

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

FORM 10-K
FOR ANNUAL AND TRANSITION REPORTS PURSUANT TO
SECTIONS 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

(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

Commission file number 001-32600

Tucows Inc.

(Exact Name of Registrant as Specified in Its Charter)

Pennsylvania
(State or Other Jurisdiction of Incorporation or Organization)

23-2707366
(I.R.S. Employer Identification No.)

96 Mowat Avenue
Toronto, Ontario, Canada
(Address of Principal Executive Offices)

M6K 3M1
(Zip Code)

Registrant's telephone number, including area code: (416) 535-0123

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, no par value	TCX	NASDAQ Capital Market

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 Section 15(d) of the Act. Yes ☐ No ☒

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

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

Indicate by check mark 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 ☐ Accelerated filer ☒ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards 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 Act). Yes ☐ No ☒

As of June 30, 2020, (the last day of our most recently completed second quarter), the aggregate market value of the common stock held by non-affiliates of the registrant was approximately \$438.6 million. Such aggregate market value was computed by reference to the closing sale price per share of \$57.32 as reported on the NASDAQ Capital Market on such date. For purposes of making this calculation, the registrant has excluded each executive officer, each director and each beneficial owner of more than ten percent of the outstanding shares of common stock of the Company. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

The number of shares outstanding of the registrant's common stock as of March 1, 2021, was 10,619,932.

TUCOWS INC.
ANNUAL REPORT ON FORM 10-K
For Fiscal Year Ended December 31, 2020

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TRADEMARKS, TRADE NAMES AND SERVICE MARKS

Tucows®, EPAG®, Hover®, OpenSRS®, Platypus®, Ting®, eNom®, Roam®, Roam Mobility®, Bulkregister®, Ascio®, Cedar®, and YummyNames® are registered trademarks of Tucows Inc. or its subsidiaries. Other service marks, trademarks and trade names of Tucows Inc. or its subsidiaries may be used in this Annual Report on Form 10-K (this “Annual Report”). All other service marks, trademarks and trade names referred to in this Annual Report are the property of their respective owners. Solely for convenience, any trademarks referred to in this Annual Report may appear without the ® or TM symbol, but such references are not intended to indicate, in any way, that we or the owner of such trademark, as applicable, will not assert, to the fullest extent under applicable law, our or its rights, or the right of the applicable licensor, to these trademarks.

Information Concerning Forward-Looking Statements

This Annual Report on Form 10-K contains, in addition to historical information, forward-looking statements by Tucows Inc. (the “Company”, “we”, “us” “Tucows” or “our”) with regard to our expectations as to financial results and other aspects of our business that involve risks and uncertainties and may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as “may,” “should,” “anticipate,” “believe,” “plan,” “estimate,” “expect,” and “intend,” and other similar expressions are intended to identify forward-looking statements. The forward-looking statements contained in this report include statements regarding, among other things, the competition we expect to encounter as our business develops and competes in a broader range of Internet services, the Company's foreign currency requirements, specifically for the Canadian dollar and Euro; Mobile Services Platform and fixed Internet access subscriber growth and retention rates, the number of new, renewed and transferred-in domain names we register as our business develops and competes; the effect of a potential generic top level domain (“gTLD”) expansion by the Internet Corporation for Assigned Names and Numbers (“ICANN”) on the number of domains we register and the impact it may have on related revenues; our belief regarding the underlying platform for our domain services, our expectation regarding the trend of sales of domain names and advertising; our belief that, by increasing the number of services we offer, we will be able to generate higher revenues; our expectation regarding litigation; the potential impact of current and pending claims on our business; our valuations of certain deferred tax assets; our expectation to collect our outstanding receivables, net of our allowance for doubtful accounts; our expectation regarding fluctuations in certain expense and cost categories; our expectations regarding our unrecognized tax; our expectations regarding cash from operations to fund our business; the impact of cancellations of or amendments to market development fund programs under which we receive funds, our expectation regarding our ability to manage realized gains/losses from foreign currency contracts; the impact of the novel strain coronavirus (“COVID-19”) pandemic on our business, operations and financial performance; and general business conditions and economic uncertainty. These statements are based on management’s current expectations and are subject to a number of uncertainties and risks that could cause actual results to differ materially from those described in the forward-looking statements. Many factors affect our ability to achieve our objectives and to successfully develop and commercialize our services including:

- Risk associated with contingent consideration in the Asset Purchase Agreement (as defined below) with Dish Wireless LLC
 - Risk associated with sharing the Ting brand with Dish Wireless LLC
 - Risk associated with the concentration of MSE business with one customer
 - Risk that we are unable to meet our minimum commitments with our MNO partner for the remaining contract not assigned to DISH
 - Our ability to continue to generate sufficient working capital to meet our operating requirements;
 - Our ability to service our debt commitments;
 - Our ability to maintain a good working relationship with our vendors and customers;
 - The ability of vendors to continue to supply our needs;
 - Actions by our competitors;
 - Our ability to attract and retain qualified personnel in our business;
 - Our ability to effectively manage our business;
 - The effects of any material impairment of our goodwill or other indefinite-lived intangible assets;
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- Our ability to obtain and maintain approvals from regulatory authorities on regulatory issues;
- Our ability to invest in the build-out of fiber networks into selected towns and cities to provide Internet access services to residential and commercial customers while maintaining the development and sales of our established services;
- Adverse tax consequences such as those related to changes in tax laws or tax rates or their interpretations, including with respect to the impact of the Tax Cuts and Jobs Act of 2017;
- The application of judgment in determining our global provision for income taxes, deferred tax assets or liabilities or other tax liabilities given the ultimate tax determination is uncertain;
- Health epidemics, including the recent COVID-19 pandemic, have had, and could in the future have, an adverse impact on our business, operations and financial results, and the markets and communities in which we and our employees, vendors and customers operate
- Pending or new litigation; and
- Factors set forth herein under the caption “Item 1A Risk Factors”.

This list of factors that may affect our future performance and financial and competitive position and the accuracy of forward-looking statements is illustrative, but it is by no means exhaustive. Accordingly, all forward-looking statements should be evaluated with the understanding of their inherent uncertainty. All forward-looking statements included in this document are based on information available to us as of the date of this document, and we assume no obligation to update these cautionary statements or any forward-looking statements, except as required by law. These statements are not guarantees of future performance.

We qualify all the forward-looking statements contained in this Annual Report on Form 10-K by the foregoing cautionary statements.

PART I

ITEM 1. BUSINESS

Overview

Our mission is to provide simple useful services that help people unlock the power of the Internet.

We accomplish this by reducing the complexity of our customers’ experience as they access the Internet (at home or on the go) and while using Internet services such as domain name registration, email and other Internet services. We are organized, managed and report our financial results as two segments, Network Access Services and Domain Services, which are differentiated primarily by their services, the markets they serve and the regulatory environments in which they operate.

Our management regularly reviews our operating results on a consolidated basis, principally to make decisions about how we utilize our resources and to measure our consolidated operating performance. To assist us in forecasting growth and to help us monitor the effectiveness of our operational strategies, our management regularly reviews revenue for each of our service offerings in order to gain more depth and understanding of the key business metrics driving our business. Accordingly, we report Network Access Services and Domain Services revenue separately.

We redefined our reporting segments and our key measure of performance effective January 1, 2021 as a result of the increased separation between our mobile and fiber product offerings as well as the increased delineation between the operations supporting certain product offerings planned in 2021.

Effective January 1, 2021, Tucows will adjust its segment reporting to include adjusted EBITDA as a key measure of segment performance in addition to its existing key measure of segment performance, gross profit.

Also effective January 1, 2021, The operating results of our existing Network Access segment will be separated into two separate segments, the Mobile segment and the Fiber segment. The new Mobile segment will contain our Mobile Services Enabler ("MSE") and professional services product offerings as well as the retail sale of mobile phones and retail telephony services. The Fiber segment will contain the operating results of our retail high speed Internet access operations. The product offerings included in the Domain Services segment will remain unchanged.

Network Access Services

Network Access Services includes retail mobile services, mobile platform and professional services supporting Mobile Virtual Network Operators ("MVNOs"), fixed high-speed Internet access services and other revenues, including billing solutions to small Internet service providers ("ISPs").

Historically, the Company offered retail mobile services ("Ting Mobile") through the Ting website and to a lesser extent through certain third-party retail stores and online retailers. We generated revenues from the sale of retail telephony services, mobile phone hardware and related accessories to individuals and small businesses through the Ting website. Ting Mobile's primary focus was providing simple and easy to use services, including simple value pricing, in particular for multi-line accounts, and superior customer care. This continued until August 1, 2020, when the Company and its wholly owned Subsidiary Ting, Inc. entered into an Asset Purchase Agreement (the "Purchase Agreement") with DISH Wireless LLC ("DISH") pursuant to which Ting sold substantially all of its retail mobile customer relationships, and mobile handset and SIM inventory to DISH and granted DISH the right to use and an option to purchase the Ting brand. The transferred assets under the Purchase Agreement do not include the technology platforms and related intellectual property and infrastructure necessary to enable or support the mobile customers. The Company has retained the assets used to provide the MSE platform and other professional services to DISH, as discussed further below. The residual revenues and costs associated with retail mobile services in the months following the entry into the Purchase Agreement represent the telephony services, mobile phone hardware and related accessories sold to the small subset of customer relationships retained by the Company that were not part of the Purchase Agreement. These customers are limited to one MNO agreement that was not assigned to DISH. The Company will retain customer accounts associated with the excluded MNO, and the minimum revenue commitments under the excluded MNO contract. The Company will be able to continue adding customers under the excluded MNO contract working with DISH in order to meet the commitment.

Historically, the Company also operated other MVNO brands, ZipSim and Always Online Wireless (collectively referred to as the "Roam Mobility brands"). The Roam Mobility brands operated as an MVNO on the same nationwide Global System for Mobile communications ("GSM") network used by Ting Mobile and distributed through third-party retail stores and product branded websites. The primary focus of the Roam Mobility brands was to offer affordable roaming service to those travelling throughout the United States or Internationally. In light of the impact of the COVID-19 pandemic on business and leisure travel industries, demand for SIM-enabled roaming services early in the fiscal year ("Fiscal") ending December 31, 2020 ("Fiscal 2020") decreased significantly. As a result of the current and expected longer term reduction of business and leisure travel, the Company decided to shut down the operations of the Roam Mobility brands in June 2020, which was completed by September 30, 2020.

Although we still provide retail mobile services to a small subset of customers retained through the Ting Mobile brand, this service offering no longer represents the Company's strategic focus for Mobile Services going forward. Instead, we have transitioned away from a MVNO and towards a MSE, where we will focus on delivering a wide range of functions including billing, activation, provisioning, funnel marketing, and other professional services to mobile providers. Contemporaneously with the execution of the Purchase Agreement with DISH, the Company executed a Mobile Services Enabler Master Services Agreement (the "MSA") with DISH with to provide certain back-office enabling services in support of DISH's MVNO operations in the United States. The MSA has a four-year term effective August 1, 2020, with an automatic one-year extension upon achievement of certain milestones, and monthly per subscriber tiered rates. DISH is now the first Tucows MSE customer. Under the terms of the MSA, the Company is permitted to sell MSE services to other third parties.

The Company also derives revenue from the sale of fixed high-speed Internet access ("Ting Internet") in select communities throughout the United States, including towns in North Carolina, Maryland, Idaho, Colorado, Virginia, and California with further expansion underway to both new and existing Ting towns. Our primary sales channel of Ting Internet is through the Ting website. The primary focus of Ting Internet is to provide reliable Gigabit Internet services to consumer and business customers. On January 1, 2020, the Company closed its acquisition of Cedar Holdings Group ("Cedar"). Cedar is a telecommunications provider serving multiple markets in the Western Slope of Colorado and northwestern New Mexico. Cedar has focused the last several years on building fiber to enterprise, anchor institution, and residential customers.

Revenues from our retail mobile services, MSE business and Ting Internet are all generated in the U.S. and are provided on a monthly basis. Ting Internet services have no fixed contract terms, while our MSE customer agreements have set contract lengths with the underlying MVNO.

Domain Services

Domain Services includes wholesale and retail domain name registration services, value added services and portfolio services derived through our OpenSRS, eNom, Ascio and Hover brands. We earn revenues primarily from the registration fees charged to resellers in connection with new, renewed and transferred domain name registrations. In addition, we earn revenues from the sale of retail domain name registration and email services to individuals and small businesses. Domain Services revenues are attributed to the country in which the contract originates, which is primarily in Canada and the U.S. for OpenSRS and eNom brands. Ascio domain services contracts and EPAG agreements primarily originate in Europe.

Our primary distribution channel is a global network of approximately 36,000 resellers that operate in approximately 160 countries and who typically provide their customers, the end-users of Internet-based services, with solutions for establishing and maintaining an online presence. Our primary focus is serving the needs of this network of resellers by providing the broadest portfolio of gTLD and the country code top-level domain (“ccTLD”) options and related services, a white-label platform that facilitates the provisioning and management of domain names, a powerful Application Program Interface, easy-to-use interfaces, comprehensive management and reporting tools, and proactive and attentive customer service. Our services are integral to the solutions that our resellers deliver to their customers. We provide “second tier” support to our resellers by email, chat and phone in the event resellers experience issues or problems with our services. In addition, our Network Operating Center proactively monitors all services and network infrastructure to address deficiencies before customer services are impacted.

We believe that the underlying platforms for our services are among the most mature, reliable and functional reseller-oriented provisioning and management platforms in our industry, and we continue to refine, evolve and improve these services for both resellers and end-users. Our business model is characterized primarily by non-refundable, up-front payments, which lead to recurring revenue and positive operating cash flow.

Wholesale, primarily branded as OpenSRS, eNom, EPAG and Ascio, derives revenue from its domain registration service and from providing value-added services. The OpenSRS, eNom, EPAG and Ascio domain services manage 25.4 million domain names under the Tucows, eNom, EPAG and Ascio ICANN registrar accreditations and for other registrars under their own accreditations, which has increased by 1.6 million domain names since December 31, 2019. The increase is driven by increased registrations during COVID-19, as more businesses established an online presence, offset by the continued erosion of registrations related to non-core customers from our eNom brand.

Value-added services include hosted email which provides email delivery and webmail access to millions of mailboxes, Internet security services, Internet hosting, WHOIS privacy, publishing tools and other value-added services. All of these services are made available to end-users through a network of 36,000 web hosts, ISPs and other resellers around the world. In addition, we also derive revenue by monetizing domain names which are near the end of their lifecycle through advertising revenue or auction sale.

Retail, primarily the Hover and eNom portfolio of websites, including eNom, eNom Central and Bulkregister, derive revenues from the sale of domain name registration and email services to individuals and small businesses. Our retail domain services also includes our Personal Names Service – based on over 36,000 surname domains – that allows roughly two-thirds of Americans to purchase an email address based on their last name.

Portfolio services generate revenue by offering names in our surname domain portfolio for resale through our RealNames email service. The Company expects portfolio revenue to decline into 2021 and starting in the first quarter of 2021 will no longer separately breakout Portfolio revenues.

Additional information about segments can be found in “Note 19 – Segment Reporting” of the Notes to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report.

Net Revenues

Network Access Services

The Company generates Network Access Services revenues primarily through the provisioning of retail mobile services, mobile platform and professional services supporting MVNOs, fixed high-speed Internet access services and other revenues, including billing solutions to small ISPs.

Mobile Services - Retail Mobile Services

Ting Mobile wireless usage contracts grant customers access to standard talk, text and data mobile services. Ting Mobile contracts are billed based on the customer's selected rate plan, which can be either usage based or an unlimited plan. All rate plan options are charged to customers on a postpaid, monthly basis at the end of their billing cycle. As discussed above, on August 1, 2020, the Company and its wholly owned Subsidiary Ting, Inc. entered into the Purchase Agreement with DISH pursuant to which Ting sold substantially all of its retail mobile customer relationships, and mobile handset and SIM inventory to DISH and granted the right to use and option to purchase the Ting brand. Select MNO agreements previously established to operate the Ting Mobile MVNO business were assigned to DISH as part of this Purchase Agreement. We retained a small subset of customers to which we continue to provide retail mobile services. All future revenues associated with Retail Mobile Services stream will only be for this subset of customers retained by the Company.

Ting Mobile services are primarily contracted through the Ting website, for one month at a time and contain no commitment to renew the contract following each customer's monthly billing cycle. The Company's billing cycle for all Ting Mobile customers is computed based on the customer's activation date. In order to recognize revenue as the Company satisfies its obligations, we compute the amount of revenues earned but not billed from the end of each billing cycle to the end of each reporting period. In addition, revenues associated with the sale of wireless devices and accessories are recognized when title and risk of loss is transferred to the customer and shipment has occurred. Incentive marketing credits given to customers are recorded as a reduction of revenue.

As part of the Purchase Agreement, as a form of consideration for the sale of the customer relationships, the Company receives a payout on the margin associated with the legacy customer base sold to DISH, over a period of 10 years. This has been classified as Other Income and not considered revenue in the current period as it represents the payout from a one-time sale and is not considered a part of our core business operations with the shift from MVNO to MSE.

The Company also operated the Roam Mobility brands historically and, in June 2020, decided to shut down the businesses due to the considerable lack of demand for SIM-enabled roaming services as a result of the limited business and leisure travel brought about by the COVID-19 pandemic. The shutdown was completed by September 30, 2020. Our Roam Mobility brands offered standard talk, text and data mobile services. Roam customers prepaid for their usage through the Roam Mobility website. When prepayments were received the amount was deferred, and subsequently recognized as the Company satisfies its obligation to provide mobile services. In addition, revenues associated with the sale of SIM cards were recognized when title and risk of loss was transferred to the subscriber and shipment occurred. Incentive marketing credits given to customers were recorded as a reduction of revenue.

Mobile Services - Mobile Platform Services

Tucows' MSE platform provides network access, provisioning and billing services for MVNOs. These platform fees are billed to our MVNO customers monthly, on a postpaid basis. Currently, we have one MSE platform customer - DISH, but intend to expand this service to other MVNOs in the future. The fees are based on the volume of their subscribers utilizing the platform during a given month. The Company recognizes revenue over this new revenue stream as the Company satisfies its obligations to provide MSE services on a monthly basis. For any bundled professional services where proceeds are collected before the service period as part of MSE Platform Revenues, the professional services revenue is initially deferred and recognized only as the Company performs its obligation to provide professional services.

Mobile Services - Other Professional Services

This revenue stream includes any other professional services, including transitional services, earned in connection with Tucows' new MSE business. These are billed to our customers monthly at set and established rates for services provided in the applicable period. Currently, we have one professional services customer - DISH, but intend to expand this service to other MVNOs in the future. The Company recognizes revenue over this new revenue stream as the Company satisfies its obligations to provide professional services.

Fiber Internet Services

Fiber Internet Services derive revenues from providing Ting Internet to individuals and small businesses in select cities. In addition, we provide billing, provisioning and customer care software solutions to ISPs through our Platypus billing software. Ting Internet access contracts provide customers Internet access at their home or business through the installation and use of our fiber optic network. Ting Internet contracts are generally prepaid and grant customers with unlimited bandwidth based on a fixed price per month basis. Since consideration is collected before the service period, revenue is initially deferred and recognized as the Company performs its obligation to provide Internet access.

Ting Internet services are primarily contracted through the Ting website, for one month at a time and contain no commitment to renew the contract following each customer's monthly billing cycle. The Company's billing cycle for all Ting Internet access customers is computed based on the customer's activation date. In order to recognize revenue as the Company satisfies its obligations, we compute the amount of revenues earned but not billed from the end of each billing cycle to the end of each reporting period. In addition, revenues associated with the sale of Internet hardware to subscribers are recognized when title and risk of loss is transferred to the subscriber and shipment has occurred. Incentive marketing credits given to customers are recorded as a reduction of revenue.

In those cases, where payment is not received at the time of sale, revenue is not recognized until contract inception unless the collection of the related accounts receivable is reasonably assured. The Company records costs that reflect expected refunds, rebates and credit card charge-backs as a reduction of revenues at the time of the sale based on historical experiences and current expectations.

Domain Services

Wholesale - Domain Services

Domain registration contracts, which can be purchased for terms of one to ten years, provide our resellers and retail registrant customers with the exclusive right to a personalized internet address from which to build an online presence. The Company enters into domain registration contracts in connection with each new, renewed and transferred-in domain registration. At the inception of the contract, the Company charges and collects the registration fee for the entire registration period. Though fees are collected upfront, revenue from domain registrations are recognized rateably over the registration period as domain registration contracts contain a ‘right to access’ license of IP, which is a distinct performance obligation measured over time. The registration period begins once the Company has confirmed that the requested domain name has been appropriately recorded in the registry under contractual performance standards.

Historically, our wholesale domain service has constituted the largest portion of our business and encompasses all of our services as an accredited registrar related to the registration, renewal, transfer and management of domain names. In addition, this service fuels other revenue categories as it often is the initial service for which a reseller will engage us, enabling us to follow on with other services and allowing us to add to our portfolio by purchasing names registered through us upon their expiration. We expect Domain services will continue to be the largest portion of our business and will continue to enable us to sell add-on services.

The Company is an ICANN accredited registrar. Thus, the Company is the primary obligor with our reseller and retail registrant customers and is responsible for the fulfillment of our registrar services to those parties. As a result, the Company reports revenue in the amount of the fees we receive directly from our reseller and retail registrant customers. Our reseller customers maintain the primary obligor relationship with their retail customers, establish pricing and retain credit risk to those customers. Accordingly, the Company does not recognize any revenue related to transactions between our reseller customers and their ultimate retail customers.

Wholesale – Value-Added Services

We derive revenue from domain related value-added services like digital certifications, WHOIS privacy and hosted email and by providing our resellers and retail registrant customers with tools and additional functionality to be used in conjunction with domain registrations. All domain related value-added services are considered distinct performance obligations which transfer the promised service to the customer over the contracted term. Fees charged to customers for domain related value-added services are collected at the inception of the contract, and revenue is recognized on a straight-line basis over the contracted term, consistent with the satisfaction of the performance obligations.

We also derive revenue from other value-added services, which primarily consists of Internet hosting services on the OpenSRS and eNom domain expiry streams.

Retail

We derive revenues from Hover and eNom’s retail properties through the sale of retail domain name registration and email services to individuals and small businesses.

Portfolio

The Company sells the rights to its portfolio of surname domains used in its RealNames email service. Revenue generated from sale of domain name contracts, containing a distinct performance obligation to transfer the domain name rights under the Company’s control, is generally recognized once the rights have been transferred and payment has been received in full. Domain portfolio names are sold through our RealNames email service. The Company expects portfolio revenue to decline into 2021 and starting in the first quarter of 2021 will no longer separately breakout Portfolio revenues.

For information about geographic areas, see “Note 19 – Segment Reporting” of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report.

Intellectual Property

We believe that we are well positioned in the wholesale domain registration and email markets due in part to our highly-recognized “Tucows”, “OpenSRS”, “Ascio” and “eNom” brands and the respect they confer on us as a defender of end-user rights and reseller-friendly approaches to doing business. We were among the first group of 34 registrars to be accredited by ICANN in 1999, and we remain active in Internet governance issues.

Our success and ability to compete depend on our ability to develop and maintain the proprietary aspects of our brand name and technology. We rely on a combination of trademark, trade secret and copyright laws, as well as contractual restrictions to protect our intellectual property rights.

We have registered the Tucows trademark in the United States, Canada and the European Union and we register additional service marks and trademarks as appropriate and where such protection is available.

We seek to limit disclosure of our intellectual property by requiring all employees and consultants with access to our proprietary information to commit to confidentiality, non-disclosure and work-for-hire agreements. All of our employees are required to sign confidentiality and non-use agreements, which provide that any rights they may have in copyrightable works or patentable technologies accrue to us. Before entering into discussions with potential vendors and partners about our business and technologies, we require them to enter into a non-disclosure agreement. If these discussions result in a license or other business relationship, we also generally require that the agreement containing the parties’ rights and obligations include provisions for the protection of its intellectual property rights.

Customers

The majority of the customers to whom we provide reseller services are generally either web hosts or ISPs. A small number of customers are consultants and designers providing our services to their business clients. Both our Retail Domain Services and our Network Access Services customers are a very broad mix of consumers, small businesses and corporations. We have a singular customer in DISH for our MSE Platform and Other Professional Services, until such time we expand these offerings to other MVNOs.

No customer represented more than 10% of our consolidated revenues in any of the last three fiscal years.

While web hosts and ISPs are capitalizing on the growth in Internet usage and the demand for new services, they also face significant competition from numerous other service providers with competitive or comparable offerings. This has led such web hosts and ISPs to focus on core competencies. As such resellers are increasingly seeking to outsource non-core services. Outsourcing enables these resellers to better focus on customer acquisition and retention efforts by eliminating the need to own, develop and support non-core applications in-house.

Seasonality

During the summer months and certain other times of the year, such as major holidays, Internet usage often declines. As a result, some of our services (such as OpenSRS, eNom, Ascio, and Hover) may experience reduced demand during these times. For example, our experience shows that new domain registrations decline during the summer months and around the year-end holidays.

Competition

Our competitors may be divided into the following groups:

- US Broadband providers such as AT&T, Comcast, Verizon and CenturyLink, who primarily compete with Ting Internet Services.
- Retail-oriented domain registrars, such as GoDaddy and Web.com who compete with our Reseller customers in wholesale domain services and with Hover.
- Wholesale-oriented domain registrars, such as GoDaddy, who market services to resellers such as our customers.
- Wholesale Email Service providers, such as Google, Microsoft, Bluetie and MailTrust.

We expect to continue to experience significant competition from the competitors identified above and, as our business continues to develop, we expect to encounter competition from other providers. Service providers, Internet portals, web hosting companies, email hosting companies, outsourced application companies, country code registries and major telecommunication firms may broaden their services to include services we offer.

We believe the primary competitive factors in our Network Access Services are:

- Providing a superior customer service experience
- Providing a simple and friendly user experience through more usable web and application interfaces and more fair and transparent pricing;
- Being agnostic on internet hardware, including network routers; and
- Providing superior technology, speed and reliability with fiber to the home services.

We believe the primary competitive factors in our Domain Services are:

- Providing superior customer service by anticipating the technical requirements and business objectives of resellers and providing them with technical advice to help them understand how our services can be customized to meet their particular needs;
- Providing cost savings over in-house solutions by relieving resellers of the expense of acquiring and maintaining hardware and software and the associated administrative burden;
- Enabling resellers to better manage their relationships with their end-users;
- Facilitating scalability through an infrastructure designed to support millions of transactions across millions of end-users; and
- Providing superior technology and infrastructure, consisting of industry-leading software and hardware that allow resellers to provide these services to their customers without having to make substantial investments in their own software or hardware.

Although we encounter pricing pressure in many markets in which we compete, we believe the effects of that pressure are mitigated by the fact that we deliver a high degree of value to our customers through our business and technical practices. We believe our status as a trusted supplier also allows us to mitigate the effects of this type of competition. We believe that the long-term relationships we have made with many customers results in a sense of certainty that would not be available to those customers through a competitor.

Human Capital Resources

As a global Internet and technology company, we have a wide range of employees, including management professionals, technicians, engineers, and call center employees. As of December 31, 2020, we had approximately 800 full-time employees globally. None of our employees are currently represented by a labor union. We consider our relations with our employees to be good. Approximately 67% of our employees are based in Canada, followed by 26% based in the U.S., and the remaining 7% spread across Europe and other regions. Of our employees, approximately 450 support our Network Access Services segment, while approximately 350 support our Domains Services segment. Our employees perform work in a variety of environments, including customers' homes or businesses, in the field, in corporate offices or remotely from their own home offices. For the small group of employees who are unable work from home during this time, including our order fulfillment and Fiber installation teams, many of whom work in the field, they are encouraged to practice social distancing and to continue to follow hygiene best practices and safety protocols as outlined by the Centers for Disease Control and Prevention. As a response to the pandemic, we have established an Fiber Internet install solution for our employees and customers that minimizes risks associated with person-to-person contact. We expect our work from home policy to remain in effect until emergency state and governmental declarations where we have physical offices have ended and we believe the risk of community spread of the disease has subsided. Given our experience with remote work prior to COVID-19, we have not and do not expect to have productivity issues while the overwhelming majority of our office-based workforce is dispersed. We ground ourselves in being open, human, real and smart and we believe this corporate culture fosters innovation, creativity and teamwork across the organization and is a critical contributor to our success. We offer competitive compensation in addition employee stock options, physical and mental health benefits, learning allowances, future planning programs for employee RRSP/401k contributions, as well as generous vacation, maternity, paternity and adoption leaves for our employees. We also support five Employee Resource Groups ("ERGs") focused on BIPOC, caregivers, LGBTQA, racial justice and equality, and women leadership. These volunteer groups connect employees with shared characteristics, life experiences and enable them to engage in activities that advance our culture and contribute to our success.

Compliance with Government Regulations

Network Access Services

Our Network Access Services segment is subject to regulation by the Federal Communications Commission ("FCC"), federal and other state laws in the U.S. These include:

The FCC and other federal, state and local, as well as international, governmental authorities have jurisdiction over our business. The licensing, construction, operation, sale and interconnection arrangements of wireless telecommunications systems are regulated by the FCC and, depending on the jurisdiction, international, state and local regulatory agencies. In particular, the FCC imposes significant regulation on licensees of wireless spectrum with respect to how radio spectrum is used by licensees, the nature of the services that licensees may offer and how the services may be offered, and resolution of issues of interference between spectrum bands.

Our Fiber Internet services are also subject to a number of regulations and commitments. The FCC frequently considers imposing new broadband-related regulations such as those relating to an Open Internet. States and localities also consider new broadband-related regulations, including those regarding government-owned broadband networks, net neutrality and connectivity during COVID-19. Additionally, as an internet service provider ("ISP"), we must implement certain network capabilities to assist law enforcement in conducting surveillance of persons suspected of criminal activity. From time to time, the FCC considers imposing new regulatory obligations on ISPs. We are committed to an Open Internet and do not block, throttle or engage in paid or affiliated prioritization, and have committed not to block, throttle or discriminate against lawful content.

Domain Services

Our Domain Services segment is subject to regulation by the Internet Corporation for Assigned Names and Numbers ("ICANN"), federal and state laws in the U.S. and the laws of other jurisdictions in which we do business. These include:

ICANN: The registration of domain names is governed by ICANN. ICANN is a multi-stakeholder private sector, not-for-profit corporation formed for the express purposes of overseeing a number of Internet related tasks, including management of the DNS, allocation of IP addresses, accreditation of domain name registrars and registries and the definition and coordination of policy development for all of these functions. Tucows, eNom, EPAG and Ascio are each individually accredited by ICANN as domain name registrars and thus our ability to offer domain name registration products is subject to our ongoing relationship with, and accreditation by, ICANN.

Country Code Top-Level Domain ("ccTLD") Authorities: The regulation of ccTLDs is governed by national regulatory agencies of the country underlying the specific ccTLDs, such as Canada (.ca). Our ability to sell ccTLDs is dependent on our ability to maintain accreditation in good standing with these various international authorities.

Communications Decency Act ("CDA"): The CDA generally protects online service providers, such as Tucows, from liability for certain activities of their customers, such as posting of defamatory or obscene content, unless the online service provider is participating in the unlawful conduct. Notwithstanding the general protections from liability under the CDA, we may nonetheless be forced to defend ourselves from claims of liability covered by the CDA, resulting in an increased cost of doing business.

Digital Millennium Copyright Act ("DMCA"): The DMCA provides recourse for owners of copyrighted material who believe that their rights under U.S. copyright law have been infringed on the Internet. Under the DMCA, we generally are not liable for infringing content posted by third parties. However, if we receive a proper notice from a copyright owner alleging infringement of its protected works by web pages for which we provide hosting services, and we fail to expeditiously remove or disable access to the allegedly infringing material, fail to post and enforce a digital rights management policy or a policy to terminate accounts of repeat infringers, or otherwise fail to meet the requirements of the safe harbor under the DMCA, the owner may seek to impose liability on us.

General Data Protection Regulation ("GDPR"): GDPR creates obligations around the procurement, processing, publication and sharing of personal data. Potential fines for violations of certain provisions of GDPR reach as high as 4% of a company's annual total revenue, potentially including the revenue of its international affiliates. The solutions we develop for GDPR-compliance may not be adequate in the views of regulatory authorities or ICANN, which may cause the loss of WHOIS privacy revenue or increase our costs of developing compliant solutions or subject us to litigation, liability, civil penalties, or loss of market share. As the privacy laws and regulations around the world continue to evolve, these changes could adversely affect our business operations in similar ways

Several bodies of law may be deemed to apply to us with respect to various customer activities. Because we operate in a relatively new and rapidly evolving industry and since our industry is characterized by rapid changes in technology and in new and growing illegal activity, these bodies of laws are constantly evolving. As a host of content through our Exact Hosting business, and to a lesser extent as a registrar of domain names services we may be subject to potential liability for illegal activities by our resellers' customers on their websites. We provide an automated service that enables users to register domain names. We do not monitor or review, nor does our accreditation agreement with ICANN require that we monitor or review, the appropriateness of the domain names we register for our customers or the content of their websites, and we have no control over the activities in which these customers engage. While we have policies in place to terminate domain names or to take other action if presented with evidence of illegal conduct, customers could nonetheless engage in prohibited activities without our knowledge..

Corporate Information

Our principal place of business is located in Canada.

We were incorporated under the laws of the Commonwealth of Pennsylvania in November 1992 under the name Infonautics, Inc. In August 2001, we completed our acquisition of Tucows Inc., a Delaware corporation, and we changed our name from Infonautics, Inc. to Tucows Inc. Our principal executive offices are located at 96 Mowat Avenue, Toronto, Ontario, M6K 3M1 Canada. Our telephone number is (416) 535-0123. We also have offices in Germany, Denmark and the United States of America.

We are subject to the filing requirements of the Securities Exchange Act of 1934 (the “Exchange Act”). Therefore, we file annual reports, periodic reports, proxy statements and other information with the Securities and Exchange Commission, or SEC. The SEC maintains an Internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically at www.sec.gov.

Our website address is tucows.com. We make available through our website, free of charge, copies of our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, as amended as soon as reasonably practicable after filing such material electronically or otherwise furnishing it to the SEC. The information on the website listed above is not and should not be considered part of this Annual Report and is not incorporated by reference in this document.

Information about our Executive Officers and Key Employees

The following table sets forth the names, ages and titles of persons currently serving as our executive officers and key employees.

Name	Age	Title
Elliot Noss	58	President and Chief Executive Officer
Davinder Singh	46	Chief Financial Officer
Jill Szuchmacher	46	Chief Strategy Officer and EVP Networks
Dave Woroch	58	Executive Vice President, Domains
Bret Fausett	57	Chief Legal Officer
Hanno Liem	47	Chief Technology Officer
Jessica Johansson	48	Chief People Officer
Justin Reilly	33	Chief Product Officer
Michael Goldstein	49	Chief Revenue Officer, Ting
Ross Rader	49	Chief Customer Officer

Elliot Noss has served as our President and Chief Executive Officer since May 1999 and served as Vice President of Corporate Services for Tucows Interactive Limited, which was acquired by Tucows in May 1999, from April 1997 to May 1999.

Davinder Singh has served as our Chief Financial Officer since 2017, having previously served as Vice President Finance since joining the Company in 2016. Prior to joining the Company, Mr. Singh spent eight years at KPMG LLP primarily focusing on public company audits in the technology field. After leaving KPMG LLP, Mr. Singh joined TELUS and held progressive roles, including Chief Financial Officer of TELUS International, TELUS’ outsourcing division. Mr. Singh is a Chartered Professional Accountant with the Institute of Chartered Professional Accountants of British Columbia.

Jill Szuchmacher joined Tucows in November 2020 as our Chief Strategy Officer & Executive Vice President, Networks. Prior to joining Tucows, Ms. Szuchmacher was Vice President of Operations at Google Fiber where she led strategy, planning, training and analytics for build and field operations.

David Woroch has served as our Executive Vice President, Domains since 2014 and oversees the Domains business at Tucows, including OpenSRS, eNom, Ascio and EPAG (wholesale), Hover (retail) and the premium domain portfolio. Mr. Woroch joined Tucows in March 2000 after thirteen years at IBM and has helped build Tucows’ sales, marketing, business development, product management and technical support capabilities.

Bret Fausett joined Tucows in September 2017 as our Chief Legal Officer. Prior to joining Tucows, Mr. Fausett worked for Uniregistry, where he had served as General Counsel for six years. Prior to Uniregistry, Mr. Fausett worked as outside legal counsel to a number of domain industry related companies.

Hanno Liem joined Tucows in January 2018 as our Chief Technology Officer. Prior to joining Tucows, Mr. Liem worked for Rakuten Kobo since 2012 where he served as their Vice President of Global Operations and focused on site operations and engineering.

Jessica Johansson has served as our Chief People Officer since January 2017. Prior to joining Tucows, Ms. Johansson held executive level HR roles at Johnson Controls, Inc. since 2008, Brookfield Renewable Energy Group and Capgemini.

Justin Reilly joined Tucows in September 2019 as our Chief Product Officer. Prior to joining Tucows, Justin was Head of Product & Customer Experience Innovation at Verizon, as well as founder of a number of companies with consumer grade product and machine learning at their core.

Michael Goldstein has served as our Chief Revenue Officer since September 2009. Before joining us, Mr. Goldstein spent five years at Ogilvy, NY as a Partner and, Marketing Director managing advertising, brand identity, digital and public relations campaigns for clients such as TD Ameritrade, Kraft, GlaxoSmithKline and DoubleClick.

Ross Rader has served as Chief Customer Officer since 2012, where he leads our customer service and support organization. In 2000, as our Director of Assigned Names, Ross helped launch Tucows OpenSRS service. In 2005, as General Manager, Retail Services he oversaw Tucows’ retail domain operations, including the development and launch of Hover in 2008.

ITEM 1A. RISK FACTORS

Our business faces significant risks. Some of the following risks relate principally to our business and the industry and statutory and regulatory environment in which we operate. Other risks relate principally to the securities markets and ownership of our stock. The risks described below may not be the only risks we face. Additional risks that we do not yet know of or that we currently think are immaterial may also impair our business operations. If any of the events or circumstances described in the following risk factors actually occur, our business, financial condition or results of operations could suffer, and the trading price of our common stock could decline.

RISKS RELATED TO OUR BUSINESS AND INDUSTRY

We face intense competition and consolidation in the industries and markets we serve. If we do not continue to provide services that are useful to users, we may not remain competitive and be forced to reduce our prices, and our revenues and operating results could be adversely affected.

Network Access Services

The U.S. wireless communications & Internet services industry has become extremely competitive. We expect competition to continue to intensify as a result of the entrance of new competitors or the expansion of services offered by existing competitors. If we cannot compete effectively, our revenues, growth and profitability may be materially adversely affected. Our brands compete with (1) incumbent facilities-based wireless communication and Internet service providers and their prepaid affiliate brands and (2) other MVNOs and (3) other MSEs offering network access, billing and provisioning solutions. Most of our competitors have substantially greater financial, technical, personnel and marketing resources and a larger market share than we do, and we may not be able to compete successfully against them. Due to their size and bargaining power, they may obtain discounts for facilities, equipment, devices (including cellular handsets, IoT enabled devices and ONTs), content, and services, potentially placing us at a competitive disadvantage. As consolidation in the industry creates even larger competitors, our competitors' purchasing advantages may increase further, hampering our efforts to attract and retain customers. They may use their significant market power to introduce additional products and service features (or lower prices) that we are unable to offer at similar cost or price to the customer. This may impact our ability to gain significant market share from these competitors. To remain competitive, we may be compelled to offer greater subsidies for our devices, reduce the prices for our wireless, platform or gigabit services or augment our service offerings. Any subsidies or price reductions that we offer in order to remain competitive may reduce our margins and revenues, and may adversely affect our profitability and cash flows. Lower prices may also make our services more accessible to new, lower-value customers with less disposable income available to spend on our services. In addition, if prices decline, customers without long-term contracts may change their service providers more frequently, thereby increasing our churn and resulting in higher acquisition costs to replace those customers. A shift to lower value or less loyal customers could have an adverse impact on our results of operations and cash flows.

Domain Services

The market for Internet services generally and domain registrations in particular is intensely competitive and rapidly evolving as participants strive to protect their current market share and improve their competitive position, and we expect competition to intensify in the future. If any of our competitors merge with one another, or existing suppliers (Registries) decide to begin competing in our core business areas, they will present a stronger force in the market and may attract the business of both existing and prospective resellers. In addition, our resellers may opt to build their own technical systems and seek ICANN accreditation in order to process domain applications themselves. Currently ICANN has over 2,400 active registrars who register domain names in one or more of the gTLDs that it oversees. Not all of these accredited registrars, however, are operational. There are relatively few barriers of entry to this market, so as this market continues to develop we expect the number of competitors to increase. The continued entry into the domain registration industry and the rapid growth of some competitive registrars and service providers who have already entered the industry may make it difficult for us to maintain our current market share. As a result, we may not be able to compete effectively and our sales may decrease materially. To remain competitive, competitors may offer aggressive price discounts on the services they offer. At the same time, registries may increase their prices, increasing the cost of the services we sell. These pricing pressures may require us to match these discounts or absorb price increases in order to remain competitive, which would reduce our margins, or cause us to lose customers who decide to purchase the discounted service offerings of our competitors or forego a purchase because of pricing. Most of our existing competitors are also expanding the variety of services that they offer. These competitors include, among others, domain name registrars, hosting companies and Internet service providers, as well as other large Internet companies, who have the ability to offer these services for free or at a reduced price as part of a bundle with other service offerings. If these companies decide to devote greater resources to the development, promotion and sale of these new products and services, greater numbers of individuals and businesses may choose to use these competitors as their starting point for creating an online presence and as a general platform for running their online business operations.

Our service offerings both in Network Access Services and Domain Services may not be successful if we are unable to maintain existing customer relationships or establish new relationships.

Network Access Services

Our retail mobile services, mobile platform services and fiber businesses may not prove to be successful or profitable in the long term. Long-term success is dependent upon its sustained ability to generate sufficient revenue from its customers based on their use of its services and its ability to respond to churn by retaining existing customers and adding new customers.

Specifically regarding our Retail Mobile Services, with limited influence over the small subset of subscribers on the MNO contract retained by the Company as part of the Purchase Agreement, we may be unable to effectively respond to churn or attract a sufficient level of new customers to meet the minimum commitments with this MNO partner. This could incur significant and recurring penalties until such a time that the contract is complete. These penalties would negatively impact our operational performance and financial results if enforced by the MNO.

Regarding our Mobile Platform Services, at the start, DISH will be our sole customer and will represent 100% of our MSE revenues until such time that we are able to scale our services to other customers interested in our enablement services. With all our MSE revenues concentrated with one customer, we are exposed to significant risk if we are unable to maintain this customer relationship or establish new relationships with other MVNOs in the future. Additionally, our revenues as an MSE are directly tied to the subscriber volumes of DISH's MVNO or MNO networks, so our profitability is contingent on the ability of DISH to continue to add subscribers onto our platform. If any of these events occur, our operational performance and financial results may be adversely affected.

Domain Services

Our network of resellers is our principal source for distributing domain services. We also rely on our resellers to market, promote and sell our services. Our ability to increase revenues in the future will depend significantly on our ability to maintain our reseller network, to sell more services through existing resellers and to develop our relationships with existing resellers by providing customer and sales support and additional products. Resellers have no obligations to distribute our services and may stop doing so at any time. If we are not able to maintain our relationships with resellers, our ability to distribute our services will be harmed, and our revenue may decline.

Our service offerings both in Network Access Services and Domain Services may be limited in ability to grow their respective businesses and customer base unless we can continue to manage vendor relationships and obtain both valuable network capacity and a multitude of domain name registration options. If these rates increase or product mix lags in comparison to our competitors, this could have a significant impact upon our operating results.

Network Access Services

In order to remain competitive in providing retail mobile services, we must continue to obtain valuable wireless network capacity at favorable rates and terms, provide adequate customer service and acquire and market a sufficient quantity and mix of handsets and related accessories. Our operating performance and ability to attract new customers may be adversely affected if we are unable to meet the increasing demands for our services in a timely and efficient manner, while adequately addressing the growing demands on our customer service, billing, and other back-office functions. Any change in our ability, or the ability of third parties with whom we contract, to provide these services also could adversely affect our operations and financial performance. With the sale of substantially all of the customer relationships associated with Ting Mobile to DISH as part of the Purchase Agreement, the fact that we now retain control over such a small subset of our historical subscriber base and that all of those customers are fixed to one MNO network could hinder our ability in the future to negotiate favorable rates and access to the mobile services mentioned above.

Domain Services

In order to remain competitive, we must provide a multitude of domain name registration options (TLDs, ccTLDs) to our resellers. Any failure on our part to offer domain registrations in a significant number of TLDs/ccTLDs or in a popular TLD/ccTLD would cause us to lose a competitive advantage and could cause resellers to elect to take their business to a registrar that does offer these services. Each registry typically imposes a fee in association with the registration of each domain. For example, Verisign, the registry for .com, presently charges a \$7.85 fee for each .com registration and ICANN currently charges a \$0.18 fee for each .com domain name registered in the gTLDs that fall within its purview. We have no control over these agencies and cannot predict when they may increase their respective fees. An amendment to the registry agreement between ICANN and Verisign was approved by the U.S. Department of Commerce in November 2018. The amendment confirms that Verisign will operate the .com registry until 2024. The amendment also repeals price controls and provides Verisign the pricing flexibility to change its .com Registry Agreement with ICANN to increase wholesale .com prices. Specifically, the flexibility permits Verisign to pursue with ICANN an up to 7 percent increase in the prices for .com domain names, in each of the last four years of the six-year term of the .com Registry Agreement. The changes also affirm that Verisign may not vertically integrate or operate as a registrar in the .com top level domain.

Our service offerings both in Network Access Services and Domain Services may experience a material adverse effect should the nature of the Internet fundamentally change or fail to grow and expand internationally as a viable medium for commerce. This includes changes in current navigation practices, technologies or marketing practices.

Network Access Services

The success of our Network Access Services, primarily Ting Fiber depends on the continued development and acceptance of symmetrical gigabyte Internet infrastructure and service as a medium for faster Internet communication. A number of factors could prevent continued growth and acceptance, including:

- the unwillingness of companies and customers to shift their purchasing from traditional ISP vendors to alternative vendors like Ting Fiber;
- the Fiber infrastructure may not be able to support the demands placed on it, and its performance and reliability may decline as usage grows;
- the development of alternative, wireless technologies (such as 5G) that could provide a similar or reasonably acceptable Internet speed and service without a fixed connection/physical network.

Any of these issues could slow the growth of the adoption of Fiber Internet, which could limit our growth and revenues.

Domain Services

The domain name registration industry continues to develop and adapt to changing technology and the demands of individual governments. These developments may include changes in the administration or operation of the Internet, including (a) the creation and institution of alternate systems for directing Internet traffic without the use of the existing domain system or (b) systems under local government control that splinter from, or thwart the operation of, the Internet. Systems existing outside the domain name system are not subject to ICANN accreditation requirements and restrictions. Other competitors have attempted to introduce naming systems that use keywords rather than traditional domains. The widespread acceptance of any alternative systems and Internet navigation practices could eliminate the need to register a domain to establish an online presence and could materially adversely affect our business, financial condition and results of operations.

Additionally, we believe that a major source of growth for Internet-based companies will come from individuals and businesses outside the United States where Internet access and use is currently less prevalent. A substantial number of our resellers are currently based outside the United States and we plan to grow our business in other countries. If Internet usage in these jurisdictions does not increase as anticipated, or if governments prohibit the registration and use of domain names or certain classes of domain names, our revenues may not grow as anticipated.

Our ongoing investment in new businesses, services and technologies and divestment of old businesses and services is inherently risky, and could disrupt our current operations. We may not be able to realize the intended and anticipated benefits from our investments, acquisitions and agreements, which could affect the value of these decisions to our business and our ability to meet our financial obligations and targets in the short or medium term.

Network Access Services

As part of the Purchase Agreement with DISH, the Company will be entitled to a 10-year payment stream that is a function of the margin generated by the transferred subscribers over the 10-year period. Subscribers are able to accept offers, plans or pricing from DISH. This consideration structure may not prove to be successful or profitable in the long-term to us if the existing subscriber base churns at an above average rate upon acquisition by DISH. Additionally, given DISH controls the revenues and costs incurred associated with the acquired subscribers, there could arise a situation where profitability for the subscriber base is diminished either by lower price points or cost inflation. If any of these events occur, our operational performance and financial results may be adversely affected.

Additionally, we have invested and expect to continue to invest in our new fiber to the home ("FTTH") deployments in select markets in the United States (Ting Fiber) both organically and inorganically through acquisitions like the purchase of Cedar Holdings Group, a telecommunications provider serving multiple markets in the Western Slope of Colorado and northwestern New Mexico. The investments are a reflection of our ongoing efforts to build FTTH network via public-private partnerships in communities we identify as having strong, unmet demand for FTTH services. Such FTTH investments may involve risks and uncertainties, including: insufficient revenues from such investments and acquisitions, in the short and medium term to offset any new commitments assumed and expenses associated with these new investments; inadequate return of capital on our investments; inability to obtain the appropriate technical and operational resources; and unanticipated local or federal regulatory changes that could cause us to fail to realize the anticipated benefits of such investments. Because these new FTTH deployments are inherently risky, no assurance can be given that such investments will be successful and will not adversely affect our financial condition and operating results.

Domain Services

We may acquire companies, assets or the rights to technologies in the future in order to develop new services or enhance existing services, to enhance our operating infrastructure, to fund expansion, to respond to competitive pressures or to acquire complementary businesses in the Domain Services industry. Entering into these types of arrangements entails many risks, any of which could materially harm our business, including: the diversion of management's attention from other business concerns; the failure to effectively integrate the acquired technology or company into our business; the incurring of significant acquisition costs; the loss of key employees from either our current business or the acquired business; and the assumption of significant liabilities of the acquired company. Any of the foregoing or other factors could harm our ability to achieve anticipated levels of profitability from acquired businesses or to realize other anticipated benefits of acquisitions. We may not be able to identify or consummate any future acquisitions on favorable terms, or at all. If we do effect an acquisition, it is possible that the financial markets or investors will view the acquisition negatively.

The Company's success depends on our ability to keep pace with technological advances. Failure to respond to rapid technological changes in the industries we serve or difficulty in scaling or adapting existing architecture could result in the loss of customers and cause us to incur additional expenses.

Network Access Services

The U.S. wireless communications industry is experiencing rapid growth of new technologies, products and services. We cannot predict which of many possible future technologies, products, or services will be important to maintain our competitive position or what expenditures we will be required to make in order to develop and provide these technologies, products or services. To the extent we do not keep pace with technological advances or fail to timely respond to changes in the competitive environment affecting our industry, we could lose market share or experience a decline in revenue, cash flows and net income from our mobile services (both retail and platform related services). As a result of the financial strength and benefits of scale enjoyed by some of our competitors, they may be able to offer services at lower prices than we can, thereby adversely affecting our revenues, growth and profitability.

Currently there is no Internet access technology that comes close to the speed, reliability, scalability and value of fiber-optics. However, it's possible that another medium that's either better or more economically/easily deployed could be developed in the longer term, or wireless could be improved enough to supplant the need for fiber in certain types of installations, like multi-family units, that would impact Ting Fiber's ability to grow. To be successful as we continue to build out the Ting Fiber network in communities across the U.S. and bring customers onto the network we must ensure that our network infrastructure performs well and is reliable. The greater the user traffic and the greater the complexity of our services, the more computing power we will need. We have spent and expect to continue to spend substantial amounts on the purchase of equipment to enable our network infrastructure to handle increased traffic. This expansion is expensive and complex and could result in inefficiencies or operational failures. If we do not expand successfully, or if we experience inefficiencies and operational failures, the quality of our services and our customers' experience could decline. This could damage our reputation and lead us to lose current and potential customers. Cost increases, loss of traffic or failure to accommodate new technologies or changing business requirements could harm our operating results and financial condition.

Domain Services

The Internet and e-commerce are characterized by rapid technological change. Sudden changes in user and customer requirements and preferences, the frequent introduction of new applications and services embodying new technologies and the emergence of new industry standards and practices could make our applications, services and systems obsolete. The emerging nature of applications and services in the Internet application and services industry and their rapid evolution will require that we continually improve the performance, features and reliability of our applications and services. Our success will depend, in part, on our ability: to develop and license new applications, services and technologies that address the increasingly sophisticated and varied needs of our current and prospective customers; and to respond to technological advances and emerging industry standards and practices on a cost-effective and timely basis.

The development of applications and services and other proprietary technology involves significant technological and business risks and requires substantial expenditures and lead-time. We may be unable to use new technologies effectively or adapt our internally developed technology and transaction-processing systems to customer requirements or emerging industry standards in a timely manner, or at all. Our internal development teams may also be unable to keep pace with new technological developments that affect the marketplace for our services. In addition, as we offer new services and functionality, we will need to ensure that any new services and functionality are well integrated with our current services, particularly as we offer an increasing number of our services as part of bundled suites. To the extent that any new services offered by us do not interoperate well with our existing services, our ability to market and sell those new services would be adversely affected and our revenue level and ability to achieve and sustain profitability might be harmed. Updating technology internally and licensing new technology from third parties may require us to incur significant additional capital expenditures.

Corporate Systems

For our fiber, retail mobile, and domain services businesses, we use data centers, some provided by third-parties and some provided by ourselves, for the storage and exchange of corporate and customer data. Any damage to or failure of our data center systems could result in interruptions in our service, which could reduce our revenues and profits, and damage our brands.

We rely on network operators, bandwidth providers, data centers and other vendors in providing services to our customers, and any system failure or interruption in the services provided by either our Company or third parties could harm our ability to operate our business and damage our reputation.

Network Access Services

As provider of retail mobile services, we do not own or operate a physical network, but rather utilize the nationwide wireless communication networks of our Network Operator. We rely on them and their third-party affiliates to maintain their wireless facilities and government authorizations and to comply with government policies and regulations. If they fail to do so, we may incur substantial losses. Some of the risks related to their nationwide wireless communication networks and infrastructure include: major equipment failures, breaches of network or information technology security that affect their wireless networks, including transport facilities, communications switches, routers, microwave links, cell sites or other equipment or third-party owned local and long-distance networks on which we rely, power surges or outages, software defects and disruptions beyond their control, such as natural disasters and acts of terrorism, among others. The Master Services Agreement with our Network Operator does not contain any contractual indemnification provisions relating to network outages or other disruptions. Any impact on their nationwide wireless communication networks could disrupt our operations, require significant resources, result in a loss of subscribers or impair our ability to attract new subscribers, which in turn could have a material adverse effect on our business, results of operations and financial condition. Delays or failure to add network capacity, or increased costs of adding capacity or operating the network, could limit our ability to increase our customer base, limit our ability to increase our revenues, or cause a deterioration of our operating margin.

Similarly as a provider of Fiber Internet services, we rely on the continuing operation of our Fiber Network. Any damage to or failure of our network facilities could result in interruptions in our service, which could reduce our revenues and profits, and damage our brands. Our systems are vulnerable to damage or interruption from earthquakes, terrorist attacks, floods, fires, power loss, telecommunications failures, or other attempts to harm our systems. In any Ting Town where we are not the underlying network operator and are utilizing the Fiber network of a third party, we rely on those third parties and their affiliates to maintain their network facilities, government authorizations and to comply with government policies and regulations. If they fail to do so, we may incur substantial losses. Some of our data centers are located in areas with a high risk of major earthquakes. Our data centers are also subject to break-ins, sabotage and intentional acts of vandalism, and to potential disruptions if the operators of these facilities have financial difficulties. The occurrence of a natural disaster, a decision to close a facility without adequate notice or other unanticipated problems at our data centers could result in lengthy interruptions in our service.

Domain Services

The availability of our Domain Name services depends on the continuing operation of our information technology and communications systems. Any damage to or failure of our systems could result in interruptions in our service, which could reduce our revenues and profits, and damage our brands. Our systems are vulnerable to damage or interruption from earthquakes, terrorist attacks, floods, fires, power loss, telecommunications failures, computer viruses, computer denial of service attacks or other attempts to harm our systems. Some of our data centers are located in areas with a high risk of major earthquakes. Our data centers are also subject to break-ins, sabotage and intentional acts of vandalism, and to potential disruptions if the operators of these facilities have financial difficulties. Some of our systems are not fully redundant, and our disaster recovery planning cannot account for all eventualities. The occurrence of a natural disaster, a decision to close a facility without adequate notice or other unanticipated problems at our data centers could result in lengthy interruptions in our service.

We have currently entered into agreements with unrelated parties for certain business operations and to license third-party technologies. Any claims against these unrelated parties to which we rely for business operations and/or licensed technology could result in the need to incur substantial costs to replace the technology or services which could delay and increase the cost of product and service developments.

Network Access Services

We have entered into agreements with unrelated parties for the day-to-day execution of certain services, the development and maintenance of certain systems necessary for the operation of our business, and for network equipment, handsets, devices, and other equipment. We expect our dependence on key suppliers to continue as more advanced technologies are developed. If we experience difficulties with regard to these arrangements, it could result in additional expense, loss of subscribers and revenue, interruption of our services or a delay in the roll-out of new technology.

Domain Services

We currently license certain technologies from third parties and incorporate them into certain of our services including email, security certificates, anti-spam and anti-virus. The Internet services market is evolving and we may need to license additional technologies to remain competitive. We may not be able to license these technologies on commercially reasonable terms or at all (should these third-party technology licenses infringe on the proprietary rights of others). To the extent we cannot license necessary solutions, we may have to devote our resources to development of such technologies, which could delay and increase the cost of product and service developments overall.

Our systems face security risks, and any compromise of the security of these systems could disrupt our business, damage our reputation and result in the disclosure of confidential information, legal liability for damages and loss of customers.

In the ordinary course of our business, we collect and store sensitive data, including intellectual property, our proprietary business information and that of our customers, suppliers and business partners, and personally identifiable information of our customers and employees. Due to the fact that all of our services are Internet based, the amount of data we store for our users on our servers (including personal information) has been increasing. We make extensive use of online services and centralized data processing, including through third-party service providers. The secure maintenance and transmission of customer information is an important element of our operations.

From time to time, concerns have been expressed about whether our services compromise the privacy of our users and others. Concerns about our practices with regard to the collection, use, disclosure or security of personal information or other privacy-related matters, even if unfounded, could damage our reputation and operating results and expose us to litigation and possible liability, including claims for unauthorized purchases with credit card information, impersonation, or fraud claims and other claims relating to the misuse of personal information and unauthorized marketing purposes. While we strive to comply with all applicable data protection laws and regulations, as well as our own privacy policies, any failure or perceived failure to comply may result in proceedings or actions against us by government entities or others, which could potentially have an adverse effect on our business.

We have previously been the target of attempted attacks and must monitor and develop our systems to protect this data from misappropriation. Our information technology and other systems that maintain and transmit customer information, including location or personal information, or those of service providers, may be compromised by a malicious third-party penetration of our network security, or that of a third-party service provider, or impacted by advertent or inadvertent actions or inactions by our employees, or those of a third-party service provider. Cyber-attacks, which include the use of malware, computer viruses and other means for disruption or unauthorized access, have increased in frequency, scope and potential harm in recent years. While, to date, we have not been subject to any successful cyber-attacks or other cyber incidents which, individually or in the aggregate, have been material to our operations or financial condition, the preventive actions we take to reduce the risk of cyber incidents and protect our information technology and networks may be insufficient to repel a major cyber-attack in the future. As a result, our subscribers' information may be lost, disclosed, accessed, used, corrupted, destroyed or taken without the subscribers' consent.

Any major compromise of our data or network security, failure to prevent or mitigate the loss of our services or customer information and delays in detecting any such compromise or loss could disrupt our operations, impact our reputation and subscribers' willingness to purchase our services and subject us to additional costs and liabilities, including litigation, which could be material.

Disputes concerning the ownership or rights to use intellectual property and litigation involving other rights of third parties could be costly and time-consuming to litigate, may distract management from operating the business, and may result in us paying significant damage awards, losing significant rights and our ability to operate all or a portion of our business.

We rely upon copyright, trade secret and trademark law, confidentiality and nondisclosure agreements, invention assignment agreements and work-for-hire agreements to protect our proprietary technology, all of which offer only limited protection. Due to the global nature of our web-based businesses and services, we cannot ensure that our efforts to protect our proprietary information will be adequate to protect against infringement and misappropriation by third parties, particularly in foreign countries where laws or law enforcement practices may not protect proprietary rights as fully as in the United States of America and Canada.

We have licensed, and may in the future license, some of our trademarks and other proprietary rights to others. Third parties may also reproduce or use our intellectual property rights without seeking a license and thus benefit from our technology without paying for it. Third parties could also independently develop technology, processes or other intellectual property that are similar to or superior to those used by us. Actions by licensees, misappropriation of the intellectual property rights or independent development by others of similar or superior technology might diminish the value of our proprietary rights or damage our reputation. The unauthorized reproduction or other misappropriation of our intellectual property rights, including copying the look, feel and functionality of our website could enable third parties to benefit from our technology without us receiving any compensation. The enforcement of our intellectual property rights may depend on our taking legal action against these infringing parties, and we cannot be sure that these actions will be successful.

Defense of claims of infringement of intellectual property or other rights of third parties against us would require the resources of both our time and money. Third parties may assert claims of infringement of patents or other intellectual property rights against us concerning past, current or future technologies. Content obtained from third parties and distributed over the Internet by us may result in liability for defamation, negligence, intellectual property infringement, product or service liability and dissemination of computer viruses or other disruptive problems. We may also be subject to claims from third parties asserting trademark infringement, unfair competition and violation of publicity and privacy rights relating specifically to domains.

As a domain name registrar, we regularly become involved in disputes over registration of domain names. These disputes are typically resolved through the UDRP, ICANN's administrative process for domain name dispute resolution, or less frequently through litigation under the ACPA, or under general theories of trademark infringement or dilution. The UDRP generally does not impose liability on registrars, and the ACPA provides that registrars may not be held liable for registering or maintaining a domain name absent a showing of bad faith intent to profit or reckless disregard of a court order by the registrars. However, we may face liability if we fail to comply in a timely manner with procedural requirements under these rules. In addition, these processes typically require at least limited involvement by us, and therefore increase our cost of doing business. The volume of domain name registration disputes may increase in the future as the overall number of registered domain names increases.

We have substantial goodwill and other intangible assets, therefore to the extent that any intellectual property is deemed impaired we would be required to record a significant charge to earnings in our financial statements during the period in which any impairment of our goodwill or intangible assets is determined. Any impairment charges or changes to the estimated amortization periods could have a material adverse effect on our financial results.

Our service offerings both in Network Access Services and Domain Services are exposed to risks associated with credit card and other online payment chargebacks, fraud and new payment methods.

Network Access Services

The Company offers its retail wireless and Internet services on a postpaid basis. The success of its postpaid offerings depends on its ability to manage its credit risk while attracting new customers with profitable usage patterns. These businesses have a short operating history and there can be no assurance that it will be able to manage credit risk or generate sufficient revenue to cover its postpaid-related expenses, including losses arising from its customers' failure to make payments when due. We manage credit risk exposure using techniques that are designed to set terms and limits for the credit risk it accepts. The techniques we use may not accurately predict future defaults due to, among other things, inaccurate assumptions or fraud. Our ability to manage credit risk may also be adversely affected by legal or regulatory changes, competitors' actions, consumer behavior, and inadequate collections staffing or techniques. While we continually seek to improve our assumptions and controls, the failure to manage credit risk appropriately may materially adversely affect our profitability and ability to grow.

Domain Services

A substantial majority of our revenue originates from online credit card transactions. Under current credit card industry practices, we are liable for fraudulent and disputed credit card transactions because we do not obtain the cardholder's signature at the time of the transaction, even though the financial institution issuing the credit card may have authorized the transaction. Under credit card association rules, penalties may be imposed at the discretion of the association. Any such potential penalties would be imposed on our credit card processor by the association. Under our contract with our processor, we are required to reimburse our processor for such penalties. Our current level of fraud protection, based on our fraudulent and disputed credit card transaction history, is within the guidelines established by the credit card associations. However, we face the risk that one or more credit card associations may, at any time, assess penalties against us or terminate our ability to accept credit card payments from customers, which would have a material adverse effect on our business, financial condition and results of operations.

Our indebtedness could adversely affect our financial condition, our ability to raise additional capital to fund our operations, our ability to operate our business, divert our cash flow from operations for debt payments and prevent us from meeting our debt obligations. Our debt agreements impose significant operating and financial restrictions on us and our subsidiaries, which may prevent us from capitalizing on business opportunities.

As of March 2, 2021, our outstanding debt under our credit facility was \$121.7 million. Our ability to generate cash flow from operations to make principal and interest payments on our debt will depend on our future performance, which will be affected by a range of economic, competitive and business factors as well as changes in government monetary or fiscal policy.

Absent sufficient cash flows from operations, we may need to engage in equity or debt financings to secure additional funds to meet our operating and capital needs. We may not be able to secure additional debt or equity financing on favorable terms, or at all, at the time when we need that funding. In addition, even though we may have sufficient cash flow, we may still elect to sell additional equity or debt securities or obtain credit facilities for other reasons. If we raise additional funds through further issuances of equity or convertible debt securities, our existing shareholders could suffer significant dilution in their percentage ownership of our company, and any new equity securities we issue could have rights, preferences and privileges senior to those of holders of our common stock. In addition, if we decide to raise funds through debt or convertible debt financings, we may be unable to meet our interest or principal payments. Our inability to generate sufficient cash flow from operations or obtain additional capital or alternative financing on acceptable terms could have a material adverse effect on our business, financial condition and results of operations.

The current agreements governing our indebtedness impose significant operating and financial restrictions on us. These restrictions, subject in certain cases to customary baskets, exceptions, and incurrence-based ratio tests, may limit our or our subsidiaries' ability to engage in some transactions, including the following: incurring additional indebtedness and issuing stock; paying dividends, share repurchases or making other restricted payments or investments; selling assets, properties, or licenses that we have or in the future may procure; creating liens on assets; engaging in mergers, acquisitions, business combinations, or other transactions. These restrictions could limit our ability to react to changes in our operating environment or the economy. Any future indebtedness that we incur may contain similar or more restrictive covenants. Any failure to comply with the restrictions of our debt agreements may result in an event of default under these agreements, which in turn may result in defaults or acceleration of obligations under these agreements and other agreements, giving our lenders the right to terminate any commitments they had made to provide us with further funds and to require us to repay all amounts then outstanding. Any of these events would have a material adverse effect on our business, financial condition, and operating results.

The international nature of our businesses and operations expose us to additional risks that could harm our business, operating results, and growth strategy; including risks related to taxation and foreign currencies fluctuations.

We are a U.S. based multinational company. Expansion into international markets is a continued element of our growth strategy. Introducing and marketing our services internationally, developing direct and indirect international sales and support channels and managing foreign personnel and operations all require significant management attention and financial resources. We face a number of risks associated with expanding our businesses internationally that could negatively impact our results of operations, including the following:

- Foreign currency fluctuations and exchange rates: Our operating results are accordingly subject to fluctuations in foreign currency exchange rates, which could adversely affect our future operating results. We attempt to mitigate a portion of these risks through foreign currency hedging, based on our judgment of the appropriate trade-offs among risk, opportunity and expense. We generally use hedging programs to partially hedge our exposure to foreign currency exchange rate fluctuations for Canadian dollars, the currency in which we incur the majority of operating expenses. Although we regularly review our hedging program and make adjustments as necessary based on the judgment factors discussed above, our hedging activities may not offset more than a portion of the adverse financial impact resulting from unfavorable movement in foreign currency exchange rates, which could adversely affect our financial condition or results of operations.
- Potentially adverse tax consequences or an inability to realize tax benefits: Significant judgment is required in determining our provision for income taxes, deferred tax assets or liabilities and in evaluating our tax positions on a worldwide basis. While we believe our tax positions are consistent with the tax laws in the jurisdictions in which we conduct our business, it is possible that these positions may be overturned by jurisdictional tax authorities, which may have a significant impact on our provision for income taxes. Tax laws are dynamic and subject to change as new laws are passed and new interpretations of the law are issued or applied, including the Tax Cuts and Job Act of 2017. In addition, governmental tax authorities are increasingly scrutinizing the tax positions of companies. If U.S. or other foreign tax authorities change applicable tax laws, our overall taxes could increase, and our business, financial condition or results of operations may be adversely impacted.
- Management, communication and integration problems resulting from cultural differences and geographic dispersion.
- Compliance with foreign laws, accreditation and regulatory requirements in relation to provision of services, protection of intellectual property and third-party data in foreign jurisdictions.
- Competition from companies with international operations, including large international competitors and entrenched local companies.
- To the extent we choose to make acquisitions to enable our international expansion efforts, the identification of suitable acquisition targets in the markets into which we want to expand.
- Political and economic instability in some international markets
- Sufficiently qualified labor pools in various international markets
- We may not succeed in our efforts to continue to expand our international presence as a result of the factors described above or other factors that may have an adverse impact on our overall financial condition and results of operations.

Unanticipated changes in effective tax rates or adverse outcomes resulting from examination of our income or other tax returns could adversely affect our operating results and financial condition.

We are subject to income and other taxes in a number of jurisdictions and our tax structure is subject to review by both domestic and foreign tax authorities. We must make significant assumptions, judgments and estimates to determine our current provision for income taxes, deferred tax assets and liabilities and any valuation allowance that may be recorded against our deferred tax assets. Although we believe that our estimates are reasonable, the ultimate determination of our tax liability is always subject to review by the applicable tax authorities. Any adverse outcome of such a review could have a negative effect on our operating results and financial condition in the period or periods for which such determination is made. Our current and future tax liabilities could be adversely affected by:

- international income tax authorities, including the Canada Revenue Agency and the U.S. Internal Revenue Service, challenging the validity of our arms-length related party transfer pricing policies or the validity of our contemporaneous documentation.
- changes in the valuation of our deferred tax assets; or
- changes in tax laws, regulations, accounting principles or the interpretations of such laws.

We could be subject to changes in tax rates, the adoption of new U.S. or international tax legislation, or exposure to additional tax liabilities. This could discourage the registration or renewal of domain names.

Due to the global nature of the Internet, it is possible that, although our services and the Internet transactions related to them typically originate in Virginia, Canada, Denmark and Germany, governments of other states or foreign countries might attempt to regulate our transactions or levy sales, income or other taxes relating to our activities. Tax authorities at the international, federal, state and local levels are currently reviewing the appropriate treatment of companies engaged in Internet commerce. New or revised international, federal, state or local tax regulations may subject us or our customers to additional sales, income and other taxes. We cannot predict the effect of current attempts to impose sales, income or other taxes on commerce over the Internet on Tucows or on our customers. New or revised taxes and, in particular, sales taxes, would likely increase the cost of doing business online and decrease the attractiveness of advertising and selling goods and services over the Internet. New taxes could also create significant increases in internal costs necessary to capture data, and collect and remit taxes. Any of these events could have an adverse effect on our business and results of operations.

The Company's success depends on the continued service and availability of key personnel.

Much of the Company's future success depends on the continued availability and service of key personnel, including its Chief Executive Officer, executive team and other highly skilled employees. Experienced personnel in the technology industry are in high demand and competition for their talents is intense. We may not be able to retain our key employees or replace them when necessary.

Our business depends on our strong brands. If we are not able to maintain and enhance our brands, our ability to expand our customer base will be impaired and our business and operating results will be harmed.

In recognition of the evolving nature of the internet services market and to make it easier to clearly differentiate each service we offer from our competitors, we enhanced our branding by focusing our primary service offerings under six distinct brands namely "OpenSRS", "eNom", "Hover", "EPAG", "Ascio" and "Ting". We also believe that maintaining and enhancing the "Tucows" corporate brand and our service brands is critical to expanding our customer base. We anticipate that, as our market becomes increasingly competitive, maintaining and enhancing our brands may become increasingly difficult and expensive. Maintaining and enhancing our brands will depend largely on our ability to be a technology leader providing high quality products and services, which we may not do successfully. To date, we have engaged in relatively little direct brand promotion activities. This enhances the risk that we may not successfully implement brand enhancement efforts in the future.

Additionally, included in the Purchase Agreement with DISH, the Company granted DISH the right to use the name "Ting" and its associated domain name over a 24-month period, after which DISH has an option to purchase the brand from the Company. If after this period DISH opts to purchase the Ting brand from the Company, we will need to rebrand our Ting Fiber Internet business. DISH will use the Ting brand to provision Ting Mobile services, provided by DISH. Contemporaneously, the Company will continue to use the Ting brand with Ting Fiber, the Company's existing Fiber Internet service. This could cause a misassociation in the minds of consumers and the market who could associate either Company as the single service provider of both services. Additionally, any actions taken by DISH as part of the transactions contemplated by the Purchase Agreement may impact the Ting brand's reputation. These actions could range from poor service quality, bad customer experience, privacy concerns, data breaches, and other events that could negatively impact the Ting brand permanently. The Ting brand could then carry negative connotation with consumers and impact our ability to continue to grow our Fiber Internet business under the Ting brand. If any of these events occur, our operational performance and financial results, in particular those of our Fiber Internet business may be adversely affected.

If we fail to maintain an effective system of disclosure controls and internal control over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act, our ability to produce timely and accurate financial statements or comply with applicable regulations could be impaired.

Section 404 of the Sarbanes-Oxley Act of 2002 requires us to evaluate the effectiveness of our internal control over financial reporting as of the end of each year, and to include a management report assessing the effectiveness of our internal control over financial reporting in each Annual Report on Form 10-K. Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. Over time, controls may become inadequate because changes in conditions or deterioration in the degree of compliance with policies or procedures may occur. Implementation of new technology related to the control system may result in misstatements due to errors that are not detected and corrected during testing. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and may not be detected.

Economic, political, and market conditions may adversely affect our businesses, financial condition, and operating results.

The financial results of our business are both directly and indirectly dependent upon economic conditions throughout the world, which in turn can be impacted by conditions in the global financial markets. Uncertainty about global economic conditions may lead businesses to postpone spending in response to tighter credit and reductions in income or asset values. Weak economic activity may lead government customers to cut back on services. Factors such as interest rates (including the LIBOR transition), availability of credit, inflation rates, changes in laws (including laws relating to taxation), trade barriers, currency exchange rates and controls, and national and international political circumstances (including wars, terrorist acts or security operations) could have a material adverse effect on our business and investments, which could reduce our revenue, profitability and value of our assets. These factors may also adversely affect the business, liquidity and financial condition of our customers. In addition, periods of poor economic conditions could increase our ongoing exposure to credit risks on our accounts receivable balances. This could have a material adverse effect on our business, financial condition and results of operations.

Our business and financial performance could be adversely affected, directly or indirectly, by both global and local natural disasters, health crises and other disruptive activities.

Neither the occurrence nor the potential impact of disasters, health crises and other disruptive activities can be predicted. However, these occurrences could impact us directly as a result of damage or by preventing us from conducting our business in the ordinary course, or indirectly as a result of their impact on our customers, suppliers or other counterparties. We could also suffer adverse consequences to the extent that such occurrences affect the financial markets or the economy in general or in any particular region. Our ability to mitigate the adverse consequences of such occurrences is in part dependent on the quality of our resiliency planning, and our ability, if any, to anticipate the nature of any such event that occurs. The adverse impact of such occurrences also could be increased to the extent that there is a lack of preparedness on the part of international, national or regional emergency responders or on the part of other organizations and businesses that we deal with, particularly those that we depend upon but have no control over.

The ongoing global COVID-19 pandemic that characterized most of Fiscal 2020, has adversely impacted, and may continue to adversely impact, many aspects of our business. With respect to our Network Access business segment, Roam Mobility brands, our niche prepaid SIM-enabled Mobile Services brand that relied on global travel as a key factor in its success, accounted for the majority of the negative financial impact caused by COVID-19 ultimately resulting in Management's decision to shut down operations in Fiscal 2020. Ting Mobile, the post-paid Mobile Services brand, also experienced a drop in customer data usage and an increased churn rate of low-margin business accounts. We do not know when retail mobile services customer data usage and business account churn rates will return to pre-pandemic levels, if ever, and continued declines and increases, respectively, could harm our Network Access businesses. Also within our Network Access business segment, although we have implemented certain smart, reduced-risk installs for our Ting Fiber customers, we do not expect new customer installations to return to pre-pandemic levels in the near term. A continued decline in new customer growth and installations could harm our Network Access business.

In response to the COVID-19 pandemic, many state, local, and foreign governments have put in place, and others in the future may put in place, quarantines, executive orders, shelter-in-place orders, and similar government orders and restrictions in order to control the spread of the disease. Such orders or restrictions, or the perception that such orders or restrictions could occur, have resulted in business closures, work stoppages, slowdowns and delays, work-from-home policies, travel restrictions, and cancellation or postponement of events, among other effects, that could negatively impact productivity and disrupt our operations and those of our MNOs, vendors and customers. We continue to implement a work-from-home policy for substantially all of our employees, and we may take further actions that alter our operations as may be required by federal, state, or local authorities, or which we determine are in our best interests. While most of our operations can be performed remotely, there is no guarantee that we will be as effective while working remotely because our team is dispersed, many employees may have additional personal needs to attend to (such as looking after children as a result of school closures or family who become sick), and employees may become sick themselves and be unable to work. Decreased effectiveness of our team could adversely affect our results due to our inability to meet in person with vendors and service providers, longer time periods to provide services related to domain registrations, longer time to respond to Network Access customer service issues, extended timelines for Network Access customer installations and repairs, or other decreases in productivity that could harm our business.

The global impact of COVID-19 continues to rapidly evolve, and we will continue to monitor the situation closely. The ultimate impact of the COVID-19 pandemic or a similar health crisis is highly uncertain and subject to change. We do not yet know the full extent of potential delays or impacts on our business, operations, financial results or the global economy as a whole. While the spread of COVID-19 may eventually be contained or mitigated, there is no guarantee that a future outbreak or any other widespread epidemics will not occur, or that the global economy will recover, either of which could seriously harm our business.

RISKS RELATED TO LEGAL, GOVERNMENTAL AND REGULATORY MATTERS

ICANN's Oversight of Domain Name Registration System and domain name registration charge. If these fee increase, this may have a significant impact on our operating results.

ICANN is a private sector, not-for-profit corporation formed in 1998 by the U.S. Department of Commerce for the express purposes of overseeing a number of Internet related tasks previously performed directly on behalf of the U.S. government, including managing the domain name registration system. ICANN currently imposes a fee (\$0.18) in association with the registration of each domain name. We have no control over ICANN and cannot predict when they may increase their respective fees. If we absorb such cost increases, or if surcharges act as a deterrent to registration, our profits may be adversely impacted by these third-party fees.

ICANN has been subject to strict scrutiny by the public and by the U.S. and other governments around the world with many of those governments becoming increasingly interested in Internet governance. For example, the U.S. Congress has held hearings to evaluate ICANN's selection process for new TLDs. In addition, ICANN faces significant questions regarding efficacy as a private sector entity. ICANN may continue to evolve both its long-term structure and mission to address perceived shortcomings such as a lack of accountability to the public and a failure to maintain a diverse representation of interests on its board of directors. We continue to face the risks that:

- the U.S. or any other government may reassess its decision to introduce competition into, or ICANN's role in overseeing, the domain registration market;
- the Internet community or the U.S. Department of Commerce or U.S. Congress may refuse to recognize ICANN's authority or support its policies, which could create instability in the domain registration system;
- some of ICANN's policies and practices, and the policies and practices adopted by registries and registrars, could be found to conflict with the laws of one or more jurisdictions;
- ICANN may lose any one of the several claims pending against it in both the U.S. and international courts, in which case its credibility may suffer and its policies may be discredited;
- the terms of the Registrar Accreditation Agreement (the "RAA"), under which we are accredited as a registrar, could change in ways that are disadvantageous to us or under certain circumstances could be terminated by ICANN preventing us from operating our Registrar, or ICANN could adopt unilateral changes to the RAA that are unfavorable to us, that are inconsistent with our current or future plans, or that affect our competitive position;
- ICANN and, under their registry agreements, VeriSign and other registries may impose increased fees received for each ICANN accredited registrar and/or domain name registration managed by those registries;
- ICANN or any registries may implement policy changes that would impact our ability to run our current business practices throughout the various stages of the lifecycle of a domain name; and
- international regulatory or governing bodies, such as the International Telecommunications Union or the European Union, may gain increased influence over the management and regulation of the domain registration system, leading to increased regulation in areas such as taxation and privacy.
- If any of these events occur, they could create instability in the domain registration system. These events could also disrupt or suspend portions of our domain registration solution, which would result in reduced revenue.

Data protection regulations may impose legal obligations on us that we cannot meet or that conflict with our ICANN contractual requirements.

In 2018, the European Commission adopted the General Data Protection Regulation (the "GDPR"), which creates obligations around the procurement, processing, publication and sharing of personal data. Potential fines for violations of certain provisions of GDPR reach as high as 4% of a company's annual total revenue, potentially including the revenue of its international affiliates. The solutions we develop for GDPR-compliance may not be adequate in the views of regulatory authorities or ICANN, which may cause the loss of WHOIS privacy revenue or increase our costs of developing compliant solutions or subject us to litigation, liability, civil penalties, or loss of market share. As the privacy laws and regulations around the world continue to evolve, these changes could adversely affect our business operations in similar ways.

The law relating to the use of and ownership of intellectual property on the internet as well as the liability of internet services companies for data and content carried on or disseminated through their network's websites is currently unsettled and could expose us to unforeseen liabilities. This could negatively affect the public's perception of our corporate image.

As a host of content through our Exact Hosting business, and to a lesser extent as a registrar of domain names services, we may be subject to potential liability for illegal activities by our resellers' customers on their websites. We provide an automated service that enables users to register domain names. We do not monitor or review, nor does our accreditation agreement with ICANN require that we monitor or review, the appropriateness of the domain names we register for our customers or the content of their websites, and we have no control over the activities in which these customers engage. While we have policies in place to terminate domain names or to take other action if presented with evidence of illegal conduct, customers could nonetheless engage in prohibited activities without our knowledge.

Several bodies of law may be deemed to apply to us with respect to various customer activities. Because we operate in a relatively new and rapidly evolving industry and since our industry is characterized by rapid changes in technology and in new and growing illegal activity, these bodies of laws are constantly evolving. Some of the laws that apply to us with respect to certain customer activities include the following:

- The Communications Decency Act of 1996 (the "CDA"), generally protects online service providers, such as Tucows, from liability for certain activities of their customers, such as posting of defamatory or obscene content, unless the online service provider is participating in the unlawful conduct. Notwithstanding the general protections from liability under the CDA, we may nonetheless be forced to defend ourselves from claims of liability covered by the CDA, resulting in an increased cost of doing business.
- The Digital Millennium Copyright Act of 1998 (the "DMCA"), provides recourse for owners of copyrighted material who believe that their rights under U.S. copyright law have been infringed on the Internet. Under the DMCA, we generally are not liable for infringing content posted by third parties. However, if we receive a proper notice from a copyright owner alleging infringement of its protected works by web pages for which we provide hosting services, and we fail to expeditiously remove or disable access to the allegedly infringing material, fail to post and enforce a digital rights management policy or a policy to terminate accounts of repeat infringers, or otherwise fail to meet the requirements of the safe harbor under the DMCA, the owner may seek to impose liability on us.
- Although established statutory law and case law in these areas to date generally have shielded us from liability for customer activities, court rulings in pending or future litigation may serve to narrow the scope of protection afforded us under these laws. In addition, laws governing these activities are unsettled in many international jurisdictions, or may prove difficult or impossible for us to comply with in some international jurisdictions. Also, notwithstanding the exculpatory language of these bodies of law, we may be embroiled in complaints and lawsuits which, even if ultimately resolved in our favor, add cost to our doing business and may divert management's time and attention. Finally, other existing bodies of law, including the criminal laws of various states, may be deemed to apply or new statutes or regulations may be adopted in the future. Our insurance may not be adequate to compensate or may not cover us at all in the event we incur liability for damages due to data and content carried on or disseminated through our network. Any costs not covered by insurance that are incurred as a result of this liability or alleged liability, including any damages awarded and costs of litigation, could harm our business and prospects.
- Domain name registrars also face potential tort law liability for their role in wrongful transfers of domain names. The safeguards and procedures we have adopted may not be successful in insulating us against liability from such claims in the future. In addition, we face potential liability for other forms of "domain name hijacking," including misappropriation by third parties of our network of customer domain names and attempts by third parties to operate websites on these domain names or to extort the customer whose domain name and website were misappropriated. Furthermore, our risk of incurring liability for a security breach on a customer website would increase if the security breach were to occur following our sale to a customer of an SSL certificate that proved ineffectual in preventing it. Finally, we are exposed to potential liability as a result of our private domain name registration service, wherein we become the domain name registrant, on a proxy basis, on behalf of our customers. While we have a policy of providing the underlying information and reserve the right to cancel privacy services on domain names giving rise to domain name disputes including when we receive reasonable evidence of an actionable harm, the safeguards we have in place may not be sufficient to avoid liability in the future, which could increase our costs of doing business.
- There have been ongoing legislative developments and judicial decisions concerning trademark infringement claims, unfair competition claims and dispute resolution policies relating to the registration of domains. To help protect ourselves from liability in the face of these ongoing legal developments, we have taken the following precautions:
 - our standard registration agreement requires that each registrant indemnify, defend and hold us harmless for any dispute arising from the registration or use of a domain registered in that person's name; and
 - since December 1, 1999, we have required our resellers to ensure that all registrants are bound to the UDRP as approved by ICANN.

Despite these precautions, we cannot be assured that our indemnity and dispute resolution policies will be sufficient to protect us against claims asserted by various third parties, including claims of trademark infringement and unfair competition.

New laws or regulations concerning domains and registrars may be adopted at any time. Our responses to uncertainty in the industry or new regulations could increase our costs or prevent us from delivering our domain registration services over the Internet, which could delay growth in demand for our services and limit the growth of our revenues. New and existing laws may cover issues such as:

- pricing controls;
- the creation of additional generic top-level domains and country code domains;
- consumer protection;
- cross-border domain registrations;
- trademark, copyright and patent infringement;
- domain dispute resolution; and
- the nature or content of domains and domain registration.

An example of legislation passed in response to novel intellectual property concerns created by the Internet is the ACPA enacted by the United States government in November 1999. This law seeks to curtail a practice commonly known in the domain registration industry as cybersquatting. A cyber squatter is generally defined in the ACPA as one who registers a domain that is identical or similar to another party's trademark, or the name of another living person, with the bad faith intent to profit from use of the domain. The ACPA states that registrars may not be held liable for registration or maintenance of a domain for another person absent a showing of the registrar's bad faith intent to profit from the use of the domain. Registrars may be held liable, however, if they do not comply promptly with procedural provisions of the ACPA. For example, if there is litigation involving a domain, the registrar is required to deposit a certificate representing the domain registration with the court. If we are held liable under the ACPA, any liability could have a material adverse effect on our business, financial condition and results of operations.

Our service offerings both in Network Access Services and Domain Services may become subject to new government regulations that may be costly to adopt, and may adversely affect our business prospects, future growth or results of operations.

Network Access Services

The FCC and other federal, state and local, as well as international, governmental authorities have jurisdiction over our business and could adopt regulations or take other actions that would adversely affect our business prospects or results of operations. The licensing, construction, operation, sale and interconnection arrangements of wireless telecommunications systems are regulated by the FCC and, depending on the jurisdiction, international, state and local regulatory agencies. In particular, the FCC imposes significant regulation on licensees of wireless spectrum with respect to how radio spectrum is used by licensees, the nature of the services that licensees may offer and how the services may be offered, and resolution of issues of interference between spectrum bands. The FCC grants wireless licenses for terms of generally ten years that are subject to renewal and revocation. There is no guarantee that our Network Operator's license will be renewed. Failure to comply with FCC requirements applicable to a given license could result in revocation of that license and, depending on the nature of the non-compliance, other licenses.

Our Fiber Internet services are also subject to a number of regulations and commitments. The FCC frequently considers imposing new broadband-related regulations such as those relating to an Open Internet. States and localities also consider new broadband-related regulations, including those regarding government-owned broadband networks, net neutrality and connectivity during COVID-19. Additionally, as an internet service provider ("ISP"), we must implement certain network capabilities to assist law enforcement in conducting surveillance of persons suspected of criminal activity. From time to time, the FCC considers imposing new regulatory obligations on ISPs. We are committed to an Open Internet and do not block, throttle or engage in paid or affiliated prioritization, and have committed not to block, throttle or discriminate against lawful content.

Various states are considering regulations over terms and conditions of service, including certain billing practices, privacy, and consumer-related issues that may not be pre-empted by federal law. If imposed, these regulations could make it more difficult and expensive to implement national sales and marketing programs and could increase the costs of our operations.

Domain Services

To date, government regulations have not materially restricted use of the Internet in most parts of the world. The legal and regulatory environment pertaining to the Internet, however, is uncertain and may change. New laws may be passed, existing but previously inapplicable laws may be deemed to apply to the Internet, or existing legal safe harbors may be narrowed, both by U.S. federal or state governments and by governments of foreign jurisdictions. These changes could affect:

- the liability of online resellers for actions by customers, including fraud, illegal content, spam, phishing, libel and defamation, infringement of third-party intellectual property and other abusive conduct;
- other claims based on the nature and content of Internet materials, such as pornography;
- user privacy and security issues;
- consumer protection;
- sales and other taxes, including the value-added tax of the European Union member states;
- characteristics and quality of services; and
- cross-border commerce.

The adoption of any new laws or regulations, or the application or interpretation of existing laws or regulations to the Internet, could hinder growth in use of the Internet and online services generally, and decrease acceptance of the Internet and online services as a means of communications, commerce and advertising. In addition, such changes in laws could increase our costs of doing business, subject our business to increased liability or prevent us from delivering our services over the Internet, thereby harming our business and results of operations.

Our Network Access Services businesses rely on Network Operators. Failure by a Network Operator to obtain the proper licenses and governmental approvals from regulatory authorities would cause us to be unable to successfully operate those businesses.

The FCC licenses currently held by our Network Operators and their third-party affiliates to provide wireless services are subject to renewal and revocation. There is no guarantee that their wireless or network licenses will be renewed. The FCC requires all licensee to meet certain requirements, including so-called "build-out" requirements, to retain their licenses. Their failure to comply with certain FCC requirements in a given license area could result in the revocation of their license for that geographic area. As Ting expands its Internet business, enters new markets, and considers offering regulated telecommunications services, it takes on additional local, state and federal regulatory and compliance obligations that require additional diligence and resources.

We may experience unforeseen or potentially uninsured liabilities or losses in connection with our Domain Services business, including the risk that our standard agreements with customers may not be enforceable. This could negatively impact our financial results.

We operate on a global basis and all of our customers must execute our standard agreements that govern the terms of the services we provide to our customers. These agreements contain provisions intended to limit our potential liability arising from the provision of services to our customers. As most of our customers purchase our services online, execution of our agreements by resellers occurs electronically or, in the case of our terms of use, is deemed to occur because of a user's continued use of the website/internet service following notice of those terms. We believe that our reliance on these agreements is consistent with the practices in our industry, but if a domestic, foreign or international court were to find that either one of these methods of execution is invalid or that key provisions of our services agreements are unenforceable, we could be subject to liability that has a material adverse effect on our business or we could be required to change our business practices in a way that increases our cost of doing business.

Although we maintain general liability insurance, claims could exceed the coverage obtained or might not be covered by our insurance. While we typically obtain representations from our technology and content providers and contractual partners concerning the ownership of licensed technology and informational content and obtain indemnification to cover any breach of these representations, we still may not receive accurate representations or adequate compensation for any breach of these representations. We may have to pay a substantial amount of money for claims that are not covered by insurance or indemnification or for claims where the existing scope or adequacy of insurance or indemnification is disputed or insufficient.

RISKS RELATES TO OWNERSHIP OF OUR STOCK

Our share price may be volatile, which may make it difficult for shareholders to sell their shares of common stock when they want to, at an attractive price.

Our share price has varied recently and the price of our common stock may decrease in the future, regardless of our operating performance. Investors may be unable to resell their common stock following periods of volatility because of the market's adverse reaction to this volatility.

The following factors may contribute to this volatility: actual or anticipated variations in our quarterly operating results; interruptions in our services; seasonality of the markets and businesses of our customers; announcements of new technologies or new services by our company or our competitors; our ability to accurately select appropriate business models and strategies; the operating and stock price performance of other companies that investors may view as comparable to us; analyst or short-seller reports; news relating to our company or industry as a whole; and news relating to trends in our markets.

The stock market in general and the market for Internet-related companies in particular, including our company, has experienced volatility.

We cannot guarantee that our recently announced stock buyback program will be fully consummated or that such program will enhance the long-term value of our share price.

In February 2021, the Company's Board approved a stock buyback program to repurchase up to \$40 million of the Company's common stock, which will commence on February 10, 2021 and terminate on or before February 9, 2022. Although the Company has repurchased shares under previous programs, including 70,238 shares in Fiscal 2020, there is no obligation for the Company to continue to repurchase or to repurchase any specific dollar amount of stock. The stock buyback program could affect the price of our stock and increase volatility in the market. We cannot guarantee that this program will be fully consummated or that such program will enhance the long-term value of our share price.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2. PROPERTIES

Our principal administrative, engineering, marketing and sales office is located in Toronto, Ontario, and consists of approximately 28,000 square feet. We lease satellite offices in various cities across the United States as well as internationally in Germany and Denmark. The Toronto, Ontario office supports both the Network Access Services and Domain Services segments. Leased satellite offices across the United States support the Network Access Services segment, while European offices support Domain Services.

The Company has acquired real property in Centennial, Colorado where it has constructed an office, warehouse and data center to support our local logistical operations and our North American colocation needs. The Company also has real property in Fuquay-Varina, North Carolina for future local logistical operations. Both these properties support the Network Access Services segment.

Currently, substantially all of our computer and communications hardware is located at our facilities or at server hosting facilities in Toronto, Ontario, San Jose, California, Centennial, Colorado and Ashburn, Virginia.

ITEM 3. LEGAL PROCEEDINGS

We are involved in various investigations, claims and lawsuits arising in the normal conduct of our business, none of which, individually or in aggregate in our opinion, will materially harm our business. We cannot assure you that we will prevail in any litigation. Regardless of the outcome, any litigation may require us to incur significant litigation expense and may result in significant diversion of management attention.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Price Range of Common stock

Our common stock is traded on the NASDAQ Capital Market under the symbol "TCX". Our common stock is also traded on the Toronto Stock Exchange under the symbol "TC".

As of March 3, 2021, Tucows had 81 shareholders of record.

We have not declared or paid any cash dividends on our common stock during the fiscal years ended December 31, 2020 and December 31, 2019, and we do not intend to do so in the immediate future, but we may decide to do so in the future depending on ongoing market conditions. Our ability to pay any cash dividends on our common stock, should our Board decide to do so, is also dependent on our earnings and cash requirements and may, from time to time, be governed by the terms of our credit agreements.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

2021 Stock Buyback Program:

On February 9, 2021, the Company announced that its Board had approved a stock buyback program to repurchase up to \$40 million of its common stock in the open market. The \$40 million buyback program commenced on February 10, 2020 and is expected to terminate on February 9, 2022.

2020 Stock Buyback Program:

On February 12, 2020, the Company announced that its Board had approved a stock buyback program to repurchase up to \$40 million of its common stock in the open market. The \$40 million buyback program commenced on February 13, 2020 and was terminated on February 9, 2021. The Company repurchased 70,238 shares under this program in Fiscal 2020 for total consideration of \$3.3 million, none of which were repurchased during the quarter ending December 31, 2020.

2019 Stock Buyback Program:

On February 13, 2019, the Company announced that its Board had approved a stock buyback program to repurchase up to \$40 million of its common stock in the open market. The \$40 million buyback program commenced on February 14, 2019 and terminated on February 13, 2020. The Company repurchased 101,816 shares under this program in Fiscal 2019 for total consideration of \$5.0 million.

2018 Stock Buyback Program:

On February 14, 2018, the Company announced that its Board had approved a stock buyback program to repurchase up to \$40 million of its common stock in the open market. The \$40 million buyback program commenced on February 14, 2018 and terminated on February 13, 2019. No repurchases were made under this program.

Net Exercise of Stock Options:

Our current equity-based compensation plans include provisions that allow for the "net exercise" of stock options by all plan participants. In a net exercise, any required payroll taxes, federal withholding taxes and exercise price of the shares due from the option holder can be paid for by having the option holder tender back to the Company a number of shares at fair value equal to the amounts due. These transactions are accounted for by the Company as a purchase and retirement of shares and are included in the table below as common stock received in connection with share-based compensation.

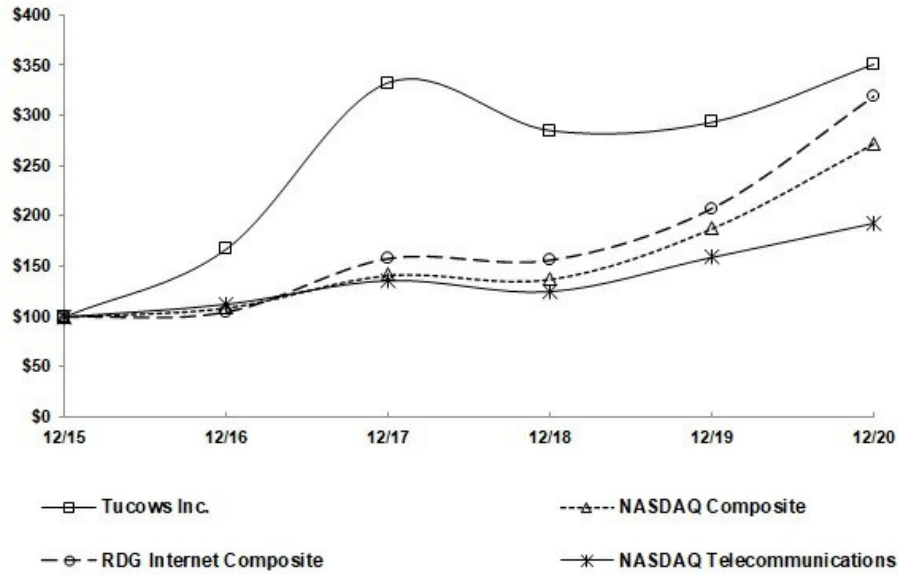
	Year Ended December 31,		
	2020	2019	2018
Common stock repurchased on the open market or through tender offer			
Number of shares	70,238	101,816	-
Aggregate market value of shares (in thousands)	\$ 3,281	\$ 4,986	\$ -
Average price per share	\$ 46.70	\$ 48.97	\$ -
Common stock received in connection with share-based compensation			
Number of shares	48,013	21,332	19,777
Aggregate market value of shares (in thousands)	\$ 2,957	\$ 1,510	\$ 1,138
Average price per share	\$ 61.58	\$ 70.77	\$ 57.56

STOCK PERFORMANCE GRAPH

The following graph and table compares the Company's stock performance to three stock indices over a five-year period assuming a \$100 investment was made on the last day of fiscal year 2015.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*

Among Tucows Inc., the NASDAQ Composite Index,
the RDG Internet Composite Index and the NASDAQ Telecommunications Index



*\$100 invested on 12/31/15 in stock or index, including reinvestment of dividends.
Fiscal year ending December 31.

ITEM 6. SELECTED FINANCIAL DATA

Beginning with the Company's Quarterly Report on Form 10-Q ended June 30, 2018 filed with the SEC August 8, 2018, all dollar values of current and comparative figures in the financial statements and accompanying tables have been rounded to the nearest thousand (\$000), except when otherwise indicated.

The following table summarizes certain selected financial data. The selected financial data is derived from, and is qualified by reference to, our audited consolidated financial statements for the years ended December 31, 2020, 2019, 2018, 2017, and 2016 and should be read in conjunction with those statements (amounts expressed in thousands, except per share amounts).

Please note that the Company has adopted ASC 2016-02, *Leases* (Topic 842) on January 1, 2019 using the modified retrospective method and ("ASC") Topic 606, *Revenue from Contracts with Customers* (Topic 606) on January 1, 2018 using the modified retrospective method. The comparative periods were not restated. See "Note 2 (u) – Significant Accounting Policies" of the Notes to the Consolidated Financial Statements for the years ended December 31, 2020, 2019, and 2018 included in Part II, Item 8 of this Annual Report.

	For the year ended December 31,				
	2020	2019	2018	2017	2016
Statement of Operations Data					
Revenue	\$ 311,202	\$ 337,145	\$ 346,013	\$ 329,421	\$ 189,819
Total cost of revenues	225,717	236,368	249,243	244,900	126,765
Sales and marketing	34,274	34,270	33,063	29,423	20,755
Technical operations and development	12,427	9,717	8,748	7,258	4,495
General and administrative	20,268	17,880	17,710	13,594	11,405
Depreciation, amortization and impairment of indefinite life intangible assets	10,568	9,695	7,671	7,262	1,451
Loss (gain) on disposition of property and equipment	(17)	73	-	-	-
Impairment of definite life intangible assets	1,431	-	-	-	-
Loss (gain) on currency forward contracts	(383)	(198)	254	(98)	(99)
Total other income (expense), net	3,843	(4,769)	(3,169)	(3,007)	66
Income before provision for income taxes	10,760	24,571	26,155	24,075	25,113
Provision for (recovery of) income taxes	4,985	9,173	9,020	1,748	9,046
Net income	\$ 5,775	\$ 15,398	\$ 17,135	\$ 22,327	\$ 16,067
Net income per share attributable to common stockholders					
Basic	\$ 0.55	\$ 1.45	\$ 1.62	\$ 2.12	\$ 1.53
Diluted	\$ 0.54	\$ 1.43	\$ 1.59	\$ 2.07	\$ 1.50
Weighted average shares used in computing net income per share					
Basic	10,591	10,624	10,605	10,537	10,525
Diluted	10,692	10,773	10,794	10,794	10,714
	At December 31,				
	2020	2019	2018	2017	2016
Balance Sheet Data					
Cash and cash equivalents	\$ 8,311	\$ 20,393	\$ 12,637	\$ 18,049	\$ 15,105
Deferred costs of fulfillment	111,066	109,167	106,527	127,003	60,390
Total assets	451,903	425,918	339,575	350,650	154,413
Deferred revenue	152,245	149,303	143,694	160,582	77,849
Debt	121,733	113,503	64,601	76,924	10,249
Total liabilities	347,205	331,724	259,799	290,439	116,596
Total stockholders' equity	\$ 104,698	\$ 94,194	\$ 79,776	\$ 60,211	\$ 37,817

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

The following discussion and analysis should be read together with the audited consolidated financial statements of Tucows Inc. (the "Company", "we", "us", "Tucows" or "our") as at December 31, 2020 and December 31, 2019 and for the years ended December 31, 2020, 2019 and 2018 and accompanying notes set forth elsewhere in this report. All financial information is presented in U.S. dollars.

Some of the statements set forth in this section are forward-looking statements relating to our future results of operations. Accordingly, reference is made to "Part I. Item 1A. Risk Factors" and "Cautionary Statement Regarding Forward-Looking Statements," which describe important factors that could cause actual results to differ from expectations and non-historical information contained herein.

OVERVIEW

Our mission is to provide simple useful services that help people unlock the power of the Internet.

We accomplish this by reducing the complexity of our customers' experience as they access the Internet (at home or on the go) and while using Internet services such as domain name registration, email, and other Internet services. We are organized, managed and report our financial results as two segments, Network Access Services and Domain Services, which are differentiated primarily by their services, the markets they serve and the regulatory environments in which they operate.

Our principal place of business is located in Canada. We manage our business as segments, Network Access Services, which primarily derives revenue from two distinct service offerings - Mobile Services and Fiber Internet services, and Domain Services, which derives revenue from three distinct service offerings - wholesale, retail and portfolio. To assist us in forecasting growth and to help us monitor the effectiveness of our operational strategies, our management regularly reviews revenue and cost of revenues for each of our segments in order to gain more depth and understanding of the key business metrics driving our business.

For the years ended December 31, 2020, 2019 and 2018, we reported revenue of \$311 million, \$337 million and \$346 million, respectively.

Network Access Services

Network Access Services derives revenues from two distinct service offerings - Mobile Services and Fiber Internet services. Mobile Services includes retail mobile services, mobile platform and other professional services supporting MVNOs, whereas Fiber Internet services is focused on providing fixed high-speed Internet access services to individuals and small businesses across the United States as well as billing solutions to small ISPs. Network Access Services revenues are all generated in the U.S. and are provided on a monthly basis. Ting Mobile and Internet services have no fixed contract terms, while our MSE customer agreements have set contract lengths with the underlying MVNO.

Mobile Services were historically focused on providing mobile telephony services through our MVNO brand Ting Mobile. As mentioned above, on August 1, 2020 the Company sold substantially all of the customer relationships associated with Ting Mobile to DISH as part of the Purchase Agreement and now only retains a small subset of customers for which it continues to provide retail mobile services through the Ting Mobile brand. As part of the Purchase Agreement, the Company granted DISH the right to use and an option to purchase the Ting brand. Historically, we also operated other MVNO brands, ZipSim and Always Online Wireless (collectively referred to as the "Roam Mobility brands"). However, as a result of the developments in the economy and the heavily impacted business and leisure travel industries as a result of the COVID-19 pandemic early into the year, the Company was faced with considerable lack of demand for a SIM-enabled roaming service and decided to shut down the operations of the Roam Mobility brands in June 2020, which was completed by September 30, 2020. Although we still provide retail mobile services to a small subset of customers retained from the Purchase Agreement, this service offering no longer represents the Company's strategic focus for Mobile Services going forward. Instead, we have transitioned away from a MVNO and towards a MSE, where we will focus on delivering a wide range of functions including billing, activation, provisioning, funnel marketing, and other professional services to mobile providers via our Mobile Platform. DISH is now the first Tucows mobile technology customer.

Fiber Internet services derives revenue from the sale of fixed high-speed Internet access ("Ting Internet") in select communities throughout the United States, including towns in North Carolina, Maryland, Idaho, Colorado, Virginia, and California with further expansion underway to both new and existing Ting towns. Our primary sales channel of Ting Internet is through the Ting website. The primary focus of Ting Internet is to provide reliable Gigabit Internet services to consumer and business customers. On January 1, 2020, the Company completed its acquisition of Cedar. Cedar is a telecommunications provider serving multiple markets in the Western Slope of Colorado and northwestern New Mexico. Cedar has focused the last several years on building fiber to enterprise, anchor institution, and residential customers. The purchase price was \$14.1 million, less an estimated purchase price adjustment of approximately \$0.2 million relating to a working capital deficit and assessment of the fair value of contingent consideration, for net purchase consideration of \$13.9 million. The cash consideration due at closing of \$9.0 million was financed by an advance on the 2019 Amended Credit Facility. The Company also issued 32,374 of Tucows Inc. shares (\$2 million) with a two-year restriction period at closing. Included in the agreement is contingent consideration totaling up to \$4.0 million is expected to be paid on the 24th and 36th month anniversaries of the closing of the transaction dependent upon certain milestones as defined in the definitive transaction agreement. The fair value of the contingent consideration was determined to be \$3.1 million using a discount rate of 11.2%. As of December 31, 2020, Ting Internet had access to 56,000 serviceable addresses and 15,000 active accounts under its management compared to having access to 36,000 serviceable addresses and 10,000 active accounts under its management as of December 31, 2019.

Domain Services

Domain Services derives revenues from three distinct service offerings - wholesale, retail and portfolio. Wholesale includes the sale of domain name registration services and value added services through our reseller focused brands - OpenSRS, eNom, EPAG and Ascio. Retail services is also focused on the sale of domain name registration and email services but with an end customer focus, selling to individuals and small businesses through our brands Hover and eNom portfolio of websites. Lastly, we make a portfolio of surname domain names available for sale as part of our RealNames email service. Domain Services revenues are attributed to the country in which the contract originates, which is primarily in Canada and the U.S. for OpenSRS and eNom brands. Ascio domain services contracts and EPAG agreements primarily originate in Europe.

Wholesale derives revenues primarily from the registration fees charged to resellers in connection with new, renewed and transferred domain name registrations. In addition to domain name registrations we also provide other value added services including hosted email, Internet security services, Internet hosting, WHOIS privacy, publishing tools and more. In addition, we also derive revenue by monetizing domain names which are near the end of their lifecycle through advertising revenue or auction sale. All of these services are made available to end-users through a network of 36,000 web hosts, ISPs and other resellers around the world. Together the OpenSRS, eNom, EPAG and Ascio Domain Services manage 25.4 million domain names under the Tucows, eNom, EPAG and Ascio ICANN registrar accreditations and for other registrars under their own accreditations. Domains under management has increased by 1.6 million domain names since December 31, 2019. The increase is driven by increased registrations experienced by our brands during the COVID-19 pandemic, which saw more businesses establish and expand their online presence, offset by the continued erosion of registrations related to non-core customers from our eNom brand.

Retail, primarily the Hover and eNom portfolio of websites, including eNom, eNom Central and Bulkregister, derive revenues from the sale of domain name registration and email services to individuals and small businesses. Our retail domain services also includes our Personal Names Service – based on over 36,000 surname domains – that allows roughly two-thirds of Americans to purchase an email address based on their last name. Portfolio services generate revenue by offering names in our surname domain portfolio for resale through our RealNames email service. The Company expects portfolio revenue to remain flat into Fiscal 2021 (as defined below) and thereafter.

KEY BUSINESS METRICS and Non-GAAP Measure

We regularly review a number of business metrics, including the following key metrics and non-GAAP measure, to assist us in evaluating our business, measure the performance of our business model, identify trends impacting our business, determine resource allocations, formulate financial projections and make strategic business decisions. Following the sale of substantially all of the Ting Mobile customers as part of the Purchase Agreement, we have ceased reporting Ting Mobile subscribers and accounts under management. The following tables set forth the key business metrics which we believe are the primary indicators of our performance for the periods presented:

Adjusted EBITDA

Tucows reports all financial information in accordance with United States generally accepted accounting principles (“GAAP”). Along with this information, to assist financial statement users in an assessment of our historical performance, we typically disclose and discuss a non-GAAP financial measure, adjusted EBITDA, on investor conference calls and related events that excludes certain non-cash and other charges as we believe that the non-GAAP information enhances investors’ overall understanding of our financial performance. Please see discussion of adjusted EBITDA in the Results of Operations section below.

Ting Internet

	For the year ended December 31,		
	2020	2019	2018
	(in '000's)		
Ting Internet accounts under management	15	10	7
Ting Internet serviceable addresses (1)	56	36	28

(1) Defined as premises to which Ting has the capability to provide a customer connection in a service area.

Domain Services

	For the year ended December 31,(1)		
	2020	2019	2018
	(in 000's)		
Total new, renewed and transferred-in domain name registrations provisioned	18,220	17,285	17,358
Domains under management			
Registered using Registrar Accreditation belonging to the Tucows Group	19,685	19,233	18,537
Registered using Registrar Accreditation belonging to Resellers	5,692	4,540	4,772
Total domain names under management(2)	25,377	23,773	23,309

(1) For a discussion of these period-to-period changes in the domains provisioned and domains under management and how they impacted our financial results see the Net Revenues discussion below.

(2) Throughout 2018, the Company completed bulk transfers of 2.89 million names, for domain names under management related to Namecheap.

OPPORTUNITIES, CHALLENGES AND RISKS

Our revenue is primarily realized in U.S. dollars and a major portion of our operating expenses are paid in Canadian dollars. Fluctuations in the exchange rate between the U.S. dollar and the Canadian dollar may have a material effect on our business, financial condition and results from operations. In particular, we may be adversely affected by a significant weakening of the U.S. dollar against the Canadian dollar on a quarterly and an annual basis. Our policy with respect to foreign currency exposure is to manage our financial exposure to certain foreign exchange fluctuations with the objective of neutralizing some or all of the impact of foreign currency exchange movements by entering into foreign exchange forward contracts to mitigate the exchange risk on a portion of our Canadian dollar exposure. We may not always enter into such forward contracts and such contracts may not always be available and economical for us. Additionally, the forward rates established by the contracts may be less advantageous than the market rate upon settlement.

Network Access Services

On August 1, 2020, the Company and its wholly owned Subsidiary Ting, Inc. entered into a Purchase Agreement with DISH pursuant to which Ting sold substantially all of its retail mobile customer relationships, and mobile handset and SIM inventory to DISH and granted the right to use and an option to purchase the Ting brand. Select MNO agreements previously established to operate the Ting Mobile MVNO business were assigned to DISH as part of this Purchase Agreement. The transferred assets under the Purchase Agreement do not include the technology platforms and related intellectual property and infrastructure necessary to enable or support the mobile customers. The Company will retain assets used to provide MSE services to DISH, as discussed below.

Contemporaneously with the execution of the Purchase Agreement on August 1, 2020, the Company, through its wholly owned subsidiary Ting, Inc. entered into a services agreement under which Ting will act as a MSE with DISH in support of DISH's MVNO businesses. Under the terms of the MSE Agreement, the Company and its affiliates are permitted to sell mobile service enabler services to other third parties. The identified risks associated with this pivot from MVNO to MSE have been discussed at length above in Part I under the caption "Item 1A Risk Factors" in this Annual Report on Form 10-K.

As an ISP, we have invested and expect to continue to invest in new fiber to the home ("FTTH") deployments in select markets in the United States. The investments are a reflection of our ongoing efforts to build FTTH network via public-private partnerships in communities we identify as having strong, unmet demand for FTTH services. Given the significant upfront build and operational investments for these FTTH deployments, there is risk that future technological and regulatory changes as well as competitive responses from incumbent local providers, may result in us not fully recovering these investments.

The communications industry continues to compete on the basis of network reach and performance, types of services and devices offered, and price.

Domain Services

The increased competition in the market for Internet services in recent years, which we expect will continue to intensify in the short and long term, poses a material risk for us. As new registrars are introduced, existing competitors expand service offerings and competitors offer price discounts to gain market share, we face pricing pressure, which can adversely impact our revenues and profitability. To address these risks, we have focused on leveraging the scalability of our infrastructure and our ability to provide proactive and attentive customer service to aggressively compete to attract new customers and to maintain existing customers.

Substantially all of our Domain Services revenue is derived from domain name registrations and related value-added services from wholesale and retail customers using our provisioning and management platforms. The market for wholesale registrar services is both price sensitive and competitive and is evolving with the introduction of new gTLDs, particularly for large volume customers, such as large web hosting companies and owners of large portfolios of domain names. We have a relatively limited ability to increase the pricing of domain name registrations without negatively impacting our ability to maintain or grow our customer base. Growth in our Domain Services revenue is dependent upon our ability to continue to attract and retain customers by maintaining consistent domain name registration and value-added service renewal rates and to grow our customer relationships through refining, evolving and improving our provisioning platforms and customer service for both resellers and end-users. In addition, we also generate revenue through pay-per-click advertising and the sale of names from our portfolio of domain names and through the OpenSRS Domain Expiry Stream. The revenue associated with names sales and advertising has recently experienced flat to declining trends due to the uncertainty around the implementation of ICANN's New gTLD Program, lower traffic and advertising yields in the marketplace, which we expect to continue.

From time-to-time certain of our vendors provide us with market development funds to expand or maintain the market position for their services. Any decision by these vendors to cancel or amend these programs for any reason may result in payments in future periods not being commensurate with what we have achieved during past periods.

Sales of domain names from our surname domain portfolio have a negative impact on our advertising revenue as these names are no longer available for advertising purposes. In addition, the timing of portfolio sales is unpredictable and may lead to significant quarterly fluctuations in our Portfolio revenue. The Company expects portfolio revenue to decline into 2021 and starting in the first quarter of 2021 will no longer separately breakout Portfolio revenues.

An in-depth assessment of the risk factors impacting our businesses has been discussed at length above in Part I under the caption "Item 1A Risk Factors" in this Annual Report on Form 10-K.

Critical Accounting Policies

The following is a discussion of our critical accounting policies and methods. Critical accounting policies are defined as those that are both important to the portrayal of our financial condition and results of operations and are reflective of significant judgments and uncertainties made by management that may result in materially different results under different assumptions and conditions. “Note 2 – Significant Accounting Policies” of the Notes to the Consolidated Financial Statements for the year ended December 31, 2020 (“Fiscal 2020”) included in Part II, Item 8 of this Annual Report, includes further information on the significant accounting policies and methods used in the preparation of our consolidated financial statements.

The preparation of the consolidated financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, management evaluates its estimates, including those related to amounts recognized for carrying values of revenues, bad debts, and inventory obsolescence which requires estimates of sales forecasts and other marketplace considerations, internal use software which requires estimates of whether the costs incurred meet the criteria for capitalization based on the stage of the projects, the portion of MSE billings related to professional services, the recoverability of goodwill and intangible assets which require estimates of future cash flows and discount rates, lease liability which requires estimates of incremental borrowing rate and the expectation of exercising lease renewal periods, income taxes, contingencies and litigation, and estimates of credit spreads for determination of the fair value of derivative instruments. Management bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances at the time they are made. Under different assumptions or conditions, the actual results will differ, potentially materially, from those previously estimated. Many of the conditions impacting these assumptions and estimates are outside of the Company’s control.

Revenue Recognition Policy

The Company’s revenues are derived from (a) the provisioning of mobile and fiber Internet services; and from (b) domain name registration contracts, other domain related value-added services and domain sale contracts. Amounts received in advance of meeting the revenue recognition criteria described below are recorded as deferred revenue. All products are generally sold without the right of return or refund.

Revenue is measured based on consideration specified in a contract with a customer and excludes any sales incentives and amounts collected on behalf of third parties. The Company recognizes revenue when it satisfies a performance obligation by transferring control over a product or service to a customer.

Nature of goods and services

The following is a description of principal activities – separated by reportable segments – from which the Company generates its revenue. For more detailed information about reportable segments. See “Note 19 – Segment Reporting” of the Notes to the Consolidated Financial Statements included in this report for more information.

(a) Network Access Services

The Company generates Network Access Services revenues primarily through the provisioning of retail mobile services, mobile platform and professional services supporting MVNOs, fixed high-speed Internet access services and other revenues, including billing solutions to small ISPs.

Mobile Services - Retail Mobile Services

Ting Mobile wireless usage contracts grant customers access to standard talk, text and data mobile services. Ting Mobile contracts are billed based on the customer's selected rate plan, which can be either usage based or an unlimited plan. All rate plan options are charged to customers on a postpaid, monthly basis at the end of their billing cycle. As discussed above, on August 1, 2020, the Company and its wholly owned Subsidiary Ting, Inc. entered into a Purchase Agreement with DISH pursuant to which Ting sold substantially all of its retail mobile customer relationships, and mobile handset and SIM inventory to DISH and granted the right to use and option to purchase the Ting brand. Select MNO agreements previously established to operate the Ting Mobile MVNO business were assigned to DISH as part of this Purchase Agreement. Ting, Inc. only retains a small subset of customers to which it continues to provide retail mobile services. All future revenues associated with Retail Mobile Services stream will only be for this subset of customers retained by Ting, Inc.

Ting Mobile services are primarily contracted through the Ting website, for one month at a time and contain no commitment to renew the contract following each customer's monthly billing cycle. The Company's billing cycle for all Ting Mobile customers is computed based on the customer's activation date. In order to recognize revenue as the Company satisfies its obligations, we compute the amount of revenues earned but not billed from the end of each billing cycle to the end of each reporting period. In addition, revenues associated with the sale of wireless devices and accessories are recognized when title and risk of loss is transferred to the customer and shipment has occurred. Incentive marketing credits given to customers are recorded as a reduction of revenue.

As part of the DISH Purchase Agreement, as a form of consideration for the sale of the customer relationships, the Company receives a payout on the margin associated with the legacy customer base sold to DISH, over a period of 10 years. This has been classified as Other Income and not considered revenue in the current period.

The Company also operated the Roam Mobility brands historically and through the first half of the 2020 fiscal year, but decided to shut down the businesses due to the considerable lack of demand for SIM-enabled roaming services as a result of the limited business and leisure travel brought about by the COVID-19 pandemic. Our Roam Mobility brands offered standard talk, text and data mobile services. Roam customers prepaid for their usage through the Roam Mobility website. When prepayments were received the amount was deferred, and subsequently recognized as the Company satisfies its obligation to provide mobile services. In addition, revenues associated with the sale of SIM cards were recognized when title and risk of loss is transferred to the subscriber and shipment occurred. Incentive marketing credits given to customers were recorded as a reduction of revenue.

Mobile Services - Mobile Platform Services

Tucows' MSE platform provides network access, provisioning and billing services for MVNOs. These platform fees are billed to our MVNO customers monthly, on a postpaid basis. The fees are based on the volume of their subscribers utilizing the platform during a given month. The Company recognizes revenue over this new revenue stream as the Company satisfies its obligations to provide MSE services on a monthly basis. For any bundled professional services where proceeds are collected before the service period as part of MSE Platform Revenues, the professional services revenue is initially deferred and recognized only as the Company performs its obligation to provide professional services.

Mobile Services - Other Professional Services

This revenue stream includes any other professional services, including transitional services, earned in connection with Tucows' new MSE business. These are billed to our customers monthly at set and established rates for services provided in period. The Company recognizes revenue over this new revenue stream as the Company satisfies its obligations to provide professional services.

Fiber Internet Services

Fiber Internet Services derive revenues from providing Ting Internet to individuals and small businesses in select cities. In addition, we provide billing, provisioning and customer care software solutions to ISPs through our Platypus billing software. Ting Internet access contracts provide customers Internet access at their home or business through the installation and use of our fiber optic network. Ting Internet contracts are generally prepaid and grant customers with unlimited bandwidth based on a fixed price per month basis. Since consideration is collected before the service period, revenue is initially deferred and recognized as the Company performs its obligation to provide Internet access.

Ting Internet services are primarily contracted through the Ting website, for one month at a time and contain no commitment to renew the contract following each customer's monthly billing cycle. The Company's billing cycle for all Ting Internet access customers is computed based on the customer's activation date. In order to recognize revenue as the Company satisfies its obligations, we compute the amount of revenues earned but not billed from the end of each billing cycle to the end of each reporting period. In addition, revenues associated with the sale of Internet hardware to subscribers are recognized when title and risk of loss is transferred to the subscriber and shipment has occurred. Incentive marketing credits given to customers are recorded as a reduction of revenue.

In those cases, where payment is not received at the time of sale, revenue is not recognized until contract inception unless the collection of the related accounts receivable is reasonably assured. The Company records costs that reflect expected refunds, rebates and credit card charge-backs as a reduction of revenues at the time of the sale based on historical experiences and current expectations.

(b) Domain Services

Wholesale - Domain Services

Domain registration contracts, which can be purchased for terms of one to ten years, provide our resellers and retail registrant customers with the exclusive right to a personalized internet address from which to build an online presence. The Company enters into domain registration contracts in connection with each new, renewed and transferred-in domain registration. At the inception of the contract, the Company charges and collects the registration fee for the entire registration period. Though fees are collected upfront, revenue from domain registrations are recognized rateably over the registration period as domain registration contracts contain a 'right to access' license of IP, which is a distinct performance obligation measured over time. The registration period begins once the Company has confirmed that the requested domain name has been appropriately recorded in the registry under contractual performance standards.

Historically, our wholesale domain service has constituted the largest portion of our business and encompasses all of our services as an accredited registrar related to the registration, renewal, transfer and management of domain names. In addition, this service fuels other revenue categories as it often is the initial service for which a reseller will engage us, enabling us to follow on with other services and allowing us to add to our portfolio by purchasing names registered through us upon their expiration. We expect Domain services will continue to be the largest portion of our business and will continue to enable us to sell add-on services.

The Company is an ICANN accredited registrar. Thus, the Company is the primary obligor with our reseller and retail registrant customers and is responsible for the fulfillment of our registrar services to those parties. As a result, the Company reports revenue in the amount of the fees we receive directly from our reseller and retail registrant customers. Our reseller customers maintain the primary obligor relationship with their retail customers, establish pricing and retain credit risk to those customers. Accordingly, the Company does not recognize any revenue related to transactions between our reseller customers and their ultimate retail customers.

Wholesale – Value-Added Services

We derive revenue from domain related value-added services like digital certifications, WHOIS privacy and hosted email and by providing our resellers and retail registrant customers with tools and additional functionality to be used in conjunction with domain registrations. All domain related value-added services are considered distinct performance obligations which transfer the promised service to the customer over the contracted term. Fees charged to customers for domain related value-added services are collected at the inception of the contract, and revenue is recognized on a straight-line basis over the contracted term, consistent with the satisfaction of the performance obligations.

We also derive revenue from other value-added services, which primarily consists of Internet hosting services on the OpenSRS and eNom domain expiry streams.

Retail

We derive revenues from Hover and eNom's retail properties through the sale of retail domain name registration and email services to individuals and small businesses.

Portfolio

The Company sells the rights to its portfolio of surname domains used in its RealNames email service. Revenue generated from sale of domain name contracts, containing a distinct performance obligation to transfer the domain name rights under the Company's control, is generally recognized once the rights have been transferred and payment has been received in full. Domain portfolio names are sold through our RealNames email service. The Company expects portfolio revenue to decline into 2021 and starting in the first quarter of 2021 will no longer separately breakout Portfolio revenues.

Valuation of Goodwill, Intangible Assets and Long-Lived Assets

The excess of the purchase price over the fair values of the identifiable assets and liabilities from our acquisitions is recorded as goodwill. At December 31, 2020, we had \$116.3 million in goodwill related to our acquisitions and \$47.4 million in intangible assets comprised of indefinite life intangibles of \$12.3 million and finite life intangible assets of \$35.3 million. At December 31, 2019, we had \$109.8 million in goodwill related to our acquisitions and \$57.7 million in intangible assets comprised of indefinite life intangibles of \$12.3 million and finite life intangible assets of \$45.4 million. We report our financial results as two operating segments, Domain Services, being wholesale and retail domain name registration services, value added services and portfolio, and Network Access which derives revenue from Mobile Services and Fiber Internet services. Ninety-three percent of goodwill relates to our Domain Services operating segment and 7% of goodwill relates to our Network Access segment. Of our goodwill balance, \$94.1 million is not deductible for tax purposes. Eighty-nine percent of intangible assets relate to our Domain Services operating segment and 11% of intangible assets relate to our Network Access operating segment.

We account for goodwill and indefinite life intangible assets in accordance with the Financial Accounting Standards Board's ("FASB's") authoritative guidance, which requires that goodwill and indefinite life intangible assets are not amortized, but are subject to an annual impairment test. We complete our impairment test on an annual basis, during the fourth quarter of our fiscal year, or more frequently, if changes in facts and circumstances indicate that impairment indicators are present.

Our indefinite life intangible assets consist of surname domain names and direct navigation domain names. In order to maintain our rights to these domain names, we pay annual renewal fees to the applicable domain name registries. Over the course of time, we sometimes decide not to renew certain under-performing domain names and incur an impairment charge associated with such non-renewal. There was no impairment recorded on indefinite-life intangible assets during 2020, 2019 and 2018.

With regard to long-lived assets comprised of property and equipment and finite life intangible assets, we continually evaluate whether events or circumstances have occurred that indicate the remaining estimated useful lives of our definite-life intangible assets may warrant revision or whether the carrying amount of such assets may not be recoverable and exceed their fair value. We use an estimate of the related undiscounted cash flows over the remaining life of the asset in measuring whether the asset is recoverable. During Fiscal 2020 there was a \$1.4 million impairment recorded on definite-life intangible assets associated with the shutdown of the Roam Mobility brands discussed above. There was no impairment recorded on definite-life intangible assets and property and equipment recorded during 2019 or 2018.

We performed a qualitative assessment to determine whether there were events or circumstances which would lead to a determination, whether it is more likely than not, that goodwill and indefinite life intangible assets have been impaired. In performing the qualitative testing, we made an evaluation of the impact of various factors to the expected future cash flows attributable to our operating segments and to the assumed discount rate which would be used to present value those cash flows. Consideration was given to factors such as macro-economic, industry and market conditions including the capital markets and the competitive environment amongst others. We concluded that there were no indications of impairment under the qualitative approach. The analysis was consistent with the approach we utilized in our analysis performed in prior years.

Any changes to our key assumptions about our businesses and our prospects, or changes in market conditions, could cause the fair value of our operating segments to fall below its carrying value, resulting in a potential impairment charge. In addition, changes in our organizational structure or how our management allocates resources and assesses performance, could result in a change in our operating segments, requiring a reallocation and updated impairment analysis of goodwill and indefinite life intangible assets. A goodwill or intangible asset impairment charge could have a material effect on our consolidated financial statements because of the significance of goodwill and intangible assets to our consolidated balance sheet. There was no further impairment of goodwill or intangible assets as a result of the annual impairment tests completed during the fourth quarters of 2020, 2019 or 2018.

Accounting for Income Taxes

We are subject to income taxes in the U.S. and numerous foreign jurisdictions. Significant judgment is required in evaluating our uncertain tax positions and determining our provision for income taxes. We apply a two-step approach to recognizing and measuring uncertain tax positions. The first step is to evaluate the tax position for recognition by determining if on the weight of available evidence, it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit that is more than 50% likely to be realized upon settlement.

Although we believe we have adequately reserved for our uncertain tax positions, no assurance can be given that the final tax outcome of these matters will not be different. We adjust these reserves in light of changing facts and circumstances, such as the closing of a tax audit or the refinement of an estimate based on new information that may become available. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences will impact the provision for income taxes in the period in which such determination is made.

As we account for income taxes under the asset and liability method, we recognize deferred tax assets or liabilities for the anticipated future tax effects of temporary differences between the financial statement basis and the tax basis of our assets and liabilities. We record a valuation allowance to reduce the net deferred tax assets when it is more likely than not that the benefit from the deferred tax assets will not be realized. In assessing the need for a valuation allowance, historical and future levels of income, expectations and risks associated with estimates of future taxable income and ongoing tax planning strategies are considered. In the event that it is determined that the deferred tax assets to be realized in the future would be in excess of the net recorded amount, an adjustment to the deferred tax asset valuation allowance would be recorded. This adjustment would increase income in the period that such determination was made. Likewise, should it be determined that all or part of a recorded net deferred tax asset would not be realized in the future, an adjustment to increase the deferred tax asset valuation allowance would be charged to income in the period that such determination would be made. At December 31, 2020, the valuation allowance of \$11.2 million was related to foreign tax credits and net operating losses that we are not expected to realize.

On a periodic basis, we evaluate the probability that our deferred tax asset balance will be recovered to assess its realizability. To the extent we believe it is more likely than not that some portion of our deferred tax assets will not be realized, we will increase the valuation allowance against the deferred tax assets. Realization of our deferred tax assets is dependent primarily upon future taxable income. Our judgments regarding future profitability may change due to future market conditions, changes in U.S. or international tax laws and other factors. These changes, if any, may require possible material adjustments to these deferred tax assets, impacting net income or net loss in the period when such determinations are made.

In connection with the eNom acquisition in 2017, we acquired deferred tax liabilities primarily composed of prepaid registry fees. As a result, we aligned our tax methodology pertaining to the deductibility of prepaid registry fees for our other subsidiaries. In the first quarter of 2019, we determined that we were in technical violation with respect to the administrative application of the accounting method change relating to the deductibility of prepaid registry fees for these additional subsidiaries. In February 2019, the Company filed an application for relief ("9100 Relief") to correct the issue. In November 2019, the Company was granted 9100 Relief and was given 30 days to file the appropriate forms based on prescribed instructions. The Company timely filed the forms with the IRS in December 2019 and no further action is necessary. We now await the final IRS response and acceptance of the change in accounting method. Management is of the view that it is more likely than not that the IRS will accept the 9100 Relief and filing of the prescribed forms. As such, no additional tax uncertainties or related interest or penalties have been recorded as at of December 31, 2019 and 2020.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the "Act") was signed into law making significant changes to the Internal Revenue Code. Changes include, but are not limited to, a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017, the transition of U.S international taxation from a worldwide tax system to a territorial system, and a one-time transition tax on the mandatory deemed repatriation of foreign earnings.

Recently Issued Accounting Standards

See “Note 2 – Significant Accounting Policies” of the Notes to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report for information regarding recently issued accounting standards.

Current COVID-19 Response

Our Employees

Tucows is a global business. Our first consideration during the global pandemic as a result of the disease caused by the COVID-19 outbreak is for the health and safety of our employees, our customers and their communities, all around the world. Tucows has long encouraged a culture of remote work even prior to this global pandemic, and on Sunday March 8, 2020 Tucows’ executive leadership announced that all employees who could conceivably work from home were encouraged to do so. Tucows is actively and strongly encouraging its workforce to heed travel and all other emergency advisories, including social distancing and where appropriate, self-isolation. We expect our work from home policy to remain in effect until emergency state and governmental declarations where we have physical offices have ended and we believe the risk of community spread of the disease has subsided. Given our experience with remote work prior to COVID-19, we have not and do not expect to have productivity issues while the overwhelming majority of our office-based workforce is dispersed.

For the small group of employees who are unable work from home during this time, including our order fulfillment and Fiber installation teams, many of whom work in the field, they are encouraged to practice social distancing and to continue to follow hygiene best practices and safety protocols as outlined by the Centers for Disease Control and Prevention. At the initial stage of the COVID-19 outbreak, we took steps to cancel and reschedule all in-home installation and service appointments across our Ting Fiber footprint. Since then, the Ting Internet team has established an install solution for our employees and customers that minimizes risks associated with person-to-person contact.

Our Customers

We recognize the important role we play within the Internet space and are committed to continue providing quality service during the COVID-19 outbreak. Services like individual and wholesale domain names, email and hosting do not rely on in-person interaction or the supply chain in the same way physical products and services do. We are providing uninterrupted services for all Domains related services, across our OpenSRS, eNom, Ascio, EPAG and Hover brands.

Our retail mobile services and new MSE business is without any physical storefronts, and is similarly well-positioned to weather this pandemic.

Our Fiber Internet business does not have bandwidth caps or other such limitations. Likewise, our networks are built with the capacity to accommodate future needs. To help our customers remain connected at home during this time, we upgraded all our lower-tier fiber customers to symmetrical gigabit access at no charge. Any additional traffic from our customers working from home has not had and is not expected to have any negative impact on connectivity. As discussed above, our install solution was implemented in early May 2020. With this service limitation, new customer acquisition will remain slower than pre-pandemic levels of growth and installation. Even with an install solution that minimizes risks, customers may be unwilling to have service personnel visit their homes or offices.

Our Community

Tucows believes the Internet is essential infrastructure and an immensely powerful tool, especially in times of crises where coordination is essential.

From an early point in the current global crisis, it was clear to us that we were going to need to do something new and different in how we responded to COVID-19 related domain registrations. Many of these domains are registered for good, helpful purposes, such as community organization, dissemination of healthcare information, and recording people’s experiences through this pandemic. Others, however, purport to sell COVID-19 cures, vaccines, or tests, none of which are legitimately available on the market at the time of the registration and many of which pose a significant health risk to the general public. There are three major components to our COVID-19 activities related to domain registrations: (i) identification, (ii) assessment for harm, and (iii) stakeholder engagement. It is important to note that our response to each and every issue that we find is contextual and dependent on the specific circumstances. We expect to return to our regular procedures as the pandemic and corresponding risks subsides. Although this approach vastly increases the burden on our compliance staff and puts us in the uncomfortable position of having to assess the level of harm represented by a COVID-related domain and the website to which it resolves - we feel these circumstances are exceptional and are determined to do our part.

In order to provide Internet access and assistance to residents of cities and towns that are part of the Ting Fiber network, we have set up free, fiber-fed, drive-up Wi-Fi hotspots. These hotspots enable those with no home Internet access, or insufficient access, to access critical services like online learning and telehealth services, work remotely, check in on and access vital health, government and other services and generally access information. These hotspots will remain in operation as long as they are needed and as long as it is safe and prudent to do so.

We have not experienced any material resource constraints nor do we foresee requiring any material expenditures to continue to implement our business continuity plans described above.

Current and expected COVID-19 Impacts

Financial & Operational Impacts

Further to the below discussion within this Annual Report around the financial condition and results of operations for the current period financial results, the current impact from COVID-19 has been limited to the Network Access segment, primarily impacting Mobile Services. Management continues to assess the impact of COVID-19 regularly and we do not expect the impact to substantially worsen in 2021, should the COVID-19 pandemic persist. On a segment basis, our current assessment is as follows:

Network Access – Mobile Services:

At the outbreak of the pandemic, Mobile services usage dropped significantly as customer usage patterns changed. As a result of regional lockdowns and shelter-in-place orders throughout the United States, more customers were utilizing at-home WIFI networks rather than connecting to cellular networks; which had a corresponding negative impact on our revenues throughout the year. Similarly, with business and leisure travel significantly halted, there was limited demand for SIM-enabled roaming services. As a result of the pandemic, the Company decided to shut down the operations of the Roam Mobility brands given the expected long-term reduction to both business and leisure travel. Additionally, on August 1, 2020, the Company entered into a Purchase Agreement with DISH pursuant to which it sold substantially all of the mobile customer relationships, and mobile handset and SIM inventory to DISH and granted the right to use and purchase the Ting brand. Ting, Inc. only retains a small subset of customers to which it continues to provide retail mobile services. However, since the outbreak of the pandemic we have seen usage stabilize for Ting Mobile, albeit at levels still lower than before the pandemic. This combined with the fact that our exposure is also significantly limited given the above mentioned sale of the majority of our customer relationships to DISH in the current period. Our new MSE platform and professional services businesses are completely online and do not rely on physical storefronts to attract or service customers' needs. We are fully prepared to continue providing uninterrupted Mobile related enablement services to our MVNO customers. We have not and do not expect any corresponding material negative impacts on our revenues for these new revenue streams, nor do we expect the impact to substantially worsen over the coming months.

Network Access – Fiber Internet Services:

As discussed above, upon news of the COVID-19 outbreak, we took the major step to cancel and reschedule all in-home installation and service appointments across our Ting Fiber footprint. Since then, the Ting Internet team has established a smart-install solution. This smart-install solution is faster and more efficient than our existing process, all while protecting the health and safety of our employees and customers alike. Although new customer installations initially slowed near the end of the first quarter of 2020, we are now seeing returned growth in both subscribers under management as well as serviceable addresses relative to the prior quarter. Additionally, our existing customer base and most recent acquisition of Cedar both continue to provide increased recurring revenue for us to support this business relative to prior years.

Domain Services:

Domain Services are foundational to the functioning of the Internet. As discussed above, services like individual and wholesale domain names, email and hosting do not rely on in-person interaction or the supply chain in the same way physical products and services do. We have not experienced any negative COVID-19 related impacts, either financially or operationally for Domains related services, across our OpenSRS, eNom, Ascio, EPAG & Hover brands. As more businesses face the reality of prolonged physical shutdown and move to establish an online presence, we have seen growth in this segment, primarily driven by large volume resellers in our OpenSRS brand where total domains under management increased by 1.8 million domain names since March 31, 2020, the quarter-end closest to the onset of the pandemic. This growth rate in domains under management was driven by the pandemic, and may not be sustained in the future as domain registrations plateau. Our results of operations for the current period financial results are in line with management's expectation for the period given product, customer mix and current brand trajectories. We will continue to monitor the impact but do not foresee any negative financial or operational impacts associated with this segment.

Liquidity & Financial Resource Impacts

For a complete assessment of our liquidity and covenant positions please reference the relevant discussions within this Annual Report. We have experienced no significant change to our liquidity position or credit risk as a result of the financial and operational impacts related to COVID-19, as discussed above. Our cost or access to funding sources has not changed and is not reasonably likely to change in the near future as a result of the pandemic. Our sources and uses of cash have not been materially impacted and there is no known material uncertainty about our ongoing ability meet covenants or repayment terms of our credit agreements at this time.

Internal Controls over Financial Reporting

Tucows has long encouraged a culture of remote work even prior to COVID-19. Our financial reporting systems and our internal controls over financial reporting and disclosure controls and procedures are already adapted for a remote work environment. There have been no changes during the current period that, as a result of COVID-19, would affect our ability to maintain these systems and controls.

COVID-19 Related Assistance & Support

Currently, Tucows has not received any form of financial or resource related assistance from any government or local authority. There do exist programs in the regions in which we operate that are designed to support corporations like Tucows during this time, primarily in the form employee wage subsidization. Tucows will continue to review the applicability of these programs but does not expect to seek any assistance.

Across our businesses, we have been able to defer portions of installment taxes payable to various Government bodies as payment timelines have been extended in response to the pandemic.

Accounting Policy Impacts

Given the rapidly changing nature of COVID-19 developments and the current uncertainty around the length and severity these developments could create, Tucows does not have sufficient evidence to anticipate a material impairment with respect to goodwill, intangible assets, long-lived assets, or right of use assets. We will continue to monitor the impacts closely and as more information becomes available. We do not foresee any changes in accounting judgements in relation to COVID-19 that will have a material impact on our financial statements.

RESULTS OF OPERATIONS FOR THE YEAR ENDED DECEMBER 31, 2020 AS COMPARED TO THE YEAR ENDED DECEMBER 31, 2019

The Company has initially applied Accounting Standard Update (“ASU”) No. 2016-02, *Leases (Topic 842)* on January 1, 2019, which was adopted using the modified retrospective basis. Accordingly, comparative figures have not been restated.

NET REVENUES**Network Access Services**

The Company generates Network Access Services revenues primarily through the provisioning of retail mobile services, mobile platform and professional services supporting MVNOs, fixed high-speed Internet access services and other revenues, including billing solutions to small ISPs.

Mobile Services - Retail Mobile Services

Ting Mobile wireless usage contracts grant customers access to standard talk, text and data mobile services. Ting Mobile contracts are billed based on the customer's selected rate plan, which can be either usage based or an unlimited plan. All rate plan options are charged to customers on a postpaid, monthly basis at the end of their billing cycle. As discussed above, on August 1, 2020, the Company and its wholly owned Subsidiary Ting, Inc. entered into the Purchase Agreement with DISH pursuant to which Ting sold substantially all of its retail mobile customer relationships, and mobile handset and SIM inventory to DISH and granted the right to use and option to purchase the Ting brand. Select MNO agreements previously established to operate the Ting Mobile MVNO business were assigned to DISH as part of this Purchase Agreement. We retained a small subset of customers to which we continue to provide retail mobile services. All future revenues associated with Retail Mobile Services stream will only be for this subset of customers retained by the Company.

Ting Mobile services are primarily contracted through the Ting website, for one month at a time and contain no commitment to renew the contract following each customer's monthly billing cycle. The Company's billing cycle for all Ting Mobile customers is computed based on the customer's activation date. In order to recognize revenue as the Company satisfies its obligations, we compute the amount of revenues earned but not billed from the end of each billing cycle to the end of each reporting period. In addition, revenues associated with the sale of wireless devices and accessories are recognized when title and risk of loss is transferred to the customer and shipment has occurred. Incentive marketing credits given to customers are recorded as a reduction of revenue.

As part of the Purchase Agreement, as a form of consideration for the sale of the customer relationships, the Company receives a payout on the margin associated with the legacy customer base sold to DISH, over a period of 10 years. This has been classified as Other Income and not considered revenue in the current period as it represents the payout from a one-time sale and is not considered a part of our core business operations with the shift from MVNO to MSE.

The Company also operated the Roam Mobility brands historically and through the first half of the 2020 fiscal year, but decided to shut down the businesses due to the considerable lack of demand for SIM-enabled roaming services as a result of the limited business and leisure travel brought about by the COVID-19 pandemic. Our Roam Mobility brands offered standard talk, text and data mobile services. Roam customers prepaid for their usage through the Roam Mobility website. When prepayments were received the amount was deferred, and subsequently recognized as the Company satisfies its obligation to provide mobile services. In addition, revenues associated with the sale of SIM cards were recognized when title and risk of loss was transferred to the subscriber and shipment occurred. Incentive marketing credits given to customers were recorded as a reduction of revenue.

Mobile Services - Mobile Platform Services

Tucows' MSE platform provides network access, provisioning and billing services for MVNOs. These platform fees are billed to our MVNO customers monthly, on a postpaid basis. The fees are based on the volume of their subscribers utilizing the platform during a given month. The Company recognizes revenue over this new revenue stream as the Company satisfies its obligations to provide MSE services on a monthly basis. For any bundled professional services where collection is collected before the service period as part of MSE Platform Revenues, the professional services revenue is initially deferred and recognized only as the Company performs its obligation to provide professional services.

Mobile Services - Other Professional Services

This revenue stream includes any other professional services, including transitional services, earned in connection with Tucows' new MSE business. These are billed to our customers monthly at set and established rates for services provided in period. The Company recognizes revenue over this new revenue stream as the Company satisfies its obligations to provide professional services.

Fiber Internet Services

Fiber Internet Services derive revenues from providing Ting Internet to individuals and small businesses in select cities. In addition, we provide billing, provisioning and customer care software solutions to ISPs through our Platypus billing software. Ting Internet access contracts provide customers Internet access at their home or business through the installation and use of our fiber optic network. Ting Internet contracts are generally prepaid and grant customers with unlimited bandwidth based on a fixed price per month basis. Since consideration is collected before the service period, revenue is initially deferred and recognized as the Company performs its obligation to provide Internet access.

Ting Internet services are primarily contracted through the Ting website, for one month at a time and contain no commitment to renew the contract following each customer's monthly billing cycle. The Company's billing cycle for all Ting Internet access customers is computed based on the customer's activation date. In order to recognize revenue as the Company satisfies its obligations, we compute the amount of revenues earned but not billed from the end of each billing cycle to the end of each reporting period. In addition, revenues associated with the sale of Internet hardware to subscribers are recognized when title and risk of loss is transferred to the subscriber and shipment has occurred. Incentive marketing credits given to customers are recorded as a reduction of revenue.

In those cases, where payment is not received at the time of sale, revenue is not recognized until contract inception unless the collection of the related accounts receivable is reasonably assured. The Company records costs that reflect expected refunds, rebates and credit card charge-backs as a reduction of revenues at the time of the sale based on historical experiences and current expectations.

Domain Services

Wholesale - Domain Services

Domain registration contracts, which can be purchased for terms of one to ten years, provide our resellers and retail registrant customers with the exclusive right to a personalized internet address from which to build an online presence. The Company enters into domain registration contracts in connection with each new, renewed and transferred-in domain registration. At the inception of the contract, the Company charges and collects the registration fee for the entire registration period. Though fees are collected upfront, revenue from domain registrations are recognized rateably over the registration period as domain registration contracts contain a 'right to access' license of IP, which is a distinct performance obligation measured over time. The registration period begins once the Company has confirmed that the requested domain name has been appropriately recorded in the registry under contractual performance standards.

Historically, our wholesale domain service has constituted the largest portion of our business and encompasses all of our services as an accredited registrar related to the registration, renewal, transfer and management of domain names. In addition, this service fuels other revenue categories as it often is the initial service for which a reseller will engage us, enabling us to follow on with other services and allowing us to add to our portfolio by purchasing names registered through us upon their expiration. We expect Domain services will continue to be the largest portion of our business and will continue to enable us to sell add-on services.

The Company is an ICANN accredited registrar. Thus, the Company is the primary obligor with our reseller and retail registrant customers and is responsible for the fulfillment of our registrar services to those parties. As a result, the Company reports revenue in the amount of the fees we receive directly from our reseller and retail registrant customers. Our reseller customers maintain the primary obligor relationship with their retail customers, establish pricing and retain credit risk to those customers. Accordingly, the Company does not recognize any revenue related to transactions between our reseller customers and their ultimate retail customers.

Wholesale – Value-Added Services

We derive revenue from domain related value-added services like digital certifications, WHOIS privacy and hosted email and by providing our resellers and retail registrant customers with tools and additional functionality to be used in conjunction with domain registrations. All domain related value-added services are considered distinct performance obligations which transfer the promised service to the customer over the contracted term. Fees charged to customers for domain related value-added services are collected at the inception of the contract, and revenue is recognized on a straight-line basis over the contracted term, consistent with the satisfaction of the performance obligations.

We also derive revenue from other value-added services, which primarily consists of Internet hosting services on the OpenSRS and eNom domain expiry streams.

Retail

We derive revenues from Hover and eNom's retail properties through the sale of retail domain name registration and email services to individuals and small businesses.

Portfolio

The Company sells the rights to its portfolio of surname domains used in its RealNames email service. Revenue generated from sale of domain name contracts, containing a distinct performance obligation to transfer the domain name rights under the Company's control, is generally recognized once the rights have been transferred and payment has been received in full. Domain portfolio names are sold through our RealNames email service. The Company expects portfolio revenue to decline into 2021 and starting in the first quarter of 2021 will no longer separately breakout Portfolio revenues.

The following table presents our net revenues, by revenue source:

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2020	2019
Network Access Services:		
Mobile Services		
Retail mobile services	\$ 46,540	\$ 84,657
Mobile platform services	564	-
Other professional services	3,416	-
Total Mobile	50,520	84,657
Fiber Internet Services	18,428	11,006
Total Network Access Services	68,948	95,663
Domain Services:		
Wholesale		
Domain Services	186,893	182,957
Value Added Services	19,788	18,922
Total Wholesale	206,681	201,879
Retail	34,323	34,786
Portfolio	1,250	4,817
Total Domain Services	242,254	241,482
	\$ 311,202	\$ 337,145
(Decrease) increase over prior period	\$ (25,943)	
(Decrease) increase - percentage	(8)%	

The following table presents our revenues, by revenue source, as a percentage of total revenues:

	Year ended December 31,	
	2020	2019
Network Access Services:		
Mobile Services		
Retail mobile services	15%	25%
Mobile platform services	0%	0%
Other professional services	1%	0%
Total Mobile	16%	25%
Fiber Internet Services	6%	3%
Total Network Access Services	22%	28%
Domain Services:		
Wholesale		
Domain Services	61%	55%
Value Added Services	6%	6%
Total Wholesale	67%	61%
Retail	11%	10%
Portfolio	0%	1%
Total Domain Services	78%	72%
	100%	100%

Total net revenues for Fiscal 2020 decreased by \$25.9 million, or 8%, to \$311.2 million from \$337.1 million for the fiscal year ended December 31, 2020 ("Fiscal 2020"). The overall decrease in revenue was primarily driven by the \$34.1 million reduction of revenues attributable to our Mobile Services streams that were impacted by both the sale of the majority of the customer base of Ting Mobile to DISH Wireless on August 1, 2020 and the shutdown of Roam Mobility brands impacted by loss of mobile subscribers and reduced usage related to COVID-19 when compared to the prior year. As part of the Purchase Agreement, as a form of consideration for the sale of the customer relationships, the Company receives a payout on the margin associated with the legacy customer base sold to DISH over the 10-year term of the agreement. This has been classified as Other Income and not considered revenue in the current period. This decrease in revenues was offset by a \$7.4 million increase related to Fiber Internet services revenues, driven by our recent first quarter acquisition of Cedar as well as through the expansion of our existing Ting Internet footprint. Additionally, smaller increases from Domain Services of \$0.8 million also helped offset any revenue decreases in period, which was driven by an overall increase in domains under management relative to the prior year.

Deferred revenue from domain name registrations and other Internet services at December 31, 2020 increased to \$152.2 million from \$149.3 million at December 31, 2019, primarily due to current period billings for domain name registration and service renewals.

No customer accounted for more than 10% of revenue during Fiscal 2020 or during the fiscal year ending December 31, 2019 ("Fiscal 2019"). As of December 31, 2020 DISH accounted for 59% of total accounts receivable and at December 31, 2019 no customer accounted for more than 10% of accounts receivable.

Though a significant portion of the Company's domain services revenues are prepaid by our customers, where the Company does collect receivables, significant management judgment is required at the time revenue is recorded to assess whether the collection of the resulting receivables is reasonably assured. On an ongoing basis, we assess the ability of our customers to make required payments. Based on this assessment, we expect the carrying amount of our outstanding receivables, net of allowance for doubtful accounts, to be fully collected.

Network Access Services

Mobile Services

Net revenues from Mobile Services for Fiscal 2020, as compared to Fiscal 2019, decreased by \$34.2 million or 40% to \$50.5 million. This decrease is driven by a decline in Retail Mobile Services revenue, which decreased by \$38.2 million compared to Fiscal 2019, to \$46.5 million. Ting Mobile accounts for \$35.0 million of this decrease (of which \$2.0 million is reduced device revenues and \$33.0 million relates to service revenues), followed by Roam Mobility at \$3.1 million of the total decrease. The decline in Retail Mobile Services revenue is driven by the sale of substantially all of the Ting Mobile customer base on August 1, 2020 to DISH and the shutdown of Roam Mobility in the Fiscal Year. In addition to these changes, continued subscriber churn and reduced usage related to the COVID-19 pandemic for three full quarters in 2020 also resulted in lower revenues relative to Fiscal 2019. This decrease is offset by an increase in Mobile Platform services revenues by \$0.6 million and Other Professional Services revenues by \$3.4 million, both a result of the new MSE business created, for which DISH is currently the only customer. The current period only reflects seven months of retail mobile services revenue at the existing subscriber base of Ting Mobile, versus a complete twelve-month period in 2019. Subsequent to the sale to DISH, the Retail Mobile Services revenue relates to a small subset of customers retained by the Company. The consideration for the sale of the subscriber base to DISH is captured as Other Income in the current period and described below.

Fiber Internet Services

Revenues from Ting Internet and billing solutions generated \$18.4 million in revenue during Fiscal 2020, up \$7.4 million or 67% compared to Fiscal 2019. This growth is driven by the recent first quarter acquisition of Cedar. Cedar contributed \$4.7 million of the increase in revenue during the current period, with \$2.7 million related to the continued expansion of our Ting Internet footprint in new and existing Ting towns throughout the United States.

As of December 31, 2020, Ting Internet had access to 56,000 serviceable addresses and 15,000 active accounts under its management compared to having access to 36,000 serviceable addresses and 10,000 active accounts under its management as of December 31, 2019. These figures include the increase in serviceable addresses and accounts attributable to the Cedar acquisition.

Domain Services

Wholesale

During Fiscal 2020, Wholesale domain services revenue increased by \$3.9 million or 2% to \$186.9 million. The increase in revenue compared to Fiscal 2019 was primarily driven by a \$4.6 million increase in revenue related to the prior year acquisition of Ascio. Ascio revenues now represent a full year of earned revenue compared to the stub period of attributable revenue during Fiscal 2019. Additionally, we saw a further increase in Wholesale domain revenues of \$5.2 million from our other domain services brands, namely OpenSRS and EPAG due to the increase in domains under management for these brands associated with an uptick in registrations through 2020 in connection with COVID-19. As more businesses establish an online presence during this time, we have seen growth from large volume resellers across these brands. This has had a marginal impact on revenue in the current period but will have a carryforward impact in subsequent periods as revenues are recognized from previously deferred billings. These increases were offset by a decrease of \$5.9 million in Wholesale domain revenues related to our eNom brand, driven by continued decline in domain registrations by non-core customers relative to Fiscal 2019.

Together the OpenSRS, eNom, EPAG and Ascio Domain Services manage 25.4 million domain names under the Tucows, eNom, EPAG and Ascio ICANN registrar accreditations and for other registrars under their own accreditations. Domains under management has increased by 1.6 million domain names since December 31, 2019. The increase is driven by increased registrations experienced by our brands during the COVID-19 pandemic, which saw more businesses establish and expand their online presence, offset by the continued erosion of registrations related to non-core customers from our eNom brand.

Net revenues from value-added services increased by \$0.9 million to \$19.8 million compared to Fiscal 2019. The increase in value-added service revenue over Fiscal 2019 was primarily driven by an increase in expiry stream revenue.

Retail

Net revenues from retail decreased by \$0.5 million to \$34.3 million compared to Fiscal 2019. The decrease in revenue was primarily driven by the erosion of retail customers away from our eNom Central brand.

Portfolio

Portfolio revenues decreased by \$3.5 million to \$1.3 million compared to Fiscal 2019. This decrease was expected after the Company disposed of its entire domain portfolio in the fourth quarter of Fiscal 2019, excluding surname domains used in the RealNames email service. The Company expects portfolio revenue to decline into 2021 and starting in the first quarter of 2021 will no longer separately breakout Portfolio revenues.

COST OF REVENUES

Network Access Services

Mobile Services - Retail Mobile Services

Cost of revenues for Retail Mobile Services includes the costs of provisioning mobile services, which is primarily our customers' voice, messaging, data usage provided by our Network Operator, and the costs of providing mobile phone hardware, which is the cost of mobile phone devices and SIM cards sold to our customers, order fulfillment related expenses, and inventory write-downs.

Mobile Services - Mobile Platform Services

Cost of revenues, if any, to provide the MSE Platform services including network access, provisioning and billing services for MVNOs.

Mobile Services - Other Professional Services

Cost of revenues to provide professional services, including transitional services, to our MVNO customers to help support their businesses. This includes any personnel and contractor fees for any client service resources retained by the Company. Only a subset of the Company's employee base provides professional services to our MVNO customers, this cost reflects that group of resources.

Fiber Internet Services

Cost of revenues primarily includes the costs for provisioning high speed Internet access, which is comprised of network access fees and software licenses and the costs of providing hardware. Hardware costs are comprised of network routers sold to our customers, order fulfillment related expenses, inventory adjustments and fees paid to third-party service providers primarily for printing services in connection with billing services to ISPs.

Domain Services

Wholesale - Domain Services

Cost of revenues for domain registrations represents the amortization of registry and accreditation fees on a basis consistent with the recognition of revenues from our customers, namely rateably over the term of provision of the service. Registry fees, the primary component of cost of revenues, are paid in full when the domain is registered, and are initially recorded as prepaid domain registry fees. This accounting treatment reasonably approximates a recognition pattern that corresponds with the provision of the services during the period. Market development funds that do not represent a payment for distinct goods or services provided by the Company, and thus do not meet the criteria for revenue recognition under ASU 2014-09, are reflected as cost of goods sold and are recognized as earned.

Wholesale - Value-Added Services

Costs of revenues for value-added services include licensing and royalty costs related to the provisioning of certain components of related to hosted email and fees paid to third-party hosting services. Fees payable for trust certificates are amortized on a basis consistent with the provision of service, generally one year, while email hosting fees and monthly printing fees are included in cost of revenues in the month they are incurred.

Retail

Costs of revenues for our provision and management of Internet services through our retail sites, Hover.com and the eNom branded sites, include the amortization of registry fees on a basis consistent with the recognition of revenues from our customers, namely rateably over the term of provision of the service. Registry fees, the primary component of cost of revenues, are paid in full when the domain is registered, and are recorded as prepaid domain registry fees.

Portfolio

Costs of revenues for our portfolio represent the amortization of registry fees for domains added to our portfolio over the renewal period, which is generally one year, the value attributed under intangible assets to any domain name sold and any impairment charges that may arise from our assessment of our domain name intangible assets. Payments for domain registrations are payable for the full term of service at the time of activation of service and are recorded as prepaid domain registry fees and are expensed rateably over the renewal term. In the fourth quarter of 2019, the Company disposed of its entire domain portfolio, excluding surname domains used in the RealNames email service. As expected, this has resulted in a material decline in portfolio costs of revenues in Fiscal 2020. The Company expects portfolio revenues and costs of revenue to decline into 2021 and starting in the first quarter of 2021 will no longer separately breakout Portfolio revenues or costs.

Network expenses

Network expenses include personnel and related expenses, depreciation and amortization, communication costs, equipment maintenance, stock-based compensation and employee and related costs directly associated with the management and maintenance of our network. Communication costs include bandwidth, co-location and provisioning costs we incur to support the supply of all our services.

The following table presents our cost of revenues, by revenue source:

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2020	2019
Network Access Services:		
Mobile Services		
Retail mobile services	\$ 22,942	\$ 44,415
Mobile platform services	56	-
Other professional services	2,970	-
Total Mobile	25,968	44,415
Fiber Internet Services	6,982	3,928
Total Network Access Services	32,950	48,343
Domain Services:		
Wholesale		
Domain Services	146,788	148,530
Value Added Services	3,161	2,986
Total Wholesale	149,949	151,516
Retail	17,023	17,093
Portfolio	479	627
Total Domain Services	167,451	169,236
Network Expenses:		
Network, other costs	10,194	9,190
Network, depreciation and amortization costs	13,484	9,599
Network, impairment	1,638	-
	25,316	18,789
	\$ 225,717	\$ 236,368
(Decrease) increase over prior period	\$ (10,651)	
(Decrease) increase - percentage	-5%	

The following table presents our cost of revenues, as a percentage of total cost of revenues for the periods presented:

	Year ended December 31,	
	2020	2019
Network Access Services:		
Mobile Services		
Retail mobile services	10%	19%
Mobile platform services	1%	0%
Other professional services	1%	0%
Total Mobile	12%	19%
Fiber Internet Services	3%	2%
Total Network Access Services	15%	21%
Domain Services:		
Wholesale		
Domain Services	64%	63%
Value Added Services	1%	1%
Total Wholesale	65%	64%
Retail	8%	7%
Portfolio	0%	0%
Total Domain Services	73%	71%
Network Expenses:		
Network, other costs	5%	4%
Network, depreciation and amortization costs	6%	4%
Network, impairment	1%	0%
	12%	8%
	100%	100%

Total cost of revenues for Fiscal 2020 decreased by \$10.7 million, or 5%, to \$225.7 million from \$236.4 million in Fiscal 2019. The decrease was primarily driven by the \$18 million of reduced costs attributable to our Mobile Services streams. Consistent with above, Fiscal 2020 results now include three full quarters impacted from loss of mobile subscribers and reduced usage related to COVID-19, in addition to the 2020 results including the sale of Ting Mobile customers and the shutdown of Roam Mobility. Both of these contribute to the current period results having significantly lower costs. Additionally, further decreases in domain name services of \$1.8 million, related to continued erosion in Wholesale and Retail domain registrations by non-core customers primarily from our existing Domain Services brands, namely eNom. These decreases were offset by increased network expenses of \$6.5 million and Fiber access costs of \$3.1 million as a result of continued Fiber network expansion. The increase in network expenses included a \$1.6 million impairment related to Ting TV, a product under development for Ting Fiber that was discontinued. These increased Fiber costs of revenues are driven by both our recent first quarter acquisition of Cedar as well as through the expansion of our existing Ting Internet footprint.

Prepaid domain registration and other Internet services fees as of December 31, 2020 increased by \$1.9 million, or 2%, to \$111.1 million from \$109.2 million at December 31, 2019 primarily due to current period domain name registration and annual service renewals.

Network Access Services

Mobile Services

Cost of revenues from Mobile Services for Fiscal 2020, as compared to Fiscal 2019, decreased by \$18.4 million or 41% to \$26.0 million. This is driven by decreased Retail Mobile Services costs of \$21.5 million, of which \$19.6 million relates to Ting Mobile (of which \$2.3 million is reduced device costs and \$17.3 million relates to service costs) and \$1.9 million relates to Roam Mobility. Consistent with the above discussion around net revenues, the driving factors for these decreases from Fiscal 2019 are related to the sale of substantially all of the Ting Mobile customer base and the shutdown of Roam Mobility in the current Fiscal Year. Residual Retail Mobile Services costs are also impacted by three quarters of the COVID-19 pandemic, characterized by a decline in mobile subscribers and reduced usage which translates into lower year-to-date costs. The decline also included reduced minimum commitment charges with network operators which decreased by \$4.3 million compared to the Fiscal 2019. This decrease is offset by an increase of \$3.0 million related to costs associated with Other Professional Services provided to DISH.

Fiber Internet Services

In Fiscal 2020, costs related to provisioning high speed Internet access and billing solutions increased \$3.1 million, or 79%, to \$7.0 million as compared to \$3.9 million during Fiscal 2019. The increase in costs were primarily driven by increased direct costs and bandwidth costs related to the continued expansion of the Ting Fiber network, for both existing towns and cities as well as those acquired via the Cedar acquisition.

Domain Services

Wholesale

Costs for wholesale domain services for Fiscal 2020 decreased by \$1.7 million to \$146.8 million, when compared to Fiscal 2019. The decrease was primarily driven by a \$6.1 million decrease in wholesale domain services costs associated with the erosion of domain registrations by non-core customers for our eNom brand. This decrease in eNom registrations was offset by increased Wholesale domain services costs of \$4.3 million from our other wholesale brands, namely OpenSRS, EPAG and Ascio. The offsetting increase is largely a result of the prior year acquisition of Ascio, where Ascio costs now represent a full year compared to the stub period of attributable costs during Fiscal 2019. To a lesser extent any residual increase was a result of increased domains under management for OpenSRS as a result of COVID-19 impacts discussed above.

Costs for wholesale value-added services for Fiscal 2020 increased by \$0.2 million to \$3.2 million, when compared to Fiscal 2019. The increase in cost of revenue is primarily related to an increase in certificate costs related to Ascio and increased Expiry sales compared to Fiscal 2019.

Retail

Costs for retail for Fiscal 2020 decreased by \$0.1 million, to \$17.0 million, when compared to Fiscal 2019. The decrease was a result of an overall declining volume of transactions related to the eNom retail brands.

Portfolio

Costs for portfolio decreased by \$0.1 million for Fiscal 2020, to \$0.5 million when compared to Fiscal 2019. This decrease was expected after the Company disposed of its entire domain portfolio in the fourth quarter of Fiscal 2019, excluding surname domains used in the RealNames email service. The Company expects portfolio costs to decline into 2021 and starting in the first quarter of 2021 will no longer separately breakout Portfolio costs.

Network Expenses

Network costs for Fiscal 2020 increased by \$6.5 million to \$25.3 million when compared to Fiscal 2019. The comparative increase was primarily driven by depreciation as a result of the expansion of the Company's increased network infrastructure associated with the continuing expansion of the Ting Fiber footprint, inclusive of \$0.7 million related to the Cedar acquisition. In addition to these Fiber network increases, the second quarter of 2020 included a \$1.6 million impairment related to Ting TV, a product under development for Ting Fiber.

SALES AND MARKETING

Sales and marketing expenses consist primarily of personnel costs. These costs include commissions and related expenses of our sales, product management, public relations, call center, support and marketing personnel. Other sales and marketing expenses include customer acquisition costs, advertising and other promotional costs.

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2020	2019
Sales and marketing	\$ 34,274	\$ 34,270
Increase over prior period	\$ 4	
Increase - percentage	0%	
Percentage of net revenues	11%	10%

Sales and marketing expenses for Fiscal 2020 remained flat at \$34.3 million when compared to Fiscal 2019. Although the Company initially forecasted an increase in sales and marketing expenses for Fiscal 2020, the sale of substantially all of the Ting Mobile customer base and the shutdown of Roam Mobility through the latter half of the Fiscal Year effectively offset any increases in expenditure seen from the Cedar and Ascio acquisitions or the continued build out of the Ting Fiber network.

Excluding movements in exchange rates, we expect sales and marketing expenses for the fiscal year ending December 31, 2021 ("Fiscal 2021") to increase in absolute dollars, as we adjust our marketing programs and sales and customer support personnel costs to support our network access services marketing and customer service needs.

TECHNICAL OPERATIONS AND DEVELOPMENT

Technical operations and development expenses consist primarily of personnel costs and related expenses required to support the development of new or enhanced service offerings and the maintenance and upgrading of existing infrastructure. This includes expenses incurred in the research, design and development of technology that we use to register domain names, network access services, email, retail, domain portfolio and other Internet services, as well as to distribute our digital content services. Editorial costs relating to the rating and review of the software content libraries are included in the costs of product development. All technical operations and development costs are expensed as incurred.

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2020	2019
Technical operations and development	\$ 12,427	\$ 9,717
Increase over prior period	\$ 2,710	
Increase - percentage	28%	
Percentage of net revenues	4%	3%

Technical operations and development expenses for Fiscal 2020 increased by \$2.7 million, or 28%, to \$12.4 million. The increase in costs relates primarily to increased salaries and benefits driven by an expanding workforce and wage inflation focused on our shared services and engineering teams of \$2.3 million, as well as increased spending related to contract and outsourcing spends to aid in platform development efforts across our business lines of \$0.4 million. Additionally, Fiscal 2020 reflected a full year of people costs related to the workforce acquired in the Ascio acquisition on March 18, 2019, as compared to a stub period of costs in Fiscal 2019.

Excluding movements in exchange rates, we expect technical operations and development expenses for Fiscal 2021, in absolute dollars, to increase when compared to Fiscal 2020 to support the ongoing growth in our operations.

GENERAL AND ADMINISTRATIVE

General and administrative expenses consist primarily of compensation and related costs for managerial and administrative personnel, fees for professional services, public listing expenses, rent, foreign exchange and other general corporate expenses.

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2020	2019
General and administrative	\$ 20,268	\$ 17,880
Increase over prior period	\$ 2,388	
Increase - percentage	13%	
Percentage of net revenues	7%	5%

General and administrative expenses for Fiscal 2020 increased by \$2.4 million, or 13%, to \$20.3 million as compared to Fiscal 2019.

The increase was primarily driven by an increase in people costs of \$1.5 million, an increase in foreign exchange expense of \$1.4 million, and an increase in professional fees of \$0.6 million in connection with the sale of the Ting Mobile customer relationships to DISH. These increases in general and administrative expenses were offset by a decrease in both credit card fees and bad debts associated with the Mobile Services business, in the amounts of \$0.8 million and \$0.2 million, respectively. Additionally, the current year saw a decrease in transitional costs related to Ascio and eNom of \$0.2 million and \$0.2 million, respectively.

Excluding movements in exchange rates, we expect general and administrative expenses for Fiscal 2021, in absolute dollars, to increase when compared to Fiscal 2020 largely to support the growth of our business.

DEPRECIATION OF PROPERTY AND EQUIPMENT

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2020	2019
Depreciation of property and equipment	\$ 488	\$ 486
Increase over prior period	\$ 2	
Increase - percentage	0%	
Percentage of net revenues	0%	0%

Depreciation costs for Fiscal 2020 remained flat at \$0.5 million for Fiscal 2019.

LOSS (GAIN) ON DISPOSAL OF PROPERTY AND EQUIPMENT

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2020	2019
Loss on disposition of property and equipment	\$ (17)	\$ 73
Decrease over prior period	\$ (90)	
Decrease - percentage	(123)	
Percentage of net revenues	(0)%	0%

Loss (gain) on disposal of property and equipment decreased \$0.1 million in Fiscal 2020. The decrease was a result of Fiscal 2019 including equipment disposal from the former Kirkland, Washington office. The Company saw a small gain in the current year on the disposition of property and equipment from the shutdown of the St. Catharines, Ontario office.

AMORTIZATION OF INTANGIBLE ASSETS

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2020	2019
Amortization of intangible assets	\$ 10,080	\$ 9,209
Increase over prior period	\$ 871	
Increase - percentage	9%	
Percentage of net revenues	3%	3%

Amortization of intangible assets increased \$0.9 million for Fiscal 2020, to \$10.1 million. The increase is primarily driven by the acquisition of Cedar as well as a full year's worth of amortization of acquired Ascio intangible assets for which the prior year represented a stub period.

Network rights, brand and customer relationships acquired in connection with the following acquisitions are amortized on a straight-line basis over a range of two to seven years: eNom in January 2017, Ascio in March of 2019, and Cedar in January 2020. As discussed above, the balance of the Roam Mobility brands was fully impaired as at June 30, 2020 as part of shutdown of the Roam brands. This is reflected below in the impairment of definite life intangible assets of \$1.4 million.

IMPAIRMENT OF DEFINITE LIFE INTANGIBLE ASSETS

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2020	2019
Impairment of definite life intangible assets	\$ 1,431	\$ -
Increase over prior period	\$ 1,431	
Increase - percentage	N/A%	
Percentage of net revenues	0%	-%

Impairment of definite life intangible assets for Fiscal 2020 was \$1.4 million as compared to nil in Fiscal 2019. The increase is driven by the write-off of customer relationships acquired in connection with our Roam Mobility Brands. As discussed above, Roam Mobility saw a decline in mobile subscribers and reduced usage related to the COVID-19 pandemic. As at June 30, 2020, the Company decided to shut down the Roam Mobility brands and related business as a result of this lack of demand for SIM-enabled roaming services due to the continued decrease of both business and leisure travel caused by the pandemic. As part of that shut down, the associated customer relationships previously acquired were written off in period.

LOSS (GAIN) ON CURRENCY FORWARD CONTRACTS

Although our functional currency is the U.S. dollar, a major portion of our fixed expenses are incurred in Canadian dollars. Our goal with regard to foreign currency exposure is, to the extent possible, to achieve operational cost certainty, manage financial exposure to certain foreign exchange fluctuations and to neutralize some of the impact of foreign currency exchange movements. Accordingly, we enter into foreign exchange contracts to mitigate the exchange rate risk on portions of our Canadian dollar exposure.

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2020	2019
Loss (gain) on currency forward contracts	\$ (383)	\$ (198)
Decrease over prior period	\$ (185)	
Decrease - percentage	93%	
Percentage of net revenues	0%	0%

We have entered into certain forward exchange contracts that do not comply with the requirements of hedge accounting to meet a portion of our future Canadian dollar requirements through December 2020. During Fiscal 2020, the Company recorded a net gain of \$0.5 million on the change in fair value of outstanding contract as well as a \$0.1 million realized loss on matured contracts. In Fiscal 2019 the Company recorded a net gain of \$0.3 million in the change in fair value of outstanding contracts as well as a \$0.1 million realized loss on matured contracts.

At December 31, 2020, our balance sheet reflects a derivative instrument asset of \$3.9 million as a result of our existing foreign exchange contracts. Until their respective maturity dates, these contracts will fluctuate in value in line with movements in the Canadian dollar relative to the U.S. dollar.

OTHER INCOME (EXPENSES)

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2020	2019
Other income (expense), net	\$ 3,843	\$ (4,769)
Increase over prior period	\$ 8,612	
Increase - percentage	(181)%	
Percentage of net revenues	1%	1%

Other income increased by \$8.6 million when compared to Fiscal 2019. This was primarily due to the \$7.6 million increase due to the gain on sale of Ting customer assets to DISH in the current period. This gain represented the net effect of proceeds earned from DISH in regards to the legacy customer base of \$11.1 million offset by the write off of certain Mobile intangible and contract assets totaling \$3.5 million. In addition to this, another contributing factor in the increase was lower interest incurred on our Amended 2019 Credit Facility, obtained to fund the acquisition of eNom, Ascio and Cedar and funding for expenditures associated with the Company's Fiber to the Home program.

INCOME TAXES

The following table presents our provision for income taxes for the periods presented:

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2020	2019
Provision for income taxes	\$ 4,985	\$ 9,173
Decrease in provision over prior period	\$ (4,188)	
Decrease - percentage	(46)%	
Effective tax rate	46%	37%

We operate in various tax jurisdictions, and accordingly, our income is subject to varying rates of tax. Losses incurred in one jurisdiction cannot be used to offset income taxes payable in another jurisdiction. Our ability to use income tax loss carry forwards and future income tax deductions is dependent upon our operations in the tax jurisdictions in which such losses or deductions arise. Income taxes are computed using the asset and liability method, under which deferred tax assets and liabilities are determined based on the difference between the financial statement carrying values and tax base of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized.

Fiscal 2020 includes tax on profits of \$10.8 million compared to \$24.6 million for Fiscal 2019. Our Fiscal 2020 income tax expense includes a tax expense of less than \$0.1 million related to the adoption of ASU 2016-09, which requires all excess tax benefits and tax deficiencies related to employee share-based payments to be recognized through income tax expense on a prospective basis. The Fiscal 2019 tax recovery related to excess tax benefits related to employee share-based compensation was \$0.6 million.

On December 22, 2017, the Act was signed into law making significant changes to the Internal Revenue Code. Changes include, but are not limited to, a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017, the transition of U.S. international taxation from a worldwide tax system to a territorial system, bonus depreciation that will allow for full expensing of qualified property, and a one-time transition tax on the mandatory deemed repatriation of foreign earnings.

In Fiscal 2020, the Company did not utilize the bonus depreciation with respect to its continued investment in the Ting Internet business. Despite this, due to the reduction in tax rate to 21%, it is unlikely we will ultimately be able to fully claim the Fiscal 2020 foreign taxes paid in future years as a foreign tax credit. As such, we have taken a valuation allowance on foreign tax credits not utilized for 2020 income tax purposes and net operating losses not expected to be utilized in the future, the net negative effect of which is a \$2.9 million addition to income tax expense, as compared to \$5.3 million additional tax expense in Fiscal 2019.

A reconciliation of the federal statutory income tax rate to our effective tax rate is set forth in “Note 9 – Income Taxes” of the Notes to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report.

ADJUSTED EBITDA

We believe that the provision of this supplemental non-GAAP measure allows investors to evaluate the operational and financial performance of our core business using similar evaluation measures to those used by management. We use adjusted EBITDA to measure our performance and prepare our budgets. Since adjusted EBITDA is a non-GAAP financial performance measure, our calculation of adjusted EBITDA may not be comparable to other similarly titled measures of other companies; and should not be considered in isolation, as a substitute for, or superior to measures of financial performance prepared in accordance with GAAP. Because adjusted EBITDA is calculated before recurring cash charges, including interest expense and taxes, and is not adjusted for capital expenditures or other recurring cash requirements of the business, it should not be considered as a liquidity measure. See the Consolidated Statements of Cash Flows included in the attached financial statements. Non-GAAP financial measures do not reflect a comprehensive system of accounting and may differ from non-GAAP financial measures with the same or similar captions that are used by other companies and/or analysts and may differ from period to period. We endeavor to compensate for these limitations by providing the relevant disclosure of the items excluded in the calculation of adjusted EBITDA to net income based on GAAP, which should be considered when evaluating the Company's results. Tucows strongly encourages investors to review its financial information in its entirety and not to rely on a single financial measure.

Our adjusted EBITDA definition excludes depreciation, amortization of intangible assets, income tax provision, interest expense (net), accretion of contingent consideration, stock-based compensation, asset impairment, loss on the disposal of Ting Mobile customer assets, gains and losses from unrealized foreign currency transactions and costs that are one-time in nature and not indicative of on-going performance (profitability), including acquisition and transition costs. Gains and losses from unrealized foreign currency transactions removes the unrealized effect of the change in the mark-to-market values on outstanding unhedged foreign currency contracts, as well as the unrealized effect from the translation of monetary accounts denominated in non-U.S. dollars to U.S. dollars.

The following table reconciles net income to adjusted EBITDA:

Reconciliation of Net income to Adjusted EBITDA (In Thousands of US Dollars) (unaudited)	Twelve months ended December 31,		
	2020 (unaudited)	2019 (unaudited)	2018 (unaudited)
Net income for the period	\$ 5,775	\$ 15,398	\$ 17,135
Depreciation of property and equipment	12,632	8,961	5,722
Impairment of property and equipment	1,638	-	-
Loss (gain) on disposition of property and equipment	(17)	73	-
Amortization of intangible assets	11,420	10,333	9,243
Impairment of intangible assets	1,431	-	-
Write-down on disposal of Ting Mobile customer assets	3,513	-	-
Interest expense, net	3,611	4,769	3,687
Accretion of contingent liability	344	-	-
Provision for income taxes	4,985	9,173	9,020
Stock-based compensation	3,718	2,876	2,574
Unrealized loss (gain) on change in fair value of forward contracts	(500)	(313)	207
Unrealized loss (gain) on foreign exchange revaluation of foreign denominated monetary assets and liabilities	461	(581)	940
Acquisition and other costs ¹	1,961	1,216	1,526
Adjusted EBITDA	\$ 50,972	\$ 51,905	\$ 50,054

¹ Acquisition and other costs represents transaction-related expenses, transitional expenses, such as redundant post-acquisition expenses, primarily related to our acquisition of Ascio in March 2019, Cedar in January 2020, and the disposition of certain Ting Mobile assets in August 2020. Expenses include severance or transitional costs associated with department, operational or overall company restructuring efforts, including geographic alignments.

Adjusted EBITDA for the year ended December 31, 2020 decreased by \$0.9 million, or 2% to \$51.0 million when compared to the year ended December 31, 2019. The decrease in adjusted EBITDA from period-to-period was primarily driven by lower contribution from the erosion of wholesale and retail registrations from our eNom brand as well as Mobile Services due to the sale of Ting Mobile customer relationships to DISH as well as the shutdown of Roam Mobility. The overall decrease in EBITDA was partially offset by an increased contribution from wholesale domain registrations from our OpenSRS and EPAG brands who have seen an increase in domains under management over the course of the COVID-19 pandemic as more businesses move online. The increase is also impacted by increased contribution from Ascio due to the full year of contribution in 2020 relative to the stub period in 2019 due to acquisition timing. Additionally, the acquisition of Cedar and continued expansion of the Ting Fiber network has seen increased contribution from Fiber year-over-year.

OTHER COMPREHENSIVE INCOME (LOSS)

To mitigate the impact of the change in fair value of our foreign exchange contracts on our financial results, in October 2012 we begun applying hedge accounting for the majority of the contracts we need to meet our Canadian dollar requirements on a prospective basis. The impact of the fair value adjustment on outstanding hedged contracts for Fiscal 2020 was a net gain in other comprehensive income of \$1.9 million compared to a net gain of \$1.3 million for Fiscal 2019.

The following table presents other comprehensive income for the periods presented:

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2020	2019
Other comprehensive income (loss)	\$ 1,863	\$ 1,283
Increase over prior period	\$ 580	
Increase - percentage	45%	
Percentage of net revenues	1%	0%

The impact of the fair value adjustments on outstanding hedged contracts during 2020 was a gain in OCI of \$1.7 million as compared to a loss of \$1.1 million during 2019.

The net amount reclassified to earnings during 2020 was a loss of \$0.2 million compared to a loss of \$0.2 million during 2019.

RESULTS OF OPERATIONS FOR THE YEAR ENDED DECEMBER 31, 2019 AS COMPARED TO THE YEAR ENDED DECEMBER 31, 2018

The Company has reclassified certain prior year income statement amounts to conform the current year presentation. As a result of these reclassifications, there were no changes to previously reported net income, comprehensive income and income from operations.

The Company has initially applied ASC 2014-09 (Topic 606) on January 1, 2018 using the modified retrospective method. Under this method, the comparative information is not restated.

NET REVENUES

The following table presents our net revenues, by revenue source:

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2019	2018
<u>Network Access Services:</u>		
Mobile Services		
Retail mobile services	\$ 84,657	\$ 89,340
Mobile platform services	-	-
Other professional services	-	-
Total Mobile	84,657	89,340
Fiber Internet Services	11,006	7,984
Total Network Access Services	95,663	97,324
<u>Domain Services:</u>		
Wholesale		
Domain Services	182,957	189,434
Value Added Services	18,922	17,756
Total Wholesale	201,879	207,190
Retail	34,786	34,524
Portfolio	4,817	6,975
Total Domain Services	241,482	248,689
	\$ 337,145	\$ 346,013
(Decrease) increase over prior period	\$ (8,868)	
(Decrease) increase - percentage	(3%)	

The following table presents our revenues, by revenue source, as a percentage of total revenues:

	Year ended December 31,	
	2019	2018
Network Access Services:		
Mobile Services		
Retail mobile services	25%	26%
Mobile platform services	0%	0%
Other professional services	0%	0%
Total Mobile	25%	26%
Fiber Internet Services	3%	2%
Total Network Access Services	28%	28%
Domain Services:		
Wholesale		
Domain Services	55%	55%
Value Added Services	6%	5%
Total Wholesale	61%	60%
Retail	10%	10%
Portfolio	1%	2%
Total Domain Services	72%	72%
	100%	100%

Total net revenues for Fiscal 2019 decreased by \$8.9 million, or 3%, to \$337.1 million from \$346.0 million for the fiscal year ended December 31, 2018 ("Fiscal 2018"). The overall decrease in revenue was primarily driven by the \$16.9 million acceleration of revenue related to the Namecheap bulk transfer of 2.89 million names throughout Fiscal 2018. Wholesale and domain revenue decreased a further \$5.8 million during Fiscal 2019 related an erosion in Wholesale domain registrations by noncore customers. Ting Mobile handset and mobile usage revenue decreased \$4.6 million due to a decrease in mobile subscribers, and portfolio revenue decreased \$2.2 million. The decreases in revenues were offset by a \$17.4 million increase related to the acquisition of Ascio, a domain registrar business acquired on March 18, 2019, an increase in Wholesale domain revenue related to price increases, as well as a \$3.0 million increase in revenue related to the expanding Ting Internet footprint. Deferred revenue from domain name registrations and other Internet services at December 31, 2019 increased to \$149.3 million from \$143.7 million at December 31, 2018, primarily due to the acquisition of Ascio.

No customer accounted for more than 10% of revenue during Fiscal 2019 or Fiscal 2018, and no customers accounted for more than 10% of accounts receivable as of December 31, 2019 and 2018. Management judgment is required at the time of recording of revenue to assess whether the collection of the resulting receivables is reasonably assured. On an ongoing basis, we assess the ability of our customers to make required payments. Based on this assessment, we expect the carrying amount of our outstanding receivables, net of allowance for doubtful accounts, to be fully collected.

Network Access Services

Mobile and Other Services

Net revenues from mobile phone equipment and services for Fiscal 2019, as compared to Fiscal 2018, decreased by \$4.6 million or 5% to \$84.7 million. The overall decrease in revenue was primarily related to a decline in mobile service revenue, which decreased by \$2.2 million compared to Fiscal 2018, to \$78.2 million, as a result of a decline in mobile subscribers. Revenues from the sale of mobile hardware and related accessories decreased by \$2.4 million compared to Fiscal 2018, to \$6.5 million. The decrease in device revenue was primarily driven by reduced demand for higher-priced devices compared to Fiscal 2018.

Other revenues from Ting Internet and billing solutions generated \$11.0 million in revenue during Fiscal 2019, up \$3.0 million or 38% compared to Fiscal 2018. Growth in Ting Internet revenues was as a result of the increased Ting Internet footprint in existing Ting towns throughout the United States, as well as the addition of Fuquay-Varina, North Carolina in the first quarter of 2019.

As of December 31, 2019, Ting Mobile had 160,000 mobile subscribers and 289,000 mobile devices under its management compared to 163,000 subscribers and 296,000 devices under its management as of December 31, 2018.

As of December 31, 2019, Ting Internet had access to 36,000 serviceable addresses and 10,000 active accounts under its management compared to having access to 28,000 serviceable addresses and 7,000 active accounts under its management as of December 31, 2018.

Domain Services

Wholesale

During Fiscal 2019, Wholesale domain services revenue decreased by \$6.4 million or 3% to \$183.0 million. The decrease in revenue compared to Fiscal 2018 was primarily driven by the \$16.9 million acceleration of revenue related to the Namecheap bulk transfer of 2.89 million domain names during 2018. Wholesale domain revenue decreased a further \$10.1 million related to the erosion of registrations by non-core customers during Fiscal 2019. The overall decrease in Wholesale domain revenues was partially offset by a \$17.4 million increase in revenue related to the acquisition of Ascio and a \$3.2 million increase in revenue related to price increases.

The number of overall transactions from new, renewed and transferred-in domain name registrations for Fiscal 2019, as compared to Fiscal 2018, decreased by 0.1 million to 17.3 million. The decrease was primarily driven by the departure of a few large, low margin customers, including Namecheap. The overall decrease was partially offset by an increase in new, renewed and transferred-in domain name registrations related to the acquisition of Ascio. While we anticipate that the number of new, renewed and transferred-in domain name registrations will continue to incrementally increase in the long term, the volatility of these factors could affect the growth of domain names that we manage.

Net revenues from value-added services increased by \$1.1 million to \$18.9 million compared to Fiscal 2018. The increase in value-added service revenue over Fiscal 2018 was primarily driven by an increase in expiry stream revenue.

Retail

Net revenues from retail increased by \$0.3 million to \$34.8 million compared to Fiscal 2018. Revenue increased, because Fiscal 2018 revenue was negatively impacted by the fair value effect of deferred revenue acquired in the eNom acquisition to a greater extent than in Fiscal 2019.

Portfolio

Portfolio revenues decreased by \$2.2 million to \$4.8 million compared to Fiscal 2018. The decrease is due to a decrease in the volume of portfolio sales in Fiscal 2019. In the fourth quarter of 2019, the Company disposed of its entire domain portfolio, excluding surname domains used in the RealNames email service. The Company expects portfolio revenue to materially decline in Fiscal 2020 and thereafter.

COST OF REVENUES

The following table presents our cost of revenues, by revenue source:

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2019	2018
Network Access Services:		
Mobile Services		
Retail mobile services	\$ 44,415	\$ 46,061
Mobile platform services	-	-
Other professional services	-	-
Total Mobile	44,415	46,061
Fiber Internet Services	3,928	3,994
Total Network Access Services	48,343	50,055
Domain Services:		
Wholesale		
Domain Services	148,530	160,216
Value Added Services	2,986	3,154
Total Wholesale	151,516	163,370
Retail	17,093	17,725
Portfolio	627	953
Total Domain Services	169,236	182,048
Network Expenses:		
Network, other costs	9,190	9,846
Network, depreciation and amortization costs	9,599	7,294
	18,789	17,140
	\$ 236,368	\$ 249,243
(Decrease) increase over prior period	\$ (12,875)	
(Decrease) increase - percentage	(5%)	

The following table presents our cost of revenues, as a percentage of total cost of revenues for the periods presented:

	Year ended December 31,	
	2019	2018
Network Access Services:		
Mobile Services		
Retail mobile services	19%	18%
Mobile platform services	0%	0%
Other professional services	0%	0%
Total Mobile	19%	18%
Fiber Internet Services	2%	2%
Total Network Access Services	21%	20%
Domain Services:		
Wholesale		
Domain Services	63%	65%
Value Added Services	1%	1%
Total Wholesale	64%	66%
Retail	7%	7%
Portfolio	0%	0%
Total Domain Services	71%	73%
Network Expenses:		
Network, other costs	4%	4%
Network, depreciation and amortization costs	4%	3%
	8%	7%
	100%	100%

Total cost of revenues for Fiscal 2019 decreased by \$12.8 million, or 5%, to \$236.4 million from \$249.2 million in Fiscal 2018. The decrease was primarily driven by the \$16.8 million acceleration of costs related to the Namecheap bulk transfer of 2.89 million names during Fiscal 2018. Wholesale domain and value added service costs decreased a further \$9.9 million related to an erosion in registrations by non-core customers. Retail domain costs decreased \$0.6 million related to the churn of low margin customers and portfolio costs decreased by \$0.4 million. Cost of revenue decreased a further \$1.7 million due to a decline in mobile subscribers. The overall decrease in cost of revenue was offset by an increase of \$14.8 million of costs related to the acquisition of Ascio, and an increase of \$1.7 million in Network Expenses associated with the expanding Ting Internet footprint. Prepaid domain registration and other Internet services fees as of December 31, 2019 increased by \$2.7 million, or 3%, to \$109.2 million from \$106.5 million at December 31, 2018 primarily from the acquisition of Ascio.

Network Access Services

Mobile and Other Services

Cost of revenues from mobile phone equipment and services for Fiscal 2019, as compared to Fiscal 2018, decreased by \$1.7 million or 4% to \$44.4 million. The decrease in mobile usage charges was primarily driven by a decrease in Roam Mobility brands related costs of \$1.8 million related to lower network operator costs in the current period and restructuring charges that were incurred during Fiscal 2018. The decrease was also driven by lower mobile hardware and related accessories costs, which decreased \$2.1 million as compared to Fiscal 2018. The decrease in hardware sales was primarily driven by reduced demand for higher-priced devices compared to Fiscal 2018. The decrease in mobile usage costs were offset by an increase in Ting mobile service related costs of \$2.2 million related to increased minimum charges with network operators.

In Fiscal 2019, costs related to provisioning high speed Internet access and billing solutions decreased \$0.1, or 3%, to \$3.9 million as compared to \$4.0 million during Fiscal 2018. The decrease in costs was primarily due to the fact that overhead resources have been increasingly focused on capital activities as compared to Fiscal 2018.

Domain Services

Wholesale

Domain Service

Costs for wholesale domain services for Fiscal 2019 decreased by \$11.7 million to \$148.5 million, when compared to Fiscal 2018. The decrease was primarily driven by the accelerated recognition of \$16.8 million domains revenue associated with the Namecheap bulk transfer of 2.89 million names throughout Fiscal 2018. Wholesale domain costs decreased a further \$9.7 million related to an erosion in registrations by non-core customers. The decreases were partially offset by a \$14.8 million increase related to the acquisition of Ascio.

Value-Added Services

Costs for wholesale value-added services for Fiscal 2019 decreased by \$0.2 million to \$3.0 million, when compared to Fiscal 2018. The decrease in cost of revenue is primarily related to an overall decline in certification and email sales during Fiscal 2018.

Retail

Costs for retail for Fiscal 2019 decreased by \$0.6 million, to \$17.1 million, when compared to Fiscal 2018. The decrease was a result of an overall declining volume of transactions related to certain retail brands.

Portfolio

Costs for portfolio decreased by \$0.4 million for Fiscal 2019, to \$0.6 million when compared to Fiscal 2018, the decrease in cost is primarily driven by a lower volume of portfolio sales compared to Fiscal 2018. In the fourth quarter of 2019, the Company disposed of its entire domain portfolio, excluding surname domains used in the RealNames email service. The Company expects portfolio cost of revenue to materially decline in Fiscal 2020 and thereafter in-line with the expected decline in revenue.

Network Expenses

Network costs for Fiscal 2019 increased by \$1.7 million to \$18.8 million when compared to Fiscal 2018, which is primarily driven by the increase in network costs and depreciation of the fiber assets associated with the continuing expansion of the Ting Fiber footprint.

SALES AND MARKETING

Sales and marketing expenses consist primarily of personnel costs. These costs include commissions and related expenses of our sales, product management, public relations, call center, support and marketing personnel. Other sales and marketing expenses include customer acquisition costs, advertising and other promotional costs.

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2019	2018
Sales and marketing	\$ 34,270	\$ 33,063
Increase over prior period	\$ 1,207	
Increase - percentage	4%	
Percentage of net revenues	10%	10%

Sales and marketing expenses for Fiscal 2019 increased by \$1.2 million, or 4%, to \$34.3 million as compared to Fiscal 2018. This increase primarily related to a \$1.3 million increase in people costs acquired in the acquisition of Ascio in the first quarter of 2019. Stock-based compensation expenses also increased \$0.2 million in Fiscal 2019 to attract and retain labor. The overall increase in sales and marketing expense was partially offset by a decrease in other marketing expenses of \$0.3 million.

TECHNICAL OPERATIONS AND DEVELOPMENT

Technical operations and development expenses consist primarily of personnel costs and related expenses required to support the development of new or enhanced service offerings and the maintenance and upgrading of existing infrastructure. This includes expenses incurred in the research, design and development of technology that we use to register domain names, network access services, email, retail, domain portfolio and other Internet services, as well as to distribute our digital content services. Editorial costs relating to the rating and review of the software content libraries are included in the costs of product development. All technical operations and development costs are expensed as incurred.

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2019	2018
Technical operations and development	\$ 9,717	\$ 8,748
Increase over prior period	\$ 969	
Increase - percentage	11%	
Percentage of net revenues	3%	3%

Technical operations and development expenses for Fiscal 2019 increased by \$1.0 million, or 11%, to \$9.7 million. The increase in costs relates primarily to a \$0.7 million increase related to the Ascio acquisition, with a further increase of \$0.3 million related to increased salaries and benefits driven by an expanding workforce and wage inflation.

GENERAL AND ADMINISTRATIVE

General and administrative expenses consist primarily of compensation and related costs for managerial and administrative personnel, fees for professional services, public listing expenses, rent, foreign exchange and other general corporate expenses.

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2019	2018
General and administrative	\$ 17,880	\$ 17,710
Increase over prior period	\$ 170	
Increase - percentage	1%	
Percentage of net revenues	5%	5%

General and administrative expenses for Fiscal 2019 increased by \$0.2 million, or 1%, to \$17.9 million as compared to Fiscal 2018. The overall increase in general and administrative expense was primarily driven by a \$0.7 million increase related to Ascio expenses. The overall increase in general and administrative expenses was partially offset by a foreign exchange gain of \$0.5 million.

DEPRECIATION OF PROPERTY AND EQUIPMENT

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2019	2018
Depreciation of property and equipment	\$ 486	\$ 424
Increase over prior period	\$ 62	
Increase - percentage	15%	
Percentage of net revenues	0%	0%

Depreciation costs for Fiscal 2019 increased to \$0.5 million when compared to \$0.4 million for Fiscal 2018. The increase is driven by an increase in computer hardware assets, compared to Fiscal 2018.

LOSS ON DISPOSAL OF PROPERTY AND EQUIPMENT

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2019	2018
Loss on disposition of property and equipment	\$ 73	\$ -
Increase over prior period	\$ 73	
Increase - percentage	N/A%	
Percentage of net revenues	0%	-%

Loss on disposal costs were \$0.1 million during the Fiscal 2019 related to equipment disposal from the Kirkland office.

AMORTIZATION OF INTANGIBLE ASSETS

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2019	2018
Amortization of intangible assets	\$ 9,209	\$ 7,247
Increase over prior period	\$ 1,962	
Increase - percentage	27%	
Percentage of net revenues	3%	2%

Amortization of intangible assets increased \$2.0 million for Fiscal 2019, to \$9.2 million. The increase is primarily driven by the acquisition of Ascio.

Network rights, brand and customer relationships acquired in connection with the acquisitions eNom in January 2017, Roam Mobility brands in September of 2017 and Ascio in March of 2019 are amortized on a straight-line basis over a range of two to seven years.

LOSS (GAIN) ON CURRENCY FORWARD CONTRACTS

Although our functional currency is the U.S. dollar, a major portion of our fixed expenses are incurred in Canadian dollars. Our goal with regard to foreign currency exposure is, to the extent possible, to achieve operational cost certainty, manage financial exposure to certain foreign exchange fluctuations and to neutralize some of the impact of foreign currency exchange movements. Accordingly, we enter into foreign exchange contracts to mitigate the exchange rate risk on portions of our Canadian dollar exposure.

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2019	2018
Loss (gain) on currency forward contracts	\$ (198)	\$ 254
Decrease over prior period	\$ (452)	
Decrease - percentage	178%	
Percentage of net revenues	0%	0%

We have entered into certain forward exchange contracts that do not comply with the requirements of hedge accounting to meet a portion of our future Canadian dollar requirements through December 2019. During Fiscal 2019, the Company recorded a net gain of \$0.3 million on the change in fair value of outstanding contracts as well as a \$0.1 million realized loss on matured contracts. In Fiscal 2018 the Company recorded a net loss of \$0.2 million for the change in fair value of outstanding contracts and a loss of less than \$0.1 million of settlements of contracts not designated as hedges.

At December 31, 2019, our balance sheet reflects a derivative instrument asset of \$0.7 million as a result of our existing foreign exchange contracts. Until their respective maturity dates, these contracts will fluctuate in value in line with movements in the Canadian dollar relative to the U.S. dollar.

OTHER INCOME AND (EXPENSES)

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2019	2018
Other income (expense), net	\$ (4,769)	\$ (3,169)
Increase over prior period	\$ (1,600)	
Increase - percentage	50%	
Percentage of net revenues	1%	1%

Other expenses increased by \$1.6 million when compared to Fiscal 2018 primarily due to interest incurred on our credit facility with the majority of the borrowings on the credit facility to support the build-out of the Ting Fiber network. Other expense consists primarily of the interest we incur in connection with our Amended 2019 Credit Facility. The interest incurred primarily relates to our loan balances obtained to fund the acquisition of eNom, the acquisition of Ascio and funding for expenditures associated with the Company's Fiber to the Home program. Costs in 2018 were partially offset by income of \$0.5 million from the amortization of a \$1.5 million Joint Marketing Agreement commencing in November 2015, which fully amortized in the fourth quarter of 2018.

INCOME TAXES

The following table presents our provision for income taxes for the periods presented:

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2019	2018
Provision for income taxes	\$ 9,173	\$ 9,020
Increase in provision over prior period	\$ 153	
Increase - percentage	2%	
Effective tax rate	37%	34%

We operate in various tax jurisdictions, and accordingly, our income is subject to varying rates of tax. Losses incurred in one jurisdiction cannot be used to offset income taxes payable in another jurisdiction. Our ability to use income tax loss carry forwards and future income tax deductions is dependent upon our operations in the tax jurisdictions in which such losses or deductions arise. Income taxes are computed using the asset and liability method, under which deferred tax assets and liabilities are determined based on the difference between the financial statement carrying values and tax base of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized.

Fiscal 2019 includes tax on profits of \$24.6 million compared to \$26.2 million for Fiscal 2018. Our Fiscal 2019 income tax expense benefited from the inclusion of a \$0.6 million tax recovery related to the adoption of ASU 2016-09, which requires all excess tax benefits and tax deficiencies related to employee share-based payments to be recognized through income tax expense on a prospective basis. The Fiscal 2018 tax recovery related to excess tax benefits related to employee share-based compensation was \$0.7 million.

On December 22, 2017, the Act was signed into law making significant changes to the Internal Revenue Code. Changes include, but are not limited to, a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017, the transition of U.S. international taxation from a worldwide tax system to a territorial system, bonus depreciation that will allow for full expensing of qualified property, and a one-time transition tax on the mandatory deemed repatriation of foreign earnings.

In Fiscal 2019, the Company was able to utilize the bonus depreciation with respect to its continued investment in the Ting Internet business. The impact of this, together with the reduction in tax rate to 21%, make it unlikely we will ultimately be able to fully claim the Fiscal 2019 foreign taxes paid in future years. As such, we have taken a valuation allowance for foreign tax credits and R&D tax credits not utilized for 2019 income tax purposes and net operating losses not expected to be utilized in the future, the net negative effect of which is a \$5.3 million addition to income tax expense, as compared to \$2.8 million additional tax expense in Fiscal 2018.

A reconciliation of the federal statutory income tax rate to our effective tax rate is set forth in "Note 9 – Income Taxes" of the Notes to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report.

OTHER COMPREHENSIVE INCOME (LOSS)

To mitigate the impact of the change in fair value of our foreign exchange contracts on our financial results, in October 2012 we begun applying hedge accounting for the majority of the contracts we need to meet our Canadian dollar requirements on a prospective basis. The impact of the fair value adjustment on outstanding hedged contracts for Fiscal 2019 was a net loss in other comprehensive income of \$0.8 million compared to a net loss of \$0.1 million for Fiscal 2018.

The following table presents other comprehensive income for the periods presented:

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,	
	2019	2018
Other comprehensive income (loss)	\$ 1,283	\$ (810)
Increase over prior period	\$ 2,093	
Increase - percentage	(258)%	
Percentage of net revenues	0%	0%

The impact of the fair value adjustments on outstanding hedged contracts during 2019 was a gain in OCI of \$1.1 million as compared to a loss of \$1.0 million during 2018.

The net amount reclassified to earnings during 2019 was a loss of \$0.2 million compared to a loss of \$0.2 million during 2018.

Liquidity and capital resources

As of December 31, 2020, our cash and cash equivalents balance decreased \$12.1 million when compared to December 31, 2019. Our principal uses of cash were \$44.5 million for the continued investment in property, equipment and intangible assets, \$8.8 million for the Acquisition of Cedar, \$3.3 million in stock repurchases, and \$0.6 million of other costs, including tax payment associated with stock option exercises and loan payable costs. These uses of cash were offset by cash provided by operating activities of \$36.1 million, advances of \$8.0 million from our 2019 Amended Credit Facility (as defined below), and \$1.0 million of proceeds received on exercise of stock options.

Amended 2019 Credit Facility

On June 14, 2019, the Company and its wholly-owned subsidiaries, Tucows.com Co., Ting Fiber, Inc., Ting Inc., Tucows (Delaware) Inc. and Tucows (Emerald), LLC, entered into an Amended and Restated Senior Secured Credit Agreement with Royal Bank of Canada ("RBC"), as administrative agent, and lenders party thereto (collectively with RBC, the "Lenders") under which the Company has access to an aggregate of up to \$240 million in funds, inclusive of a \$60 million accordion facility.

On November 27, 2019, the Company entered into Amending Agreement No. 1 to the Amended and Restated Senior Secured Credit Agreement (collectively with the Amended and Restated Senior Secured Credit Agreement, the "Amended 2019 Credit Facility") to amend certain defined terms in connection with the Cedar acquisition.

In connection with the Amended 2019 Credit Facility, the Company incurred an additional \$0.3 million of fees paid to lenders and \$0.2 million of legal fees related to the debt issuance. Of these fees, \$0.4 million are debt issuance costs, which have been reflected as a reduction to the carrying amount of the loan payable and will be amortized over the term of the credit facility agreement and \$0.1 million have been recorded in General and administrative expenses.

The obligations of the Company under the Amended 2019 Credit Agreement are secured by a first priority lien on substantially all of the personal property and assets of the Company and has a four-year term.

Other Credit Facilities

Prior to the Company entering into the Amended 2019 Credit Facility, the Company had entered into the 2017 Amended Credit Facility and prior credit facilities with Bank of Montreal ("BMO"), which provided the Company with continued access to a treasury risk management facility and a credit card facility. All remaining credit facilities under the 2017 Amended Credit Facility and the prior credit facilities with BMO have been terminated.

As of December 31, 2020, the Company held contracts in the amount of \$31.8 million with BMO to trade U.S. dollars in exchange for Canadian dollars under an uncommitted treasury risk management facility which assists the Company with hedging Canadian dollar exposures.

Cash Flow from Operating Activities

Year ended December 31, 2020

Net cash inflows from operating activities were \$36.1 million, a decrease of 11% when compared to the prior year. Net income, after adjusting for non-cash charges, during Fiscal 2020 was \$36.0 million, a decrease of 6% when compared to the prior year. Net income included non-cash charges and recoveries of \$30.2 million such as depreciation, amortization, impairment of indefinite life intangible asset, loss on write-off of property and equipment, write-down on disposal of Ting Mobile customer assets and contract costs, excess tax benefits on stock-based compensation, stock-based compensation, the provision for unrealized losses on currency forward contracts and a recovery for deferred tax. This generation of cash from net income was further increased by a working capital change of \$0.1 million. We generated \$6.7 million from movements in inventory, income taxes recoverable, accrued liabilities, customer deposits and deferred revenue. These positive contributions were offset by cash use of \$6.6 million to invest in accounts receivable, prepaid expenses and deposits, deferred costs of fulfillment, accounts payable, and accreditation fees.

Year ended December 31, 2019

Net cash inflows from operating activities were \$40.4 million, an increase of 9% when compared to the prior year. Net income, after adjusting for non-cash charges, during Fiscal 2019 was \$38.4 million, an increase of 8% when compared to the prior year. Net income included non-cash charges and recoveries of \$23.0 million such as depreciation, amortization, impairment of indefinite life intangible asset, excess tax benefits on stock-based compensation, stock-based compensation, the provision for unrealized losses on currency forward contracts and a recovery for deferred tax. This generation of cash from net income was further increased by a working capital change of \$2.0 million. We generated \$13.3 million from movements in inventory, prepaid registration costs, prepaid expenses and deposits, accrued liabilities and customer deposits. These positive contributions were offset by cash use of \$11.3 million to invest in accounts receivable, deferred revenue, income taxes recoverable, accounts payable, and accreditation fees.

Year ended December 31, 2018

Net cash inflows from operating activities were \$37.2 million, an increase of 17% when compared to the prior year. Net income, after adjusting for non-cash charges, during Fiscal 2018 was \$35.4 million, an increase of 18% when compared to the prior year. Net income included non-cash charges and recoveries of \$18.3 million such as depreciation, amortization, impairment of indefinite life intangible asset, excess tax benefits on stock-based compensation, stock-based compensation, the provision for unrealized losses on currency forward contracts and a recovery for deferred tax. This generation of cash from net income was further increased by our increasing working capital of \$1.8 million. We generated \$24.9 million from movements in accounts receivables, deferred registration costs, accounts payable and income taxes recoverable. These positive contributions were offset by cash use of \$23.1 million to invest in deferred revenue, accreditation fees, inventory, prepaid expenses and deposits, customer deposits and accrued liabilities.

Cash Flow from Financing Activities

Year ended December 31, 2020

Net cash inflows from financing activities during Fiscal 2020 totaled \$5.1 million as compared to cash inflows of \$43.5 million during Fiscal 2019. Net cash inflows of \$8.0 million resulting from draws on the 2019 Amended Credit Facility and \$1.0 million from proceeds received on the exercise of stock options. These cash inflows were partially offset by \$3.3 million outflow for stock repurchases, \$0.6 million outflow from the net impact of exercise of stock options and \$0.1 million of loan costs.

Year ended December 31, 2019

Net cash inflows from financing activities during Fiscal 2019 totaled \$43.5 million as compared to cash outflows of \$12.9 million during Fiscal 2018. Net cash inflows of \$57.4 million resulting from draws on the 2019 Amended Credit Facility to fund the FTTH capital expenditures, the acquisition of Ascio and general working capital requirements. These cash inflows were partially offset by outflows of \$8.1 million of principal repayments relating to our 2019 Credit Amended Credit Facility, \$5.0 million in stock repurchases, \$0.6 million of loan costs and \$0.2 million outflow from the net impact of exercise of stock options.

Year ended December 31, 2018

Net cash outflows from financing activities during Fiscal 2018 totaled \$12.9 million as compared to cash inflows of \$65.2 million during Fiscal 2017. Net cash inflows of \$7.0 million resulting from draws on the 2017 Amended Credit Facility to fund the FTTH capital expenditures and general working capital requirements. These cash inflows were partially offset by outflows of \$19.6 million of principal repayments relating to our 2017 Credit Amended Credit Facility, \$0.3 million outflow from the net impact of exercise of stock options

Cash Flow from Investing Activities

Year ended December 31, 2020

Investing activities during the Fiscal 2020 used net cash of \$53.3 million as compared to using \$76.1 million during Fiscal 2019.

Cash outflows of \$44.5 million related to the investment in property, equipment and intangible assets, primarily to support the continued expansion of our fiber footprint. In addition, the Company used \$8.8 million in connection with the acquisition of Cedar. The Company continues to invest in our existing Ting Towns of Centennial, Colorado, Charlottesville, Virginia, Fuquay-Varina, North Carolina, Wake Forest, North Carolina, Holly Springs, North Carolina, and Sandpoint, Idaho as well ramping construction in Roaring Fork, Colorado, Rolesville, North Carolina, and Culver City, California, as we seek to extend both our current network and expand to new towns. We expect our capital expenditures on building and expanding our fiber network to continue to increase significantly during Fiscal 2021.

Year ended December 31, 2019

Investing activities during the Fiscal 2019 used net cash of \$76.1 million as compared to using \$29.7 million during Fiscal 2018.

Cash outflows of \$28.5 million related to the acquisition of Ascio Technologies, Inc., \$3.6 million related to the acquisition of intangible assets, of which \$3.5 million related to the acquisition of mobile subscribers of the FreedomPop and Unreal MVNO brands, and \$44.1 million of cash outflows was invested in property and equipment, primarily to support the continued expansion of our fiber footprint. The Company continues to invest in our existing Ting Towns of Charlottesville, Virginia, Holly Springs, North Carolina and Westminster, Maryland as well ramping construction in Sandpoint, Idaho, Centennial, Colorado, and Fuquay Varina, North Carolina, as we seek to extend both our current network and expand to new towns. We expect our capital expenditures on building and expanding our fiber network to continue to increase significantly during Fiscal 2019.

Year ended December 31, 2018

Investing activities during the Fiscal 2018 used net cash of \$29.7 million as compared to using \$94.1 million during Fiscal 2017.

In the second half of Fiscal 2018, the Company purchased customer relationships related to hosting and mobile services for \$0.6 million. On February 14, 2018, the Company acquired the remaining 10% interest in Ting Virginia, LLC. for a consideration of \$1.2 million. The consideration was funded through cash flow from operations. See Note 3(a) of the Notes to the Consolidated Financial Statements included in this report. In addition, the Company invested \$27.9 million in property and equipment, primarily to support the continued expansion of our fiber footprint. The Company continues to invest in our Ting towns of Charlottesville, Virginia, Holly Springs, North Carolina and Westminster, Maryland.

We may need additional funds or seek other financing arrangements to facilitate more rapid expansion, develop new or enhance existing products or services, respond to competitive pressures or acquire or invest in complementary businesses, technologies, services or products. We may also evaluate potential acquisitions of other businesses, products and technologies. We currently have no commitments or agreements regarding the acquisition of other businesses. If additional financing is required, we may need additional equity or debt financing and any additional financing may be dilutive to existing investors. We may not be able to raise funds on acceptable terms, or at all.

Off Balance Sheet Arrangements

We did not have any off-balance sheet arrangements as of December 31, 2020.

Contractual Obligations

For the purpose of the contractual obligations table below, contractual obligations for purchases of goods or services are defined as agreements that are enforceable and legally binding and that specify all significant terms, including: fixed or minimum quantities to be purchased; fixed, minimum or variable price provisions; and the approximate timing of the transaction. The expected timing of payment of the obligations discussed below is estimated based on information available to us as of December 31, 2020. Timing of payments and actual amounts paid may be different depending on the time of receipt of goods or services or changes to agreed-upon amounts for some obligations. The following table summarizes our contractual obligations at December 31, 2020 (Dollar amounts in thousands of US dollars):

Contractual Obligations for the year ending December 31,	Contractual Lease Obligations	Debt Obligations	Purchase Obligations (1)	Total Obligations
2021	\$ 2,084	\$ -	\$ 10,262	\$ 12,346
2022	2,057	-	9,742	11,799
2023	1,979	122,400	13,967	138,346
2024	1,439	-	19,078	20,517
2025	900	-	5,283	6,183
Thereafter	4,071	-	93	4,164
	<u>\$ 12,530</u>	<u>\$ 122,400</u>	<u>\$ 58,425</u>	<u>\$ 193,355</u>

(1) Purchase obligations include all other legally binding service contracts for mobile telephone services and other operational agreements to be delivered during Fiscal 2021 and subsequent years. Note, Purchase Obligations do not include interest payments on the Company's credit facilities.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We develop products in Canada and sell these services in North America and Europe. Our sales are primarily made in U.S. dollars, while a major portion of expenses are incurred in Canadian dollars. Our financial results could be affected by factors such as changes in foreign currency exchange rates or weak economic conditions in foreign markets. Our interest income is sensitive to changes in the general level of Canadian and U.S. interest rates, particularly since the majority of our investments are in short-term instruments. Based on the nature of our short-term investments, we have concluded that there is no material interest rate risk exposure as of December 31, 2020. We are also subject to market risk exposure related to changes in interest rates under our 2019 Amended Credit Facility. We do not expect that any changes in interest rates will be material; however, fluctuations in interest rates are beyond our control. We will continue to monitor and assess the risks associated with interest expense exposure and may take additional actions in the future to mitigate these risks.

Although our functional currency is the U.S. dollar, a substantial portion of our fixed expenses are incurred in Canadian dollars. Our policy with respect to foreign currency exposure is to manage financial exposure to certain foreign exchange fluctuations with the objective of neutralizing some of the impact of foreign currency exchange movements. Exchange rates are, however, subject to significant and rapid fluctuations, and therefore we cannot predict the prospective impact of exchange rate fluctuations on our business, results of operations and financial condition. Accordingly, we have entered into foreign exchange forward contracts to mitigate the exchange rate risk on portions of our Canadian dollar exposure.

As of December 31, 2020, we had the following outstanding foreign exchange forward contracts to trade U.S. dollars in exchange for Canada dollars:

Maturity date (Dollar amounts in thousands of U.S. dollars)	Notional amount of U.S. dollars	Weighted average exchange rate of U.S. dollars	Fair value
January - March 2021	11,125	1.4283	1,327
April - June 2021	9,879	1.4283	1,179
July - September 2021	10,782	1.4362	1,353
	<u>\$ 31,786</u>	1.4310	<u>\$ 3,860</u>

As of December 31, 2020, the Company had \$31.8 million of outstanding foreign exchange forward contracts which will convert to CDN \$45.5 million. Of these contracts, \$26.8 million met the requirements for hedge accounting.

As of December 31, 2019, the Company had \$30.5 million of outstanding foreign exchange forward contracts which will convert to CDN \$40.5 million. Of these contracts, \$26.1 million met the requirements for hedge accounting.

We have performed a sensitivity analysis model for foreign exchange exposure over the year ended December 31, 2020. The analysis used a modeling technique that compares the U.S. dollar equivalent of all expenses incurred in Canadian dollars, at the actual exchange rate, to a hypothetical 10% adverse movement in the foreign currency exchange rates against the U.S. dollar, with all other variables held constant. Foreign currency exchange rates used were based on the market rates in effect during the year ended December 31, 2020. The sensitivity analysis indicated that a hypothetical 10% adverse movement in foreign currency exchange rates would result in a decrease in pre-tax net income for the year ended December 31, 2020 of approximately \$4.5 million. There can be no assurances that the above projected exchange rate decrease will materialize. Fluctuations of exchange rates are beyond our control. We will continue to monitor and assess the risk associated with these exposures and may take additional actions in the future to hedge or mitigate these risks.

Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk consist principally of cash equivalents, marketable securities, foreign exchange contracts and accounts receivable. Our cash, cash equivalents and short-term investments are in high-quality securities placed with major banks and financial institutions whom we have evaluated as highly creditworthy, and commercial paper. Similarly, we enter into our foreign exchange contracts with major banks and financial institutions. With respect to accounts receivable, we perform ongoing evaluations of our customers, generally granting uncollateralized credit terms to our customers, and maintaining an allowance for doubtful accounts based on historical experience and our expectation of future losses.

Interest rate risk

Our exposure to interest rate fluctuations relate primarily to our 2019 Amended Credit Facility.

As of December 31, 2020, we had an outstanding balance of \$121.7 million on the 2019 Amended Credit Facility. The 2019 Amended Credit Facility bears a base interest rate based on borrowing elections by the Company with a marginal rate calculated as a function the Company's total Funded Debt to EBITDA, plus the applicable LIBOR rate. In May 2020, the Company entered into a pay-fixed, receive-variable interest rate swap with a Canadian chartered bank to limit the potential interest rate fluctuations incurred on its future cash flows related to variable interest payments on the Credit facility. The notional value of the interest rate swap was \$70 million. The Company does not use the interest rate swap for trading or speculative purposes. The contract is coterminous with the Credit facility, maturing in June 2023. As of December 31, 2020, an adverse change of one percent on the interest rate would have the effect of increasing our annual interest payment on 2019 Amended Credit Facility by approximately \$0.5 million, assuming that the loan balance as of December 31, 2020 is outstanding for the entire period.

The Company is currently charged interest based on LIBOR, a key global reference interest rate. The interest is partially hedged by interest rate swaps held by the Company. Currently, LIBOR's regulator and administrators are seeking to discontinue the publication of LIBOR. Global markets working groups around the world continue to search and recommend an alternative reference rate for LIBOR. In the U.S., the Alternative Reference Rates Committee ("ARRC") has identified the Secured Overnight Financing Rate ("SOFR") as its preferred alternative rate for USD LIBOR, however work continues across all jurisdictions to evaluate alternatives and establish transition plans and timelines. Both the credit facility agreement and the interest rate swaps will need to be amended when an alternative reference rate is chosen, at which time we may adopt some of the practical expedients provided by ASU 2020-04. As mentioned above, the Company has assessed which existing contracts reference LIBOR and we will continue to monitor the situation and recommendations for an alternative reference rate as they become available. Additionally, the Company will continue proactive discussions and renegotiations with counterparties around the reference rate change as appropriate.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Our consolidated financial statements and supplementary data required by this item are attached to this Annual Report on Form 10-K beginning on page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As required by Rule 13a-15(b) of the Securities Exchange Act of 1934 (the “Exchange Act”), management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated, as of the end of the period covered by this report, the effectiveness of our disclosure controls and procedures as defined in Exchange Act Rule 13a-15(e). Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their control objectives. Based on the evaluation of our disclosure controls and procedures as of the end of the period covered by this annual report, our Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2020 our disclosure controls and procedures were effective at the reasonable assurance level.

Management’s Annual Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). Our 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 accounting principles generally accepted in the United States of America and includes those policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America
- Provide reasonable assurance that our receipts and expenditures are being made only in accordance with authorization of our management and directors; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, such as resource constraints, human error, lack of knowledge or awareness and the possibility of intentional circumvention of these controls, internal control over financial reporting may not prevent or detect misstatements. Furthermore, the design of any control system is based, in part, upon assumptions about the likelihood of future events, for which assumptions may ultimately prove to be incorrect. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Management, including our Chief Executive Officer and Chief Financial Officer, assessed the effectiveness of our internal control over financial reporting as of December 31, 2020. In making this assessment, our management used the criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

Based on the results of our evaluation, management has determined that our internal control over financial reporting was effective as of December 31, 2020.

KPMG LLP (“KPMG”), our independent registered public accounting firm, has audited our consolidated financial statements and expressed an unqualified opinion thereon. KPMG has issued an attestation report on the effectiveness of our internal control over financial reporting as of December 31, 2020. These reports are set forth at the beginning of Part II, Item 8 of this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

There were no changes made in our internal controls over financial reporting occurred during Fiscal 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

Allen Karp

Chairperson of the Board since September 2012 and Director since October 2005

Mr. Karp, 80, was with Cineplex Odeon Corporation in various positions from 1986 to 2005, retiring as Chairman and Chief Executive Officer in 2002 and as Chairman Emeritus in 2005. From 1966 to 1986, he practiced law at the law firm of Goodman and Carr LLP, where he was named partner in 1970. Mr. Karp was until recently a Director of Brookfield Real Estate Services Inc., where he also served on the Audit Committee and as the Chair of the Corporate Governance Committee. From 2004 to 2014, Mr. Karp was Chairman of the Board of Directors of IBI Group Inc., as well as Chairman of the Nominating, Governance and Compensation Committee. Mr. Karp is a past director of the Toronto International Film Festival Group, where he served as Chairman of the Board from 1999 to 2007 and served as Chairman of its Corporate Governance Committee from 2007 to 2012. Additionally, Mr. Karp has previously served as director of several other public corporations.

Mr. Karp has extensive executive leadership skills, long-standing senior management experience, a strong ethics and compliance focus and audit committee experience. These skills and qualifications, in addition to his recent service on the boards of directors of other public companies, enable him to bring valuable perspectives to our Board, particularly with respect to corporate governance matters, and qualify him to be a director of Tucows.

Rawleigh H. Ralls

Director since May 2009

Mr. Ralls, 58, was a founding partner of Lacuna, LLC, an investment management company focused on both public and private companies, which he formed in October 2006. Prior thereto, from 1999 to 2006, he was Chairman of Netidentity.com, an Internet email and web hosting company, where he led corporate strategy and development until the firm's sale in 2006. Mr. Ralls currently serves on the Board of Directors of a number of private companies.

Mr. Ralls has a wealth of industry experience, most notably the experience that he gained through his leadership of Netidentity.com. In addition, Mr. Ralls contributes a unique perspective to the Board's discussions and considerations based on the two decades of investing and portfolio management experience. All of these attributes qualify Mr. Ralls to be a director of Tucows.

Erez Gissin

Director since August 2001

Mr. Gissin, 62, has served since 2010 as a managing partner in Helios Energy Investment, a renewable energy investment fund. From 2005 to 2010, Mr. Gissin served as the Chief Executive Officer of BCID Ltd., an investment company focusing on infrastructure development projects in China. From 2000 to 2005, Mr. Gissin served as the Chief Executive Officer of IP Planet Networks Ltd., an Israeli satellite communication operator providing Internet backbone connectivity and solutions to Internet Service Providers. From 1995 to 2000, Mr. Gissin was Vice President, Business Development of Eurocom Communications Ltd., a holding company that controls several telecommunications services, equipment and Internet companies in Israel.

Mr. Gissin has a strong background in the internet communications industry and has gained significant institutional knowledge in his long tenure as one of our directors. Mr. Gissin also has significant leadership experience as the Chief Executive Officer of BCID Ltd. and IP Planet Networks Ltd. and has extensive financial acumen derived from his years of executive experience and PE fund management. All of these qualities qualify Mr. Gissin to be a director of Tucows.

Elliot Noss

Director since August 2001

Mr. Noss, 58, is our President and Chief Executive Officer and has served in such capacity since the completion of our merger with Tucows Delaware in August 2001. From May 1999 until completion of the merger in August 2001, Mr. Noss served as President and Chief Executive Officer of Tucows Delaware. Before that, from April 1997 to May 1999, Mr. Noss served as Vice President of Corporate Services of Tucows Interactive Ltd., which was acquired by Tucows Delaware in May 1999.

Mr. Noss's lengthy service as our Chief Executive Officer has provided him with extensive knowledge of, and experience with, Tucows' operations, strategy and financial position. In addition, Mr. Noss has widespread knowledge of the internet and software industry generally that, coupled with his operational expertise, qualifies him to be a director of Tucows.

Jeffrey Schwartz

Director since June 2005

Mr. Schwartz, 58, has served as a director of Dorel Industries since 1987 and as Executive Vice President and Chief Financial Officer since 2003. Mr. Schwartz is a graduate of McGill University in Montreal and has a degree in the field of business administration.

Mr. Schwartz has a significant amount of public-company financial expertise, particularly in his executive experience as the chief financial officer of Dorel Industries, Inc. This executive experience, along with Mr. Schwartz's service as one of our Audit Committee members (and as Chairperson of our Audit Committee since 2005), qualifies him to be a director of Tucows.

Robin Chase

Director since October 2014, Co-Chair since November 2020

Robin Chase, 62, is a transportation entrepreneur. She is co-founder and former CEO of Zipcar, founded in 2000, the world's leading car sharing network; as well as co-founder of Veniam, founded in 2012, a network company that moves terabytes of data between vehicles and the cloud. She has recently co-founded her first nonprofit, NUMO, a global alliance to channel the opportunities presented by new urban mobility technologies to build cities that are sustainable and just. Her recent book is *Peers Inc: How People and Platforms are Inventing the Collaborative Economy and Reinventing Capitalism*.

In addition to Ms. Chase's position as a member of the Tucows Board, she sits on the boards of World Resources Institute and Future Planet Capital, and serves on the Dutch multinational DSM's Sustainability Advisory Board. In the past, she served on the boards of Veniam and the Massachusetts Department of Transportation, the French National Digital Agency, the National Advisory Council for Innovation & Entrepreneurship for the US Department of Commerce, the Intelligent Transportation Systems Program Advisory Committee for the US Department of Transportation, the OECD's International Transport Forum Advisory Board, the Massachusetts Governor's Transportation Transition Working Group, and Boston Mayor's Wireless Task Force.

Ms. Chase lectures widely, has been frequently featured in the major media, and has received many awards in the areas of innovation, design, and environment, including the prestigious Urban Land Institute's Nicols Prize as Urban Visionary, Time 100 Most Influential People, Fast Company Fast 50 Innovators, and BusinessWeek Top 10 Designers. Robin graduated from Wellesley College and MIT's Sloan School of Management, was a Harvard University Loeb Fellow, and received an honorary Doctorate of Design from the Illinois Institute of Technology.

Ms. Chase's experience operating companies at the chief executive officer level along with her numerous experiences on these boards and councils qualify her to be a director of Tucows.

Brad Burnham

Director since January 2017

Brad Burnham, 66, is the co-founder and a current Partner of Union Square Ventures (“USV”), founded in 2003, an early stage venture capital firm in New York. USV has invested in more than 75 Internet services, including, Twitter, Inc., Tumblr, Inc., Etsy, Inc., Indeed, Inc., Zynga Inc., Foursquare Labs, Inc, Duolingo, Inc. and Coinbase, Inc. Prior to USV, Mr. Burnham was a partner at AT&T Ventures, the venture capital arm of AT&T. AT&T Ventures invested in consumer facing Internet services like Audible, telecommunications technology companies such as Argon, Xedia, and Juniper Networks, and Competitive Local Exchange Carriers (CLECs) such as Knology, and Data Local Exchange Carriers (“DLECs”) such as Covad. Prior to joining AT&T Ventures, Mr. Burnham was the founder and CEO of Echo Logic, a software tools company spun out of Bell Laboratories. Earlier in his career, Brad held a number of management positions in sales, marketing and business development at AT&T Computer Systems. He began his career as a sales representative at New York Telephone. Mr. Burnham also currently serves on the boards of directors of several non-public organizations.

Mr. Burnham has extensive experience in investing in and serving on the boards of numerous internet service companies which qualify him to be a director of Tucows.

Our directors are elected annually and serve until the election or appointment and qualification of their successors or their earlier death, resignation or removal.

Executive Officers

The required information regarding our executive officers is set forth in Part I hereof under the caption “Executive Officers and Key Employees of the Registrant” and is incorporated herein by reference.

Governance Principles

The governance principles of our Board of Directors (“Board”) include the charters of our Audit Committee and our Corporate Governance, Nominating and Compensation Committee. Our governing principles also include our Code of Business Conduct and Ethics which includes specifics for our senior officers, including our Chief Executive Officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. Each of these documents can be obtained without charge from our Internet web site at tucows.com. Amendments and waivers of our ethics policy for our senior officers will either be posted on our website or filed with the SEC on a Current Report on Form 8-K.

Mr. Karp serves as Chairperson and Ms. Chase serves as Co-Chair. Our Board currently consists of seven directors, all of whom, except for Elliot Noss, are “independent” within the meaning of the independence requirements prescribed by the listing standards of the NASDAQ Capital Market. The Board believes that this structure, which provides an overwhelming majority of independent directors, coupled with the Board meeting in executive session without any management directors or non-independent directors present, is an appropriate structure for Tucows’ Board. We believe that this structure provides appropriate and independent oversight by the Board. The Board regularly consults with our Chief Executive Officer, who is also a director, and our Corporate Governance, Nominating and Compensation Committee to review the various types of risk that affect Tucows and the strategies to mitigate such risks. The Board believes that this structure has been effective.

Meetings

Our Board met seven times for regularly scheduled meetings and twelve times for special meetings during Fiscal 2020. Our Board also took action by unanimous written consent on four occasions during Fiscal 2020. Each director attended at least 75% of the total number of meetings of the Board during Fiscal 2020.

Executive Sessions of Independent Directors

A majority of the independent directors meet quarterly in executive sessions without members of our management present. Mr. Karp is responsible for chairing the executive sessions.

Policy Regarding Attendance

Directors are expected, but are not required, to attend board meetings, meetings of committees on which they serve, and shareholder meetings, and to spend the time needed and meet as frequently as necessary to discharge their responsibilities properly. Elliot Noss attended our 2020 annual meeting of shareholders held virtually and Allen Karp, Erez Gissin and Robin Chase of the Tucows Board of Directors also attended. The remainder of the Board were available on request.

Committees

Our Board has two committees, an audit committee established in accordance with Section 3(a)(58)(A) of the Securities Exchange Act of 1934, as amended, and a corporate governance, nominating and compensation committee. Our committees generally meet in connection with regularly scheduled quarterly and annual meetings of the Board, with additional meetings held as often as its members deem necessary to perform its responsibilities. From time to time, depending on the circumstances, the Board may form a new committee or disband a current committee.

The Audit Committee currently consists of Mr. Schwartz (Chair), Mr. Karp and Mr. Gissin, all of whom are independent directors as prescribed by the listing standards of the NASDAQ Capital Market.

The Audit Committee held five meetings during Fiscal 2020. The Audit Committee also took action by unanimous written consent on one occasion during Fiscal 2020. Each member of the Audit Committee attended at least 75% of the total number of meetings of the committee during Fiscal 2020. The Audit Committee's purposes are to:

- Provide oversight of the Company's accounting and financial reporting processes and the audit of the Company's financial statements;
- Assist the Board in oversight of (i) the integrity of the Company's financial statements, (ii) the Company's compliance with legal and regulatory requirements, (iii) the qualifications, independence and performance of the Company's independent registered public accounting firm, and (iv) the Company's internal accounting and financial controls;
- Provide to the Board such information and materials as it may deem necessary to make the Board aware of significant financial matters that require the attention of the Board; and
- Oversee the management of risks associated with the Company's financial reporting, accounting and auditing matters.

Each of the members of our Audit Committee is an independent director and satisfies the independence standards as prescribed by the listing standards of the NASDAQ Capital Market and Rule 10A-3 under the Exchange Act and is able to read and understand fundamental financial statements including balance sheets, income statements and cash flow statements. Additionally, the Board has determined that Mr. Schwartz qualifies as an "audit committee financial expert" as defined under Item 407(d)(5) of Regulation S-K. The Board has adopted a written charter for the Audit Committee, which the Audit Committee has reviewed and determined to be in compliance with the rules prescribed by the listing standards of the NASDAQ Capital Market and which is available at tucows.com.

The Corporate Governance, Nominating and Compensation Committee currently consists of Mr. Karp (Chair), Mr. Schwartz, Ms. Chase and Mr. Ralls. Each member of our Corporate Governance, Nominating and Compensation Committee is an independent director as defined in the listing standards of the NASDAQ Capital Market and also satisfies the applicable compensation committee member independence standards as prescribed by the listing standards of the NASDAQ Capital Market and Rule 10C-1 under the Exchange Act.

The *Corporate Governance, Nominating and Compensation Committee* held seven meetings during Fiscal 2020. The Corporate Governance, Nominating and Compensation Committee took action by unanimous written consent on two occasions during Fiscal 2020. Each member of the Corporate Governance, Nominating and Compensation Committee attended at least 75% of the total number of meetings of the committee during Fiscal 2020. The Corporate Governance, Nominating and Compensation Committee's purposes are to:

- Identify individuals qualified to become board members, consistent with criteria approved by the Board.
- Select, or recommend that the Board select, the director nominees for election at each annual meeting of stockholders.
- Oversee the evaluation of the Board and management.
- Review and approve corporate goals and objectives relevant to the Company's Chief Executive Officer ("CEO") compensation, evaluate the CEO's performance in light of those goals and objectives, and, either as a committee or together with the other independent directors (as directed by the Board), determine and approve the CEO's compensation level based on this evaluation.

- Review and approve non-CEO Executive compensation including incentive compensation and equity-based compensation.
- Provide oversight of the Company's compensation policies and plans and benefits programs, and overall compensation philosophy.
- Administer the Company's equity compensation plans for its executive officers and employees and the granting of equity awards pursuant to such plans or outside of such plans; and
- Cause to be prepared the report of the Corporate Governance, Nominating and Compensation required by the rules and regulations of the Securities and Exchange Commission (the "SEC").

The Corporate Governance, Nominating and Compensation Committee may delegate authority to one or more members of this committee or one or more members of management when appropriate, but no such delegation is allowed if the authority is required by law, regulation or listing standard to be exercised by the Corporate Governance, Nominating and Compensation Committee as a whole. The Board has adopted a written charter for the Corporate Governance, Nominating and Compensation Committee, which the Corporate Governance, Nominating and Compensation Committee has reviewed and determined to be in compliance with the rules prescribed by the listing standards of the NASDAQ Capital Market and which is available at tucows.com.

Our executive officers do not play a formal role in determining their compensation. However, Jessica Johansson, our Chief People Officer, reviews (i) information the Company purchased from Payfactor and (ii) published trends for the year from a variety of public sources, and, after consulting with Mr. Noss, our Chief Executive Officer, provides consolidated information outlining management's recommendation regarding executive officer compensation based on title to the Corporate Governance, Nominating and Compensation Committee. The Corporate Governance, Nominating and Compensation Committee then reviews and discusses the information provided with our CEO and Chief People Officer and then determines the total compensation for each named executive office, as it deems appropriate.

Board Leadership Structure and Responsibilities

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

Our Board and its committees meet throughout the year on a set schedule, and also hold special meetings and act by written consent from time to time as appropriate. The independent directors meet without management present at regularly scheduled executive sessions at each quarterly Board meeting and some special Board meetings. Our Board has delegated certain responsibilities and authority to its Audit Committee and Corporate Governance, Nominating and Compensation Committee. The Audit Committee periodically discusses with management the Company's policies and guidelines regarding risk assessment and risk management, as well as the Company's major financial risk exposures and the steps that management has taken to monitor and control such exposures. The Audit Committee also reviews, evaluates and recommends changes to the Company's financial reporting policies and procedures. The Corporate Governance, Nominating and Compensation Committee reviews and evaluates the risks underlying the Company's compensation policies and plans and recommends changes to these policies and plans accordingly. Our Board believes that risk oversight actions taken by our Board and its committees are appropriate and effective at this time.

We believe it is beneficial to separate the roles of Chief Executive Officer and Chairperson to facilitate their differing roles in the leadership of our company. The role of the Chairperson includes setting the agenda for, and presiding over, all meetings of our Board of Directors, including executive sessions of independent directors, providing input regarding information sent to our Board of Directors, serving as liaison between the Chief Executive Officer and the independent directors and providing advice and assistance to the Chief Executive Officer. The Chairperson is also a key participant in establishing performance objectives and overseeing the process for the annual evaluation of our Chief Executive Officer's performance. In addition, under our Bylaws, our Chairperson has the authority to call special meetings of our Board of Directors and shareholders. In contrast, our Chief Executive Officer is responsible for handling our day-to-day management and direction, serving as a leader to the management team and formulating corporate strategy.

Currently our Chairperson is Mr. Karp, our Co-Chair is Ms. Chase, while Mr. Noss serves as our Chief Executive Officer. Mr. Karp and Ms. Chase are independent directors. Mr. Karp and Ms. Chase have extensive executive leadership skills, long-standing senior management and board experience, a strong ethics and compliance focus and Mr. Karp has audit committee experience.

We believe that this leadership structure for our Board provides us with the most effective level of oversight over the Company's business operations while at the same time enhancing our Board's ability to oversee our enterprise-wide approach to risk management and corporate governance and best serves the interests of our shareholders. It allows for a balanced corporate vision and strategy, which is necessary to address the challenges and opportunities we face at this time and demonstrates our commitment to good corporate governance. In addition, it allows for appropriate oversight of the Company by our Board, fosters appropriate accountability of management and provides a clear delineation of responsibilities for each position.

Role of the Board in Risk Oversight

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

The full Board (or the appropriate committee in the case of risks that are under the purview of a particular committee) receives reports on the risks we face from our Chief Executive Officer or other members of management to enable us to understand our risk identification, risk management and risk mitigation strategies. When a committee receives the report, the chairperson of the relevant committee reports on the discussion to the full Board during that committee's reports portion of the next Board meeting. However, it is the responsibility of the committee chairs to report findings regarding material risk exposures to our Board as quickly as possible.

Director Nomination

Our Corporate Governance, Nominating and Compensation Committee is responsible for identifying potential nominees to our Board. In considering candidates for nomination, our Corporate Governance, Nominating and Compensation Committee seeks individuals who evidence strength of character, mature judgment, career specialization, relevant technical skills or financial acumen, diversity of viewpoint and industry knowledge. As set forth in the charter of our Corporate Governance, Nominating and Compensation Committee, our Board endeavors to have directors who collectively possess a broad range of skills, expertise, industry and other knowledge and business and other experience useful to the effective oversight of our business. In addition, our Board also seeks members from diverse backgrounds so that our Board consists of members with a broad spectrum of experience and expertise and with a reputation for integrity. In determining whether to nominate a current director for re-election, our Corporate Governance, Nominating and Compensation Committee will take into account these same criteria as well as the director's past performance, including his or her participation in and contributions to the activities of the Board.

Our Corporate Governance, Nominating and Compensation Committee will evaluate and consider recommendations for director candidates from shareholders using the same criteria described above. As set forth in the charter of the Corporate Governance, Nominating and Compensation Committee, recommendations submitted by the Company's shareholders shall be submitted, along with the following to the attention of the Chairperson of the Corporate Governance, Nominating and Compensation Committee at 96 Mowat Avenue, Toronto, Ontario M6K 3M1 Canada at least 120 days before the first anniversary of the date on which we first mailed our proxy materials for our prior year's annual meeting of shareholders:

- the name and address of the recommending shareholder;
- the candidate's name and the information about the individual that would be required to be included in a proxy statement under the rules of the SEC;
- information about the relationship between the candidate and the recommending shareholder;
- the consent of the candidate to serve as a director; and
- proof of the number of shares of our common stock that the recommending shareholder owns and the length of time the shares have been owned.

Communications with our Board of Directors

A Tucows' shareholder who wishes to communicate with our Board may send correspondence to the attention of our Secretary at 96 Mowat Avenue, Toronto, Ontario M6K 3M1 Canada. The Secretary will submit the shareholder's correspondence to the Chairperson of the Board, the Chairperson of the appropriate committee, or the appropriate individual director, as applicable.

Director Compensation

Under the terms of our 2006 Amended and Restated Equity Compensation Plan (the "2006 Plan"), we make automatic formula grants of nonqualified stock options to our non-employee directors and members of committees of our Board as described below. All stock-based compensation for our non-employee directors is governed by our 2006 Plan or its predecessor, our 1996 Equity Compensation Plan (the "1996 Plan"). All options granted under the automatic formula grants vest after one year, have an exercise price equal to the fair market value per common share as determined by the per share price as of the close of business on the date of grant and have a five-year term. Options are granted to directors under the 2006 Plan as follows:

- on the date a non-employee director becomes a director, he or she is granted options to purchase 4,375 shares of our common stock;
- on the date a director becomes a member of the Audit Committee, he or she is granted options to purchase 3,750 shares of our common stock;
- on the date a director becomes a member of the Corporate Governance, Nominating and Compensation Committee, he or she is granted options to purchase 2,500 shares of our common stock; and
- on each date on which we hold our annual meeting of shareholders, each non-employee director in office immediately before and after the annual election of directors receives an automatic grant of options to purchase 3,750 shares of our common stock.

Directors who are employees receive no additional or special compensation for serving as directors.

All annual fees are paid to our directors in quarterly installments.

In November 2017, the Board approved a new fee structure for 2018 that simplified the Director compensation structure with annual fees and eliminates per meeting attendance fees. Commencing with Fiscal 2018, each date on which we hold our annual meeting of shareholders, each non-employee director in office immediately before and after the annual election of directors receives an automatic grant of options to purchase shares of our common stock. The initial grant was set at 3,750 options based on a \$60 per share price with the actual grant each year to be determined based on the share price 30 days prior to the annual election of directors. Each non-employee member of the Board will receive \$30,000 annually, the Chairperson of the Board will additionally receive \$15,000; each Chair of the Audit Committee and Corporate Governance, Nomination and Compensation Committee will additionally receive \$7,500; and each member of the Audit Committee and Corporate Governance, Nomination and Compensation Committee will additionally receive \$12,000.

We also purchase directors and officers liability insurance for the benefit of our directors and officers as a group in the amount of \$30 million. We also reimburse our directors for their reasonable out-of-pocket expenses incurred in attending meetings of our Board or its committees.

The table below shows all compensation paid to each of our non-employee directors during 2020. Each of the directors listed below served for the entire year.

Name	Fees earned or paid in cash (\$)		Option awards \$(1)		Total (\$)
(a)	(b)		(d)		(h)
Allen Karp	\$	76,500	\$	69,188	\$ 145,688
Rawleigh Ralls		42,000		69,188	111,188
Erez Gissin		42,000		69,188	111,188
Robin Chase		42,000		69,188	111,188
Jeffrey Schwartz		61,500		69,188	130,688
Brad Burnham		30,000		69,188	99,188
	\$	294,000	\$	415,128	\$ 709,128

(1) On September 8, 2020 under the 2006 Plan, our non-employee directors were awarded these automatic formula option grants. Under the 2006 Plan, these options will vest one year after the grant date and carry an exercise price of \$68.41. All these options remained outstanding as of December 31, 2020 and have a five-year term. The aggregate grant date fair value of the option grants was calculated in accordance with the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 718 and based on the Black-Scholes option-pricing model and used the same assumptions that are set forth in "Note 14 – Stock Option Plans" of the Notes to the Consolidated Financial Statements including Part II, Item 8 of this Annual Report.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act, requires our directors and executive officers and persons who own more than ten percent of a registered class of our equity securities to file with the SEC reports of ownership and reports of changes in ownership of our common stock and our other equity securities. These persons are required by SEC regulation to furnish us with copies of all Section 16(a) reports they file.

We believe that, under the SEC's rules and based solely upon our review of the copies of the Forms 3, 4 and 5 furnished to us, or written representations from certain reporting persons, any such reports have been filed in a timely manner, with two exceptions; the Form 4 filed on November 30, 2020 for Jessica Johansson was filed late as were Forms 3 and 4 filed on December 11, 2020 for Jill Szuchmacher.

Stock ownership of management

We encourage stock ownership by our directors, officers and employees to align their interests with the interests of shareholders. Under Section 16(a) of the Exchange Act, directors, officers and certain beneficial owners of the Company's equity securities are required to file reports of their transactions in the Company's equity securities with the SEC on specified due dates.

ITEM 11. EXECUTIVE COMPENSATION**COMPENSATION DISCUSSION AND ANALYSIS****Philosophy**

We recognize that our success depends to a great degree on the integrity, knowledge, imagination, skill, diversity and teamwork of our employees. To this end, attracting and retaining the level of executive talent we need to be successful in accomplishing our mission of providing simple useful services that help people unlock the power of the Internet is a key objective of our executive compensation program. Our executive compensation program is designed to ensure we have the talent we need to maintain our current high-performance standards and grow our business for the future. As such, we aim to provide competitive compensation packages for all our key positions, including our Named Executive Officers ("NEOs") that are guided by market rates and tailored to account for the specific needs and responsibilities of the particular position as well as the performance and unique qualifications of the individual employee. For Fiscal 2019, our NEO's included Messrs. Noss, Singh, Woroch, Liem and Fausett.

This Compensation Discussion and Analysis ("CD&A") provides comprehensive information about our executive compensation program for our Fiscal 2020 NEOs, who are listed below, and provides context for the decisions underlying the compensation reported in the executive compensation tables in this Annual Report. Our NEOs are:

Elliot Noss	President and Chief Executive Officer ("CEO")
Davinder Singh	Chief Financial Officer ("CFO")
Bret Fausett	Chief Legal Officer & General Counsel ("General Counsel")
Justin Reilly	Chief Product Officer ("CPO")
David Woroch	Executive Vice-President, Domains ("EVP, Domains")

Our philosophy is to provide a mix of compensation that motivates our executives to achieve our short and long- term performance goals in a market-competitive and fiscally responsible way, which in turn will create value for our shareholders. We achieve our objectives by designing our executive compensation program so that a substantial amount of our NEOs' compensation is performance-based to ensure the actual compensation paid to our executives is appropriately aligned with our Company's performance and shareholder long-term interests. In addition, we also link individual compensation to Company performance by virtue of the stock options granted by the Company. More specifically, our executive compensation programs are designed to:

- provide an appropriate mix of fixed and variable compensation to attract, retain and motivate key executives;
- provide a substantial portion of our executive compensation that is performance-based, on a company or service basis, to support creation of long-term shareholder value, Adjusted EBITDA for Compensation (as defined below) growth and operational efficiency without encouraging excessive risk taking;
- target compensation at the 50th percentile of market levels, as measured by Payfactor; and
- promote internal equity by offering comparable pay to executives whom we expect to make roughly equivalent contributions, while differentiating executives' compensation arrangements when appropriate.

Overview of Pay Elements and Linkage to Compensation Philosophy and Objectives

We believe the following elements of our compensation program help us to realize our compensation philosophy and objectives:

Pay Element	Characteristics	Compensation Philosophy and Objectives	Factors Considered to Determine Awards
Salary	Annual fixed cash compensation	Provides a competitive and stable component of income to our executives	• Job responsibilities • Experience • Individual contributions • Future potential • Internal pay equity • Effect on other elements of compensation and benefits including target bonus amounts
Short-Term Incentive Bonus	Annual variable cash compensation based on the achievement of pre- established annual performance measures based on Adjusted EBITDA for Compensation	Provides competitive short- term incentive opportunities for our executives to earn annual cash bonuses based on performance objectives that, if attained, can reasonably be expected to (i) promote our business and strategic objectives and (ii) correspond to those paid to similarly-situated and comparably skilled executives at peer companies	• Company performance measures • Service performance measures
Stock Options Grants	Annual long-term equity awards that vest over four years	Provides variable compensation that helps to retain executives and ensures our executives' interests are aligned with those of shareholders to grow long-term value	• Job responsibilities • Individual contributions • Future potential • Value of vested and unvested outstanding equity awards • Internal pay equity

The weight of each of these components has to date not been determined by any particular formula, although our overall mix of total compensation has historically emphasized retention value. The specific mix of components has been and will continue to be within the discretion and business judgment of our Board and the Corporate Governance, Nominating and Compensation Committee, which has placed greater emphasis on considerations specific to the individual holding a particular executive position rather than on general market data.

Role of Shareholder Say-on-Pay Votes

We provide our shareholders with the opportunity to cast a triennial advisory vote on executive compensation, or a Say-on-Pay proposal. At our annual meeting of stockholders held on September 8, 2020, 96% of the votes cast on the Say-on-Pay proposal at that meeting were voted in favor of the compensation of our NEOs, as described in the proxy statement for the 2020 annual meeting. Accordingly, the Corporate Governance, Nominating and Compensation Committee believes that this affirms stockholder support for our executive compensation policies and practices, and no material changes have been made to such policies and practices as a result of our Say-on-Pay proposal and voting results in September 2020.

At the 2020 Annual Meeting, a majority of our stockholders approved, as recommended by our Board, a proposal for our stockholders to be provided with the opportunity to cast a non-binding advisory vote on compensation of our NEOs every three years. Our Board believed that this frequency would be appropriate as a triennial vote would provide the Company with sufficient time to engage with stockholders to understand and respond to the “say-on-pay” vote results and to put in place any changes to the Company’s compensation program as a result of such discussions, if necessary. The next stockholder advisory (non-binding) vote on executive compensation will be held at our 2023 Annual Meeting.

Determining Total Compensation

Role of Compensation Consultant and Use of Market Data

Our Corporate Governance, Nominating and Compensation Committee (the “Committee”) is authorized to retain the services of one or more executive compensation advisors, as it deems appropriate, in connection with the establishment and maintenance of our executive compensation programs and related policies. The Committee engaged Integrated HR & Compensation Solutions (“ICS”) to provide compensation advisory services to advise the Committee on its current executive compensation program and make recommendations for any changes needed in order for executive compensation to be at the median of market data.

ICS worked with our Chief People Officer to (i) establish executive compensation benchmarking points, (ii) establish appropriate market-based compensation ranges for executive employees, (iii) provide advice and recommendations related to our long term incentive programs (“LTIPs”) and short term incentive programs (“STIPs”), (iv) analyze and compare to prevalent market practices for comparable roles our total compensation mix (i.e. base salary, LTIPs and STIPs) for our executives and (v) provide a software tool to assist the Company in its executive compensation planning efforts.

In establishing market comparators for the executive team, ICS consulted market data as provided by Mercer’s Benchmark Database compensation survey and the most recent publicly filed compensation disclosures of companies of comparable size and scope.

In electing to engage ICS, the Committee took into consideration all factors relevant to the Consultant’s independence and concluded that no conflict of interest existed.

Base Salary

With respect to each NEO, in determining total compensation, the Corporate Governance, Nominating and Compensation Committee considers the Company’s compensation philosophy as outlined above, comparative market data and specific factors relative to each NEO’s responsibilities and performance. We do not specifically benchmark compensation for our NEOs in terms of picking a particular percentile relative to other people with similar titles at peer group companies. We believe that many subjective factors unique to each NEO’s responsibilities and performance are not adequately reflected or otherwise accounted for in a percentile-based compensation determination.

In addition, in determining the appropriate level of total compensation for our NEOs, the Corporate Governance, Nominating and Compensation Committee (i) reviews and considers the performance of each NEO, and (ii) considers, for each NEO, the estimated amount of total compensation:

- we would be willing to pay to retain that person;
- we would have to pay to replace the person; and
- the individual could otherwise command in the employment marketplace.

Our Chief People Officer reviews comparative data derived from market research and publicly available information for each of the NEOs and then recommends compensation levels for all employees to our CEO. The CEO then, after consultation with our Chief People Officer, makes recommendations to the Corporate Governance, Nominating and Compensation Committee regarding total compensation for each NEO. The Corporate Governance, Nominating and Compensation Committee reviews and discusses the information and then determines the total compensation for each NEO, as it deems appropriate.

The CEO’s total compensation is determined by the Corporate Governance, Nominating and Compensation Committee outside the presence of the CEO. The Committee’s decision regarding total compensation for the CEO is based on the philosophy outlined above and includes a review of comparative data and consideration of the accomplishments of the CEO in developing the business strategy for the Company, the performance of the Company relative to this strategy and his ability to attract and retain senior management. In establishing the CEO’s total compensation, the Corporate Governance, Nominating and Compensation Committee is also mindful of the prior results of the shareholder’s Advisory Vote on Executive Compensation.

We provide a base salary to our NEOs to compensate them for services rendered on a day-to-day basis during the year and to provide sufficient fixed cash compensation to allow them to focus on their ongoing responsibilities. The base salaries of all executive officers are reviewed annually and adjusted when necessary to reflect individual roles and performance as well as market conditions.

In connection with the Corporate Governance, Nominating and Compensation Committee’s annual review process, the Committee approved a new targeted total compensation structure for our NEOs, including an increase to base and incentive bonus compensation. The Committee approved the increase in compensation in a phased approach with 50% of the increase implemented in 2020 and 25% of the increase being implemented in 2021 and 2022, respectively.

Annual Cash Incentive Bonuses

We use annual cash incentive bonuses to communicate specific goals that are of primary importance during the coming year and motivate our senior officers and NEOs to achieve these goals. Each year, we assess if our corporate financial and strategic objectives are optimally aligned with our management incentive compensation plan to motivate and reward our senior executives, including our NEOs, to attain specific short-term performance objectives that, in turn, further our long-term business objectives. These objectives are based upon corporate or service-related targets, rather than individual objectives. In setting target payout levels under our management incentive compensation plan, our Corporate Governance, Nominating and Compensation Committee considers historical payouts, the total cost to the company should performance objectives be achieved and our retention needs.

The Corporate Governance, Nominating and Compensation Committee determines the initial level of funding for the annual incentive bonus pools during the annual budgeting process and approves provisional quarterly payments, computed on a pro-rata basis, based on quarterly minimum year-to-date targets for our senior officers, including NEOs, taking into account the Company's actual performance on a year-to-date basis. To ensure that our annual target remains the primary consideration, any quarterly payments are subject to a discretionary holdback percentage, which has historically been set at 25% but may be adjusted each quarter should circumstances warrant it. To mitigate the risk of overpayment of incentive bonuses based on a quarterly performance, a 25% holdback of quarterly payments is maintained. The Corporate Governance, Nominating and Compensation Committee retains the right to interpret, rescind, prescribe, amend or suspend payment under our management incentive compensation plan at any time. Changes made by the Corporate Governance, Nominating and Compensation Committee will however only be on a prospective basis so will not impact any quarterly rights our NEO's and senior officers may have up to the date of the change.

The performance goals under our management incentive compensation plan consists of two components; namely, an incentive bonus and an overachievement bonus, each with established thresholds and maximum achievement levels.

For the incentive bonus component, achievement of established targets for each NEO will equate to 100% of the bonus being paid. Where 75% of an established target is achieved ("floor level") this will result in 50% of the bonus being paid. Below the floor level no bonus is payable. In those cases where achievement is between the floor level and the established target, straight-line interpolation is applied from the established target levels.

To further incent our senior management and NEOs to promote our business and strategic objectives; to the extent that the Company's actual performance exceeds the Company's Adjusted EBITDA for compensation goals ("overachievement target"), the Compensation Committee sets aside 30% of the overachievement target in an overachievement pool to reward our senior management, employees and NEOs. At the discretion of the Corporate Governance, Nominating and Compensation Committee, approximately 40% of the overachievement pool has been allocated to the NEOs and is shared equally among them.

Incentive Bonus program

The table below summarizes the 2020 and 2021 incentive bonus opportunities for our NEOs.

Named Officer	Unaudited		
	Target incentive Bonus Opportunity(1)		Basis for Target incentive Bonus
	2021	2020	
Elliot Noss	\$ 229,427	\$ 161,437	100% Corporate Adjusted EBITDA for Compensation(2)
Davinder Singh	\$ 105,604	\$ 41,383	100% Corporate Adjusted EBITDA for Compensation(2)
Bret Fausett	\$ 97,335	\$ 63,000	100% Corporate Adjusted EBITDA for Compensation(2)
Justin Reilly	\$ 109,849	\$ 98,494	100% Corporate Adjusted EBITDA for Compensation(2)
David Woroch	\$ 129,250	\$ 105,815	100% Domain Services targets

(1) All dollar amounts below are shown U.S. dollars. Amounts payable in Canadian dollars for 2020 have been converted into U.S. dollars based upon the exchange rate of 1.3385 Canadian dollars for each U.S. dollar, the average Oanda exchange rate for 2020 as at December 31, 2020. Amounts that were payable in Canadian dollars during the 2019 fiscal year have been converted into U.S. dollars based upon the exchange rate of 1.3067 Canadian dollars for each U.S. dollar, which represents the average Oanda exchange rate for 2019 as at December 31, 2019.

(2) Adjusted EBITDA for Compensation is a non-GAAP measure and excludes depreciation, amortization of intangibles, income tax provision, interest expense, interest income, stock-based compensation, asset impairment, loss on the disposal of Ting Mobile customer assets, gains and losses from unrealized foreign currency transactions and infrequently occurring items including acquisition and transition costs. Gains and losses from unrealized foreign currency transactions removes the unrealized effect of the change in the mark-to-market values on outstanding unhedged foreign currency contracts, as well as the unrealized effect from the translation of monetary accounts denominated in non-U.S. dollars to U.S. dollars and infrequently occurring items. Under relevant SEC rule, we are not required to present reconciliation of Adjusted EBITDA for Compensation to GAAP financial measures if Adjusted EBITDA for Compensation is presented in connection with disclosure of target levels in the CD&A.

Our Corporate Governance, Nominating and Compensation Committee met in February 2021 and determined the achievement of the financial objectives applicable under the management incentive compensation plan for 2020 had been fully achieved. As the Company met its Adjusted EBITDA for Compensation targets for the fiscal year ended December 31, 2020, the Corporate Governance, Nominating and Compensation Committee assessed that 100% of the incentive bonuses for all our NEO's was payable.

In connection with the Corporate Governance, Nominating and Compensation Committee's annual review process, the Committee also approved a new set of performance goals under our management incentive compensation plan for Fiscal 2021 and decided not to increase the incentive bonus target opportunity for our NEOs.

Overachievement Bonus Program

The Overachievement Bonus Program is designed to further incent our employees, senior management and NEOs to exceed the Company's Adjusted EBITDA for compensation goals. In assessing our overall performance for Fiscal 2020, the Corporate Governance, Nominating and Compensation Committee deemed that no overachievement bonus should be payable for Fiscal 2020.

Equity-Based Awards

We believe that equity-based awards encourage our NEOs to focus on the long-term performance of our business. Our Board grants equity awards to executives and other employees in order to enable them to participate in the long-term appreciation of our stock price. Additionally, we believe our equity awards provide an important retention tool for our NEOs, as they are subject to multi-year vesting. To date, we have not adopted stock ownership guidelines for our NEOs.

Historically, we have granted equity-based awards in the form of stock options, including options granted at the commencement of employment and additional awards each year. The size of the initial option grant made to each NEO upon joining our company is primarily based on competitive conditions applicable to the NEO's specific position. For subsequent equity grants to our NEOs, our Corporate Governance, Nominating and Compensation Committee receives input from our CEO and Vice President, Human Resources.

In connection with its annual review process, the Corporate Governance, Nominating and Compensation Committee approved, effective May 28, 2020, the following stock option awards to our NEOs. These stock options vest in equal installments on each of the first four anniversaries of the grant date, generally subject to the NEO's continued employment with us. No grants have yet been awarded for Fiscal 2021.

Name	Number of stock options	Aggregate Grant Date Fair Value (US Dollars)
Elliot Noss	4,500	\$ 90,315
Davinder Singh	2,250	\$ 45,158
Bret Fausett	2,250	\$ 45,158
Justin Reilly	2,250	\$ 45,158
David Woroch	2,250	\$ 45,158

During Fiscal 2020 options exercised and vested for our named executive officers were as follows:

Name	Options exercised during Fiscal 2020	Options vested during Fiscal 2020
Elliot Noss	6,250	5,875
Davinder Singh	-	4,689
Bret Fausett	-	3,907
Justin Reilly	-	7,813
David Woroch	6,250	2,939

Severance and Change of Control Benefits

Our Board believes that it is necessary to offer senior members of our executive team severance benefits to ensure that they remain focused on executing our strategic plans, including in the event of a proposed or actual acquisition. We have entered into employment agreements with our NEOs to provide them with additional severance benefits upon an involuntary termination of employment under specified circumstances prior to and following a change of control. The terms of these agreements are described below in "Potential Payments on Termination or Change in Control."

Perquisites

We do not provide any significant perquisites or other personal benefits to our NEOs.

Benefits

We provide the following benefits to our NEOs. We believe these benefits are typical of the companies with which we compete for employees:

- healthcare insurance;
- life insurance and accidental death and dismemberment insurance;
- long term disability insurance;
- a registered retirement savings matching program;
- a healthcare spending account;
- a car allowance;
- an annual medical; and
- an employee assistance program.

Certain Corporate Governance Considerations

We currently do not require our executive officers to own a particular number of shares of our common stock. The Corporate Governance, Nominating and Compensation Committee is satisfied that stock and option holdings among our executive officers are sufficient at this time to provide motivation and to align their interests with those of our stockholders. However, we prohibit all directors and employees from hedging their economic interest in the Company securities that they hold.

Tax Considerations

We do not provide any tax gross-ups to our executive officers or directors.

In designing our compensation programs, the Corporate Governance, Nominating and Compensation Committee considers the financial accounting and tax consequences to Tucows as well as the tax consequences to our employees. In determining the aggregate number and mix of equity grants in any fiscal year, the Corporate Governance, Nominating and Compensation Committee and management consider the size and share-based compensation expense of the outstanding and new equity awards. Section 162(m) of the Code generally disallows a tax deduction to public corporations for compensation greater than \$1 million paid for any fiscal year to the corporation's Chief Executive Officer and the three other most highly compensated executive officers as of the end of any fiscal year, other than the Chief Financial Officer. However, certain types of performance-based compensation are excluded from the \$1 million deduction limit if specific requirements are met.

The Committee considers the impact of Section 162(m) when designing our Executive Compensation Program and structured our Executive Bonus Plan, stock plans and performance share programs so that a number of awards may be granted under these plans and programs in a manner that complies with the requirements imposed by Section 162(m). Tax deductibility is not the primary factor used by the Committee in setting compensation, however, and corporate objectives may not necessarily align with the requirements for full deductibility under Section 162(m). We believe it is important to preserve flexibility in administering compensation programs as corporate objectives may not always be consistent with the requirements for full deductibility. While our Corporate Governance, Nominating and Compensation Committee has not adopted a formal policy regarding tax deductibility of compensation paid to our NEOs, our Corporate Governance, Nominating and Compensation Committee may exercise discretion to pay non-deductible compensation if following the requirements of Section 162(m) would not be in the interests of our shareholders.

Compensation Risk Assessment

The Corporate Governance, Nominating and Compensation Committee oversaw the performance of a risk assessment of our Executive Compensation Program to ascertain any potential material risks that may be created by this program. Because performance-based incentives are used in our executive compensation program, it is important to ensure that these incentives do not result in our NEOs taking unnecessary or excessive risks or any other actions that may conflict with our long-term interests. The Corporate Governance, Nominating and Compensation Committee considered the following attributes of our Executive Compensation Program:

- the balance between short- and long-term incentives;
- use of qualitative as well as quantitative performance factors in determining compensation payouts, including minimum and maximum performance thresholds, funding that is based on actual results measured against pre-approved financial and operational goals and metrics that are clearly defined;
- incentive compensation that includes a stock component where value is best realized through long-term appreciation of stockholder value; and
- incentive compensation components that are paid or vest over an extended period.

The Corporate Governance, Nominating and Compensation Committee focuses primarily on the compensation of our NEOs because risk-related decisions depend predominantly on their judgment. The Corporate Governance, Nominating and Compensation Committee believes that risks arising from our policies and practices for compensation of other employees are not reasonably likely to have a material adverse effect on us.

Compensation Committee Report

The Corporate Governance, Nominating and Compensation Committee has reviewed and discussed the foregoing CD&A with management and, based on such review and discussions, the Corporate Governance, Nominating and Compensation Committee has recommended to the Board that the CD&A be included in this Annual Report.

Submitted by the following members of the Corporate Governance, Nominating and Compensation Committee:

Allen Karp, Chair
Rawleigh Ralls
Jeffrey Schwartz
Robin Chase

Summary Compensation Table

The following Summary Compensation table provides a summary of the compensation earned by our NEOs, including our Chief Executive Officer, our Chief Financial Officer, and our next three most highly compensated executive officers for services rendered in all capacities during 2020. Specific aspects of this compensation are dealt with in further detail in the tables that follow. All dollar amounts below are shown in U.S. dollars. If necessary, amounts that were paid in Canadian dollars during Fiscal 2020 were converted into U.S. dollars based upon the exchange rate of 1.3385 Canadian dollars for each U.S. dollar, which represents the average Oanda exchange rate for 2020.

Name and Principal Position	Year	Salary (\$)	Bonus (1) (\$)	Stock Awards (\$)	Option Awards (2) (\$)	All Other Compensation (3) (\$)	Total (\$)
(a)	(b)	(c)	(d)	(e)	(f)	(i)	(j)
<i>Elliot Noss</i>	2020	\$ 359,143	\$ 204,713	\$ —	\$ 90,315	\$ 7,845	\$ 662,016
<i>President and Chief Executive Officer</i>	2019	321,932	111,252	—	95,760	7,911	536,855
	2018	320,587	141,359	—	105,930	8,111	575,987
<i>Davinder Singh</i>	2020	234,511	82,077	—	45,158	6,724	368,470
<i>Chief Financial Officer</i>	2019	205,643	28,519	—	47,880	6,781	288,823
	2018	229,915	34,254	—	52,965	6,953	324,087
<i>Bret Fausett</i>	2020	270,375	86,250	—	45,158	-	401,783
<i>Chief Legal Officer</i>	2019	254,846	44,100	—	47,880	—	346,826
	2018	250,000	51,660	—	26,483	—	328,143
<i>Justin Reilly (4)</i>	2020	291,371	96,152	—	45,158	1,121	433,802
<i>Chief Product Officer</i>	2019	79,939	17,140	—	256,410	188	353,677
<i>David Woroch</i>	2020	246,838	120,950	—	45,158	6,724	419,670
<i>Executive Vice President, Domains</i>	2019	216,453	91,673	—	47,880	6,781	362,787
	2018	215,677	99,041	—	52,965	6,953	374,432

(1) Represents bonus earned under our incentive programs during the fiscal years ended December 31, 2020, 2019 and 2018.

Of the 2020 amount, the following amounts were paid in February 2021 (unaudited):

Elliot Noss	\$ 89,561
Davinder Singh	\$ 35,909
Bret Fausett	\$ 37,582
Justin Reilly	\$ 42,066
David Woroch	\$ 52,916

Of the 2019 amount, the following amounts were paid in February 2020 (unaudited):

Elliot Noss	\$ 54,037
Davinder Singh	\$ 13,852
Bret Fausett	\$ 21,420
Justin Reilly	\$ 14,202
David Woroch	\$ 42,450

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Of the 2018 amount, the following amounts were paid in February 2019 (unaudited):

Elliot Noss	\$	58,461
Davinder Singh	\$	14,986
Bret Fausett	\$	22,601
David Woroch	\$	41,790

(2) Represents the aggregate grant date fair value of such awards, calculated in accordance with FASB ASC 718. Please see “Note 14 – Stock Option Plans” of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report, for a discussion of the assumptions underlying these calculations.

(3) Amounts reported in this column are comprised of the following items:

Unaudited				
	Year	Additional Health Spending Credits (\$)	Car Allowance (\$)	All Other Compensation (\$)
<i>Elliot Noss</i>	2020	\$ 1,121	\$ 6,724	\$ 7,845
	2019	1,130	6,781	7,911
	2018	1,159	6,952	8,111
<i>Davinder Singh</i>	2020	1,121	5,603	6,724
	2019	1,130	5,651	6,781
	2018	1,159	5,794	6,953
<i>Bret Fausett</i>	2020	—	—	—
	2019	—	—	—
	2017	—	—	—
<i>Justin Reilly</i>	2020	1,121	—	1,121
	2019	188	—	188
<i>David Woroch</i>	2020	1,121	5,603	6,724
	2019	1,130	5,651	6,781
	2018	1,159	5,794	6,953

(4) Mr. Reilly joined the Company in August, 2019.

Executive Pay Ratio

In August 2015 pursuant to a mandate of the Dodd-Frank Wall Street Reform and Consumer Protection Act, the SEC adopted a rule requiring annual disclosure of the ratio of the median employee's annual total compensation to the total annual compensation of the principal executive officer ("PEO"). The Company's PEO is Mr. Noss. The annual total compensation for fiscal year 2020 for our PEO was \$662,016, and for the median employee was \$42,998. The resulting ratio of our PEO's pay to the pay of our median employee for fiscal year 2020 is 15 to 1.

The measurement was prepared as of December 31, 2020 based on active employees as at that date and total compensation for the annual period then ended. The Company utilized tax records to determine the total annual compensation based on gross employment income for each individual Form W-2 or equivalent for our international subsidiaries. Gross employment income includes salaries, bonus, company medical benefits, car allowance and benefits from exercise of stock-options. We determined the compensation of our median employee (i) by calculating the annual total compensation described above for each of our employees, (ii) ranking the annual total compensation of all employees except for the PEO from lowest to highest and (iii) determining the Median Employee. The Median Employee's Fiscal 2020 compensation was then determined in a manner consistent with the Summary Compensation Table above and compared to the PEO to derive the ratio.

Grants of Plan-Based Awards

The following table sets forth information concerning plan-based awards granted to our NEOs in 2020:

Name	Grant date	All other option awards: Number of shares underlying options	Exercise or base price of option awards	Grant date fair value of option awards (1)
Elliot Noss	5/28/2020	4,500	\$ 60.01	\$ 90,315
Davinder Singh	5/28/2020	2,250	\$ 60.01	\$ 45,158
Bret Fausett	5/28/2020	2,250	\$ 60.01	\$ 45,158
Justin Reilly	5/28/2020	2,250	\$ 60.01	\$ 45,158
David Woroch	5/28/2020	2,250	\$ 60.01	\$ 45,158

(1) Represents the grant date fair value of such awards, calculated in accordance with FASB ASC 718. Please see "Note 14 – Stock Option Plans" of Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report, for a discussion of the assumptions underlying these calculations.

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth information concerning stock options held by the named executive officers as of December 31, 2020:

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date
<i>Elliot Noss</i>	10,000	—	19.41	12/31/2021
	10,000	—	21.10	12/31/2022
	2,250	2,250	64.10	6/4/2025
	1,125	3,375	62.12	5/27/2026
	—	4,500	60.01	5/27/2027
	<u>23,375</u>	<u>10,125</u>		
<i>Davinder Singh</i>	2,000	—	19.95	2/11/2023
	5,000	—	19.95	2/11/2023
	1,500	500	55.65	7/23/2024
	1,125	1,125	64.10	6/4/2025
	562	1,688	62.12	5/27/2026
	—	2,250	60.01	5/27/2027
	<u>10,187</u>	<u>5,563</u>		
<i>Bret Fausett</i>	7,500	2,500	53.20	9/4/2024
	562	563	64.10	6/4/2025
	562	1,688	62.12	5/27/2026
	—	2,250	60.01	5/27/2027
	<u>8,624</u>	<u>7,001</u>		
<i>Justin Reilly</i>	5,000	—	55.19	9/15/2026
	2,250	6,750	55.19	9/15/2026
	—	2,250	60.01	5/27/2027
	<u>7,250</u>	<u>9,000</u>		
<i>David Woroch</i>	5,000	—	19.41	12/31/2021
	5,000	—	21.10	12/31/2022
	1,125	1,125	64.10	6/4/2025
	562	1,688	62.12	5/27/2026
	—	2,250	60.01	5/27/2027
	<u>11,687</u>	<u>5,063</u>		

The stock options grants listed in the above table were issued under our 2006 Plan.

Under the 2006 Plan, these options primarily vest over a period of four years and have a 7-year term. These options are not exercisable for one year after the grant. Thereafter they become exercisable at the rate of 25% per annum, becoming fully exercisable after the fourth year.

Director Compensation

The required information regarding our director compensation is set forth in Part III, Item 10 “Directors, Executive Officers and Corporate Governance” of this Annual Report and is incorporated herein by reference.

Potential Payments on Termination or Change in Control

We have certain agreements that require us to provide compensation to our NEO in the event of a termination of employment or a change in control of Tucows. These agreements are summarized following the table below and do not include any payment for termination for cause. The tables below show estimated compensation payable to each NEO upon various triggering events. Actual amounts can only be determined upon the triggering event.

Unaudited			
Elliot Noss (1)			
	2020	Termination without Cause (Dollar amounts in U.S. dollars)	Change in Control (Dollar amounts in U.S. dollars)
Compensation			
Base Salary/Severance (2)		\$ 718,286	\$ 2,718,286
Bonus Plan (3)		287,314	287,314
Acceleration of Unvested Equity Awards (4)		124,212	124,212
Benefits (5)			
Car Allowance		13,448	13,448
Healthcare Flexible Spending Account		2,242	2,242
		<u>\$ 1,145,502</u>	<u>\$ 3,145,502</u>
Unaudited			
Davinder Singh (1)			
	2020	Termination without Cause (Dollar amounts in U.S. dollars)	Change in Control (Dollar amounts in U.S. dollars)
Compensation			
Base Salary/Severance (2)		\$ 195,426	\$ —
Bonus Plan (3)		68,399	—
Acceleration of Unvested Equity Awards (4)		119,892	—
Benefits (5)			
Car Allowance		4,669	—
Healthcare Flexible Spending Account		934	—
		<u>\$ 389,320</u>	<u>\$ —</u>
Unaudited			
Bret Fausett (1)			
	2020	Termination without Cause (Dollar amounts in U.S. dollars)	Change in Control (Dollar amounts in U.S. dollars)
Compensation			
Base Salary/Severance (2)		\$ 202,781	\$ —
Bonus Plan (3)		64,890	—
Acceleration of Unvested Equity Awards (4)		61,091	—
Benefits (5)			
Car Allowance		—	—
Healthcare Flexible Spending Account		—	—
		<u>\$ 328,762</u>	<u>\$ —</u>

Unaudited			
Justin Reilly (1)			
	2020	Termination without Cause (Dollar amounts in U.S. dollars)	Change in Control (Dollar amounts in U.S. dollars)
Compensation			
Base Salary/Severance (2)		\$ 169,966	\$ —
Bonus Plan (3)		56,089	—
Acceleration of Unvested Equity Awards (4)		94,011	—
Benefits (5)			
Car Allowance		—	—
Healthcare Flexible Spending Account		654	—
		<u>\$ 320,720</u>	<u>\$ —</u>
Unaudited			
David Woroch (1)			
	2020	Termination without Cause (Dollar amounts in U.S. dollars)	Change in Control (Dollar amounts in U.S. dollars)
Compensation			
Base Salary/Severance (2)		\$ 493,677	\$ 493,677
Bonus Plan (3)		241,902	241,902
Acceleration of Unvested Equity Awards (4)		26,654	26,654
Benefits (5)			
Car Allowance		11,206	11,206
Healthcare Flexible Spending Account		2,242	2,242
		<u>\$ 775,681</u>	<u>\$ 775,681</u>

- (1) For the purpose of the table we assumed an annual base salary at the executive's level as of December 31, 2020.
- (2) Severance for Mr. Noss is compensation for one year plus one-month additional compensation for each completed year of service. Total compensation is capped at 24 months. For Messrs. Singh, Fausett, Reilly and Woroch, severance compensation is for six months plus one-month additional compensation for each completed year of service. Total compensation is capped at 24 months.
- (3) For the purpose of the table we assumed that the annual incentive bonus target as of December 31, 2020 had been achieved and that no overachievement bonus or special bonuses would be payable.
- (4) For purposes of the above table, we have assumed that if we terminate Mr. Noss without cause all his unvested options vest automatically and that for Messrs. Singh, Fausett, Reilly and Woroch, their options continue to vest through any severance period. On a change in control we have assumed that all unvested options for Mr. Noss vest automatically and that for Messrs. Singh, Fausett, Reilly and Woroch, their options continue to vest through and until the end of any severance period. Amounts disclosed in this table equal the closing market value of our common stock as of December 31, 2020, minus the exercise price, multiplied by the number of unvested shares of our common stock that would vest. The closing market value of our common stock on December 31, 2020 was \$73.89.
- (5) Pay for unused vacation, extended health, matching registered retirement savings plan benefit, life insurance and accidental death and dismemberment insurance are standard programs offered to all employees and are therefore not reported.

Employment Agreements—Termination

Employment contracts are currently in place for each of the NEOs. These employment contracts detail the severance payments that will be provided on termination of employment and the consequent obligations of non-competition and non-solicitation.

The following details the cash severance payment that will be paid to each of the named executive officers in the event of termination without cause or termination for good reason.

Upon termination without cause, Messrs. Woroch, Singh, Reilly and Fausett are each entitled to a severance payment in the amount of six months' compensation plus one months' compensation for each additional completed year of service. Severance payments can be made in equal monthly installments. Messrs. Woroch, Singh, Reilly and Fausett are each bound by a standard non-competition covenant for a period of twelve months following their termination.

Mr. Noss's employment agreements is subject to early termination by us due to:

- the death or disability of the executive;
- for "cause;" or
- without "cause."

If we terminate Mr. Noss without "cause," he is entitled to receive 12 months of compensation plus one month of compensation for each year of service, to a maximum of 24 months of compensation.

For purposes of the employment agreements, "cause" is defined to mean the executive's conviction (or plea of guilty or nolo contendere) for committing an act of fraud, embezzlement, theft or other act constituting a felony or willful failure or an executive's refusal to perform the duties and responsibilities of his position, which failure or refusal is not cured within 30 days of receiving a written notice thereof from our Board.

Employment Agreements—Change in Control

Under his employment agreements, Mr. Noss is also entitled to the change in control benefits described in the following paragraph if:

- the executive resigns with or without "good reason" within the 30-day period immediately following the date that is six months after the effective date of the "change in control;" or
- within 18 months after a "change in control" and executive's employment is terminated either:
- without "cause;" or
- by resignation for "good reason."

If an executive's employment is terminated following a change in control under the circumstances described in the preceding paragraph, the executive is entitled to receive a lump sum payment based upon the fair market value of the Company on the effective date of the "change in control" as determined by our Board in the exercise of good faith and reasonable judgment taking into account, among other things, the nature of the "change in control" and the amount and type of consideration, if any, paid in connection with the "change in control." Depending on the fair market value of the company, the lump sum payments range from \$375,000 to \$2 million for Mr. Noss. In addition to the lump sum payments, all stock options held by Mr. Noss will be immediately and fully vested and exercisable as of the date of termination.

A "change in control" is generally defined as:

- the acquisition of 50% or more of our common stock;
- a change in the majority of our Board unless approved by the incumbent directors (other than as a result of a contested election); and
- certain reorganizations, mergers, consolidations, liquidations or dissolutions, unless certain requirements are met regarding continuing ownership of our outstanding common stock.

"Good reason" is defined to include the occurrence of one or more of the following:

- the executive's position, management responsibilities or working conditions are diminished from those in effect immediately prior to the change in control, or he is assigned duties inconsistent with his position;
- the executive is required to be based at a location in excess of 30 miles from his principal job location or office immediately prior to the change in control;
- the executive's base compensation is reduced, or the executive's compensation and benefits taken as a whole are materially reduced, from those in effect immediately prior to the change in control; or
- we fail to obtain a satisfactory agreement from any successor to assume and agree to perform our obligations to the executive under his employment agreement.

Compensation Committee Interlocks and Insider Participation

The members of the Corporate Governance, Nominating and Compensation Committee of our Board during 2020 were Messrs. Karp (Chair), Schwartz and Ralls and Ms. Chase. To ensure that our compensation policies are administered in an objective manner, our Corporate Governance, Nominating and Compensation Committee is comprised entirely of independent directors. None of the members of our Corporate Governance, Nominating and Compensation Committee has ever been an officer or employee of the Company or its subsidiaries. None of our executive officers serves as a member of the Board or compensation committee of any entity that has one or more executive officers on our Board or Corporate Governance, Nominating and Compensation Committee.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table sets forth the beneficial ownership of our common stock, as of March 3, 2021, by each of our directors and NEOs, as well as by all of our directors and executive officers as a group. The information on beneficial ownership in the table and related footnotes is based upon data furnished to us by, or on behalf of, the persons referred to in the table. Unless otherwise indicated in the footnotes to the table, each person named has sole voting power and sole investment power with respect to the shares included in the table.

Name	Unaudited			
	Beneficial Ownership of Common Stock			
	Common Stock Beneficially Owned Excluding Options	Stock Options Exercisable within 60 Days of March 3, 2021	Total Common Stock Beneficially Owned	Percent of Class(1)
Elliot Noss				
96 Mowat Avenue Toronto, Ontario, Canada	702,553 (2)	23,375	725,928	6.8%
Davinder Singh	-	10,187	10,187	*
Bret Fausett	27,777	8,624	36,401	*
Justin Reilly	-	7,250	7,250	*
David Woroch	127,106 (3)	11,687	138,793	1.3%
Allen Karp	16,726 (4)	15,000	31,726	*
Rawleigh Ralls	2,261	11,250	13,511	*
Robin Chase	6,672	17,500	24,172	*
Erez Gissin	14,137	15,000	29,137	*
Jeffrey Schwartz	8,625	15,000	23,625	*
Brad Burnham	353,982 (5)	15,625 (6)	369,607	3.5%
All directors and executive officers as a group (17 persons)	1,302,808	196,596	1,499,404	13.9%

* Less than 1%.

(1) Based on 10,619,932 shares outstanding as of March 1, 2021, and stock options exercisable within 60 days of March 3, 2021.

(2) Includes an aggregate of 120,670 shares of common stock that are held in Mr. Noss's RRSP accounts. Includes 1,639 shares of common stock that are held in Mr. Noss's TFSA account. Includes 38,968 shares of common stock that are held in Mr. Noss's former spouses name, over which he has voting power only, pursuant to a separation agreement of 2013. Includes 514,951 shares of Common Stock that are subject to a loan and pledge arrangement entered into by Mr. Noss in order to satisfy the required Canadian taxes and exercise price due in connection with the exercise of expiring options.

(3) Includes 54,984 shares of common stock that are held in Mr. Woroch's RRSP account and 10,750 shares of common stock held in his wife's RRSP account.

(4) Includes 3,000 shares of common stock that are held directly by Mr. Karp's wife.

(5) Includes 26,112 shares held directly by Mr. Burnham, and 327,870 shares held by USV Opportunity Investors 2014, L.P. ("USV Opportunity 2014"). USV Opportunity 2014 GP, LLC ("USV Opportunity 2014 GP") is the general partner of USV Opportunity 2014 and, as such, has the power to vote and dispose of the 327,870 shares held by USV Opportunity 2014. Mr. Burnham is a manager of USV Opportunity 2014 GP and, as such, may be deemed to share voting and dispositive power over the 327,870 shares held by USV Opportunity 2014. Mr. Burnham disclaims beneficial ownership of the shares owned by USV Opportunity 2014 except to the extent of his pecuniary interest therein.

(6) On December 1, 2017, Mr. Burnham, a member of Union Square Ventures, LLC ("USV LLC"), entered into a fee compensation agreement with USV LLC, under which Mr. Burnham agreed to hold the Company's stock option grants to him in his individual capacity, and upon the exercise of such options, Mr. Burnham will transfer to USV LLC the shares acquired in the option exercise or, with the consent of USV LLC, a cash payment equal to the fair market value of such shares. In connection with such option exercise and transfer, USV LLC will extend to Mr. Burnham an interest-free loan in an amount equal to the exercise price of the option, and any transfer of acquired shares or cash payment will, to the extent not in excess of the amount of the loan (if any), first be deemed as repayment of the loan.

Share Ownership of Certain Beneficial Owners

The following table sets forth information with respect to each shareholder known to us to be the beneficial owner of more than 5% of our outstanding common stock as of March 3, 2021 except for Mr. Noss, whose beneficial ownership of shares is described in the table above.

Name and Address of Beneficial Owner	Beneficial Ownership of Common Stock	
	Number of Shares Beneficially Owned	Percent of Class (1)
Investmentaktiengesellschaft fuer langfristige Investoren TGV Ruengsdorfer Str. 2e 53173 Bonn, Germany	1,610,239 (2)	15.2%
BlackRock, Inc. 55 East 52nd Street New York, NY 10055	652,690 (3)	6.1%
Blacksheep Fund Management Limited Rock House, Main Street, Blackrock, Co Dublin, Ireland A94 YY39	566,555 (4)	5.3%
University of Notre Dame du Lac 1251 N. Eddy Street, Suite 400 South Bend, Indiana 46617	556,248 (5)	5.2%

(1) Based on 10,619,932 shares outstanding as of March 1, 2021.

(2) Investmentaktiengesellschaft fuer langfristige Investoren TGV had sole dispositive power and sole voting power over 1,610,239 shares of common stock. This information is based solely on a review of a Schedule 13G filed with the SEC on January 29, 2021 by Investmentaktiengesellschaft fuer langfristige Investoren TGV.

(3) BlackRock Inc. had sole dispositive power and sole voting power over 652,690 shares of common stock. This information is based solely on a review of a Schedule 13G filed with the SEC on February 2, 2021 by BlackRock Inc..

(4) Blacksheep Fund Management Limited had sole dispositive power and sole voting power over 566,555 shares of common stock. This information is based solely on a review of a Schedule 13G filed with the SEC on February 8, 2021 by Blacksheep Fund Management Limited.

(5) University of Notre Dame de Lac had sole dispositive power and sole voting power over 556,248 shares of common stock. This information is based solely on a review of a Schedule 13G filed with the SEC on February 2, 2021 by University of Notre Dame de Lac.

Equity Compensation Plan Information

The following table provides information for our equity compensation plans as of December 31, 2020:

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (#)	Weighted average exercise price of outstanding options, warrants and rights (\$)	Number of securities remaining available for future issuance under the plan (excluding securities reflected in the first column) (#)
Equity compensation plans approved by security holders:			
2006 Equity Compensation Plan	845,020	\$ 55.31	1,530,514
Equity compensation plans not approved by security holders	—	—	—
Total	845,020	\$ 55.31	1,530,514

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Review, Approval or Ratification of Transactions with Related Persons

The Audit Committee of the Board is responsible for reviewing and, if appropriate, approving all related party transactions between us and any officer or director that would potentially require disclosure pursuant to the Audit Committee charter. As of the date of this Annual Report on Form 10-K, we expect that any transactions in which related persons have a direct or indirect interest will be presented to the Audit Committee for review and approval. While neither the Audit Committee nor the board have adopted a written policy regarding related party transactions, the Audit Committee makes inquiries to our management and our auditors when reviewing such transactions. Neither we nor the audit committee are aware of any transaction that was required to be reported with the SEC where such policies and procedures either did not require review or were not followed.

Director Independence

Our Board has determined that each of Messrs. Karp, Ralls, Gissin, Schwarz and Burnham and Ms. Chase are independent directors, as prescribed by the listing standards of the NASDAQ Capital Market. In this Annual Report, each of these six directors are referred to individually as an “independent director” and collectively as the “independent directors”. In addition, our Board has determined that each member of our Audit Committee satisfies the applicable audit committee independence standards as prescribed by the listing standards of the NASDAQ Capital Market and Rule 10A-3 under the Exchange Act, and that each member of our Corporate Governance, Nomination and Compensation Committee satisfies the applicable compensation committee member independence standards as prescribed by the listing standards of the NASDAQ Capital Market and Rule 10C-1 under the Exchange Act.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

A summary of the fees of KPMG LLP for the years ended December 31, 2020 and 2019 are set forth below:

	2020 Fees	2019 Fees
Audit Fees (1)	\$ 562,000	\$ 566,000
Audit-Related Fees (2)	8,000	-
Tax Fees (3)	78,000	91,000
All Other Fees (4)	20,000	-
Total Fees	\$ 668,000	\$ 657,000

- (1) Consists of fees and expenses for (a) the annual audits of our consolidated financial statements and the accompanying attestation report regarding our ICFR contained in our Annual Report on Form 10-K, (b) the review of quarterly financial information included in our Quarterly Reports on Form 10-Q, and (c) audit services related to mergers and acquisitions.
- (2) Consists of fees and expenses for assurance and related services, such as the review of non-periodic filings with the SEC.
- (3) Consists of fees and expenses for tax compliance and advisory services.
- (4) All other services not included in the above.

Audit Committee pre-approval of audit and permissible non-audit services of independent auditors.

The Audit Committee has adopted a pre-approval policy that provides guidelines for the audit, audit-related, tax and other non-audit services that may be provided to us by our independent auditors. Under this policy, the Audit Committee pre-approves all audit and certain permissible accounting and non-audit services performed by the independent auditors. These permissible services are set forth on an attachment to the policy that is updated at least annually and may include audit services, audit-related services, tax services and other services. For audit services, the independent auditor provides the audit committee with an audit plan including proposed fees in advance of the annual audit. The Audit Committee approves the plan and fees for the audit.

With respect to non-audit and accounting services of our independent auditors that are not pre-approved under the policy, the employee making the request must submit the request to our Chief Financial Officer. The request must include a description of the services, the estimated fee, a statement that the services are not prohibited services under the policy and the reason why the employee is requesting our independent auditors to perform the services. If the aggregate fees for such services are estimated to be less than or equal to \$50,000, our Chief Financial Officer will submit the request to the chairperson of the audit committee for consideration and approval, and the engagement may commence upon the approval of the chairperson. The chairperson is required to inform the full Audit Committee of the services at its next meeting. If the aggregate fees for such services are estimated to be greater than \$50,000, our Chief Financial Officer will submit the request to the full Audit Committee for consideration and approval, generally at its next meeting or special meeting called for the purpose of approving such services. The engagement may only commence upon the approval of full Audit Committee.

PART IV
ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The following documents are filed as part of this Annual Report on Form 10-K:

1. Financial Statements. The financial statements listed in the accompanying index to consolidated financial statements are filed as part of this Annual Report on Form 10-K.
2. Financial Statement Schedules. Schedules are not submitted because they are not required or are not applicable, or the required information is shown in the consolidated financial statements or notes thereto.
3. Exhibits. The Exhibits listed below are filed or incorporated by reference as part of this Annual Report on Form 10-K. Where so indicated by footnote, exhibits which were previously filed are incorporated by reference. For exhibits incorporated by reference, the location of the exhibit in the previous filing is indicated in the footnotes below.

Exhibit No.	Description
2.1	Stock Purchase Agreement, dated as of January 20, 2017, by and among Tucows Inc., Tucows (Emerald), LLC, Rightside Group, Ltd., Rightside Operating Co. and eNom, Incorporated (Incorporated by reference to Exhibit 2.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on January 23, 2017).
2.2	First Amendment, dated as of June 13, 2017, to Stock Purchase Agreement, dated as of January 20, 2017, by and among Tucows Inc., Tucows (Emerald), LLC, Rightside Group, Ltd., Rightside Operating Co. and eNom, Incorporated (Incorporated by reference to Exhibit 2.3 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on June 15, 2017, 2017).
2.3	Asset Purchase Agreement, dated as of March 18, 2019, by and among Tucows Inc., Ting Fiber, Inc., NetNames European Holdings ApS, NetNames GmbH, CSC Administrative Services Limited UK, Corporation Service Company and Ascio Technologies, Inc. (Incorporated by reference to Exhibit 2.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on March 20, 2019).
3.1.1	Fourth Amended and Restated Articles of Incorporation of Tucows Inc. (Incorporated by reference to Exhibit 3.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on November 29, 2007).
3.1.2	Articles of Amendment to Fourth Amended and Restated Articles of Incorporation of Tucows Inc. (Incorporated by reference to Exhibit 3.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on January 3, 2014).
3.2	Second Amended and Restated Bylaws of Tucows Inc. (Incorporated by reference to Exhibit 3.2 filed with Tucows' Annual Report on Form 10-K for the year ended December 31, 2006, as filed with the SEC on March 29, 2007).
3.3	Amendment No. 1 to Second Amended and Restated Bylaws of Tucows Inc. (Incorporated by Reference to Exhibit 3.3 filed with Tucows' Quarterly Report on Form 10-Q for the quarter ended June 30, 2012).
4.1#	Description of Securities of the Registrant.
10.1*	2006 Equity Compensation Plan, as amended and restated, and approved by Shareholders as of September 8, 2020 (Incorporated by reference to Exhibit 4.1 filed with Tucows form S-8 as filed with the SEC on November 25, 2020).
10.2*	Employment Agreement, dated as of January 22, 2003, between Tucows.com Co. and Elliot Noss (Incorporated by reference to Exhibit 10.3 filed with Tucows' Annual Report on Form 10-K for the year ended December 31, 2002, as filed with the SEC on March 28, 2003).
10.3	Lease between 707932 Ontario Limited and Tucows International Corporation, dated as of December 10, 1999 (Incorporated by reference to exhibit number 10.9 filed with Tucows' Annual Report on Form 10-K for the year ended December 31, 2001, as filed with the SEC on April 1, 2002).
10.4	Lease extension between 707932 Ontario Limited and Tucows Inc. and Tucows.com Co., dated as of September 18, 2004 (Incorporated by reference to Exhibit 10.8 filed with Tucows' Annual Report on Form 10-K for the year ended December 31, 2004, as filed with the SEC on March 24, 2005).
10.5	Lease extension between 707921 Ontario Limited and Tucows (Delaware) Inc. and Tucows.com Co., dated as of January 1, 2019 (Incorporated by reference to Exhibit 10.5 filed with Tucows' Annual Report on Form 10-K for the year ended December 31, 2019, as filed with the SEC on March 4, 2020).
10.6*	Description of Tucows Fiscal 2004 At Risk Compensation Plan (Incorporated by reference to Exhibit 10.9 filed with Tucows' Annual Report on Form 10-K for the year ended December 31, 2004, as filed with the SEC on March 24, 2005).

Exhibit No.	Description
10.7	Amended and Restated Senior Secured Credit Agreement, dated as of June 14, 2019, by and among Tucows.com Co., Ting Fiber, Inc., Ting, Inc., Tucows (Delaware) Inc., Tucows (Emerald), LLC, as Borrowers, Tucows, Inc., as parent, Royal Bank of Canada, as Administrative Agent, and Royal Bank of Canada, Bank of Montreal, Bank of Nova Scotia, HSBC Bank Canada and Canadian Imperial Bank of Commerce, as Lenders (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on June 18, 2019).
10.8	Amending Agreement No. 1, dated as of November 27, 2019, to the Amended and Restated Senior Secured Credit Agreement, dated as of June 14, 2019 (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on December 4, 2019).
10.9	Asset Purchase Agreement, dated as of August 1, 2020, by and between Tucows Inc., and DISH WIRELESS L.L.C. (Incorporated by reference to Exhibit 10.1 filed with Tucows' Quarterly Report on Form 10-Q on November 5, 2020).
10.10	Mobile Virtual Network Enabler ("MVNE") Master Services Agreement, dated August 1, 2020, by and between Ting Inc., and DISH WIRELESS L.L.C. (Incorporated by reference to Exhibit 10.1 filed with Tucows' Quarterly Report on Form 10-Q on November 5, 2020).
21.1#	Subsidiaries of Tucows Inc.
23.1#	Consent of KPMG LLP, Independent Registered Public Accounting Firm.
31.1#	Chief Executive Officer's Rule 13a-14(a)/15d-14(a) Certification.
31.2#	Chief Financial Officer's Rule 13a-14(a)/15d-14(a) Certification.
32.1†	Chief Executive Officer's Section 1350 Certification.
32.2†	Chief Financial Officer's Section 1350 Certification.
101.INS#	Inline XBRL Instance Document (the Instance Document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)
101.SCH#	Inline XBRL Taxonomy Extension Schema
101.CAL#	Inline XBRL Taxonomy Extension Calculation
101.DEF#	Inline XBRL Taxonomy Extension Definition
101.LAB#	Inline XBRL Taxonomy Extension Labels
101.PRE#	Inline XBRL Taxonomy Extension Presentation
104	The cover page from this Annual Report on Form 10-K, formatted as Inline XBRL.
*	Management or compensatory contract.
#	Filed herewith.
†	Furnished herewith.

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Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors of Tucows, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited Tucows Inc.'s 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 2019, the related consolidated statements of 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 March 3, 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 Annual Report on Internal Control over Financial Reporting in Item 9A of the Form 10-K for the fiscal year-ended December 31, 2020. 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

Chartered Professional Accountants, Licensed Public Accountants

Vaughan, Canada

March 3, 2021

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors of Tucows, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Tucows, Inc. and subsidiaries (the Company) as of December 31, 2020 and 2019, the related consolidated statements of 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 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 March 3, 2021 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Change in Accounting Principle

As discussed in Note 2(u) to the consolidated financial statements, the Company adopted Accounting Standards Codification ("ASC") Topic 842, *Leases* ("ASC 842") on January 1, 2019 using the modified retrospective method by recognizing the cumulative effect of initially applying ASC 842 as an adjustment to the opening balance sheet as at January 1, 2019.

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.

Evaluation of sufficiency of audit evidence over revenue

As discussed in Note 10 to the consolidated financial statements, the Company's revenues are derived from (a) the provisioning of retail mobile services, the provisioning of wholesale mobile platform services, professional services and the provisioning of retail fiber Internet services in the Network Access Services segment; and from (b) domain name registration contracts, other domain related value-added services, domain sale contracts, and other advertising revenue in the Domain Services segment. The Company had \$311.2 million in revenues for the year ended December 31, 2020, of which \$242.2 million were generated in the Domain Services segment and \$69.0 million were generated from Network Access Services segment.

We identified the evaluation of the sufficiency of audit evidence over revenue as a critical audit matter. This matter required especially subjective auditor judgment because of the multiple revenue streams, the related revenue recognition processes, and the number of information technology (IT) applications involved. This included determining the revenue streams over which procedures were performed, the nature and extent of audit evidence obtained over each selected revenue stream, and the need to involve information technology professionals with specialized skills and knowledge to assist with the performance of certain procedures.

The following are the primary procedures we performed to address this critical audit matter. For each revenue stream we selected, we evaluated the design and tested the operating effectiveness of certain internal controls related to the processing and recording of revenue. We assessed the recorded revenue by selecting a sample of transactions and comparing the amounts recognized to underlying systems, records and/or other relevant and reliable third party data. We involved IT professionals with specialized skills and knowledge to assist in the testing of certain IT systems and related controls and reports that are used by the Company in its revenue recognition process. We evaluated the sufficiency of the audit evidence obtained over revenue by assessing the results of procedures performed.

/s/ KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

We have served as the Company's auditor since 2000.

Vaughan, Canada

March 3, 2021

Tucows Inc.

Consolidated Balance Sheets

(Dollar amounts in thousands of U.S. dollars)

	<u>December 31, 2020</u>	<u>December 31, 2019</u>
Assets		
Current assets:		
Cash and cash equivalents	\$ 8,311	\$ 20,393
Accounts receivable, net of allowance for doubtful accounts of \$222 as of December 31, 2020 and \$131 as of December 31, 2019	15,540	14,564
Inventory	1,875	3,457
Prepaid expenses and deposits	16,845	13,478
Derivative instrument asset, current portion (note 7)	3,860	731
Deferred costs of fulfillment, current portion (note 11 (b))	93,467	91,252
Income taxes recoverable	1,302	1,800
Total current assets	<u>141,200</u>	<u>145,675</u>
Deferred costs of fulfillment, long-term portion (note 11 (b))	17,599	17,915
Property and equipment (note 4)	117,530	82,121
Right of use operating lease asset	11,238	11,335
Deferred costs of acquisition (note 11 (a))	362	1,400
Deferred tax asset (note 9)	226	-
Intangible assets (note 5)	47,444	57,654
Goodwill (note 5)	116,304	109,818
Total assets	<u>\$ 451,903</u>	<u>\$ 425,918</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 6,329	\$ 6,671
Accrued liabilities	10,235	9,373
Customer deposits	15,402	14,074
Derivative instrument liability, current portion (note 7)	99	-
Operating lease liability, current portion (note 12)	1,761	1,413
Deferred revenue, current portion (note 10)	127,336	123,101
Accreditation fees payable, current portion	940	952
Income taxes payable	863	1,324
Total current liabilities	<u>162,965</u>	<u>156,908</u>
Derivative instrument liability, long-term portion (note 7)	114	-
Deferred revenue, long-term portion (note 10)	24,909	26,202
Accreditation fees payable, long-term portion	195	216
Operating lease liability, long-term portion (note 12)	9,179	9,424
Loan payable, long-term portion (note 8)	121,733	113,503
Other long-term liability (note 3 (c))	3,416	-
Deferred tax liability (note 9)	24,694	25,471
Stockholders' equity (note 13)		
Preferred stock - no par value, 1,250,000 shares authorized; none issued and outstanding	-	-
Common stock - no par value, 250,000,000 shares authorized; 10,612,414 shares issued and outstanding as of December 31, 2020 and 10,585,159 shares issued and outstanding as of December 31, 2019	20,798	16,633
Additional paid-in capital	1,458	880
Retained earnings	80,106	76,208
Accumulated other comprehensive income (loss) (note 7)	2,336	473
Total stockholders' equity	<u>104,698</u>	<u>94,194</u>
Total liabilities and stockholders' equity	<u>\$ 451,903</u>	<u>\$ 425,918</u>
Commitments and contingencies (note 18)		
Subsequent events (note 20)		

See accompanying notes to consolidated financial statements

Tucows Inc.

Consolidated Statements of Comprehensive Income

(Dollar amounts in thousands of U.S. dollars, except per share amounts)

	Year ended December 31,		
	2020	2019	2018*
Net revenues (note 10)	\$ 311,202	\$ 337,145	\$ 346,013
Cost of revenues (note 10)			
Cost of revenues	200,401	217,579	232,103
Network expenses	10,194	9,190	9,846
Depreciation of property and equipment (note 4)	12,144	8,475	5,298
Amortization of intangible assets (note 5)	1,340	1,124	1,996
Impairment of property and equipment (note 4)	1,638	-	-
Total cost of revenues	225,717	236,368	249,243
Gross profit	85,485	100,777	96,770
Expenses:			
Sales and marketing	34,274	34,270	33,063
Technical operations and development	12,427	9,717	8,748
General and administrative	20,268	17,880	17,710
Depreciation of property and equipment (note 4)	488	486	424
Loss (gain) on disposition of property and equipment	(17)	73	-
Amortization of intangible assets (note 5)	10,080	9,209	7,247
Impairment of definite life intangible assets (note 5)	1,431	-	-
Loss (gain) on currency forward contracts (note 7)	(383)	(198)	254
Total expenses	78,568	71,437	67,446
Income from operations	6,917	29,340	29,324
Other income (expenses):			
Interest expense, net	(3,611)	(4,769)	(3,687)
Gain on sale of Ting customer assets, net (note 16)	7,612	-	-
Other income, net	(158)	-	518
Total other income (expenses)	3,843	(4,769)	(3,169)
Income before provision for income taxes	10,760	24,571	26,155
Provision for income taxes (note 9)	4,985	9,173	9,020
Net income before redeemable non-controlling interest	5,775	15,398	17,135
Redeemable non-controlling interest	-	-	(26)
Net income attributable to redeemable non-controlling interest	-	-	26
Net income for the period	5,775	15,398	17,135
Other comprehensive income, net of tax			
Unrealized income (loss) on hedging activities (note 7)	1,653	1,101	(1,022)
Net amount reclassified to earnings (note 7)	210	182	212
Other comprehensive income (loss) net of tax expense (recovery) of \$550 and \$411 and (\$259) for the years ended December 31, 2020, 2019 and 2018 (note 7)	1,863	1,283	(810)
Comprehensive income, net of tax for the period	\$ 7,638	\$ 16,681	\$ 16,325
Basic earnings per common share (note 17)	\$ 0.55	\$ 1.45	\$ 1.62
Shares used in computing basic earnings per common share (note 17)	10,590,684	10,623,799	10,604,722
Diluted earnings per common share (note 17)	\$ 0.54	\$ 1.43	\$ 1.59
Shares used in computing diluted earnings per common share (note 17)	10,692,281	10,772,812	10,794,170

*The Company has initially applied ASC 2016-02 (Topic 842) on January 1, 2019 (note 2 (u)). The accounting standard was adopted using the modified retrospective method, under this method the comparative period was not restated.

See accompanying notes to consolidated financial statements

Tucows Inc.

Consolidated Statements of Stockholders' Equity

(Dollar amounts in thousands of U.S. dollars)

	Common stock		Additional	Retained	Accumulated	Total
	Number	Amount	paid in	earnings	other	stockholders'
			capital		comprehensive	equity
					income (loss)	
Balances, December 31, 2017*	10,583,879	\$ 15,368	\$ 2,167	\$ 42,676	\$ -	\$ 60,211
Adoption of Topic 606 (note 2(u))	-	-	-	1,063	-	1,063
Adjusted, January 1, 2018	10,583,879	15,368	2,167	43,739	-	61,274
Exercise of stock options	63,886	455	(343)	-	-	112
Shares deducted from exercise of stock options for payment of withholding taxes and exercise consideration	(19,777)	-	(445)	-	-	(445)
Stock-based compensation (note 14)	-	-	2,574	-	-	2,574
Net income	-	-	-	17,135	-	17,135
Accretion of redeemable non-controlling interest in Ting Virginia, LLC.	-	-	-	(64)	-	(64)
Other comprehensive income (loss) (note 7)	-	-	-	-	(810)	(810)
Balances, December 31, 2018*	10,627,988	15,823	3,953	60,810	(810)	79,776
Exercise of stock options	80,319	967	(572)	-	-	395
Shares deducted from exercise of stock options for payment of withholding taxes and exercise consideration	(21,332)	-	(548)	-	-	(548)
Repurchase and retirement of shares (note 13(a))	(101,816)	(157)	(4,829)	-	-	(4,986)
Stock-based compensation (note 14)	-	-	2,876	-	-	2,876
Net income	-	-	-	15,398	-	15,398
Other comprehensive income (loss) (note 7)	-	-	-	-	1,283	1,283
Balances, December 31, 2019	10,585,159	16,633	880	76,208	473	94,194
Exercise of stock options	113,132	2,290	(1,305)	-	-	985
Shares deducted from exercise of stock options for payment of withholding taxes and exercise consideration	(48,013)	-	(556)	-	-	(556)
Repurchase and retirement of shares (note 13(a))	(70,238)	(125)	(1,279)	(1,877)	-	(3,281)
Acquisition of Cedar Networks	32,374	2,000	-	-	-	2,000
Stock-based compensation (note 14)	-	-	3,718	-	-	3,718
Net income	-	-	-	5,775	-	5,775
Other comprehensive income (loss) (note 7)	-	-	-	-	1,863	1,863
Balances, December 31, 2020	10,612,414	\$ 20,798	\$ 1,458	\$ 80,106	\$ 2,336	\$ 104,698

*The Company has initially applied ASC 2016-02 (Topic 842) on January 1, 2019 (note 2(u)). The accounting standard was adopted using the modified retrospective method, under this method the comparative period was not restated.

See accompanying notes to consolidated financial statements

Tucows Inc.

Consolidated Statements of Cash Flows

(Dollar amounts in thousands of U.S. dollars)

	Year ended December 31,		
	2020	2019	2018*
Cash provided by:			
Operating activities:			
Net income for the period	\$ 5,775	\$ 15,398	\$ 17,135
Items not involving cash:			
Depreciation of property and equipment	12,632	8,961	5,722
Loss on write off of property and equipment	1,638	142	-
Amortization of debt discount and issuance costs	269	297	281
Amortization of intangible assets	11,420	10,333	9,243
Net amortization contract costs	106	(10)	14
Accretion of contingent consideration	344	-	-
Impairment of definite life intangible asset	1,431	-	-
Other	223	-	-
Deferred income taxes (recovery)	(3,939)	1,285	1,038
Excess tax benefits on share-based compensation expense	(861)	(634)	(697)
Amortization of deferred rent	-	-	(14)
Net Right of use operating assets/Operating lease liability	205	(32)	-
Loss on disposal of domain names	17	114	341
Other income	-	-	(429)
Loss (gain) on change in the fair value of forward contracts	(500)	(313)	207
Write-down on disposal of Ting Mobile customer assets and contract costs	3,513	-	-
Stock-based compensation	3,718	2,876	2,574
Change in non-cash operating working capital:			
Accounts receivable	(281)	(3,015)	1,539
Inventory	945	318	(831)
Prepaid expenses and deposits	(3,459)	2,904	(1,286)
Deferred costs of fulfillment	(1,899)	7,678	20,476
Income taxes recoverable	908	(89)	2,691
Accounts payable	(902)	(1,221)	171
Accrued liabilities	376	2,329	(513)
Customer deposits	1,493	27	(3,336)
Deferred revenue	2,942	(6,900)	(16,888)
Accreditation fees payable	(33)	(67)	(229)
Net cash provided by operating activities	36,081	40,381	37,209
Financing activities:			
Proceeds received on exercise of stock options	985	395	112
Payment of tax obligations resulting from net exercise of stock options	(556)	(548)	(445)
Repurchase of common stock	(3,281)	(4,986)	-
Proceeds received on loan payable	8,000	57,371	7,000
Repayment of loan payable	-	(8,130)	(19,596)
Payment of loan payable costs	(32)	(641)	(8)
Net cash (used in) provided by financing activities	5,116	43,461	(12,937)
Investing activities:			
Additions to property and equipment	(44,437)	(44,070)	(27,919)
Acquisition of a portion of the minority interest in Ting Virginia, LLC (note 3(a))	-	-	(1,200)
Acquisition of Cedar Holdings Group, net of cash of \$66 (note 3(c))	(8,770)	-	-
Acquisition of Ascio Technologies, net of cash of \$1,437 (note 3(b))	-	(28,450)	-
Acquisition of intangible assets	(72)	(3,566)	(565)
Net cash used in investing activities	(53,279)	(76,086)	(29,684)
Increase (decrease) in cash and cash equivalents	(12,082)	7,756	(5,412)
Cash and cash equivalents, beginning of period	20,393	12,637	18,049
Cash and cash equivalents, end of period	\$ 8,311	\$ 20,393	\$ 12,637
Supplemental cash flow information:			
Interest paid	\$ 3,573	\$ 4,785	\$ 3,712
Income taxes paid, net	\$ 8,926	\$ 7,941	\$ 6,799
Supplementary disclosure of non-cash investing and financing activities:			
Property and equipment acquired during the period not yet paid for	\$ 1,129	\$ 548	\$ 1,462
Fair value of shares issued for acquisition of Cedar Holdings Group	\$ 2,000	\$ -	\$ -
Fair value of contingent consideration for acquisition of Cedar Holdings Group	\$ 3,072	\$ -	\$ -

*The Company has initially applied ASC 2016-02 (Topic 842) on January 1, 2019 (note 2(u)). The accounting standard was adopted using the modified retrospective method, under this method the comparative period was not restated.

See accompanying notes to consolidated financial statements

Tucows Inc.

Notes to Consolidated Financial Statements

(Dollar amounts in thousands of U.S. dollars, except per share amounts)

1. Organization of the Company:

Tucows Inc. (referred to throughout this report as the “Company”, “Tucows”, “we”, “us” or through similar expressions) provides simple useful services that help people unlock the power of the Internet. The Company provides US consumers and small businesses with mobile phone services nationally and high-speed fixed Internet access in selected towns. The Company offers Mobile Service Enabler (“MSE”) solutions, as well as professional services to other retail mobile providers. The Company is also a global distributor of Internet services, including domain name registration, digital certificates, and email. It provides these services primarily through a global Internet-based distribution network of Internet Service Providers, web hosting companies and other providers of Internet services to end-users.

2. Significant Accounting Policies:

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”) and are stated in U.S. dollars, except where otherwise noted.

(a) Basis of presentation

These consolidated financial statements include the accounts of the Company and its subsidiaries. All significant intercompany balances and transactions have been eliminated on consolidation.

(b) Use of estimates

The preparation of the consolidated financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, management evaluates its estimates, including those related to amounts recognized for bad debts and inventory obsolescence which requires estimates of sales forecasts and other marketplace considerations, internal use software which requires estimates of whether the costs incurred meet the criteria for capitalization based on the stage of the projects, the portion of MSE billings related to professional services, the recoverability of goodwill and intangible assets which require estimates of future cash flows and discount rates, lease liability which requires estimates of incremental borrowing rate and the expectation of exercising lease renewal periods, income taxes, contingencies and litigation, and estimates of credit spreads for determination of the fair value of derivative instruments. Management bases its estimates on historical experience, available market information as applicable, and on various other assumptions that are believed to be reasonable under the circumstances at the time they are made. Under different assumptions or conditions, the actual results will differ, potentially materially, from those previously estimated. Many of the conditions impacting these assumptions and estimates are outside of the Company’s control.

(c) Cash and cash equivalents

All highly liquid investments, with an original term to maturity of three months or less are classified as cash and cash equivalents. Cash and cash equivalents are stated at cost which approximates market value.

(d) Inventory

Inventory primarily consists of Internet optical network terminals and customer installation equipment. To a lesser extent, inventory also includes mobile devices, mobile sim cards and related accessories. All inventory is stated at the lower of cost or net realizable value. Cost is determined based on actual cost of the mobile device, accessory shipped or optical network terminals.

The net realizable value of inventory is analyzed on a regular basis. This analysis includes assessing obsolescence, sales forecasts, product life cycle, marketplace and other considerations. If assessments regarding the above factors adversely change, we may be required to write down the value of inventory.

(e) Property and equipment

Property and equipment are stated at cost, net of accumulated depreciation. Depreciation is provided on a straight-line basis so as to depreciate the cost of depreciable assets over their estimated useful lives at the following rates:

Asset	Rate
Computer equipment	30%
Computer software	33 1/3 - 100%
Furniture and equipment	20%
Vehicles and tools	20%
Fiber network (years)	15
Customer equipment and installations (years)	3
Leasehold improvements	Over term of lease
Capitalized internal use software (years)	3 - 7

The Company reviews the carrying values of its property and equipment for potential impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If the estimated undiscounted future cash flows expected to result from the use of the group of assets and their eventual disposition is less than their carrying amount, they are considered to be impaired. The amount of the impairment loss recognized is measured as the amount by which the carrying value of the asset exceeds the fair value of the asset, with fair value being determined based upon discounted cash flows or appraised values, depending on the nature of the assets.

Additions to the fiber network are recorded at cost, including all material, labor, vehicle and installation and construction costs and certain indirect costs associated with the construction of cable transmission and distribution facilities. While the Company's capitalization is based on specific activities, once capitalized, costs are tracked by fixed asset category at the fiber network level and not on a specific asset basis. For assets that are retired, the estimated historical cost and related accumulated depreciation is removed.

Additions to land are recorded at cost, and include any direct costs associated with the purchase, as well as any direct costs incurred to bring it to the condition necessary for its intended use, such as legal fees associated with the acquisition and the cost of permanent improvements. Land is not depreciated.

We capitalize costs for software to be used internally when we enter the application development stage. This occurs when we complete the preliminary project stage, management authorizes and commits to funding the project, and it is feasible that the project will be completed and the software will perform the intended function. We cease to capitalize costs related to a software project when it enters the post implementation and operation stage.

Costs capitalized during the application development stage consist of payroll and related costs for employees who are directly associated with, and who devote time directly to, a project to develop software for internal use. External contractor costs who are directly associated with, and who devote time directly to, a project to develop software for internal use are also capitalized. Generally, we do not capitalize any general and administrative or overhead costs or costs incurred during the application development stage related to research and development, training or data conversion costs. Research and development costs and data conversion costs may be capitalized as Costs to fulfill a contract, if they relate to a specific professional services customer contract (see Note 11 - Costs to obtain and fulfill a contract). Costs related to upgrades and enhancements to internal-use software, if those upgrades and enhancements result in additional functionality, are capitalized. If upgrades and enhancements do not result in additional functionality, those costs are expensed as incurred.

The capitalized software development costs are generally to be amortized using the straight-line method over a 3 to 7-year period. In determining and reassessing the estimated useful life over which the cost incurred for the software should be amortized, we consider the effects of obsolescence, technology, competition and other economic factors.

(f) Derivative Financial Instruments

The Company uses derivative financial instruments to manage foreign currency exchange risk. The Company also uses pay-fixed, receive-variable interest rate swap with a Canadian chartered bank to limit the potential interest rate fluctuations incurred on its future cash flows related to variable interest payments on the Credit facility.

The Company accounts for these instruments in accordance with Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 815, "Derivatives and Hedging" ("Topic 815"), which requires that every derivative instrument be recorded on the balance sheet as either an asset or liability measured at its fair value as of the reporting date. Topic 815 also requires that changes in our derivative financial instruments' fair values be recognized in earnings, unless specific hedge accounting and documentation criteria are met (i.e., the instruments are accounted for as hedges). The Company recorded the effective portions of the gain or loss on derivative financial instruments that were designated as cash flow hedges in accumulated other comprehensive income in our accompanying Consolidated Balance Sheets.

For certain foreign currency contracts, the Company has not complied with the documentation standards required for its forward foreign exchange contracts to be accounted for as hedges and has, therefore, accounted for such forward foreign exchange contracts at their fair values with the changes in fair value recorded in net income.

The fair value of the forward exchange contracts is determined using an estimated credit adjusted mark-to-market valuation which takes into consideration the Company's and the counterparty's credit risk. The valuation technique used to measure the fair values of the derivative instruments is a discounted cash flow technique, with all significant inputs derived from or corroborated by observable market data, as no quoted market prices exist for the derivative instruments. The discounted cash flow techniques use observable market inputs, such as foreign currency spot, LIBOR rates, forward currency and interest rates.

(g) Goodwill and Other Intangible assets

Goodwill

Goodwill represents the excess of purchase price over the fair values assigned to the net assets acquired in business combinations. The Company does not amortize goodwill. Impairment testing for goodwill is performed annually in the fourth quarter of each year or more frequently if impairment indicators are present. Impairment testing is performed at the operating segment level. The Company has determined that it has two operating segments, Domain Services and Network Access services.

The Company performs a qualitative assessment to determine whether there are events or circumstances which would lead to a determination that it is more likely than not that goodwill has been impaired. If, after this qualitative assessment, the Company determines that it is not more likely than not that goodwill has been impaired, then no further quantitative testing is necessary. In performance of the qualitative test, an evaluation is made of the impact of various factors to the expected future cash flows attributable to its operating segments and to the assumed discount rate which would be used to present value those cash flows. Consideration is given to factors such as, macro-economic and industry and market conditions including the capital markets and the competitive environment amongst others. In the event that the qualitative tests indicate that there may be impairment, quantitative impairment testing is required.

If required to perform the quantitative test, the Company uses a discounted cash flow or income approach in which future expected cash flows at the operating segment level are converted to present value using factors that consider the timing and risk of the future cash flows. The estimate of cash flows used is prepared on an unleveraged debt-free basis. The discount rate reflects a market-derived weighted average cost of capital. The Company believes that this approach is appropriate because it provides a fair value estimate based upon the Company's expected long-term operating and cash flow performance for its operating segment. The projections are based upon the Company's best estimates of projected economic and market conditions over the related period including growth rates, estimates of future expected changes in operating margins and cash expenditures.

Other significant estimates and assumptions include terminal value growth rates, terminal value margin rates, future capital expenditures and changes in future working capital. If assumptions and estimates used to allocate the purchase price or used to assess impairment prove to be inaccurate, future asset impairment charges could be required.

Intangibles Assets Not Subject to Amortization

Intangible assets not subject to amortization consist of surname domain names and direct navigation domain names. While the domain names are renewed annually, through payment of a renewal fee to the applicable registry, the Company has the exclusive right to renew these names at its option. Renewals occur routinely and at a nominal cost. Moreover, the Company has determined that there are currently no legal, regulatory, contractual, economic or other factors that limit the useful life of these domain names on an aggregate basis and accordingly treat the portfolio of domain names as indefinite life intangible assets. The Company re-evaluates the useful life determination for domain names in the portfolio each year to determine whether events and circumstances continue to support an indefinite useful life.

The Company reviews individual domain names in the portfolio for potential impairment throughout the fiscal year in determining whether a particular name should be renewed. Impairment is recognized for names that are not renewed.

Intangible Assets Subject to Amortization

Intangible assets subject to amortization, consist of brand, customer relationships, technology and network rights and are amortized on a straight-line basis over their estimated useful lives as follows:

	(in years)
Technology	2
Brand	7
Customer relationships	3 - 7
Network rights	15

The Company continually evaluates whether events or circumstances have occurred that indicate the remaining estimated useful lives of its intangible assets subject to amortization may warrant revision or that the remaining balance of such assets may not be recoverable. The Company uses an estimate of the related undiscounted cash flows over the remaining life of the asset in measuring whether the asset is recoverable.

(h) Revenue recognition

See “Note 10 – Revenue” for a description of the Company’s revenue recognition policy and a further description of the principal activities – separated by reportable segments – from which the Company generates its revenue.

(i) Deferred revenue

Deferred revenue primarily relates to the unearned portion of revenues received in advance related to the unexpired term of registration fees from domain name registrations and other domain related Internet services, on both a wholesale and retail basis, net of external commissions. To a lesser extent, deferred revenue also includes a portion of the transaction price received from mobile platform services, which are related to professional services.

(j) Contract Costs

See “Note 11 – Costs to obtain and fulfill a contract” for a description of the Company’s contract cost recognition policy.

(k) Leases

See note 2(u) for the Company’s adoption of ASC 842 on January 1, 2019.

Under ASC 842, we determine if an arrangement is a lease at inception. Our lease agreements generally contain lease and non-lease components. Payments under our lease arrangements are primarily fixed. Non-lease components primarily include payments for maintenance and utilities. We combine fixed payments for non-lease components with lease payments and account for them together as a single lease component which increases the amount of our lease assets and liabilities.

Certain lease agreements contain variable payments, which are expensed as incurred and not included in the lease assets and liabilities. These amounts include payments affected by payments contingent on the number of Ting internet subscribers connected to a leased fiber network, and payments for maintenance and utilities.

We have elected to consider leases with a term of 12 months or less as short-term, and as such these have not been recognized on the balance sheet. We recognize lease expense for short-term leases on a straight-line basis over the lease term.

Lease assets and liabilities are recognized at the present value of the future lease payments at the lease commencement date. The interest rate used to determine the present value of the future lease payments is our incremental borrowing rate, because the interest rate implicit in our leases is not readily determinable. Our incremental borrowing rate is estimated to approximate the interest rate on a collateralized basis with similar terms and payments, and in economic environments where the leased asset is located. Our lease terms include periods under options to extend or terminate the lease when it is reasonably certain that we will exercise that option. We generally use the base, non-cancelable, lease term when determining the lease assets and liabilities. Lease assets also include any prepaid lease payments.

Operating lease expense is recognized on a straight-line basis over the lease term.

(l) Accreditation fees payable

In accordance with ICANN rules, the Company has elected to pay ICANN fees incurred on the registration of Generic Top-Level Domains on an annual basis. Accordingly, accreditation fees that relate to registrations completed prior to ICANN rendering a bill are accrued and reflected as accreditation fees payable.

(m) Translation of foreign currency transactions

The Company's functional currency is the United States dollar. Monetary assets and liabilities of the Company and of its wholly owned subsidiaries that are denominated in foreign currencies are translated into United States dollars at the exchange rates prevailing at the balance sheet dates. Non-monetary assets and liabilities are translated at the historical exchange rates. Transactions included in operations are translated at the rate at the date of the transactions.

(n) Income taxes

Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss carry forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in net income in the year that includes the enactment date. A valuation allowance is recorded if it is not "more likely than not" that some portion of or all of a deferred tax asset will be realized.

The Company recognizes the impact of an uncertain income tax position at the largest amount that is more-likely-than-not to be sustained upon audit by the relevant taxing authority and includes consideration of interest and penalties. An uncertain income tax position will not be recognized if it has less than a 50% likelihood of being sustained. The liability for unrecognized tax benefits is classified as non-current unless the liability is expected to be settled in cash within 12 months of the reporting date.

(o) Stock-based compensation

Stock-based compensation expense recognized during the period is based on the value of the portion of stock-based payment awards that is ultimately expected to vest, reduced for estimated forfeitures.

(p) Earnings per common share

Basic earnings per common share has been calculated on the basis of net income for the year divided by the weighted average number of common shares outstanding during each year. Diluted earnings per share gives effect to all dilutive potential common shares outstanding at the end of the year assuming that they had been issued, converted or exercised at the later of the beginning of the year or their date of issuance. In computing diluted earnings per share, the treasury stock method is used to determine the number of shares assumed to be purchased from the conversion of common share equivalents or the proceeds of the exercise of options.

(q) Concentration of credit risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash equivalents, accounts receivable, forward foreign exchange contracts and pay-fixed, receive-variable interest rate swap contracts. Cash equivalents consist of deposits with major commercial banks, the maturities of which are three months or less from the date of purchase. With respect to accounts receivable, the Company performs periodic credit evaluations of the financial condition of its customers and typically does not require collateral from them. The counterparty to any forward foreign exchange contracts is a major commercial bank which management believes does not represent a significant credit risk. Management assesses the need for allowances for potential credit losses by considering the credit risk of specific customers, historical trends and other information.

(r) Fair value measurement

Fair value of financial assets and liabilities is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. The three-tier hierarchy for inputs used in measuring fair value, which prioritizes the inputs used in the methodologies of measuring fair value for assets and liabilities, is as follows:

Level 1—Quoted prices in active markets for identical assets or liabilities

Level 2—Observable inputs other than quoted prices in active markets for identical assets and liabilities

Level 3—No observable pricing inputs in the market

Financial assets and financial liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurements. Our assessment of the significance of a particular input to the fair value measurements requires judgment, and may affect the valuation of the assets and liabilities being measured and their placement within the fair value hierarchy.

The fair value of cash and cash equivalents, accounts receivable, accounts payable, accreditation fees payable, customer deposits and accrued liabilities (level 2 measurements) approximate their carrying values due to the relatively short periods to maturity of the instruments.

The fair value of the derivative financial instruments is determined using an estimated credit-adjusted mark-to-market valuation (a level 2 measurement) which takes into consideration the Company and the counterparty credit risk.

(s) Investments

The Company accounts for investment in entities over which it has the ability to exert significant influence, but does not control and is not the primary beneficiary of, using the equity method of accounting. The Company includes the proportionate share of earnings (loss) of the equity method investees in Other Income in the Consolidated Statements of Comprehensive Income. The proportional shares of affiliate earnings or losses accounted for under the equity method of accounting were not material for all periods presented.

(t) Segment reporting

The Company operates in two operating segments, Domain Services and Network Access Services.

The Company's Domain Services revenues are attributed to the country in which the contract originates. Revenues from domain names issued under the OpenSRS, brand from the Ontario, Canada location are attributed to Canada because it is impracticable to determine the country of the customer. Revenues from domain names issued under the eNom brand from the Washington state location are attributable to the United States because it is impracticable to determine the country of the customer. Revenues from domain names issued under the Ascio brand from the Copenhagen, Denmark location are attributed to Denmark because it is impracticable to determine the country of the customer. Revenues from domain names issued under the EPAG brand from the Bonn, Germany location are attributed to Germany because it is impracticable to determine the country of the customer. The Company's Network Access Services which consist primarily of MSE services, professional services, mobile telephony services and the provisioning of high speed Internet access services, are generated primarily through its business operations in the United States.

The Company's assets are primarily located in Canada, the United States and Europe.

(u) Recent Accounting Pronouncements

Recent Accounting Pronouncements Adopted

ASU 2016-02: Adoption of Leases (Topic 842)

The Company adopted ASU No. 2016-02, *Leases* (Topic 842) ("ASU 2016-02") as of January 1, 2019.

The Company has elected to apply ASU 2016-02 using the modified retrospective approach with the transition relief provided by ASC 2018-11, which allows the Company to use January 1, 2019 as the date of initial application. As a result, the 2018 comparative period has not been restated and continue to be reported under Topic 840.

The Company elected the practical expedient to use hindsight when considering the likelihood that lessee options to extend or terminate a lease or purchase the underlying asset will be exercised, and in assessing the impairment of right-of-use assets.

The Company elected the practical expedient not to separate non-lease components from the associated lease components for its existing datacenter, corporate offices and fiber-optic cable leases at transition.

As a result of adopting ASU 2016-02, the most significant effects were the recognition of a right-of-use ("ROU") asset and lease liability related to operating leases of approximately \$8.8 million and approximately \$8.3 million, respectively at January 1, 2019. The difference between the ROU asset and lease liability of \$0.5 million was due to the net reclassification of previously deferred rent and prepaid expenses of approximately \$0.1 million and approximately \$0.6 million, respectively to the ROU asset. There was no impact on opening retained earnings on adoption. The adoption of ASU 2016-02 did not have a significant impact on our consolidated statements of comprehensive income or our consolidated statements of cash flows.

ASU 2014-09: Adoption of Revenue from Contracts with Customers (Topic 606)

On January 1, 2018, the Company adopted ASU 2014-09 using the modified retrospective method by recognizing the cumulative effect of initially applying ASU 2014-09 as an adjustment to the opening balance of equity as at January 1, 2018. The results for reporting periods beginning after January 1, 2018 are presented under ASU 2014-09, while prior period amounts are not adjusted and continue to be reported in accordance with our historic accounting policy, under Accounting Standards Codification (“ASC”) Topic 605, Revenue Recognition (ASC Topic 605). The adoption of ASU 2014-09 did not affect the Company’s cash flows from operating, investing, or financing activities. Furthermore, the impact on timing of revenue recognition was not material as the treatment of revenue for services rendered over time is consistent under ASU 2014-09 and ASC Topic 605. The details of the significant changes and quantitative impact of the changes are set out below. For a more comprehensive description of how the Company recognizes revenue under the new revenue standard in accordance with its performance obligations, see Note 10 – Revenue for more information.

The Company previously recognized commission fees related to Ting Mobile, Ting Internet, eNom domain registration and eNom domain related value-added service contracts as selling expenses when they were incurred. Under ASU 2014-09, when these commission fees are deemed incremental and are expected to be recovered, the Company capitalizes as an asset such commission fees as costs of obtaining a contract. These commission fees are amortized into income consistently with the pattern of transfer of the good or service to which the asset relates. The amortization of deferred costs of acquisition are amortized into Sales and marketing expense. The estimation of the amortization period for the costs to obtain a contract requires judgement.

Under ASU 2014-09, the Company has applied the following practical expedients:

- a) When the amortization period for costs incurred to obtain a contract with a customer is less than one year, the Company has elected to apply a practical expedient to expense the costs as incurred; and
- b) For mobile and internet access services, where the performance obligation is part of contracts that have an original expected duration of one year or less (typically one month), the Company has elected to apply a practical expedient to not disclose revenues expected to be recognized in the future related performance obligations that are unsatisfied (or partially unsatisfied).

On January 1, 2018 as a result of adopting ASU 2014-09, the Company recorded a contract cost asset of \$1.4 million with a corresponding increase to opening retained earnings and deferred tax liability of \$1.1 million and \$0.3 million, respectively, due to the deferral of costs of obtaining contracts.

Other

In August 2017, the Financial Accounting Standards Board (“FASB”) issued ASU No. 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities* (“ASU 2017-12”), which better aligns an entity’s risk management activities and financial reporting for hedging relationship through changes to both the designation and measurement guidance for qualifying hedging relationships and presentation of hedge results. The new standard expands and refines hedge accounting for both nonfinancial and financial risk components and aligns the recognition and presentation of the effects of the hedging instrument and hedged item in the financial statements. The Company adopted the targeted improvements to ASU 2017-12 on January 1, 2019 using a modified retrospective approach to existing hedging relationships. The new guidance did not have a material impact on our consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-15, *Intangibles—Goodwill and Other—Internal-Use Software* (Subtopic 350-40): *Customer’s Accounting for Fees Paid in a Cloud Computing Arrangement* (“ASU 2018-15”). ASU 2018-15 helps entities evaluate the accounting for fees paid by a customer in a cloud computing arrangement (hosting arrangement) by providing guidance on accounting for implementation costs when the cloud computing arrangement does not include a license and is accounted for as a service contract. The amendments in ASU 2018-15 require an entity (customer) in a hosting arrangement to assess which implementation costs to capitalize vs expense as it relates to a service contract. The amendments also require the entity (customer) to expense the capitalized implementation costs of a hosting arrangement that is a service contract over the term of the hosting arrangement. The Company adopted ASU 2018-15 on January 1, 2020 using a modified retrospective approach. The new guidance did not have a material impact on our consolidated financial statements.

Recent Accounting Pronouncements Not Yet Adopted

In March 2020, the FASB issued ASU No. 2020-04, *Reference Rate Reform* (Topic 848): *Facilitation of the Effects of Reference Rate Reform on Financial Reporting* (“ASU 2020-04”), which provides optional guidance for a limited period of time to ease the potential burden of reference rate reform on financial reporting. The amendments in ASU 2020-04 apply to contract modifications that replace a reference rate affected by reference rate reform and contemporaneous modifications of other contract terms related to the replacement of the reference rate. The following optional expedients for applying the requirements of certain Topics or Industry Subtopics in the Codification are permitted for contracts that are modified because of reference rate reform and that meet certain scope guidance:

- a) Modifications of contracts within the scope of Topics 310, Receivables, and 470, Debt, should be accounted for by prospectively adjusting the effective interest rate.
- b) Modifications of contracts within the scope of Topic 842, Leases, should be accounted for as a continuation of the existing contracts with *no* reassessments of the lease classification and the discount rate or remeasurements of lease payments that otherwise would be required under those Topics for modifications *not* accounted for as separate contracts.
- c) Modifications of contracts do *not* require an entity to reassess its original conclusion about whether that contract contains an embedded derivative that is clearly and closely related to the economic characteristics and risks of the host contract under Subtopic 815-15, Derivatives and Hedging—Embedded Derivatives

The amendments in ASU 2020-04 are effective for all entities as of March 12, 2020 through December 31, 2022. The Company is currently charged interest and standby fees associated with its Amended 2019 Credit Facility (as defined below) based on LIBOR which are partially hedged by interest rate swaps, which are also based on LIBOR. Both the credit facility agreement and the interest rate swaps will need to be amended when an alternative reference rate is chosen, at which time we *may* adopt some of the practical expedients provided by ASU 2020-04.

3. Acquisitions:

(a) Blue Ridge Websoft

On February 27, 2015, Ting Fiber, Inc. (“Ting”), one of the Company’s wholly owned subsidiaries, acquired a 70% ownership interest in Ting Virginia, LLC and its subsidiaries, Blue Ridge Websoft, LLC (doing business as Blue Ridge Internet Works), Fiber Roads, LLC and Navigator Network Services, LLC for consideration of approximately \$3.5 million.

On February 1, 2017, under the terms of a call option in the agreement, Ting acquired an additional 20% interest in Ting Virginia, LLC from the selling shareholders (the “Minority Shareholders”) for consideration of \$2.0 million.

On February 13, 2018, the Company entered into an agreement with the Minority Shareholders pursuant to which the Minority Shareholders could immediately exercise their put option to sell their remaining 10% ownership interest in Ting Virginia, LLC for \$1.2 million to the Company. The put option was exercised on February 13, 2018 and the Company paid \$1.2 million for the remaining 10% ownership interest and Ting Virginia, LLC became a wholly-owned subsidiary of the Company.

(b) Ascio

On March 18, 2019, the Company entered into an Asset Purchase Agreement with its indirect wholly owned subsidiary, Ting Fiber, Inc., and NetNames European Holdings ApS, CSC Administrative Services Limited UK, and Corporation Service Company (“CSC”), pursuant to which Ting Fiber, Inc. purchased from CSC all of the equity of Ascio Technologies, Inc. (“Ascio”), a domain registrar business, and all of CSC’s assets related to that business. The final purchase price was \$29.9 million, which represented the agreed upon purchase of \$29.44 million plus an amount of \$0.45 million related to the estimated working capital deficiency acquired.

As required by ASC 805, Business Combinations, the Company has recorded deferred revenue at fair value at the acquisition date, which was determined by estimating the costs associated with customer support services and prepaid domain name registration fees to fulfill the contractual obligations over the remaining life of the contract at the acquisition date plus a normal profit margin.

The following table shows the final allocation of the purchase price for Ascio to the acquired identifiable assets and liabilities assumed (*thousands of U.S. dollars*):

Goodwill	\$	19,765
Cash		1,437
Brand		2,090
Developed technology		2,440
Customer relationships		10,610
Prepaid domain registry fees		10,318
Other assets		2,218
Total assets		48,878
Deferred Revenue		(12,510)
Deferred Tax Liabilities		(2,852)
Other liabilities		(3,630)
Total liabilities		(18,992)
Consideration Paid	\$	29,886

All definite life intangible assets acquired, including brand, developed technology and customer relationships will be amortized over 7 years.

The goodwill related to this acquisition is primarily attributable to synergies expected to arise from the acquisition and is deductible for US tax purposes but non-deductible for Danish tax purposes.

In connection with this acquisition, the Company incurred total acquisition related costs of \$0.5 million of which \$0.3 million and \$0.2 million were included in General & Administrative expenses in the consolidated statements of operations and comprehensive income during Fiscal 2019 and Fiscal 2018, respectively.

(c) Cedar

In the fourth quarter of 2019, the Company entered into a Stock Purchase Agreement to purchase all of the issued and outstanding shares of Cedar Holdings Group, Incorporated (“Cedar”), a fiber Internet provider business based in Durango, Colorado. The transaction closed on January 1, 2020, following receipt of all regulatory approvals. The purchase price was \$14.1 million, less a purchase price adjustment of approximately \$0.2 million relating to a working capital deficit and the estimated fair value of contingent consideration, for net purchase consideration of \$13.9 million. In addition to \$9.0 million cash consideration due at closing, the Company also issued 32,374 (\$2.0 million) of Tucows Inc. shares with a two-year restriction period at closing. Included in the agreement is contingent consideration totaling up to \$4.0 million, due on the 24th and 36th month anniversaries of the closing of the transaction dependent upon the achievement of certain milestones as defined in the Share Purchase Agreement. The fair value of the contingent consideration was determined to be \$3.1 million using a discount rate of 11.2%.

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The following table shows the final allocation of the purchase price for Cedar to the acquired identifiable assets and liabilities assumed (*thousands of U.S. dollars*):

Cash Consideration, including working capital adjustment	\$	8,836
Share-based payment		2,000
Fair value of contingent payments		3,072
Total estimated purchase price		13,908
Cash and Cash Equivalents		66
Accounts Receivables, net		13
Other current assets		22
Property and equipment		4,661
Right of use operating lease		18
Customer relationships		4,640
Network rights		750
Total identifiable assets		10,170
Accounts payable and accrued liabilities		(362)
Deferred tax liability		(2,373)
Operating lease liability		(13)
Total liabilities assumed		(2,748)
Total net assets (liabilities) assumed		7,422
Total goodwill	\$	6,486

The amortization period for the customer relationships and network rights are 7 and 15 years, respectively.

The following table presents selected unaudited pro forma information for the Company assuming the acquisition of Cedar had occurred as of January 1, 2019. This pro forma information does not purport to represent what the Company's actual results would have been if the acquisition had occurred as of the date indicated or what results would be for any future periods.

	Unaudited	
	Year Ended December 31,	
	2020	2019
Net revenues	\$ 311,202	\$ 342,056
Net income	5,775	15,181
Basic earnings per common share	0.55	1.43
Diluted earnings per common share	\$ 0.54	\$ 1.41

The amount of revenue recognized since the acquisition date included in the consolidated statements of operations and comprehensive income statement for Fiscal 2020 is \$4.7 million.

The net income recognized since the acquisition date included in the consolidated statements of operations and comprehensive income for Fiscal 2020 is a loss of \$0.7 million.

4. Property and Equipment:

Property and equipment consist of the following (Dollar amounts in thousands of U.S. dollars):

	December 31, 2020	December 31, 2019
Computer equipment	\$ 25,029	\$ 18,027
Computer software	1,760	2,336
Capitalized internal use software	2,835	1,270
Furniture and equipment	1,314	1,394
Vehicles and tools	4,476	2,656
Fiber network	66,766	40,645
Customer equipment and installations	13,332	8,586
Land	1,634	1,511
Assets under construction	36,720	30,352
Leasehold improvements	475	542
	154,341	107,319
Less:		
Accumulated depreciation	36,811	25,198
	\$ 117,530	\$ 82,121

Depreciation of property and equipment (Dollar amounts in thousands of U.S. dollars):

	Year Ended December 31, 2020	Year Ended December 31, 2019	Year Ended December 31, 2018
Depreciation of property and equipment	\$ 12,632	\$ 8,961	\$ 5,722

During the year ended December 31, 2020, property, plant and equipment with a net book value of \$1.6 million related to Ting TV, a product under development for Ting Fiber was written off and included in impairment of property and equipment in the consolidated statement of comprehensive income. During the years ended December 31, 2019 and 2018, property, plant and equipment with a net book value of \$0.1, and Snil respectively were written off.

5. Goodwill and Other Intangible Assets

Goodwill

Goodwill represents the excess of the purchase price over the fair value of tangible and identifiable intangible assets acquired and liabilities assumed in our acquisitions.

Goodwill consists of the following (Dollar amounts in thousands of U.S. dollars):

	Network Access Services	Domain Services	Total
Balances, December 31, 2018	\$ 2,132	\$ 87,922	\$ 90,054
Ascio Technologies Inc. acquisition	-	19,764	19,764
Balances, December 31, 2019	\$ 2,132	\$ 107,686	\$ 109,818
Cedar Holdings Group, Inc. acquisition	6,486	-	6,486
Balances, December 31, 2020	\$ 8,618	\$ 107,686	\$ 116,304

The Company's Goodwill balance is \$116.3 million as of December 31, 2020 and \$109.8 million as of December 31, 2019. The Company's goodwill relates 93% (\$107.7 million) to its Domain Services operating segment and 7% (\$8.6 million) to its Network Access Services operating segment.

Goodwill is not amortized, but is subject to an annual impairment test. The Company performed an impairment analysis as outlined in "Note 2(g) – Significant Accounting Policies" and there were no indications of impairment for Fiscal 2020 and Fiscal 2019.

Other Intangible Assets:

Intangible assets consist of acquired brand, technology, customer relationships, surname domain names, direct navigation domain names and network rights. The Company considers its intangible assets consisting of surname domain names and direct navigation domain names as indefinite life intangible assets. The Company has the exclusive right to these domain names as long as the annual renewal fees are paid to the applicable registry. Renewals occur routinely and at a nominal cost. The indefinite life intangible assets are not amortized, but are subject to impairment assessments performed throughout the year. During Fiscal 2020, we assessed whether certain domain names that were originally acquired in the June 2006 acquisition of Mailbank.com Inc. that were up for renewal, should not be renewed. During the years ended December 31, 2020, December 31, 2019, and December 31, 2018, no impairment of indefinite life intangible assets was recorded.

Finite-life intangible assets, comprising brand, technology, customer relationships and network rights are being amortized on a straight-line basis over periods of two to fifteen years.

In the third quarter of 2019, the Company acquired the mobile customer base of FreedomPop and Unreal Mobile brands from STS Media Inc., operating on the Sprint network. The migration of these customers occurred over a 60-day period, ending in September 2019 with subscribers having the option to accept the Ting offering or cancel or port their service elsewhere. The final purchase price was \$3.5 million. These assets have been assigned to Customer Relationships and are being amortized over 3 years.

In June 2020, in light of developments in the economy and the business and leisure travel industries as a result of the COVID-19 pandemic, the Company decided to discontinue the operation of Roam Mobility. As a consequence of the decision to shut down its Roam Mobility operations, the Company has recorded an impairment loss associated with Roam Mobility customer relationships of \$1.4 million during the year ended December 31, 2020.

In August 2020, the Company sold the mobile customer accounts that are marketed and sold under the Ting brand (other than certain customer accounts associated with one network operator), and as such de-recognized any capitalized customer relationships associated with those accounts. See Note 16 - Other income, for more information.

Throughout Fiscal 2020, the Company purchased several non-exclusive land easements, totaling \$0.1 million, which are necessary for the Company to install fiber internet infrastructure in conjunction with its Fiber Internet business.

Acquired intangible assets consist of the following (Dollar amounts in thousands of U.S. dollars):

	Surname domain names	Direct navigation domain names	Brand	Customer relationships	Technology	Network rights	Total
Amortization period	indefinite life	indefinite life	7 years	3 - 7 years	2 years	15 years	
Balances, December 31, 2018	\$ 11,176	\$ 1,247	\$ 9,004	\$ 27,290	\$ 163	\$ 515	\$ 49,395
Ascio Technologies Inc. acquisition	-	-	2,090	10,610	2,440	-	15,140
FreedomPop acquisition	-	-	-	3,475	-	-	3,475
Acquisition of customer relationships	-	-	-	91	-	-	91
Additions to/(disposals from) domain portfolio, net	(12)	(102)	-	-	-	-	(114)
Amortization expense	-	-	(2,003)	(7,197)	(1,087)	(46)	(10,333)
Balances December 31, 2019	\$ 11,164	\$ 1,145	\$ 9,091	\$ 34,269	\$ 1,516	\$ 469	\$ 57,654
Cedar Holdings Group Inc. acquisition	-	-	-	4,640	-	750	5,390
Additions to/(disposals from) domain portfolio, net	(7)	(10)	-	-	-	-	(17)
Impairment of definite life intangible asset	-	-	-	(1,431)	-	-	(1,431)
Other	-	-	-	(223)	-	-	(223)
Write-down of Ting Mobile customer relationships	-	-	-	(2,581)	-	-	(2,581)
Acquisition of Network rights	-	-	-	-	-	72	72
Amortization expense	-	-	(2,070)	(8,010)	(1,242)	(98)	(11,420)
Balances December 31, 2020	\$ 11,157	\$ 1,135	\$ 7,021	\$ 26,664	\$ 274	\$ 1,193	\$ 47,444

The following table shows the estimated amortization expense for each of the next 5 years, assuming no further additions to acquired intangible assets are made (Dollar amounts in thousands of U.S. dollars):

	Year ending December 31,
2021	\$ 9,515
2022	9,345
2023	8,669
2024	4,455
2025	2,587
Thereafter	581
Total	\$ 35,152

6. Fair Value Measurement:

For financial assets and liabilities recorded in our financial statements at fair value we utilize a valuation hierarchy for disclosure of the inputs to valuation used to measure fair value. This hierarchy prioritizes the inputs into three broad levels. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument. Level 3 inputs are unobservable inputs based on the Company's own assumptions used to measure assets and liabilities at fair value. A financial asset or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

The following table provides a summary of the fair values of the Company's derivative instruments measured at fair value on a recurring basis as at December 31, 2020 (Dollar amounts in thousands of U.S. dollars):

	December 31, 2020			Assets (Liabilities) at Fair value
	Fair Value Measurement Using			
	Level 1	Level 2	Level 3	
Derivative instrument asset, net	\$ -	\$ 3,647	\$ -	\$ 3,647
Total Assets, net	\$ -	\$ 3,647	\$ -	\$ 3,647

The following table provides a summary of the fair values of the Company's derivative instruments measured at fair value on a recurring basis as at December 31, 2019 (Dollar amounts in thousands of U.S. dollars):

	December 31, 2019			
	Fair Value Measurement Using			Assets (Liabilities) at Fair value
	Level 1	Level 2	Level 3	
Derivative instrument asset, net	\$ -	\$ 731	\$ -	\$ 731
Total Assets, net	\$ -	\$ 731	\$ -	\$ 731

7. Derivative Instruments and Hedging Activities:

Foreign currency forward contracts

Since October 2012, the Company has employed a hedging program with a Canadian chartered bank to limit the potential foreign exchange fluctuations incurred on its future cash flows related to a portion of payroll, taxes, rent and payments to Canadian domain name registry suppliers that are denominated in Canadian dollars and are expected to be paid by its Canadian operating subsidiary. As part of its risk management strategy, the Company uses derivative instruments to hedge a portion of the foreign exchange risk associated with these costs. The Company does not use these forward contracts for trading or speculative purposes. These forward contracts typically mature between one and eighteen months.

In May 2020, the Company entered into a pay-fixed, receive-variable interest rate swap with a Canadian chartered bank to limit the potential interest rate fluctuations incurred on its future cash flows related to variable interest payments on the Credit facility. The notional value of the interest rate swap was \$70 million. The Company does not use these forward contracts for trading or speculative purposes. The contract is coterminous with the Credit facility, maturing in June 2023.

The Company has designated certain of these transactions as cash flow hedges of forecasted transactions under ASC Topic 815. For certain contracts, as the critical terms of the hedging instrument, and of the entire hedged forecasted transaction, are the same, in accordance with ASC Topic 815, the Company has been able to conclude that changes in fair value and cash flows attributable to the risk of being hedged are expected to completely offset at inception and on an ongoing basis. Accordingly, unrealized gains or losses on the effective portion of these contracts have been included within other comprehensive income. The fair value of the contracts, as of December 31, 2020 and December 31, 2019, is recorded as derivative instrument assets or liabilities. For certain contracts where the hedged transactions are no longer probable to occur, the loss on the associated forward contract is recognized in earnings.

As of December 31, 2020, the notional amount of forward contracts that the Company held to sell U.S. dollars in exchange for Canadian dollars was \$31.8 million, of which \$26.8 million met the requirements of ASC Topic 815 and were designated as hedges.

As of December 31, 2019 the notional amount of forward contracts that the Company held to sell U.S. dollars in exchange for Canadian dollars was \$30.5 million, of which \$26.1 million met the requirements of ASC Topic 815 and were designated as hedges.

As of December 31, 2020, we had the following outstanding forward contracts to trade U.S. dollars in exchange for Canadian dollars:

Maturity date (Dollar amounts in thousands of U.S. dollars)	Notional amount of U.S. dollars	Weighted average exchange rate of U.S. dollars	Fair value
January - March 2021	11,125	1.4283	1,327
April - June 2021	9,879	1.4283	1,179
July - September 2021	10,782	1.4362	1,353
	<u>\$ 31,786</u>	<u>1.4310</u>	<u>\$ 3,860</u>

Fair value of derivative instruments and effect of derivative instruments on financial performance

The effect of these derivative instruments on our consolidated financial statements as of, and for the year ended December 31, 2020 and 2019, were as follows (amounts presented do not include any income tax effects).

Fair value of derivative instruments in the consolidated balance sheets (see "Note 6 – Fair Value Measurement")

Derivatives (Dollar amounts in thousands of U.S. dollars)	Balance Sheet Location	As of December 31, 2020 Fair Value	As of December 31, 2019 Fair Value
		Asset	Asset
Foreign Currency forward contracts designated as cash flow hedges (net)	Derivative instruments	\$ 3,254	\$ 626
Interest rate swap contract designated as a cash flow hedge (net)	Derivative instruments	\$ (213)	\$ -
Foreign Currency forward contracts not designated as cash flow hedges (net)	Derivative instruments	606	105
Total foreign currency forward contracts (net)	Derivative instruments	<u>\$ 3,647</u>	<u>\$ 731</u>

Movement in AOCI balance for the year ended December 31, 2020 (Dollar amounts in thousands of U.S. dollars)

	Gains and losses on cash flow hedges	Tax impact	Total AOCI
Opening AOCI balance - December 31, 2019	\$ 625	\$ (152)	\$ 473
Other comprehensive income (loss) before reclassifications	2,142	(489)	1,653
Amount reclassified from AOCI	271	(61)	210
Other comprehensive income (loss) for the year ended December 31, 2020	2,413	(550)	1,863
Ending AOCI Balance - December 31, 2020	\$ 3,038	\$ (702)	\$ 2,336

Movement in AOCI balance for the year ended December 31, 2019 (Dollar amounts in thousands of U.S. dollars)

	Gains and losses on cash flow hedges	Tax impact	Total AOCI
Opening AOCI balance - December 31, 2018	\$ (1,069)	\$ 259	\$ (810)
Other comprehensive income (loss) before reclassifications	1,454	(353)	1,101
Amount reclassified from AOCI	240	(58)	182
Other comprehensive income (loss) for the year ended December 31, 2019	1,694	(411)	1,283
Ending AOCI Balance - December 31, 2019	\$ 625	\$ (152)	\$ 473

Movement in AOCI balance for the year ended December 31, 2018 (Dollar amounts in thousands of U.S. dollars)

	Gains and losses on cash flow hedges	Tax impact	Total AOCI
Opening AOCI balance - December 31, 2017	\$ -	\$ -	\$ -
Other comprehensive income (loss) before reclassifications	(1,350)	328	(1,022)
Amount reclassified from AOCI	281	(69)	212
Other comprehensive income (loss) for the year ended December 31, 2018	(1,069)	259	(810)
Ending AOCI Balance - December 31, 2018	\$ (1,069)	\$ 259	\$ (810)

Effects of derivative instruments on income and other comprehensive income (OCI) (Dollar amounts in thousands of U.S. dollars)

Derivatives in Cash Flow Hedging Relationship	Amount of Gain or (Loss) Recognized in OCI, net of tax, on Derivative	Location of Gain or (Loss) Reclassified from AOCI into Income	Amount of Gain or (Loss) Reclassified from AOCI into Income
		Operating expenses	\$ (188)
Foreign currency forward contracts for the year ended December 31, 2020	\$ 2,026	Cost of revenues	\$ (66)
Interest rate swap contract for the year ended December 31, 2020	\$ (163)	Interest expense, net	\$ (17)
		Operating expenses	\$ (197)
Foreign currency forward contracts for the year ended December 31, 2019	\$ 1,283	Cost of revenues	\$ (43)
Interest rate swap contract for the year ended December 31, 2019	\$ -	Interest expense, net	\$ -
		Operating expenses	\$ (245)
Foreign currency forward contracts for the year ended December 31, 2018	\$ (810)	Cost of revenues	\$ (36)
Interest rate swap contract for the year ended December 31, 2018	\$ -	Interest expense, net	\$ -

In addition to the above, for those foreign currency forward contracts not designated as hedges, the Company recorded the following fair value adjustments on settled and outstanding contracts (Dollar amounts in thousands of U.S. dollars):

Forward currency contracts not designated as hedges:	Year Ended December 31,		
	2020	2019	2018
Gain (loss) on settlement	\$ (117)	\$ (115)	\$ (47)
Gain (loss) on change in fair value	\$ 500	\$ 313	\$ (207)

8. Loan Payable:

Amended 2019 Credit Facility

On June 14, 2019, the Company and its wholly-owned subsidiaries, Tucows.com Co., Ting Fiber, Inc., Ting Inc., Tucows (Delaware) Inc. and Tucows (Emerald), LLC entered into an Amended and Restated Senior Secured Credit Agreement (the “Amended 2019 Credit Facility”) with Royal Bank (“RBC”), as administrative agent, and lenders party thereto (collectively with RBC, the “Lenders”) under which the Company has access to an aggregate of up to \$240 million in funds, which consists of \$180 million guaranteed credit facility and a \$60 million accordion facility. The Amended 2019 Credit Facility replaced the Company’s 2017 Amended Credit Facility.

In connection with the Amended 2019 Credit Facility, the Company incurred \$0.3 million of fees paid to the Lenders and \$0.2 million of legal fees related to the debt issuance. Of these fees, \$0.4 million are debt issuance costs, which have been reflected as a reduction to the carrying amount of the loan payable and will be amortized over the term of the credit facility agreement and \$0.1 million were recorded in General and administrative expenses for the year ended December 31, 2019.

The obligations of the Company under the Amended 2019 Credit Agreement are secured by a first priority lien on substantially all of the personal property and assets of the Company and has a four-year term, maturing on June 13, 2023.

2017 Amended Credit Facility

Prior to entering into the Amended 2019 Credit Facility, the Company had entered into a secured Credit Agreement (as amended, the “2017 Amended Credit Facility”) on January 20, 2017 with Bank of Montreal (“BMO”), RBC and Bank of Nova Scotia (collectively, the “Previous Lenders”) under which the Company had access to an aggregate of up to \$140 million in funds.

On March 18, 2019, the Company entered into the Second Amendment to the 2017 Credit Facility to provide the Previous Lenders’ consent for the acquisition of Ascio (discussed in “Note 3 (b) – Acquisitions”), advance the acquisition funding and to reallocate borrowing limits between loan facilities. We incurred costs associated with the Second Amendment to the 2017 Credit Facility of \$0.2 million, which were recorded as debt issuance costs.

The obligations of the Company under the 2017 Amended Credit Facility were secured by a first priority lien on substantially all of the personal property and assets of the Company and had a four-year term.

Credit Facility Terms

The Amended 2019 Credit Facility is revolving with interest only payments with no scheduled repayments during the term.

The Amended 2019 Credit Facility contains customary representations and warranties, affirmative and negative covenants, and events of default. The Amended 2019 Credit Facility requires that the Company to comply with the following financial covenants: (i) at all times, a Total Funded Debt to Adjusted EBITDA Ratio (as defined in the Amended 2019 Credit Agreement) of 3.50:1; and (ii) with respect to each fiscal quarter, an Interest Coverage Ratio (as defined in the Amended 2019 Credit Agreement) of not less than 3.00:1. Further, the Company's maximum annual Capital Expenditures cannot exceed 110% of the forecasted capital expenditures of its annual business plan. In addition, share repurchases require the Lenders' consent if the Company's Total Funded Debt to Adjusted EBITDA ratio exceeds 2.00:1. As at and for the periods ending December 31, 2020 and December 31, 2019 the Company was in compliance with these covenants.

Borrowings under the Amended 2019 Credit Facility will accrue interest and standby fees based on the Company's Total Funded Debt to Adjusted EBITDA ratio and the availment type as follows:

Availment type or fee	If Total Funded Debt to EBITDA is:			
	Less than 1.00	Greater than or equal to 1.00 and less than 2.00	Greater than or equal to 2.00 and less than 2.50	Greater than or equal to 2.50
Canadian dollar borrowings based on Bankers' Acceptance or U.S. dollar borrowings based on LIBOR (Margin)	1.50%	1.85%	2.35%	2.85%
Canadian or U.S. dollar borrowings based on Prime Rate or U.S. dollar borrowings based on Base Rate (Margin)	0.25%	0.60%	1.10%	1.60%
Standby fees	0.30%	0.37%	0.47%	0.57%

The following table summarizes the Company's borrowings under the credit facilities (Dollar amounts in thousands of U.S. dollars):

	December 31, 2020	December 31, 2019
Revolver	122,400	114,400
Less: unamortized debt discount and issuance costs	(667)	(897)
Total loan payable	121,733	113,503
Less: loan payable, current portion	-	-
Loan payable, long-term portion	121,733	113,503

The following table summarizes our scheduled principal repayments as of December 31, 2020 (Dollar amounts in thousands of U.S. dollars):

2021	-
2022	-
2023	122,400
	<u>\$ 122,400</u>

9. Income Taxes:

The provision for income taxes differs from the amount computed by applying the statutory federal income tax rate of 21% for the years ended December 31, 2020, December 31, 2019 and December 31, 2018, to income before provision for income taxes as a result of the following (Dollar amounts in thousands of U.S. dollars):

	Year ended December 31,		
	2020	2019	2018
Income for the year before provision for income taxes	\$ 10,760	\$ 24,571	\$ 26,155
Computed federal tax expense	2,259	5,160	5,492
Increase (reduction) in income tax expense resulting from:			
State income taxes	303	526	846
Change in Valuation allowance	1,867	5,277	2,811
Expired business tax credits	1,044	-	-
Non-creditable Foreign Tax	818	515	-
Excess tax benefits on share-based compensation expense	(407)	(634)	(697)
Permanent differences	(161)	(103)	159
Effect of deferred tax in foreign branch	(774)	(840)	-
Others	36	(728)	409
Provision for income taxes	\$ 4,985	\$ 9,173	\$ 9,020

On December 22, 2017, the U.S. Government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the Tax Act). The Tax Act makes broad and complex changes to the U.S. tax code, including, but not limited to: (1) reducing the U.S. federal corporate tax rate from 35% to 21%; (2) changing rules related to uses and limitations of net operating loss carry forwards created in tax years beginning after December 31, 2017; (3) bonus depreciation allows for full expensing of qualified property; (4) creating a new limitation on deductible interest expense; (5) eliminating the corporate alternative minimum tax; and (6) new tax rules related to foreign operations.

In Fiscal 2020, the Company did not utilize the bonus depreciation with respect to its continued investment in the Ting Internet business. Despite this, due to the reduction in tax rate to 21%, it is unlikely we will ultimately be able to fully claim the Fiscal 2020 foreign taxes paid in future years as a foreign tax credit. As such, we have taken a valuation allowance on foreign tax credits not utilized for 2020 income tax purposes and net operating losses not expected to be utilized in the future, the net negative effect of which is a \$2.9 million addition to income tax expense.

In Fiscal 2019, the Company was able to utilize the bonus depreciation with respect to its continued investment in the Ting Internet business. The impact of this, together with the reduction in tax rate to 21%, make it unlikely we will ultimately be able to fully claim the Fiscal 2019 foreign taxes paid in future years. In addition, the Company generated net operating losses of \$0.3 million which it does not expect to be able to utilize in the future. As such, we have taken a valuation allowance on foreign tax credits not utilized for 2019 income tax purposes and net operating losses not expected to be utilized in the future, the net negative effect of which is a \$5.3 million addition to income tax expense.

In Fiscal 2018, the Company was able to utilize the bonus depreciation with respect to its continued investment in the Ting Internet business. The impact of this, together with the reduction in tax rate to 21%, make it unlikely we will ultimately be able to fully claim the Fiscal 2018 foreign taxes paid in future years. In addition, the Company generated net operating losses of \$0.2 million which it does not expect to be able to utilize in the future. As such, we have taken a valuation allowance on foreign tax credits not utilized for 2018 income tax purposes and net operating losses not expected to be utilized in the future, the net negative effect of which is a \$2.8 million addition to income tax expense.

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and liabilities as of December 31, 2020, and December 31, 2019 are presented below (Dollar amounts in thousands of U.S. dollars):

	December 31, 2020	December 31, 2019
Deferred tax assets (liabilities):		
Deferred tax assets:		
Deferred revenue	\$ 5,739	\$ 6,301
Foreign tax credits and general business credits	11,203	9,004
Net operating losses	1,452	1,341
Accruals, including foreign exchange and other	792	1,490
Sub-total Deferred tax assets	19,186	18,136
Valuation allowance	(11,232)	(9,365)
Total deferred tax assets	\$ 7,954	\$ 8,771
Deferred tax liabilities:		
Prepaid registry fees and expenses	\$ (16,909)	\$ (16,237)
Amortization	(7,083)	(6,925)
Limited life intangible assets	(4,327)	(5,958)
Indefinite life intangible assets	(2,847)	(3,110)
Foreign branch deferred tax liability	(1,256)	(2,012)
Total deferred tax liability	\$ (32,422)	\$ (34,242)
Net deferred tax asset (liability)	\$ (24,468)	\$ (25,471)

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the years in which those temporary differences become deductible. Management considers projected future taxable income, uncertainties related to the industry in which the Company operates, and tax planning strategies in making this assessment.

We believe it is more likely than not that our remaining deferred tax assets, net of the valuation allowance, will be realized based on current income tax laws, including those modified by the Tax Act, and expectations of future taxable income stemming from forecasted profits from ongoing operations and from the reversal of existing deferred tax liabilities.

The Company had nil total gross unrecognized tax benefits as of both December 31, 2020 and December 31, 2019.

The Company recognizes accrued interest and penalties related to unrecognized tax benefits in tax expense. The Company did not have any interest and penalties accrued as of December 31, 2020 and December 31, 2019.

In connection with the eNom acquisition in 2017, we acquired deferred tax liabilities primarily composed of prepaid registry fees. As a result, we aligned our tax methodology pertaining to the deductibility of prepaid registry fees for our other subsidiaries. In the first quarter of 2019, we determined that we were in technical violation with respect to the administrative application of the accounting method change relating to the deductibility of prepaid registry fees for these additional subsidiaries. In February 2019, the Company filed an application for relief ("9100 Relief") to correct the issue. In November 2019, the Company was granted 9100 Relief and was given 30 days to file the appropriate forms based on prescribed instructions. The Company filed the forms in December, 2019 and now awaits the final IRS response and acceptance of the change in accounting method. Management is of the view that it is more likely than not that the IRS will accept the 9100 Relief and filing of the prescribed forms. As such, no additional tax uncertainties or related interest or penalties have been recorded as at December 31, 2020.

10. Revenue:

Significant accounting policy

The Company's revenues are derived from (a) the provisioning of retail mobile services, the provisioning of wholesale mobile platform services, professional services and the provisioning of retail fiber Internet services in our Network Access Services segment; and from (b) domain name registration contracts, other domain related value-added services, domain sale contracts, and other advertising revenue in our Domain Services segment. Amounts received in advance of meeting the revenue recognition criteria described below are recorded as deferred revenue. All products are generally sold without the right of return or refund.

Revenue is measured based on consideration specified in a contract with a customer and excludes any sales incentives and amounts collected on behalf of third parties. The Company recognizes revenue when it satisfies a performance obligation by transferring control over a product or service to a customer.

Nature of goods and services

The following is a description of principal activities – separated by reportable segments – from which the Company generates its revenue. For more detailed information about reportable segments. See Note 19 – Segment Reporting for more information.

(a) Network Access Services

The Company generates Network Access Services revenues primarily through the provisioning of mobile services. Mobile services consist of retail services provided to Ting Mobile customers and mobile platform services provided to wholesale customers to whom we also provide other professional services. Fiber internet services revenue include the provisioning of fixed high-speed Internet access, Ting Internet, as well as billing solutions to Internet Service Providers ("ISPs").

Retail mobile services (Ting Mobile) wireless usage contracts grant customers access to standard talk, text and data mobile services. Ting Mobile contracts are billed based on the actual amount of monthly services utilized by each customer during their billing cycle and charged to customers on a postpaid basis. Voice minutes, text messages and megabytes of data are each billed separately based on a tiered pricing program. The Company recognizes revenue for Ting Mobile usage based on the actual amount of monthly services utilized by each customer.

Mobile platform services agreements contain both MSE services and professional services. MSE services represent a single promise to provide continuous access (i.e., a stand-ready performance obligation) to the platform and software solutions. As each month of providing access to the platform is substantially the same and the customer simultaneously receives and consumes the benefits as access is provided, the performance obligation is comprised of a series of distinct service periods. Consideration for these arrangements is variable each month depending on the number of subscribers hosted on the platform. The Company also provides professional services as a part of the mobile platform services agreements. These professional services can include implementation, training, consulting or software development/modification services. Revenues from arrangements to provide professional services are generally distinct from the other promises in the contract(s) and are recognized as the related services are performed. Consideration payable under the professional service arrangements is included with the variable consideration from the mobile platform services, which would represent variable consideration estimated using the most likely amount based on the range of hours expected to be incurred in providing the services. Where consideration for professional services is included in the consideration for mobile platform services, the Company estimates the standalone selling price ("SSP") for professional services based on observable standalone sales, and applies the residual approach to estimate the SSP for mobile platform services. The total variable consideration is estimated at contract inception (considering any constraints that may apply and updating the estimates as new information becomes available) and the transaction price is allocated to the performance obligations based on the relative SSP basis and recognized over the period to which it relates.

Other professional services consist of professional service arrangements that are billed separately on a time-and-materials basis as well as revenues from the Transitional Services Agreement ("TSA") with DISH Wireless L.L.C. ("DISH"). For professional services billed separately on a time-and-materials basis, revenues are recognized based on the actual hours of services provided. Under the TSA, the Company will provide certain other services such as customer service, marketing and fulfillment services. DISH has the option to terminate services provided under the TSA throughout the term of the agreement, which is for five years effective August 1, 2020. Consideration payable under this arrangement is based on cost plus margin, and revenues are recognized as the services are provided to DISH each month under the 'as-invoiced' practical expedient.

Fiber Internet services (Ting Internet) contracts provide customers Internet access at their home or business through the installation and use of our fiber optic network. Ting Internet contracts are generally prepaid and grant customers with unlimited bandwidth based on a fixed price per month basis. Because consideration is collected before the service period, revenue is initially deferred and recognized as the Company performs its obligation to provide Internet access. Though the Company does not consider the installation of fixed Internet access to be a distinct performance obligation, the fees related to installation are immaterial and therefore revenue is recognized as billed.

Both Ting Mobile and Ting Internet access services are primarily contracted through the Ting website, for one month at a time and contain no commitment to renew the contract following each customer's monthly billing cycle. The Company's billing cycle for all Ting Mobile and Ting Internet customers is computed based on the customer's activation date. In order to recognize revenue as the Company satisfies its obligations, we compute the amount of revenues earned but not billed from the end of each billing cycle to the end of each reporting period. In addition, revenues associated with the sale of wireless devices and accessories and Internet hardware to subscribers are recognized when title and risk of loss is transferred to the subscriber and shipment has occurred. Incentive marketing credits given to customers are recorded as a reduction of revenue.

In those cases, where payment is not received at the time of sale, revenue is not recognized at contract inception unless the collection of the related accounts receivable is reasonably assured. The Company records costs that reflect expected refunds, rebates and credit card charge-backs as a reduction of revenues at the time of the sale based on historical experiences and current expectations.

(b) Domain Services

Domain registration contracts, which can be purchased for terms of one to ten years, provide our resellers and retail registrant customers with the exclusive right to a personalized internet address from which to build an online presence. The Company enters into domain registration contracts in connection with each new, renewed and transferred-in domain registration. At the inception of the contract, the Company charges and collects the registration fee for the entire registration period. Though fees are collected upfront, revenue from domain registrations are recognized rateably over the registration period as domain registration contracts contain a 'right to access' license of IP, which is a distinct performance obligation measured over time. The registration period begins once the Company has confirmed that the requested domain name has been appropriately recorded in the registry under contractual performance standards.

Domain related value-added services like digital certifications, WHOIS privacy, website hosting and hosted email provide our resellers and retail registrant customers with tools and additional functionality to be used in conjunction with domain registrations. All domain related value-added services are considered distinct performance obligations which transfer the promised service to the customer over the contracted term. Fees charged to customers for domain related value-added services are collected at the inception of the contract, and revenue is recognized on a straight-line basis over the contracted term, consistent with the satisfaction of the performance obligations.

The Company is an ICANN accredited registrar. Thus, the Company is the primary obligor with our reseller and retail registrant customers and is responsible for the fulfillment of our registrar services to those parties. As a result, the Company reports revenue in the amount of the fees we receive directly from our reseller and retail registrant customers. Our reseller customers maintain the primary obligor relationship with their retail customers, establish pricing and retain credit risk to those customers. Accordingly, the Company does not recognize any revenue related to transactions between our reseller customers and their ultimate retail customers.

The Company also sells the rights to the Company's portfolio domains or names acquired through the Company's domain expiry stream. Revenue generated from sale of domain name contracts, containing a distinct performance obligation to transfer the domain name rights under the Company's control, is generally recognized once the rights have been transferred and payment has been received in full.

Disaggregation of Revenue

The following is a summary of the Company's revenue earned from each significant revenue stream (Dollar amounts in thousands of U.S. dollars):

	2020	2019	2018*
Network Access Services:			
Mobile Services			
Retail mobile services	\$ 46,540	\$ 84,657	\$ 89,340
Mobile platform services	564	-	-
Other professional services	3,416	-	-
Total Mobile	50,520	84,657	89,340
Fiber Internet Services	18,428	11,006	7,984
Total Network Access Services	68,948	95,663	97,324
Domain Services:			
Wholesale			
Domain Services	186,893	182,957	189,434
Value Added Services	19,788	18,922	17,756
Total Wholesale	206,681	201,879	207,190
Retail	34,323	34,786	34,524
Portfolio	1,250	4,817	6,975
Total Domain Services	242,254	241,482	248,689
	<u>\$ 311,202</u>	<u>\$ 337,145</u>	<u>\$ 346,013</u>

(*)As a result of the bulk transfers of 2.89 million domain names to Namecheap throughout 2018, recognized revenue for the year ended December 31, 2018 includes \$16.9 million, related to previously deferred revenue, a portion of which would have otherwise been recognized after December 31, 2018.

As of December 31, 2020, one customer represented 59% of total accounts receivable. As of December 31, 2019 and December 31, 2018 no customer accounted for more than 10% of total accounts receivable.

During the years ended December 31, 2020, December 31, 2019 and December 31, 2018 no customer accounted for more than 10% of total revenue.

The following is a summary of the Company's cost of revenue from each significant revenue stream (Dollar amounts in thousands of U.S. dollars):

	2020	2019	2018*
Network Access Services:			
Mobile Services			
Retail mobile services	\$ 22,942	\$ 44,415	\$ 46,061
Mobile platform services	56	-	-
Other professional services	2,970	-	-
Total Mobile	25,968	44,415	46,061
Fiber Internet Services	6,982	3,928	3,994
Total Network Access Services	32,950	48,343	50,055
Domain Services:			
Wholesale			
Domain Services	146,788	148,530	160,216
Value Added Services	3,161	2,986	3,154
Total Wholesale	149,949	151,516	163,370
Retail	17,023	17,093	17,725
Portfolio	479	627	953
Total Domain Services	167,451	169,236	182,048
Network Expenses:			
Network, other costs	10,194	9,190	9,846
Network, depreciation and amortization costs	13,484	9,599	7,294
Network, impairment	1,638	-	-
Total Network Expenses	25,316	18,789	17,140
	\$ 225,717	\$ 236,368	\$ 249,243

(*)As a result of the bulk transfers of 2.89 million domain names to Namecheap throughout 2018, recognized Cost of revenue for the year ended December 31, 2018 includes \$16.8 million, related to previously deferred prepaid registry fees, a portion of which would have otherwise been recognized after December 31, 2018.

Contract Balances

The following table provides information about contract liabilities (deferred revenue) from contracts with customers. The Company accounts for contract assets and liabilities on a contract-by-contract basis, with each contract presented as either a net contract asset or a net contract liability accordingly.

Given that Company's long-term contracts with customers are billed in advance of service, the Company's contract liabilities relate to amounts recorded as deferred revenues. The Company does not have material streams of contracted revenue that have not been billed.

Deferred revenue primarily relates to the portion of the transaction price received in advance related to the unexpired term of domain name registrations and other domain related value-added services, on both a wholesale and retail basis, net of external commissions.

The opening balance of deferred revenue was \$149.3 million as of January 1, 2020. Significant changes in deferred revenue were as follows (Dollar amounts in thousands of U.S. dollars):

	Year ended December 31, 2020
Balance, beginning of period	\$ 149,303
Deferred revenue	234,047
Recognized revenue	(231,105)
Balance, end of period	\$ 152,245

Remaining Performance Obligations:

As the Company fulfills its performance obligations, the following table includes revenues expected to be recognized in the future related performance obligations that are unsatisfied (or partially unsatisfied) as at December 31, 2020 (Dollar amounts in thousands of U.S. dollars):

For professional services and internet access services, where the performance obligation is part of contracts that have an original expected duration of one year or less, the Company has elected to apply a practical expedient to not disclose revenues expected to be recognized in the future related performance obligations that are unsatisfied (or partially unsatisfied) (Dollar amounts in thousands of US dollars).

	Year ended December 31, 2020
2021	\$ 124,271
2022	11,493
2023	5,212
2024	3,231
2025	1,994
Thereafter	2,979
Total	\$ 149,180

11. Costs to obtain and fulfill a contract

(a) Deferred costs of acquisition

We recognize an asset for the incremental costs of obtaining a contract with a customer if we expect the period of benefit of those costs to be longer than one year and those costs are expected to be recoverable under the term of the contract. We have identified certain sales incentive programs that meet the requirements to be capitalized, and therefore, capitalized them as contract costs in the amount of \$0.4 million at December 31, 2020.

Capitalized contract acquisition costs are amortized into operating expense based on the transfer of goods or services to which the assets relate which typically range from two – ten years. For the year ended December 31, 2020, the Company capitalized \$0.4 million and also amortized \$0.5 million of contract costs, respectively. The Company wrote-down \$0.9 million of capitalized commissions associated with Ting Mobile customer accounts that were sold on August 1, 2020. The breakdown of the movement in the deferred costs of acquisition balance for the year ended December 31, 2020 is as follows (Dollar amounts in thousands of U.S. dollars):

	Year ended December 31, 2020
Balance, beginning of period	\$ 1,400
Capitalization of costs	430
Amortization of costs	(536)
Write-down of Ting Mobile contract costs	(932)
Balance, end of period	\$ 362

When the amortization period for costs incurred to obtain a contract with a customer is less than one year, we have elected to apply a practical expedient to expense the costs as incurred. These costs include our internal sales compensation program and certain partner sales incentive programs.

(b) Deferred costs of fulfillment

Deferred costs to fulfill contracts generally consist of domain registration costs which have been paid to a domain registry, and are capitalized as deferred costs of fulfillment. These costs are deferred and amortized over the life of the domain which generally ranges from one to ten years. To a lesser degree, deferred costs to fulfill contracts also include certain research, design and data migration costs associated with specific professional services contracts. All deferred professional services costs are deferred over the term of the customer contract. For the year ended December 31, 2020, the Company capitalized \$170.2 million and also amortized \$168.3 million of contract costs. There were no impairment losses recognized in relation to the costs capitalized during the year ended December 31, 2020. Amortization expense is primarily included in cost of revenue. The breakdown of the movement in the deferred costs of fulfillment balance for the year ended December 31, 2020 is as follows (Dollar amounts in thousands of U.S. dollars).

	Year ended December 31, 2020
Balance, beginning of period	\$ 109,167
Deferral of costs	170,167
Recognized costs	(168,268)
Balance, end of period	<u>\$ 111,066</u>

12. Leases

We lease datacenters, corporate offices and fiber-optic cables under operating leases. The Company does not have any leases classified as finance leases.

Our leases have remaining lease terms of 1 year to 20 years, some of which may include options to extend the leases for up to 5 years, and some of which may include options to terminate the leases within 1 year.

The components of lease expense were as follows (Dollar amounts in thousands of U.S. dollars):

	Year Ended December 31, 2020	Year Ended December 31, 2019
Operating Lease Cost (leases with a total term greater than 12 months)	\$ 2,195	\$ 3,057
Short-term Lease Cost (leases with a total term of 12 months or less)	501	1,040
Variable Lease Cost	589	657
Total Lease Cost	<u>\$ 3,286</u>	<u>\$ 4,754</u>

Lease Cost is presented in general and administrative expenses and network expenses within our consolidated statements of operations and comprehensive income.

Information related to leases was as follows (Dollar amounts in thousands of U.S. dollars):

	Year Ended December 31, 2020	Year Ended December 31, 2019
<i>Supplemental cashflow information:</i>		
Operating Lease - Operating Cash Flows (Fixed Payments)	\$ 2,332	\$ 3,130
Operating Lease - Operating Cash Flows (Liability Reduction)	1,952	2,665
New ROU Assets - Operating Leases	\$ 2,798	\$ 5,392
<i>Supplemental balance sheet information related to leases:</i>		
Weighted Average Discount Rate	3.60%	5.20%
Weighted Average Remaining Lease Term	8.35 yrs	8.62 yrs

Maturity of lease liability as of December 31, 2020 (Dollar amounts in thousands of U.S. dollars):

	December 31, 2020
2021	\$ 2,084
2022	2,057
2023	1,979
2024	1,439
2025	900
Thereafter	4,071
Total future lease payments	<u>12,530</u>
Less interest	1,590
Total	<u>\$ 10,940</u>

Operating lease payments include payments under the non-cancellable term and approximately \$0.3 million related to options to extend lease terms that are reasonably certain of being exercised.

As of December 31, 2020, we have entered into lease agreements for total payments of \$0.5 million that have not yet commenced, and therefore are not included in the lease liability.

13. Common Shares

The Company's authorized common share capital is 250 million shares of common stock without nominal or par value. On December 31, 2020, there were 10,612,414 shares of common stock outstanding (December 31, 2019: 10,585,159).

Repurchase of common shares:

(a) Normal Course Issuer Bids:

2021 Stock Buyback Program

On February 9, 2021, the Company announced that its Board of Directors ("Board") has approved a stock buyback program to repurchase up to \$40 million of its common stock in the open market. The \$40 million buyback program commenced on February 10, 2021 and is expected to be terminated on February 9, 2022. Please see "Note 20 – Subsequent Events" for more information on the 2021 stock buyback program.

2020 Stock Buyback Program

On February 12, 2020, the Company announced that its Board has approved a stock buyback program to repurchase up to \$40 million of its common stock in the open market. The \$40 million buyback program commenced on February 13, 2020 and terminated on February 9, 2021. During year ended December 31, 2020, the Company repurchased 70,238 shares under this program for total consideration of \$3.3 million.

2019 Stock Buyback Program

On February 13, 2019, the Company announced that its Board has approved a stock buyback program to repurchase up to \$40 million of its common stock in the open market. The \$40 million buyback program commenced on February 14, 2019 and terminated on February 12, 2020. During the year ended December 31, 2019, the Company repurchased 101,816 shares under this program, for a total of \$5.0 million. During the year ended December 31, 2020 no repurchases were made under this program.

2018 Stock Buyback Program

On February 14, 2018, the Company announced that its Board approved a stock buyback program to repurchase up to \$40 million of its common stock in the open market. The \$40 million buyback program commenced on February 14, 2018 and terminated on February 13, 2019. No repurchases were made under this program.

(b) Net Exercise of Stock Options

Our current equity-based compensation plans include provisions that allow for the "net exercise" of stock options by all plan participants. In a net exercise, any required payroll taxes, federal withholding taxes and exercise price of the shares due from the option holder can be paid for by having the option holder tender back to the Company a number of shares at fair value equal to the amounts due. These transactions are accounted for by the Company as a purchase and retirement of shares and are included in the table on the following page as common stock received in connection with share-based compensation.

The following table summarizes our share repurchase activity for the periods covered below (Dollar amounts in thousands of US dollars, except for share data):

	Year Ended December 31,		
	2020	2019	2018
Common stock repurchased on the open market or through tender offer			
Number of shares	70,238	101,816	-
Aggregate market value of shares (in thousands)	\$ 3,281	\$ 4,986	\$ -
Average price per share	\$ 46.70	\$ 48.97	\$ -
Common stock received in connection with share-based compensation			
Number of shares	48,013	21,332	19,777
Aggregate market value of shares (in thousands)	\$ 2,957	\$ 1,510	\$ 1,138
Average price per share	\$ 61.58	\$ 70.77	\$ 57.56

14. Stock Option Plans:

The Company's 1996 Stock Option Plan (the "1996 Plan") was established for the benefit of the employees, officers, directors and certain consultants of the Company. The maximum number of common shares which may be set aside for issuance under the 1996 Plan was 2,787,500 shares, provided that the Board of the Company has the right, from time to time, to increase such number subject to the approval of the shareholders of the Company when required by law or regulatory authority. Generally, options issued under the 1996 Plan vest over a four-year period. The 1996 Plan expired on February 25, 2006; no options were issued from this plan after that date.

On November 22, 2006, the shareholders of the Company approved the Company's 2006 Equity Compensation Plan (the "2006 Plan"), which was amended and restated effective July 29, 2010 and which serves as a successor to the 1996 Plan. The 2006 Plan has been established for the benefit of the employees, officers, directors and certain consultants of the Company. The maximum number of common shares which have been set aside for issuance under the 2006 Plan is 1.25 million shares. On October 8, 2010, the 2006 Plan was amended to increase the number of shares which have been set aside for issuance by an additional 0.475 million shares to 1.725 million shares. In September 2015, the 2006 Plan was amended to increase the number of shares which have been set aside for issuance by an additional 0.75 million shares to 2.475 million shares. In November 2020, the 2006 Plan was amended to increase the number of shares which have been set aside for issuance by an additional 1.53 million shares to 4.0 million shares. Generally, options issued under the 2006 Plan vest over a four-year period and have a term not exceeding seven years, except for automatic formula grants of non-qualified stock options, which vest after one year and have a five-year term. Prior to the September 2015 amendment to the 2006 Plan, automatic formula grants of non-qualified stock options vested immediately upon grant.

Our current equity-based compensation plans include provisions that allow for the "net exercise" of stock options by all plan participants. In a net exercise, any required payroll taxes, federal withholding taxes and exercise price of the shares due from the option holder can be paid for by having the option holder tender back to the Company a number of shares at fair value equal to the amounts due. These transactions are accounted for by the Company as a purchase and retirement of shares.

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option-pricing model. Because option-pricing models require the use of subjective assumptions, changes in these assumptions can materially affect the fair value of the options. The assumptions presented in the table below represent the weighted average of the applicable assumption used to value stock options at their grant date. The Company calculates expected volatility based on historical volatility of the Company's common shares. The expected term, which represents the period of time that options granted are expected to be outstanding, is estimated based on historical exercise experience. The Company evaluated historical exercise behavior when determining the expected term assumptions. The risk-free rate assumed in valuing the options is based on the U.S. Treasury yield curve in effect at the time of grant for the expected term of the option. The Company determines the expected dividend yield percentage by dividing the expected annual dividend by the market price of Tucows Inc. common shares at the date of grant.

The fair value of stock options granted during the years ended December 31, 2020, December 31, 2019 and December 31, 2018 was estimated using the following weighted average assumptions:

	Year Ended December 31,		
	2020	2019	2018
Volatility	39.0%	36.5%	37.9%
Risk-free interest rate	1.8%	2.0%	2.7%
Expected life (in years)	4.54	4.50	4.48
Dividend yield	0.0%	0.0%	0.0%
The weighted average grant date fair value for options issued, with the exercise price equal to market value on the date of grant	\$ 19.98	\$ 20.20	\$ 22.22

Details of stock option transactions are as follows:

	Year Ended December 31, 2020		Year Ended December 31, 2019		Year Ended December 31, 2018	
	Number of shares	Weighted average exercise price per share	Number of shares	Weighted average exercise price per share	Number of shares	Weighted average exercise price per share
Outstanding, beginning of period	754,497	\$ 49.94	702,337	\$ 43.80	653,571	\$ 36.69
Granted	239,325	61.21	180,800	60.56	163,366	62.80
Exercised	(113,132)	30.53	(80,319)	16.90	(63,886)	12.86
Forfeited	(26,468)	60.29	(31,986)	59.35	(50,714)	52.33
Expired	(9,202)	58.96	(16,335)	47.51	-	-
Outstanding, end of period	845,020	55.31	754,497	49.94	702,337	43.80
Options exercisable, end of period	401,345	\$ 49.21	356,066	\$ 40.64	326,937	\$ 28.91

As of December 31, 2020, the exercise prices, weighted average remaining contractual life of outstanding options and intrinsic values were as follows:

Exercise price	Options outstanding				Options exercisable			
	Number outstanding	Weighted average exercise price per share	Weighted average remaining contractual life (years)	Aggregate intrinsic value	Number exercisable	Weighted average exercise price per share	Weighted average remaining contractual life (years)	Aggregate intrinsic value
\$15.93 - \$19.95	48,564	\$ 17.77	1.0	\$ 2,726	48,564	\$ 17.77	1.0	\$ 2,726
\$21.10 - \$27.53	36,250	23.76	1.5	1,817	36,250	23.76	1.5	1,817
\$35.25 - \$37.35	5,625	36.88	1.5	208	4,375	37.35	1.0	160
\$46.90 - \$48.00	14,000	47.33	5.2	372	4,750	47.21	3.8	126
\$51.82 - \$59.98	309,659	55.51	3.5	5,690	233,378	55.49	3.4	4,295
\$60.01 - \$68.41	410,922	62.07	5.6	4,858	74,028	63.33	4.8	782
\$72.50 - \$72.50	20,000	72.50	6.9	28	-	-	-	-
	845,020	\$ 55.31	4.4	\$ 15,699	401,345	\$ 49.21	3.2	\$ 9,906

Total unrecognized compensation cost relating to unvested stock options at December 31, 2020, prior to the consideration of expected forfeitures, is approximately \$7.3 million and is expected to be recognized over a weighted average period of 2.4 years.

The total intrinsic value of options exercised during the years ended December 31, 2020, December 31, 2019 and December 31, 2018 was \$3.7 million, \$3.9 million and \$2.9 million, respectively. Cash received from the exercise of stock options during the years ended December 31, 2020, December 31, 2019 and December 31, 2018 was \$1.0 million, \$0.4 million and \$0.1 million respectively.

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The Company recorded stock-based compensation amounting to \$3.7 million, \$2.9 million and \$2.6 million for the years ended December 31, 2020, 2019 and 2018 respectively. Stock-based compensation has been included in operating expenses as follows (Dollar amounts in thousands of US dollars):

	Year Ended December 31,		
	2020	2019	2018
Network expenses	\$ 472	\$ 307	\$ 223
Sales and marketing	1,678	1,251	1,025
Technical operations and development	756	596	636
General and administrative	812	722	690
	<u>\$ 3,718</u>	<u>\$ 2,876</u>	<u>\$ 2,574</u>

15. Foreign Exchange:

A foreign exchange loss amounting to \$1.0 million has been recorded in general and administrative expenses during the year ended December 31, 2020. A foreign exchange gain amounting to \$0.4 million has been recorded in general and administrative expenses during the year ended December 31, 2019. A foreign exchange loss amounting to \$0.9 million has been recorded in general and administrative expenses during the year ended December 31, 2018.

16. Other Income (Expenses):

In February 2015, we waived our rights under the proposed joint venture to operate the .online registry and instead entered into a Joint Marketing agreement with our venture partners under which our original capital contributions have been returned and a set of go-forward marketing arrangements have been created instead. Under the terms of the agreement, the Company has undertaken to provide certain marketing support for .online registry and has agreed to certain volume commitments during the term of the agreement. The Joint Marketing Agreement is for a term of three years and commenced in November 2015. The Company generated a gain of \$1.5 million for waiving its rights and entering the Joint Marketing Agreement. The gain was being recognized over the term of three years. An amount of \$0.5 million of this gain was recognized in in Other income, net in the year ended December 31, 2018. As of December 31, 2018 the gain had been fully recognized.

On August 1, 2020, the Company entered into an Asset Purchase Agreement (the "Purchase Agreement"), by and between the Company and DISH Wireless L.L.C. ("DISH"). Under the Purchase Agreement and in accordance with the terms and conditions set forth therein, the Company sold to DISH its mobile customer accounts that are marketed and sold under the Ting brand (other than certain customer accounts associated with one network operator) ("Transferred Assets"). For a period of 10 years following the execution of the Purchase Agreement, DISH will pay a monthly fee to the Company generally equal to an amount of net revenue received by DISH in connection with the transferred customer accounts minus certain fees and expenses, as further set forth in the Purchase Agreement. During the year ended December 31, 2020, the Company earned \$11.1 million under the Purchase Agreement.

On August 1, 2020, the Company derecognized intangible assets and capitalized contract costs associated with the Transferred Assets in the amount of \$3.5 million. As an accounting policy, the Company only records contingent consideration when the consideration is resolved. As such the Company will continue to record contingent consideration in Other income as the consideration is invoiced on a monthly basis over the 10-year period following the execution of the Purchase Agreement. The gain is presented net of the original cost base of the Transferred Assets:

	For the twelve months ended		
	2020	2019	2018
Write-down of Ting Mobile intangible assets	\$ (2,581)	\$ -	\$ -
Write-down of Ting Mobile contract costs	(932)	-	-
Income earned on sale of Transferred Assets	11,125	-	-
Gain on sale of Ting customer assets	<u>\$ 7,612</u>	<u>\$ -</u>	<u>\$ -</u>

17. Earnings Per Common Share:

The following table reconciles the numerators and denominators of the basic and diluted earnings per common share computation (Dollar amounts in thousands of US dollars, except for share data):

	Year ended December 31,		
	2020	2019	2018
Numerator for basic and diluted earnings per common share:			
Net income for the period	\$ 5,775	\$ 15,398	\$ 17,135
Denominator for basic and diluted earnings per common share:			
Basic weighted average number of common shares outstanding	10,590,684	10,623,799	10,604,722
Effect of outstanding stock options	101,597	149,013	189,448
Diluted weighted average number of shares outstanding	<u>10,692,281</u>	<u>10,772,812</u>	<u>10,794,170</u>
Basic earnings per common share	<u>\$ 0.55</u>	<u>\$ 1.45</u>	<u>\$ 1.62</u>
Diluted earnings per common share	<u>\$ 0.54</u>	<u>\$ 1.43</u>	<u>\$ 1.59</u>

Options to purchase 83,177 common shares were outstanding during 2020 (2019: 547,372; 2018: 451,739) but were not included in the computation of diluted income per common share because the options' exercise price was greater than the average market price of the common shares for the year.

18. Commitments and Contingencies:

(a) The Company has several non-cancelable lease and purchase obligations primarily for general office facilities, service contracts for mobile telephone services and equipment that expire over the next ten years. Future minimum payments under these agreements are as follows (Dollar amounts in thousands of US dollars):

Contractual Obligations for the year ending December 31,	Contractual Lease Obligations	Debt Obligations	Purchase Obligations (1)	Total Obligations
2021	\$ 2,084	\$ -	\$ 10,262	\$ 12,346
2022	2,057	-	9,742	11,799
2023	1,979	122,400	13,967	138,346
2024	1,439	-	19,078	20,517
2025	900	-	5,283	6,183
Thereafter	4,071	-	93	4,164
	<u>\$ 12,530</u>	<u>\$ 122,400</u>	<u>\$ 58,425</u>	<u>\$ 193,355</u>

(1) Purchase obligations include all other legally binding service contracts for mobile telephone services and other operational agreements to be delivered during Fiscal 2021 and subsequent years.

(b) On February 9, 2015 Ting Fiber, Inc. (“Ting”) entered into a lease and network operation agreement with the City of Westminster, Maryland (the “City”) relating to the deployment of a new fiber network throughout the Westminster area (“WFN”).

Under the agreement, the City will finance, construct, and maintain the WFN which will be leased to Ting for a period of ten years. The network will be constructed in phases, the scope and timing of which shall be determined by the City, in cooperation with Ting.

Under the terms of the agreement, Ting may be required to advance funds to the City in the event of a quarterly shortfall between the City’s revenue from leasing the network to Ting and the City’s debt service requirements relating to financing of the network. Ting could be responsible for shortfalls between \$50,000 and \$150,000 per quarter. In Fiscal 2016, the City has entered into financing for the construction of the WFN which allows the City to draw up to \$21.0 million, from their lenders, over the next five years with interest only payments during that period with a loan maturity of 30 years. As of December 31, 2020, the City has drawn \$17.5 million and the City’s revenues from Ting exceed the City’s debt service requirements. The Company does not believe it will be responsible for any shortfall in Fiscal 2021.

(c) On September 17, 2018 Ting entered into a non-exclusive access and use agreement with SiFi Networks Fullerton, LLC (“SiFi”). The agreement memorializes a long-term (15-year) relationship wherein Ting will be granted the non-exclusive right to act as an Internet service provider for a fiber-optic network to be constructed in the city of Fullerton, California. Under the terms of the agreement, SiFi is fully responsible for constructing, operating and maintaining a wholesale fiber-optic network, as well as the financing of those activities.

Ting is responsible for paying a fee per subscriber to SiFi. Through a “take or pay” arrangement, Ting has agreed to certain minimum charges based on minimum subscriber rates. These minimum fees are variable based on the percentage completion of the fiber optic network, and thus have not been considered an unconditional purchase obligation for the purposes of the table in Note 18(a).

(d) On November 4, 2019 Ting entered into an access and use agreement with Netly, LLC (“Netly”). The agreement memorializes a long-term (12-year) relationship wherein Ting will be granted the right to act as an Internet service provider for fiber-optic networks to be constructed in and around the cities of Solana Beach, California. Under the terms of the agreement, Ting will have a 3-year “Headstart” period over each completed segment of the network, whereby Ting shall be the exclusive provider of services to subscribers during the “Headstart” period. Netly is fully responsible for constructing, operating and maintaining a wholesale fiber optic network, as well as the financing of those activities.

Ting is responsible for paying a fee per subscriber to Netly, as well as an unlit door fee for each serviceable address not subscribed. Through a “take or pay” arrangement, Ting has agreed to certain minimum charges based on minimum subscriber rates. These minimum fees are variable based on the percentage completion of the fiber optic network, and thus have not been considered an unconditional purchase obligation for the purposes of the table in Note 18(a).

(e) In the normal course of its operations, the Company becomes involved in various legal claims and lawsuits. The Company intends to vigorously defend these claims. While the final outcome with respect to any actions or claims outstanding or pending as of December 31, 2020 cannot be predicted with certainty, management does not believe that the resolution of these claims, individually or in the aggregate, will have a material adverse effect on the Company’s financial position.

19. Segment Reporting:

(a) We are organized and managed based on two operating segments which are differentiated primarily by their services, the markets they serve and the regulatory environments in which they operate and are described as follows:

1. Network Access Services - This segment derives revenue from the retail sale of mobile phones, retail telephony services, retail high speed Internet access to individuals and small businesses primarily through the Ting website. The segment also derives revenue from MSE services and professional services to wholesale customers. Revenues are generated in the United States.

2. Domain Services – This segment includes wholesale and retail domain name registration services, value added services and portfolio services. The Company primarily earns revenues from the registration fees charged to resellers in connection with new, renewed and transferred domain name registrations; the sale of retail Internet domain name registration and email services to individuals and small businesses; and by making its portfolio of domain names available for sale or lease. Domain Services revenues are attributed to the country in which the contract originates, primarily Canada and the United States.

The Chief Executive Officer (the “CEO”) is the chief operating decision maker and regularly reviews the operations and performance by segment. The CEO reviews gross profit as (i) a key measure of performance for each segment and (ii) to make decisions about the allocation of resources. Sales and marketing expenses, technical operations and development expenses, general and administrative expenses, depreciation of property and equipment, amortization of intangibles assets, impairment of indefinite life intangible assets, gain on currency forward contracts and other expense net are organized along functional lines and are not included in the measurement of segment profitability. Total assets and total liabilities are centrally managed and are not reviewed at the segment level by the CEO. The Company follows the same accounting policies for the segments as those described in “Note 2 – Significant Accounting Policies”, and “Note 10 – Revenue”.

Information by reportable segments (with the exception of disaggregated revenue, which is discussed in “Note 10 – Revenue”), which is regularly reported to the chief operating decision maker is as follows (Dollar amounts in thousands of US dollars):

	Network Access Services	Domain Services	Consolidated Totals
Year Ended December 31, 2020			
Net Revenues	\$ 68,948	\$ 242,254	\$ 311,202
Cost of revenues			
Cost of revenues	32,950	167,451	200,401
Network expenses	2,430	7,764	10,194
Depreciation of property and equipment	10,544	1,600	12,144
Amortization of intangible assets	98	1,242	1,340
Impairment of Property Plant and Equipment	1,638	-	1,638
Total cost of revenues	47,660	178,057	225,717
Gross Profit	21,288	64,197	85,485
Expenses:			
Sales and marketing			34,274
Technical operations and development			12,427
General and administrative			20,268
Depreciation of property and equipment			488
Loss on disposition of property and equipment			(17)
Amortization of intangible assets			10,080
Impairment of definite life intangible assets			1,431
Loss (gain) on currency forward contracts			(383)
Income from operations			6,917
Other income (expenses), net			3,843
Income before provision for income taxes			\$ 10,760

	Network Access Services	Domain Services	Consolidated Totals
Year Ended December 31, 2019			
Net Revenues	\$ 95,663	\$ 241,482	\$ 337,145
Cost of revenues			
Cost of revenues	48,343	169,236	217,579
Network expenses	2,007	7,183	9,190
Depreciation of property and equipment	6,877	1,598	8,475
Amortization of intangible assets	46	1,078	1,124
Total cost of revenues	57,273	179,095	236,368
Gross Profit	38,390	62,387	100,777
Expenses:			
Sales and marketing			34,270
Technical operations and development			9,717
General and administrative			17,880
Depreciation of property and equipment			486
Loss on disposition of property and equipment			73
Amortization of intangible assets			9,209
Loss (gain) on currency forward contracts			(198)
Income from operations			29,340
Other income (expenses), net			(4,769)
Income before provision for income taxes			\$ 24,571
Year Ended December 31, 2018			
Net Revenues	\$ 97,324	\$ 248,689	\$ 346,013
Cost of revenues			
Cost of revenues	50,055	182,048	232,103
Network expenses	2,029	7,817	9,846
Depreciation of property and equipment	4,063	1,235	5,298
Amortization of intangible assets	46	1,950	1,996
Total cost of revenues	56,193	193,050	249,243
Gross Profit	41,131	55,639	96,770
Expenses:			
Sales and marketing			33,063
Technical operations and development			8,748
General and administrative			17,710
Depreciation of property and equipment			424
Amortization of intangible assets			7,247
Loss (gain) on currency forward contracts			254
Income from operations			29,324
Other income (expenses), net			(3,169)
Income before provision for income taxes			\$ 26,155

(b) The following is a summary of the Company's cost of revenues from each significant revenue stream (Dollar amounts in thousands of US dollars):

	2020	2019	2018*
Network Access Services:			
Mobile Services			
Retail mobile services	\$ 22,942	\$ 44,415	\$ 46,061
Mobile platform services	56	-	-
Other professional services	2,970	-	-
Total Mobile	25,968	44,415	46,061
Fiber Internet Services			
Total Network Access Services	32,950	48,343	50,055
Domain Services:			
Wholesale			
Domain Services	146,788	148,530	160,216
Value Added Services	3,161	2,986	3,154
Total Wholesale	149,949	151,516	163,370
Retail			
Portfolio	17,023	17,093	17,725
Total Domain Services	167,451	169,236	182,048
Network Expenses:			
Network, other costs	10,194	9,190	9,846
Network, depreciation and amortization costs	13,484	9,599	7,294
Network, impairment	1,638	-	-
Total Network Expenses	25,316	18,789	17,140
	\$ 225,717	\$ 236,368	\$ 249,243

(c) The following is a summary of the Company's property and equipment by geographic region (Dollar amounts in thousands of US dollars):

	December 31, 2020	December 31, 2019
Canada	\$ 2,521	\$ 2,319
United States	114,968	79,758
Europe	41	44
	\$ 117,530	\$ 82,121

(d) The following is a summary of the Company's amortizable intangible assets by geographic region (Dollar amounts in thousands of US dollars):

	December 31, 2020	December 31, 2019
Canada	\$ 2,385	\$ 5,207
United States	32,767	40,138
	\$ 35,152	\$ 45,345

(e) The following is a summary of the Company's deferred tax asset, net of valuation allowance, by geographic region (Dollar amounts in thousands of US dollars):

	December 31, 2020	December 31, 2019
Germany	\$ 226	\$ -
	<u>\$ 226</u>	<u>\$ -</u>

(f) Valuation and qualifying accounts (Dollar amounts in thousands of US dollars):

Allowance for doubtful accounts	Balance at beginning of period	Charged to costs and expenses	Write-offs during period	Balance at end of period
Year Ended December 31, 2020	\$ 131	\$ 91	\$ -	\$ 222
Year Ended December 31, 2019	\$ 132	\$ (1)	\$ -	\$ 131

20. Subsequent Events:

- A. On February 9, 2021, the Company announced that its Board has approved a stock buyback program to repurchase up to \$40 million of its common stock in the open market. Purchases will be made exclusively through the facilities of the NASDAQ Capital Market. The stock buyback program commenced on February 10, 2021 and will terminate on or before February 9, 2022. The previously announced \$40 million buyback program for the period February 13, 2020 to February 12, 2021 was terminated on February 9, 2021. According to the terms of our 2019 Amended Credit Facility, share repurchases require the Lenders' consent if the Company's Total Funded Debt to Adjusted EBITDA ratio exceeds 2.00:1.

21. Selected Quarterly Financial Data (Unaudited):

	December 31	September 30	June 30	March 31
	(in thousands, except for per share data)			
2020				
Total revenues	\$ 70,784	\$ 74,311	\$ 82,122	\$ 83,985
Gross profit	17,428	19,941	22,966	25,150
Net income	2,068	716	157	2,834
Earnings per share:				
Basic	\$ 0.19	\$ 0.07	\$ 0.01	\$ 0.27
Diluted	0.19	0.07	0.01	0.26
2019				
Total revenues	\$ 85,946	\$ 88,129	\$ 84,117	\$ 78,953
Gross profit	26,045	27,574	24,507	22,651
Net income	5,778	4,205	2,616	2,799
Earnings per share:				
Basic	\$ 0.55	\$ 0.40	\$ 0.25	\$ 0.26
Diluted	0.54	0.39	0.24	0.26

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

DATE: March 3, 2021

Tucows Inc.

By: /s/ ELLIOT NOSS

Name: Elliot Noss

Title: *Chief Executive Officer and President*

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ ELLIOT NOSS</u> Elliot Noss	President, Chief Executive Officer (Principal Executive Officer) and Director	March 3, 2021
<u>/s/ DAVINDER SINGH</u> Davinder Singh	Chief Financial Officer (Principal Financial and Accounting Officer)	March 3, 2021
<u>/s/ ALLEN KARP</u> Allen Karp	Director	March 3, 2021
<u>/s/ RAWLEIGH RALLS</u> Rawleigh Ralls	Director	March 3, 2021
<u>/s/ ROBIN CHASE</u> Robin Chase	Director	March 3, 2021
<u>/s/ EREZ GISSIN</u> Erez Gissin	Director	March 3, 2021
<u>/s/ JEFFREY SCHWARTZ</u> Jeffrey Schwartz	Director	March 3, 2021
<u>/s/ BRAD BURNHAM</u> Brad Burnham	Director	March 3, 2021

**DESCRIPTION OF THE REGISTRANT'S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF THE
SECURITIES EXCHANGE ACT OF 1934**

The following summary describes the common stock, no par value per share, of Tucows Inc. (the “Company”, “our”, “us”, or “we”), which are the only securities of the Company registered under Section 12 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). The following is a summary and does not purport to be complete. The summary is subject to and qualified by the provisions of our Fourth Amended and Restated Articles of Incorporation (the “Articles”), Second Amended and Restated Bylaws (the “Bylaws”), and the Pennsylvania Business Corporation Law (“PBCL”).

Authorized Capital Stock

Our authorized capital stock consists of 250,000,000 shares of common stock, no par value per share, and 1,250,000 shares of preferred stock, no par value per share, all of which shares of preferred stock are undesignated.

Common Stock

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of shareholders, and will be entitled to receive dividends and other distributions when and if declared by our Board of Directors at any regular or special meeting, subject to the rights of the holders of shares of any series of preferred stock.

If we are liquidated, subject to the rights, if any, of the holders of any outstanding shares of preferred stock, the holders of shares of our common stock will be entitled to share, ratably according to the number of shares of common stock held by them, in our remaining assets available for distribution to our stock.

The holders of shares of our common stock will not have preemptive rights to purchase or subscribe for any stock or any other of our securities. There are no conversion, redemption, or sinking fund provisions applicable to our common stock.

Preferred Stock

Under the terms of the Articles, our Board of Directors is authorized to issue shares of preferred stock from time to time in one or more series without shareholder approval. Our Board of Directors has the full authority to fix by resolution full, limited, fractional, or no voting rights, and such designations, preferences, qualifications, privileges, limitations, restrictions, options, conversion rights and other special or relative rights of any series of preferred stock. This authority is subject to the limitation that no shares of preferred stock may have more than one vote per share with respect to any matter on which shares of preferred stock vote together with shares of our common stock.

Anti-takeover Provisions of the Articles, Bylaws, and Pennsylvania Law

The provisions of the PBCL, the Articles, and Bylaws may have the effect of delaying, deferring, or discouraging another person from acquiring control of the Company.

Pennsylvania Law

The PBCL has several anti-takeover provisions which apply to registered corporations. A registered corporation is generally a corporation that has a class or series of shares entitled to vote in the election of directors registered under the Exchange Act.

We are a registered corporation, however, we have elected to opt-out of substantially all of the anti-takeover provisions of the PBCL, specifically Subchapters 25E, G, H and Section 2538 of Subchapter 25D. These provisions do not apply to us.

We are subject to the provisions of Subchapter 25F of the PBCL prohibiting business combination transactions with a person that becomes a beneficial owner of shares representing 20% or more of the voting power in an election of our directors unless:

- the business combination or the acquisition of the 20% interest is approved by our Board of Directors before the 20% interest is acquired;
- the person beneficially owns at least 80% of the outstanding shares and the business combination is approved by a majority vote of the disinterested shareholders, and satisfies minimum price and other conditions prescribed in the PBCL;
- the business combination is approved by a majority vote of the disinterested shareholders at a meeting called no earlier than five years after the date the 20% interest is acquired; or
- the business combination is approved by shareholder vote at a meeting called no earlier than five years after the date the 20% interest is acquired, and satisfies minimum price and other conditions prescribed in the PBCL.

A “business combination” includes mergers, consolidations, asset sales, share exchanges, divisions of a registered corporation or any subsidiary thereof and other transactions resulting in a disproportionate financial benefit to an interested shareholder.

The above description of Subchapter 25F of the PBCL merely summarizes the material anti-takeover provisions applicable to us that are contained in the PBCL, but are not a complete discussion of those provisions.

The PBCL contains other provisions applicable to us that may have an anti-takeover effect. For instance, under Section 1715 of the PBCL, our directors are not required to consider the interests of the shareholders as being dominant or controlling in considering our best interests. Our directors may consider, to the extent they consider appropriate, such factors as:

- the effects of any action upon any group affected by such action, including our shareholders, employees, suppliers, customers and creditors and upon communities in which we have offices or other establishments;
 - our short-term and long-term interests, including benefits that may accrue to us from our long term plans and the possibility that these interests may be best served by our continued independence;
 - the resources, intent and conduct of any person seeking to acquire control of us; and
 - all other pertinent factors.
-

Section 1715 further provides that any act of our Board of Directors, a committee of the Board of Directors or an individual director relating to or affecting an acquisition or potential or proposed acquisition of control to which a majority of our disinterested directors have assented will be presumed to satisfy the standard of care set forth in the PBCL, unless it is proven by clear and convincing evidence that our disinterested directors did not consent to such act in good faith after reasonable investigation. As a result of this and the other provisions of Section 1715, our directors are provided with broad discretion with respect to actions that may be taken in response to acquisitions or proposed acquisitions of corporate control.

Fourth Amended and Restated Articles of Incorporation

Shareholders of the Company do not have the right to cumulate their votes with respect to the election of directors.

Second Amended and Restated Bylaws

Board of Director Vacancies

The Bylaws provide that vacancies in the Board of Directors, including vacancies resulting from an increase in the number of directors, may be filled by a majority vote of the remaining members of the Board of Directors though less than a quorum, or by a sole remaining director.

Shareholder Action; Special Meeting of Shareholders

The Bylaws provide that shareholders may not take any action by unanimous written consent or partial consent in lieu of a meeting. The Bylaws further provide that a special meeting of shareholders may only be called by the Chief Executive Officer, the Chairman of the Board of Directors, or the Board of Directors pursuant to a resolution adopted by a majority of the total number of authorized directors.

Advance Notice Requirements for Shareholder Proposals and Director Nominations

The Bylaws provide advance notice procedures for shareholders seeking to bring business before our annual meeting of shareholders, or to nominate candidates for election as directors at our annual meeting of shareholders. To be timely, a shareholder's notice must be delivered, in writing, to the Secretary at our principal executive offices not more than 90 days nor less than 60 days prior to the date on which the Company first mailed its proxy materials for the preceding year's annual meeting if the date of the annual meeting is not more than 30 days before and not more than 30 days after the first anniversary of the preceding year's annual meeting. If the date of the annual meeting is more than 30 days before or more than 30 days after the first anniversary of the preceding year's annual meeting, a shareholder's notice must be delivered not more than 120 days nor less than 90 days prior to such annual meeting, or no later than the tenth day following the public announcement of the annual meeting.

For a special meeting, to be timely, a shareholder notice must be delivered, in writing, to the Secretary at our principal executive offices not more than 90 days nor less than 60 days prior to the date of such special meeting, and no later than the tenth day following the public announcement of a special meeting.

The Bylaws also specify certain requirements regarding the form and content of the shareholder's notice.

These provisions might preclude our shareholders from bringing matters before our annual meeting of shareholders or special meetings or making nominations for directors at our annual meetings or special meetings.

Listing

Our common stock is listed on the NASDAQ Capital Market under the symbol "TCX" and on the TSX Exchange under the symbol "TC".

Subsidiaries of Tucows Inc., a Pennsylvania corporation

1. Tucows (Delaware) Inc., a Delaware corporation, is a wholly owned subsidiary of Tucows Inc.
2. Tucows.com Co., a Nova Scotia corporation, is a wholly owned subsidiary of Tucows (Delaware) Inc.
3. Tucows Corp., a Mississippi corporation, is a wholly owned subsidiary of Tucows (Delaware) Inc.
4. Tucows (UK) Limited, a company incorporated in England and Wales, is a wholly owned subsidiary of Tucows.com Co.
5. Tucows (Australia) Pty Limited, a Victoria corporation, is a wholly owned subsidiary of Tucows.com Co.
6. Tucows (Germany) Inc., a Nova Scotia corporation, is a wholly owned subsidiary of Tucows.com Co.
7. EPAG Domainservices GmbH, a Bonn corporation, is a wholly owned subsidiary of Tucows (Germany) Inc.
8. Ting Inc., a Delaware corporation, is a wholly owned subsidiary of Tucows (Delaware) Inc.
9. Tucows TLDs Inc., a Nova Scotia corporation, is a wholly owned subsidiary of Tucows.com Co.
10. Tucows Domains Inc., an Ontario corporation, is a wholly owned subsidiary of Tucows.com Co.
11. Contact Privacy Inc., an Ontario corporation, is a wholly owned subsidiary of Tucows.com Co.
12. Ting Fiber Inc., a Delaware Corporation, is a wholly owned subsidiary of Tucows (Delaware) Inc.
13. Ting Virginia, LLC, a Virginia limited liability company, is a wholly owned subsidiary of Ting Fiber Inc.
14. Blue Ridge Websoft, LLC, a Virginia limited liability company, is a wholly owned subsidiary of Ting Virginia, LLC.
15. Fiber Roads, LLC, a Virginia limited liability company, is a wholly owned subsidiary of Ting Virginia, LLC.
16. Navigator Network Services, LLC, a Virginia limited liability company, is a wholly owned subsidiary of Ting Virginia, LLC.
17. Tucows (Emerald), LLC, a Delaware limited liability company, is a wholly owned subsidiary of Ting Fiber Inc.
18. eNom, LLC, a Delaware limited liability company, is a wholly owned subsidiary of Tucows (Emerald), LLC.
19. eNom Canada Corp. a Nova Scotia corporation, is a wholly owned subsidiary of eNom, LLC.
20. Whois Privacy Protection Services, Inc, Nevada corporation, is a wholly owned subsidiary of eNom, LLC.
21. Secure Business Services, Inc., a Nevada corporation, is a wholly owned subsidiary of eNom, LLC.
22. Ascio Technologies, Corp., a Nova Scotia corporation, is a wholly owned subsidiary of Tucows.com co.
23. Ascio GmbH, a Munich corporation, is a wholly owned subsidiary of EPAG Domainservices GmbH.
24. Cedar Holdings Group, Inc., a Colorado corporation, is a wholly owned subsidiary of Ting Fiber, Inc.
25. Zippytech Inc., a Colorado corporation, is a wholly owned subsidiary of Cedar Holdings Group, Inc.
26. Zippytech of New Mexico Inc., a New Mexico corporation, is a wholly owned subsidiary of Cedar Holdings Group, Inc.



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Consent of Independent Registered Public Accounting Firm

The Board of Directors of Tucows Inc.:

We consent to the incorporation by reference in the Registration Statements (No. 333-12279, 333-37545, 333-61181, 333-30342, 333-74010, 333-106961, 333-140985, 333-169848, 333-207863, 333-250959) on Form S-8 and the Registration Statement (No. 333-125843) on Form S-1 of Tucows Inc. (the Company), of our reports dated March 3, 2021, with respect to the consolidated balance sheets of Tucows Inc. as of December 31, 2020 and 2019, the related consolidated statements of 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, 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 Tucows Inc.

Our report dated March 3, 2021 on the consolidated financial statements of the Company refers to the change in the Company's method for accounting for the adoption of *ASC Topic 842: Leases*.

A handwritten signature in black ink that reads "KPMG LLP" with a horizontal line underneath.

Chartered Professional Accountants, Licensed Public Accountants

Vaughan, Canada
March 3, 2021

**Certification Pursuant to
Rules 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as Amended**

I, Elliot Noss, certify that:

1. I have reviewed this annual report on Form 10-K of Tucows 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 13-a15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13-a15(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 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 function):
 - 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: March 3, 2021

/s/ ELLIOT NOSS
Elliot Noss
Chief Executive Officer and President

**Certification Pursuant to
Rules 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as Amended**

I, Davinder Singh, certify that:

1. I have reviewed this annual report on Form 10-K of Tucows 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 13-a15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13-a15(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 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 function):
 - 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: March 3, 2021

/s/ DAVINDER SINGH

Davinder Singh
Chief Financial Officer

CERTIFICATION PURSUANT TO 18 U.S.C SECTION 1350

In connection with the Annual Report of Tucows Inc. (the "Company") on Form 10-K for the period ended December 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Elliot Noss, Chief Executive Officer and President of the Company, hereby certify to my knowledge, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 3, 2021

/s/ ELLIOT NOSS
Elliot Noss
Chief Executive Officer and President

CERTIFICATION PURSUANT TO 18 U.S.C SECTION 1350

In connection with the Annual Report of Tucows Inc. (the "Company") on Form 10-K for the period ended December 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Davinder Singh, Chief Financial Officer of the Company, hereby certify to my knowledge, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 3, 2021

/s/ DAVINDER SINGH

Davinder Singh
Chief Financial Officer