) defects in software program(s); (iv) human and machine error; (v) acts of war and/or nature; (vi) intentional, unauthorized attacks from computer “hackers”, or cyber-attacks; and (vii) using the Systems to perpetrate identity theft through unauthorized authentication to our customers’ customers’ accounts. Most recently, the marketplace is experiencing an ever-increasing exposure to both the number and severity of cyber-attacks. In addition, we continue to expand our use of third-party Systems and Networks with our solution offerings thereby permitting, for example, our customers’ customers to use the Internet to review account balances, order services or execute similar account management functions. Access to Networks and Systems via the Internet has the potential to increase their vulnerability to unauthorized access and corruption, as well as increasing the dependency of the Systems’ reliability on the availability and performance of the Internet and end users’ infrastructure they obtain through other third-party providers.

The method, manner, cause and timing of an extended interruption, outage, or security breach in third-party and/or the Networks or Systems are impossible to predict. As a result, there can be no assurances that these Networks and Systems will not fail, not suffer a security breach or that the third-party and/or our business continuity or remediation plans will adequately mitigate the negative effects of a disruption or security breach to the Networks or Systems. Further, our property, technology errors and omissions, contractual relationship with third-party providers, and business interruption insurance may not adequately compensate us for losses that we incur as a result of such interruptions or security breaches. Should the Networks or Systems: (i) experience an extended interruption or outage; (ii) have their security breached; (iii) have their data lost, corrupted or otherwise compromised; and/or (iv) fail to meet contractual requirements related to our cybersecurity program, it would impede our ability to meet solution and service delivery obligations, and likely have an immediate impact to the business operations of our customers. This would most likely result in damaging our reputation as well as our long-term ability to attract and retain new customers. The loss of confidential information could result in losing the customers’ confidence, as well as claims for contractual breach, and imposition of penalties, fines, and/or damages. These risks will increase as our business continues to expand to include new solutions, technologies, and markets.

We May Not Be Able to Efficiently and Effectively Implement New Solutions or Migrate Customers and Merchants onto Our Solutions.

Our continued growth plans include the implementation of new solutions, as well as migrating both new and existing customers and merchants to our solutions. Such implementations or migrations (collectively referred to hereafter in this section as “implementations”), regardless of whether they involve new solutions or new customers, have become increasingly more difficult because of the sophistication, complexity, and interdependencies of the various software and network environments impacted, combined with the increasing complexity of our current and potential customers’ and merchants’ underlying business processes. In addition, the complexity of the implementations increases when the arrangement includes other vendors participating in the project, including but not limited to, prime and subcontractor relationships with our company. For these reasons, implementations subject our customers and merchants to potential business disruption, which could cause them to delay or even cancel future implementations.

As a result, there is a risk that we may experience cancellations, delays, or unexpected costs associated with implementations. In addition, our inability to complete implementations in an efficient and effective manner could damage our reputation in the marketplace, reducing our opportunity to grow our business with both new and existing customers and merchants.

We May Not Be Successful in the Integration or Achievement of Financial Targets of Our Acquisitions.

As part of our growth strategy, we seek to acquire assets, technology, and businesses which will provide the technology and personnel to expedite our solutions and services development efforts, provide complementary solutions, or provide access to new markets and customers.

Acquisitions involve a number of risks and difficulties, including: (i) expansion into new markets and business ventures; (ii) the requirement to understand local business practices; (iii) the diversion of management’s attention to the integration of acquired operations and personnel; (iv) being bound by acquired customer or vendor contracts with unfavorable terms; and (v) potential adverse effects on a company’s operating results for various reasons, including, but not limited to, the following items: (a) the inability to achieve financial targets; (b) the inability to achieve certain integration expectations, operating goals, and synergies; (c) costs incurred to exit current or acquired contracts or activities; (d) costs incurred to service any acquisition debt; and (e) the amortization or impairment of acquired intangible assets.

Due to the multiple risks and difficulties associated with any acquisition, there can be no assurance that we will be successful in achieving our expected strategic, operating, and financial goals for any such acquisition.

We May Not Be Able to Respond to Rapid Technological Changes.

The market for business support solutions, such as customer care, billing solutions, and payment solutions is characterized by rapid changes in technology and is highly competitive with respect to the need for timely solution innovations and new solution introductions. As a result, we believe that our future success in sustaining and growing our revenue depends upon: (i) our ability to continuously expand, adapt, modify, maintain, and operate our solutions to address the increasingly complex and evolving needs of our customers without sacrificing the reliability or quality of the solutions; (ii) the integration of acquired technologies and their widely distributed, complex worldwide operations; and (iii) creating and maintaining an integrated suite of customer care and billing solutions, which are portable to new verticals. In addition, the market is demanding that our solutions have greater architectural flexibility and interoperability, and that we are able to meet the demands for technological advancements to our solutions at a greater pace. Our attempts to meet these demands subject our R&D efforts to greater risks.

As a result, substantial and effective R&D and solution investment will be required to maintain the competitiveness of our solutions in the market. Technical problems may arise in developing, maintaining, integrating, and operating our solutions as the complexities are increased. Development projects can be lengthy and costly, and may be subject to changing requirements, programming difficulties, a shortage of qualified personnel, and/or unforeseen factors which can result in delays. In addition, we may be responsible for the implementation of new solutions and/or the conversion of customers to new solutions, and depending upon the specific solution, we may also be responsible for operations of the solution.

There is an inherent risk in the successful development, implementation, conversion, integration, and operation of our solutions as the technological complexities, and the pace at which we must deliver these solutions to market, continue to increase. The risk of making an error that causes significant operational disruption to a customer, or results in incorrect computer processing of customer or vendor data that we perform on behalf of our customers, increases proportionately with the frequency and complexity of changes to our solutions and new delivery models. There can be no assurance: (i) of continued market acceptance of our solutions; (ii) that we will be successful in the development of enhancements or new solutions that respond to technological advances or changing customer needs at the pace the market demands; or (iii) that we will be successful in supporting the implementation, conversion, integration, and/or operations of enhancements or new solutions.

We Rely on A Limited Number of Third-Party Vendor Relationships to Execute Our Business Which Exposes Us to Supply Disruptions, Cost Increases, and Cyberattacks.

We rely on third-party providers for software, distributed computing infrastructure environments (or commonly referred to as “cloud” computing services), processing, and other suppliers to deliver our solutions to our customers. Our ability to deliver according to our contractual commitments and market demands depends significantly on being able to obtain the necessary licenses, components, computing capacity, and other vital services and supplies as needed and on competitive terms. In addition, if a third party were to experience a material breach of their information technology systems which results in the unauthorized access, theft, use, destruction, or unauthorized disclosures of customers' or employees' data or confidential information of the Company stored in such systems, including through cyberattacks or other external or internal methods, it could result in a material loss of revenues from the potential adverse impact to our reputation, our ability to retain or attract new customers, potential disruption or loss of services from the vendor and disruption to our business. Such a breach could also result in contractual claims, and could lead to our being named as a party in consumer litigation brought by or on behalf of impacted individuals. Although we strive to avoid single-source supplier solutions, this is not always possible. Failure by any of our third-party vendors could interrupt our operations and the delivery of our solutions, and/or drastically increase our costs. Additionally, if these third-party vendors would decide to significantly increase our costs, it could have an adverse financial impact to our business as we have limited third-party options and the ability to shift to a competing solution, or redesign our solutions would take considerable time, effort, and money.

Failure to Deal Effectively with Fraud, Fictitious Transactions, Bad Transactions, and Negative Experiences Could Increase Our Loss Rate and Harm Our Payment Processing Business, and Could Severely Diminish Merchant and Consumer Confidence in and Use of Our Services.

In the event that merchants do not fulfill their obligations to consumers, or a consumer disputes a transaction for various reasons, we may incur losses as a result of chargebacks and/or claims from consumers. We would seek to recover such losses from the merchant; however, we may not be able to recover the amounts in full if the merchant is unwilling or unable to pay. While we have established financial reserves based on assumptions and estimates that we believe are reasonable to cover such eventualities, these reserves on individual merchants may be insufficient. We may also incur losses from claims that the consumer did not authorize the purchase, from consumer fraud, from erroneous transactions, and as a result of consumers who have closed bank accounts or have insufficient funds in their bank accounts to satisfy payments. In addition, if losses incurred by us related to payment card transactions become excessive, we could lose the right to process credit card transactions, which would significantly impact our payment processing business. We have taken measures to detect and reduce the risk of fraud, including underwriting and risk management procedures and processes, but these measures need to be continually updated to address emerging means of perpetrating fraud or to accommodate new solution offerings.

A Reduction in Demand for Our Key Business Support Solutions Could Have a Material Adverse Effect on Our Financial Position and Results of Operations.

Historically, a substantial percentage of our total revenue has been generated from our core cloud-based product, ACP, and related solutions. These solutions are expected to continue to provide a large percentage of our total revenue in the foreseeable future. Any significant reduction in demand for ACP and related solutions could have a material adverse effect on our business.

Our Global Operations Subject Us to Additional Risks.

We currently conduct a portion of our business outside the U.S. We are subject to certain risks associated with operating internationally including the following items:

- Our solutions not meeting local requirements;
- Fluctuations in foreign currency exchange rates for which a natural or purchased hedge does not exist or is ineffective;
- Staffing and managing of our foreign operations;
- Longer sales cycles for new contracts;
- Longer collection cycles for customer billings or accounts receivable, as well as heightened customer collection risks, especially in countries with highly inflationary economies and/or restrictions on the movement of cash out of the country;
- Trade barriers;
- Governmental sanctions;
- Complying with varied legal and regulatory requirements across jurisdictions;
- Reduced protection for intellectual property rights in some countries;
- Inability to recover value added taxes and/or goods and services taxes in foreign jurisdictions;
- Political instability and threats of terrorism and/or war;
- A potential adverse impact to our overall effective income tax rate resulting from, among other things:
 - Operations in foreign countries with higher tax rates than the U.S.;
 - The inability to utilize certain foreign tax credits; and
 - The inability to utilize some or all of losses generated in one or more foreign countries.

Our Use of Open Source Software May Subject Us to Certain Intellectual Property-Related Claims or Require Us to Re-Engineer Our Software, Which Could Harm Our Business.

We use open source software in connection with our solutions, processes, and technology. Companies that use or incorporate open source software into their products have, from time to time, faced claims challenging their use, ownership and/or licensing rights associated with that open source software. As a result, we could be subject to suits by parties claiming certain rights to what we believe to be open source software. Some open source software licenses require users who distribute open source software as part of their software to publicly disclose all or part of the source code in their software and make any derivative works of the open source code available on unfavorable terms or at no cost. In addition to risks related to license requirements, use of open source software can lead to greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties, support, or controls with respect to origin of the software. Use of open source software also complicates compliance with export-related laws. While we take measures to protect our use of open source software in our solutions, open source license terms may be ambiguous, and many of the risks associated with usage of open source software cannot be eliminated. If we were found to have inappropriately used open source software, we may be required to release our proprietary source code, re-engineer our software, discontinue the sale of certain solutions in the event re-engineering cannot be accomplished on a timely basis, or take other remedial action that may divert resources away from our development efforts.

Failure to Protect Our Intellectual Property Rights or Claims by Others That We Infringe Their Intellectual Property Rights Could Substantially Harm Our Business, Financial Position and Results of Operations.

We rely on a combination of trade secret, copyright, trademark, and patent laws in the U.S. and similar laws in other countries, and non-disclosure, confidentiality, and other types of contractual arrangements to establish, maintain, and enforce our intellectual property rights in our solutions. Despite these measures, any of our intellectual property rights could be challenged, invalidated, circumvented, or misappropriated. Further, our contractual arrangements may not effectively prevent disclosure of our confidential information or provide an adequate remedy in the event of unauthorized disclosure of our confidential information. Others may independently discover trade secrets and proprietary information, which may complicate our assertion of trade secret rights against such parties. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position. In addition, the laws of certain countries do not protect proprietary rights to the same extent as the laws of the U.S. Therefore, in certain jurisdictions, we may be unable to protect our proprietary technology adequately against unauthorized third party copying or use, which could adversely affect our competitive position.

Although we hold a limited number of patents and patent applications on some of our solutions, we do not rely upon patents as a primary means of protecting our rights in our intellectual property. In any event, there can be no assurance that our patent applications will be approved, that any issued patents will adequately protect our intellectual property, or that such patents will not be challenged by third parties. Also, much of our business and many of our solutions rely on key technologies developed or licensed by third parties, and we may not be able to obtain or continue to obtain licenses and technologies from these third parties at all or on reasonable terms.

Finally, third parties may claim that we, our customers, licensees or other parties indemnified by us are infringing upon their intellectual property rights. Even if we believe that such claims are without merit, they can be time consuming and costly to defend and distract management's and technical staff's attention and resources. Claims of intellectual property infringement also might require us to redesign affected solutions, enter into costly settlement or license agreements or pay costly damage awards, or face a temporary or permanent injunction prohibiting us from marketing or selling certain of our solutions. Even if we have an agreement to indemnify us against such costs, the indemnifying party may be unable to uphold its contractual obligations. If we cannot or do not license the infringed technology on reasonable pricing terms or at all, or substitute similar technology from another source, our business could be adversely impacted. Our failure to adequately establish, maintain, and protect our intellectual property rights could have a material adverse effect on our business.

We May Incur Material Restructuring Charges in the Future.

In the past, we have recorded restructuring charges related to involuntary employee terminations, various facility abandonments, and various other restructuring and reorganization activities. We continually evaluate ways to reduce our operating expenses through new restructuring opportunities, including more effective utilization of our assets, workforce, and operating facilities. As a result, there is a risk, which is increased during economic downturns and with expanded global operations, that we may incur material restructuring or reorganization charges in the future.

Risks Related to Our Industry

Our Business is Highly Dependent on the Global Communications Industry.

Since a large percentage of our revenue are generated from customers that operate within the global communications industry, we are highly dependent on the health and the business trends occurring within this industry (in particular for our North American cable and satellite customers). Key factors within this industry that could potentially impact our customers' businesses, and thus, our business, are as follows:

- *Key Market Conditions:* The global communications industry has undergone significant fluctuations in growth rates and capital investment cycles in the past decade.

In addition, changes in demand for traditional services for CSPs are causing them to seek new revenue sources, while also managing their cost structure and quality of service delivery during their business transformation. The result is that many CSPs are delaying investment decisions on legacy systems, and making investments in new solutions to drive their business forward into new areas.

- *Market Consolidation:* The pace of consolidation within the industry continues to accelerate as communication service providers look to increase the scale of their operations and footprint within the entire communications ecosystem. Potential byproducts of this consolidation that could impact us are as follows: (i) there could be fewer providers in the market, each with potentially greater bargaining power and economic leverage due to their larger size, which may result in our having to lower our prices to remain competitive, retain our market share, or comply with the surviving customer's current more favorable contract terms, and (ii) the controlling entity in a consolidation that is not our current customer, may acquire one of our existing customers and choose to consolidate both entities onto the controlling entity's software platform, thus reducing and possibly eliminating our business with our existing customer.

Also, as consolidated entities execute upon their revenue and operational synergies, there is generally a slowdown in decision-making on discretionary spending and/or on new business initiatives. While this could be a timing issue only, it could impact quarterly and annual results.

- *Competition:* Our customers operate in a highly competitive environment. Competitors range from traditional wireline and wireless providers to new entrants like digital native service providers such as Amazon, Apple, Facebook, Google, and Netflix. Should these competitors be successful in their strategies, it could threaten our customers' market share, pricing power, and level of services delivered. These threats could negatively impact our customers' revenue, putting pressure on our source of revenue, as generally speaking, these companies do not use our core solutions and there can be no assurance that new entrants will become our customers. In addition, demand for spectrum, network bandwidth and content continue to increase and any changes in the regulatory environment could have a significant impact to not only our customers' businesses, but in our ability to help our customers be successful.

The above industry factors are impacting our customers' businesses, and thus could cause delays, cancellations/loss of business, and/or downward pricing pressure on our sales and services. This could cause us to either fall short of revenue expectations or have a cost model that is misaligned with revenue.

We Face Significant Competition in Our Industry.

The market for our solutions is highly competitive. We directly compete with both independent providers and in-house solutions developed by existing and potential customers. In addition, some independent providers are entering into strategic alliances with other independent providers, resulting in either new competitors, or competitors with greater resources. Many of our current and potential competitors have significantly greater financial, marketing, technical, and other competitive resources than our company, many with significant and well-established domestic and international operations. There can be no assurance that we will be able to compete successfully with our existing competitors or with new competitors.

Risks Related to Laws and Regulations

The Occurrence or Perception of a Security Breach or Disclosure of Confidential Personally Identifiable Information Could Harm Our Business.

In providing solutions to our customers, we transmit, use, store and otherwise process, confidential and personally identifiable information ("PII"), including social security numbers, health-related information (including protected health information, or "PHI" as defined under HIPAA), and financial information (including information regulated under the GLBA and other financial privacy laws). Our treatment of such information is subject to contractual restrictions and federal, state, and foreign data privacy laws and regulations, which continue to evolve resulting in greater scrutiny and regulation over the protection of PII. In response to these evolving restrictions and regulations (which include, without limitation, the Health Insurance Portability and Accountability Act ("HIPAA"), the Health Information Technology for Economic and Clinical Health Act ("HITECH"), the California Consumer Privacy Act ("CCPA"), the Gramm-Leach-Bliley Act ("GLBA"), and other U.S. federal and state financial privacy laws and regulations, and the European Union's General Data Protection Regulation ("GDPR"), we have implemented and maintain administrative, technical, and physical security measures and it is our standard practice to contractually require our service providers to whom we disclose data (including PII) to implement and maintain reasonable privacy, data protection, and information security measures, in each case to protect against loss, theft, misuse, or unauthorized access to or disclosure of such information, and otherwise comply with these laws and regulations. These measures include standard industry practices (e.g., payment card industry ("PCI") requirements), periodic security reviews of our systems by independent parties, secure development practices, network firewalls, policy directives, procedural controls, training of our personnel, intrusion detection systems, and antivirus applications. However, due to the inherent risks and complexities to defend against cybercrime and other information security incidents, these measures may fail to adequately protect this information. Any failure on our part to protect the security and privacy of PII and other confidential information, or otherwise comply with data privacy laws and regulations may subject us to contractual liability and damages, loss of business, damages from individual claimants (including class action litigation), substantial fines/penalties, criminal prosecution, and unfavorable publicity.

Even the mere perception of a security breach or inadvertent disclosure of PII could damage our reputation and inhibit market acceptance of our solutions. In addition, third-party vendors that we engage to perform services for us may unintentionally release PII or otherwise fail to comply with applicable laws and regulations. Under our terms of service and our contracts with customers, if there is a breach of PII that we store, we could be liable to the customer for their losses and related expenses. As new laws and regulations emerge and evolve and as our business continues to expand to include new products and technologies, these risks will increase and our compliance costs are likely to increase substantially. As we increase our customer base and expand our business, third parties may increasingly seek to compromise our security controls or gain unauthorized access to our, and our customers', sensitive information and PII. Further, as we continue to have a significant number of our employees working remotely, these security risks may be increased. We have implemented heightened monitoring of our Networks and Systems, but cannot guarantee that our efforts, or those of third parties on whom we rely or with whom we partner, will be successful in preventing any such information security incidents or attacks.

We May Be Subject to Payments Regulation in the U.S.

Many states in which we operate have laws that govern payment activities and have implemented various definitions and licensing requirements for entities deemed to be money transmitters, including licensure. We have applied for money transmitter licenses in a number of states, and for those states where we have applied and not yet received licensure, we could be subject to enforcement actions and financial penalties and other costs. An enforcement action could result in restrictions upon, or a prohibition on engaging in, the business of money transmission in one or more states and it could delay or prevent us from obtaining a money transmitter license in one or more states. Enforcement actions could also result in reputational harm to our business and force us to cease or limit certain aspects of our business or prevent us from growing our business. Further, laws governing payment activities may evolve and changes in such law could affect our ability to provide our solutions or services in the same form and on the same terms as we have historically, or at all.

And while we have currently applied for money transmitter licenses in a number of states, there can be no assurance that we will be able to obtain any such licenses and such application process may be prolonged and costly. During the application process, states may impose disclosure and vetting requirements of persons deemed in control of our business. In addition, there are substantial costs and potential solution changes involved in maintaining such licenses, and we could be subject to fines or other enforcement action if we are found to have violated applicable federal, state, and local laws and regulations, including those related to licensing and supervision, anti-money laundering, the Bank Secrecy Act, financial privacy, and cybersecurity and data security. These factors could impose substantial additional costs and involve considerable delay to the development or provision of our solutions or services, or could require significant and costly operational changes or prevent us from providing our solutions or services in a given market. These limitations may adversely affect our ability to grow our business.

We may also be subject to card association and network rules and requirements, and violations of such rules and requirements could result in fines or the inability to use third-party networks to conduct our business.

We May be Subject to Various Anti-Money Laundering and Counter-Terrorist Financing Laws and Regulations.

We are subject to various anti-money laundering ("AML") and counter-terrorist financing laws and regulations that prohibit, among other things, our involvement in processing the proceeds of criminal activities. We maintain an AML Compliance Policy and Procedure applicable to our payments processing business which policy is intended to comply with any applicable U.S. federal requirements. The laws or their application, our interpretation of the laws, and/or our services may change so that we could be subject to additional regulation and incur additional costs of compliance. We may not be able to meet additional regulatory requirements or the cost of adhering to such requirements could be substantial or could severely impact our ability to continue to maintain and/or grow our payments processing business or retain merchants or partners. The regulations of other countries and/or any increased compliance costs associated with such regulations, could prevent us from entering new markets for our services.

Our Global Operations Require Us to Comply With Applicable U.S. and International Laws and Regulations.

Doing business on a global basis requires our company and our subsidiaries to comply with the laws and the regulations of the U.S. government and various international jurisdictions. In addition, the number of countries enacting anti-corruption laws and related enforcement activities is increasing. These regulations place restrictions on our operations, trade practices and trade partners. In particular, our global operations are subject to U.S. and foreign anti-corruption laws and regulations such as the Foreign Corrupt Practices Act ("FCPA"), the U.K. Anti-Bribery Act and economic sanction programs administered by the Office of Foreign Assets Control ("OFAC").

The FCPA prohibits us from providing anything of value to foreign officials for the purposes of influencing official decisions or obtaining or retaining business. In addition, the FCPA imposes accounting standards and requirements on publicly traded U.S. corporations and their foreign affiliates, which are intended to prevent the diversion of corporate funds to the payment of bribes and other improper payments, and to prevent the establishment of “off books” slush funds from which such improper payment can be made. As part of our business, we regularly deal with state-owned business enterprises, the employees of which are considered foreign officials for purposes of the FCPA. In addition, some of the international locations in which we operate lack a developed legal system and have higher than normal levels of corruption. We inform our personnel and third-party sales representatives of the requirements of the FCPA and other anti-corruption laws, including, but not limited to their reporting requirements. We have also developed and will continue to develop and implement systems for formalizing contracting processes, performing due diligence on agents and partners while improving our recordkeeping and auditing practices regarding these regulations. However, there is no guarantee that our employees, third-party sales representatives or other agents have not or will not engage in conduct undetected by our processes and for which we might be held responsible under the FCPA or other anti-corruption laws.

Economic sanctions programs restrict our business dealings with certain countries and individuals. As a global provider, we are exposed to a heightened risk of violating OFAC regulations. Violations of these laws and regulations are punishable by civil penalties, including fines, injunctions, asset seizures, debarment from government contracts and revocations or restrictions of licenses, as well as criminal fines and imprisonment. While we actively screen and monitor the global companies and individuals that we do business with, utilizing a risk-based approach, there is no guarantee that we have not or will not, through the lack of accurate information, changing customer business structures, process failure, oversight, or error, have violations occur.

General Risks

Our Business May be Disrupted and Our Results of Operations and Cash Flows May be Adversely Affected by the Recent Coronavirus (COVID-19) Pandemic.

In March 2020, the World Health Organization declared a global pandemic related to the rapidly spreading coronavirus (COVID-19) outbreak which has led to a global health emergency. Although vaccines have been produced and are being distributed on a limited basis there is still significant uncertainty related to the duration and scope of the pandemic. The significance of the impact on our operations is not yet certain and depends on numerous evolving factors that we may not be able to accurately predict or effectively respond to, including, among others:

- the effect on global economic activity and the resulting impact on our customer’s businesses, their credit and liquidity, and their demand for our solutions and services, as well as their ability to pay;
- our ability to deliver and implement our solutions in a timely manner, including as a result of supply chain challenges, one or more print and mail facility closures for an extended period, restrictions on travel for our and customer personnel, as well as shelter-in-place orders; and
- actions taken by U.S., foreign, state, and local governments, suppliers, and individuals in response to the outbreak.

While we have significant sources of cash and liquidity and access to a committed credit line, a prolonged period of generating lower cash from operations could adversely affect our financial condition and the achievement of our strategic objectives.

Failure to Attract and Retain Our Key Management and Other Highly Skilled Personnel Could Have a Material Adverse Effect on Our Business.

Our future success depends in large part on the continued service of our key management, sales, product development, professional services, and operational personnel. We believe that our future success also depends on our ability to attract and retain a diverse, highly skilled technical, managerial, operational, and sales and marketing personnel, including, in particular, personnel in the areas of R&D, professional services, and technical support. Competition for qualified personnel at times can be intense, particularly in the areas of R&D, conversions, software implementations, and technical support. This risk is heightened with a widely dispersed customer base and employee populations. For these reasons, we may not be successful in attracting and retaining the personnel we require, which could have a material adverse effect on our ability to meet our commitments and new solution delivery objectives.

Variability of Our Quarterly Revenue and Our Failure to Meet Revenue and Earnings Expectations Would Negatively Affect the Market Price of Our Common Stock.

From time to time, we may experience variability in quarterly revenue and operating results. Common causes of failure to meet revenue and operating expectations include, among others:

- Inability to close and/or recognize revenue on certain transactions in the period originally anticipated;
- Inability to accurately forecast payment processing transaction volumes and related transaction costs;
- Delays in renewal of multiple or individually significant agreements;
- Inability to renew existing customer or vendor arrangements at anticipated rates;
- Delays in timing of initiation and/or implementation of significant projects or arrangements;
- Inability to meet customer expectations materially within our cost estimates;
- Changes in spending and investment levels;
- Foreign currency fluctuations; and
- Economic and political conditions.

Should we fail to meet our revenue and earnings expectations of the investment community, by even a relatively small amount, it could have a disproportionately negative impact upon the market price of our common stock.

Substantial Impairment of Long-lived Assets in the Future May Be Possible.

As a result of various acquisitions and the growth of our company over the last several years, we have approximately \$203 million of long-lived assets other than goodwill (principally, property and equipment, software, acquired customer contracts, and customer contract costs) as of December 31, 2020. Long-lived assets are required to be evaluated for possible impairment whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. We utilize our market capitalization and/or cash flow models as the primary basis to estimate the fair value amounts used in our long-lived asset impairment valuations. If an impairment was to be recorded in the future, it could materially impact our results of operations in the period such impairment is recognized, but such an impairment charge would be a non-cash expense, and therefore would have no impact on our cash flows.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

As of December 31, 2020, we were operating in over 25 leased sites around the world, representing approximately 700,000 square feet.

Our corporate headquarters is located in Greenwood Village, Colorado. In addition, we lease office space in the U.S. in Allen, Texas; Atlanta, Georgia; Chicago, Illinois; Irving, Texas; Omaha, Nebraska; and Philadelphia, Pennsylvania. The leases for these office facilities expire in the years 2023 through 2031. We also maintain leased facilities internationally in Australia, Brazil, Canada, Colombia, France, India, Ireland, Malaysia, Portugal, South Africa, Sweden, United Arab Emirates, and the U.K. The leases for these international office facilities expire in the years 2021 through 2026. We utilize these office facilities primarily for the following: (i) customer services, training, and support; (ii) product and operations support; (iii) systems and programming activities; (iv) professional services staff; (v) R&D activities; (vi) sales and marketing activities; and (vii) general and administrative functions.

Additionally, we lease four statement production and mailing facilities totaling approximately 350,000 square feet. These facilities are located in: (i) Omaha, Nebraska; (ii) Crawfordville, Florida; (iii) Austin, Texas; and (iv) Fort Worth, Texas. The leases for these facilities expire in the years 2022 through 2028.

We believe that our facilities are adequate for our current needs and that additional suitable space will be available as required. We also believe that we will be able to either: (i) extend our current leases as they terminate; or (ii) find alternative space without experiencing a significant increase in cost. See Note 6 to our Financial Statements for information regarding our obligations under our facility leases.

Item 3. Legal Proceedings

From time-to-time, we are involved in litigation relating to claims arising out of our operations in the normal course of business. In the opinion of our management, we are not presently a party to any material pending or threatened legal proceedings.

Item 4. Mine Safety Disclosures

Not applicable.

Executive Officers of the Registrant

As of the date of this filing, our executive officers are Brian A. Shepherd (President and Chief Executive Officer), Rolland B. Johns (Chief Financial Officer), and Kenneth M. Kennedy (Chief Operating Officer, President – Revenue Management and Digital Monetization and Executive Vice President). We have employment agreements with each of our executive officers.

Brian A. Shepherd

President and Chief Executive Officer

Mr. Shepherd, 53, joined CSG in 2016, and is President and Chief Executive Officer (“CEO”) of CSG. Mr. Shepherd was appointed President and CEO and a member of our Board in January 2021. Before becoming CEO, Mr. Shepherd was Executive Vice President and Group President of CSG, where he led the profit and loss organization for the entire global organization. He also served as Executive Vice President and President of Global Broadband, Cable and Satellite Business from 2016 to 2017, where he focused on accelerating the growth and strategic direction of CSG’s global broadband, cable and direct broadcast satellite business. Mr. Shepherd is a global business expert with strong management, customer relationship, global sales, strategy and corporate growth experience. In previous executive roles at companies such as TeleTech, Amdocs, DST Innovis, and McKinsey & Company, Mr. Shepherd built a successful history of helping companies drive and achieve their strategic growth initiatives. With 20 years of experience in the cable and communications industries, he has built wide and deep relationships with C-suite leaders, decision-makers and policy influencers who have shaped these industries globally. Mr. Shepherd graduated magna cum laude from Wabash College with a B.A. in Economics. He also received an M.B.A. from Harvard Business School.

Rolland B. Johns

Executive Vice President and Chief Financial Officer

Mr. Johns, 51, serves as Chief Financial Officer (“CFO”) of CSG, where he oversees finance, accounting, treasury, and investor relations for the organization. Mr. Johns joined CSG in 2013 as Chief Accounting Officer and was named to his current position in May 2018. Mr. Johns brings more than 25 years of global finance and accounting expertise to the position. Prior to joining CSG, he was an audit partner at KPMG, serving in many leadership and management roles, including lead audit engagement partner on several large public company engagements in various industries across the globe. Mr. Johns is a member of the AICPA and the Nebraska Society of Certified Public Accountants. He holds a B.S. in Accounting from the University of San Diego.

Kenneth M. Kennedy

Executive Vice President, Chief Operating Officer and President – Revenue Management and Digital Monetization

Mr. Kennedy, 51, is Chief Operating Officer (“COO”) of CSG and President – Revenue Management & Digital Monetization, responsible for driving revenue and creating scalable monetization solutions that help CSG deepen customer relationships. Prior to becoming COO, Mr. Kennedy served as President of Technology and Product, where he oversaw all product management, engineering, platform architecture and operations across CSG’s solutions portfolio. Mr. Kennedy also served as CSG’s Executive Vice President of Product Development from 2016 to 2017, and as Chief Technology Officer and Senior Vice President of Product Management, Development and Operations from 2006 to 2016. Prior to CSG, Mr. Kennedy was one of the original founders of Telution, where he served as Vice President of Software Development and Professional Services from 1998 to 2006. Before Telution, Mr. Kennedy worked at Accenture (f.k.a. Andersen Consulting), where he was responsible for developing highly scalable distributed software solutions for the financial services and communications industries. Mr. Kennedy holds a B.B.A. in Management Information Systems from the University of Notre Dame.

Board of Directors of the Registrant

Information related to our Board of Directors (the “Board”) is provided below.

Donald B. Reed

Mr. Reed, 76, was appointed to the Board in May 2005 and has served as CSG's non-executive Chairman of the Board since January 2010. He is presently retired. Mr. Reed served as CEO of Cable & Wireless Global, a subsidiary of Cable & Wireless plc, from 2000 to 2003 and was employed in other executive positions at Cable & Wireless from 1998 until May 2000. Prior to that he was CEO of Cabletron Systems and held numerous executive positions at NYNEX Corporation including President and Group Executive of Nynex, Executive Vice President at Bell Atlantic, and President of Nynex New England (New England Telephone) with various responsibilities for directing regional, national, and international government affairs, public policy initiatives, legislative and regulatory matters, and public relations. He has previously served on the public boards of Bell Atlantic, Idearc Inc., and Aggregate Industries plc (London) as a director. Mr. Reed is a graduate of Virginia Military Institute (VMI) and served in the United States military as an officer with the 82nd Airborne and 1st Infantry Divisions in Vietnam.

David G. Barnes

Mr. Barnes, 59, was appointed to the Board in February 2014. He is currently Chief Financial Officer of Trimble Inc., a position he assumed in January 2020. Previously, he served as Executive Vice President, Global Operations of Stantec Inc., a publicly traded global provider of engineering, consulting, and construction services from 2016 through 2018. From 2009 through 2016, he served as Executive Vice President and CFO of MWH Global Inc., an employee-owned engineering and construction firm. MWH Global Inc. was acquired by Stantec Inc. in 2016. From 2006 to 2008, he was Executive Vice President of Western Union Financial Services. From 2004 to 2006, Mr. Barnes served as CFO of Radio Shack Corporation, and from 1999 to 2004, he was Vice President, Treasurer, and U.S. CFO for Coors Brewing Company. Mr. Barnes holds an M.B.A. degree from the University of Chicago and a B.A. degree from Yale University.

Ronald H. Cooper

Mr. Cooper, 64, was appointed to the Board in November 2006. He most recently served as the President and CEO of Clear Channel Outdoor Americas, Inc. (an outdoor advertising company) from 2009 through 2012. Prior to this position, he was a Principal at Tufts Consulting LLC from 2006 through 2009. Previously, he spent nearly 25 years in the cable and telecommunications industry, most recently at Adelphia Communications where he served as President and COO from 2003 to 2006. Prior to Adelphia, Mr. Cooper held a series of executive positions at AT&T Broadband, RELERA Data Centers & Solutions, MediaOne and its predecessor Continental Cablevision, Inc. He has served on various boards of directors and committees with the National Cable Television Association, California Cable & Telecommunications Association, Cable Television Association for Marketing, New England Cable Television Association, and Outdoor Advertising Association of America. Mr. Cooper holds a B.A. degree from Wesleyan University.

Marwan H. Fawaz

Mr. Fawaz, 58, was appointed to the Board in March 2016. He is currently an Executive Advisor to Google and Alphabet Inc., after joining Alphabet as the CEO of Nest Labs, Inc. With more than 30 years of experience in the media, cable, telecommunications, and broadband industries, Mr. Fawaz offers a wealth of knowledge and expertise, developed from his time as Executive Vice President and CEO of Google/Motorola Mobility from 2012 to 2013 and Executive Vice President of Strategy and Operations and Chief Technology Officer of Charter Communications from 2006 to 2011. In addition, he served as Senior Vice President and Chief Technology Officer of Adelphia Communications from 2003 to 2006 and held leadership positions for other cable industry companies such as MediaOne, among others. He was the founder and principal of Sarepta Advisors, a strategic advisory and consulting group supporting the technology, media, and telecommunications industries. He holds an M.S. degree in Electrical and Communication Engineering and a B.S. degree in Electrical Engineering, both from California State University at Long Beach.

Rajan Naik

Dr. Naik, 49, was appointed to the Board in August 2018. He currently serves as Chief Strategy and Innovation Officer for Motorola Solutions, Inc., where he is responsible for the corporate strategy organization, chief technology office, M&A, venture capital portfolio, and competitive and market intelligence. Motorola Solutions creates mission-critical communication solutions, including devices, networks, software, services, and video. Prior to joining Motorola Solutions, Dr. Naik held the role of Senior Vice President, Chief Strategy Officer at Advanced Micro Devices (AMD), a provider of high performance computing, graphics and visualization technologies. From 2000 to 2012, Dr. Naik was a Partner at McKinsey & Company in the technology/media/telecom practice. He holds a BSc. degree in Engineering from Cornell University and a Ph.D. degree in Engineering from the Massachusetts Institute of Technology.

Janice I. Obuchowski

Ms. Obuchowski, 69, was appointed to the Board in November 1997. She is the founder and President of Freedom Technologies, Inc. (a firm providing public policy, strategic, and engineering advice to companies in the communications sector, government agencies, and international clients), a position she has held since 1992. In 2003, Ms. Obuchowski was appointed by President George W. Bush to serve as Ambassador and Head of the U.S. Delegation to the World Radiocommunication Conference. She has served as Assistant Secretary for Communications and Information at the Department of Commerce, Administrator for the National Telecommunications and Information Administration (“NTIA”), and as the head of international government relations at NYNEX Corporation. Ms. Obuchowski formerly served as a director on the board for Inmarsat plc. and Orbital ATK during the past five years. She also has served on several non-profit and other publicly traded company boards. She holds a J.D. degree from Georgetown University and a B.A. degree from Wellesley College, and also attended the University of Paris.

Brian A. Shepherd

Mr. Shepherd’s biographical information is included in the “Executive Officers of the Registrant” section shown directly above.

Frank V. Sica

Mr. Sica, 70, has served as a director of the Company since its formation in 1994. He has been a Partner of Tailwind Capital (a private equity firm) since 2006. He currently serves as a director on the boards of Kohl’s Corporation, and Safe Bulkers, Inc. Mr. Sica holds an M.B.A. degree from the Tuck School of Business at Dartmouth College and a B.A. degree from Wesleyan University.

Haiyan Song

Ms. Song, 55, was appointed to the Board in January 2020. She currently serves as EVP and GM, Security at F5 Networks. Prior to that, Ms. Song served as Senior Vice President and General Manager of Security Markets for Splunk, Inc from 2014-2020. Before joining Splunk, she spent four years from 2010 to 2014 with Hewlett Packard Enterprise Co., in engineering and general manager roles within Hewlett Packard’s ArcSight Business Unit. Ms. Song joined Hewlett Packard following the company’s acquisition of ArcSight, Inc. in 2010. Ms. Song was Vice President of Engineering & Product with ArcSight from 2005 to 2010. Ms. Song holds both M.S. and B.S. degrees in Computer Science from Florida Atlantic University. She also studied at Tsinghua University in China and completed the Stanford University Graduate School of Business Executive Program in General Management in 2012.

Silvio Tavares

Mr. Tavares, 49, was appointed to the Board in May 2020. Since 2013, he has served as President of the board of directors and CEO of the Digital Commerce Alliance (formerly The CardLinx Association), a leading global trade association for the digital commerce, payments and fin-tech industries. Prior to that, Tavares was Senior Vice President and Global Head of Information Products at Visa, Inc., and before that was with First Data Corp. (now part of Fiserv) from 2006-2012, where he was Senior Vice President and Head of the Global Information and Analytics Business Unit and also held other senior finance roles. He holds a J.D. degree from the Boston University School of Law; an M.B.A. degree from the Boston College Carroll Graduate School of Management; and a B.S. degree in Electrical and Computer Engineering from Tufts University.

James A. Unruh

Mr. Unruh, 80, was appointed to the Board in June 2005. He became a founding Principal of Alerion Capital Group, LLC (a private equity investment company) in 1998 and currently holds such position. Mr. Unruh was an executive with Unisys Corporation (a global information technology company) from 1987 to 1997, including serving as its Chairman and CEO from 1990 to 1997. From 1982 to 1986, Mr. Unruh held various executive positions, including Senior Vice President–Finance and CFO with Burroughs Corporation, a predecessor of Unisys corporation. Prior to 1982, Mr. Unruh was CFO with Memorex Corporation and also held various executive positions with Fairchild Camera and Instrument Corporation, including CFO. Mr. Unruh formerly served as director on the boards for Tenet Healthcare Corporation and Prudential Financial, Inc. during the past five years. He holds an M.B.A. degree from the University of Denver and a B.S. degree from the University of Jamestown.

Lily Yang

Tse Li (Lily) Yang, 48, was appointed to the Board in February 2021. She is currently Chief Accounting Officer of Pinterest, where she is responsible for accounting, tax, treasury, and internal audit. Prior to that, she spent two years with Medivation as the Vice President of Finance and Accounting where she was tasked with driving strategic growth and expansion before the company was acquired by Pfizer. Yang worked at Gilead Sciences from 2003 until 2015, finishing her tenure as Vice President - Corporate Controller. Yang holds a B.S. degree in Accounting and Managerial Information Systems from Boston University and is a Certified Public Accountant.

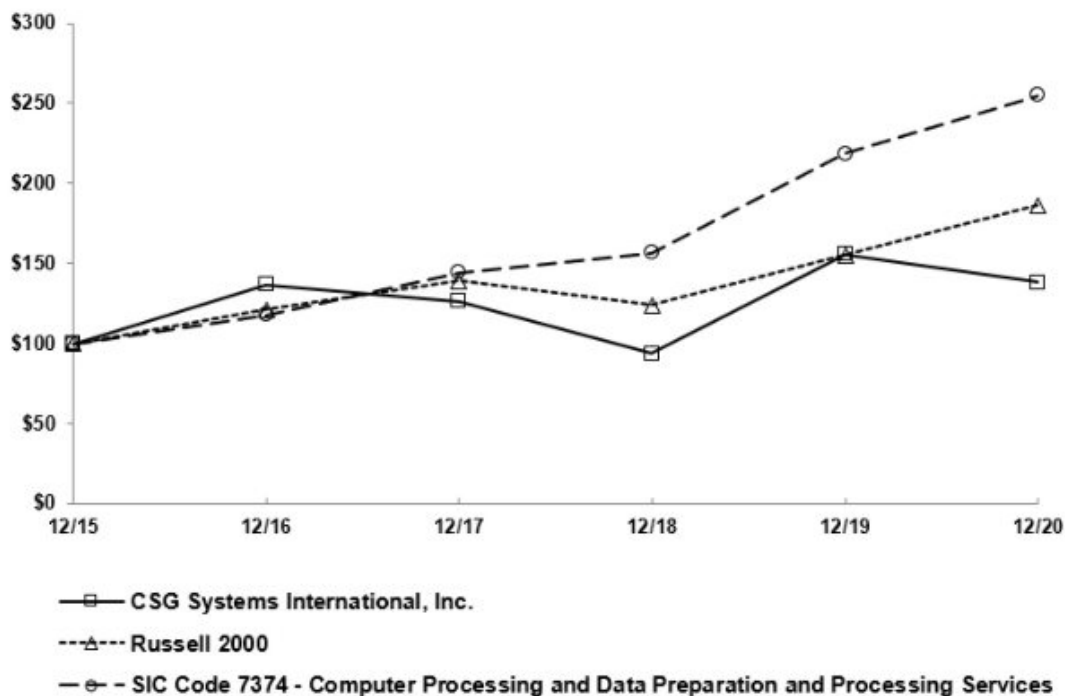
PART II

Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock is listed on NASDAQ under the symbol “CSGS”. On January 31, 2021, the number of holders of record of common stock was 125.

Stock Price Performance

The following graph compares the cumulative total stockholder return on our common stock, the Russell 2000 Index, and our Standard Industrial Classification (“SIC”) Code Index: Data Preparation and Processing Services during the indicated five-year period. The graph assumes that \$100 was invested on December 31, 2015, in our common stock and in each of the two indexes, and all dividends, if any, were reinvested.



	As of December 31,					
	2015	2016	2017	2018	2019	2020
CSG Systems International, Inc.	\$ 100.00	\$ 136.89	\$ 126.38	\$ 93.58	\$ 155.37	\$ 138.28
Russell 2000 Index	100.00	121.31	139.08	123.76	155.35	186.36
Data Preparation and Processing Services	100.00	117.65	144.13	156.48	218.56	255.15

Equity Compensation Plan Information

The following table summarizes certain information about our equity compensation plans as of December 31, 2020:

<u>Plan Category</u>	<u>Number of securities to be issued upon exercise of outstanding options, warrants, and rights</u>	<u>Weighted-average exercise price of outstanding options, warrants, and rights</u>	<u>Number of securities remaining available for future issuance</u>
Equity compensation plans approved by security holders	—	\$ —	5,928,624

Of the total number of securities remaining available for future issuance, 5,774,916 shares can be used for various types of stock-based awards, as specified in the equity compensation plan, with the remaining 153,708 shares to be used for our employee stock purchase plan. See Note 13 to our Financial Statements for additional discussion of our equity compensation plans.

Issuer Repurchases of Equity Securities

The following table presents information with respect to purchases of our common stock made during the fourth quarter of 2020 by CSG Systems International, Inc. or any “affiliated purchaser” of CSG Systems International, Inc., as defined in Rule 10b-18(a)(3) under the Exchange Act.

<u>Period</u>	<u>Total Number of Shares Purchased (1) (2)</u>	<u>Average Price Paid Per Share</u>	<u>Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (2)</u>	<u>Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plan or Programs (2)</u>
October 1 - October 31	176,299	\$ 40.80	175,500	4,495,967
November 1 - November 30	102,951	41.77	101,650	4,394,317
December 1 - December 31	145,853	44.72	57,200	4,337,117
Total	<u>425,103</u>	<u>\$ 42.38</u>	<u>334,350</u>	

- (1) The total number of shares purchased that are not part of the Stock Repurchase Program represents shares purchased and cancelled in connection with stock incentive plans.
- (2) See Note 12 to our Financial Statements for additional information regarding our share repurchases.

Item 6. Selected Financial Data

The following selected financial data have been derived from our audited financial statements. The selected financial data presented below should be read in conjunction with, and is qualified by reference to, our MD&A and our Financial Statements. The information below is not necessarily indicative of the results of future operations.

	Year Ended December 31,				
	2020	2019	2018	2017	2016
	(in thousands, except per share amounts)				
Statements of Income Data:					
Revenue (1)(2)(3)	\$ 990,533	\$ 996,810	\$ 875,059	\$ 789,582	\$ 760,958
Operating income (1)(2)(3)(4)	105,556	126,109	104,932	105,685	132,629
Net income (1)(2)(3)(4)	58,711	82,770	66,130	61,364	62,882
Weighted-average diluted shares outstanding	32,278	32,465	32,855	32,865	33,014
Diluted net income per common share (1)(2)(3)(4)	\$ 1.82	\$ 2.55	\$ 2.01	\$ 1.87	\$ 1.90
Dividend declared per share	\$ 0.94	\$ 0.89	\$ 0.84	\$ 0.79	\$ 0.74
Key Capital Activities:					
Shares repurchased under Stock Repurchase Program	624	576	704	500	318
Cost of shares repurchased under Stock Repurchase Program	\$ 26,309	\$ 25,457	\$ 27,628	\$ 20,548	\$ 11,565
Dividends declared	30,932	29,445	28,148	26,823	23,753
Balance Sheet Data (at Period End):					
Cash, cash equivalents and short-term investments (2)(6)(7)	\$ 240,297	\$ 182,657	\$ 162,880	\$ 261,360	\$ 276,498
Total assets (2)(5)	1,332,000	1,283,030	1,114,362	904,534	891,879
Total debt (6)	351,217	356,822	359,826	331,736	416,260
Total treasury stock (6)(7)	894,126	867,817	842,360	814,732	826,002
Total stockholders' equity (3)(6)(7)	422,395	396,662	361,024	342,746	251,360

- (1) In December 2019, we entered into a new Master Subscriber Agreement with Comcast that extends our contractual relationship for an additional five years. The new agreement was effective January 1, 2020, and included certain pricing adjustments that contributed to the approximately \$16 million year-over-year decrease in revenue generated from Comcast.
- (2) In January 2020, we acquired Tekzenit, Inc., and as a result, twelve months of their operations are included in our 2020 results. The overall cost of this acquisition was approximately \$10 million and it was funded with existing cash.
- During 2018, we acquired Business Ink and Forte Payment Systems, Inc., and as a result, ten and three months of their operations, respectively, are included in our 2018 results (approximately \$74 million of revenue impact). The overall cost of these acquisitions was approximately \$155 million and was funded with existing cash.
- See Note 7 to our Financial Statements for additional discussion of these acquisitions.
- (3) In 2018, we adopted Accounting Standards Update (“ASU”) 2014-09, *Revenue from Contracts with Customers* (Topic 606), a single comprehensive model which supersedes nearly all existing revenue recognition guidance under U.S. GAAP. Under the new guidance, revenue is recognized when promised goods or services are transferred to customers in an amount that reflects the consideration that is expected to be received for those goods or services.
- We adopted the new guidance using the cumulative effect approach, and as a result, recorded a cumulative adjustment increasing beginning retained earnings (net of tax) by approximately \$7 million.
- (4) In February 2016, our former cyber-security business (marketed under the Invotas brand), which had been previously sold to certain former management personnel, was acquired by a third-party. Based on the terms of the agreement, we received additional consideration upon a liquidation event, as defined in the agreement, which resulted in an additional gain on the sale of \$6.6 million.
- (5) In 2019, we adopted ASU 2016-02, *Leases* (Topic 842), which requires lessees to recognize a lease liability and a right-of-use asset for all leases, including operating leases, with a term greater than twelve months on its balance sheet.
- We adopted this ASU utilizing the effective date method of transition thus, prior period information in our Financial Statements was not adjusted. In conjunction with the adoption of this ASU we recorded additional assets and liabilities of approximately \$80 million related to the right-of-use assets and lease liabilities.

- (6) In March 2018, we refinanced our Credit Agreement. As a result, under the refinanced 2018 Credit Agreement, we: (i) extended the term of the agreement to March 2023; (ii) obtained a reduction in the interest rate and other fees; and (iii) borrowed \$150 million, resulting in a net increase of available cash of \$30 million, after paying off the outstanding \$120 million balance from the term loan under the previous 2015 Credit Agreement.

In March 2016, we completed an offering of \$230 million of 4.25% senior convertible notes due March 15, 2036. The net proceeds of approximately \$223 million were used to settle the outstanding 2010 Convertible Notes, due March 1, 2017. During 2016, we repurchased approximately \$115 million of the 2010 Convertible Notes for approximately \$216 million, and recognized a loss on the repurchases of \$8.7 million. In March 2017, we settled our conversion obligation by paying cash of \$34.8 million for the remaining par value of the notes and delivered 694,240 shares of our common shares from treasury stock to settle the \$28.8 million value of the conversion obligation in excess of par value.

See Note 5 to our Financial Statements for additional discussion of our debt.

- (7) In December 2019, Comcast exercised 0.4 million vested stock warrants, which we net cash settled under the provisions of the warrant agreement. The fair value of the stock warrants were \$24.6 million, resulting in a net cash settlement of \$12.9 million. In January 2017, Comcast exercised 1.4 million vested stock warrants, which we net share settled under the provisions of the warrant agreement by delivering 649,221 of our common shares from treasury stock, which had a fair value of \$31.5 million. The carrying value of the shares of treasury stock delivered was \$15.4 million. See Note 12 to our Financial Statements for additional discussion of the stock warrants.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Forward-Looking Statements

This report contains a number of forward-looking statements relative to our future plans and our expectations concerning our business and the industries we serve. These forward-looking statements are based on assumptions about a number of important factors and involve risks and uncertainties that could cause actual results to differ materially from estimates contained in the forward-looking statements. Some of the risks that are foreseen by management are outlined above within Item 1A., "Risk Factors". Item 1A. constitutes an integral part of this report, and readers are strongly encouraged to review this section closely in conjunction with MD&A.

Impact of COVID-19

In March 2020, the World Health Organization declared a global pandemic related to the rapidly spreading coronavirus (COVID-19) outbreak which has led to a global health emergency. This outbreak has negatively affected the U.S. and the global economy, created a significant disruption of the financial markets, disrupted global supply chains, and has resulted in mandated closures, orders to shelter-in-place, and significant travel restrictions. While we have taken measures to protect the health and safety of our employees, to include a remote working environment for those employees who are able to conduct business from home and significantly reduced travel, we are still conducting business as usual and are working with our customers to minimize any potential disruption. At this time, we do not believe that our remote working environment and limited staffing in select office locations has adversely impacted our internal controls, financial reporting systems, or our operations.

The full extent of the impact of the COVID-19 pandemic on our business, operations, and financial results will depend on numerous evolving factors that we may not be able to accurately predict. See Part II Item 1A. Risk Factors of this report for additional details. While the outbreak did not negatively impact our operating results for the first quarter of 2020, we began to realize these impacts to revenue during the second quarter of 2020 as we experienced extended sales and implementation cycles related to our revenue management and customer experience solutions, as well as processing volume reductions. During the fourth quarter of 2020, we experienced our second quarter of sequential revenue growth, reflecting stabilization in the impacted areas of our business. We also continued to build our sales pipeline, driven in large part by the accelerating demand for digital transformation. Going forward, we will continue to diligently monitor and manage our expense levels in line with our anticipated revenue profile.

As we continue to manage our business in this uncertain environment, our priorities will remain the health and safety of our employees, providing our customers with world-class services and solutions, and prudently managing our liquidity to ensure our continued financial strength. As of December 31, 2020, we had approximately \$240 million in cash, cash equivalents and short-term investments, and an additional \$200 million available to borrow under our revolving credit facility. Given our financial strength, we expect to be able to maintain adequate liquidity as we manage through the current environment, though we cannot reasonably estimate the duration and severity of this global pandemic or its ultimate impact on the global economy and our business results.

Executive Transition Costs

In August 2020, we announced that effective December 30, 2020, Bret Griess, our then-current President and CEO would step down and effective January 1, 2021, Brian Shepherd, our then-current Executive Vice President and Group President would become President and CEO.

As a result of these changes, we entered into a Separation Agreement, dated August 26, 2020, and a subsequent amendment to the Separation Agreement dated December 31, 2020, with Mr. Griess. Under the terms of the Separation Agreement, Mr. Griess is entitled to the following:

- Compensation, benefits, and other payments pursuant to the terms of his Employment Agreement. The additional compensation, totaling \$7.3 million, was expensed ratably over his remaining service period, for which approximately \$5 million will be paid in 2021 and approximately \$2 million will be paid in 2022.
- Accelerated vesting of approximately 198,000 shares of unvested restricted stock on December 30, 2020. This modification resulted in a reversal of stock-based compensation expense of \$2.7 million in the third quarter of 2020. The fair value of the modified award of \$8.4 million was recognized ratably from the date of the modification through December 30, 2020.

The net impact of the executive transition costs for 2020 was \$13.0 million, and was recorded in selling, general and administrative ("SG&A") expense.

Management Overview

Results of Operations. A summary of our results of operations for 2020 and 2019, and other key performance metrics are as follows (in thousands, except percentages and per share amounts):

	Year Ended December 31,	
	2020	2019
Revenue	\$ 990,533	\$ 996,810
Transaction fees (1)	67,671	69,114
Operating Results:		
Operating income	105,556	126,109
Operating income margin	10.7%	12.7%
Diluted EPS	\$ 1.82	\$ 2.55
Supplemental Data:		
Restructuring and reorganization charges (2)	\$ 5,328	\$ 4,834
Executive transition costs (2)	13,012	-
Acquisition-related costs:		
Amortization of acquired intangible assets	11,816	12,603
Earn-out compensation	-	1,260
Transaction-related costs	(587)	-
Stock-based compensation (2)	19,762	20,896
Amortization of OID	2,983	2,819

- (1) Transaction fees are primarily comprised of interchange and other payment-related fees that we pay, in conjunction with the delivery of service to customers under our payment services contracts, to third-party payment processors and financial institutions. Because we control the integrated service provided under our payment services customer contracts, these transaction fees are presented gross, and not netted against revenue.
- (2) Stock-based compensation included in the table above exclude amounts that have been recorded in restructuring and reorganization charges and executive transition costs.

Revenue. Revenue for 2020 was \$990.5 million, a 1% decrease when compared to \$996.8 million for 2019, with the decrease mainly attributed to the pricing adjustments associated with the five-year Comcast extension effective January 1, 2020, as well as foreign currency headwinds, offset by the year-over-year growth in our revenue management solutions and strong professional services revenue.

Operating Results. Operating income for 2020 was \$105.6 million, or a 10.7% operating income margin percentage, compared to \$126.1 million, or a 12.7% operating income margin percentage for 2019. Operating income for 2020 was negatively impacted by the \$13.0 million of executive transition costs, discussed above, a \$10 million impairment charge, discussed below, and lower revenue generated in 2020, which were offset to a certain extent by the benefit of lower employee-related costs.

Diluted Earnings Per Share ("EPS"). Diluted EPS for 2020 was \$1.82 compared to \$2.55 for 2019, reflective of the lower operating income discussed above. Additionally, 2019 diluted EPS was positively impacted by a lower effective income tax rate due to Comcast's exercise of 0.4 million vested common stock warrants that resulted in the recognition of an approximately \$4 million net income tax benefit.

Balance Sheet and Cash Flows. As of December 31, 2020, we had cash, cash equivalents, and short-term investments of \$240.3 million, compared to \$182.7 million as of December 31, 2019. Cash flows from operating activities for 2020 were \$173.0 million, compared to \$151.1 million for 2019. See the Liquidity section below for further discussion of our cash flows.

Significant Customer Relationships

Comcast. Comcast continues to be our largest customer. For 2020 and 2019, revenue from Comcast was \$213 million and \$229 million, respectively, representing approximately 22% and 23% of our total revenue. The decrease in Comcast revenue is mainly due to the pricing adjustments associated with the new agreement that was executed in December 2019 and became effective January 1, 2020. Our agreement with Comcast runs through December 31, 2024 for cloud and related solutions, and through December 31, 2025 for print and mail services for residential customer accounts, with the option to extend the cloud and related services for an additional one-year term.

A copy of the Comcast agreement and related amendments, with confidential information redacted, is included in the exhibits to our periodic filings with the SEC.

Charter. Charter is our second largest customer. For 2020 and 2019, revenue from Charter was \$209 million and \$195 million, respectively, representing approximately 21% and 20% of our total revenue. Our agreement with Charter runs through December 31, 2021, with an option to extend the agreement for an additional one-year term. We are currently engaged in discussions with Charter regarding contract renewal terms.

A copy of the Charter agreement and related amendments, with confidential information redacted, is included in the exhibits to our periodic filings with the SEC.

Stock-Based Compensation Expense

Stock-based compensation expense is included in the following (in thousands):

	2020	2019	2018
Cost of revenues	\$ 4,947	\$ 4,584	\$ 4,536
Research and development	2,745	2,657	2,483
Selling, general and administrative (1)	12,070	13,655	12,631
Restructuring	(215)	(977)	(292)
Total stock-based compensation expense	<u>\$ 19,547</u>	<u>\$ 19,919</u>	<u>\$ 19,358</u>

(1) SG&A stock-based compensation in the table above excludes the \$5.7 million of executive transition costs in 2020.

See Notes 2 and 13 to our Financial Statements for additional discussion of our stock-based compensation expense.

Critical Accounting Policies

The preparation of our Financial Statements in conformity with accounting principles generally accepted in the U.S. requires us to select appropriate accounting policies, and to make judgments and estimates affecting the application of those accounting policies. In applying our accounting policies, different business conditions or the use of different assumptions may result in materially different amounts reported in our Financial Statements.

We have identified the most critical accounting policies that affect our financial position and the results of our operations. These critical accounting policies were determined by considering our accounting policies that involve the most complex or subjective decisions or assessments. Our most critical accounting policies identified relate to: (i) revenue recognition; (ii) impairment assessments of long-lived assets; (iii) income taxes; and (iv) loss contingencies. These critical accounting policies, as well as our other significant accounting policies, are disclosed in the notes to our Financial Statements.

Revenue Recognition. In accordance with ASC 606, revenue is recognized upon conclusion that a contract with a customer exists. Such conclusion is made by us when the contract is legally enforceable and certain criteria, including collectability, are met. In making our determination of collectability, we consider a number of factors depending upon the specific aspects of an arrangement, which may include, but is not limited to, the following items: (i) an assessment of the customer's specific credit worthiness, evidenced by its current financial position and/or recent operating results, credit ratings, and/or a bankruptcy filing status (as applicable); (ii) the customer's current accounts receivable status and/or its historical payment patterns with us (as applicable); (iii) the economic condition of the industry in which the customer conducts the majority of its business; and/or (iv) the economic conditions and/or political stability of the country or region in which the customer is domiciled and/or conducts the majority of its business. The evaluation of these factors, and the ultimate determination of collectability, requires significant judgments to be made by us. Our judgments could have a significant effect to the amount and timing of revenue recognized in any period.

Our contracts with customers include cloud-based revenue management solution arrangements, managed services arrangements, cloud-based payment processing transaction services, software license and service arrangements, professional services arrangements, and bundled service arrangements. The revenue recognition policies that involve the most complex and subjective decisions or assessments that may have a material impact on our operations relate to the accounting for cloud-based revenue management solution arrangements, software license and service arrangements, and bundled service arrangements.

Our cloud-based revenue management solution arrangements are complex agreements that typically include multiple performance obligations. Key factors considered in accounting for cloud-based revenue management solution arrangements include the following criteria: (i) identification of performance obligations within the contract; (ii) determination of the transaction price given the variable nature of the consideration and significance of the consideration; (iii) determination of stand-alone selling price for each performance obligation and the allocation of value between the performance obligations; and (iv) calculation of revenue recognized in each period. The evaluation of these factors and ultimate revenue recognition decision requires significant judgements to be made by us. Depending on the significance of variable consideration, number of solutions/services, complex pricing structures and long-term nature of these types of contracts, our judgements and estimates made in this area could have a significant effect on the amount and timing of revenue recognized in any period. In addition, certain solutions and arrangements require us to assess whether we are a principal to the transaction (gross revenue) or an agent to the transaction (net revenue). Such assessments can have a significant effect on the amount of total revenue recognized.

Our software license and related services arrangements include multiple performance obligations which may be complex and require considerable judgement. Key factors considered in accounting for our software license and related service arrangements include the following criteria: (i) identification of performance obligations within the contract; (ii) assessment of whether services included in the arrangement represent significant production, modification or customization of the software (as applicable), such that the delivery of the software license and related services required to implement the software represent one combined performance obligation; (iii) determination of the transaction price for the contract as these types of arrangements may include both fixed and variable consideration; (iv) determination of stand-alone selling price for each performance obligation including the allocation of value between performance obligations; and (v) estimates to measure progress for delivery. The evaluation of these factors and ultimate revenue recognition decision requires significant judgements to be made by us. We generally determine stand-alone selling prices using pricing calculations (which include regional market factors) for our software license fees and maintenance, and cost-plus margins for services. The pricing calculations can be complex and require estimates based on volumes. Additionally, our use of an hours-based method of accounting for software license and other professional services performance obligations that are satisfied over time requires estimates of total project revenue and costs, along with the expected hours necessary to complete a project. Changes in estimates as a result of additional information as work progresses on a project are inherent characteristics of this method of revenue recognition as we are exposed to business risks in completing these types of performance obligations. The estimation process to support our hours-based recognition method is more difficult for projects of greater length and/or complexity. Our judgments and estimates could: (i) have a significant effect on revenue recognized in any period by changing the amount and/or the timing of the revenue recognized; and/or (ii) impact the expected profitability of a project, including whether an overall loss on an arrangement has occurred.

Our contracts are subject to modification via amendment, change requests, and/or statement of works. Such modifications may occur frequently. The accounting for contract modifications under ASC 606 is complex and requires significant judgements to be made by us as to whether the contract modification is treated as either a separate contract or part of the existing contract. Our judgements could have a significant effect on the revenue recognized in any period by changing the amount and/or timing of the revenue recognized.

Our contracts typically include service level agreements or other incentives which may result in refunds or credits to our customers. Under ASC 606, failure to meet service level standards under the terms of the contract represent adjustments to the overall consideration (reductions in revenue) and may need to be estimated at the outset of the arrangement as part of the overall variable consideration. Such estimates require significant judgement by us and may impact the amount and/or timing of the revenue recognized.

Impairment Assessments of Long-Lived Assets. Long-lived assets relate primarily to property and equipment, software, acquired customer contracts, and customer contract costs. These assets are required to be evaluated for possible impairment as events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. A long-lived asset (or group of long-lived assets) is impaired if estimated future undiscounted cash flows associated with that asset, without consideration of interest, are insufficient to recover the carrying amount of the long-lived asset. Once deemed impaired, even if by \$1, the long-lived asset is written down to its fair value which could be considerably less than the carrying amount or future undiscounted cash flows. The determination of estimated future cash flows and, if required, the determination of the fair value of a long-lived asset, are by their nature, highly subjective judgments. Changes to one or more of the assumptions utilized in such an analysis could materially affect our impairment conclusions for long-lived assets.

Income Taxes. We are required to estimate our income tax liability in each jurisdiction in which we operate, including U.S. federal, state, and foreign income taxes.

Various judgments are required in evaluating our income tax positions and determining our provisions for income taxes. We regularly assess the likelihood of the future realization of our deferred income tax assets. To the extent we believe that it is not more likely than not that a deferred income tax asset will be realized, a valuation allowance is established. During the ordinary course of our business, there are certain transactions and calculations for which the ultimate income tax determination may be uncertain. In addition, we may be subject to examination of our income tax returns by various tax authorities which could result in adverse outcomes. For these reasons, we establish a liability associated with unrecognized tax benefits based on estimates of whether additional taxes and interest may be due. We adjust this liability based upon changing facts and circumstances, such as the closing of a tax audit, the closing of a tax year upon the expiration of a statute of limitations, or the refinement of an estimate. Should any of the factors considered in determining the adequacy of this liability change significantly, an adjustment to the liability may be necessary. Due to the potential significance of these issues, such an adjustment could be material.

One of the more complex items within our income tax expense is the determination of our annual research and experimentation income tax credit ("R&D tax credit"). We have incurred approximately \$120 - \$130 million annually in R&D expense over the last three years. The calculation of the R&D tax credit involves the identification of qualifying projects, as well as an estimation of the qualifying costs for such projects. Due to the size, nature, and the number of projects worked on in any given year, the calculation can become complex and certain judgments are necessary in determining the amount of the R&D tax credits claimed.

Loss Contingencies. In the ordinary course of business, we are subject to potential claims related to various items including but not limited to the following: (i) legal and regulatory matters; (ii) vendor contracts; (iii) solution and service delivery matters; and (iv) labor matters. Accounting and disclosure requirements for loss contingencies requires us to assess the likelihood of any adverse judgments in or range of potential outcomes for these matters. A determination of the amount of reserves for such contingencies, if any, is based on an analysis of the issues, often with the assistance of legal counsel. The evaluation of such issues, and our ultimate accounting and disclosure decisions, are by their nature, subject to various estimates and highly subjective judgments. Should any of the factors considered in determining the adequacy of any required reserves change significantly, an adjustment to the reserves may be necessary. Due to the potential significance of these issues, such an adjustment could be material.

Detailed Discussion of Results of Operations

The following discussion includes a comparison of our results of operations and liquidity for 2020 compared to 2019. For a discussion of the 2019 compared to 2018, please refer to Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended December 31, 2019, filed with the SEC on February 21, 2020.

Total Revenue. Total revenue for 2020 was \$990.5 million, a 1% decrease when compared to \$996.8 million for 2019. The decrease in total revenue can be mainly attributed to pricing adjustments associated with the five-year Comcast extension effective January 1, 2020, as well as foreign currency headwinds, offset by the year-over-year growth in our revenue management solutions and strong professional services revenue, to include the revenue generated from the acquired Tekzenit business, discussed in Note 7 to the Financial Statements.

We use the location of the customer as the basis of attributing revenue to individual countries and corresponding geographic regions. Revenue by geographic regions for 2020 and 2019 were as follows (in thousands):

	2020	2019
Americas (principally the U.S.)	\$ 856,858	\$ 866,831
Europe, Middle East, and Africa	96,480	91,685
Asia Pacific	37,195	38,294
Total revenue	<u>\$ 990,533</u>	<u>\$ 996,810</u>

Total Operating Expenses. Our operating expenses for 2020 increased 2% to \$885.0 million, from \$870.7 million for 2019. The increase in operating expenses can be primarily attributed to: (i) the approximately \$13 million of executive transition costs, discussed above; and (ii) an approximately \$10 million impairment charge recorded in the second quarter of 2020 for the write-off of capitalized customer contract costs related to a discontinued project implementation. These costs were offset to a certain degree by lower employee-related costs and favorable foreign currency movements.

Cost of Revenue (Exclusive of Depreciation). Our cost of revenue consist principally of the following: (i) computing capacity and network communications costs; (ii) statement production costs (e.g., labor, paper, envelopes, equipment, equipment maintenance, etc.); (iii) transaction fees-interchange and other payment-related fees to third-party payment processors and financial institutions; (iv) customer support organizations (e.g., our customer support call center, account management, etc.); (v) professional services organization (vi) various product delivery and support organizations (e.g., managed services delivery, product management, product maintenance, etc.); (vii) third-party software costs and/or royalties related to certain software products; (viii) facilities and infrastructure costs related to the statement production and support organizations; and (ix) amortization of acquired intangibles. The costs related to new solution development (including significant enhancements to existing solutions and services) are included in R&D expense.

The cost of revenue for 2020 increased 2% to \$535.6 million, from \$525.1 million for 2019. This increase is mainly due to the approximately \$10 million impairment charge, mentioned above. Additionally, during 2020, we had more internal resources reassigned to cost of revenues projects that had previously been assigned to R&D projects, however this was offset by lower employee-related costs. Total cost of revenue as a percentage of revenue for 2020 and 2019 was 54.1% and 52.7%, respectively.

R&D Expense (Exclusive of Depreciation). R&D expense for 2020 was \$122.8 million, a 4% decrease when compared to \$128.0 million for 2019, with the decrease mainly attributed to lower employee-related costs, to include personnel and the related costs previously assigned to R&D projects being reassigned to cost of revenue projects, mentioned above.

Our R&D efforts are focused on the continued evolution of our solutions that enable global service providers worldwide to provide a more personalized customer experience while introducing new digital products and services. This includes the continued investment in our cloud-based solutions.

As a percentage of total revenue, R&D expense for 2020 and 2019 was 12.4% and 12.8%, respectively. We anticipate the level of R&D investment in the near-term to be relatively consistent with 2020.

SG&A Expense (Exclusive of Depreciation). SG&A expense for 2020 increased 4% to \$198.3 million, from \$191.3 million for 2019. The increase in SG&A expense between 2020 and 2019 is primarily due to the \$13.0 million of executive transition costs, discussed above, offset to a certain degree by lower employee-related costs. As a percentage of total revenue, SG&A expense for 2020 and 2019 was 20.0% and 19.2%, respectively.

Depreciation Expense. Depreciation expense for all property and equipment is reflected separately from cost of revenue or the other components of operating expenses. Depreciation expense for 2020 was \$22.9 million, a 7% increase from \$21.4 million for 2019. The increase can be primarily attributed to our increased level of capital expenditures on items such as technology, security, infrastructure, and modernization of equipment.

Restructuring and Reorganization Charges. In 2020 and 2019, we implemented cost reduction and efficiency initiatives that resulted in restructuring and reorganization charges of \$5.3 million and \$4.8 million, respectively. These initiatives were primarily made up of organizational changes made to pursue global opportunities and efficiencies.

See Note 8 to our Financial Statements for additional information regarding these initiatives.

Operating Income. Operating income and operating income margin for 2020 was \$105.6 million, or 10.7% of total revenue, compared to \$126.1 million, or 12.7% of total revenue for 2019. Operating income for 2020 was negatively impacted by the \$13.0 million of executive transition costs and the \$10 million impairment charge, discussed above, and the lower revenue generated in 2020, which were offset to a certain extent by the benefit of the lower employee-related costs.

Interest Expense and Amortization of Original Issue Discount (“OID”). Our interest expense relates primarily to our 2016 Convertible Notes and our 2018 Credit Agreement. See Note 5 to our Financial Statements for additional discussion of our long-term debt, to include the non-cash interest expense related to the amortization of the convertible debt OID.

Income Tax Provision. Our effective income tax rates for 2020 and 2019 were as follows:

	2020 (1)	2019 (2)
	31%	22%

- (1) The 2020 effective income tax rate reflects an adjustment for the income tax impact related to the executive transition costs, discussed above (see Note 9 to our Financial Statements).
- (2) As a result of Comcast’s exercise of their remaining 0.4 million of vested stock warrants in December 2019 (see Note 12 to our Financial Statements), we received an additional income tax benefit of approximately \$4 million (see Note 9 to our Financial Statements) due to the stock warrants appreciating in value since the grant date.

Liquidity

Cash and Liquidity. As of December 31, 2020, our principal sources of liquidity included cash, cash equivalents, and short-term investments of \$240.3 million, compared to \$182.7 million as of December 31, 2019. We generally invest our excess cash balances in low-risk, short-term investments to limit our exposure to market and credit risks.

As part of our 2018 Credit Agreement, we have a \$200 million senior secured revolving loan facility with a syndicate of financial institutions that expires in March 2023. As of December 31, 2020, there were no borrowings outstanding on the 2018 Revolver. The 2018 Credit Agreement contains customary affirmative covenants and financial covenants. As of December 31, 2020, and the date of this filing, we believe we are in compliance with the provisions of the 2018 Credit Agreement.

Our cash, cash equivalents, and short-term investment balances as of the end of the indicated periods were located in the following geographical regions (in thousands):

	December 31, 2020	December 31, 2019
Americas (principally the U.S.)	\$ 183,918	\$ 125,309
Europe, Middle East and Africa	47,513	50,477
Asia Pacific	8,866	6,871
Total cash, equivalents and short-term investments	<u>\$ 240,297</u>	<u>\$ 182,657</u>

We generally have ready access to substantially all of our cash, cash equivalents, and short-term investment balances, but may face limitations on moving cash out of certain foreign jurisdictions due to currency controls and potential negative economic consequences. As of December 31, 2020, we had \$1.7 million of cash restricted as to use to collateralize guarantees and outstanding letters of credit.

Cash Flows From Operating Activities. We calculate our cash flows from operating activities beginning with net income, adding back the impact of non-cash items or non-operating activity (e.g., depreciation, amortization, amortization of OID, impairments, gain/loss from debt extinguishments, deferred income taxes, stock-based compensation, etc.), and then factoring in the impact of changes in operating assets and liabilities.

Our primary source of cash is from our operating activities. Our current business model consists of a significant amount of recurring revenue sources related to our long-term cloud-based and managed services arrangements (primarily billed monthly), payment process transaction services (primarily billed monthly), and software maintenance agreements (which may be billed monthly, quarterly, or annually). This recurring revenue base provides us with a reliable and predictable source of cash. In addition, software license fees and professional services revenue are sources of cash, but the payment streams for these items are less predictable.

The primary use of our cash is to fund our operating activities. Over half of our total operating costs relate to labor costs (both employees and contracted labor) for the following: (i) compensation; (ii) related fringe benefits; and (iii) reimbursements for travel and entertainment expenses. Other operating expenses consist of: (i) computing capacity and related services and communication lines for our outsourced cloud-based business; (ii) paper, envelopes, and related supplies for our statement processing solutions; (iii) transaction fees paid in conjunction with the delivery of services under our payment services contracts; (iv) hardware and software maintenance; and (v) rent and related facility costs. These items are purchased under a variety of both short-term and long-term contractual commitments. A summary of our material contractual obligations is provided below.

Our 2020 and 2019 net cash flows from operating activities, broken out between operations and changes in operating assets and liabilities, for the indicated quarterly periods are as follows (in thousands):

	<u>Operations</u>	<u>Changes in Operating Assets and Liabilities</u>	<u>Net Cash Provided by (Used In) Operating Activities – Totals</u>
Cash Flows from Operating Activities:			
2020:			
March 31 (1)(2)	\$ 52,938	\$ (60,151)	\$ (7,213)
June 30 (2)	41,022	16,668	57,690
September 30 (2)	31,971	33,237	65,208
December 31	37,747	19,588	57,335
Total	<u>\$ 163,678</u>	<u>\$ 9,342</u>	<u>\$ 173,020</u>
2019:			
March 31 (1)(2)	\$ 42,003	\$ (29,177)	\$ 12,826
June 30 (2)	46,072	(30,469)	15,603
September 30 (2)	44,210	34,888	79,098
December 31	40,342	3,207	43,549
Total	<u>\$ 172,627</u>	<u>\$ (21,551)</u>	<u>\$ 151,076</u>

- (1) Cash flows from operating activities for the first quarter of 2020 and 2019 reflect the negative impacts of the payment of the 2019 and 2018 year-end accrued employee incentive compensation in the first quarter subsequent to the year-end accrual for those items.
- (2) Cash flows from operating activities for the first and second quarters of 2020 and 2019 were negatively impacted by the timing of certain recurring key customer payments that were delayed and received subsequent to quarter-end, of approximately \$33 million and \$26 million for the first and second quarters of 2020, respectively, and \$14 million and \$25 million for the first and second quarters of 2019, respectively. As of the end of the third quarters of 2020 and 2019, these recurring key customer payments were current, resulting in the third quarters of 2020 and 2019 cash flows from operating activities having the benefit of an additional payment due to the timing delays in previous quarters.

We believe the above table illustrates our ability to generate recurring quarterly cash flows from our operations, and the importance of managing our working capital items. The quarterly and annual variations in our net cash provided by operating activities are related mostly to the changes in our operating assets and liabilities (related mostly to fluctuations in timing at quarter-end of customer payments and changes in accrued expenses), and generally over longer periods of time, do not significantly impact our cash flows from operations.

Significant fluctuations in key operating assets and liabilities between 2020 and 2019 that impacted our cash flows from operating activities are as follows:

Billed Trade Accounts Receivable

Management of our billed accounts receivable is one of the primary factors in maintaining strong cash flows from operating activities. Our billed trade accounts receivable balance includes significant billings for several non-revenue items (primarily postage, sales tax, and deferred revenue items). As a result, we evaluate our performance in collecting our accounts receivable through our calculation of Days Billings Outstanding (“DBO”) rather than a typical Days Sales Outstanding (“DSO”) calculation.

Our gross and net billed trade accounts receivable and related allowance for doubtful accounts receivable (“Allowance”) as of the end of the indicated quarterly periods, and the related DBOs for the quarters then ended, are as follows (in thousands, except DBOs):

<u>Quarter Ended</u>	<u>Gross</u>	<u>Allowance</u>	<u>Net Billed</u>	<u>DBOs</u>
2020:				
March 31	\$ 264,601	\$ (3,888)	\$ 260,713	72
June 30	248,470	(4,057)	244,413	73
September 30	228,847	(3,730)	225,117	68
December 31	230,251	(3,628)	226,623	67
2019:				
March 31	\$ 247,833	\$ (2,897)	\$ 244,936	65
June 30	268,656	(2,861)	265,795	67
September 30	245,972	(3,356)	242,616	67
December 31	247,793	(3,735)	244,058	63

As of December 31, 2020 and 2019, approximately 96% and 95%, respectively, of our billed accounts receivable balance, were less than 60 days past due.

The increase in DBOs during the first and second quarter of 2020 can be directly attributed to the delay of certain recurring key customer payments, as noted above. We may experience future adverse impacts to our DBOs if we experience payment delays. However, these recurring monthly payments that cross a reporting period-end do not raise any collectability concerns, as payment is generally received subsequent to quarter-end. All other changes in our gross and net billed accounts receivable reflect the normal fluctuations in the timing of customer payments at quarter-end, as evidenced by our relatively consistent DBO metric over the past several quarters.

As a global provider of software and professional services, a portion of our accounts receivable balance relates to international customers. This diversity in the geographic composition of our customer base may adversely impact our DBOs as longer billing cycles (i.e., billing terms and cash collection cycles) are an inherent characteristic of international software and professional services transactions. For example, our ability to invoice and collect arrangement fees may be dependent upon, among other things: (i) the completion of various customer administrative matters, local country billing protocols and processes (including local cultural differences), and non-customer administrative matters; (ii) meeting certain contractual invoicing milestones; or (iii) the overall project status in certain situations in which we act as a subcontractor to another vendor on a project.

Cash Flows From Investing Activities. Our typical investing activities consist of purchases and sales of short-term investments and purchases of software, property and equipment, which are discussed below. Additionally, our recent investing activities also include acquisition and investment activities related to: (i) the acquisition of the Tekzenit business in 2020 that resulted in payments of \$10.0 million; (ii) the acquisition of the Forte business in 2018 that resulted in payments in 2019 of \$13.2 million; and (iii) investments in a payment technology and services company in 2020 and 2019 of \$1.5 million and \$4.0 million, respectively (see Note 2 and 7 of our Financial Statements). All of these activities are included in our cash flows from investing activities.

Purchases/Sales of Short-term Investments

During 2020 and 2019 we purchased \$81.8 million and \$54.3 million, respectively, and sold or had mature \$56.5 million and \$52.1 million, respectively, of short-term investments. We continually evaluate the possible uses of our excess cash balances and will likely purchase and sell additional short-term investments in the future.

Software, Property and Equipment

Our annual capital expenditures for software, property and equipment for 2020 and 2019 were \$29.4 million and \$37.3 million, respectively. Our capital expenditures for these periods consisted principally of investments in: (i) computer hardware, software, and related equipment; (ii) statement production equipment; and (iii) facilities and internal infrastructure items.

Cash Flows From Financing Activities. Our financing activities typically consist of various debt-related transactions and activities with our common stock, which are discussed below.

Issuance of Common Stock

Proceeds from the issuance of common stock for 2020 and 2019 were \$2.5 million and \$2.2 million, respectively, and relate primarily to our employee stock purchase plan.

Repurchase of Common Stock

During 2020 and 2019 we repurchased approximately 624,000 shares and 576,000 shares of our common stock under the guidelines of our Stock Repurchase Program for \$26.3 million and \$25.5 million, respectively.

Additionally, outside of our Stock Repurchase Program, during 2020 and 2019, we repurchased from our employees and then canceled approximately 254,000 shares and 117,000 shares, of our common stock for \$11.9 million and \$5.1 million, respectively, in connection with minimum tax withholding requirements resulting from the vesting of restricted stock under our stock incentive plans.

Through December 31, 2020 and 2019, we have paid \$38.1 million and \$30.9 million, respectively, for our total repurchases of common stock, with the differences when compared to the amounts accrued attributed to the timing of the settlement.

Cash Dividends Paid on Common Stock

During 2020 and 2019, the Board approved dividend payments totaling \$30.9 million and \$29.4 million, respectively. During 2020 and 2019, we paid dividends of \$31.1 million and \$29.1 million, respectively, with the differences between the amount approved and paid attributed to dividends accrued on unvested incentive shares that are paid upon vesting.

Common Stock Warrants

During the fourth quarter of 2019, Comcast exercised the remaining 0.4 million of their vested common stock warrants, which we net cash settled under the provisions of the warrant agreement for \$12.9 million. See Note 12 to our Financial Statements for further discussion of Comcast's exercise of their common stock warrants.

Long-term Debt

During 2020 and 2019 we made principal repayments of \$10.3 million and \$7.5 million, respectively, on our long-term debt balance. See Note 5 to our Financial Statements for additional discussion of our long-term debt.

Contractual Obligations and Other Commercial Commitments and Contingencies

We have various contractual obligations that are recorded as liabilities in our Consolidated Balance Sheets. Other items, such as certain purchase commitments and other executory contracts, are not recognized as liabilities in our Balance Sheets but are required to be disclosed.

The following table summarizes our significant contractual obligations and commercial commitments as of December 31, 2020, and the future periods in which such obligations are expected to be settled in cash (in thousands).

	<u>Total</u>	<u>Less than 1 Year</u>	<u>Years 2-3</u>	<u>Years 4-5</u>	<u>More than 5 Years</u>
Long-term debt	\$ 513,330	\$ 26,405	\$ 134,737	\$ 19,550	\$ 332,638
Leases	95,968	18,754	33,597	24,325	19,292
Purchase obligations	343,948	96,509	134,675	100,850	11,914
Total	<u>\$ 953,246</u>	<u>\$ 141,668</u>	<u>\$ 303,009</u>	<u>\$ 144,725</u>	<u>\$ 363,844</u>

The contractual obligation amounts reflected for our long-term debt are based upon the following assumptions:

- (i) Our 2016 Convertible Notes will remain outstanding through their maturity date of March 15, 2036 (although the 2016 Convertible Notes can be converted during the period from, and including, December 15, 2021 to the close of business on the business day immediately preceding March 15, 2022 and holders may require us to repurchase the 2016 Convertible Notes for cash on each of March 15, 2022, March 14, 2026, and March 15, 2031); upon settlement, our cash obligation will not exceed the principal amount; and interest paid through maturity is at a rate of 4.25%; and
- (ii) Our 2018 Credit Agreement includes the mandatory quarterly amortization payments on the term loan as of December 31, 2020, and the interest paid throughout the life of the term loan is based upon the interest rate applicable as of December 31, 2020.

Our long-term debt obligations are discussed in more detail in Note 5 to our Financial Statements.

Our operating leases are discussed in Note 6 to our Financial Statements. As of December 31, 2020, our purchase obligations consist primarily of our expected minimum base fees under the Ensono service agreement, which includes embedded lease components related to processors at our outsourced data center environment (discussed in Notes 6 and 11 to our Financial Statements).

Of the total contractual obligations and commercial commitments above, approximately \$507 million is reflected on our Balance Sheet.

Off-Balance Sheet Arrangements

Our off-balance sheet arrangements are mainly limited to money transmitter bonds, bid bonds, and performance bonds. These arrangements do not have a material impact and are not reasonably likely to have a material future impact to our financial condition, results of operation, liquidity, capital expenditures, or capital resources. See Note 11 to our Financial Statements for additional information on these guarantees.

Capital Resources

The following are the key items to consider in assessing our sources and uses of capital resources:

Current Sources of Capital Resources.

- Cash, Cash Equivalents and Short-term Investments. As of December 31, 2020, we had cash, cash equivalents, and short-term investments of \$240.3 million, of which approximately 73% is in U.S. Dollars and held in the U.S. We have \$1.7 million of restricted cash included in cash and cash equivalents, used primarily to collateralize guarantees and outstanding letters of credit. For the remainder of the monies denominated in foreign currencies or located outside the U.S., we do not anticipate any material amounts being unavailable for use in running our business.
- Operating Cash Flows. As described in the Liquidity section above, we believe we have the ability to generate strong cash flows to fund our operating activities and act as a source of funds to meet our capital resource requirements.
- Revolving Loan Facility. We currently have a \$200 million revolving loan facility, our 2018 Revolver. As of December 31, 2020, we had no borrowing outstanding on our 2018 Revolver and had the entire \$200 million available to us. Our long-term debt obligations are discussed in more detail in Note 5 to our Financial Statements.

Uses/Potential Uses of Capital Resources. Below are the key items to consider in assessing our uses/potential uses of capital resources:

- Common Stock Repurchases. We have made repurchases of our common stock in the past under our Stock Repurchase Program. As of December 31, 2020, we had 4.3 million shares authorized for repurchase remaining under our Stock Repurchase Program. Our 2018 Credit Agreement places certain limitations on our ability to repurchase our common stock.

Under our Stock Repurchase Program, we may repurchase shares in the open market or in privately negotiated transactions, including through an accelerated stock repurchase plan or under a SEC Rule 10b5-1 plan. The actual timing and amount of share repurchases are dependent on the current market conditions and other business-related factors. Our common stock repurchases are discussed in more detail in Note 11 to our Financial Statements.

During 2020, we repurchased 624,000 shares of our common stock for \$26.3 million (weighted-average price of \$42.13 per share) under our Stock Repurchase Program.

Outside of our Stock Repurchase Program, during 2020, we repurchased from our employees and then cancelled 254,000 shares of our common stock for \$11.9 million in connection with minimum tax withholding requirements resulting from the vesting of restricted stock under our stock incentive plans.

- Executive Transition. In August 2020, we entered into a Separation Agreement with our former President and CEO, and a subsequent amendment to the Separation Agreement dated December 31, 2020, which includes a commitment to pay additional compensation of approximately \$7 million, for which approximately \$5 million will be paid in 2021 and approximately \$2 million will be paid in 2022.
- Cash Dividends. During 2020, the Board declared dividends totaling \$30.9 million. Going forward, we expect to pay cash dividends each year in March, June, September, and December, with the amount and timing subject to the Board's approval.
- Acquisitions. The 2018 Forte acquisition purchase agreement, which was subsequently amended in December 2020, includes provisions for \$18.8 million of potential future earn-out payments over a measurement period through September 30, 2023. The earn-out payments are tied to performance-based goals and continued employment by the eligible recipients.

In January 2020, we acquired certain assets of Tekzenit for an initial purchase price of approximately \$10 million. The purchase agreement includes provisions for additional purchase price payments in the form of earn-out and qualified sales payments for up to \$10 million over a three-year measurement period upon meeting certain financial and sales criteria.

As of December 31, 2020, we have made no earn-out payments or qualified sales payments for either of these acquisitions.

These acquisitions were funded from currently available cash. Our acquisitions are discussed in more detail in Note 7 to our Financial Statements. As part of our growth strategy, we are continually evaluating potential business, asset acquisitions, and investments. Our strategy includes acquiring assets and businesses which provide the technology and personnel to expedite our solutions and services development efforts, provide complementary solutions and services, increase market share, and provide access to new markets and customers.

- Equity Method Investment. During 2020 we made an additional \$1.5 million investment in a payment technology and services company that enables omni-channel digital payments in Latin America. As of December 31, 2020, we held a 15% noncontrolling interest with a carrying value of \$7.9 million. See Note 2 to our Financial Statements for additional discussion.
- Capital Expenditures. During 2020, we spent \$29.4 million on capital expenditures. As of December 31, 2020, we had committed to purchase \$1.9 million of equipment.
- Stock Warrants. We have issued Stock Warrants with an exercise price of \$26.68 per warrant to Comcast as an incentive for Comcast to convert new customer accounts to ACP. Once vested, Comcast may exercise the Stock Warrants and elect either physical delivery of common shares or net share settlement (cashless exercise). Alternatively, the exercise of the Stock Warrants may be settled with cash based solely on our approval, or if Comcast were to beneficially own or control in excess of 19.99% of the common stock or voting of the Company. As of December 31, 2020, approximately 1.0 million Stock Warrants are outstanding, none of which are vested.

The Stock Warrants are discussed in more detail in Note 12 to our Financial Statements.

- Long-Term Debt. As of December 31, 2020, our long-term debt consisted of the following: (i) 2016 Convertible Notes with a par value of \$230.0 million; and (ii) 2018 Credit Agreement term loan borrowings of \$126.6 million.

2016 Convertible Notes

Our 2016 Convertible Notes will be convertible at the option of the note holders during the period from December 15, 2021 to the close of business on the business day immediately preceding March 15, 2022. For notes presented during this time frame, the settlement amount will be equal to the sum of the daily settlement amounts for each of the following 40 consecutive trading days during the related observation period. As a result, we expect our required debt service cash outlay during the next twelve months for the 2016 Convertible Notes to be limited to interest payments of \$9.8 million.

2018 Credit Agreement

Our 2018 Credit Agreement mandatory repayments and the cash interest expense (based upon current then interest rates) for the next twelve months is \$14.1 million, and \$2.2 million, respectively. We have the ability to make prepayments on our 2018 Credit Agreement without penalty.

Our long-term debt obligations are discussed in more detail in Note 5 to our Financial Statements.

In summary, we expect to continue to have material needs for capital resources going forward, as noted above. We believe that our current cash, cash equivalents and short-term investments balances and our 2018 Revolver, together with cash expected to be generated in the future from our current operating activities, will be sufficient to meet our anticipated capital resource requirements for at least the next twelve months. We believe we could obtain additional capital through other debt sources which may be available to us if deemed appropriate.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Market risk is the potential loss arising from adverse changes in market rates and prices. As of December 31, 2020, we are exposed to various market risks, including changes in interest rates, fluctuations, and changes in the market value of our cash equivalents and short-term investments, and changes in foreign currency exchange rates. We have not historically entered into derivatives or other financial instruments for trading or speculative purposes.

Interest Rate Risk

Long-Term Debt. The interest rate on our 2016 Convertible Notes is fixed, and thus, as it relates to our convertible debt borrowings, we are not exposed to changes in interest rates.

The interest rates under our 2018 Credit Agreement are based upon an adjusted LIBOR rate plus an applicable margin, or an alternate base rate plus an applicable margin. Refer to Note 5 to our Financial Statements for further details of our long-term debt.

A hypothetical adverse change of 10% in the December 31, 2020 adjusted LIBOR rate would not have had a material impact upon our results of operations.

Market Risk

Cash Equivalents and Short-Term Investments. Our cash and cash equivalents as of December 31, 2020 and 2019 were \$188.7 million and \$156.5 million, respectively. Certain of our cash balances are swept into overnight money market accounts on a daily basis, and at times, any excess funds are invested in low-risk, somewhat longer term, cash equivalent instruments and short-term investments. Our cash equivalents are invested primarily in institutional money market funds, commercial paper, and time deposits held at major banks. We have minimal market risk for our cash and cash equivalents due to the relatively short maturities of the instruments.

Our short-term investments as of December 31, 2020 and 2019 were \$51.6 million and \$26.1 million, respectively. Currently, we utilize short-term investments as a means to invest our excess cash only in the U.S. The day-to-day management of our short-term investments is performed by a large financial institution in the U.S., using strict and formal investment guidelines approved by our Board. Under these guidelines, short-term investments are limited to certain acceptable investments with: (i) a maximum maturity; (ii) a maximum concentration and diversification; and (iii) a minimum acceptable credit quality. At this time, we believe we have minimal liquidity risk associated with the short-term investments included in our portfolio.

Settlement Assets. We are exposed to market risk associated with cash held on behalf of merchants related to our payment processing services. As of December 31, 2020 and 2019, we had \$149.8 million and \$169.3 million, respectively, of cash collected on behalf of merchants which is held for an established holding period until settlement. The holding period is generally one to four business days depending on the payment model and contractual terms with the merchant. During the holding period, cash is held in accounts with various major financial institutions in the U.S. in an amount equal to at least 100% of the aggregate amount owed to the merchant. These balances can significantly fluctuate between periods due to activity at the end of the period and the day in which the period ends.

Long-Term Debt. The fair value of our convertible debt is exposed to market risk. We do not record our convertible debt at fair value but present the fair value for disclosure purposes (see Note 2 to our Financial Statements). Generally, the fair value of our convertible debt is impacted by changes in interest rates and changes in the price and volatility of our common stock. As of December 31, 2020, the fair value of the 2016 Convertible Notes was estimated at \$244.7 million using quoted market prices.

Foreign Currency Exchange Rate Risk

Due to foreign operations around the world, our balance sheet and income statement are exposed to foreign currency exchange risk due to the fluctuations in the value of currencies in which we conduct business. While we attempt to maximize natural hedges by incurring expenses in the same currency in which we contract revenue, the related expenses for that revenue could be in one or more differing currencies than the revenue stream.

During the year ended December 31, 2020, we generated approximately 88% of our revenue in U.S. dollars. We expect that, in the foreseeable future, we will continue to generate a very large percentage of our revenue in U.S. dollars.

As of December 31, 2020 and 2019, the carrying amounts of our monetary assets and monetary liabilities on the books of our non-U.S. subsidiaries in currencies denominated in a currency other than the functional currency of those non-U.S. subsidiaries are as follows (in thousands, in U.S. dollar equivalents):

	December 31, 2020		December 31, 2019	
	Monetary Liabilities	Monetary Assets	Monetary Liabilities	Monetary Assets
Pounds sterling	\$ (148)	\$ 1,673	\$ (30)	\$ 1,786
Euro	(288)	7,734	(76)	11,284
U.S. Dollar	(292)	24,445	(117)	18,890
South African Rand	-	4,809	-	7,602
Other	(6)	1,071	(6)	1,065
Totals	\$ (734)	\$ 39,732	\$ (229)	\$ 40,627

A hypothetical adverse change of 10% in the December 31, 2020 exchange rates would not have had a material impact upon our results of operations.

Item 8. Financial Statements and Supplementary Data

**CSG SYSTEMS INTERNATIONAL, INC.
CONSOLIDATED FINANCIAL STATEMENTS
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Management's Report on Internal Control Over Financial Reporting

Management of CSG Systems International, Inc. and subsidiaries (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) or 15d-15(f) under the Securities Exchange Act of 1934, as amended. The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. The 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 U.S. 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 and procedures may deteriorate.

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2020. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework (2013)*.

Based on our assessment, management believes that the Company maintained effective internal control over financial reporting as of December 31, 2020.

The Company's independent registered public accounting firm, KPMG LLP, has issued an attestation report on the effectiveness of the Company's internal control over financial reporting as of December 31, 2020. That report appears immediately following.

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
CSG Systems International, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited CSG Systems International, Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2020 and December 31, 2019, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2020, and the related notes (collectively, the consolidated financial statements), and our report dated February 19, 2021 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. 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 audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (3) 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/ KPMG LLP

Omaha, Nebraska
February 19, 2021

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
CSG Systems International, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of CSG Systems International, Inc. and subsidiaries (the Company) as of December 31, 2020 and December 31, 2019, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2020, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and December 31, 2019, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2020, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 19, 2021 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Adoption of ASC Topic 842 in 2019

As discussed in Note 2 to the consolidated financial statements, the Company has changed its method of accounting for leases in 2019 due to the adoption of ASC Topic 842, *Leases* (ASC 842). The Company adopted the standard using the effective date method, and as such, the 2018 comparative information in the financial statements has not been adjusted and continues to be as previously reported.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the 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 audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits 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. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Agreements with significant customers

As discussed in Note 3 to the consolidated financial statements, the Company generated 43% of its revenue from its significant customers. The agreements with these significant customers are complex and subject to modification in the form of amendments, change requests, or statements of work, which can occur frequently. The accounting for these agreements requires significant judgments to be made by the Company, specifically whether a new or revised agreement is treated as either a separate contract or modification of an existing contract. The judgments could significantly affect revenue recognized in any period.

We identified the evaluation of agreements with significant customers as a critical audit matter. Due to the subjectivity and complexity in the application of the portion of the accounting standard related to contract modifications, the assessment of the Company's judgments regarding whether each new or revised agreement is treated as a separate contract or modification of an existing contract required a higher degree of auditor judgment.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Company's revenue recognition process. This included controls over monitoring and evaluating agreements with significant customers. For certain new or revised agreements with significant customers, we obtained and read the agreement, performed an independent analysis of the accounting treatment as a separate contract or modification of an existing contract, and compared our conclusions to those made by the Company.

/s/ KPMG LLP

We have served as the Company's auditor since 2002.

Omaha, Nebraska

February 19, 2021

CSG SYSTEMS INTERNATIONAL, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except per share amounts)

	December 31, 2020	December 31, 2019
<u>ASSETS</u>		
Current assets:		
Cash and cash equivalents	\$ 188,699	\$ 156,548
Short-term investments	51,598	26,109
Total cash, cash equivalents and short-term investments	240,297	182,657
Settlement assets	149,785	169,327
Trade accounts receivable:		
Billed, net of allowance of \$3,628 and \$3,735	226,623	244,058
Unbilled	37,785	33,450
Income taxes receivable	2,167	4,297
Other current assets	41,688	35,293
Total current assets	698,345	669,082
Non-current assets:		
Property and equipment, net of depreciation of \$105,073 and \$98,029	81,759	84,429
Operating lease right-of-use assets	110,756	94,847
Software, net of amortization of \$139,836 and \$125,437	26,453	32,526
Goodwill	272,322	259,164
Acquired customer contracts, net of amortization of \$105,778 and \$93,767	48,012	55,105
Customer contract costs, net of amortization of \$39,893 and \$31,526	47,238	50,746
Deferred income taxes	10,205	9,392
Other assets	36,910	27,739
Total non-current assets	633,655	613,948
Total assets	\$ 1,332,000	\$ 1,283,030
<u>LIABILITIES AND STOCKHOLDERS' EQUITY</u>		
Current liabilities:		
Current portion of long-term debt	\$ 14,063	\$ 10,313
Operating lease liabilities	22,651	22,442
Customer deposits	39,992	38,687
Trade accounts payable	29,834	32,704
Accrued employee compensation	86,289	77,527
Settlement liabilities	148,819	168,342
Deferred revenue	52,357	45,094
Income taxes payable	6,627	2,806
Other current liabilities	19,383	20,778
Total current liabilities	420,015	418,693
Non-current liabilities:		
Long-term debt, net of unamortized discounts of \$5,346 and \$10,053	337,154	346,509
Operating lease liabilities	95,926	78,936
Deferred revenue	17,275	18,552
Income taxes payable	2,436	2,543
Deferred income taxes	5,109	6,376
Other non-current liabilities	31,690	14,759
Total non-current liabilities	489,590	467,675
Total liabilities	909,605	886,368
Stockholders' equity:		
Preferred stock, par value \$.01 per share; 10,000 shares authorized; zero shares issued and outstanding	-	-
Common stock, par value \$.01 per share; 100,000 shares authorized; 5,929 and 3,661 shares reserved for employee stock purchase plan and stock incentive plans; 32,713 and 32,891 shares outstanding	700	696
Additional paid-in capital	470,557	454,663
Treasury stock, at cost; 35,980 and 35,356 shares	(894,126)	(867,817)
Accumulated other comprehensive income (loss):		
Unrealized gains on short-term investments, net of tax	13	16
Cumulative foreign currency translation adjustments	(31,151)	(39,519)
Accumulated earnings	876,402	848,623
Total stockholders' equity	422,395	396,662
Total liabilities and stockholders' equity	\$ 1,332,000	\$ 1,283,030

The accompanying notes are an integral part of these consolidated financial statements.

CSG SYSTEMS INTERNATIONAL, INC.
CONSOLIDATED STATEMENTS OF INCOME
(in thousands, except per share amounts)

	Year Ended December 31,		
	2020	2019	2018
Revenue	\$ 990,533	\$ 996,810	\$ 875,059
Cost of revenue (exclusive of depreciation, shown separately below)	535,597	525,122	449,820
Other operating expenses:			
Research and development	122,847	127,994	124,034
Selling, general and administrative	198,279	191,329	169,308
Depreciation	22,926	21,422	18,304
Restructuring and reorganization charges	5,328	4,834	8,661
Total operating expenses	<u>884,977</u>	<u>870,701</u>	<u>770,127</u>
Operating income	<u>105,556</u>	<u>126,109</u>	<u>104,932</u>
Other income (expense):			
Interest expense	(15,500)	(17,748)	(17,667)
Amortization of original issue discount	(2,983)	(2,819)	(2,664)
Interest and investment income, net	1,244	1,785	2,646
Loss on extinguishment of debt	-	-	(810)
Other, net	(2,961)	(1,604)	550
Total other	<u>(20,200)</u>	<u>(20,386)</u>	<u>(17,945)</u>
Income before income taxes	85,356	105,723	86,987
Income tax provision	(26,645)	(22,953)	(20,857)
Net income	<u>\$ 58,711</u>	<u>\$ 82,770</u>	<u>\$ 66,130</u>
Weighted-average shares outstanding:			
Basic	32,010	32,051	32,488
Diluted	32,278	32,465	32,855
Earnings per common share:			
Basic	\$ 1.83	\$ 2.58	\$ 2.04
Diluted	1.82	2.55	2.01

The accompanying notes are an integral part of these consolidated financial statements.

CSG SYSTEMS INTERNATIONAL, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in thousands)

	Year Ended December 31,		
	2020	2019	2018
Net income	\$ 58,711	\$ 82,770	\$ 66,130
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	8,368	3,418	(14,203)
Unrealized holding gains (losses) on short-term investments arising during period	(3)	14	90
Other comprehensive income (loss), net of tax	8,365	3,432	(14,113)
Total comprehensive income, net of tax	<u>\$ 67,076</u>	<u>\$ 86,202</u>	<u>\$ 52,017</u>

The accompanying notes are an integral part of these consolidated financial statements.

CSG SYSTEMS INTERNATIONAL, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands)

	Shares of Common Stock Outstanding	Common Stock	Common Stock Warrants	Additional Paid-in Capital	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Accumulated Earnings	Total Stockholders' Equity
BALANCE, January 1, 2018	33,516	\$ 689	\$ 9,082	\$ 427,091	\$ (814,732)	\$ (28,822)	\$ 749,438	\$ 342,746
Comprehensive income:								
Net income	-	-	-	-	-	-	66,130	
Unrealized gain on short-term investments, net of tax	-	-	-	-	-	90	-	
Foreign currency translation adjustments	-	-	-	-	-	(14,203)	-	
Total comprehensive income								52,017
Repurchase of common stock	(862)	-	-	(7,339)	(27,628)	-	-	(34,967)
Issuance of common stock pursuant to employee stock purchase plan	71	-	-	2,311	-	-	-	2,311
Issuance of restricted common stock pursuant to stock-based compensation plans	553	5	-	(5)	-	-	-	-
Cancellation of restricted common stock issued pursuant to stock-based compensation plans	(120)	(1)	-	1	-	-	-	-
Stock-based compensation expense	-	-	-	19,358	-	-	-	19,358
Dividends	-	-	-	-	-	-	(28,003)	(28,003)
Adjustments due to adoption of new accounting standards	-	-	-	-	-	-	7,562	7,562
BALANCE, December 31, 2018	33,158	693	9,082	441,417	(842,360)	(42,935)	795,127	361,024
Comprehensive income:								
Net income	-	-	-	-	-	-	82,770	
Unrealized gain on short-term investments, net of tax	-	-	-	-	-	14	-	
Foreign currency translation adjustments	-	-	-	-	-	3,418	-	
Total comprehensive income								86,202
Repurchase of common stock	(693)	-	-	(5,068)	(25,457)	-	-	(30,525)
Issuance of common stock pursuant to employee stock purchase plan	55	-	-	2,227	-	-	-	2,227
Issuance of restricted common stock pursuant to stock-based compensation plans	513	4	-	(4)	-	-	-	-
Cancellation of restricted common stock issued pursuant to stock-based compensation plans	(142)	(1)	-	1	-	-	-	-
Stock-based compensation expense	-	-	-	19,919	-	-	-	19,919
Exercise of Comcast stock warrants	-	-	(9,082)	(3,829)	-	-	-	(12,911)
Dividends	-	-	-	-	-	-	(29,274)	(29,274)
BALANCE, December 31, 2019	32,891	696	-	454,663	(867,817)	(39,503)	848,623	396,662
Comprehensive income:								
Net income	-	-	-	-	-	-	58,711	
Unrealized gain on short-term investments, net of tax	-	-	-	-	-	(3)	-	
Foreign currency translation adjustments	-	-	-	-	-	8,368	-	
Total comprehensive income								67,076
Repurchase of common stock	(878)	-	-	(11,859)	(26,309)	-	-	(38,168)
Issuance of common stock pursuant to employee stock purchase plan	68	-	-	2,523	-	-	-	2,523
Issuance of restricted common stock pursuant to stock-based compensation plans	672	7	-	(7)	-	-	-	-
Cancellation of restricted common stock issued pursuant to stock-based compensation plans	(40)	(3)	-	-	-	-	-	(3)
Stock-based compensation expense	-	-	-	25,237	-	-	-	25,237
Dividends	-	-	-	-	-	-	(30,932)	(30,932)
BALANCE, December 31, 2020	32,713	700	-	470,557	(894,126)	(31,138)	876,402	422,395

The accompanying notes are an integral part of these consolidated financial statements.

CSG SYSTEMS INTERNATIONAL, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended		
	2020	2019	2018
Cash flows from operating activities:			
Net income	\$ 58,711	\$ 82,770	\$ 66,130
Adjustments to reconcile net income to net cash provided by operating activities-			
Depreciation	22,926	21,422	18,304
Amortization	43,947	45,700	44,328
Amortization of original issue discount	2,983	2,819	2,664
Asset impairment	11,030	438	1,851
Gain on short-term investments and other	(123)	(364)	(101)
Loss on extinguishment of debt	-	-	810
Deferred income taxes	(1,033)	(77)	4,913
Stock-based compensation	25,237	19,919	19,358
Changes in operating assets and liabilities, net of acquired amounts:			
Trade accounts receivable, net	14,659	(4,015)	(138)
Other current and non-current assets and liabilities	(10,688)	(17,727)	(23,179)
Income taxes payable/receivable	5,405	4,771	5,055
Trade accounts payable and accrued liabilities	(5,752)	(10,317)	(7,146)
Deferred revenue	5,718	5,737	10,492
Net cash provided by operating activities	<u>173,020</u>	<u>151,076</u>	<u>143,341</u>
Cash flows from investing activities:			
Purchases of software, property and equipment	(29,397)	(37,319)	(57,104)
Purchases of short-term investments	(81,824)	(54,258)	(75,022)
Proceeds from sale/maturity of short-term investments	56,454	52,135	190,778
Acquisition of and investments in business, net of cash acquired	(11,491)	(17,194)	(144,791)
Net cash used in investing activities	<u>(66,258)</u>	<u>(56,636)</u>	<u>(86,139)</u>
Cash flows from financing activities:			
Proceeds from issuance of common stock	2,523	2,227	2,311
Payment of cash dividends	(31,056)	(29,126)	(27,979)
Repurchase of common stock	(38,123)	(30,918)	(34,726)
Exercise of common stock warrants	-	(12,911)	-
Proceeds from long-term debt	-	-	150,000
Payments on long-term debt	(10,313)	(7,500)	(125,625)
Payments of deferred financing costs	-	-	(1,490)
Net cash used in financing activities	<u>(76,969)</u>	<u>(78,228)</u>	<u>(37,509)</u>
Effect of exchange rate fluctuations on cash	<u>2,358</u>	<u>1,059</u>	<u>(2,659)</u>
Net increase in cash and cash equivalents	32,151	17,271	17,034
Cash and cash equivalents, beginning of period	156,548	139,277	122,243
Cash and cash equivalents, end of period	<u>\$ 188,699</u>	<u>\$ 156,548</u>	<u>\$ 139,277</u>
Supplemental disclosures of cash flow information:			
Cash paid during the period for-			
Interest	\$ 13,681	\$ 16,064	\$ 15,857
Income taxes	22,431	18,358	10,426

The accompanying notes are an integral part of these consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. General

CSG Systems International, Inc. (the “Company”, “CSG”, or forms of the pronoun “we”), a Delaware corporation, was formed in October 1994 and is based in Denver, Colorado. We are a revenue management, customer experience, and payment solutions provider primarily serving the global communications industry. We have over 35 years of experience supporting communications service providers’ management of their revenue, customer communications, and digital ecosystem as they advance their video, voice, data content, and digital services to consumers. Over the years, we have focused our research and development (“R&D”) and acquisition investments on expanding our solution set to address the complex, transformative needs of service providers. We are a member of the S&P SmallCap 600 and Russell 2000 indices.

The accompanying Consolidated Financial Statements (“Financial Statements”) are prepared in conformity with generally accepted accounting principles (“GAAP”) in the United States of America (“U.S.”).

2. Summary of Significant Accounting Policies

Principles of Consolidation. Our Financial Statements include all of our accounts and our subsidiaries’ accounts. All material intercompany accounts and transactions have been eliminated.

Translation of Foreign Currency. Our foreign subsidiaries use the local currency of the countries in which they operate as their functional currency. Their assets and liabilities are translated into U.S. dollars at the exchange rates in effect at the balance sheet date. Revenue, expenses, and cash flows are translated at the average rates of exchange prevailing during the period. Foreign currency translation adjustments are included in comprehensive income in stockholders’ equity. Foreign currency transaction gains and losses are included in the determination of net income.

Use of Estimates in Preparation of Our Financial Statements. The preparation of our Financial Statements requires management to make estimates and assumptions that may affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of our Financial Statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates. The more critical accounting estimates and related assumptions that may affect our financial position and results of operations are in the areas of: (i) revenue recognition; (ii) impairment assessments of long-lived assets; (iii) income taxes; and (iv) loss contingencies.

Revenue Recognition. We adopted Accounting Standards Update (“ASU”) 2014-09, *Revenue from Contracts with Customers* (Topic 606) (“ASC 606”) as of January 1, 2018 using the cumulative effect method and recorded a cumulative adjustment increasing beginning retained earnings (net of tax) by approximately \$7 million, primarily related to contracts that we were previously required to defer revenue as we did not have vendor specific objective evidence of fair value for certain undelivered elements.

Our revenue from customer contracts is measured based on consideration specified in our contracts as discussed further below. We recognize revenue for our products and services separately if they are distinct performance obligations. A product or service, or group of products or services, is a distinct performance obligation if it is separately identifiable from other items in the context of the contract and if our customer can benefit from the product or service on their own or with other resources that are readily available to that customer. We recognize revenue when we satisfy our performance obligations by transferring control of a particular product or service, or group of products or services, to our customers, as described in more detail below. Taxes assessed on our products and services based on governmental authorities at the time of invoicing are excluded from our revenue.

Cloud and Related Solutions

Our cloud and related solutions revenue include: (i) our software-as-a-service (“SaaS”), revenue management solutions, and various related ancillary services; (ii) our managed services offering in which we operate software solutions (primarily our software solutions) on behalf of our customers; and (iii) cloud-based payment processing transaction services.

We contract for our cloud-based revenue management solutions using long-term arrangements whose terms have typically ranged from three to five years. These arrangements consist of a series of multiple services delivered daily or monthly, to include such things as: (i) revenue and customer engagement solutions; (ii) business support services (e.g., workforce management tools, consumer credit verifications, etc.); (iii) digital enablement and delivery functions; and (iv) customer statement invoice printing and mailing services. The fees for these services typically are billed to our customers monthly based upon actual monthly volumes and/or usage of services (e.g., the number of customer accounts maintained on our solutions, the number of transactions processed on our solutions, and/or the quantity and content of the monthly statements and mailings processed through our solutions).

For cloud-based revenue management solution contracts, the total contract consideration (including impacts of discounts or incentives) is primarily variable dependent upon actual monthly volumes and/or usage of services; however, these contracts can also include ancillary fixed consideration in the form of one-time, monthly, or annual fees. Pricing of products and services in these contracts is generally at stand-alone selling price, with no allocation of value between the individual performance obligations. In situations where we do an allocation, we determine stand-alone selling price based on established pricing and/or cost, plus an applicable margin. Revenue is generally recognized based on activities performed over a series of daily or monthly periods.

We contract for managed services solutions using long-term arrangements whose terms have typically ranged from three to five years. Under managed services agreements, we operate software products (primarily our software solutions) on behalf of our customers: (i) out of a customer's data center; (ii) out of a data center we own and operate; or (iii) out of a third-party data center we contract with for such services. Managed services can also include us providing other services, such as transitional services, fulfillment, remittance processing, operational consulting, back office, and end-user billing services.

For managed services contracts, the total contract consideration is typically a fixed monthly fee, but these contracts may also have variable fee components. The fees for these services typically are billed to our customers on a monthly basis. Unless managed services are included with a software license contract (as discussed further below), there is generally only one performance obligation and revenue is recognized for these arrangements on a ratable basis as the services are performed.

Our contracts for payment processing transaction services are generally month-to-month or fixed term with automatic renewals. Services provided under these arrangements primarily include Automated Clearing House ("ACH") transaction processing, credit/debit card processing, web-based and telephone payment processing, and real-time check verification and authentication services. The fees for these services typically are billed on a monthly basis.

Our payment processing services are comprised of one performance obligation. Revenue for payment processing services is based primarily on a fee per transaction or a percentage of the transaction principal and recognized as delivered over a series of daily service periods. Transaction fees collected from customers are recognized as revenue on a gross basis when we are the principal in completing the payment processing transaction. As a principal to the transaction, we control the service of processing payments on our platform. We bear primary responsibility for the fulfillment of the payment service, contract directly with our customers, and have full discretion in determining the fee charged to our customers which is independent of the costs we incur when we utilize payment processors or other financial institutions to perform services on our behalf. We therefore bear full margin risk when completing a payment processing transaction. Transaction fees paid to third-party payment processors and other financial institutions are primarily comprised of interchange and other payment-related fees paid in conjunction with the delivery of service to customers under our payment services contracts. These fees are recognized in cost of revenue.

Fees related to set-up or implementation activities for both cloud-based solution and managed services contracts are deferred and recognized ratably over the related service period to which the activities relate.

Depending on the significance of variable consideration, number of products/services, complex pricing structures and long-term nature of these types of contracts, the judgments and estimates made in this area could have a significant effect on the amount and timing of revenue recognized in any period.

Software and Services

Our software and services revenue relates primarily to: (i) software license sales on either a perpetual or term license basis; and (ii) professional services to implement the software. Our software and services contracts are often contracted in bundled arrangements that include not only the software license and related implementation services, and may also include maintenance, managed services, and/or additional professional services.

For our software arrangements, total contract consideration is allocated between the separate performance obligations based on stand-alone selling prices for software licenses, cost plus applicable margin for services and established pricing for maintenance. The initial sale of our software products generally requires significant production, modification, or customization, such that the delivery of the software license and related professional services required to implement the software represent one combined performance obligation that is satisfied over time based on hours worked (hours-based method). We are using hours worked on the project, compared against expected hours to complete the project, as the measure to determine progress toward completion as we believe it is the most appropriate metric to measure such progress. The software and services fees are generally fixed fees billed to our customers on a milestone or date basis.

The determination of the performance obligations and allocation of value for software license arrangements require significant judgment. We generally determine stand-alone selling prices using pricing calculations (which include regional market factors) for our software license fees and maintenance, and cost-plus margins for services. Additionally, our use of an hours-based method of accounting for software license and other professional services performance obligations that are satisfied over time requires estimates of total project revenue and costs, along with the expected hours necessary to complete a project. Changes in estimates as a result of additional information or experience on a project as work progresses are inherent characteristics of this method of revenue recognition as we are exposed to business risks in completing these types of performance obligations. The estimation process to support our hours-based recognition method is more difficult for projects of greater length and/or complexity. The judgments and estimates made for these types of obligations could: (i) have a significant effect on revenue recognized in any period by changing the amount and/or the timing of the revenue recognized; and/or (ii) impact the expected profitability of a project, including whether an overall loss on an arrangement has occurred. To mitigate the inherent risks in using this hours-based method, we track our current hours expended against our estimates on a periodic basis and continually reevaluate the appropriateness of our estimates.

In certain instances, we sell software license volume upgrades, which provide our customers the right to use our software to process higher transaction volume levels. In these instances, we analyze the contract to determine if the volume upgrade is a separate performance obligation and if so, we recognize the value associated with the software license as revenue on the effective date of the volume upgrade.

A portion of our professional services revenue is contracted separately (e.g., business consulting services, etc.). Such contracts can either be on a fixed-price or time-and-materials basis. Revenue from fixed-price professional service contracts is recognized using an estimated hours-based method, as these professional services represent a performance obligation that is satisfied over time. Revenue from professional services contracts billed on a time-and-materials basis is recognized as the services are performed.

Maintenance

Our maintenance revenue relates primarily to support of our software once it has been implemented and placed in service. Maintenance revenue is recognized ratably over the software maintenance period as services are provided. Our maintenance consists primarily of customer and product support, technical updates (e.g., bug fixes, etc.), and unspecified upgrades or enhancements to our software products. If specified upgrades or enhancements are offered in a contract, which are rare, they are accounted for as a separate performance obligation. Maintenance may be invoiced to our customers on a monthly, quarterly, or annual basis.

Transaction Price Allocated to the Remaining Performance Obligations

As of December 31, 2020, our aggregate amount of the transaction price allocated to the remaining performance obligations is approximately \$1 billion, which is made up of fixed fee consideration and guaranteed minimums expected to be recognized in the future related to performance obligations that are unsatisfied (or partially unsatisfied). We expect to recognize approximately 90% of this amount by the end of 2023, with the remaining amount recognized by the end of 2028. We have excluded from this amount variable consideration expected to be recognized in the future related to performance obligations that are unsatisfied. The majority of our future revenue is related to our cloud and related solution customer contracts that includes variable consideration dependent upon a series of monthly volumes and/or daily usage of services and have contractual terms ending from 2021 through 2028.

Disaggregation of Revenue

The nature, amount, timing, and uncertainty of our revenue and how revenue and cash flows are affected by economic factors is most appropriately depicted by revenue type, geographic region, and customer vertical.

Revenue by type for 2020, 2019, and 2018 was as follows (in thousands):

	2020	2019	2018
Revenue:			
Cloud and related solutions	\$ 880,822	\$ 896,164	\$ 766,377
Software and services	63,239	52,364	58,101
Maintenance	46,472	48,282	50,581
Total revenue	<u>\$ 990,533</u>	<u>\$ 996,810</u>	<u>\$ 875,059</u>

We use the location of the customer as the basis of attributing revenue to geographic regions. Revenue by geographic region for 2020, 2019, and 2018, as a percentage of our total revenue, was as follows:

	2020	2019	2018
Americas (principally the U.S.)	86%	87%	85%
Europe, Middle East and Africa (principally Europe)	10%	9%	10%
Asia Pacific	4%	4%	5%
Total revenue	<u>100%</u>	<u>100%</u>	<u>100%</u>

We generate our revenue primarily from the global communications markets; however, we serve an expanding group of customers in markets including financial services, healthcare, media and entertainment companies, and government entities. Revenue by customer vertical for 2020, 2019, and 2018, as a percentage of our total revenue, was as follows:

	2020	2019	2018
Broadband/Cable/Satellite	58%	58%	64%
Telecommunications	19%	19%	21%
Other	23%	23%	15%
Total revenue	<u>100%</u>	<u>100%</u>	<u>100%</u>

Billed and Unbilled Accounts Receivable. Billed accounts receivable represents our unconditional rights to consideration. Once invoiced, our payment terms are generally between 30-60 days. We rarely have contracts with financing arrangements. Unbilled accounts receivable represents our rights to consideration for work completed but not billed. Unbilled accounts receivable is transferred to billed accounts receivable when the rights become unconditional which is generally at the time of invoicing.

The following table rolls forward our unbilled accounts receivable from January 1, 2019 to December 31, 2020 (in thousands):

	Unbilled Receivables
Beginning Balance, January 1, 2019	\$ 37,227
Recognized during the period	252,445
Reclassified to receivables	(255,983)
Other	(239)
Ending Balance, December 31, 2019	<u>33,450</u>
Recognized during the period	248,574
Reclassified to receivables	(244,574)
Other	335
Ending Balance, December 31, 2020	<u>\$ 37,785</u>

Deferred Revenue. Deferred revenue represents consideration received from customers in advance of services being performed.

The following table rolls forward our deferred revenue from January 1, 2019 to December 31, 2020 (in thousands):

	Deferred Revenue
Beginning Balance, January 1, 2019	\$ (57,763)
Revenue recognized that was included in deferred revenue at the beginning of the period	39,352
Consideration received in advance of services performed net of revenue recognized in the current period	(44,051)
Other	(1,184)
Ending Balance, December 31, 2019	<u>(63,646)</u>
Revenue recognized that was included in deferred revenue at the beginning of the period	40,811
Consideration received in advance of services performed net of revenue recognized in the current period	(46,719)
Other	(78)
Ending Balance, December 31, 2020	<u>\$ (69,632)</u>

Postage. We pass through to our customers the cost of postage that is incurred on behalf of those customers, and typically require an advance payment on expected postage costs. These advance payments are included in customer deposits in the accompanying Consolidated Balance Sheets (“Balance Sheets” or “Balance Sheet”) and are classified as current liabilities regardless of the contract period. We net the cost of postage against the postage reimbursements for those customers where we require advance deposits and include the net amount (which is not material) in cloud and related solutions revenue.

Cash and Cash Equivalents. We consider all highly liquid investments with original maturities of three months or less at the date of purchase to be cash equivalents. As of December 31, 2020 and 2019, our cash equivalents consist primarily of institutional money market funds, commercial paper, and time deposits held at major banks.

As of December 31, 2020 and 2019, we had \$1.7 million and \$2.7 million, respectively, of restricted cash that serves to collateralize guarantees and outstanding letters of credit. This restricted cash is included in cash and cash equivalents in our Balance Sheets.

Short-term Investments and Other Financial Instruments. Our financial instruments as of December 31, 2020 and 2019 include cash and cash equivalents, short-term investments, accounts receivable, accounts payable, and debt. Due to their short maturities, the carrying amounts of cash equivalents, accounts receivable, and accounts payable approximate their fair value.

Our short-term investments and certain cash equivalents are considered “available-for-sale” and are reported at fair value in our Balance Sheets, with unrealized gains and losses, net of the related income tax effect, excluded from earnings and reported in a separate component of stockholders’ equity. Realized and unrealized gains and losses were not material in any period presented.

Primarily all short-term investments held by us as of December 31, 2020 and 2019 have contractual maturities of less than two years from the time of acquisition. Our short-term investments at December 31, 2020 and 2019 consisted almost entirely of fixed income securities. Proceeds from the sale/maturity of short-term investments in 2020, 2019, and 2018 were \$56.5 million, \$52.1 million, and \$190.8 million, respectively.

The following table represents the fair value hierarchy based upon three levels of inputs, of which Levels 1 and 2 are considered observable and Level 3 is unobservable, for our financial assets measured at fair value (in thousands):

	December 31, 2020			December 31, 2019		
	Level 1	Level 2	Total	Level 1	Level 2	Total
Cash equivalents:						
Money market funds	\$ 33,535	\$ —	\$ 33,535	\$ 4,847	\$ —	\$ 4,847
Commercial paper	—	15,746	15,746	—	26,964	26,964
Corporate debt securities	—	1,351	1,351	—	—	—
Short-term investments:						
Corporate debt securities	—	38,672	38,672	—	22,159	22,159
U.S. government agency bonds	—	4,642	4,642	—	—	—
Asset-backed securities	—	8,284	8,284	—	3,950	3,950
Total	\$ 33,535	\$ 68,695	\$ 102,230	\$ 4,847	\$ 53,073	\$ 57,920

Valuation inputs used to measure the fair values of our money market funds were derived from quoted market prices. The fair values of all other financial instruments are based upon pricing provided by third-party pricing services. These prices were derived from observable market inputs.

We have chosen not to record our debt at fair value, with changes recognized in earnings each reporting period. The following table indicates the carrying value and estimated fair value of our debt as of the indicated periods (in thousands):

	December 31, 2020		December 31, 2019	
	Carrying Value	Fair Value	Carrying Value	Fair Value
2018 Credit Agreement (carrying value including current maturities)	\$ 126,563	\$ 126,563	\$ 136,875	\$ 136,875
2016 Convertible debt (par value)	230,000	244,663	230,000	262,775

The fair value for our Credit Agreement was estimated using a discounted cash flow methodology, while the fair value for our convertible debt was estimated based upon quoted market prices or recent sales activity, both of which are considered Level 2 inputs. See Note 5 for discussion regarding our debt.

Settlement Assets and Settlement Liabilities. Settlement assets and settlement liabilities represent cash collected on behalf of merchants via payment processing services which is held for an established holding period until settlement with the merchant. The holding period is generally one to four business days depending on the payment model and contractual terms with the merchant. During the holding period, cash is held in trust with various major financial institutions and a corresponding liability is recorded for the amounts owed to the merchant. At any given time, there may be differences between the cash held in trust and the corresponding liability due to the timing of operating-related cash transfers.

Concentrations of Credit Risk. In the normal course of business, we are exposed to credit risk. The principal concentrations of credit risk relate to cash deposits, cash equivalents, short-term investments, and accounts receivable. We regularly monitor credit risk exposures and take steps to mitigate the likelihood of these exposures resulting in a loss. We hold our cash deposits, cash equivalents, and short-term investments with financial institutions we believe to be of sound financial condition.

We are exposed to credit risk related to settlement assets and risk of loss related to our settlement obligations. We hold our settlement assets in major financial institutions we believe to be of sound financial condition. To mitigate the risk of loss due to non-performance or non-payment by a merchant, we perform credit risk evaluations based on multiple criteria and may require a cash deposit from the merchant depending on their risk profile. If a deposit is required, the cash is held in a segregated bank account for the duration of the relationship with the merchant. These deposits are restricted and are fully offset by corresponding liabilities and are included in other assets and other liabilities in our Balance Sheets.

We generally do not require collateral or other security to support accounts receivable. We evaluate the credit worthiness of our customers in conjunction with our revenue recognition processes, as well as through our ongoing collectability assessment processes for accounts receivable. We maintain an allowance for doubtful accounts receivable based upon factors surrounding the credit risk of specific customers, historical trends, and other information. We use various judgments and estimates in determining the adequacy of the allowance for doubtful accounts receivable. See Note 3 for additional details of our concentration of accounts receivable.

The activity in our allowance for doubtful accounts receivable is as follows (in thousands):

	2020	2019	2018
Balance, beginning of year	\$ 3,735	\$ 3,115	\$ 4,149
Additions to expense	1,481	778	462
Write-offs	(1,532)	(158)	(1,659)
Recoveries	—	—	—
Other	(56)	—	163
Balance, end of year	<u>\$ 3,628</u>	<u>\$ 3,735</u>	<u>\$ 3,115</u>

Property and Equipment. Property and equipment are recorded at cost (or at estimated fair value if acquired in a business combination) and are depreciated over their estimated useful lives ranging from three to ten years. Leasehold improvements are depreciated over the shorter of their economic life or the lease term. Depreciation expense is computed using the straight-line method for financial reporting purposes. Depreciation expense for all property and equipment is reflected in our Income Statements separately in the aggregate and is not included in the cost of revenue or the other components of operating expenses.

Software. We expend substantial amounts on R&D, particularly for new solutions and services, and enhancements of existing solutions and services. For development of software solutions that are to be licensed by us, we expense all costs related to the development of the software until technological feasibility is established. For development of software to be used internally (e.g., cloud-based systems software), we expense all costs prior to the application development stage.

During 2020, 2019, and 2018, we expended \$122.8 million, \$128.0 million, and \$124.0 million, respectively, on R&D projects. We did not capitalize any R&D costs in 2020, 2019, and 2018, as the costs subject to capitalization during these periods were not material. We did not have any capitalized R&D costs included in our December 31, 2020 and 2019 Balance Sheets.

Realizability of Long-Lived Assets. We evaluate our long-lived assets, other than goodwill, for possible impairment whenever events or changes in circumstances indicate that the carrying value of these assets may not be recoverable. A long-lived asset is impaired if estimated future undiscounted cash flows associated with that asset are insufficient to recover the carrying amount of the long-lived asset. If deemed impaired, the long-lived asset is written down to its estimated fair value.

Goodwill. We evaluate our goodwill for impairment on an annual basis, as well as we may evaluate our goodwill on a more periodic basis (e.g., quarterly) if events occur or circumstances change that could indicate a potential impairment may have occurred. Goodwill is considered impaired if the carrying value of the reporting unit which includes the goodwill is greater than the estimated fair value of the reporting unit.

Contingencies. We accrue for a loss contingency when: (i) it is probable that an asset has been impaired, or a liability has been incurred; and (ii) the amount of the loss can be reasonably estimated. The determination of loss contingencies is subject to various judgments and estimates. We do not record the benefit from a gain contingency until the benefit is realized.

Earnings Per Common Share (“EPS”). Basic and diluted EPS amounts are presented on the face of our Income Statements.

The reconciliation of the basic and diluted EPS denominators related to the common shares is included in the following table (in thousands):

	2020	2019	2018
Basic weighted-average common shares	32,010	32,051	32,488
Dilutive effect of restricted common stock	268	282	218
Dilutive effect of Stock Warrants	—	132	149
Diluted weighted-average common shares	<u>32,278</u>	<u>32,465</u>	<u>32,855</u>

The Convertible Notes have a dilutive effect only in those periods in which our average stock price exceeds the current effective conversion price (see Note 5).

The Stock Warrants have a dilutive effect only in those periods in which our average stock price exceeds the exercise price of \$26.68 per warrant (under the treasury stock method) and are not subject to performance vesting conditions (see Note 12).

Potentially dilutive common shares related to unvested restricted stock and Stock Warrants were excluded from the computation of diluted EPS, as the effect was antidilutive, and were not material in any period presented.

Equity Method Investment. During 2020, we made an additional \$1.5 million investment in a payment technology and services company that enables omni-channel digital payments in Latin America. As of December 31, 2020 and 2019, we held an 15% and 8% noncontrolling interest with a carrying value of \$7.9 million and \$6.6 million, respectively.

Stock-Based Compensation. Stock-based compensation represents the cost related to stock-based awards granted to employees and non-employee directors. We measure stock-based compensation cost at the grant date of the award, based on the estimated fair value of the award and recognize the cost (net of estimated forfeitures) over the requisite service period.

Income Taxes. We account for income taxes using the asset and liability method. Under this method, income tax expense is recognized for the amount of taxes payable or refundable for the current year. Deferred tax assets and liabilities are recognized for expected future tax consequences of temporary differences between the financial reporting and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

Accounting Pronouncement Adopted. In January 2019, we adopted ASU No. ASU 2016-02, *Leases* (Topic 842) (“ASC 842”) which required lessees to recognize a lease liability and a right-of-use asset for all leases, including operating leases, with a term greater than twelve months on its balance sheet. As we adopted ASC 842 utilizing the effective date method of transition, prior period information in our Financial Statements was not adjusted. In conjunction with the adoption of ASC 842, we recorded a balance sheet gross up of approximately \$80 million, related to the right-of-use assets and lease liabilities, and have included the amortization of the right-of-use-assets in the changes in other current and non-current assets and liabilities and the accretion and payments of lease liabilities in the changes in trade accounts payable and accrued liabilities, respectively, on our Statement of Cash Flows.

Accounting Pronouncement Issued But Not Yet Effective. In August 2020, the FASB issued ASU No. 2020-06, *Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity* (“ASU 2020-06”), which simplifies the accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments and contracts in an entity’s own equity. ASU 2020-06 also amends the related Earnings Per Share guidance. ASU 2020-06 is effective for fiscal years beginning after December 15, 2021, with early adoption permitted for fiscal years beginning after December 15, 2020, and can be adopted on either a fully retrospective or modified retrospective basis. The Company is currently evaluating the timing, method of adoption and overall impact of this standard on its consolidated financial statements.

3. Segment Reporting and Significant Concentration

Segment Information. We have evaluated how our chief operating decision maker has organized our company for purposes of making operating decisions and assessing performance, and have concluded that as of December 31, 2020, there is one reportable segment.

Significant Customers. A large percentage of our revenue have been generated from our two largest customers, which are Comcast Corporation (“Comcast”) and Charter Communications, Inc. (“Charter”).

Revenue from these customers represented the following percentages of our total revenue for the following years:

	2020	2019	2018
Comcast	22%	23%	25%
Charter	21%	20%	20%

Solutions and Services. Our solutions and services help companies around the world monetize and digitally enable the customer experience by accurately capturing, managing, generating, and optimizing the interactions and revenue associated with their customers. We generate a substantial percentage of our revenue from customers utilizing Advanced Convergent Platform (“ACP”), a private cloud-based platform, and related customer communications management solutions (e.g., field force automation, analytics, electronic bill presentment, ACH, etc.) to the North American cable and satellite markets. In addition, a smaller portion of our revenue is generated from our public cloud revenue management and payments solutions serving service providers globally. Finally, we license certain solutions (e.g., mediation, partner management, rating, and charging) and provide our professional services to implement, configure, and maintain these solutions. These solutions are sometimes provided under a managed service arrangement, where we assume long-term responsibility for delivering our solutions and related operations under a defined scope and specified service levels.

As of December 31, 2020 and 2019, the percentage of net billed accounts receivable balances attributable to these customers were as follows:

	As of December 31,	
	2020	2019
Comcast	19%	24%
Charter	20%	24%

We expect to continue to generate a significant percentage of our future revenue from our significant customers. There are inherent risks whenever a large percentage of total revenue is concentrated with a limited number of customers. Should a significant customer: (i) terminate or fail to renew their contracts with us, in whole or in part for any reason; (ii) significantly reduce the number of customer accounts processed on our solutions, the price paid for our solutions and services, or the scope of solutions and services that we provide; or (iii) experience significant financial or operating difficulties, it could have a material adverse effect on our financial position and results of operations.

4. Long-Lived Assets

Property and Equipment. Property and equipment at December 31 consisted of the following (in thousands, except years):

	Useful Lives (Years)	2020	2019
Computer equipment	3-6	\$ 87,289	\$ 88,701
Leasehold improvements	5-10	25,442	25,778
Operating equipment	3-8	67,097	59,864
Furniture and fixtures	8	7,004	8,115
		186,832	182,458
Less - accumulated depreciation		(105,073)	(98,029)
Property and equipment, net		\$ 81,759	\$ 84,429

Goodwill. We do not have any intangible assets with indefinite lives other than goodwill. A rollforward of goodwill for 2019 and 2020 is as follows (in thousands):

January 1, 2019 balance	\$ 255,816
Adjustments related to prior acquisitions	640
Effects of changes in foreign currency exchange rates	2,708
December 31, 2019 balance	259,164
Tekzenit, Inc. acquisition	9,083
Adjustments related to prior acquisitions	(60)
Effects of changes in foreign currency exchange rates	4,135
December 31, 2020 balance	<u>\$ 272,322</u>

See Note 7 for discussion of the Tekzenit, Inc. acquisition.

Other Intangible Assets. Our other intangible assets subject to ongoing amortization consist of acquired customer contracts and software.

Acquired Customer Contracts. As of December 31, 2020 and 2019, the carrying values of our acquired customer contracts were as follows (in thousands):

	December 31, 2020			December 31, 2019		
	Gross Carrying Amount	Accumulated Amortization	Net Amount	Gross Carrying Amount	Accumulated Amortization	Net Amount
Acquired customer contracts	\$ 153,790	\$ (105,778)	\$ 48,012	\$ 148,872	\$ (93,767)	\$ 55,105

Acquired customer contracts as of December 31, 2020 include assets acquired in the Tekzenit, Inc. acquisition (see Note 7).

The aggregate amortization related to customer contracts included in our operations for 2020, 2019, and 2018 was as follows (in thousands):

	2020	2019	2018
Acquired customer contracts amortization (1)	\$ 9,963	\$ 10,374	\$ 7,898

- (1) Acquired customer contracts represent assets acquired in our prior business acquisitions. Acquired customer contracts are amortized over their estimated useful lives ranging from three to twenty years based on the approximate pattern in which the economic benefits of the intangible assets are expected to be realized, with the amortization expense included as cost of revenue in our Income Statements.

The remaining weighted-average amortization period of the acquired customer contract as of December 31, 2020 was approximately 100 months. Based on the net carrying value of these acquired customer contracts, the estimated amortization for each of the five succeeding fiscal years ending December 31 will be: 2021 – \$7.2 million; 2022 – \$7.0 million; 2023 – \$5.8 million; 2024 – \$5.6 million; and 2025 – \$5.6 million.

Software. Software consists of: (i) software and similar intellectual property rights from various business combinations; and (ii) internal use software. As of December 31, 2020 and 2019, the carrying values of our software assets were as follows (in thousands):

	2020			2019		
	Gross Carrying Amount	Accumulated Amortization	Net Amount	Gross Carrying Amount	Accumulated Amortization	Net Amount
Acquired software (2)	\$ 75,602	\$ (70,242)	\$ 5,360	\$ 75,370	\$ (68,157)	\$ 7,213
Internal use software (3)	90,687	(69,594)	21,093	82,593	(57,280)	25,313
Total software	<u>\$ 166,289</u>	<u>\$ (139,836)</u>	<u>\$ 26,453</u>	<u>\$ 157,963</u>	<u>\$ (125,437)</u>	<u>\$ 32,526</u>

The aggregate amortization related to software included in our operations for 2020, 2019, and 2018 was as follows (in thousands):

	2020	2019	2018
Acquired software amortization (2)	\$ 1,853	\$ 2,229	\$ 1,801
Internal use software amortization (3)	13,216	10,641	9,517
Total software amortization	<u>\$ 15,069</u>	<u>\$ 12,870</u>	<u>\$ 11,318</u>

- (2) Acquired software represents software intangible assets acquired in our prior business acquisitions, which are amortized over their estimated useful lives ranging from four to eight years. The amortization of acquired software is reflected as a cost of revenue in our Income Statements.
- (3) Internal use software represents: (i) third-party software licenses; and (ii) the internal and external costs related to the implementation of the third-party software licenses. Internal use software is amortized over its estimated useful life ranging from one to ten years.

The remaining weighted-average amortization period of the software intangible assets as of December 31, 2020 was approximately 36 months. Based on the net carrying value of these intangible assets, the estimated amortization for each of the five succeeding fiscal years ending December 31 will be: 2021 – \$11.7 million; 2022 – \$7.2 million; 2023 – \$4.6 million; 2024 – \$1.5 million; and 2025 – \$0.9 million.

Customer Contract Costs. As of December 31, 2020 and 2019, the carrying values of our customer contract cost assets, related to those contracts with a contractual term greater than one year, were as follows (in thousands):

	December 31, 2020			December 31, 2019		
	Gross Carrying Amount	Accumulated Amortization	Net Amount	Gross Carrying Amount	Accumulated Amortization	Net Amount
Customer contract incentives (4)	\$ 4,626	\$ (2,320)	\$ 2,306	\$ 4,626	\$ (1,612)	\$ 3,014
Capitalized costs (5)	70,214	(33,104)	37,110	68,085	(26,482)	41,603
Capitalized commission fees (6)	12,291	(4,469)	7,822	9,561	(3,432)	6,129
Total customer contact costs	<u>\$ 87,131</u>	<u>\$ (39,893)</u>	<u>\$ 47,238</u>	<u>\$ 82,272</u>	<u>\$ (31,526)</u>	<u>\$ 50,746</u>

During 2020, we recorded an impairment charge of \$10.3 million for the write-off of capitalized customer contract costs related to a discontinued project implementation. This non-cash impairment charge is primarily included in cost of revenue in our Income Statement.

The aggregate amortization related to our customer contract costs included in our operations for 2020 and 2019 was as follows (in thousands):

	2020	2019	2018
Customer contract incentives amortization (4)	\$ 708	\$ 6,018	\$ 11,052
Capitalized costs amortization (5)	13,803	12,625	10,304
Capitalized commission fees amortization (6)	2,679	2,136	2,025
Total customer contract costs amortization	<u>\$ 17,190</u>	<u>\$ 20,779</u>	<u>\$ 23,381</u>

- (4) Customer contract incentives consist principally of incentives provided to new or existing customers to convert their customer accounts to, or retain their customer's account on, our outsourced solutions and are amortized ratably over the contract period to include renewal periods, if applicable, which as of December 31, 2020, have termination dates that range from 2023 to 2025. The amortization of customer contract incentives is reflected as a reduction of revenue in our Income Statements.
- (5) Capitalized costs are related to customer conversion/set-up activities and direct material costs to fulfill long-term cloud-based or managed services arrangements. These costs are amortized over the contract period, which as of December 31, 2020, range from 2021 to 2028, based on the transfer of goods or services to which the assets relate, and are included in cost of revenue in our Income Statements.
- (6) Capitalized commission fees are incremental commissions paid as a result of obtaining a customer contract. These fees are amortized over the contract period based on the transfer of goods or services to which the assets relate, which as of December 31, 2020, range from 2021 to 2026, and are included in selling, general and administrative ("SG&A") expenses in our Income Statements. Incremental commission fees incurred as a result of obtaining a customer contract are expensed when incurred if the amortization period of the asset that we otherwise would have recognized is one year or less (a practical expedient allowed under ASC 606).

5. Debt

As of December 31, 2020 and 2019, our long-term debt was as follows (in thousands):

	December 31, 2020	December 31, 2019
<i>2018 Credit Agreement:</i>		
Term loan, due March 2023, interest at adjusted LIBOR plus 1.5% (combined rate of 1.75% at December 31, 2020 and 3.44% at December 31, 2019)	\$ 126,563	\$ 136,875
Less – deferred financing costs	(1,155)	(1,715)
2018 Term Loan, net of unamortized discounts	125,408	135,160
\$200 million revolving loan facility, due March 2023, interest at adjusted LIBOR plus applicable margin	—	—
<i>2016 Convertible Notes:</i>		
Convertible Notes – Senior convertible notes; due March 15, 2036; cash interest at 4.25%	230,000	230,000
Less – unamortized original issue discount	(3,021)	(6,004)
Less – deferred financing costs	(1,170)	(2,334)
2016 Convertible Notes, net of unamortized discounts	225,809	221,662
Total debt, net of unamortized discounts	351,217	356,822
Current portion of long-term debt, net of unamortized discounts	(14,063)	(10,313)
Long-term debt, net of unamortized discounts	\$ 337,154	\$ 346,509

2018 Credit Agreement. On March 5, 2018, we entered into a new \$350 million credit agreement (the “2018 Credit Agreement”) with a consortium of banks to replace the amended and restated \$350 million credit agreement entered into in February 2015, (the “2015 Credit Agreement”).

The 2018 Credit Agreement provides borrowings in the form of: (i) a \$150 million aggregate principal five-year term loan (the “2018 Term Loan”); and (ii) a \$200 million aggregate principal five-year revolving loan facility (the “2018 Revolver”). With the \$150 million proceeds from the 2018 Term Loan, we repaid the outstanding \$120 million balance of the term loan under the 2015 Credit Agreement, resulting in a net increase of available cash by \$30 million, a portion of which was used to pay certain fees and expenses in connection with the refinancing, and the remainder of which was used for general corporate purposes.

The interest rates under the 2018 Credit Agreement are based upon our choice of an adjusted LIBOR rate plus an applicable margin of 1.50% - 2.50%, or an alternate base rate plus an applicable margin of 0.50% - 1.50%, with the applicable margin, depending on our then-net secured total leverage ratio. We will pay a commitment fee of 0.200% - 0.375% of the average daily unused amount of the 2018 Revolver, with the commitment fee rate also dependent upon our then-net secured total leverage ratio. If the LIBOR rate is no longer available, then our interest rate under the Credit Agreement will be determined by the alternate base rate plus an applicable margin as discussed above. The 2018 Credit Agreement includes mandatory repayments of the aggregate principal amount of the 2018 Term Loan (payable quarterly) for the first, second, third, fourth, and fifth years, with the remaining principal balance due at maturity. The 2018 Credit Agreement has no prepayment penalties and requires mandatory repayments under certain circumstances, including: (i) asset sales or casualty proceeds; and (ii) proceeds of debt or preferred stock issuances.

The 2018 Credit Agreement contains customary affirmative covenants. In addition, the 2018 Credit Agreement has customary negative covenants that places limits on our ability to: (i) incur additional indebtedness; (ii) create liens on our property; (iii) make investments; (iv) enter into mergers and consolidations; (v) sell assets; (vi) declare dividends or repurchase shares; (vii) engage in certain transactions with affiliates; (viii) prepay certain indebtedness; and (ix) issue capital stock of subsidiaries. We must also meet certain financial covenants to include: (i) a maximum total leverage ratio; (ii) a maximum first-lien leverage ratio; and (iii) a minimum interest coverage ratio. In conjunction with the 2018 Credit Agreement, we entered into a security agreement in favor of Bank of America N.A, as collateral agent (the “Security Agreement”). Under the Security Agreement and 2018 Credit Agreement, certain of our domestic subsidiaries have guaranteed our obligations, and have pledged substantially all of our assets to secure the obligations under the 2018 Credit Agreement and such guarantees.

During the year ended December 31, 2020, we made \$10.3 million of principal repayments on our 2018 Credit Agreement. As of December 31, 2020, our interest rate on the 2018 Term Loan is 1.75% (adjusted LIBOR plus 1.50% per annum), effective through March 31, 2021, and our commitment fee on the 2018 Revolver is 0.20%. As of December 31, 2020, we had no borrowings outstanding on our 2018 Revolver and had the entire \$200 million available to us.

In conjunction with the closing of the 2018 Credit Agreement, we incurred financing costs of \$1.5 million. When combined with the remaining deferred financing costs of the 2015 Credit Agreement, financing costs of \$2.8 million have been deferred and are being amortized to interest expense using the effective interest method over the related term of the 2018 Credit Agreement. Additionally, as certain lenders from the 2015 Credit Agreement chose not to participate in the 2018 Credit Agreement syndication group, we wrote-off \$0.8 million of unamortized debt issuance costs and recognized a loss on extinguishment of that debt.

2016 Convertible Notes. In March 2016, we completed an offering of \$230 million of 4.25% senior convertible notes due March 15, 2036 (the “2016 Convertible Notes”) to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended. The 2016 Convertible Notes are unsecured obligations and pay 4.25% annual cash interest, payable semiannually in arrears on March 15 and September 15 of each year.

The 2016 Convertible Notes will be convertible at the option of the note holders upon the satisfaction of specified conditions and during certain periods. During the period from, and including, December 15, 2021 to the close of business on the business day immediately preceding March 15, 2022 and on or after December 15, 2035, holders may convert all or any portion of their 2016 Convertible Notes at the conversion rate then in effect at any time regardless of these conditions. For the 2016 Convertible Notes presented during this time frame, the settlement amount will be equal to the sum of the daily settlement amounts for each of the following 40 consecutive trading days during the related observation period.

Under the terms of the 2016 Convertible Notes, we will adjust the conversion rate for any quarterly dividends exceeding \$0.185 per share. As of December 31, 2020, the conversion rate was 17.6656 shares of our common stock per \$1,000 principal amount of the 2016 Convertible Notes, which is equivalent to an initial conversion price of \$56.61 per share of our common stock. As of December 31, 2010, none of the conversion features have been achieved, and thus, the 2016 Convertible Notes are not convertible by the holders.

We will settle conversions of the 2016 Convertible Notes by paying or delivering, as the case may be, cash, shares of our common stock, or a combination thereof, at our election. It is our current intent and policy to settle our conversion obligations as follows: (i) pay cash for 100% of the par value of the 2016 Convertible Notes that are converted; and (ii) to the extent the value of our conversion obligation exceeds the par value, we can satisfy the remaining conversion obligation in our common stock, cash, or a combination thereof. As of December 31, 2020, the value of our conversion obligation did not exceed the par value of the 2016 Convertible Notes.

Holders may require us to repurchase the 2016 Convertible Notes for cash on each of March 15, 2022, March 15, 2026, and March 15, 2031, or upon the occurrence of a fundamental change (as defined in the 2016 Convertible Notes Indenture (the “2016 Notes Indenture”)) in each case at a purchase price equal to the principal amount thereof plus accrued and unpaid interest.

We may not redeem the 2016 Convertible Notes prior to March 20, 2020. On or after March 20, 2020, we may redeem for cash all or part of the 2016 Convertible Notes if the last reported sale price of our common stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period (including the last trading day of such period) ending on, and including, the trading day immediately preceding the date on which we provide notice of redemption. On or after March 15, 2022, we may redeem for cash all or part of the 2016 Convertible Notes regardless of the sales price condition described in the preceding sentence. In each case, the redemption price will equal the principal amount of the 2016 Convertible Notes to be redeemed, plus accrued and unpaid interest.

The 2016 Notes Indenture includes customary terms and covenants, including certain events of default after which the 2016 Convertible Notes may be due and payable immediately. The 2016 Notes Indenture contains customary affirmative covenants, including compliance with terms of certain other indebtedness of the Company over a defined threshold amount.

The remaining original issue discount (“OID”) related to the 2016 Convertible Notes is being amortized to interest expense through December 15, 2021, the first date the 2016 Convertible Notes can be put back to us by the holders.

Estimated Maturities on Long-Term Debt.

As of December 31, 2020, the maturities of our long-term debt, based upon: (i) the mandatory repayment schedule for the 2018 Term Loan; and (ii) the first initial settlement date of the 2016 Convertible Notes, was as follows (in thousands):

	2021	2022	2023	Total
2018 Term Loan	\$ 14,062	\$ 15,000	\$ 97,500	\$ 126,562
2016 Convertible Notes	—	230,000	—	230,000
Total long-term debt repayments	<u>\$ 14,062</u>	<u>\$ 245,000</u>	<u>\$ 97,500</u>	<u>\$ 356,562</u>

Deferred Financing Costs. As of December 31, 2020, net deferred financing costs related to the 2018 Credit Agreement were \$1.2 million and are being amortized to interest expense over the related term of the 2018 Credit Agreement (through March 2023). As of December 31, 2020, net deferred financing costs related to the 2016 Convertible Notes were \$1.2 million, and are being amortized to interest expense through December 15, 2021, the first date the 2016 Convertible Notes can be put back to us by the holders. The net deferred financing costs are presented as a reduction from the carrying amount of the corresponding debt liability in our Balance Sheets. Interest expense for 2020, 2019, and 2018 includes amortization of deferred financing costs of \$1.9 million, \$1.8 million, and \$1.9 million, respectively. The weighted-average interest rate on our debt borrowings, including amortization of OID, amortization of deferred financing costs, and commitment fees on the revolving loan facility, for 2020, 2019, and 2018, was approximately 5%, 6%, and 5%, respectively.

6. Leases

We have operating leases for: (i) real estate which include both office space and statement production and mailing facilities; (ii) our outsourced data center environment, as discussed further in Note 11; and (iii) operating equipment. Our leases have remaining terms of up to ten years, some of which include options to extend the leases for up to an additional ten years. For leases commencing prior to 2019, we used the noncancelable term to calculate the related right-of-use asset and corresponding lease liability. The exercise of lease renewal options is at our sole discretion. Additionally, certain of our leases include payments that are adjusted periodically for inflation.

We have made an accounting policy election not to recognize on our balance sheet, leases with an initial term of twelve months or less, for any class of underlying asset. We have also made an election for real estate leases beginning in 2019 and later, not to separate the lease and non-lease components, but rather account for the entire arrangement as a single lease component (a practical expedient allowed under ASC 842). For our outsourced data center environment agreement, we have concluded that there are lease and non-lease components, and have allocated the consideration in the agreement on a relative stand-alone price basis. Due to the significant assumptions and judgements required in accounting for leases (to include whether a contract contains a lease, the allocation of the consideration, and the determination of the discount rate), the judgements and estimates made could have a significant effect on the amount of assets and liabilities recognized.

We sublease certain of our leased real estate to third parties. These subleases have remaining lease terms of up to three years and certain subleases have renewal terms that can extend the lease for up to an additional two years.

The components of lease expense were as follows (in thousands):

	<u>2020</u>	<u>2019</u>
Operating lease expense	\$ 26,360	\$ 24,670
Variable lease expense	4,518	4,647
Short-term lease expense	625	583
Sublease income	(2,066)	(1,710)
Total net lease expense	<u>\$ 29,437</u>	<u>\$ 28,190</u>

Other information related to leases was as follows (in thousands, except term and discount rate):

	<u>2020</u>	<u>2019</u>
Supplemental Cash Flows Information:		
Cash paid for amounts included in the measurement of operating lease liabilities	\$ 21,130	\$ 24,006
Right-of-use assets obtained in exchange for new operating lease liabilities	37,987	33,782
Weighted-average remaining lease term - operating leases	69 months	59 months
Weighted-average discount rate - operating leases	3.62%	4.32%

Future minimum lease payments under non-cancelable leases as of December 31, 2020 were as follows (in thousands):

2021	\$	26,013
2022		25,037
2023		23,022
2024		21,827
2025		16,028
Thereafter		19,292
Total future minimum lease payments (1)		<u>131,219</u>
Less: Interest (2)		<u>(12,642)</u>
Total	\$	<u><u>118,577</u></u>
Current operating lease liabilities	\$	22,651
Non-current operating lease liabilities		95,926
Total	\$	<u><u>118,577</u></u>

- (1) For leases commencing prior to 2019, minimum lease payments exclude payments for real estate taxes and non-lease components.
- (2) We use our functional currency adjusted incremental borrowing rate for the discount rate.

Total lease expense for 2018 was \$19.0 million.

7. Acquisitions

Forte Payment Systems, Inc. On October 1, 2018, we acquired Forte for a purchase price of approximately \$93 million (approximately \$85 million, excluding cash acquired), of which approximately \$13 million of the purchase price was initially held back subject to certain tax filings, and then paid in July 2019. Forte was a leading provider of advanced payment solutions. The acquisition accelerated our ability to offer a comprehensive suite of next generation payment solutions that enables service providers to provide a differentiated customer experience while also strengthening our position in the revenue management and payment sector and allowed us to grow our footprint into new verticals. The purchase agreement also includes provisions for \$18.8 million of potential future earn-out payments over a four-year measurement period. In December 2020, CSG amended the term of the earn-out provisions to extend the measurement period an additional year through September 30, 2023. The earn-out payments are tied to performance-based goals and a defined service period by the eligible recipients and is being accounted for as post-acquisition compensation. No changes were made to the performance-based goals as a result of the extension. As of December 31, 2020, we have accrued \$2.4 million related to the potential earn-out payments.

Tekzenit, Inc. On January 2, 2020, we acquired Tekzenit Inc. (“Tekzenit”) for a purchase price of approximately \$10 million. This acquisition will allow us to accelerate our go-to-market approach serving customers who are focused on improving their customers’ experience while transforming their business. The purchase agreement includes provisions for additional purchase price (“Provisional Purchase Price”) payments in the form of earn-out and qualified sales payments for up to \$10 million over a three-year measurement period upon meeting certain financial and sales criteria. Of the Provisional Purchase Price amount, \$6 million is considered contingent purchase price payments, of which \$1.5 million was accrued upon acquisition. The remaining \$4 million is tied to certain financial and sales criteria over a defined service period by the eligible recipients and is therefore accounted for as post-acquisition compensation. As of December 31, 2020, we have not accrued any amounts related to the post-acquisition compensation payments due to the uncertainty of payment.

As of December 31, 2020, the purchase accounting for the Tekzenit acquisition was complete. We recorded goodwill of \$9.1 million and acquired customer contracts of \$2.9 million and liabilities assumed primarily include the contingent purchase price liabilities of \$1.5 million.

8. Restructuring and Reorganization Charges

Restructuring and reorganization charges are expenses that generally result from cost reduction initiatives and/or significant changes to our business, to include such things as involuntary employee terminations, changes in management structure or skillset, divestitures of businesses, facility consolidations and abandonments, impairment of acquired intangible assets, and fundamental reorganizations impacting operational focus and direction. The following are the key restructuring and reorganizational activities we incurred over the last three years that have impacted our results from operations:

During 2020 we implemented the following restructuring activities:

- We reduced our workforce by approximately 80 employees, primarily in North America, as a result of organizational changes and efficiencies. As a result, we incurred restructuring charges related to involuntary terminations of \$4.2 million

During 2019 we implemented the following restructuring activities:

- We reduced our workforce by approximately 70 employees, primarily in North America, as a result of organizational changes and efficiencies. As a result, we incurred restructuring charges related to involuntary terminations of \$2.5 million.

During 2018 we implemented the following restructuring activities:

- We reduced our workforce by approximately 170 employees as a result of organizational changes made to pursue global opportunities and efficiencies. As a result, we incurred restructuring charges related to involuntary terminations of \$6.2 million.
- We closed one of our print facilities. As a result, we incurred restructuring charges related to involuntary terminations and impairment of assets of \$2.7 million.
- We reversed a liability related to a previous disposition of a business resulting in a reduction in restructuring charges of \$2.3 million.

The activities discussed above resulted in total charges for 2020, 2019, and 2018 of \$5.3 million, \$4.8 million, and \$8.7 million, respectively, which have been reflected as a separate line item in our Income Statements.

The activity in the business restructuring and reorganization reserves during 2020, 2019, and 2018 is as follows (in thousands):

	Termination Benefits	Facilities Abandonment	Disposition of Business Operations	Other	Total
January 1, 2018, balance	\$ 1,116	\$ 3,032	\$ —	\$ —	\$ 4,148
Charged to expense during period	6,555	1,981	(2,330)	2,455	8,661
Cash payments	(6,744)	(2,625)	—	—	(9,369)
Adjustment for asset impairment	—	—	—	(1,851)	(1,851)
Other	475	546	2,330	(604)	2,747
December 31, 2018, balance	1,402	2,934	—	—	4,336
Charged to expense during period	2,499	—	—	2,335	4,834
Cash payments	(3,551)	—	—	(1,987)	(5,538)
Adjustment for asset impairment	—	—	—	(438)	(438)
Adjustment for adoption of ASC 842 (1)	—	(2,934)	—	—	(2,934)
Other	472	—	—	90	562
December 31, 2019, balance	822	—	—	—	822
Charged to expense during period	4,152	—	—	1,176	5,328
Cash payments	(4,042)	—	—	(504)	(4,546)
Adjustment for asset impairment	—	—	—	(672)	(672)
Other	1	—	—	—	1
December 31, 2020, balance	<u>\$ 933</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 933</u>

- (1) With the adoption of ASC 842 on January 1, 2019, the facilities abandonment liabilities of \$2.9 million were offset against our initial lease right-of-use assets on our Balance Sheet.

As of December 31, 2020, \$0.9 million of the business restructuring and reorganization reserves were included in current liabilities.

9. Income Taxes

Income Tax Provision. The components of net income before income taxes are as follows (in thousands):

	2020	2019	2018
Domestic	\$ 77,721	\$ 93,510	\$ 80,234
India	6,245	4,769	2,173
Foreign Other	1,390	7,444	4,580
Total	<u>\$ 85,356</u>	<u>\$ 105,723</u>	<u>\$ 86,987</u>

The income tax provision consists of the following (in thousands):

	2020	2019	2018
Current:			
Federal	\$ 17,760	\$ 16,616	\$ 7,814
State	5,373	2,910	4,589
India	1,788	1,004	757
Foreign Other	2,990	2,515	2,784
	<u>27,911</u>	<u>23,045</u>	<u>15,944</u>
Deferred:			
Federal	(497)	(1,943)	4,584
State	(1,031)	624	(619)
India	(387)	36	(152)
Foreign Other	649	1,191	1,100
	<u>(1,266)</u>	<u>(92)</u>	<u>4,913</u>
Total income tax provision	<u>\$ 26,645</u>	<u>\$ 22,953</u>	<u>\$ 20,857</u>

The effective tax rate in India of 22.4%, 21.8% and 27.8% in 2020, 2019 and 2018 respectively, differs from the statutory rate of approximately 29% due primarily to certain operations occurring within a Special Economic Zone (“SEZ”). Under the terms of SEZ, CSG qualifies for a reduced income tax rate on operations within the SEZ for a period of up to 10 years, beginning in 2018.

The difference between our income tax provision computed at the statutory Federal income tax rate and our financial statement income tax is summarized as follows (in thousands):

	2020	2019	2018
Provision at Federal rate of 21%	\$ 17,925	\$ 22,202	\$ 18,267
State income taxes, net of Federal impact	3,430	2,792	2,985
Research and experimentation credits	(2,705)	(3,314)	(4,040)
Stock award vesting	(540)	(3,661)	(1,513)
Tax uncertainties	(403)	(56)	(122)
Section 199 manufacturing deduction	—	—	168
Section 162(m) compensation limitation	4,494	978	951
Foreign rate differential	462	930	1,238
Valuation allowance for deferred tax assets	1,002	(495)	(177)
Withholding Tax	2,572	2,408	2,070
Other impact of foreign operations	621	227	685
Statutory rate change	71	(10)	(87)
Other	(284)	952	432
Total income tax provision	<u>\$ 26,645</u>	<u>\$ 22,953</u>	<u>\$ 20,857</u>

We have undistributed earnings of approximately \$52 million from certain foreign subsidiaries. We intend to indefinitely reinvest these foreign earnings, therefore, a provision has not been made for foreign withholding taxes that might be payable upon remittance of such earnings. Determination of the amount of unrecognized deferred tax liability on unremitted foreign earnings is not practicable because of the complexities of the hypothetical calculation.

Deferred Income Taxes. Net deferred income tax assets as of December 31, 2020 and 2019 are as follows (in thousands):

	2020	2019
Deferred income tax assets	\$ 59,895	\$ 71,343
Deferred income tax liabilities	(33,099)	(48,411)
Valuation allowance	(21,700)	(19,916)
Net deferred income tax assets	<u>\$ 5,096</u>	<u>\$ 3,016</u>

The components of our net deferred income tax assets (liabilities) as of December 31, 2020 and 2019 are as follows (in thousands):

	2020	2019
Net deferred income tax assets:		
Accrued expenses and reserves	\$ 12,587	\$ 8,810
Stock-based compensation	3,285	4,844
Software	(1,532)	(1,556)
Client contracts and related intangibles	(5,199)	(7,771)
Goodwill	(9,109)	(7,431)
Net operating loss carryforwards	26,893	25,989
Property and equipment	(8,816)	(4,410)
Deferred revenue	4,020	1,307
State Taxes	1,804	1,387
Contingent payments	(1,017)	(1,710)
Foreign exchange gain/loss	1,406	1,340
Operating lease right-of-use assets and lease liabilities	1,962	1,611
Other	512	522
Total deferred income tax assets	26,796	22,932
Less: valuation allowance	(21,700)	\$ (19,916)
Net deferred income tax assets	<u>\$ 5,096</u>	<u>\$ 3,016</u>

We regularly assess the likelihood of the future realization of our deferred income tax assets. To the extent we believe that it is more likely than not that a deferred income tax asset will not be realized, a valuation allowance is established. As of December 31, 2020, we believe we will generate sufficient taxable income in the future such that we will realize 100% of the benefit of our U.S. Federal deferred income tax assets, thus no valuation allowance has been established. As of December 31, 2020, we have deferred income tax assets net of federal benefit related to state and foreign income tax jurisdictions of \$4.0 million and \$29.7 million, respectively, and have established valuation allowances against those state and foreign income tax deferred income tax assets of \$2.1 million and \$19.6 million, respectively.

As of December 31, 2020 and 2019, we have an acquired U.S. Federal net operating loss (“NOL”) carryforward of approximately \$24 million and \$29 million, respectively, which will begin to expire in 2024 and can be utilized through 2030. The acquired U.S. Federal NOL carryforward is attributable to the pre-acquisition periods of acquired businesses. The annual utilization of this U.S. Federal NOL carryforward is limited pursuant to Section 382 of the Internal Revenue Code of 1986, as amended. In addition, as of December 31, 2020 and 2019, we have: (i) state NOL carryforwards of approximately \$49 million and \$51 million, respectively, which will expire beginning in 2021 and end in 2045; and (ii) foreign subsidiary NOL carryforwards of approximately \$107 million and \$96 million, respectively, which will expire beginning in 2034, with a portion of the losses available over an indefinite period of time.

Accounting for Uncertainty in Income Taxes. We are required to estimate our income tax liability in each jurisdiction in which we operate, including U.S. Federal, state, and foreign income tax jurisdictions. Various judgments and estimates are required in evaluating our tax positions and determining our provisions for income taxes. There are certain transactions and calculations for which the ultimate income tax determination may be uncertain. In addition, we may be subject to examination of our income tax returns by various foreign, federal, state, or local tax authorities, which could result in adverse outcomes. For these reasons, we establish a liability associated with unrecognized tax benefits based on estimates of whether additional taxes and interest may be due. This liability is adjusted based upon changing facts and circumstances, such as the closing of a tax audit, the expiration of a statute of limitations or the refinement of an estimate.

A reconciliation of the beginning and ending balances of our liability for unrecognized tax benefits is as follows (in thousands):

	2020	2019	2018
Balance, beginning of year	\$ 1,540	\$ 1,668	\$ 1,915
Purchase accounting adjustment related to acquisitions	160	—	—
Lapse of statute of limitations	(313)	(420)	(226)
Additions for tax positions of prior years	111	322	85
Reductions for tax positions of prior years	(105)	(30)	(106)
Balance, end of year	<u>\$ 1,393</u>	<u>\$ 1,540</u>	<u>\$ 1,668</u>

We recognize interest and penalty expense associated with our liability for unrecognized tax benefits as a component of income tax expense in our Income Statements. In addition to the \$1.4 million, \$1.5 million, and \$1.7 million of liability for unrecognized tax benefits as of December 31, 2020, 2019, and 2018, we had \$0.6 million, for each period, of income tax-related accrued interest, net of any federal benefit of deduction. If recognized, the \$1.4 million of unrecognized tax benefits as of December 31, 2020, would favorably impact our effective tax rate in future periods.

We file income tax returns in the U.S. Federal jurisdiction, various U.S. state and local jurisdictions, and many foreign jurisdictions. The U.S., U.K., India, and Australia are the primary taxing jurisdictions in which we operate. The years open for audit vary depending on the taxing jurisdiction. We estimate that it is reasonably possible that the amount of gross unrecognized tax benefits will decrease by up to \$0.3 million over the next twelve months due to completion of audits and the expiration of statute of limitations.

10. Employee Retirement Benefit Plans

We sponsor a defined contribution plan covering substantially all of our U.S.-based employees. Participants may contribute up to 100% of their eligible pay, subject to certain limitations, as pretax, salary deferral contributions. We make certain matching, and at our discretion, non-elective employer contributions to the plan. All contributions are subject to certain IRS limitations. The expense related to these contributions for 2020, 2019, and 2018 was \$12.1 million, \$11.3 million, and \$12.8 million, respectively. We also have defined contribution-type plans for certain of our non-U.S.-based employees. The total contributions made to these plans in 2020, 2019, and 2018 were \$4.8 million, \$4.1 million, and \$4.5 million, respectively.

11. Commitments, Guarantees and Contingencies

Service Agreements. We have an agreement with Ensono, Inc. (“Ensono”) to provide us outsourced computing services through September 30, 2025. We outsource the computer processing and related services required for the operation of our ACP solutions. Our ACP proprietary software and other software applications are run in an outsourced data center environment in order to obtain the necessary computer processing capacity and other computer support services without us having to make the substantial capital and infrastructure investments that would be necessary for us to provide these services internally. Our customers are connected to the outsourced data center environment through a combination of private and commercially provided networks. Our ACP cloud-based solutions are generally considered to be mission critical customer management systems by our customers. As a result, we are highly dependent upon Ensono for system availability, security, and response time.

Guarantees. In the ordinary course of business, we may provide guarantees in the form of bid bonds, performance bonds, or standby letters of credit. At December 31, 2020, we had \$3.7 million of restricted assets used to collateralize these guarantees, with \$1.7 million included in cash and cash equivalents and \$2.0 million included in other non-current assets. We have bid bonds and performance guarantees in form of surety bonds issued through a third-party of \$1.5 million that were not required to be recorded on our Consolidated Balance Sheet. We are ultimately liable for claims that may occur against these guarantees. We have no history of material claims or are aware of circumstances that would require us to pay under any of these arrangements. We also believe that the resolution of any claim that may arise in the future, either individually or in the aggregate, would not be material to our Financial Statements.

Additionally, we have money transmitter bonds issued through a third-party for the benefit of various states to comply with the states’ financial requirements and industry regulations for money transmitter licenses. At December 31, 2020, we had total aggregate money transmitter bonds of approximately \$14 million outstanding.

Warranties. We generally warrant that our solutions and related offerings will conform to published specifications, or to specifications provided in an individual customer arrangement, as applicable. The typical warranty period is 90 days from delivery of the solution or offering. For certain service offerings we provide a limited warranty for the duration of the services provided. We generally warrant that services will be performed in a professional and workmanlike manner. The typical remedy for breach of warranty is to correct or replace any defective deliverable, and if not possible or practical, we will accept the return of the defective deliverable and refund the amount paid under the customer arrangement that is allocable to the defective deliverable. Our contracts also generally contain limitation of damages provisions in an effort to reduce our exposure to monetary damages arising from breach of warranty claims. Historically, we have incurred minimal warranty costs, and as a result, do not maintain a warranty reserve.

Solution and Services Indemnifications. Our arrangements with our customers generally include an indemnification provision that will indemnify and defend a customer in actions brought against the customer that claim our products and/or services infringe upon a copyright, trade secret, or valid patent. Historically, we have not incurred any significant costs related to such indemnification claims, and as a result, do not maintain a reserve for such exposure.

Claims for Company Non-performance. Our arrangements with our customers typically limit our liability for breach to a specified amount of the direct damages incurred by the customer resulting from the breach. From time-to-time, these arrangements may also include provisions for possible liquidated damages or other financial remedies for our non-performance, or in the case of certain of our outsourced customer care and billing solutions, provisions for damages related to service level performance requirements. The service level performance requirements typically relate to system availability and timeliness of service delivery. As of December 31, 2020, we believe we have adequate reserves, based on our historical experience, to cover any reasonably anticipated exposure as a result of our nonperformance for any past or current arrangements with our customers.

Indemnifications Related to Officers and the Board of Directors. We have agreed to indemnify members of our Board of Directors (the “Board”) and certain of our officers if they are named or threatened to be named as a party to any proceeding by reason of the fact that they acted in such capacity. We maintain directors’ and officers’ (“D&O”) insurance coverage to protect against such losses. We have not historically incurred any losses related to these types of indemnifications and are not aware of any pending or threatened actions or claims against any officer or member of our Board. As a result, we have not recorded any liabilities related to such indemnifications as of December 31, 2020. In addition, as a result of the insurance policy coverage, we believe these indemnification agreements are not significant to our results of operations.

Legal Proceedings. From time-to-time, we are involved in litigation relating to claims arising out of our operations in the normal course of business.

12. Stockholders’ Equity

Stock Repurchase Program. We currently have a stock repurchase program, approved by our Board, authorizing us to repurchase shares of our common stock from time-to-time as market and business conditions warrant (the “Stock Repurchase Program”). During 2020, 2019, and 2018, we repurchased 624,000 shares of our common stock for \$26.3 million (weighted-average price of \$42.13 per share), 576,000 shares of our common stock for \$25.5 million (weighted-average price of \$44.17 per share), and 704,000 shares of our common stock for \$27.6 million (weighted-average price of \$39.23 per share), respectively, under a Securities and Exchange Commission (“SEC”) Rule 10b5-1 Plan.

As of December 31, 2020, the remaining number of shares available for repurchase under the Stock Repurchase Program totaled 4.3 million shares.

Stock Repurchases for Tax Withholdings. In addition to the above-mentioned stock repurchases, during 2020, 2019, and 2018, we repurchased and then cancelled approximately 254,000 shares, 117,000 shares, and 159,000 shares for \$11.9 million, \$5.1 million, and \$7.4 million, respectively, of common stock from our employees in connection with minimum tax withholding requirements resulting from the vesting of restricted stock under our stock incentive plans.

Cash Dividend. During 2020, 2019, and 2018 our Board approved total cash dividends of \$0.94 per share, \$0.89 per share, and \$0.84 per share of common stock, totaling \$30.9 million, \$29.4 million, and \$28.1 million, respectively.

Warrants. In 2014, in conjunction with the execution of an amendment to our current agreement with Comcast Corporation (“Comcast), we issued stock warrants (the “Warrant Agreement”) for the right to purchase up to 2.9 million shares of our common stock (the “Stock Warrants”) as an additional incentive for Comcast to convert customer accounts onto our ACP cloud-based solutions based on various milestones. The Stock Warrants have a ten-year term and an exercise price of \$26.68 per warrant.

Of the total Stock Warrants issued, 1.9 million Stock Warrants have vested and been exercised. Comcast exercised their remaining 0.4 million vested Stock Warrants in December 2019, which we net cash settled under the provision of the Warrant Agreement. The fair value of the Stock Warrants were \$24.6 million (weighted-average price of \$56.12 per share), resulting in a net cash settlement of \$12.9 million. The difference between the net cash settlement and the \$9.1 million carrying value of the Stock Warrants was recorded as an adjustment to additional paid-in capital.

As of December 31, 2020, 1.0 million Stock Warrants remain issued, none of which were vested. The remaining unvested Stock Warrants will be accounted for as a customer contract cost asset once the performance conditions necessary for vesting are considered probable.

Once vested, Comcast may exercise the Stock Warrants and elect either physical delivery of common shares or net share settlement (cashless exercise). Alternatively, the exercise of the Stock Warrants may be settled with cash based solely on our approval, or if Comcast were to beneficially own or control in excess of 19.99% of the common stock or voting of the Company.

13. Equity Compensation Plans

Stock Incentive Plan. In May 2020, our stockholders approved an increase of 3.6 million shares authorized for issuances under the Amended and Restated 2005 Stock Incentive Plan (the “2005 Plan”), from 21.4 million shares to 25.0 million shares. Shares reserved under the 2005 Plan can be granted to officers and other key employees of our company and its subsidiaries and to non-employee directors of our company in the form of stock options, stock appreciation rights, performance unit awards, restricted stock awards, or stock bonus awards. Shares granted under the 2005 Plan in the form of a performance unit award, restricted stock award, or stock bonus award are counted toward the aggregate number of shares of common stock available for issuance under the 2005 Plan as two shares for every one share granted or issued in payment of such award. As of December 31, 2020, 5.8 million shares were available for issuance, with 5.5 million shares available for grant.

Restricted Stock. We generally issue new shares (versus treasury shares) to fulfill restricted stock award grants. Restricted stock awards are granted at no cost to the recipient. Historically, our restricted stock awards have vested annually primarily over two to four years with no restrictions other than the passage of time (i.e., the shares are released upon calendar vesting with no further restrictions) (or “Time-Based Awards”). Unvested Time-Based Awards are typically forfeited and cancelled upon termination of employment with our company. Certain Time-Based Awards become fully vested (i.e., vesting accelerates) upon a change in control, as defined, and the subsequent involuntary termination of employment, or death. The fair value of the Time-Based Awards (determined by using the closing market price of our common stock on the grant date) is charged to expense on a straight-line basis over the requisite service period for the entire award.

We also issue restricted stock shares to key members of management that vest upon meeting pre-established financial performance objectives (“Performance-Based Awards”). The structure of the performance goals for the Performance-Based Awards has been approved by our stockholders. Certain Performance-Based Awards become fully vested (i.e., vesting accelerates) upon a change in control, as defined, and the subsequent involuntary termination of employment. The fair value of the Performance-Based Awards (determined by using the closing market price of our common stock on the grant date) is charged to expense on a straight-line basis over a two-year performance period.

During 2020, market-based awards for 0.1 million restricted common stock shares were granted to certain members of executive management which vest upon meeting pre-established share price targets over a four-year period (“Market-Based Awards”). The Market-Based Awards become fully vested upon a change in control, as defined, and the subsequent involuntary termination of employment. The fair value of the Market-Based Awards (determined using a Monte Carlo valuation method), is charged to expense over the estimated service period for each separately vesting portion of the award as if the award is, in-substance, multiple awards.

A summary of our unvested restricted stock activity during 2020 is as follows (shares in thousands):

	2020	
	Shares	Weighted-Average Grant Date Fair Value
Unvested awards, beginning	1,117	\$ 42.60
Awards granted	695	40.86
Awards forfeited/cancelled	(64)	40.53
Awards vested	(707)	43.15
Unvested awards, ending	1,041	\$ 41.31

The weighted-average grant date fair value per share of restricted stock shares granted during 2020, 2019, and 2018 was \$40.86, \$41.69, and \$45.57, respectively. The total market value of restricted stock shares vesting during 2020, 2019, and 2018 was \$32.8 million, \$17.0 million, and \$22.7 million, respectively.

1996 Employee Stock Purchase Plan. As of December 31, 2020, we have an employee stock purchase plan whereby 1.7 million shares of our common stock have been reserved for sale to our U.S. employees through payroll deductions. The price for shares purchased under the plan is 85% of market value on the last day of the purchase period. Purchases are made at the end of each month. During 2020, 2019, and 2018, 68,552 shares, 54,949 shares, and 68,902 shares, respectively, were purchased under the plan for \$2.5 million (\$32.20 to \$42.35 per share), \$2.3 million (\$30.76 to \$48.99 per share), and \$2.4 million (\$27.00 to \$39.68 per share), respectively. As of December 31, 2020, 153,708 shares remain eligible for purchase under the plan.

Stock-Based Compensation Expense. We recorded stock-based compensation expense of \$25.2 million, \$19.9 million, and \$19.4 million, respectively, for 2020, 2019, and 2018. As of December 31, 2020, there was \$26.8 million of total compensation cost related to unvested awards not yet recognized. This amount, excluding the impact of forfeitures, is expected to be recognized over a weighted-average period of 2.3 years.

We recorded a deferred income tax benefit related to stock-based compensation expense during 2020, 2019, and 2018, of \$5.8 million, \$4.3 million, and \$4.4 million, respectively. The actual income tax benefit realized for the tax deductions from the vesting of restricted stock for 2020, 2019, and 2018, totaled \$4.0 million, \$3.9 million, and \$5.3 million, respectively.

Modifications to Stock-Based Awards. In August 2020, we entered into a Separation Agreement (the "Separation Agreement"), with our then-current President and Chief Executive Officer ("CEO") which included a provision that accelerated the vesting of approximately 198,000 shares of unvested restricted stock on December 30, 2020. This modification resulted in a reversal of stock-based compensation expense in the third quarter of 2020 of \$2.7 million. The fair value of the modified award of \$8.4 million was recognized ratably from the date of modification through the resignation date, all of which was recognized in 2020.

14. Unaudited Quarterly Financial Data

	Quarter Ended			
	March 31	June 30	September 30	December 31
(in thousands, except per share amounts)				
2020:				
Total revenue (1)	\$ 245,617	\$ 240,321	\$ 244,108	\$ 260,487
Total cost of revenue (exclusive of depreciation)	131,206	138,153	131,073	135,165
Operating income (1)(2)(3)(4)	33,159	19,775	28,947	23,675
Income before income taxes (1)(2)(3)(4)	28,676	14,250	22,742	19,688
Income tax provision (5)	(7,162)	(3,884)	(9,176)	(6,423)
Net income (1)(2)(3)(4)(5)	21,514	10,366	13,566	13,265
Basic earnings per common share (1)(2)(3)(4)(5)	\$ 0.67	\$ 0.32	\$ 0.42	\$ 0.42
Diluted earnings per common share (1)(2)(3)(4)(5)	0.66	0.32	0.42	0.41
2019:				
Total revenue	\$ 244,793	\$ 245,856	\$ 251,414	\$ 254,747
Total cost of revenue (exclusive of depreciation)	128,963	132,234	132,054	131,871
Operating income (2)	32,093	30,338	33,420	30,258
Income before income taxes (2)	25,851	26,837	28,821	24,214
Income tax provision (5)	(6,600)	(7,458)	(7,262)	(1,633)
Net income (2)(5)	19,251	19,379	21,559	22,581
Basic earnings per common share (2)(5)	\$ 0.60	\$ 0.60	\$ 0.67	\$ 0.71
Diluted earnings per common share (2)(5)	0.59	0.60	0.66	0.70

(1) During the second quarter of 2020, we began to experience extended sales and implementation cycles and processing volume reductions resulting from the economic slowdown caused by the COVID-19 pandemic. However, we had sequential quarterly growth in both the third and fourth quarters of 2020 reflecting a stabilization of these sales and implementation cycles and a rebound in processing volumes.

(2) During the first, second, third, and fourth quarters of 2020 we incurred restructuring and reorganization charges of \$1.0 million, \$2.5 million, \$0.8 million, and \$1.0 million, respectively, or \$0.02, \$0.06, \$0.02, and \$0.02 per diluted share.

During the second, third, and fourth quarters of 2019 we incurred restructuring and reorganization charges of \$1.8 million, \$1.3 million, and \$1.6 million, respectively, or \$0.04, \$0.03, and \$0.04 per diluted share.

See Note 8 for further discussion of our restructuring and reorganization activities.

(3) During the second quarter of 2020 we wrote-off approximately \$10 million of deferred contract costs resulting from the discontinuance of a project implementation (see Note 4).

(4) During the third and fourth quarters of 2020, we incurred executive transition costs of \$1.8 and \$11.2 million, respectively, or \$0.03 and \$0.23 per diluted share, related to the planned departure of our then-current CEO under terms of his separation agreement. These costs relate to compensation, benefits, and other payments pursuant to the terms of his employment agreement and accelerated vesting of unvested restricted stock awards that were recognized over his remaining service term (see Note 13).

(5) Fluctuations in our effective income tax rate between quarters generally relates to the accounting for discrete income tax items in any given quarter, and revisions of estimates for certain income tax components during the year.

For 2020: Our effective income tax rates for the first, second, third, and fourth quarters were 25%, 27%, 40%, and 33%, respectively. The third and fourth quarter effective income tax rates were primarily impacted negatively by the disallowance of compensation relating to the executive transition costs.

For 2019: Our effective income tax rates for the first, second, third, and fourth quarters were 26%, 28%, 25%, and 7%, respectively. The fourth quarter effective income tax rate was positively impacted by an approximately \$4 million net income tax benefit we received as a result of Comcast's exercise of their remaining 0.4 million of vested common stock warrants (see Note 12).

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

As required by Rule 13a-15(b), our management, including the Chief Executive Officer (“CEO”) and Chief Financial Officer (“CFO”), conducted an evaluation as of the end of the period covered by this report of the effectiveness of our disclosure controls and procedures as defined in Rule 13a-15(e). Based on that evaluation, the CEO and CFO concluded that our disclosure controls and procedures were effective as of the end of the period covered by this report.

(b) Management’s Annual Report on Internal Control over Financial Reporting

As required by Rule 13a-15(d), our management, including the CEO and CFO, also conducted an evaluation of our internal control over financial reporting, as defined by Rule 13a-15(f). Management’s Report on Internal Control over Financial Reporting is located at the front of Part II, Item 8 of this report.

(c) Attestation Report of the Independent Registered Public Accounting Firm

Our independent registered public accounting firm issued an attestation report on the effectiveness of our internal control over financial reporting as of December 31, 2020. KPMG LLP’s report is located immediately following Management’s Report on Internal Control over Financial Reporting at the front of Part II, Item 8 of this report.

(d) Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Exchange Act Rules 13a-15 or 15d-15 that occurred during the fourth quarter of 2020 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

See the Proxy Statement for our 2021 Annual Meeting of Stockholders, from which information regarding directors is incorporated herein by reference. Information regarding our executive officers will be omitted from such proxy statement and is furnished in a separate item captioned “Executive Officers of the Registrant” included at the end of Part I of this Form 10-K.

Item 11. Executive Compensation

See the Proxy Statement for our 2021 Annual Meeting of Stockholders, from which information in response to this Item is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

See the Proxy Statement for our 2021 Annual Meeting of Stockholders, from which information required by this Item is incorporated herein by reference, with the exception of the equity compensation plan information which is presented in Item 5, “Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities,” and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

See the Proxy Statement for our 2021 Annual Meeting of Stockholders, from which information in response to this Item is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

See the Proxy Statement for our 2021 Annual Meeting of Stockholders, from which information in response to this Item is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Financial Statements, Financial Statement Schedules, and Exhibits:

(1) Financial Statements

The financial statements filed as part of this report are listed on the Index to Consolidated Financial Statements on page 39.

(2) Financial Statement Schedules:

None. Any information required in the Financial Statement Schedules is provided in sufficient detail in our Financial Statements and notes thereto.

(3) Exhibits

Exhibits are listed in the Exhibit Index on page 73.

The Exhibits include management contracts, compensatory plans and arrangements required to be filed as exhibits to the Form 10-K by Item 601 of Regulation S-K.

(b) Exhibits

The Exhibits filed or incorporated by reference herewith are as specified in the Exhibit Index.

Item 16. Form 10-K Summary

None.

EXHIBIT INDEX

Exhibit Number	Description
2.10 (10)	Implementation Agreement between CSG Systems International, Inc. and Intec
3.01 (1)	Restated Certificate of Incorporation of the Company (P)
3.02 (40)	Amended and Restated Bylaws of CSG Systems International, Inc.
3.03 (2)	Certificate of Amendment of Restated Certificate of Incorporation of CSG Systems International, Inc.
4.01 (1)	Form of Common Stock Certificate (P)
4.10 (38)	Indenture dated March 15, 2016, between CSG Systems International, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee
4.50 (49)	\$350 million Credit Agreement dated as of March 5, 2018, among CSG Systems International, Inc., as Borrower, the Subsidiary Guarantors Party hereto, Bank of America, N.A., as Administrative Agent, Collateral Agent, Swingline Lender and Issuing Bank, Wells Fargo Bank, National Association, as Syndication Agent, Compass Bank and HSBC Bank USA, National Association, as Co-Documentation Agents, the Lenders Party Hereto, and the Other Issuing Banks Party Hereto Merrill Lynch, Pierce, Fenner & Smith Incorporated and Wells Fargo Securities, LLC, as Joint Lead Arrangers and Joint Bookrunners
4.70 (30)	\$350,000,000 Second Amended and Restated Credit Agreement dated as of February 3, 2015, among CSG Systems International, Inc., as Borrower, The Guarantors Party Hereto, The Lenders Party Hereto, RBC Capital Markets, Wells Fargo Securities, LLC, HSBC Bank USA, National Association, BBVA, and Merrill Lynch, Pierce, Fenner & Smith Incorporated as Joint Lead Arrangers and Joint Bookmanagers; Wells Fargo Bank, National Association as Syndication Agent; HSBC Bank USA, National Association, BBVA Compass, and Bank of America, N.A. as Co-Documentation Agents; Royal Bank of Canada as Administrative Agent and Collateral Agent, and Royal Bank of Canada as Issuing Bank and Swingline Lender
4.90 (57)	Description of Capital Stock
10.02 (13)	Second Amended and Restated 1996 Employee Stock Purchase Plan, as adopted on May 17, 2011
10.04 (59)	CSG Systems International, Inc. Amended and Restated 2005 Stock Incentive Plan, as amended on May 21, 2020
10.05 (13)	CSG Systems International, Inc. Performance Bonus Program, as amended on August 14, 2007
10.06 (5)	CSG Systems International, Inc. 2001 Stock Incentive Plan, as amended August 14, 2007
10.15 (9)	Form of Indemnification Agreement between CSG Systems International, Inc. and Directors and Executive Officers
10.16 (4)	Indemnification Agreement between CSG Systems International, Inc. and Mr. Ronald Cooper, dated November 16, 2006
10.22* (21)	CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC
10.22A* (22)	First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC
10.22B* (23)	Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC
10.22C* (23)	Third Amendment to the Restated and Amended CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC

Exhibit Number	Description
10.22D* (23)	<u>Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22E* (24)	<u>Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22F* (24)	<u>Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22G* (24)	<u>Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22H* (25)	<u>CD Addendum to CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22I* (29)	<u>Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22J* (29)	<u>Tenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22K* (30)	<u>Eleventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22L* (30)	<u>Twelfth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22M* (30)	<u>Thirteenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22N* (31)	<u>Fourteenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22O* (31)	<u>Fifteenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22P* (32)	<u>Sixteenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22Q* (33)	<u>Seventeenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22R* (35)	<u>Eighteenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22S* (35)	<u>Nineteenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22T*(39)	<u>Nineteenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22U* (39)	<u>Twentieth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22V* (41)	<u>Twenty-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>

Exhibit Number	Description
10.22W* (41)	<u>Twenty-Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22X* (44)	<u>Twenty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22Y* (44)	<u>Common Stock Purchase Warrant between CSG Systems International, Inc. and Comcast Alpha Holdings, Inc., dated January 3, 2017</u>
10.22Z* (45)	<u>Twenty-Sixth Amendment to the CSG Master Subscriber Master Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AA* (46)	<u>Twenty-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AB* (46)	<u>Twenty-Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AC* (46)	<u>Twenty-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AD* (46)	<u>Twenty-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AE* (46)	<u>Thirtieth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AF* (46)	<u>Thirty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AG* (47)	<u>Thirty-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AH* (51)	<u>Thirty-third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AI* (51)	<u>Thirty-fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AJ* (52)	<u>Thirty-Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG System, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AK* (54)	<u>Thirty-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AL* (54)	<u>Thirty-Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AM* (54)	<u>Thirty-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AN* (55)	<u>Thirty-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AO* (55)	<u>Fortieth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AP* (56)	<u>Forty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>

Exhibit Number	Description
10.23* (8)	CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23A* (9)	Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23B* (11)	Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23C* (12)	Tenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23D* (14)	Eleventh Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23E* (14)	Twelfth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23F* (14)	Thirteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23G* (14)	Fourteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23H* (15)	Fifteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23I* (18)	Sixteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23J* (17)	Seventeenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23K* (17)	Eighteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23L* (16)	Nineteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23M* (17)	Twentieth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23N* (16)	Twenty-First Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23O* (18)	Twenty-Second Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23P* (18)	Twenty-Third Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23Q* (18)	Twenty-Fourth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23R* (19)	Twenty-Fifth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23S* (19)	Twenty-Sixth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.

Exhibit Number	Description
10.23T* (20)	<u>Twenty-Seventh Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23U* (20)	<u>Twenty-Eighth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23V* (20)	<u>Twenty-Ninth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23W* (20)	<u>Thirtieth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23X* (22)	<u>Thirty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23Y* (22)	<u>Thirty-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23Z* (22)	<u>Thirty-Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AA* (22)	<u>Thirty-Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AB* (23)	<u>Thirty-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AC* (23)	<u>Thirty-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AD* (24)	<u>Thirty-Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AE* (24)	<u>Thirty-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AF* (26)	<u>Fortieth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AG* (26)	<u>Forty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AH* (29)	<u>Forty-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AI* (29)	<u>Forty-Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AJ* (29)	<u>Forty-Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AK* (29)	<u>Forty-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AL* (29)	<u>Forty-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>

Exhibit Number	Description
10.23AM* (30)	<u>Forty-Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AN* (32)	<u>Forty-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AO* (33)	<u>Forty-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AP* (33)	<u>Fiftieth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AQ (39)	<u>Fifty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AR* (42)	<u>Fifty-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AS* (42)	<u>Fifty-Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AT* (42)	<u>Fifty-Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AU* (44)	<u>Fifty-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AV* (44)	<u>Fifty-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AW* (46)	<u>Fifty-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.</u>
10.23AX* (47)	<u>Sixtieth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network, L.L.C.</u>
10.23AY* (47)	<u>Sixty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network, L.L.C.</u>
10.23AZ* (48)	<u>Fifty-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network, L.L.C.</u>
10.23BA* (48)	<u>Sixty-Second Amendment to Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network, L.L.C.</u>
10.23BB* (48)	<u>Sixty-Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network, L.L.C.</u>
10.23BC* (52)	<u>Sixty-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG System, Inc. and DISH Network, L.L.C.</u>
10.23BD (53)	<u>Sixty-Fourth Amendment to Master Subscriber Management System Agreement between CSG System, Inc. and DISH Network, L.L.C.</u>
10.23BE (53)	<u>Sixty-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG System, Inc. and DISH Network, L.L.C.</u>
10.23BF (53)	<u>Sixty-Seventh Amendment to Master Subscriber Management System Agreement between CSG System, Inc. and DISH Network, L.L.C.</u>

Exhibit Number	Description
10.23BG (53)	<u>Sixty-Eighth Amendment to Master Subscriber Management System Agreement between CSG System, Inc. and DISH Network, L.L.C.</u>
10.23BH (53)	<u>Seventieth Amendment to Master Subscriber Management System Agreement between CSG System, Inc. and DISH Network, L.L.C.</u>
10.24* (7)	<u>CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable dated March 13, 2003</u>
10.24A* (7)	<u>ComTec Processing and Production Services Agreement</u>
10.24B* (7)	<u>Second Amendment to the Processing and Production Services Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24C* (11)	<u>Forty-Ninth Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24D* (14)	<u>Third Amendment to the Processing and Production Services Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24E* (14)	<u>Fifty-First Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24F* (14)	<u>Fifty-Third Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24G* (18)	<u>Fifty-Seventh Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24H* (18)	<u>Sixty-First Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24I* (19)	<u>Fifty-Sixth Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24J* (19)	<u>Sixty-Third Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24K* (19)	<u>Sixty-Fifth Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24L* (20)	<u>Forty-Eighth Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24M* (20)	<u>Fifty-Ninth Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24N* (20)	<u>Sixty-Seventh Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24O* (20)	<u>Sixty-Eighth Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24P (20)	<u>Second Amendment to Affiliate Addendum (Corporate National Sales Division)</u>
10.24P* (21)	<u>Sixtieth Amendment to the CSG Master Subscriber Management Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24Q (20)	<u>Fourth Amendment to Affiliate Addendum Carolina Region</u>

Exhibit Number	Description
10.24Q* (21)	<u>Seventieth Amendment to the CSG Master Subscriber Management Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24R (21)	<u>First Amendment to Affiliate Addendum Media Sales Division between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24S* (22)	<u>Sixty-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24T* (23)	<u>Seventy-Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24U* (23)	<u>Seventy-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24V* (24)	<u>Fifty-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24W* (24)	<u>Seventy-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24X* (24)	<u>Seventy-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24Y* (24)	<u>Seventy-Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24Z* (24)	<u>Eighty-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24AA* (26)	<u>Seventy-Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24AB* (26)	<u>Seventy-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24AC* (26)	<u>Seventy-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24AD* (27)	<u>Eighty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24AE* (27)	<u>Eighty-Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24AF* (27)	<u>Eighty-Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24AG* (27)	<u>Eighty-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24AH* (28)	<u>Amended and Restated Processing and Production Services Agreement entered into between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24AI* (29)	<u>Eighty-Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24AJ* (29)	<u>Eighty-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>

Exhibit Number	Description
10.24AK* (29)	Eighty-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AL* (29)	Ninetieth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AM* (29)	Ninety-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AN* (30)	Eighty-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AO* (30)	First Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Time Warner Cable Enterprises LLC
10.24AP* (31)	Ninety-Fifth Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AQ* (31)	Second Amendment to the Amended and Restated Processing and Production Services Agreement Between CSG Systems, Inc. and Time Warner Cable Enterprises LLC
10.24AR* (32)	Ninety-Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AS* (32)	Ninety-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AT* (33)	Third Amendment to the Amended and Restated Processing and Production Services Agreement between CSG Systems, Inc. and Time Warner Cable Enterprises LLC
10.24AU* (33)	Ninety-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AV* (33)	Ninety-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AW* (35)	Ninety-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AX* (35)	One Hundredth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AY* (35)	One Hundred First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AZ* (36)	One Hundred Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24BA* (39)	One Hundred Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24BB* (41)	One Hundred Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24BC* (41)	One Hundred Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24BD* (42)	One Hundred Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC

Exhibit Number	Description
10.24BE* (42)	<u>One Hundred Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24BF* (42)	<u>One Hundred Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BG* (44)	<u>One Hundred Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BH* (44)	<u>One Hundred Tenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BI* (44)	<u>One Hundred Twelfth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BJ* (45)	<u>One Hundred Eleventh Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BK* (45)	<u>One Hundred Fourteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BL* (45)	<u>One Hundred Fifteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BM* (45)	<u>One Hundred Sixteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BN (45)	<u>One Hundred Seventeenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BO* (46)	<u>One Hundred Eighteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BP* (46)	<u>One Hundred Nineteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BQ (46)	<u>One Hundred Twentieth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BR (46)	<u>One Hundred Twenty-First Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BS* (46)	<u>One Hundred Twenty-Second Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BT (46)	<u>One Hundred Twenty-Third Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BU* (46)	<u>One Hundred Twenty-Fourth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25* (41)	<u>Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25A* (41)	<u>First Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25B* (41)	<u>Second Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>

Exhibit Number	Description
10.25C* (41)	<u>Fourth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25D* (41)	<u>Fifth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25E* (41)	<u>Sixth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25F* (41)	<u>Seventh Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25G* (41)	<u>Eighth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25H* (41)	<u>Ninth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25I* (41)	<u>Tenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25J* (41)	<u>Eleventh Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25K* (41)	<u>Twelfth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25L* (41)	<u>Thirteenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25M* (41)	<u>Fourteenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25N* (41)	<u>Fifteenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25O (41)	<u>Sixteenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25P* (41)	<u>Seventeenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25Q* (41)	<u>Eighteenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25R* (41)	<u>Nineteenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25S* (41)	<u>Twentieth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25T* (41)	<u>Twenty-First Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25U* (41)	<u>Twenty-Second Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25V (41)	<u>Twenty-Third Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>

Exhibit Number	Description
10.25W* (41)	<u>Twenty-Fourth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25X* (41)	<u>Twenty-Fifth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25Y* (41)	<u>Twenty-Sixth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25Z* (41)	<u>Twenty-Seventh Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AA* (41)	<u>Twenty-Ninth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AB* (41)	<u>Thirtieth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AC* (41)	<u>Thirty-First Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AD* (41)	<u>Thirty-Second Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AE* (41)	<u>Thirty-Third Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AF* (41)	<u>Thirty-Fourth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AG* (41)	<u>Amended and Restated Thirty-Sixth Amendment to Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AH* (41)	<u>Thirty-Seventh Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AI* (41)	<u>Thirty-Eighth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AJ* (41)	<u>Thirty-Ninth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AK* (41)	<u>Fortieth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AL* (41)	<u>Forty-First Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AM* (41)	<u>Forty-Second Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AN* (41)	<u>Forty-Third Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AO* (41)	<u>Forty-Fourth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>

Exhibit Number	Description
10.25CD* (42)	Eighty-Ninth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CE* (42)	Ninety-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CF* (42)	Ninety-Second Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CG* (44)	Ninety-Third Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CH* (44)	Ninety-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Cable Holding Company, LLC
10.25CI* (45)	Ninety-Fourth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CJ* (45)	Ninety-Seventh Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CK* (45)	Ninety-Eighth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CL* (45)	Ninety-Ninth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CM* (45)	One Hundred First Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CN* (46)	One Hundredth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CO* (46)	One Hundred Second Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CP* (46)	One Hundred Fourth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CQ* (46)	One Hundred Sixth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CR* (46)	One Hundred Eighth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CS* (46)	One Hundred Ninth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CT* (47)	One Hundred Fifth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.26* (47)	Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26A* (47)	Second Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26B* (47)	Third Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC

Exhibit Number	Description
10.26C* (47)	Fourth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26D (48)	First Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26E* (48)	Fifth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26F* (48)	Sixth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26G* (48)	Eighth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26H* (48)	Ninth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26I (48)	Tenth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26J* (49)	Eleventh Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26K* (51)	Thirteenth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26L* (51)	Fifteenth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26M* (51)	Seventeenth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26N* (51)	Eighteenth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26O* (52)	Seventh Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26P* (52)	Twelfth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26Q* (52)	Fourteenth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26R* (52)	Nineteenth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26S* (54)	Twentieth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26T* (55)	Twenty-Second Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26U* (55)	Twenty-Fourth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26V* (55)	Twenty-Fifth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC

Exhibit Number	Description
10.26W* (55)	Twenty-Sixth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26X* (55)	Twenty-Seventh Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26Y* (55)	Twenty-Eighth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26Z* (56)	Twenty-Third Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AA* (56)	Thirty-First Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AB* (56)	Thirty-Second Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AC* (56)	Thirty-Third Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AD* (56)	Thirty-Fourth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AE* (57)	Thirty-Fifth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AF* (58)	Thirty-Seventh Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AG* (58)	Thirty-Eighth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AH* (60)	Twenty-First Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AI* (60)	Thirty-Ninth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AJ* (60)	Fortieth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AK* (62)	Forty-First Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AL* (62)	Forty-Second Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AM*	Forty-Fifth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AN*	Forty-Sixth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AO*	Forty-Seventh Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.27A* (57)	CD Addendum to CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC

Exhibit Number	Description
10.27B* (58)	First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC
10.27C*	Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC
10.39 (52)	CSG Systems, Inc. Wealth Accumulation Plan, as restated and amended effective December 6, 2017
10.39A (52)	Adoption Agreement to CSG Systems, Inc. Wealth Accumulation Plan, executed September 13, 2018
10.50 (3)	CSG Systems International, Inc. 2001 Stock Incentive Plan
10.51 (6)	Employment Agreement with Bret C. Griess, dated February 19, 2009
10.51A (34)	Amended and Restated Employment Agreement with Bret C. Griess, dated November 19, 2015
10.51B (43)	Amendment No. 1 to Amended and Restated Employment Agreement with Bret C. Griess, dated November 17, 2016
10.51C (61)	Separation Agreement with Bret C. Griess, dated August 26, 2020
10.51D	Amendment No. 1 to Separation Agreement with Bret C. Griess, dated December 31, 2020
10.52 (37)	Employment Agreement with Brian Shepherd, dated February 15, 2016
10.52A (43)	Amendment No. 1 to Employment Agreement with Brian Shepherd, dated November 17, 2016
10.52B	Amendment No. 2 to Employment Agreement with Brian A. Shepherd, dated November 8, 2017
10.53 (37)	Employment Agreement with Kenneth M. Kennedy, dated March 1, 2016
10.53A (43)	Amendment No. 1 to Employment Agreement with Kenneth Kennedy, dated November 17, 2016
10.53B	Amendment No. 2 to Employment Agreement with Kenneth M. Kennedy, dated November 8, 2017
10.53C	Amendment No. 3 to Employment Agreement with Kenneth Kennedy, dated January 1, 2021
10.54 (50)	Employment Agreement with Rolland B. Johns, dated May 17, 2018
10.55 (61)	Employment Agreement with Brian A. Shepherd, dated August 26, 2020
10.81 (62)	Forms of Agreement for Equity Compensation
10.82 (62)	Forms of Agreement for Equity Compensation
10.83	Forms of Agreement for Equity Compensation
10.85 (51)	Forms of Agreement for Equity Compensation
21.01	Subsidiaries of the Registrant
23.01	Consent of KPMG LLP
31.01	Certifications Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.02	Certifications Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.01	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Exhibit Number	Description
101.INS	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

- (1) Incorporated by reference to the exhibit of the same number to the Registration Statement No. 333-244 on Form S-1.
- (2) Incorporated by reference to the exhibit of the same number to the Registrant’s Quarterly Report on Form 10-Q for the period ended June 30, 1997.
- (3) Incorporated by reference to the exhibit of the same number to the Registrant’s Quarterly Report on Form 10-Q for the period ended June 30, 2002.
- (4) Incorporated by reference to the exhibit of the same number to the Registrant’s Current Report on Form 8-K for the event dated November 16, 2006.
- (5) Incorporated by reference to the exhibit of the same number to the Registrant’s Quarterly Report on Form 10-Q for the period ended September 30, 2007.
- (6) Incorporated by reference to the exhibit of the same number to the Registrant’s Current Report on Form 8-K for the event dated February 19, 2009.
- (7) Incorporated by reference to the exhibit of the same number to the Registrant’s Annual Report on Form 10-K/A for the year ended December 31, 2008, filed on September 8, 2009.
- (8) Incorporated by reference to the exhibit of the same number to the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2009.
- (9) Incorporated by reference to the exhibit of the same number to the Registrant’s Quarterly Report on Form 10-Q for the period ended March 31, 2010.
- (10) Incorporated by reference to the exhibit of the same number to the Registrant’s Quarterly Report on Form 10-Q for the period ended September 30, 2010.
- (11) Incorporated by reference to the exhibit of the same number to the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2010.
- (12) Incorporated by reference to the exhibit of the same number to the Registrant’s Quarterly Report on Form 10-Q for the period ended March 31, 2011.
- (13) Incorporated by reference to the exhibit of the same number to the Registrant’s Current Report on Form 8-K for the event dated May 17, 2011.
- (14) Incorporated by reference to the exhibit of the same number to the Registrant’s Quarterly Report on Form 10-Q for the period ended June 30, 2011.
- (15) Incorporated by reference to the exhibit of the same number to the Registrant’s Quarterly Report on Form 10-Q for the period ended September 30, 2011.
- (16) Incorporated by reference to the exhibit of the same number to the Registrant’s Quarterly Report on Form 10-Q for the period ended March 31, 2012.
- (17) Incorporated by reference to the exhibit of the same number to the Registrant’s Quarterly Report on Form 10-Q/A for the period ended March 31, 2012, filed on August 29, 2012.
- (18) Incorporated by reference to the exhibit of the same number to the Registrant’s Quarterly Report on Form 10-Q for the period ended June 30, 2012.
- (19) Incorporated by reference to the exhibit of the same number to the Registrant’s Quarterly Report on Form 10-Q for the period ended September 30, 2012.
- (20) Incorporated by reference to the exhibit of the same number to the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2012.
- (21) Incorporated by reference to the exhibit of the same number to the Registrant’s Quarterly Report on Form 10-Q for the period ended March 31, 2013.
- (22) Incorporated by reference to the exhibit of the same number to the Registrant’s Quarterly Report on Form 10-Q for the period ended June 30, 2013.

- (23) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2013.
- (24) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2013.
- (25) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-K/A for the period ended December 31, 2013, filed on July 9, 2014.
- (26) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2014.
- (27) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2014.
- (28) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q/A for the period ended June 30, 2014, filed on October 23, 2014.
- (29) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2014.
- (30) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2014.
- (31) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2015.
- (32) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2015.
- (33) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2015.
- (34) Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated November 19, 2015.
- (35) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2015.
- (36) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K/A for the year ended December 31, 2015, filed on August 29, 2016.
- (37) Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated February 25, 2016.
- (38) Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated March 9, 2016.
- (39) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2016.
- (40) Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated May 26, 2016.
- (41) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2016.
- (42) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2016.
- (43) Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated November 17, 2016.
- (44) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2016.
- (45) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2017.
- (46) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2017.
- (47) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2017.
- (48) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2017.
- (49) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2018.
- (50) Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated May 17, 2018.
- (51) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2018.
- (52) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2018.

- (53) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018.
- (54) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2019.
- (55) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2019.
- (56) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2019.
- (57) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2019.
- (58) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2020.
- (59) Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated May 21, 2020.
- (60) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2020.
- (61) Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated August 26, 2020.
- (62) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2020.

* Portions of the exhibit have been omitted pursuant to an application for confidential treatment, and the omitted portions have been filed separately with the Commission.

THIS DOCUMENT CONTAINS INFORMATION WHICH HAS BEEN EXCLUDED FROM THE EXHIBIT BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED. SUCH EXCLUDED INFORMATION IS IDENTIFIED BY BRACKETS AND MARKED WITH (*)**

**FORTY-FIFTH AMENDMENT TO
CONSOLIDATED
CSG MASTER SUBSCRIBER MANAGEMENT SYSTEM AGREEMENT BETWEEN
CSG SYSTEMS, INC. AND
CHARTER COMMUNICATIONS OPERATING, LLC**

SCHEDULE AMENDMENT

This Forty-fifth Amendment (the “Amendment”) is made by and between **CSG Systems, Inc.**, a Delaware corporation (“CSG”), and **Charter Communications Operating, LLC**, a Delaware limited liability company (“Customer”). CSG and Customer entered into that certain Consolidated CSG Master Subscriber Management System Agreement effective as of August 1, 2017 (CSG document no. 4114281), as amended (the “Agreement”), and now desire to further amend the Agreement in accordance with the terms and conditions set forth in this Amendment. If the terms and conditions set forth in this Amendment shall be in conflict with the Agreement, the terms and conditions of this Amendment shall control. Any terms in initial capital letters or all capital letters used as a defined term but not defined in this Amendment shall have the meaning set forth in the Agreement. Upon execution of this Amendment by the parties, any subsequent reference to the Agreement between the parties shall mean the Agreement as amended by this Amendment. Except as amended by this Amendment, the terms and conditions set forth in the Agreement shall continue in full force and effect according to their terms. The effective date of this Amendment is the date last signed below (the “Amendment Effective Date”).

1. Customer desires to convert those certain Customer’s subscribers associated with Customer’s subscribers located within Customer’s markets in the state of [***** (the “*****”)] currently receiving billing services from Customer’s third party biller platform to the CSG billing platform as soon as reasonably possible (for purposes of this Amendment, the “[*****”]), under the terms of the Agreement and pursuant to that certain Statement of Work, “Programmatic Data Conversion of [*****] Non-ACP Subscribers to the Advanced Convergent Platform (“ACP”),” to be executed by the Parties (CSG document no. 4135864 the “[*****”]).
2. CSG’s Services shall commence upon the Conversion Date, as defined in the Agreement.
3. CSG agrees to amend the first paragraph under Conversion Incentive Bonus of Schedule F, by deleting it in its entirety and replacing it with the following, to include conversions resulting from the [*****] and the [*****]:

As an [*****] to CSG [*****] and thus make such subscribers Connected Subscribers under this Agreement (for purposes of the [*****] and the **BSC Rate Table**, the “Converted Connected Subscribers”), CSG agrees, unless otherwise provided in Schedule F, “Fees,” under the **BSC Rate Table**, to provide Customer with an [*****] to \$***** for each [*****] (“*****”). The [*****] shall be payable with respect to each [*****] through [*****] and such [*****] will be [*****] in the [*****]. Upon the expiration of the [*****], the [*****].

THIS DOCUMENT CONTAINS INFORMATION WHICH HAS BEEN EXCLUDED FROM THE EXHIBIT BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED. SUCH EXCLUDED INFORMATION IS IDENTIFIED BY BRACKETS AND MARKED WITH (*)**

**FORTY-SIXTH AMENDMENT TO
CONSOLIDATED
CSG MASTER SUBSCRIBER MANAGEMENT SYSTEM AGREEMENT BETWEEN
CSG SYSTEMS, INC. AND
CHARTER COMMUNICATIONS OPERATING, LLC**

SCHEDULE AMENDMENT

This Forty-Sixth Amendment (the “Amendment”) is made by and between **CSG Systems, Inc.**, a Delaware corporation (“CSG”), and **Charter Communications Operating, LLC**, a Delaware limited liability company (“Customer”). CSG and Customer entered into that certain Consolidated CSG Master Subscriber Management System Agreement effective as of August 1, 2017 (CSG document no. 4114281), as amended (the “Agreement”), and now desire to further amend the Agreement in accordance with the terms and conditions set forth in this Amendment. If the terms and conditions set forth in this Amendment shall be in conflict with the Agreement, the terms and conditions of this Amendment shall control. Any terms in initial capital letters or all capital letters used as a defined term but not defined in this Amendment shall have the meaning set forth in the Agreement. Upon execution of this Amendment by the parties, any subsequent reference to the Agreement between the parties shall mean the Agreement as amended by this Amendment. Except as amended by this Amendment, the terms and conditions set forth in the Agreement shall continue in full force and effect according to their terms. The effective date of this Amendment is the date last signed below (the “Amendment Effective Date”).

1. **Customer desires to use and CSG agrees to provide an enhancement (the “[*****] Biller Historical Data Enhancement”) to make historical order and payment account data (the “Historical Data”) currently residing on [*****] received by CSG from Customer to be uploaded and hosted on the OAAT Server by CSG for the purpose of making the migrated Non-ACP Subscriber Historical Data available to and accessible by Customer via ACSR@.**
2. **As a result, upon execution of this Amendment and pursuant to the terms and conditions of the Agreement, Schedule F, “Fees,” Section 1, “CSG Services,” Subsection X, “Custom Implementation Services,” is amended to add a new subsection R, “[*****] Biller History Enhancement,” as follows:**

R. [***] Biller Historical Data Enhancement**

Description	Frequency	Fee
1. Implementation and Set Up Fee (Note 1)	[*****]	[*****]
2. [*****] Biller Historical Data File Upload (Note 2)	[** [*****]	\$ [*****]
3. Maintenance and Support Fee (Note 3)	[*****]	\$ [*****]
4. Hosting Fee (Note 4)	[*****]	[*****]

Note 1: Implementation and set up for the [*****] Biller Historical Data Enhancement shall be documented in that certain Statement of Work, “Implement ACSR@ Window for [*****] Biller History Enhancement” (CSG document no. 4136336) to be executed by CSG and Customer. **Note 2:** CSG will upload the [*****] Biller Historical Data to ACP when Customer provides CSG with a data extract file containing the Historical Data of the [*****] Biller following each programmatic data migration. The parties agree that the [*****] Biller Historical Data File Upload Fee will be waived for the initial upload.

Note 3: Maintenance and Support Fees will be limited to [** (**) *****]; support in excess of [** (**) *****] in a [*****] shall be set forth in a Statement of Work or a Letter of authorization and shall be provided at Customer’s then-current Technical Services fees.

Note 4: CSG will host the [*****] Biller Historical Data Enhancement on its Order Account Audit Tool (“OAAT”) environment, described in Section X, Subsection G of this Schedule F at [** [*****]]; provided, however, in the event [*****] of such OAAT services and hosting, the Hosting Fee for the [*****] Biller Historical Data Enhancement shall be subject to the Hosting Fee mutually agreed by the parties at the time of such [*****]. If the parties are unable to mutually agree upon such Hosting Fee for the [*****] Biller Historical Data Enhancement within [*****] following [*****] of the OAAT services and hosting, CSG shall, at its sole option, [*****] for the [*****] Biller Historical Data Enhancement upon [*****] prior written notice to Customer.

THIS AMENDMENT is executed on the days and year last signed below to be effective as of the Amendment Effective Date (defined above).

**CHARTER COMMUNICATIONS HOLDING
COMPANY, LLC (“CUSTOMER”)**

CSG SYSTEMS, INC. (“CSG”)

By: Charter Communications, Inc., its Manager

By: /s/ Michael Ciszek

By: /s/ Gregory L. Cannon

Title: SVP Billing Strategy & Design

Title: SVP, General Counsel & Secretary

Name: Michael Ciszek

Name: Gregory L. Cannon

Date: Nov 4, 2020

Date: Nov 4, 2020

THIS DOCUMENT CONTAINS INFORMATION WHICH HAS BEEN EXCLUDED FROM THE EXHIBIT BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED. SUCH EXCLUDED INFORMATION IS IDENTIFIED BY BRACKETS AND MARKED WITH (*)**.

**FORTY-SEVENTH AMENDMENT TO
CONSOLIDATED
CSG MASTER SUBSCRIBER MANAGEMENT SYSTEM AGREEMENT BETWEEN
CSG SYSTEMS, INC. AND
CHARTER COMMUNICATIONS OPERATING, LLC**

SCHEDULE AMENDMENT

This Forty-seventh Amendment (the “Amendment”) is made by and between **CSG Systems, Inc.**, a Delaware corporation (“CSG”), and **Charter Communications Operating, LLC**, a Delaware limited liability company (“Customer”). CSG and Customer entered into that certain Consolidated CSG Master Subscriber Management System Agreement effective as of August 1, 2017 (CSG document no. 4114281), as amended (the “Agreement”), and now desire to further amend the Agreement in accordance with the terms and conditions set forth in this Amendment. If the terms and conditions set forth in this Amendment shall be in conflict with the Agreement, the terms and conditions of this Amendment shall control. Any terms in initial capital letters or all capital letters used as a defined term but not defined in this Amendment shall have the meaning set forth in the Agreement. Upon execution of this Amendment by the parties, any subsequent reference to the Agreement between the parties shall mean the Agreement as amended by this Amendment. Except as amended by this Amendment, the terms and conditions set forth in the Agreement shall continue in full force and effect according to their terms. The effective date of this Amendment is the date last signed below (the “Amendment Effective Date”).

- 1. Customer desires to convert those certain Customer’s subscribers associated with Customer’s subscribers located within Customer’s markets in the state of [**** (the “****”)] currently receiving billing services from Customer’s third party biller platform to the CSG billing platform as soon as reasonably possible (for purposes of this Amendment, the “[****”]), under the terms of the Agreement and pursuant to that certain Statement of Work, “Programmatic Data Conversion of Non-ACP Subscribers to the Advanced Convergent Platform (“ACP”), to be executed by the Parties (CSG document no. 31593) (the “[****”]).
- 2. CSG’s Services shall commence upon the Conversion Date, as defined in the Agreement.
- 3. CSG agrees to amend the first paragraph under Conversion Incentive Bonus of Schedule F, by deleting it in its entirety and replacing it with the following, to include conversions resulting from the [****] and, the [****], as more particularly described in the Forty-fifth Amendment to the Agreement (CSG document no. 4135974) executed by the parties as of October 8, 2020, as identified therein:

As an [*****] to CSG [*****] and thus make such subscribers Connected Subscribers under this Agreement (for purposes of the [*****] and the **BSC Rate Table**, the “Converted Connected Subscribers”), CSG agrees, unless otherwise provided in Schedule F, “Fees,” under the **BSC Rate Table**, to provide Customer with an [*****] to \$***** for each [*****] (“*****”). The [*****] shall be payable with respect to each [*****] through [*****] and such [*****] will be [*****] in the [*****].

Upon the expiration of the [*****], the ***** for which the ***** in the ***** and in the ***** and the ***** in which the ***** is applicable. The ***** may only be ***** the ***** of the Agreement and in the ***** and, except for ***** to the ***** the ***** and the ***** in ***** the ***** will no longer be ***** For clarification purposes, ***** shall not include ***** which ***** this Agreement for the provision of *****].

THIS AMENDMENT is executed on the days and year last signed below to be effective as of the Amendment Effective Date (defined above).

CHARTER COMMUNICATIONS HOLDING COMPANY, LLC (“CUSTOMER”)

CSG SYSTEMS, INC. (“CSG”)

By: Charter Communications, Inc., its Manager

By: /s/ Michael Ciszek

By: /s/ Gregory L. Cannon

Title: SVP Billing Strategy & Design

Title: SVP, General Counsel & Secretary

Name: Michael Ciszek

Name: Gregory L. Cannon

Date: Dec 9, 2020

Date: Dec 9, 2020

THIS DOCUMENT CONTAINS INFORMATION WHICH HAS BEEN EXCLUDED FROM THE EXHIBIT BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED. SUCH EXCLUDED INFORMATION IS IDENTIFIED BY BRACKETS AND MARKED WITH ().**

**SECOND AMENDMENT TO
THE
CSG MASTER SUBSCRIBER MANAGEMENT SYSTEM AGREEMENT BETWEEN
CSG SYSTEMS, INC. AND
COMCAST CABLE COMMUNICATIONS MANAGEMENT, LLC**

THIS SECOND AMENDMENT (this "Amendment") is made by and between **CSG Systems, Inc.** ("CSG") and **Comcast Cable Communications Management, LLC** ("Customer"). The effective date of this Amendment is the date last signed below (the "Second Amendment Effective Date"). CSG and Customer entered into a certain CSG Master Subscriber Management System Agreement (CSG document #[*****]) with an effective date of January 1, 2020 (the "Agreement") and now desire to further amend the Agreement in accordance with the terms and conditions set forth in this Amendment. If the terms and conditions set forth in this Amendment conflict with the Agreement, the terms and conditions of this Amendment shall control. Any terms in initial capital letters or all capital letters used as a defined term but not defined in this Amendment shall have the meaning set forth in the Agreement. Upon execution of this Amendment by the Parties, any subsequent reference to the Agreement between the Parties shall mean the Agreement as amended by this Amendment. Except as amended by this Amendment, the terms and conditions set forth in the Agreement shall continue in full force and effect according to their terms.

CSG and Customer agree to the following:

- 1. Article 4 entitled "CSG and Customer Additional Responsibilities," subsection 4 entitled "[***** * * * * *]" shall be deleted in its entirety from the Agreement and replaced with the following:**

4.4 [*** * * * * *].**

(a) Customer shall be entitled to [***** * * * * *] as described below. For the avoidance of doubt, (i) Customer may ***** * * * * * as defined below, (if applicable) and may ***** * * * * * (***** * * * * *) and (ii) as further ***** * * * * *, if Customer ***** * * * * * because of a ***** * * * * *, Customer may ***** * * * * * (***** * * * * *).

(b) "[***** * * * * *]. Based on ***** * * * * * no later than ***** (**) ***** after such ***** * * * * * (the "***** * * * * *"), CSG ***** * * * * * Customer * * * * * (***** * * * * *) on ***** * * * * * (the "***** * * * * *"). Customer acknowledges that if (i) it ***** * * * * * Customer ***** * * * * * that results in * * * * * (a "***** * * * * *"), the ***** * * * * * shall be ***** * * * * * to CSG in ***** * * * * * or ***** * * * * *].

AMENDMENT NO. 1 TO SEPARATION AGREEMENT

This Amendment No. 1 to Separation Agreement (“Amendment”) is entered into on December 31, 2020, among CSG SYSTEMS INTERNATIONAL, INC. (“CSGS”), a Delaware corporation, CSG SYSTEMS, INC., a Delaware corporation (collectively with CSGS, the “Company”), and BRET C. GRIESS (the “Executive”), in order to amend that certain Separation Agreement, effective as of August 26, 2020, between the Company and Executive (the “Separation Agreement”).

In consideration of the mutual covenants set forth herein, the receipt and sufficiency of which are hereby acknowledged, the Parties agree to amend the Separation Agreement as follows:

1. Severance Payment. Paragraph 6 of the Separation Agreement is hereby amended in its entirety, effective as of December 31, 2020, to read as follows:

“6 Compensation, Benefits, and Other Payments. The Company and Executive agree that, unless the employment of Executive is terminated by the Company for Cause prior the Executive Officer Resignation Date, on the Executive Officer Resignation Date, Executive will become entitled to receive the following compensation, benefits, and other payments from the Company:

- (i) The balance of the Executive’s earned and unused vacation pay (collectively, the “Accrued Benefits”);
- (ii) \$7,162,032 (the “Severance Payment”);
- (iii) Continued participation at the Company’ expense in the group medical, dental, life, and long-term disability insurance benefit plans or programs of the Company which may be in effect from time to time and in which the Executive was participating as of the Executive Termination Date, unless such continued participation is restricted or prohibited by applicable governmental regulations governing such plans (the “Continued Benefits Coverage”);
- (iv) Any other amounts earned, accrued, or owed to the Executive under this Agreement but not paid as of the Executive Officer Resignation Date; and
- (v) Any other benefits payable to the Executive upon his termination without cause, or to which the Executive otherwise may be entitled, under any benefit plans or programs of the Company in effect on the Executive Officer Resignation Date.

The compensation, benefits, and other payments provided pursuant to the above will be payable to Executive in accordance with the terms and upon the conditions set forth below:

- (a) Executive's Employment Termination Date is on March 31, 2021, and as such, the Executive will receive his final payment of base salary as an active employee of the Company on April 16, 2021. Additionally, on that date, the Executive shall receive any Accrued Benefits as provided in this Paragraph 6.
- (b) The Severance Payment will be paid to Executive in equal installments on the Company's regularly scheduled payroll dates over the twelve-month period following the Employment Termination Date upon the condition that the Executive has delivered a signed release to the Company (the "Release") and the Release has become irrevocable in accordance with its terms (the "Payment Commencement Date"). The foregoing notwithstanding, however, due to the Section 409A deferral requirements as outlined in paragraph 16(a) of this Agreement, any payments that would be paid to Executive under this provision in the months of April, May, June, July, August and September 2021 shall be deemed the "Delayed Payment" and shall not be paid to Executive until October 1, 2021, at which time, the entire Delayed Payment shall be paid to Executive in a lump sum, less applicable withholdings. The Company and Executive agree that the Release shall be in the form attached hereto as Exhibit A, and that as a condition to payment of the benefits described in Paragraphs 6(ii) and (iii) of the Agreement, Executive shall execute the Release following, but not more than forty-five (45) days following, the Employment Termination Date. The Company shall execute the Release on the date following the Employment Termination Date, provided that the Company's execution of the Release shall be void ab initio if Executive either does not execute the Release in accordance with the prior sentence or revokes the Release. The Company's execution of the Release shall become irrevocable if Executive executes the Release in accordance with this sentence and does not revoke the Release and, if the Release becomes effective, it shall be deemed to satisfy the requirements of Paragraph 23 of this Agreement.
- (c) Because the Executive's Employment Termination Date is on March 31, 2021, the Executive and Executive's qualified beneficiaries will continue to receive Continued Benefits Coverage from April 1, 2021 at the Company's expense until April 30, 2022.
- (d) In the event that any inquiries regarding Executive's employment with the Company are made to one of the individuals listed on Exhibit B attached hereto (collectively referred to as "Designated Personnel"), as long as such Designated Personnel remains as a director or an employee of the Company, the Company shall provide and advise the Designated Personnel to provide: (i) verification of Executive's employment with the Company; and (ii) references to the press release the Company issued on August 31, 2020 announcing Executive's departure. In addition, the Designated Personnel shall each be notified in writing of the non-disparagement provisions in Paragraph 5 of this Agreement."

2. Entire Agreement; Modification. Paragraph 8 of the Separation Agreement is hereby amended in its entirety, effective as of December 31, 2020, to read as follows:

“8. Entire Agreement; Modification. Except as specifically set forth in Paragraph 4 of this Agreement with respect to specified provisions of the Employment Agreement incorporated in this Agreement, this Agreement will supersede the Employment Agreement in its entirety as of the Executive Officer Resignation Date, and the Employment Agreement will cease to have any further force or effect from and after the Executive Officer Resignation Date. This Agreement sets forth the entire agreement and understanding of the promises concerning the subject matter of this Agreement and supersedes all prior agreements, arrangements, and understandings relating to that subject matter including, without limitation, the Employment Agreement (except as specifically set forth in the preceding sentence). No term or provision of this Agreement may be modified or extinguished, in whole or in part, except by a writing which is dated and signed by the Parties to this Agreement. No representation, promise, or inducement has been made to or relied upon by or on behalf of the Company or Executive concerning the subject matter of this Agreement which is not set forth in this Agreement. In particular, Executive acknowledges and agrees that he is not entitled to receive from the Company any severance, incentive, or other compensation or payment related to his services to the Company or the termination of his employment by the Company, other than the compensation and payments specifically set forth in this Agreement.”

3. No Other Changes to the Separation Agreement. Except as expressly amended by this Amendment, all of the terms of the Separation Agreement shall remain in full force and effect.

[Signature Page Follows]

WITNESS WHEREOF, the Parties have executed this Amendment to be effective as of the date indicated above:

BRET C. GRIESS

CSG SYSTEMS INTERNATIONAL, INC.

/s/ Bret C. Griess
BRET C. GRIESS

/s/ Rolland B. Johns
By: Rolland B. Johns
Its: Executive Vice President and Chief Financial Officer

Date: Dec 31, 2020

Date: Dec 31, 2020
CSG SYSTEMS, INC.

/s/ Rolland B. Johns
By: Rolland B. Johns
Its: Executive Vice President and Chief Financial Officer

Date: Dec 31, 2020

[Signature Page to Amendment No. 1 to Separation Agreement]

Exhibit A

See attached

MUTUAL RELEASE

THIS MUTUAL RELEASE (“Mutual Release”) is entered into as of the date last signed below among **CSG Systems, Inc.**®, a Delaware corporation with offices at 6175 S Willow Drive, Greenwood Village, Colorado 80111 (“CSG”), **CSG Systems International, Inc.**, a Delaware corporation sharing the same office address with CSG (“CSGS”, and collectively with CSG, the “Company”) and **Bret C. Griess** (“Executive”). The Company and the Executive shall be referred herein individually as the “Party” and collectively as the “Parties.”

WHEREAS, the Company and Executive are Parties to that certain Separation Agreement made and entered into on August 26, 2020, by and between the Company and the Executive, as amended on December 31, 2020 in that certain Amendment No. 1 to Separation Agreement; and

WHEREAS, the Parties wish to completely and fully release each other from and against any and all suits, causes of action and claims with respect to the subject matter covered herein.

In consideration of the mutual promises and covenants set forth below, the Parties hereto, intending to be legally bound, hereby agree as follows:

1. MUTUAL PROMISES AND COVENANTS

The Parties agree that execution of this Mutual Release shall not represent an admission of fault or wrongdoing by either Party regarding the subject matter covered herein nor establish a precedent for establishing liability in the event of future disputes. Therefore, in exchange for the Severance Payment provided in Paragraph 6 of the Separation Agreement, and in accordance with Sections 2 and 3 below, each Party agrees to forever release the other Party and its past and present employees, agents, affiliates, shareholders, officers, directors, predecessors, if any, joint ventures, successors and assigns, heirs, executors, administrators and trustees from and against any and all suits, causes of action and claims with respect to the subject matter covered herein.

2. RELEASES

Executive, on behalf of himself and Executive’s attorneys, heirs, executors, administrators, representatives, agents, successors, and assigns, and anyone claiming for Executive or on Executive’s behalf (collectively, with Executive, the “Executive Parties”) fully release and discharge the Company and its present, past, and future parents, subsidiaries, and affiliated corporations, divisions, affiliates, predecessors, principals, partners, joint ventures, representatives, successors, and assigns, and their past and present owners, directors, officers, employees, stockholders, attorneys, agents, trustees, and insurers, and all persons acting by, through, under or in concert with any of them and all other persons, firms and corporations whomsoever in their individual, corporate, or official capacities (collectively, with the Company, the “CSG Parties”), and the Company, on behalf of itself and the CSG Parties, fully release and discharge the Executive Parties, from any and all liability, actions, causes of actions, and claims of any nature, whether known or unknown, in connection with Executive’s employment and all interactions, agreements, contracts, express or implied, which the Executive Parties have against the CSG Parties and which the CSG Parties have against the Executive Parties, in each case through the applicable signature dates of this Mutual Release. This Mutual Release, however, does not apply to any claim which as a matter of law cannot be released, including, but not limited to, claims for unemployment insurance benefits and workers’ compensation claims. The Executive Parties and the CSG Parties agree that it is their respective intent to release all claims which they can legally release. This Mutual Release excludes claims that cannot be released or waived by law or private agreement.

This release includes, but is not limited to, the following: any and all liability, actions, causes of actions, common law claims, statutory claims under state or federal law including but not limited to any rights and claims under Title VII of the Civil Rights Act of 1964, as amended; the Equal Pay Act; the Employee Retirement Income Security Act; the Americans with Disabilities Act; the Family & Medical Leave Act; the Age Discrimination in Employment Act, as amended (“ADEA”); the Sarbanes-Oxley Act; the Worker Adjustment Retraining Notification Act; any claim under any state’s human rights act, wage payment act, civil rights laws, or similar laws; any law governing any aspect of employment, and any amendments thereto (except for claims for workers’ compensation and unemployment insurance benefits); any claim under any municipal, state, or federal common law, statute, regulation

or ordinance; breach of contract claims; breach of any collective bargaining agreement claims; tort claims, including negligence; and all demands, damages expenses, fees (including attorneys' fees, court costs, expert witness fees, etc.), which the Executive Parties have against the CSG Parties and which the CSG Parties have against the Executive Parties, including, but not limited to, Executive's employment and the termination of Executive's employment, or any acts, transactions, or occurrences between the CSG Parties and the Executive Parties through each Party's applicable signature dates on this Mutual Release. This release does not purport to waive claims arising after each Party's signature date on this Mutual Release.

3. EXECUTIVE'S SPECIFIC RELEASE OF ADEA CLAIMS

In further consideration of the payments and benefits provided to Executive in Paragraph 6 of the Separation Agreement, the Executive Parties hereby irrevocably and unconditionally fully and forever waive, release, and discharge the CSG Parties from any and all suits, causes of action, or claims, whether known or unknown, arising under ADEA and its implementing regulations from the beginning of time through the date of Executive's execution of this Mutual Release. By signing this Mutual Release, Executive hereby acknowledges and affirms the following:

- a. Executive has been advised by the Company to consult with an attorney and has had the opportunity to consult with an attorney, before signing this Mutual Release, and the Mutual Release has been written in a manner calculated to be clearly understood by Executive.
- b. Executive has read and fully understands all the provisions of this Mutual Release, and Executive was given a reasonable period of forty-five (45) days to review, consider and decide whether to sign this Mutual Release and understands this signed Mutual Release must be returned to Greg Cannon, the Company's General Counsel, at 6175 S Willow Drive, 10th Floor, Greenwood Village, CO 80111, no later than May 15, 2021. Executive and the Company agree that any changes made to this Mutual Release at Executive's request do not restart the forty-five (45) day period to review this Mutual Release.
- c. Executive is waiving, among other claims, age discrimination claims under ADEA and all amendments thereto, whether known or unknown.
- d. If Executive signs this Mutual Release, Executive will have seven (7) days after signing this Mutual Release to revoke, rescind, or cancel Executive's consent to this Mutual Release. If Executive wishes to revoke this Mutual Release, Executive agrees to do so in writing within seven (7) days after signing this Mutual Release, by delivering written notice of Executive's intent to revoke to Greg Cannon, the Company's General Counsel, at 6175 S Willow Drive, 10th Floor, Greenwood Village, CO 80111.
- e. If Executive does not timely sign this Mutual Release, or rescinds, revokes, or cancels it under applicable state or federal law, then Executive will not be entitled to any of the consideration and/or any of the covenants that the Company agrees to provide and/or make in this Mutual Release (including the payments and benefits described in Paragraph 6 of the Separation Agreement) and the Company will have no obligations whatsoever under this Mutual Release, which shall be null and void.
- f. This Mutual Release will not become effective or enforceable until the eighth day following the date on which Executive signs this Mutual Release, provided that Executive does not exercise Executive's right to revoke, rescind, or otherwise cancel the Mutual Release, pursuant to the procedure set forth in Section 3(d) above.
- g. Executive has carefully read and understands the terms of this Mutual Release, including this Section, and accepts these terms freely and voluntarily, in exchange for the consideration stated above, which Executive acknowledges constitutes full, fair, reasonable and adequate consideration to which Executive is not otherwise entitled.
- h. By signing this Mutual Release, Executive is not waiving or releasing any claims based on actions or omissions that occur after the date on which Executive signs this Mutual Release.
- i. Executive states and warrants that the information provided in this Mutual Release is sufficient for Executive to knowingly and voluntarily release any claims under the ADEA.

4. COVENANT NOT TO SUE

Subject to the permitted disclosures in Section 8, the Parties hereby covenant and agree not to commence against the other Party a legal action or other proceedings or assert any defenses arising from or based, in whole or in part, on the claims, counterclaims, causes of action, suits, defenses, injuries, damages, losses and/or rights released in this Mutual Release. The Parties expressly agree that this Mutual Release may be pled as a full and complete defense to any action or other proceeding released in this Mutual Release, and as a basis for abatement of, or injunction against, such actions. In the event of any breach of the foregoing, the non-breaching Party will recover its reasonable attorney fees and actual costs and expense of enforcing this Section 4. Nothing in this Mutual Release shall, however, be construed as an agreement not to commence legal action to enforce the terms of this Mutual Release.

5. NO ADMISSION OF LIABILITY

This Mutual Release does not constitute an admission of liability and/or wrongdoing by or on the part of the Parties, all of which is expressly denied.

6. REPRESENTATIONS AND WARRANTIES

Each of the Parties represents and warrants to the other that (i) it has not assigned to any third party any of the claims released by it under Sections 2 or 3, (ii) it has the full right to execute, deliver and perform in accordance with this Mutual Release, and (iii) each of the persons signing this Mutual Release on its behalf is duly authorized to enter into this Mutual Release.

7. ACKNOWLEDGEMENT OF COUNSEL

The Parties to this Mutual Release each acknowledge that (i) they have been represented by counsel of their own choosing with respect to the negotiation and signing of this Mutual Release, (ii) they have had the opportunity to review and reflect on the terms of this Mutual Release, and (iii) they have not been the subject of any undue or improper influence that would interfere with the exercise of their understanding and will to sign this Mutual Release. The Parties agree to bear their own costs and attorneys' fees related to this Mutual Release.

8. PERMITTED DISCLOSURES

Pursuant to 18 U.S.C. § 1833(b), Executive will not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of a trade secret of the Company that (a) is made (i) in confidence to a Federal, State, or local government official, either directly or indirectly, or to Executive's attorney and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (b) is made in a complaint or other document that is filed under seal in a lawsuit or other proceeding. If Executive files a lawsuit for retaliation by the Company for reporting a suspected violation of law, Executive may disclose the trade secret to Executive's attorney and use the trade secret information in the court proceeding, if Executive (a) files any document containing the trade secret under seal, and (b) does not disclose the trade secret, except pursuant to court order. Nothing in this Mutual Release is intended to conflict with 18 U.S.C. § 1833(b) or create liability for disclosures of trade secrets that are expressly allowed by such section. Further, nothing in any agreement Executive has with the Company shall prohibit or restrict Executive from making any voluntary disclosure of information or documents to any governmental agency or legislative body, or any self-regulatory organization, in each case, without advance notice to the Company.

9. ENTIRE AGREEMENT

This Mutual Release and the Separation Agreement constitutes the entire agreement among the Parties with respect to the subject matter herein, and this Mutual Release and the Separation Agreement shall supersede all previous written or oral negotiations, commitments and writings related to the subject matter herein. This document may not be altered, amended, or modified, unless such alteration, amendment or modification shall be in writing and duly executed by the Party whose rights are affected by such alteration, amendment or modification.

10. GOVERNING LAW

This Mutual Release shall be governed by, and construed in accordance with, the laws of the state of Colorado and is enforceable as set forth herein. If any action or proceeding is brought to enforce the terms of this Mutual Release the prevailing Party shall be entitled to attorney fees and costs.

11. NO WAIVER OF PROVISIONS

Should any provision of this Mutual Release be found invalid, void or otherwise unenforceable, the remaining provisions of this Mutual Release shall remain in effect, enforceable and binding to the extent permissible under this Mutual Release and applicable law.

12. FEES AND EXPENSES

The Parties shall pay their own respective expenses, including any legal fees incurred in the preparation, review and execution of this Mutual Release.

13. NO RELIANCE

Each of the Parties to this Mutual Release understands and represents that this Mutual Release is not made with reliance upon any inducement, statement, promise or representation other than those contained within this Mutual Release.

14. EXECUTION IN COUNTERPARTS

The Parties may execute and deliver this Mutual Release in any number of counterparts or copies ("Counterpart"). When each Party has signed and delivered at least one Counterpart to the other Party hereto, each Counterpart shall be deemed an original and, taken together, the Counterparts shall constitute one and the same Agreement, which shall be binding and effective.

[Signature Page Follows]

THIS MUTUAL RELEASE is executed on the days and year last signed below, to be effective as of the Effective Date (defined above).

BRET C. GRIESS

CSG SYSTEMS INTERNATIONAL, INC.

/s/ Bret C. Griess
BRET C. GRIESS

/s/ Rolland B. Johns
By: Rolland B. Johns
Its: Executive Vice President and Chief Financial Officer

Date: Dec 31, 2020

Date: Dec 31, 2020
CSG SYSTEMS, INC.

Rolland B. Johns
By: Rolland B. Johns
Its: Executive Vice President and Chief Financial Officer

Date: Dec 31, 2020

(To be executed no earlier than the Termination Date)

Exhibit B

Board of Directors

Don Reed
David Barnes
Ron Cooper
Marwan Fawaz
Rajan Naik
Janice Obuchowski
Frank Sica
Silvio Tavares
James Unruh
Haiyan Song

EVP Team

Brian Shepherd
Ken Kennedy
Rollie Johns

Investor Relations Team

Liz Bauer
John Rea

Other Senior Leaders

Gregory Cannon
Steve Garberich

AMENDMENT NO. 2 TO EMPLOYMENT AGREEMENT

This Amendment No. 2 to Employment Agreement is made and entered into on the 8th day of November, 2017, among CSG SYSTEMS INTERNATIONAL, INC. ("CSGS"), a Delaware corporation, CSG SYSTEMS, INC. ("Systems"), a Delaware corporation, BRIAN A. SHEPHERD (the "Executive"). CSGS and Systems collectively are referred to in this Amendment No. 2 Employment Agreement as the "Companies".

* * *

WHEREAS, the Companies and the Executive entered into an Employment Agreement dated February 15, 2016 (the "Employment Agreement"); and

WHEREAS, the Companies and the Executive desire to amend the Employment Agreement as set forth in this Amendment No. 2 to reflect his new title;

NOW, THEREFORE, in consideration of the foregoing recitals and the agreements of the parties contained in this document, the Companies and the Executive agree as follows:

1. Effective immediately, Section 1. Employment and Duties of the Employment Agreement is amended in its entirety so as to read as follows:

"1. Employment and Duties. Each of the Companies hereby employs the Executive as its Executive Vice President & Group President reporting to the Chief Executive Officer, throughout the term of this agreement and agrees to cause the Executive from time to time to be elected or appointed to such corporate office and position. The duties and responsibilities of the Executive shall include a (a) the duties and responsibilities of the Executive's corporate office and position referred to in the preceding sentence which are set forth in the respective bylaws of the Companies from time to time and (b) such other duties and authorities consistent with the Executives corporate office and position referred to in the preceding sentence and this agreement which the Board of Directors of CSGS (the "Board") or the Chief Executive Officer of CSGS from time to time may assign to the Executive. If the Executive is elected or appointed as a director of CSGS or Systems or as an officer or director of any of the respective subsidiaries of the Companies during the term of this agreement then he also shall serve in such capacity or capacities but without additional compensation."

2. As amended by this Amendment No. 2 to Employment Agreement, the Employment Agreement will remain in full force and effect according to its terms.

IN WITNESS WHEREOF, each of the parties has caused this Amendment No. 2 to Employment Agreement to be executed as of the date first set forth above.

CSG SYSTEMS INTERNATIONAL, INC.,
a Delaware corporation

By: /s/ Bret C. Griess
Bret C. Griess, Chief Executive Officer

/s/ Brian A. Shepherd
Brian A. Shepherd

CSG SYSTEMS, INC., a Delaware corporation

By: /s/ Bret C. Griess
Bret C. Griess, Chief Executive Officer

AMENDMENT NO. 2 TO EMPLOYMENT AGREEMENT

This Amendment No. 2 to Employment Agreement is made and entered into on the 8th day of November, 2017, among CSG SYSTEMS INTERNATIONAL, INC. ("CSGS"), a Delaware corporation, CSG SYSTEMS, INC. ("Systems"), a Delaware corporation, and KENNETH M. KENNEDY (the "Executive"). CSGS and Systems collectively are referred to in this Amendment No. 2 Employment Agreement as the "Companies".

* * *

WHEREAS, the Companies and the Executive entered into an Employment Agreement dated March 1, 2016 (the "Employment Agreement"); and

WHEREAS, the Companies and the Executive desire to amend the Employment Agreement as set forth in this Amendment No. 2 to reflect his new title;

NOW, THEREFORE, in consideration of the foregoing recitals and the agreements of the parties contained in this document, the Companies and the Executive agree as follows:

1. Effective immediately, Section 1. Employment and Duties of the Employment Agreement is amended in its entirety so as to read as follows:

"1. Employment and Duties. Each of the Companies hereby employs the Executive as its Executive Vice President & President, Technology and Product reporting to the Chief Executive Officer, throughout the term of this agreement and agrees to cause the Executive from time to time to be elected or appointed to such corporate office and position. The duties and responsibilities of the Executive shall include a (a) the duties and responsibilities of the Executive's corporate office and position referred to in the preceding sentence which are set forth in the respective bylaws of the Companies from time to time and (b) such other duties and authorities consistent with the Executives corporate office and position referred to in the preceding sentence and this agreement which the Board of Directors of CSGS (the "Board") or the Chief Executive Officer of CSGS from time to time may assign to the Executive. If the Executive is elected or appointed as a director of CSGS or Systems or as an officer or director of any of the respective subsidiaries of the Companies during the term of this agreement then he also shall serve in such capacity or capacities but without additional compensation."

2. As amended by this Amendment No. 2 to Employment Agreement, the Employment Agreement will remain in full force and effect according to its terms.

IN WITNESS WHEREOF, each of the parties has caused this Amendment No. 2 to Employment Agreement to be executed as of the date first set forth above.

CSG SYSTEMS INTERNATIONAL, INC.,
a Delaware corporation

By: /s/ Bret C. Griess
Bret C. Griess, Chief Executive Officer

/s/ Kenneth M. Kennedy
Kenneth M. Kennedy

CSG SYSTEMS, INC., a Delaware corporation
By: /s/ Bret C. Griess
Bret C. Griess, Chief Executive Officer

AMENDMENT NO. 3 TO EMPLOYMENT AGREEMENT

This Amendment No. 3 to Employment Agreement is made and entered into on the 1st day of January, 2021, among CSG SYSTEMS INTERNATIONAL, INC. ("CSGS"), a Delaware corporation, CSG SYSTEMS, INC. ("Systems"), a Delaware corporation, and KENNETH KENNEDY (the "Executive"). CSGS and Systems collectively are referred to in this Amendment No. 3 Employment Agreement as the "Companies".

* * *

WHEREAS, the Companies and the Executive entered into an Employment Agreement dated March 1, 2016 (the "Employment Agreement"), as previously amended by Amendments 1 and 2; and

WHEREAS, the Companies and the Executive desire to further amend the Employment Agreement as set forth in this Amendment No. 3 to reflect the Executive's new title;

NOW, THEREFORE, in consideration of the foregoing recitals and the agreements of the parties contained in this document, the Companies and the Executive agree as follows:

1. Effective immediately, Section 1. Employment and Duties of the Employment Agreement is amended in its entirety so as to read as follows:

1. Employment and Duties. Each of the Companies hereby employs the Executive as Chief Operating Officer (COO) and President - Revenue Management and Digital Monetization (RMDM) throughout the term of this agreement and agrees to cause the Executive from time to time to be elected or appointed to such corporate office and position. The duties and responsibilities of the Executive shall include (a) the duties and responsibilities of the Executive's corporate office and position referred to in the preceding sentence which are set forth in the respective bylaws of the Companies from time to time and (b) such other duties and authorities consistent with the Executive's corporate office and position referred to in the preceding sentence and this agreement which the Board of Directors of CSGS (the "Board") or the Chief Executive Officer of CSGS from time to time may assign to the Executive. If the Executive is elected or appointed as a director of CSGS or Systems or as an officer or director of any of the respective subsidiaries of the Companies during the term of this agreement, then he also shall serve in such capacity or capacities but without additional compensation.

2. As amended by this Amendment No. 3 to Employment Agreement, the Employment Agreement will remain in full force and effect according to its terms.

IN WITNESS WHEREOF, each of the parties has caused this Amendment No. 3 to Employment Agreement to be executed as of the date first set forth above.

CSG SYSTEMS INTERNATIONAL, INC.,
a Delaware corporation

By: /s/ Rolland B. Johns
Rolland B. Johns, Chief Financial Officer

/s/ Kenneth Kennedy
Kenneth Kennedy

CSG SYSTEMS, INC., a Delaware corporation

By: /s/ Rolland B. Johns
Rolland B. Johns, Chief Financial Officer

This exhibit contains forms of agreements used by the company to grant performance-based restricted stock awards to its executive officers under the company's 2005 Stock Incentive Plan. Readers should note that these are forms of agreement only and particular agreements with executive officers and directors may contain terms that differ but not in material respects.

RESTRICTED STOCK AWARD AGREEMENT

Name of Grantee (the "Grantee"): _____

Date of Restricted Stock Award (the "Award Date"): _____

Number of Shares Covered by Restricted Stock Award (the "Award Shares"): _____

This Restricted Stock Award Agreement (this "Agreement") is entered into as of the Date of Restricted Stock Award set forth above (the "Award Date") by and between CSG SYSTEMS INTERNATIONAL, INC., a Delaware corporation (the "Company"), and the Grantee named above (the "Grantee").

* * *

WHEREAS, the Company has adopted an Amended and Restated 2005 Stock Incentive Plan (the "Plan") which is administered by the Compensation Committee of the Board of Directors of the Company (the "Committee"); and

WHEREAS, pursuant to the Plan, effective on the Award Date the Committee granted to Grantee a Restricted Stock Award (the "Award") covering the number of shares of the Common Stock of the Company (the "Common Stock") set forth above (the "Award Shares"), and the Company is executing this Agreement with Grantee for the purpose of setting forth the terms and conditions of the Award made by the Committee to Grantee effective on the Award Date;

NOW, THEREFORE, in consideration of the premises and the covenants and conditions contained herein, the Company and Grantee agree as follows:

1. Award of Restricted Shares.

- (a) The Company hereby confirms the grant of the Award to Grantee effective on the Award Date. The Award is subject to all of the terms and conditions of this Agreement.
 - (b) Promptly after the execution of this Agreement, the Company will cause the transfer agent for the Common Stock or other third-party Plan record keeper designated by the Company (the "Transfer Agent") to (i) either establish a separate account in its records in the name of Grantee (the "Restricted Stock Account") and credit the Award Shares to the Restricted Stock Account as of the Award Date or credit the Award Shares to a previously existing Restricted Stock Account of Grantee as of the Award Date and (ii) confirm such actions to Grantee electronically or in writing.
-

2. **Vesting of Award Shares.**

(a) For purposes of this Agreement, “Performance Period” means the two-fiscal-year period beginning on January 1, 20XX and ending on December 31, 20XY.

(b) Subject to Section 15, if applicable, the Award Shares will vest, if at all, based on the achievement percentages derived from the following measures of performance for the Company’s fiscal year ended December 31, 20XY (“Performance Measures”):

- (i) achievement percentage based on Company earnings per share (“EPS”) as determined in accordance with Exhibit 1 (“EPS Achievement Percentage”);
- (ii) achievement percentage based on Company revenue as determined in accordance with Exhibit 2 (“Revenue Achievement Percentage”); and
- (iii) achievement percentage based on performance as measured by impact minutes as determined in accordance with Exhibit 3 (“Impact Minutes Achievement Percentage”).

The number of Shares that vest shall be determined by multiplying the number of Award Shares by the total of the Weighted Achievement Percentages (Performance Measure Weight multiplied by Actual Achievement Percentage) for the three Performance Measures, as follows:

Performance Measure	Performance Measure Weight
EPS	XX%
Revenue	XX%
Impact Minutes	XX%

The following example illustrates how a total award of 1,000 shares would vest if the respective EPS, Revenue and Impact Minutes Weighted Achievement Percentages were attained for the Performance Period based on the methodologies set forth in Exhibit 1, Exhibit 2 and Exhibit 3:

Performance Measure	Weight (A)	Actual Achievement Percentage (B)	Weighted Achievement Percentage (A multiplied by B)
EPS	XX%	XX%	XX.X%
Revenue	XX%	XX%	XX.X%
Impact Minutes	XX%	XX%	XX.X%
Total of the Weighted Achievement Percentages:			XX.X%
Shares Vesting: XXX (Award Shares multiplied by the Total of the Weighted Achievement Percentages)			

- (c) (i) As soon as practicable after the end of the Performance Period, the Committee shall review and approve/certify the level of the Performance Measures achieved, and determine the corresponding vesting levels for the Award Shares as described above and in Exhibits 1, 2, and 3. The Committee may, in its sole discretion, determine whether any adjustments to the vesting levels as determined in accordance with Exhibits 1, 2, and 3 are appropriate for any unusual or unique circumstances that occurred during the Performance Period.

Subject to Section 15, no Award Shares will vest in Grantee (i) unless and until the Committee has reviewed and approved/certified the vesting levels for the Award Shares, and (ii) unless Grantee has been continuously employed by the Company from the Award Date through the date of the applicable Committee approval/certification.

- (ii) After Grantee has become vested in any of the Award Shares and, if applicable, after the cancellation of certain of the Award Shares as provided for in Section 12(b) has occurred, the Company will instruct the Transfer Agent to remove all restrictions on the transfer, assignment, pledge, encumbrance, or other disposition of the then remaining vested Award Shares in the Restricted Stock Account. Grantee thereafter may dispose of such remaining vested Award Shares in Grantee's sole discretion, subject to compliance with securities and other applicable laws and Company policies with respect to dispositions of Company stock, and may request the Transfer Agent to electronically transfer such remaining vested Award Shares to an account designated by Grantee free of any restrictions, subject to any applicable administrative requirements of the Transfer Agent.

(d) The number of Award Shares issued upon the grant of the Award is equal to the number of Award Shares set forth on the first page of this Agreement, which is equal to the number of Shares that would vest upon the attainment of the Target level of performance for each of the Performance Measures as set forth in Exhibits 1, 2 and 3. If the aggregate number of Award Shares vesting under Section 2(b) and Exhibits 1, 2 and 3 exceeds the total number of Award Shares due to vesting at levels above Target, then the Company shall issue Grantee additional shares of Common Stock in respect of such additional vesting. Such additional shares shall be issued as soon as administratively practicable following the Committee's certification of vesting levels.

3. Cancellation of Unvested Award Shares.

Subject to the provisions of Section 15, if applicable, upon a Termination of Employment of Grantee, all of the rights and interests of Grantee in any of the Award Shares which have not vested in Grantee pursuant to Section 2 prior to such Termination of Employment of Grantee automatically will completely and forever terminate; and, at the direction of the Company, the Transfer Agent will remove from the Restricted Stock Account and cancel all of those unvested Award Shares. For purposes of this Agreement, a "Termination of Employment" of Grantee means the effective time when the employer-employee relationship between Grantee and the Company terminates for any reason whatsoever. In determining the existence of continuous employment of Grantee by the Company or the existence of an employer-employee relationship between Grantee and the Company for purposes of this Agreement, the term "Company" will include a Subsidiary (as defined in the Plan); and neither a transfer of Grantee from the employ of the Company to the employ of a Subsidiary nor the transfer of Grantee from the employ of a Subsidiary to the employ of the Company or another Subsidiary will be deemed to be a Termination of Employment of Grantee.

4. Employment.

Nothing contained in this Agreement (i) obligates the Company or a Subsidiary to continue to employ Grantee in any capacity whatsoever or (ii) prohibits or restricts the Company or a Subsidiary from terminating the employment of Grantee at any time or for any reason whatsoever. In the event of a Termination of Employment of Grantee, Grantee will have only the rights set forth in this Agreement with respect to the Award Shares.

5. Dividends and Changes in Capitalization.

If at any time that any of the Award Shares have not vested in Grantee the Company declares or pays any ordinary cash dividend, any non-cash dividend of securities or other property or rights to acquire securities or other property, any liquidating dividend of cash or property, or any stock dividend or there occurs any stock split or other change in the character or amount of any of the outstanding securities of the Company, then in such event any and all cash and new, substituted, or additional securities or other property relating or attributable to those unvested Award Shares immediately and automatically will become subject to this Agreement, will be delivered to the Transfer Agent or to an independent Escrow Agent selected by the Company to be held by the Transfer Agent or such Escrow Agent pursuant to the terms of this Agreement (including but not limited to the provisions of Sections 2, 3, and 8), and will have the same status

with respect to vesting and transfer as the unvested Award Shares upon which such dividend was paid or with respect to which such new, substituted, or additional securities or other property was distributed. No interest will accrue on any cash or cash equivalents received by the Transfer Agent or such Escrow Agent pursuant to the first sentence of this Section 5.

6. Representations of Grantee.

Grantee represents and warrants to the Company as follows:

- (a) Grantee has full legal power, authority, and capacity to execute and deliver this Agreement and to perform Grantee's obligations under this Agreement; and this Agreement is a valid and binding obligation of Grantee, enforceable in accordance with its terms, except that the enforcement of this Agreement may be subject to bankruptcy, insolvency, reorganization, moratorium, or other similar laws now or hereafter in effect relating to creditors' rights generally and to general principles of equity (regardless of whether such enforcement is considered in a proceeding in equity or at law).
- (b) Grantee is aware of the public availability on the Internet at www.sec.gov of the Company's periodic and other filings made with the United States Securities and Exchange Commission.
- (c) Grantee has received a copy of the Plan.

7. Representations and Warranties of the Company.

The Company represents and warrants to Grantee as follows:

- (a) The Company is a corporation duly organized, validly existing, and in good standing under the laws of Delaware and has all requisite corporate power and authority to enter into this Agreement, to issue the Award Shares to Grantee, and to perform its obligations under this Agreement.
- (b) The execution and delivery of this Agreement by the Company have been duly and validly authorized by the Committee; and all necessary corporate action has been taken to make this Agreement a valid and binding obligation of the Company, enforceable in accordance with its terms, except that the enforcement of this Agreement may be subject to bankruptcy, insolvency, reorganization, moratorium, or other similar laws now or hereafter in effect relating to creditors' rights generally and to general principles of equity (regardless of whether such enforcement is considered in a proceeding in equity or at law).
- (c) When issued to Grantee as provided for in this Agreement, the Award Shares will be duly and validly issued, fully paid, and non-assessable.

8. Restriction on Sale or Transfer of Award Shares.

None of the Award Shares that have not vested in Grantee pursuant to Section 2 (and no beneficial interest in any of such Award Shares) may be sold, transferred, assigned, pledged, encumbered, or otherwise disposed of in any way by anyone (including a transfer by

operation of law); and any attempt by anyone to make any such sale, transfer, assignment, pledge, encumbrance, or other disposition will be null and void and of no effect.

9. Enforcement.

The Company and Grantee acknowledge that the Company's remedy at law for any breach or violation or attempted breach or violation of the provisions of Section 8 will be inadequate and that, in the event of any such breach or violation or attempted breach or violation, the Company will be entitled to injunctive relief in addition to any other remedy, at law or in equity, to which the Company may be entitled.

10. Violation of Transfer Provisions.

Neither the Company nor the Transfer Agent will be required to transfer on the stock records of the Company maintained by either of them any Award Shares which have been sold, transferred, assigned, pledged, encumbered, or otherwise disposed of by anyone in violation of any of the provisions of this Agreement or to treat as the owner of such Award Shares or accord the right to vote or receive dividends to any purported transferee or pledgee to whom such Award Shares have been sold, transferred, assigned, pledged, encumbered, or otherwise disposed of in violation of any of the provisions of this Agreement.

11. Section 83(b) Election.

Grantee has the right to make an election pursuant to Treasury Regulation § 1.83-2 with respect to the Award Shares and, if Grantee makes such election, promptly will furnish to the Company a copy of the form of election Grantee has filed with the Internal Revenue Service for such purpose and evidence that such an election has been made in a timely manner.

12. Withholding.

(a) Upon Grantee's making of the election referred to in Section 11 with respect to any of the Award Shares, Grantee will pay to or provide for the payment to or withholding by the Company of all amounts which the Company is required to withhold from Grantee's compensation for federal, state, or local tax purposes by reason of or in connection with such election. Notwithstanding any provision of this Agreement to the contrary, neither the Company nor the Transfer Agent will be obligated to release from the Restricted Stock Account any of the Award Shares with respect to which Grantee has made such election and which have vested in Grantee until Grantee's obligations under this Section 12 have been satisfied.

(b) Upon the vesting in Grantee of any of the Award Shares as to which the election referred to in Section 11 was not made by Grantee, the Company will compute as of the applicable vesting date the amounts which the Company is required to withhold from Grantee's compensation for federal, state, and local tax purposes by reason of or in connection with such vesting, based upon the Fair Market Value (as defined in the Plan) of those Award Shares. After making such computation, the Company will direct the Transfer Agent to remove from the Restricted Stock Account and cancel that number of the Award Shares whose Fair Market Value (as defined in the Plan) as of the applicable vesting date is equal to the aggregate of such amounts

required to be withheld by the Company; provided, that for such purpose the number of Award Shares to be removed from the Restricted Stock Account and cancelled will be rounded up to the nearest whole Award Share. After the actions prescribed by the preceding provisions of this Section 12(b) have been taken, the Company when required by law to do so will pay to the applicable tax authorities in cash the amounts required to have been withheld from Grantee's compensation by reason of or in connection with the vesting referred to in the first sentence of this Section 12(b), with any excess amount resulting from such rounding being treated as federal income tax withholding; and Grantee will have (i) no further obligation with respect to such amounts required to be withheld and (ii) no further rights or interests in the Award Shares withdrawn from the Restricted Stock Account and cancelled pursuant to this Section 12(b), unless the Company has miscomputed such amounts or the number of such Award Shares.

13. Voting and Other Stockholder Rights.

Grantee will have the right to vote with respect to all of the Award Shares which are outstanding and credited to the Restricted Stock Account as of a record date for determining stockholders of the Company entitled to vote, whether or not such Award Shares are vested in Grantee as of such record date. Except as expressly limited or restricted by this Agreement and except as otherwise provided in this Agreement, Grantee will have all of the other rights of a stockholder of the Company with respect to all of the Award Shares which are outstanding and credited to the Restricted Stock Account at a particular time, whether or not such Award Shares are vested in Grantee at such time.

14. Application of Plan.

The relevant provisions of the Plan relating to Restricted Stock Awards and the authority of the Committee under the Plan will be applicable to this Agreement to the extent that this Agreement does not otherwise expressly address the subject matter of such provisions.

15. General Provisions.

- (a) No Assignments. Grantee may not sell, transfer, assign, pledge, encumber, or otherwise dispose of any of Grantee's rights or obligations under this Agreement without the prior written consent of the Company; and any such attempted sale, transfer, assignment, pledge, encumbrance, or other disposition shall be void.
- (b) Notices. All notices, requests, consents, and other communications required or permitted under this Agreement shall be in writing and shall be deemed to have been duly given and made upon personal delivery to the person for whom such item is intended (including by a reputable overnight delivery service which shall be deemed to have effected personal delivery) or upon deposit, postage prepaid, registered or certified mail, return receipt requested, in the United States mail as follows:
- (i) if to Grantee, addressed to Grantee at Grantee's address shown on the stockholder records maintained by the Transfer Agent or at such other address as Grantee may specify by written notice to the Transfer Agent, or

- (ii) if to the Company, addressed to the Chief Financial Officer of the Company at the principal office of the Company or at such other address as the Company may specify by written notice to Grantee.

Each such notice, request, consent, and other communication shall be deemed to have been given upon receipt thereof as set forth above or, if sooner, three (3) business days after deposit as described above. An address for purposes of this Section 15(b) may be changed by giving written notice of such change in the manner provided in this Section 15(b) for giving notice. Unless and until such written notice is received, the addresses referred to in this Section 15(b) shall be deemed to continue in effect for all purposes of this Agreement.

- (c) Choice of Law. This Agreement shall be governed by and construed in accordance with the internal laws, and not the laws of conflicts of laws, of the State of Delaware.
- (d) Severability. The Company and Grantee agree that the provisions of this Agreement are reasonable and shall be binding and enforceable in accordance with their terms and, in any event, that the provisions of this Agreement shall be enforced to the fullest extent permitted by law. If any provision of this Agreement for any reason shall be adjudged to be unenforceable or invalid, then such unenforceable or invalid provision shall not affect the enforceability or validity of the remaining provisions of this Agreement, and the Company and Grantee agree to replace such unenforceable or invalid provision with an enforceable and valid arrangement which in its economic effect shall be as close as possible to the unenforceable or invalid provision.
- (e) Parties in Interest. All of the terms and provisions of this Agreement shall be binding upon, inure to the benefit of, and be enforceable by the respective heirs, personal representatives, successors, and assigns of the Company and the Grantee; provided, that the provisions of this Section 15(e) shall not authorize any sale, transfer, assignment, pledge, encumbrance, or other disposition of the Award Shares which is otherwise prohibited by this Agreement.
- (f) Modification, Amendment, and Waiver. No modification, amendment, or waiver of any provision of this Agreement shall be effective against the Company or Grantee unless such modification, amendment, or waiver (i) is in writing, (ii) is signed by the party sought to be bound by such modification, amendment, or waiver, (iii) states that it is intended to modify, amend, or waive a specific provision of this Agreement, and (iv) in the case of the Company, has been authorized by the Committee. However, Grantee acknowledges and agrees that the Committee, in the exercise of its sole discretion and without Grantee's consent, may modify or amend this Agreement in any manner and delay either the payment of any amounts payable pursuant to this Agreement or the release of any Award Shares which have vested pursuant to this Agreement to the minimum extent necessary to satisfy the requirements of Section 409A of the Internal Revenue Code of 1986, as amended, and any regulations thereunder; and the Company will provide Grantee with notice of any such modification or amendment. The failure of the Company or Grantee at any time to enforce any of the provisions of this Agreement shall not be construed as a waiver of such provisions and shall not affect the right of the Company or Grantee thereafter to enforce each and every provision of this Agreement in accordance with its terms.

- (g) Integration. This Agreement constitutes the entire agreement of the Company and Grantee with respect to the subject matter of this Agreement and supersedes all prior negotiations, understandings, and agreements, written or oral, with respect to such subject matter.
- (h) Headings. The headings of the sections and paragraphs of this Agreement have been inserted for convenience of reference only and do not constitute a part of this Agreement.
- (i) Counterparts. This Agreement may be executed in counterparts with the same effect as if both the Company and Grantee had signed the same document. All such counterparts shall be deemed to be an original, shall be construed together, and shall constitute one and the same instrument.
- (j) Further Assurances. The Company and Grantee agree to use their best efforts and act in good faith in carrying out their obligations under this Agreement. The Company and Grantee also agree to execute and deliver such additional documents and to take such further actions as reasonably may be necessary or desirable to carry out the purposes and intent of this Agreement.

16. Change of Control.

(a) Notwithstanding the provisions of Sections 2 and 3, all Award Shares which have not previously vested in Grantee pursuant to Section 2 automatically will vest in Grantee upon an involuntary (on the part of Grantee) Termination of Employment of Grantee without Cause after the occurrence of a Change of Control. The number of Award Shares vesting pursuant to this Section 16 shall be equal to the number of Award Shares that would vest pursuant to Section 2(b) if Target levels of performance under Exhibits 1, 2 and 3 were achieved.

- (b) For purposes of this Agreement, a "Change of Control" will be deemed to have occurred upon the happening of any of the following events:
 - (i) The Company is merged or consolidated into another corporation or entity, and immediately after such merger or consolidation becomes effective the holders of a majority of the outstanding shares of voting capital stock of the Company immediately prior to the effectiveness of such merger or consolidation do not own (directly or indirectly) a majority of the outstanding shares of voting capital stock or other equity interests having voting rights of the surviving or resulting corporation or other entity in such merger or consolidation;
 - (ii) any person, entity, or group of persons within the meaning of Sections 13(d) or 14(d) of the Securities Exchange Act of 1934 (the "1934 Act") and the rules promulgated thereunder becomes the beneficial owner (within the meaning of Rule 13d-3 under the 1934 Act) of thirty percent (30%) or more of the outstanding voting capital stock of the Company;
 - (iii) the Common Stock of the Company ceases to be publicly traded because of an issuer tender offer or other "going private" transaction (other than a transaction sponsored by the then current management of the Company);

- (iv) the Company dissolves or sells or otherwise disposes of all or substantially all of its property and assets (other than to an entity or group of entities which is then under common majority ownership (directly or indirectly) with the Company);
- (v) in one or more substantially concurrent transactions or in a series of related transactions, the Company directly or indirectly disposes of a portion or portions of its business operations (collectively, the "Sold Business") other than by ceasing to conduct the Sold Business without its being acquired by a third party (regardless of the entity or entities through which the Company conducted the Sold Business and regardless of whether such disposition is accomplished through a sale of assets, the transfer of ownership of an entity or entities, a merger, or in some other manner) and either (i) the fair market value of the consideration received or to be received by the Company for the Sold Business is equal to at least fifty percent (50%) of the market value of the outstanding Common Stock of the Company determined by multiplying the average of the closing prices for the Common Stock of the Company on the thirty (30) trading days immediately preceding the date of the first public announcement of the proposed disposition of the Sold Business by the average of the numbers of outstanding shares of Common Stock on such thirty (30) trading days or (ii) the revenues of the Sold Business during the most recent four (4) calendar quarters ended prior to the first public announcement of the proposed disposition of the Sold Business represented fifty percent (50%) or more of the total consolidated revenues of the Company during such four (4) calendar quarters; or
- (vi) during any period of two consecutive years or less, individuals who at the beginning of such period constituted the Board of Directors of the Company cease, for any reason, to constitute at least a majority of the Board of Directors of the Company, unless the election or nomination for election of each new director of the Company who took office during such period was approved by a vote of at least seventy-five percent (75%) of the directors of the Company still in office at the time of such election or nomination for election who were directors of the Company at the beginning of such period.

(c) Definition of "Cause". For purposes of this agreement, "Cause" will mean only (i) Grantee's confession or conviction of theft, fraud, embezzlement, or other crime involving dishonesty, (ii) Grantee's certification of materially inaccurate financial or other information pertaining to the Company or a Subsidiary (as defined in the Plan) with actual knowledge of such inaccuracies on the part of Grantee, (iii) Grantee's refusal or willful failure to cooperate with an

investigation by a governmental agency pertaining to the financial or other business affairs of the Company or a Subsidiary (as defined in the Plan) unless such refusal or willful failure is based upon a written direction from the Board of Directors or the Chief Executive Officer of the Company or the written advice of counsel, (iv) Grantee's excessive absenteeism (other than by reason of physical injury, disease, or mental illness) without a reasonable justification and failure on the part of Grantee to cure such absenteeism within twenty (20) days after Grantee's receipt of a written notice from the Board of Directors or the Chief Executive Officer of the Company setting forth the particulars of such absenteeism, (v) material failure by Grantee to comply with a lawful directive of the Board of Directors or the Chief Executive Officer of the Company and failure to cure such non-compliance within twenty (20) days after Grantee's receipt of a written notice from the Board of Directors or the Chief Executive Officer of the Company setting forth in reasonable detail the particulars of such non-compliance, (vi) a material breach by Grantee of any of Grantee's fiduciary duties to the Company or a Subsidiary (as defined in the Plan) and, if such breach is curable, Grantee's failure to cure such breach within twenty (20) days after Grantee's receipt of a written notice from the Board of Directors or the Chief Executive Officer of the Company setting forth in reasonable detail the particulars of such breach, (vii) willful misconduct or fraud on the part of Grantee in the performance of his duties as an employee of the Company or a Subsidiary (as defined in the Plan), or (viii) any other "cause" as defined in any existing employment agreement between the Company and Grantee.

(d) If an employment agreement between Grantee and the Company provides for the limitation of payments (including but not limited to the vesting of unvested Award Shares) that would result in the imposition of a tax under Section 4999 of the Internal Revenue Code of 1986, as amended (the "Code"), on "excess parachute payments" (as defined in Section 280G of the Code) received or receivable by Grantee, Grantee agrees that any acceleration of vesting of Award Shares pursuant to this Section 16 shall be strictly governed by and subject to the provisions of the employment agreement relating to excess parachute payments and that some or all unvested Award Shares that would otherwise vest upon a qualifying termination after a Change in Control may not vest.

(e) In the event that Grantee is not a party to an employment agreement providing for a limitation on excess parachute payments as described in Section 16(d), the Committee shall have the right in its sole discretion to reduce the acceleration of vesting of Award Shares pursuant to this Section 16 to the extent necessary to avoid the imposition of tax under Section 4999 of the Code, taking into account all other payments or benefits in the nature of compensation for purposes of Section 280G of the Code received or receivable by the Executive in connection with or as a result of the Change of Control or Grantee's Termination of Employment after the occurrence of a Change of Control; provided, however, that such reduction shall be applied in the order that will result in the Grantee's receipt of the greatest number of Award Shares after such reduction has occurred. The Company and Grantee agree that the provisions of this Section 16(e) are applicable both to all Restricted Stock Agreements and other awards granted under the Plan or any similar plan which are in effect on the date of this Agreement and to all Restricted Stock Award Agreements and other awards granted under the Plan or any similar plan which become effective after the date of this Agreement and that all of such Restricted Stock Award Agreements and other award agreements are subject to and modified by this Section 16(e).

(f) If the employment of Grantee by the Company terminates without Cause after a Change of Control as a result of a Constructive Termination, as defined in a then existing employment agreement (if any) between the Company and Grantee, and all preconditions to the effectiveness of such a Constructive Termination contained in such then existing employment agreement (if any) have been satisfied, then for purposes of Section 16(a) such termination of Grantee's employment will be deemed to be "an involuntary (on the part of Grantee) Termination of Employment of Grantee without Cause after the occurrence of a Change of Control," and the provisions of Section 16(a) will apply. Notwithstanding the foregoing or anything in this Section 16 to the contrary, if the provisions of any then existing employment agreement between the Company and Grantee would result in the vesting of a greater number of Award Shares than would vest under this Section 16, then the provisions of such employment agreement shall control.

IN WITNESS WHEREOF, the Company and Grantee have executed this Restricted Stock Award Agreement on the dates set forth below, effective on the Award Date.

COMPANY:

CSG SYSTEMS INTERNATIONAL, INC.,

a Delaware corporation

By: _____
President and Chief Executive Officer

Date: _____

GRANTEE:

Date: _____



EXHIBIT 1

Terms and Conditions of Achievement Related to Company EPS Measure

1. General. This Exhibit 1 describes the achievement percentage that will be applied under Section 2(b) based on the Company's fully diluted, non-GAAP earnings per share ("EPS"), as reported in the Company's public earnings release for the fiscal year ending December 31, 20XY (as furnished in the applicable Form 8-K).

2. Determination of EPS Achievement Percentage. The achievement percentage attributable to EPS (the "EPS Achievement Percentage") will be based on the Company's EPS for the fiscal year ending December 31, 20XY ("20XY EPS"), as determined under the following table.

	20XY EPS Achievement Tiers	EPS Achievement Percentage
Threshold	\$X.XX	XX%
Target	\$X.XX	XXX%
Maximum	\$X.XX	XXX%

If the 20XY EPS is below the Threshold tier, the EPS Achievement Percentage shall be zero (0%). If the 20XY EPS is between the Threshold and the Maximum tiers, the EPS Achievement Percentage will be determined through linear interpolation, using the next lowest and highest EPS Achievement Tier in the above table from the actual 20XY EPS achieved. By way of example:

- If 20XY EPS is \$X.XX, then the EPS Achievement Percentage shall be XX%, representing the Threshold tier achievement of XX% (next lowest tier in the above table) plus additional achievement XX%, representing XX% of the linear difference between the Threshold tier of \$X.XX and Target tier of \$X.XX (next highest tier in the above table).
 - If 20XY EPS is \$X.XX, then the EPS Achievement Percentage shall be XXX%, representing the Target tier achievement of XXX% (next lowest tier in the above table) plus additional achievement of XX%, representing XX% of the linear difference between the Target tier of \$X.XX and Maximum tier of \$X.XX (next highest tier in the above table).
 - In no case will the EPS Achievement Percentage exceed XXX%.
-

EXHIBIT 2

Terms and Conditions of Achievement Related to Company Revenue Measure

1. General. This Exhibit 2 describes the achievement percentage that will be applied under Section 2(b) based on the Company's GAAP revenue ("Revenue"), as reported in the Company's Annual Report on Form 10-K for the 20XY fiscal year.

2. Determination of the Revenue Achievement Percentage. The achievement percentage attributable to Revenue (the "Revenue Achievement Percentage") will be based on Revenue for the fiscal year ending December 31, 20XY ("20XY Revenue"), as determined under the following table:

	20XY Revenue Achievement Tiers	Revenue Achievement Percentage
Threshold	\$X,XXX.X million	XX%
Target	\$X,XXX.X million	XXX%
Maximum	\$X,XXX.X million	XXX%

If the 20XY Revenue is below the Threshold tier, the Revenue Achievement Percentage shall be zero (0%). If the 20XY Revenue is between the Threshold tier and the Maximum tier, the Revenue Achievement Percentage will be determined through linear interpolation, using the next lowest and next highest 20XY Revenue Achievement Tier in the above table from the actual 20XY Revenue achieved. By way of example:

- If 20XY Revenue is \$X,XXX.X million, then the Revenue Achievement Percentage shall be XX%, representing the Threshold tier achievement of XX% (next lowest tier in the above table) plus additional achievement of XX%, representing XX% of the linear difference between the Threshold tier of \$X,XXX.X million and the Target tier of \$X,XXX.X million (next highest tier in the above table).
 - If 20XY Revenue is \$X,XXX.X million, then the Revenue Achievement Percentage shall be XXX%, representing the Target tier achievement of XXX% (next lowest tier in the above table) plus additional achievement of XX%, representing XX% of the linear difference between the Target tier of \$X,XXX.X million and the Maximum tier of \$X,XXX.X million (next highest tier in the above table).
 - In no case will the Revenue Achievement Percentage exceed XXX%.
-

EXHIBIT 3

Terms and Conditions of Achievement Related to Company Impact Minutes Measure

1. General. This Exhibit 3 describes the achievement percentage that will be applied under Section 2(b) based on the achievement of total “Impact Minutes,” as described in Section 2 of this Exhibit.

2. Determination of Impact Minutes Achievement Percentage. The achievement percentage attributable to Impact Minutes (the “Impact Minutes Achievement Percentage”) shall be based on the Company’s total “Impact Minutes” for the fiscal year ending December 31, 20XY (“20XY Impact Minutes”), as illustrated in the following table. The “20XY Impact Minutes Achievement Tiers” were determined based on the corresponding desired impact minutes improvements (i.e., reduction in the level of Impact Minutes) from the Company’s 20XW fiscal year Impact Minutes of X,XXX, as illustrated in the following table. Note that impact minutes are an adverse customer satisfaction measurement, and therefore, a lower number is the desired outcome in the table below. In measuring the percentage of improvement in Impact Minutes from the 20XW fiscal year to the 20XY fiscal year, the Committee will adjust the 20XY fiscal year Impact Minutes to remove the effect of any products or services that were not included in calculating the 20XW Impact Minutes. The Committee’s determination of such adjustment will be final and binding on the Grantee.

	Impact Minutes Achievement Tiers	Impact Minutes Improvement As of fiscal year ended 31 Dec 20XY	Impact Minutes Achievement Percentage
Threshold	X,XXX	X%	XX%
Target	X,XXX	XX%	XXX%
Maximum	X,XXX	XX%	XXX%

If the 20XY Impact Minutes are not above the Threshold tier, the Impact Minutes Achievement Percentage shall be zero (0%). If the 20XY Impact Minutes are between the Threshold and the Maximum tiers, the achievement percentage will be determined through linear interpolation, using the next highest and lowest Impact Minutes Achievement Tier in the above table from the actual 20XY Impact Minutes achieved. By way of example:

- If 20XY Impact Minutes are X,XXX minutes, then the Impact Minutes Achievement Percentage shall be XX%, representing the Threshold tier achievement of XX% (next highest tier in the above table) plus additional achievement of XX%, representing XX% of the linear difference between the Threshold tier of X,XXX minutes and the Target tier of X,XXX minutes (next lowest tier in the above table).
 - If 20XY Impact Minutes are X,XXX minutes, then the Impact Minutes Achievement Percentage shall be XXX%, representing the Target tier achievement of XXX% (next
-

highest tier in the above table) plus additional achievement of XX%, representing XX% of the linear difference between the Target tier of X,XXX minutes and the Maximum tier of X,XXX minutes (next lowest target in the above table).

- In no case will the Impact Minutes Achievement Percentage exceed XXX%.

3. Impact Minutes. For purposes of this Exhibit 3, Impact Minutes shall be determined by the Company's management in accordance with the Company's "4DX" operational improvement program, subject to the adjustment described in Section 2.

CSG Systems International, Inc.
Subsidiaries of the Registrant
As of December 31, 2020

<u>Subsidiary</u>	<u>State or Country of Organization</u>
Ascade AB	Sweden
Ascade Middle East FZ-LLC	United Arab Emirates
Billing Intec Uruguay S.A.	Uruguay
CSG Forte Payments Holdings, Inc.	Delaware
CSG Forte Payments, Inc.	Delaware
CSG Forte Payments Canada, Inc.	Canada
CSG International Australia Pty Limited	Australia
CSG International Colombia SAS	Colombia
CSG International (NZ) Limited	New Zealand
CSG International Pty Limited	Australia
CSG International PTE Ltd	Singapore
CSG International Sdn Bhd	Malaysia
CSG Mobile Card Investment, LLC	Delaware
CSG SA Holdings (Pty) Limited	South Africa
CSG SA Services (Pty) Limited	South Africa
CSG Systems International, Inc.	Delaware
CSG Systems U.K. Limited	United Kingdom
CSG Systems, Inc.	Delaware
Desinggen, Comunicação Visual, Unipessoal Lda.	Portugal
Digiquant, Inc.	Delaware
Independent Technology Billing Solutions S de RL de CV	Mexico
CSG Systems International (India) Pvt. Ltd.	India
Independent Technology Systems Limited	United Kingdom
Independent Technology Systems SL Unipersonal	Spain
Intec Billing Canada Ltd.	Canada
Intec Billing Ireland	Ireland
Intec Billing Nigeria Limited	Nigeria
Intec Billing, Inc.	Delaware
Intec Telecom Systems (France) SARL	France
Intec Telecom Systems Denmark A/S	Denmark
Intec Telecom Systems Deutschland GmbH	Germany
Intec Telecom Systems do Brasil Limitada	Brazil
Intec Telecom Systems Italia S.P.A.	Italy
Intec Telecom Systems Limited	United Kingdom
Intec Telecom Systems South Africa (Pty) Limited	South Africa
Volubill Danmark ApS	Denmark
Volubill, Inc.	Delaware

Consent of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
CSG Systems International, Inc.:

We consent to the incorporation by reference in the registration statement (No. 333-117928, 333-125584, 333-176579, 333-176580, 333-196530, 333-227000, 333-248228) on Form S-8 of CSG Systems International, Inc. of our reports dated February 19, 2021, with respect to the consolidated balance sheets of CSG Systems International, Inc. and subsidiaries (the Company) as of December 31, 2020 and 2019, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2020, and the related notes (collectively, the "consolidated financial statements"), and the effectiveness of internal control over financial reporting as of December 31, 2020, which reports appear in the December 31, 2020 annual report on Form 10-K of CSG Systems International, Inc. Our report on the consolidated financial statements refers to the adoption of ASC Topic 842 in 2019.

/s/ KPMG LLP

Omaha, Nebraska
February 19, 2021

**CERTIFICATIONS PURSUANT TO
SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002**

I, Brian A. Shepherd, certify that:

1. I have reviewed this annual report on Form 10-K of CSG Systems International, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 19, 2021

/s/ Brian A. Shepherd
Brian A. Shepherd
President and Chief Executive Officer

**CERTIFICATIONS PURSUANT TO
SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002**

I, Rolland B. Johns, certify that:

1. I have reviewed this annual report on Form 10-K of CSG Systems International, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 19, 2021

/s/ Rolland B. Johns

Rolland B. Johns

Executive Vice President and Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

The certification set forth below is being submitted in connection with the Annual Report on Form 10-K (the "Report") for the purpose of complying with Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 (the "Exchange Act") and Section 1350 of Chapter 63 of Title 18 of the United States Code.

Brian A. Shepherd, the Chief Executive Officer and Rolland B. Johns, the Chief Financial Officer of CSG Systems International, Inc., each certifies that, to the best of his knowledge:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of CSG Systems International, Inc.

February 19, 2021

/s/ Brian A. Shepherd
Brian A. Shepherd
President and Chief Executive Officer

February 19, 2021

/s/ Rolland B. Johns
Rolland B. Johns
Executive Vice President and Chief Financial Officer