TUCOWS INC /PA/
Form 10-K
March 05, 2019

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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, 2018
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	**23-2707366**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
96 Mowat Avenue **Toronto, Ontario, Canada**	**M6K 3M1**
(Address of Principal Executive Offices)	(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	**Name of Each Exchange on Which Registered**
Common stock, no par value	NASDAQ

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

(Title of Class)
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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 is a shell company (as defined in Rule 12b-2 of Act). Yes No

As of June 30, 2018, (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 $482.0 million. Such aggregate market value was computed by reference to the closing sale price per share of $60.65 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, 2019, was 10,639,329.

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TUCOWS INC.

ANNUAL REPORT ON FORM 10-K

For Fiscal Year Ended December 31, 2018

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TRADEMARKS, TRADE NAMES AND SERVICE MARKS

Tucows®, EPAG®, Hover®, OpenSRS®, Platypus®, Ting®, eNom®, Roam®, Roam Mobility®, Bulkregister®, 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.

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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,” “pla “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; Ting Mobile 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 global 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 that the market for domain name registration will trend upward gradually and may be affected by market volatility; our belief that, by increasing the number of services we offer, we will be able to generate higher revenues; the revenue that our parked page vendor relationships may generate in the future; the effectiveness of our intellectual property protection, including our ability to license proprietary rights to network partners and to register additional trademarks and service marks; 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 benefit and the timing or completion of certain audits of our US, Canadian and German tax returns; 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, 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:

- Changes in the nature of key strategic relationships with our Mobile Virtual Network Operator ("MVNO") partners;
- The effects of vigorous competition on a highly penetrated mobile telephony market, including the impact of competition on the price we are able to charge subscribers for services and devices and on the geographic areas served by our MVNO partner wireless networks;
- Our ability to manage any potential increase in subscriber churn or bad debt expense;
- 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;
- Our ability to obtain and maintain approvals from regulatory authorities on regulatory issues;

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- 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;
- 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.

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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.

Network Access Services

Network Access Services includes mobile, fixed high-speed Internet access services and other revenue sources, including billing solutions to small Internet service providers ("ISPs").

Our primary mobile service offering ("Ting Mobile") is mainly distributed through the Ting website and to a lesser extent certain third-party retail stores and on-line retailers. We generate 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 is providing simple and easy to use services, including simple value pricing, in particular for multi-line accounts, and superior customer care.

The Company also operates other MVNO brands, Zipsim and Always Online Wireless (collectively referred to as the "Roam Mobility brands"). Roam Mobility operates as a MVNO on the same nationwide Global System for Mobile communications ("GSM") network as Ting Mobile and distributes through third-party retail stores and product branded websites. The primary focus of the Roam Mobility brands is to offer affordable roaming service to international travellers.

The Company also derives revenue from the sale of fixed high-speed Internet access ("Ting Internet") in select communities, including towns in North Carolina, Maryland, Idaho, Colorado and Virginia. Our primarily 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.

Revenues from Ting Mobile and Ting Internet are generated in the United States and are provided on a monthly basis with no fixed contract term. Revenues from Roam Mobility are generated in the United States, and Canada on a prepaid usage basis with no fixed contract terms.

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Domain Services

Domain Services includes wholesale and retail domain name registration services, value added services and portfolio services derived through our OpenSRS, eNom 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; and by making our 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.

Our primary distribution channel is a global network of approximately 37,000 resellers that operate in over 150 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.

Our wholesale domain name registration services, primarily branded as OpenSRS and eNom, derives revenue from its Domain Service and from providing value-added services. The OpenSRS and eNom Domain Services manage 23.3 million domain names under the Tucows and eNom ICANN registrar accreditations and for other registrars under their own accreditations, which has decreased by 4.4 million domain names since December 31, 2017. The reduction from prior year is primarily due to the bulk transfer of approximately 2.8 million domain names to Namecheap's credentials, which occurred in several bulk transfers throughout 2018. As a result of the bulk transfers of domain names to Namecheap the Company recognized, on an accelerated basis, $16.9 million of revenue and $16.7 million of cost of revenues in the year ended December 31, 2018 related to previously deferred revenue and deferred prepaid registry fees. The remaining domain names to be transferred to Namecheap of approximately 0.2 million names, as defined under a settlement agreement between the Company and Namecheap, are expected to be transferred to Namecheap in the first quarter of 2019.

Our 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 37,000 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.

Our retail domain name registration services, 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.

Our portfolio services generate revenue by offering names in our domain portfolio for resale through a number of distribution channels including our reseller network. We also generate advertising revenue from our portfolio.

Additional information about segments can be found in Note 18 – Segment Reporting in the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report.

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Net Revenues

Network Access Services

The Company generates Network Access Services revenues primarily through the provisioning of mobile services. Other sources of revenue include the provisioning of fixed high-speed Internet access as well as billing solutions to ISPs.

Mobile

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.

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.

Our Roam Mobility Brands also offers standard talk, text and data mobile services. Roam customers prepay for their usage through the Roam Mobility website. When prepayments are received the amount is deferred, and subsequently recognized as the Company satisfies its obligation to provide mobile services. In addition, revenues associated with the sale of SIM cards 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.

Other services

Other 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.

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Domain Services

Wholesale

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.

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, website hosting 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 primarily from Internet hosting services, advertising from 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

We derive revenue from our portfolio of domain names parking monetization, whereby the Company contracts with third-party Internet advertising publishers to direct web traffic from the Company's domain expiry stream domains and Internet portfolio domains to advertising websites. Compensation from Internet advertising publishers is calculated variably on a cost-per-action basis based on the number of advertising links that have been visited in a given month.

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. Domain portfolio names are sold through our premium domain name service, auctions or in negotiated sales. The size of our domain name portfolio varies over time, as we acquire and sell domains on a regular basis to maximize the overall value and revenue generation potential of our portfolio. In evaluating names for sale, we consider the potential foregone revenue from pay-per-click advertising, as well as other factors. The name will be offered for sale if, based on our evaluation, the name is deemed non-essential to our business and management believes that deriving proceeds from the sale is strategically more beneficial to the Company.

For information about geographic areas, see "Note 18 – Segment Reporting" in the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report.

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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” 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.

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, many of our services (OpenSRS, eNom Hover, Ting and Roam Mobility) 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. Seasonality may also affect advertising, which may have a slight impact on advertisement-based revenue. These seasonal effects could cause fluctuations in our financial results. For Ting Mobile, we see increased gross activation and churn activity in late summer as part of back-to-school activities as well as the holiday season in December. For Roam Mobility, we see increased roaming sales as consumers travel to warmer regions of the United Sates for extended periods of time.

Competition

Our competitors may be divided into the following groups:

- US Mobile Phone Service providers such as AT&T, Verizon, T-Mobile and Sprint, who primarily compete with Ting Mobile Services.
- US Broadband providers such as 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.

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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 telephony and internet hardware, including phones and 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.

Employees

As of December 31, 2018, we had approximately 584 full-time employees. None of our employees are currently represented by a labor union. We consider our relations with our employees to be good.

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 and the United States of America.

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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.

Executive Officers and Key Employees of the Registrant

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	56	President and Chief Executive Officer
Davinder Singh	44	Chief Financial Officer
David Woroch	56	Executive Vice President, Domains
Bret Fausett	55	Chief Legal Officer
Hanno Liem	45	Chief Technology Officer
Jason Silverstein	45	Vice President, Corporate Operations
Jessica Johannson	46	Vice President, Human Resources
Michael Goldstein	47	Vice President, Sales and Marketing
Ross Rader	47	Vice President, Customer Experience

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.

David Woroch has served as our Executive Vice President, Domains since 2014 and oversees the Domains business at Tucows, including OpenSRS, eNom 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.

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Jason Silverstein joined Tucows in January 2017 as our Vice President, Corporate Operations in connection with the acquisition of eNom, where he served as its General Manager as well as Vice President of Product and Engineering for Rightside Group, Ltd. since July 2015. Prior to Rightside Group, Ltd., Mr. Silverstein served in similar business technology leadership roles within companies such as the NBA, Yahoo!, multiple media companies and two start-ups co-founded by him.

Jessica Johannson has served as our Vice President of Human Resources since January 2017. Prior to joining Tucows, Ms. Johannson held executive level HR roles at Johnson Controls Inc since 2008, Brookfield Renewable Energy Group and Capgemini.

Michael Goldstein has served as our Vice President, Sales and Marketing 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 Vice President, Customer Experience 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

Risks Related to Network Access Services

Competition in the wireless and broadband industries could adversely affect Ting's revenues and profitability.

The wireless communications market is extremely competitive, and competition for customers is increasing. We compete with (1) facilities-based wireless communications providers and their prepaid affiliates or brands, including Verizon, AT&T, Sprint and T-Mobile; and (2) other MVNOs.

Ting's fixed Internet services in local markets also face some competition from established incumbent cable TV and broadband providers, which could increase as Ting gains market share.

Most of our wireless and Internet service 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, our larger wireless competitors obtain discounts for facilities, equipment, handsets, 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. Certain of our wireless competitors may also use their ownership of local wireline and wireless telecommunications facilities to introduce service features and calling plans, such as free wireless-to-landline calls, that we are unable to offer at similar cost. Their larger wireless customer bases may make discounted or free in-network calling (that we do not offer currently) or unlimited voice and data plans more attractive than any similar service that we may offer. Our Internet competitors may offer additional products and services, such as TV, VOIP, home security and other services that customers may seek as a bundled package, and that we do not currently offer. They may also better serve the mid-market in the short-term with Internet offerings that are

lower-priced than Ting's gigabit package, for a lower tier of service. This may impact our ability to gain significant market share from these competitors.

Ting has a relatively short operating history which may not be indicative of our future performance and, if our revenue and earnings growth are not sustainable, we may not be able to generate the earnings necessary to fund our operations or continue to grow our business.

We launched Ting Mobile nationally in 2012 and Ting Internet in 2015. Consequently, Ting has a limited operating and financial history upon which to evaluate its business model, financial performance and ability to succeed in the future. You should consider its prospects in light of the risks it may encounter, including risks and expenses faced by a new business competing in rapidly evolving and highly competitive markets. Ting cannot be certain that its MVNO business model, Internet business model or any specific products or services will be profitable or competitive in the long-term against larger, facilities-based wireless providers, other MVNOs or local cable and Internet competitors. Ting also cannot predict whether its MVNO model or Internet model will allow it to offer the services that customers may demand in the future. If Ting is unable to achieve sufficient revenues and earnings from operations, its financial results will be adversely affected and it may not have sufficient cash to fund its current operations or sustain its continued growth.

Ting's service offerings may not be successful in the long term if it is unable to retain customers or attract new customers.

Ting services may not prove to be successful or profitable in the long term. Ting's long-term success is dependent upon its sustained ability to generate sufficient revenue from its subscribers based on their use of its services and its ability to respond to churn by adding new customers. If Ting is unable to sustain or increase the revenue that it generates from its existing customers or obtain new customers to replace churned customers, our operational performance and financial results may be adversely affected.

Ting may face competitive pressure to reduce prices for our products and services, which may adversely affect our profitability and other financial results.

As competition in the U.S. wireless communications industry has increased, providers have lowered prices or increased the number of minutes, messages and/or data units available under monthly service plans, including increasing offers of unlimited usage plans, to attract or retain customers. To remain competitive with existing and future competitors, we may be compelled to offer greater subsidies for our handsets, reduce the prices for our services or increase the minutes, messages and/or data units that we offer under our postpaid monthly plans. 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 handset 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, as handset prices decline and handsets become more disposable, customers without long-term contracts may change their wireless 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.

Currently Ting Internet's pricing for its gigabit package offers significantly superior value to consumers compared to our competitors. The biggest competitive pressure to impact Ting may be lowering the price of the gigabit package or creating a lower-priced, reduced service mid-tier package to compete for market share in the large price-sensitive market segment.

The blurring of the traditional dividing lines among long distance, local, wireless, video and Internet services contributes to increased competition for Ting services.

The traditional dividing lines among long distance, local, wireless, video and Internet services are increasingly becoming blurred. In addition, the dividing lines between voice and data services are also becoming blurred. Through mergers, joint ventures and various service expansion strategies, major providers are striving to provide integrated

services in many of the markets we serve. This trend is also reflected in changes in the regulatory environment that have encouraged competition and the offering of integrated services. 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.

If Ting is unable to keep pace with technological advances, our revenues, growth and profitability may be materially adversely affected.

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. We also rely on the nationwide wireless communication networks of two major mobile Network Operators ("Network Operators") to provide us access to the latest mobile technologies and 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. 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 broadband 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's ability to continue to grow.

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Ting employs a postpaid business model which exposes us to increased credit risk.

Ting offers its wireless 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. Ting has a short operating history and there can be no assurance that it will be able to manage its credit risk or generate sufficient revenue to cover its postpaid-related expenses, including losses arising from its customers' failure to make payments when due. Ting manages credit risk exposure using techniques that are designed to set terms and limits for the credit risk it accepts. The techniques it uses may not accurately predict future defaults due to, among other things, inaccurate assumptions or fraud. Ting's 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 Ting continually seeks to improve its assumptions and controls, its failure to manage its credit risks appropriately may materially adversely affect our profitability and ability to grow.

Ting may be limited in its ability to grow its business and customer base for its wireless service offerings unless it can continue to obtain network capacity at favorable rates and meet the growing demands on its business systems and processes.

To further expand our MVNO business, we must continue to obtain 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.

On June 6, 2018, our current Network Operators, T-Mobile and Sprint submitted a formal merger application to the Federal Communications Commission (FCC), who are in the process of completing their regulatory review of the merger application. If the merger is successful, the consolidation of our Network Operators could hinder our ability in the future to negotiate favourable rates and access to the mobile services mentioned above.

As a MVNO, Ting is dependent on two major network operators for their wireless networks and any disruptions of Ting's use of such networks may adversely affect its business and financial results.

As a MVNO, we do not own or operate a physical network, but rather utilize the nationwide wireless communication networks of our Network Operators. To be successful, we will need to continue to provide our customers with reliable service over their nationwide wireless communication networks. 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 Agreements with our Network Operators do not contain any contractual indemnification provisions relating to network outages or other disruptions. Any impact on their nationwide wireless communication networks could disrupt Ting’s 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.

We are dependent on technology used by our Network Operators. Wireless communications technology is evolving rapidly. A significant change in current wireless network technologies or the emergence of alternative technologies could reduce significantly our ability to offer a full range of data services, as compared to our competitors. If our Network Operators fail to keep up with these changes, we may lose customers or may not be able to attract new customers.

If our Network Operators terminate or determine that they do not wish to renew their Master Services Agreements on expiration for any reason, we may be unable to obtain the wireless services necessary to operate our business. In addition, transition to an alternative provider may be limited to a provider with a CDMA or GSM network as certain of our handsets are not capable of operating on all networks. Such a transition could be time-consuming and costly and we could lose a substantial number of customers during the transition period.

Our dependence on our Network Operators is not limited to our use of their nationwide networks. We rely on them and their third-party affiliates for other critical operational matters, including:

- mobile voice, data and text usage information of our customers;
- continued expansion and improvement of their nationwide networks and their third-party affiliates' networks, which is expected to require additional investment;
- deployment of upgrades and maintenance of their nationwide networks;
- maintenance by our Network Operators of their relationships with their third-party affiliates;
- maintenance by our Network Operators and their third-party affiliates of FCC authorizations in good standing;
- integration of new services into their nationwide networks;
- certification of new handsets for use on their nationwide networks;
- compliance with FCC, state E911 and other regulatory requirements;
- obtaining telephone numbers;
- maintenance of interconnection agreements; and
- compliance with applicable laws and regulations.

Ting Mobile competes with Network Operators' products and services, and we can provide no assurance of our continued partnership with the Network Operators.

We compete with Network Operators' products and services for mobile telephony services. In addition, our Network Operators may from time to time create products or acquire interests in businesses that directly or indirectly compete with us. As a result, their interests may be different from, or adverse to, ours. We can provide no assurance of our continued partnership with the Network Operators.

We have entered into agreements with unrelated parties for certain business operations for Ting. Any difficulties experienced by us in these arrangements could result in additional expense, loss of subscribers and revenue, interruption of our services or a delay in the roll-out of new technology.

We have entered into agreements with unrelated parties for the day-to-day execution of 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.

We may not be able to realize the benefits of our fiber investments in the short or medium term

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. 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 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.

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Risks related to Domain Services

We may not be able to maintain or improve our competitive position and may be forced to reduce our prices because of strong competition in the market for Internet services generally and domain name registration, in particular, which we expect will continue to intensify.

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. 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, including Google, Web.com, 1&1, Amazon, Namecheap, GoDaddy and VeriSign. Competitors like Microsoft, Google and Yahoo!, as well as other large Internet companies, 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. In particular, VeriSign may in the future decide to offer additional services that compete with our domain name registration services or other services. If VeriSign were to become a competitor of ours in our core business areas, VeriSign would likely enjoy a number of competitive advantages, including its position as the largest registry, as well as superior financial and operational resources and customer awareness within our industry.

In addition, these and other large competitors, in an attempt to gain market share, may offer aggressive price discounts on the services they offer. These pricing pressures may require us to match these discounts 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. As a result of these factors, in the future it may become increasingly difficult for us to compete successfully.

We also face significant competition from other existing registrars and the continued introduction of new registrars in the domain registration industry. Currently ICANN has over 2,500 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.

Each registry and the ICANN regulatory body impose a charge upon the registrar for the administration of each domain registration. If these fees increase, this may have a significant impact upon our operating results.

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. In addition, pricing of new gTLDs is generally not set or controlled by ICANN, which could result in aggressive price increases on any particularly successful new gTLDs. The increase in these fees with respect to any gTLDs either must be included in the prices we charge to our service providers, imposed as a surcharge or absorbed by us. 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.

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We rely on our network of resellers to renew their domain registrations through us and to distribute our services, and if we are unable to maintain these relationships or establish new relationships, our revenues will decline.

The growth of our business depends on, among other things, our resellers' renewal of their customers' domain registrations through us. Resellers may choose to renew their domains with other registrars or their registrants may choose not to renew and pay for renewal of their domains. This may reduce our resellers' number of domain name registration customers which in turn would drive up their customer acquisition costs and harm our operating results. If resellers decide, for any reason, not to renew their registrations through us, it may in turn reduce the market to which our resellers could market our other higher-margin services, thereby further impacting our revenue and profitability and harming our operating results.

We believe that companies operating on the Internet are facing a period of consolidation. In addition, some of our resellers may decide to seek ICANN accreditation. Both of these situations could reduce the number of our active resellers, in which case our revenues may suffer.

If any of our competitors merge with one another, they will present a stronger combined 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. If a number of our customers decide to pursue this option, our sales may decrease materially.

Our failure to secure agreements with country code registries or our subsequent failure to comply with the regulations of the country code registries could cause customers to seek a registrar that offers these services.

The ccTLD registries require registrars to comply with specific regulations. Many of these regulations vary from ccTLD to ccTLD. If we fail to comply with the regulations imposed by ccTLD registries, these registries will likely prohibit us from registering or continuing to register domains in their ccTLD. Any failure on our part to offer domain registrations in a significant number of ccTLDs or in a popular 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.

Our standard agreements may not be enforceable, which could subject us to liability.

We operate on a global basis and all of our resellers 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 resellers and their customers, including liability resulting from our failure

to register or maintain domains properly, from downtime or poor performance with respect to our Internet services, or for insecure or fraudulent transactions pursuant to which we have issued Secure Sockets Layer ("SSL") certificates. 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 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.

Regulation could reduce the value of Internet domain names or negatively impact the Internet domain acquisition process, which could significantly impair the value attributable to our acquisitions of Internet domain names.

The acquisition of expiring domain names for parked page commercialization, the sale of names or acquisition of names for other uses involves the registration of thousands of Internet domain names, both in the United States and internationally. We have acquired and intend to continue to acquire previously-owned Internet domain names that have expired and have, following the period of permitted reclamation by their prior owners, been made available for sale. The acquisition of Internet domain names generally is governed by federal or international regulatory bodies. The regulation of Internet domain names in the United States and in foreign countries is subject to change. Regulatory bodies could establish additional requirements for previously-owned Internet domain names or modify the requirements for holding Internet domain names. As a result, we might not acquire or maintain names that contribute to our financial results in the same manner as we currently do. Because certain Internet domain names are important assets, a failure to acquire or maintain such Internet domain names could adversely affect our financial results and our growth. Any impairment in the value of these important assets could cause our stock price to decline.

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We have presence in the hosted messaging and email market, which is a volatile business.

Factors that are likely to contribute to fluctuations in our operating results from provisioning hosted email services include:

- the demand for outsourced email services;
- our ability to attract and retain customers and provide customer satisfaction;
- the ability to upgrade, develop and maintain our systems and infrastructure and to effectively respond to the rapid technological changes in the email market;
- the budgeting and payment cycles of our existing and potential customers;
- the amount and timing of operating costs and capital expenditures relating to expansion of the email service; and
- the introduction of new or enhanced services by competitors.

In order to succeed in the hosted email business, our email product must remain competitive. We believe that some of the competitive factors affecting the market for hosted email services include:

- breadth of platform features and functionality of our offering and the sophistication and innovation of our competitors;
- scalability, reliability, performance and ease of expansion and upgrade;
- ease of integration with customers' existing systems; and
- flexibility to enable customers to manage certain aspects of their systems and leverage outsourced services in other cases when resources, costs and time to market reasons favor an outsourced offering.

We believe competition will continue to be strong and further increase as our market attracts new competition, current competitors aggressively pursue customers, increase the sophistication of their offerings and as new participants enter the market. Many of our current and potential competitors have longer operating histories, larger customer bases, greater brand recognition in the business and greater financial, marketing and other resources than we do. Any delay in our development and delivery of new services or enhancement of existing services would allow our competitors additional time to improve their product offerings and provide time for new competition to develop and market messaging services. Increased competition could result in pricing pressures, reduced operating margins and loss of market share, any of which could cause our financial results to decline.

If we are unable to maintain our relationships with our customers our revenue may decline.

Our network of resellers is our principal source for distributing 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.

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Disputes over registration of domain names, the activities of our reseller's customers or the content of their websites could subject us to liability and could negatively affect the public's perception of our corporate image.

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, any of which could expose us to further liability and increase our costs of doing business.

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.

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Other Risks Related to Our Business

The international nature of our business exposes us to certain business risks that could limit the effectiveness of our growth strategy and cause our results of operations to suffer.

Expansion into international markets is an 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 will require significant management attention and financial resources. We face a number of risks associated with expanding our business internationally that could negatively impact our results of operations, including:

- management, communication and integration problems resulting from cultural differences and geographic dispersion;
- compliance with foreign laws, including laws regarding liability of online resellers for activities of customers and more stringent laws in foreign jurisdictions relating to the privacy and protection of third-party data;
- accreditation and other regulatory requirements to provide domain name registration, website hosting and other services 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;
- difficulties in protecting intellectual property rights in international jurisdictions;
- political and economic instability in some international markets;
- sufficiency of qualified labor pools in various international markets;
- currency fluctuations and exchange rates;
- potentially adverse tax consequences or an inability to realize tax benefits; and
- the lower level of adoption of the Internet in many international markets.

We may not succeed in our efforts 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.

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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.

We currently license many third-party technologies and may need to license further technologies which could delay and increase the cost of product and service developments.

We currently license certain technologies from third parties and incorporate them into certain of our services including email, 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. 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.

In addition, we may fail to successfully integrate licensed technology into our services. These third-party licenses may expose us to increased risks, including risks related to the integration of new technology and potential intellectual property infringement claims. In addition, an inability to obtain needed licenses could delay product and service development until equivalent technology can be identified, licensed and integrated. Any delays in services or integration problems could hinder our ability to attract and retain customers and cause our business and operating results to suffer.

We may acquire companies or make investments in, or enter into licensing arrangements with, other companies with technologies that are complementary to our business and these acquisitions or arrangements could disrupt our business, cause us to require additional financing and dilute your holdings in our company.

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. 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. Even if we successfully complete an acquisition, it could adversely affect our business.

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In the future, we may be unable to generate sufficient cash flow to satisfy our debt service obligations.

As of March 1, 2019, our outstanding debt under our credit facility was $64.6 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. Any debt financing secured by us in the future could involve restrictive covenants relating to our capital raising activities and other financial and operational matters, which might make it more difficult for us to obtain additional capital, to pay dividends and to pursue business opportunities, including potential acquisitions. 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 agreements governing our indebtedness and other financing arrangements include restrictive covenants that limit our operating flexibility.

The 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, redeeming capital stock, or making other restricted payments or investments;

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- selling or buying assets, properties, or licenses;
- developing assets, properties, or licenses that we have or in the future may procure;
- creating liens on assets; and
- 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.

We are subject to taxation related risks in multiple jurisdictions.

We are a U.S.-based multinational company subject to tax in multiple U.S. and foreign tax jurisdictions. 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. The U.S. recently enacted significant tax reform legislation known as the Tax Cuts and Jobs Act of 2017 in December 2017 ("the Act"), we continue to analyze the ongoing impact of the Act on our operations, but certain provisions of the new law may adversely affect us. 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.

Our corporate culture has contributed to our success, and if we cannot maintain this culture as we grow, we could lose the innovation, creativity and teamwork fostered by our culture, and our business may be harmed.

We believe that a critical contributor to our success has been our corporate culture, which we believe fosters innovation, creativity and teamwork. As our organization grows and we are required to implement more complex organizational management structures, we may find it increasingly difficult to maintain the beneficial aspects of our

corporate culture. This could negatively impact our future success.

Our business depends on a strong brand. If we are not able to maintain and enhance our brand, 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 four distinct brands namely “OpenSRS”, “eNom”, “Hover” 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.

If we fail to protect our proprietary rights, the value of those rights could be diminished.

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. 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.

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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.

Because of the global nature of the Internet, our websites can be viewed worldwide. However, we do not have intellectual property protection in every jurisdiction. Furthermore, effective trademark, service mark, copyright and trade secret protection may not be available in every country in which our services become available over the Internet. In addition, the legal standards relating to the validity, enforceability and scope of protection of intellectual property rights in Internet-related industries are uncertain and still evolving.

We may not be able to realize the intended and anticipated benefits from our acquisitions of expiring domain names, which could affect the value of these acquisitions to our business and our ability to meet our financial obligations and targets.

We may not be able to realize the intended and anticipated benefits that we currently expect from our acquisition of expiring domain names. These intended and anticipated benefits include increasing our cash flow from operations, broadening our Internet service offerings and delivering services that strengthen our reseller relationships.

Factors that could affect our ability to achieve these benefits include:

- A significant amount of revenue attributed to our domain name assets comes from the provision of personalized email services and the generation of revenue from third party advertisements on parked pages. Some of our existing resellers who provide similar services may perceive this as a competitive threat and therefore may decide to terminate their agreements with us because of our acquisitions of a substantial number of expiring domain names.

- We will need to continue to acquire commercially valuable expiring domain names to grow our presence in the field of direct navigation. We will need to continuously improve our technologies to acquire valuable expiring domain

names as competition in the marketplace for appropriate expiring domain names intensifies. Our domain name acquisition efforts are subject to rules and guidelines established by registries which maintain Internet domain name registrations and other registrars who process and facilitate Internet domain name registrations. The registries and registrars may change the rules and guidelines for acquiring expiring domains in ways that may prove detrimental to our domain name acquisition efforts.

- The business of direct navigation is dependent on current technologies and user practices. If browser or search technologies were to change significantly, the practice of direct navigation may be altered to our disadvantage.

If the acquired assets are not integrated into our business as we anticipate, we may not be able to achieve the benefits of these acquired assets or realize the value paid for the asset acquisitions, which could materially harm our business, financial condition and results of operations.

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We do not control the means by which end users access our websites and material changes to current navigation practices or technologies or marketing practices could result in a material adverse effect on our business.

The success of our parked pages business depends in large part upon the current end user tendency to type desired destinations directly into the web browser. End users employ this practice of direct navigation to access our websites primarily through the following methods: directly accessing our websites by typing descriptive keywords or keyword strings into the uniform resource locator (or “URL”) address box of an Internet browser, accessing our websites by clicking on bookmarked websites and accessing our websites indirectly through search engines and directories.

Each of these methods requires the use of a third-party product or service, such as an Internet browser or search engine or directory. Internet browsers may provide alternatives to the URL address box to locate websites, and search engines may from time to time change and establish rules regarding the indexing and optimization of websites. Product developments and market practices for these means of access to our websites are not within our control. We may experience a decline in traffic to our web sites if third party browser technologies or search engine methodologies and rules, including those affecting marketing efforts, are changed to our disadvantage.

We may experience unforeseen liabilities in connection with our domain name portfolio, which could negatively impact our financial results.

We currently own a portfolio of domain names that were previously owned by another third-party. In addition, we have acquired, and intend to continue to acquire, other previously owned domain names. While we have a policy against acquiring domain names that infringe on third-party intellectual property rights, including trademarks or confusingly similar business names, in some cases, these acquired names may have trademark significance that is not readily apparent to us or is not identified by us in the bulk purchasing process. As a result, we may face demands by third party trademark owners asserting infringement or dilution of their rights and seeking transfer of the domain names through the Uniform Domain Name Resolution Policy (the “UDRP”), adopted by ICANN or actions under the Antic-cybersquatting Consumer Protection Act (the “ACPA”). We may also face actions from third-parties under national trademark or anti-competition legislation.

We review each claim or demand on its merits and we intend to transfer any such previously owned domain names acquired by us to parties that have demonstrated a valid prior right of claim. We cannot, however, guarantee that we will be able to resolve all such disputes without litigation. The potential violation of third-party intellectual property rights and potential causes of action under consumer protection laws may subject us to unforeseen liabilities, including injunctions and judgments for monetary damages.

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 losing significant rights and our ability to operate all or a portion of our business.

Claims of infringement of intellectual property or other rights of third parties against us could result in substantial costs. 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. Most of these disputes arise as a result of a third party registering a domain name that is identical or similar to another party’s trademark or the name of a living person. 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.

These claims and any related litigation could result in significant costs of defense, liability for damages and diversion of management’s time and attention. Any claims from third parties may also result in limitations on our ability to use the intellectual property subject to these claims unless we are able to enter into agreements with the third parties making these claims. If a successful claim of infringement is brought against us and we fail to develop non-infringing technology or to license the infringed or similar technology on a timely basis, we may have to limit or discontinue the business operations which used the infringing technology.

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Claims against third parties on which we rely for licensed technology could result in the loss of our use of this technology causing us to incur substantial costs to replace the technology.

We rely on technologies licensed from other parties. These third-party technology licenses may infringe on the proprietary rights of others and may not continue to be available on commercially reasonable terms, if at all. The loss of this technology could require us to obtain substitute technology of lower quality or performance standards or at greater cost, which could increase our costs and make our products and services less attractive to customers.

The law relating to the liability of online services companies for data and content carried on or disseminated through their networks is currently unsettled and could expose us to unforeseen liabilities.

It is possible that claims could be made against online services companies under U.S., Canadian or foreign law for defamation, negligence, copyright or trademark infringement, or other theories based on data or content disseminated through their networks, even if a user independently originated this data or content. Several private lawsuits seeking to impose liability upon Internet service companies have been filed in U.S. and foreign courts. While the United States has passed laws protecting ISPs from liability for actions by independent users in limited circumstances, this protection may not apply in any particular case at issue. Our ability to monitor, censor or otherwise restrict the types of data or content distributed through our network is limited. Failure to comply with any applicable laws or regulations in particular jurisdictions could result in fines, penalties or the suspension or termination of our services in these jurisdictions. 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.

Privacy concerns relating to our technology could damage our reputation and deter current and potential users from using our services.

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.

In addition, due to the fact that our services are web based, the amount of data we store for our users on our servers (including personal information) has been increasing. Any systems failure or compromise of our security that results in the release of our users' data could seriously limit the adoption of our services as well as harm our reputation and brand and, therefore, our business. We may also need to expend significant resources to protect against security breaches. The risk that these types of events could seriously harm our business is likely to increase as we expand the number of Internet services we offer.

A large number of legislative proposals are pending before the United States Congress, various state legislative bodies and foreign governments concerning data protection. We cannot guarantee that our current information-collection procedures and disclosure policies will be found to be in compliance with existing or future laws or regulations. If our policies and procedures are found not to be in compliance, in addition to the possibility of fines, this could result in an order requiring that we change our data practices, which could in turn have a material effect on our business. Complying with these various laws could cause us to incur substantial costs or require us to change our business practices in a manner adverse to our business.

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.

Because we are required to recognize revenue for our services over the term of the applicable customer agreement, changes in our sales may not be immediately reflected in our operating results.

We recognize revenue from our customers rateably over the respective terms of their agreements with us as required by generally accepted accounting principles (GAAP). Typically, our domain name registration agreements have terms that range from one to ten years, and our website hosting agreements have annual or month-to-month terms. Accordingly, any increases or decreases in sales during a particular period do not translate into immediate, proportional increases or decreases in revenue during that period, and a substantial portion of the revenue that we recognize during a quarter, is derived from deferred revenue from customer agreements that we entered into during previous quarters. As a result, we may not generate net earnings despite substantial sales activity during a particular period, because we are not permitted under GAAP to recognize all of the revenue from these sales immediately, and because we are required to reflect a significant portion of our related operating expenses in full during that period. Conversely, the existence of substantial deferred revenue may prevent deteriorating sales activity from becoming immediately observable in our Consolidated Statements of Comprehensive Income.

In addition, we may not be able to adjust spending in a timely manner to compensate for any unexpected revenue shortfall, and any significant shortfall in revenue relative to planned expenditures could negatively impact our business and results of operations.

Global currency fluctuations may adversely affect our revenues and earnings.

Our revenue is primarily realized in U.S. dollars and a major portion of our operating expenses are paid in Canadian dollars. 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.

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.

If we do not maintain a low rate of credit card chargebacks, we will face the prospect of financial penalties and could lose 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.

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.

Forecasting our tax rate is complex and subject to uncertainty.

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.

Our business may be adversely affected if our internal controls are not effective.

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.

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As a result, we cannot assure you that material weaknesses in our internal control over financial reporting will not be identified in the future. Any failure to maintain or implement required new or improved controls, or any difficulties we encounter in their implementation, could result in material weaknesses, cause us to fail to timely meet our periodic reporting obligations, or result in material misstatements in our financial statements. Any such failure could also adversely affect the results of periodic management evaluations regarding disclosure controls and the effectiveness of our internal control over financial reporting required under Section 404 of the Sarbanes-Oxley Act of 2002 and the rules proclaimed after that. The existence of a material weakness could result in errors in our financial statements that could result in a restatement of financial statements, cause us to fail to timely meet our reporting obligations and cause investors to lose confidence in our reported financial information, leading to a decline in our stock price, and it could make it more difficult for us to attract and retain qualified persons to serve on our Board of Directors (“Board”) or as executive officers.

Impairment of goodwill and other intangible assets would result in a decrease in earnings.

Current accounting rules require that goodwill and other intangible assets with indefinite useful lives are not amortized, but instead must be tested for impairment at least annually. These rules also require that intangible assets with definite useful lives be amortized over their respective estimated useful lives to their estimated residual values, and reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. To the extent such evaluation indicates that the useful lives of intangible assets are different than originally estimated, the amortization period is reduced or extended and, accordingly, the quarterly amortization expense is increased or decreased. We have substantial goodwill and other intangible assets, and 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.

We could suffer uninsured losses.

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.

Difficult economic and financial conditions could have a material adverse effect on us.

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, 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 quarterly and annual operating results may fluctuate and our future revenues and profitability are uncertain.

Our quarterly and annual operating results may fluctuate significantly in the future as a result of a variety of factors, many of which are outside of our control. Our quarterly and annual operating results may be adversely affected by a wide variety of factors, including:

- our ability to maintain revenue growth at current levels or anticipate a decline in revenue from any of our services;
- our ability to identify and develop new technologies or services and to commercialize those technologies into new services in a timely manner;
- the mix of our services sold during the quarter or year;
- our ability to make appropriate decisions which will position us to achieve further growth;
- concentrated capital expenditures in any particular period to support our growth or for other reasons;
- changes in our pricing policies or those of our competitors, changes in domain name fees charged to us by Internet registries or ICANN, or other competitive pressures on selling prices;
- our ability to identify, hire, train, motivate and retain highly qualified personnel, and to achieve targeted productivity levels;
- market acceptance of Internet services generally and of new and enhanced versions of our services in particular;
- our ability to establish and maintain a competitive advantage;
- the continued development of our global distribution channel and our ability to compete in multiple countries successfully as part of our sales and marketing strategy;
- the number and significance of service enhancements and new service and technology announcements by our competitors;
- our ability to identify, develop, deliver and introduce in a timely manner new and enhanced version of our current service offerings that anticipate market demand and address customer needs;
- changes in foreign currency exchange rates and issues relating to the conversion to the Canadian dollar;
- foreign, federal or state regulation affecting our business;
- our ability to continue to attract users to our website;
- our ability to continue to attract advertisers to place content on our website;

- technical difficulties or other factors that result in system downtime;
- seasonality of the markets and businesses of our customers;
- news relating to our industry as a whole;
- our ability to enforce our intellectual property rights;
- our ability to manage Internet fraud and information theft; and
- current economic conditions.

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Our operating expenses may increase. We base our operating expense budgets on expected revenue trends that are more difficult to predict in periods of economic uncertainty. We intend to continue our efforts to control discretionary spending; however, we will continue to selectively incur expenditures in areas that we believe will strengthen our position in the marketplace. If we do not meet revenue goals, we may not be able to meet reduced operating expense levels and our operating results will suffer. It is possible that in one or more future quarters, our operating results may be below our expectations and the expectations of public market analysts and investors. In that event, the price of our common stock may fall.

Our business and financial performance could be adversely affected, directly or indirectly, by disasters, by terrorist activities or by international hostilities.

Neither the occurrence nor the potential impact of disasters, terrorist activities or international hostilities can be predicted. However, these occurrences could impact us directly as a result of damage to our facilities 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 disasters, terrorist activities or international hostilities affect the financial markets or the economy in general or in any particular region. For example, a significant earthquake could impact us directly by disrupting our business operations.

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 disasters or terrorist activities or international hostilities also could be increased to the extent that there is a lack of preparedness on the part of 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.

Risks Related to the Internet and Our Technology

Our business could be materially harmed if the administration and operation of the Internet no longer rely upon the existing domain system.

The domain registration industry continues to develop and adapt to changing technology. This development may include changes in the administration or operation of the Internet, including the creation and institution of alternate systems for directing Internet traffic without the use of the existing domain system. Some of our competitors have begun registering domains with extensions that rely on such alternate systems. These competitors 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 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.

The law relating to the use of and ownership in intellectual property on the Internet is currently unsettled and may expose us to unforeseen liabilities.

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.

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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 cybersquatter 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.

If Internet usage does not grow or if the Internet does not continue to expand as a medium for commerce, our business may suffer.

Our success depends upon the continued development and acceptance of the Internet as a widely used medium for commerce and communication. Rapid growth in the uses of, and interest in, the Internet is a relatively recent

phenomenon and its continued growth cannot be assured. A number of factors could prevent continued growth, development and acceptance, including:

- the unwillingness of companies and consumers to shift their purchasing from traditional vendors to online vendors;
- the Internet infrastructure may not be able to support the demands placed on it, and its performance and reliability may decline as usage grows;
- security and authentication issues may create concerns with respect to the transmission over the Internet of confidential information; and
- privacy concerns, including those related to the ability of websites to gather user information without the user's knowledge or consent, may impact consumers' willingness to interact online.

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

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We believe that part of our growth will be derived from resellers in international markets and may suffer if Internet usage does not continue to grow globally.

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, our revenues may not grow as anticipated.

We may be unable to respond to the rapid technological changes in the industry, and our attempts to respond may require significant capital expenditures.

The Internet and electronic 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.

We could experience system failures and capacity constraints which could diminish our ability to effectively provide our services and could damage our reputation and harm our operating results.

The availability of our 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 brand. 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.

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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, 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. We have previously been the target of attempted attacks and must monitor and develop our systems to protect our and our customer's data from misappropriation. Our ability to securely process and maintain this information is critical to our business. Despite our security measures, our systems may be vulnerable to unauthorized access by hackers or others, computer viruses and other disruptive problems. Someone who is able to circumvent security measures could misappropriate customer or proprietary information or cause interruptions in Internet operations. Internet and online resellers have in the past experienced, and may in the future experience, interruptions in service because of the accidental or intentional actions of Internet users, current and former employees or others.

We may need to expend significant capital and other resources to protect against the threat of security breaches or alleviate problems caused by breaches. Eliminating computer viruses and alleviating other security problems may require interruptions, delays or cessation of service to users accessing our websites and the web pages that deliver our content services. An information technology systems security breach may lead to a material disruption of our systems and/or the loss of business information, which may materially and adversely affect our business. Risks relating to such a security breach may include, among other things: a material adverse impact on our business and future financial results due to the theft, destruction, loss, misappropriation or release of confidential data, negative publicity resulting in reputation or brand damage with our customers, vendors or peers due to the theft, destruction, loss, misappropriation or release of confidential data, operational or business delays resulting from the disruption of information technology systems and subsequent clean-up and mitigation activities and adverse effects on our compliance with regulatory laws and regulations. Repeated or substantial interruptions could result in the loss of customers and reduced revenues.

We may have difficulty scaling and adapting our existing architecture to accommodate increased traffic and technology advances or changing business requirements, which could lead to the loss of customers and cause us to incur additional expenses.

To be successful, our network infrastructure must perform well and be 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 new equipment to upgrade our technology and network infrastructure to enable it 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.

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

We rely on vendors, including data center and bandwidth providers in providing services to our customers. Any disruption in the network access or co-location services provided by these providers or any failure of these providers to handle current or increased volumes of use could significantly harm our business. Any financial or other difficulties our providers face may also have negative effects on our business. We exercise little control over these vendors, which increases our vulnerability to problems with the services they provide. We license technology and related databases to facilitate certain aspects of our data center and connectivity operations, including Internet traffic management services. We have experienced and expect to continue to experience interruptions and delays in service and availability for such elements. Any errors, failures, interruptions or delays in connection with these technologies and information services could harm our relationship with customers, adversely affect our brand and expose us to liabilities.

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New tax treatment of companies engaged in Internet commerce may adversely affect the demand for our marketing services and our financial results.

Due to the global nature of the Internet, it is possible that, although our services and the Internet transmissions related to them typically originate in Virginia, Toronto, Canada and Germany, governments of other states or foreign countries might attempt to regulate our transmissions 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.

We may be accused of intellectual property infringement of the technology we have employed to support both our back-end platform and the products and services we offer to and through our resellers and may be sued for damages caused by actual use of the platforms or products and services and we may be required to pay substantial damage awards.

We seek to ensure that we have licensed or otherwise secured the necessary rights to use and offer for use all intellectual property relating to our platforms and the services we offer resellers through the platforms. Despite our efforts, we may be sued by third parties claiming rights in and to the technology we employ or by third parties who claim to have suffered as a result of any use, or inability to use, the platforms, products and services. If we are sued, defense of any such claims may require the resources of both our time and money. If a third-party is successful in its assertions, we may be required to pay damages that may have a material impact on our financial resources.

Our reputation and business may be harmed and it may be subject to legal claims if there is loss, disclosure or misappropriation of or access to our subscribers' or our own information or other breaches of our information security.

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. 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 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.

In addition, we and third-party service providers process and maintain our proprietary business information and data related to our business-to-business customers or suppliers. Our information technology and other systems that maintain and transmit this information, or those of service providers, may also be compromised by a malicious third-party penetration of our network security or that of a third-party service provider, or impacted by intentional or inadvertent actions or inactions by our employees or those of a third-party service provider. We also purchase equipment from third parties that could contain software defects, Trojan horses, malware, or other means by which third parties could access our network or the information stored or transmitted on such networks or equipment. As a result, our business information, or subscriber or supplier data may be lost, disclosed, accessed, used, corrupted, destroyed or taken without 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 service and subject us to additional costs and liabilities, including litigation, which could be material.

Governmental and Regulatory Risks

Governmental and regulatory policies or claims concerning the domain registration system, and industry reactions to those policies or claims, may cause instability in the industry and disrupt our business.

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ICANN Oversight of Domain Name Registration System

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 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.

Governmental Regulation Affecting the Internet

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.

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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.

We may be subject to government regulation that may be costly and may interfere with our ability to conduct business.

Although transmission of our websites primarily originates in Canada and the United States, the Internet is global in nature. Governments of foreign countries might try to regulate our transmissions or prosecute us for violations of their laws. Because of the increasing popularity and use of the Internet, federal, state and foreign governments may adopt laws or regulations in the future concerning commercial online services and the Internet, with respect to:

- user privacy;
- children;
- copyrights and other intellectual property rights and infringement;
- domains;
- pricing;
- content regulation;
- defamation;
- taxation; and
- the characteristics and quality of products and services.

Laws and regulations directly applicable to online commerce or Internet communications are becoming more prevalent. Laws and regulations such as those listed above or others, if enacted, could expose us to substantial liability and increase our costs of compliance and doing business.

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Ting's Network Operators' failure to obtain the proper licenses and governmental approvals from regulatory authorities would cause Ting to be unable to successfully operate its business.

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 licenses will be renewed. The FCC requires all wireless licensees 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 wireless 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.

Government regulation could adversely affect Ting's prospects and results of operations; the FCC and state regulatory commissions may adopt new regulations or take other actions that could adversely affect its business prospects, future growth or results of operations.

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 Operators' licenses 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.

Various states are considering regulations over terms and conditions of service, including certain billing practices 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 wireless operations.

Risks Related to our Stock

Our share price is 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;

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- news relating to our 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. This volatility often has been unrelated to the operating performance of these companies. These broad market and industry fluctuations may cause the price of our common stock to drop, regardless of our performance.

Future sales of shares of our common stock by our existing shareholders could cause our share price to fall.

If our shareholders sell substantial amounts of common stock in the public market, the market price of the common stock could fall. The perception among investors that these sales will occur could also produce this effect.

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 2019, the Company's Board approved a stock buyback program to repurchase up to $40 million of the Company's common stock, which can be discontinued at any time. Although this buyback program has been approved, there is no obligation for the Company 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

In 2018, we purchased 2.18 acres of land in Centennial, CO on which we are currently constructing a Data Centre and Warehouse facility to support the Company's collocation and Ting Internet needs. Currently, substantially all of our computer and communications hardware is located at our facilities or at server hosting facilities in Toronto, Ontario, San Jose, CA and Ashburn, VA. The 2.18 acres of land in Centennial, CO is the Company's only owned real property.

Our principal administrative, engineering, marketing and sales office is located in Toronto, Ontario. See below for a complete list of leased real property maintained by the Company:

Leased Property:

City, State/Province	Country	Size (square feet)	Purpose
Toronto, ON	Canada	28,100	General Office
Kirkland, WA	United States	22,500	General Office
Sandpoint, ID	United States	21,236	General Office / Fiber Hut
Charlottesville, VA	United States	16,450	General Office
Holly Springs, NC	United States	19,660	General Office / Warehouse / Fiber Hut
St Catharines, ON	Canada	14,100	General Office
Centennial, CO	United States	7,600	General Office / Warehouse
Starkville, MI	United States	4,000	General Office / Warehouse
Bonn, NRW	Germany	2,900	General Office
Westminster, MD	United States	2,300	General Office / Retail

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.

On August 30, 2017, Namecheap, Inc. (“Namecheap”) filed a compliant against the Company, eNom, Inc., and unknown John Does in the United States District Court for the Western District of Washington alleging breach of contract, breach of the implied duty of good faith and fair dealing, and unjust enrichment (the “Namecheap Federal Action”). On September 6, 2018, Tucows and Namecheap entered into a settlement agreement, pursuant to which the matter was amicably resolved, and the case dismissed. Namecheap has provided Tucows an administrative fee for services in connection with transferring its domain names off Tucows’ platform.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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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".

The following table sets forth the range of high and low sales prices for TCX for the periods indicated:

Year	Fiscal Quarter Ended	High	Low
2018	March 31, 2018	70.05	49.80
	June 30, 2018	66.65	55.10
	September 30, 2018	62.30	51.01
	December 31, 2018	65.07	49.69
2017	March 31, 2017	52.75	35.30
	June 30, 2017	63.20	50.50
	September 30, 2017	60.00	49.70
	December 31, 2017	71.75	54.50

As of March 1, 2019, Tucows had 75 shareholders of record.

We have not declared or paid any cash dividends on our common stock during the fiscal years ended December 31, 2018 and December 31, 2017, 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

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 is expected to terminate on February 13, 2020.

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.

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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 2013.

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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, 2018, 2017, 2016, 2015, and 2014 and should be read in conjunction with those statements (amounts expressed in thousands, except per share amounts).

	For the year ended December 31,				
	2018	**2017**	**2016**	**2015**	**2014**
Statement of Operations Data					
Revenue	$346,013	$329,421	$189,819	$171,687	$146,509
Total cost of revenues	249,243	244,900	126,765	119,629	107,115
Sales and marketing	33,063	29,423	20,755	17,394	14,236
Technical operations and development	8,748	7,258	4,495	4,503	4,306
General and administrative	17,710	13,594	11,405	10,662	9,459
Depreciation, amortization and impairment of indefinite life intangible assets	7,671	7,262	1,451	690	1,400
Loss (gain) on currency forward contracts	254	(98)	(99)	793	358
Total other income (expense), net	(3,169)	(3,007)	66	(73)	(207)
Income before provision for income taxes	26,155	24,075	25,113	17,943	9,428
Provision for (recovery of) income taxes	9,020	1,748	9,046	6,569	3,054
Net income	$17,135	$22,327	$16,067	$11,374	$6,374
Net income per share attributable to common stockholders					
Basic	$1.62	$2.12	$1.53	$1.04	$0.57
Diluted	$1.59	$2.07	$1.50	$1.00	$0.54
Weighted average shares used in computing net income per share					
Basic	10,605	10,537	10,525	10,969	11,221
Diluted	10,794	10,794	10,714	11,360	11,730

	At December 31,				
	2018	**2017**	**2016**	**2015**	**2014**
Balance Sheet Data					
Cash and cash equivalents	$12,637	$18,049	$15,105	$7,723	$8,271

Prepaid domain name registry and ancillary services fees	106,527	127,003	60,390	55,749	56,380
Total assets	339,575	350,650	154,413	129,130	125,795
Deferred revenue	143,694	160,582	77,849	71,594	71,106
Debt	64,601	76,924	10,249	3,500	-
Total liabilities	259,799	290,439	116,596	102,801	90,153
Total stockholders' equity	$79,776	$60,211	$37,817	$26,329	$35,642

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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, 2018 and December 31, 2017 and for the years ended December 31, 2018, 2017 and 2016 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 the sale of retail mobile phones, telephony services and high-speed Internet access to individuals and small businesses, 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, 2018, 2017 and 2016, we reported revenue of $346 million, $329 million and $190 million, respectively.

Network Access Services

Network Access Services derives revenue from the sale of retail mobile phones and services to individuals and small businesses through the Ting website, as well as from providing high speed Internet access, and network consulting services to customers in select cities in the United States. Ting provides its mobile and internet customers with access to our provisioning and management tools to enable them, via the ting.com website, to purchase retail mobile phones and services nationally and fixed Internet access in select cities. Revenues are generated in the United States and are provided on a monthly basis with no fixed contract term. As of December 31, 2018, Ting mobile managed mobile telephony services for approximately 163,000 subscribers and had approximately 296,000 devices under management.

Our primary distribution channel for Ting Internet services is through our website, ting.com. We strive to meet or exceed our Network Access Service customers' needs by providing them with superior services, easy-to-use interfaces and proactive and attentive customer service.

The Company also operates other MVNO brands, Zipsim and Always Online Wireless brands (collectively referred to as "Roam Mobility brands"). Roam Mobility operates as a MVNO on the same nationwide Global System for Mobile communications ("GSM") network as Ting Mobile and distributes through third-party retail stores and product branded websites. The primary focus of the Roam Mobility brand is to offer affordable roaming service to international travellers.

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Domain Services

Domain Services include wholesale and retail domain name registration services, value added services and portfolio services derived through our OpenSRS, eNom 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; and by making our 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.

Our wholesale domain name registration service, primarily branded as OpenSRS and eNom, derives revenue from its Domain Service and from providing Value-added services. The OpenSRS and eNom Domain Services manage 23.3 million domain names under the Tucows and eNom ICANN registrar accreditations and for other registrars under their own accreditations, which has decreased by 4.4 million domain names since December 31, 2017. The reduction from prior year is primarily due to the bulk transfer of approximately 2.8 million domain names to Namecheap's credentials, which occurred in several bulk transfers throughout 2018. As a result of the bulk transfers of domain names to Namecheap the Company recognized, on an accelerated basis, $16.9 million of revenue and $16.7 million of cost of revenues sold related to previously deferred revenue and deferred prepaid registry fees. The remaining domain names to be transferred to Namecheap, as defined under a settlement agreement between the Company and Namecheap, are expected to be transferred to Namecheap in the first quarter of 2019.

In addition, one of the resellers for which the Company registered domain names using the reseller's accreditation, was acquired and the registrations were moved to the acquiring reseller, resulting in approximately 0.5 million domains being transferred in the first quarter of 2018. As the Company does not defer revenue associated with hosted registry services, there was no impact on deferred revenue as a result of the transfer.

Our 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 37,000 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.

Our retail domain name registration service, 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. Retail domain service 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 generates revenue by offering names in our domain portfolio for resale through a number of distribution channels, and our reseller network. We also generate advertising revenue from our portfolio.

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. The following tables set forth the key business metrics which we believe are the primary indicators of our performance for the periods presented:

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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 exclude 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.

Network Access Services	**Year ended December 31, [1]**		
	2018	**2017**	**2016**
	(in ‘000’s)		
Ting Mobile subscribers under management[2]	163	166	147
Ting Mobile devices under management	296	282	245

(1) For a discussion of these period-to-period changes in subscribers and devices under management and how they impacted our financial results, see the Net Revenues discussion below.
(2) Subsequent to a review of our subscriber base in the first quarter of 2018, our comparative 2017 and 2016 accounts under management were reduced by approximately 6 and 4 respectively.

Domain Services

	Year ended December 31, [1]		
	2018	**2017**	**2016**
		(in ‘000’s)	
Total new, renewed and transferred-in domain name registrations provisioned	17,358	19,361	9,950
Domain names under management			
Registered using Registrar Accreditation belonging to the Tucows Group	18,537	22,300	11,356
Registered using Registrar Accreditations belonging to Resellers	4,772	5,400	3,547
Total domain names under management[2]	23,309	27,700	14,903

(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 2.8 million names, for domain names under management related to Namecheap.

OPPORTUNITIES, CHALLENGES AND RISKS

As a MVNO our Ting Mobile service is reliant on our Mobile Network Operators ("MNOs") providing competitive networks. Our MNOs each continue to invest in network expansion and modernization to improve their competitive positions. Deployment of new and sophisticated technology on a very large-scale entails risks. Should they fail to implement, maintain and expand their network capacity and coverage, adapt to future changes in technologies and continued access to and deployment of adequate spectrum successfully, our ability to provide wireless services to our subscribers, to retain and attract subscribers and to maintain and grow our subscriber revenues could be adversely affected, which would negatively impact our operating margins.

Ting Mobile enjoyed rapid growth in its first four years of operation with the growth slowing for the past two year. During the rapid growth phase we were able to continue to grow gross customer additions and maintain a consistent churn rate, which allowed us to maintain net new customer additions despite the impact of churn on a fast-growing customer base. We have also been able to supplement organic growth with bulk migrations of customer bases of other MVNOs. We expect price competition to grow more intense in the industry which could result in increased customer churn or reductions of customer acquisition rates either of which could result in a further slowing growth rate or in certain cases, our ability to maintain growth.

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.

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

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 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 larger domain names portfolio sales is unpredictable and may lead to significant quarterly and annual fluctuations in our Portfolio revenue.

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.

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Net Revenues

Network Access Services

The Company generates Network Access Services revenues primarily through the provisioning of mobile services. Other sources of revenue include the provisioning of fixed high-speed Internet access as well as billing solutions to ISPs.

Mobile

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.

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.

Our Roam Mobility brands also offer standard talk, text and data mobile services. Roam customers prepay for their usage through the Roam Mobility website. When prepayments are received the amount is deferred, and subsequently recognized as the Company satisfies its obligation to provide mobile services. In addition, revenues associated with the sale of SIM cards 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.

Other services

Other 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 Internet Service Providers ("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.

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Domain Services

Wholesale

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. With the acquisition of eNom and its 24,000-reseller network, domain services will continue to be the largest portion of our business and will further fuel our ability 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 primarily from Internet hosting services, advertising from 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

We derive revenue from our portfolio of domain names parking monetization, whereby the Company contracts with third-party Internet advertising publishers to direct web traffic from the Company's domain expiry stream domains and Internet portfolio domains to advertising websites. Compensation from Internet advertising publishers is calculated variably on a cost-per-action basis based on the number of advertising links that have been visited in a given month.

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. Domain portfolio names are sold through our premium domain name service, auctions or in negotiated sales. The size of our domain name portfolio varies over time, as we acquire and sell domains on a regular basis to maximize the overall value and revenue generation potential of our portfolio. In evaluating names for sale, we consider the potential foregone revenue from pay-per-click advertising, as well as other factors. The name will be offered for sale if, based on our evaluation, the name is deemed non-essential to our business and management believes that deriving proceeds from the sale is strategically more beneficial to the Company.

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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" in the Notes to the Consolidated Financial Statements for the year ended December 31, 2018 ("Fiscal 2018") 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 our consolidated financial statements in conformity with U.S. GAAP requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate the application of these estimates, including those related to the recoverability of investments, useful lives and valuation of intangible assets, valuation of goodwill, fair value measurement of assets and liabilities, product development costs, revenue recognition and deferred revenue and accounting for income taxes. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual amounts could differ significantly from these estimates.

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, domain sale contracts, and other advertising revenue. 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 18 – Segment reporting for more information.

(a) Network Access Services

The Company generates Network Access Services revenues primarily through the provisioning of mobile services ("Ting Mobile"). Other sources of revenue include the provisioning of fixed high-speed Internet access (Ting Internet) as well as billing solutions to ISPs.

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.

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.

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.

Our Roam Mobility brands also offer standard talk, text and data mobile services. Roam customers prepay for their usage through the Roam Mobility website. When prepayments are received the amount is deferred, and subsequently recognized as the Company satisfies its obligation to provide mobile services. In addition, revenues associated with the sale of SIM cards 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 ratably 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.

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Domain related value-added services like digital certifications, WHOIS privacy and hosted email provide our resellers and retail registrant customers 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.

Advertising revenue is derived through domain parking monetization, whereby the Company contracts with third-party Internet advertising publishers to direct web traffic from the Company’s domain expiry stream domains and Internet portfolio domains to advertising websites. Compensation from Internet advertising publishers is calculated variably on a cost-per-action basis based on the number of advertising links that have been visited in a given month. Given that the variable consideration is calculated and paid on a monthly basis, no estimation of variable consideration is required.

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, 2018, we had $90.1 million in goodwill related to our acquisitions and $49.4 million in intangible assets comprised of indefinite life intangibles of $12.4 million and finite life intangible assets of $37.0 million. At December 31, 2017, we had $90.1 million in goodwill related to our acquisitions and $58.4 million in intangible assets comprised of indefinite life intangibles of $12.8 million and finite life intangible assets of $45.7 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 the sale of retail mobile phones, telephony services, fixed high speed internet access, Internet hosting and network consulting services. Ninety–eight percent of goodwill relates to our Domain Services operating segment and 2% of goodwill relates to our Network Access segment. Of our goodwill balance, $81.0 million is not deductible for

tax purposes. Ninety-four percent of intangible assets relate to our Domain Services operating segment and 6% 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. We recorded an impairment charge of nil and $0.1 million in 2018 and 2017 respectively and less than $0.1 million in 2016.

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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. There was no impairment recorded on definite-life intangible assets and property and equipment during 2018, 2017 or 2016.

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 2018, 2017 or 2016.

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, 2018, the valuation allowance of $4.1 million was related to foreign tax credits and net operating losses that we are not expected to realize.

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 legacy domain services. In addition, 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 Fiscal 2018, 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. Based on the Company's examination of administrative practices and precedents by the IRS, we believe that on a more likely than not basis that our tax position will be sustained. If the position is not sustained, then the accounting method change would be deferred into the following taxation period and we may be subject to incremental taxes as well as interest and penalties.

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. For the year ended December 31, 2017, we recorded in our provision for income taxes a net $5.8 million reduction to income tax expense related to the implementation impact of the Act. The net positive impact amount related to the remeasurement of certain deferred tax assets and liabilities, based on the rates at which they are expected to reverse in the future, was $10.0 million. This positive impact was offset by us recording a valuation allowance of $1.3 million related to prior year foreign tax credits as we have determined there is insufficient foreign source income projected to utilize these credits. In addition, we opted to utilize our 2017 foreign taxes paid as a deduction rather than a credit, the net negative impact of which was $2.9 million, as we have insufficient foreign sourced income to utilize these credits. The amount related to the one-time transition tax on the mandatory deemed repatriation of foreign earnings was less than $0.1 million.

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.

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RESULTS OF OPERATIONS FOR THE YEAR ENDED DECEMBER 31, 2018 AS COMPARED TO THE YEAR ENDED DECEMBER 31, 2017

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,**	
	2018	**2017**
Network Access Services:		
Mobile Services	$89,340	$83,885
Other Services	7,984	5,567
Total Network Access Services	97,324	89,452
Domain Services:		
Wholesale		
Domain Services	189,434	183,731
Value Added Services	17,756	17,832
Total Wholesale	207,190	201,563
Retail	34,524	31,649
Portfolio	6,975	6,757
Total Domain Services	248,689	239,969
	$346,013	$329,421
Increase over prior period	$16,592	
Increase - percentage	5 %	

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

	Year ended December 31, 2018	2017
Network Access Services:		
Mobile Services	26 %	25 %
Other Services	2 %	2 %
Total Network Access Services	28 %	27 %
Domain Services:		
Wholesale		
Domain Services	55 %	56 %
Value Added Services	5 %	5 %
Total Wholesale	60 %	61 %
Retail	10 %	10 %
Portfolio	2 %	2 %
Total Domain Services	72 %	73 %
	100 %	100 %

Total net revenues for Fiscal 2018 increased by $16.6 million, or 5%, to $346.0 million from $329.4 million for the fiscal year ended December 31, 2017 ("Fiscal 2017"). The overall increase in revenue was primarily driven by full year impact of the 2017 acquisitions of Enom and Roam Mobility, the expanding footprint of Ting Internet, organic growth in both Ting Mobile services and wholesale domain services and the $16.9 million acceleration of revenue related to the Namecheap bulk transfer of 2.8 million names throughout 2018, a portion of which would have otherwise been recognized after Fiscal 2018. Revenue also increased as compared to fiscal 2017 because eNom revenues 2017 were negatively impacted by amortizing into revenue, deferred revenue that was recorded at fair value at the acquisition date which was approximately 10% lower than the historical cost basis of eNom. The increase in revenue was partially offset by a subsequent decline in ongoing domain registrations related to the departure of Namecheap and lower mobile device sales due to reduced demand for higher priced devices. Deferred revenue from domain name registrations and other Internet services at December 31, 2018 decreased to $143.7 million from $160.6 million at December 31, 2017, primarily due to the bulk transfers discussed above.

No customer accounted for more than 10% of revenue during Fiscal 2018 or Fiscal 2017, and no customers accounted for more than 10% of accounts receivable as of December 31, 2018 and 2017. 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 2018, as compared to Fiscal 2017, increased by $5.5 million or 7% to $89.3 million. This increase primarily reflects the growth in service revenue, which grew by $6.9 million to $80.4 million as compared to Fiscal 2017. Revenues from the sale of mobile hardware and related accessories decreased by $1.4 million to $8.9 million in Fiscal 2018. The decrease in device revenue was primarily driven by reduced demand for higher-priced devices compared to the Fiscal 2017.

High speed Internet access, and network consulting services generated $8.0 million in revenue during Fiscal 2018, up $2.4 million from Fiscal 2017. Growth in Ting Internet revenues was as a result of the increased Ting Internet footprint in Charlottesville, VA, Westminster, MD and Holly Springs, NC. The Company began offering Ting Internet in Sandpoint, ID in the second quarter of 2018 and in Centennial, CO in the third quarter of 2018. We expect continued expansions in our existing Ting towns as well as new builds in the Raleigh-Durham region and other communities to be announced to contribute revenue growth in 2019.

As of December 31, 2018, Ting Mobile had 163,000 mobile subscribers and 296,000 mobile devices under its management compared to 166,000 subscribers and 282,000 devices under its management as of December 31, 2017.

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Domain Services

Wholesale

During Fiscal 2018, wholesale domain services revenue increased by $5.7 million to $189.4 million. The increase was driven by the accelerated recognition of $16.9 million in domain revenue associated with the Namecheap bulk transfer of 2.8 million names during 2018, of which approximately $5.0 million would have been otherwise recognized after Fiscal 2018. The increase in wholesale domain revenue was also driven by the organic growth and price increases associated with the Company's existing customer base of $4.9 million. Revenue also increased compared to Fiscal 2017 because eNom revenues and gross margins in 2017 were negatively impacted by amortizing into revenue, deferred revenue that was recorded at fair value at the acquisition date which was approximately 10% lower than the historical cost basis of eNom. The increase in revenue was partially offset by a decrease in revenue associated with a decline in the number of overall transactions from new, renewed and transferred-in domain name registrations, which has decreased to 17.4 million from 19.4 million when compared to Fiscal 2017. The overall decrease in new, renewed and transferred-in domain name registrations was primarily driven by the migration of Namecheap, a low margin customer who moved their domain management and domain transaction processing to their own accreditation and in-house system. We anticipate that the number of new, renewed and transferred-in domain name registrations will continue to be impacted by decisions that large volume customers make with regard to acquiring their own accreditations, as well as the impact on the market, of the significant expansion in the number of new gTLDs added pursuant to the implementation of ICANN's new gTLD Program. 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.

Value-added services decreased by $0.1 million to $17.8 million when compared to Fiscal 2017. The decrease in revenue from Fiscal 2017 was primarily driven by decreased expiry stream revenue.

Retail

Net revenues from retail for Fiscal 2018, as compared to Fiscal 2017, increased by $2.9 million to $34.5 million. This increase was primarily due to the full year impact of the acquisition of eNom and to a lesser extent growth in our incumbent retail operations, Hover.

Portfolio

Net revenues from portfolio for Fiscal 2018, as compared to Fiscal 2017, increased by $0.2 million to $7.0 million. The increase is primarily due to a large bulk sale of names in the fourth quarter of 2018.

COST OF REVENUES

Network Access Services

Mobile

Cost of revenues for mobile services includes the costs of provisioning mobile services, which is primarily our customers' voice, messaging, data usage provided by our Network Operators, 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.

Other Services

Cost of revenues for other services 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 write-downs and fees paid to third-party service providers primarily for printing services in connection with billing services to ISPs.

Wholesale

Domain Service

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.

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.

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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. As the total names in our portfolio continue to grow, this cost will become a more significant component of our cost of revenues. 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.

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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, 2018**	**2017**
Network Access Services:		
Mobile Services	$46,061	$45,335
Other Services	3,994	3,305
Total Network Access Services	50,055	48,640
Domain Services:		
Wholesale		
Domain Services	160,216	161,013
Value Added Services	3,154	2,450
Total Wholesale	163,370	163,463
Retail	17,725	17,346
Portfolio	953	1,151
Total Domain Services	182,048	181,960
Network Expenses:		
Network, other costs	9,846	9,324
Network, depreciation and amortization costs	7,294	4,976
	17,140	14,300
	$249,243	$244,900
Increase over prior period	$4,343	
Increase - percentage	2 %	

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

	Year ended December 31,	
	2018	**2017**
Network Access Services:		
Mobile Services	18 %	19 %
Other Services	2 %	1 %
Total Network Access Services	20 %	20 %
Domain Services:		
Wholesale		
Domain Services	65 %	66 %
Value Added Services	1 %	1 %
Total Wholesale	66 %	67 %
Retail	7 %	7 %
Portfolio	0 %	0 %
Total Domain Services	73 %	74 %
Network Expenses:		
Network, other costs	4 %	4 %
Network, depreciation and amortization costs	3 %	2 %
	7 %	6 %
	100 %	100 %

Total cost of revenues for Fiscal 2018 increased by $4.3 million, or 2%, to $249.2 million from $244.9 million in Fiscal 2017. This increase primarily resulted from the increase in network and people costs associated with the continuing expansion of the Ting Fiber footprint and to a lesser extent, restructuring charges associated with terminating an unfavourable Roam Mobility service supply contract. Prepaid domain registration and other Internet services fees as of December 31, 2018 decreased by $20.5 million, or 16%, to $106.5 million from $127.0 million at December 31, 2017.

Network Access Services

Mobile and Other Services

Cost of revenues from mobile phone equipment and services for Fiscal 2018, as compared to Fiscal 2017, increased by $0.7 million or 2% to $46.1 million. This increase primarily reflects the impact of mobile service costs of revenue which grew by $2.3 million to $36.5 million as compared to Fiscal 2017. The increase in mobile service costs of revenue include restructuring charges associated with terminating an unfavourable Roam Mobility service supply contract for $0.4 million. Mobile hardware, shipping and related accessories costs decreased $1.6 million to $9.6 million. The decrease in device cost of revenue was primarily driven by reduced demand for higher-priced devices compared to the Fiscal 2017.

In addition, in Fiscal 2018, we incurred costs of $4.0 million in provisioning high speed Internet access and network consulting services as compared to $3.3 million during Fiscal 2017. The increase in costs was primarily due to the expansion of the Ting Fiber foot print and increasing subscriber base.

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Domain Services

Wholesale

Domain Service

Costs for wholesale domain services for Fiscal 2018 decreased by $0.8 million to $160.2 million, when compared to Fiscal 2017. The decrease was driven by a $8.9 million decrease due to the decline in overall transactions from new, renewed and transferred-in domain name registrations to 17.4 million from 19.4 million when compared to Fiscal 2017. The overall decrease in new, renewed and transferred-in domain name registrations was primarily driven by the migration of Namecheap, a low margin customer who moved their domain management and domain transaction processing to their own accreditation and in-house system. The decrease was partially offset by the accelerated recognition of $16.7 million in cost of revenue associated with the Namecheap bulk transfer of 2.8 million names during 2018, of which approximately $4.9 million would have been otherwise recognized after Fiscal 2018. The decrease was also offset by organic growth in existing customers $3.2 million.

Value-Added Services

Costs for wholesale value-added services for Fiscal 2018 increased by $0.7 million to $3.2 million, when compared to Fiscal 2017. The increase in cost of revenue is primarily related to organic growth in certification and email sales during Fiscal 2018.

Retail

Costs for retail for Fiscal 2018 increased by $0.4 million, to $17.7 million, when compared to Fiscal 2017. This increase was primarily due to the full year impact of the acquisition of eNom and to a lesser extent growth in our incumbent retail operations, Hover.

Portfolio

Costs for portfolio decreased by $0.2 million for Fiscal 2018, to $1.0 million when compared to Fiscal 2017, the decrease in cost is primarily driven by a lower cost per name sold as compared to Fiscal 2017.

Network Expenses

Network costs for Fiscal 2018 increased by $2.8 million to $17.1 million when compared to Fiscal 2017, 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,**	
	2018	**2017**
Sales and marketing	$33,063	$29,423
Increase over prior period	$3,640	
Increase - percentage	12 %	
Percentage of net revenues	10 %	9 %

Sales and marketing expenses for Fiscal 2018 increased by $3.6 million, or 12%, to $33.1 million as compared to Fiscal 2017. This increase primarily related to a $3.3 million increase in workforce, travel, contract services and stock-based compensation, which was driven by the growth in network access initiatives. In addition, marketing and other expenses increased $0.3 million largely to support and acquire Ting Mobile and fixed Internet access subscribers.

Excluding movements in exchange rates, we expect sales and marketing expenses for the fiscal year ending December 31, 2019 ("Fiscal 2019") 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.

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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,**	
	2018	**2017**
Technical operations and development	$8,748	$7,258
Increase over prior period	$1,490	
Increase - percentage	21 %	
Percentage of net revenues	3 %	2 %

Technical operations and development expenses for Fiscal 2018 increased by $1.5 million, or 21%, to $8.7 million. The increase in costs relate primarily to the full year impact of the eNom acquisition, increased salaries and benefits, contract services and stock-based compensation driven by an expanding workforce and wage inflation.

Excluding movements in exchange rates, we expect technical operations and development expenses for Fiscal 2019, in absolute dollars, to increase when compared to Fiscal 2018 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,**

	2018	2017
General and administrative	$17,710	$13,594
Increase over prior period	$4,116	
Increase - percentage	30 %	
Percentage of net revenues	5 %	4 %

General and administrative expenses for Fiscal 2018 increased by $4.1 million, or 30%, to $17.7 million as compared to Fiscal 2018. The increase was primarily the result of an increase in workforce, contract services and stock-based compensation related costs of $3.8 million due to expanding workforce, unfavourable foreign exchange impacts and wage inflation. The increase was also related to an increase in credit card processing fees and other administrative costs of $0.3 million.

Excluding movements in exchange rates, we expect general and administrative expenses for Fiscal 2019, in absolute dollars, to increase when compared to Fiscal 2018 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,**	
	2018	**2017**
Depreciation of property and equipment	$424	$585
Decrease over prior period	$(161)	
Decrease - percentage	(28)%	
Percentage of net revenues	0 %	0 %

Depreciation costs for Fiscal 2018 decreased to $0.4 million when compared to $0.6 million for Fiscal 2017. The decrease is driven by decreased purchases of equipment in 2018, compared to 2017 when the Company's purchased equipment increased due to the acquisition of eNom.

AMORTIZATION OF INTANGIBLE ASSETS

(Dollar amounts in thousands of U.S. dollars)	**Year ended December 31,**	
	2018	**2017**
Amortization of intangible assets	$7,247	$6,566
Increase over prior period	$681	
Increase - percentage	10 %	
Percentage of net revenues	2 %	2%

Amortization of intangible assets increased $0.7 million for Fiscal 2018, to $7.2 million. The increase in amortization is primarily related to customer acquisitions totalling $0.6 million throughout 2018 and the full year impact of acquisitions during 2017.

Network rights, brand and customer relationships acquired in connection with the acquisitions the BRI Group in February 2015, the international reseller channel of Melbourne IT in April 2016, eNom in January 2017, and Roam Mobility in September of 2017 and immaterial acquisitions in 2018 are amortized on a straight-line basis over seven years.

IMPAIRMENT OF INDEFINITE LIFE INTANGIBLE ASSETS

(Dollar amounts in thousands of U.S. dollars)	**Year ended December 31,**	
	2018	**2017**
Impairment of indefinite life intangible assets	$-	$111
Decrease over prior period	$(111)	
Decrease - percentage	(100%)	
Percentage of net revenues	- %	0 %

As part of our normal renewal process, we assess whether certain domain names acquired in the June 2006 acquisition of Mailbank.com Inc. should not be renewed and be allowed to expire. During Fiscal 2018, we renewed all of the acquired domain names. In Fiscal 2017, we assessed that that acquired domain names with a book value of less than $0.1 million should be written off and accordingly, we recorded an impairment of indefinite life intangible assets.

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,**	
	2018	**2017**
Loss (gain) on currency forward contracts	$254	$(98)
Increase over prior period	$352	
Increase - percentage	359%	
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 2018, the Company recorded a net loss of $0.2 million on the change in fair value of outstanding contracts as well as less than $0.1 million realized loss on matured contracts. In Fiscal 2017 the Company recorded a net loss of less than $0.1 million for the change in fair value of outstanding contracts and a gain $0.1 million of settlements of contracts not designated as hedges.

At December 31, 2018, our balance sheet reflects a derivative instrument liability of $1.3 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.

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OTHER INCOME (EXPENSES)

(Dollar amounts in thousands of U.S. dollars)	Year ended December 31,	
	2018	**2017**
Other income (expense), net	$(3,169)	$(3,007)
Increase over prior period	$(162)	
Increase - percentage	5 %	
Percentage of net revenues	1 %	1 %

Other expenses increased by $0.2 million when compared to Fiscal 2017 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. Within Other expense we also recognized $0.5 million of a positive financial contribution from a Joint Marketing agreement that we entered into in February 2015 where we waived our rights under a proposed joint venture to operate the online registry. The recognition of this gain was consistent with the amount recognized in Fiscal 2017. The deferred gain has been fully recognized as of December 31, 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,	
	2018	**2017**
Provision for income taxes	$9,020	$1,748
Increase in provision over prior period	$7,272	
Increase - percentage	416 %	
Effective tax rate	34 %	7 %

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 2018 includes tax on profits of $26.2 million compared to $24.1 million for Fiscal 2017. Our Fiscal 2017 income tax expense benefited from a net $5.8 million positive implementation impact from the Tax cuts and Jobs Act of 2017, more fully described below as well as the inclusion of a $2.8 million tax recovery related to the adoption of ASU 2016-09 in Fiscal 2017, 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 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 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 for 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.

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In Fiscal 2017, we reflected a net $5.8 million non-cash tax benefit through income from continuing operations for the re-measurement impact related to the changes in tax laws included in the Act. The primary driver of this re-measurement was the result of the reduction in the corporate tax rate from 35% to 21% which resulted in our recognizing, based on the rates at which they are expected to reverse in the future, a $10.0 million non-cash tax benefit through income from continuing operations for the re-measurement of our deferred tax assets and liabilities. This amount was partially offset by our recording a valuation allowance of $1.3 million related to prior year Foreign Tax Credits that we have determined are no longer more likely than not to be used as the tax rate in the jurisdiction where these Foreign Tax Credits is generated is higher than the 21% corporate tax rate. In addition, the impact of the prepaid registry fee deduction, more fully described below, together with the reduction in the tax rate to 21% made it unlikely we would be able to claim the Fiscal 2017 foreign taxes paid in future years and as such opted to utilise the foreign taxes paid as a deduction for 2017 income tax purposes, the net negative effect of which was a $2.9 million addition to income tax expense.

We had approximately $nil of total gross unrecognized tax benefit as of December 31, 2018 compared to $15,000 as of December 31, 2017.

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 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 U.S. 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), stock-based compensation, asset impairment, gains and losses from unrealized foreign currency transactions and infrequently occurring items. 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	**Twelve months ended December 31,**		
(In Thousands of US Dollars) **(unaudited)**	**2018** **(unaudited)**	**2017** **(unaudited)**	**2016** **(unaudited)**
Net income for the period	$17,135	$ 22,327	$ 16,067
Depreciation of property and equipment	5,722	3,728	1,824
Amortization of intangible assets	9,243	8,400	953
Impairment of intangible assets	-	111	43
Interest expense, net	3,687	3,567	450
Provision for income taxes	9,020	1,748	9,046
Stock-based compensation	2,574	1,457	799
Unrealized loss (gain) on change in fair value of forward contracts	207	17	(323)
Unrealized loss (gain) on foreign exchange revaluation of foreign denominated monetary assets and liabilities	943	(805)	829
Acquisition and other costs[1]	1,526	806	442
Adjusted EBITDA	$50,057	$ 41,356	$ 30,130

[1]Acquisition and other costs represents transaction-related expenses, transitional expenses, such as duplicative post-acquisition expenses, related to our acquisition of eNom in January 2017. 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, 2018 increased by $8.7 million, or 21% to $50.1 million when compared to the year ended December 31, 2017 with the increase primarily driven by an increase in gross margin compared to 2017 which is related to the fact that eNom's deferred revenue was recorded at fair value at the acquisition date which was approximately 10% lower than the historical cost basis of eNom. Adjusted EBITDA also increased due to the full year impact of the acquisition of eNom and to a lesser extent growth in domain services and Ting Mobile. Adjusted EBITDA for the year ended December 31, 2017 increased by $11.2 million, or 37% to $41.3 million when compared to the year ended December 31, 2016 with the increase primarily driven by the acquisition of eNom and to a lesser extent growth in domain services and Ting Mobile.

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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 2018 was a net loss in other comprehensive income of $0.8 million compared to a net loss of $0.1 million for Fiscal 2017.

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

(Dollar amounts in thousands of U.S. dollars)	**Year ended December 31,**	
	2018	**2017**
Other comprehensive income (loss)	$(810)	$(100)
Decrease over prior period	$(710)	
Decrease - percentage	710	
Percentage of net revenues	(0)	(0)%

The impact of the fair value adjustments on outstanding hedged contracts during 2018 was a loss in OCI of $1.0 million as compared to a gain of $0.5 million during 2017. The decrease in OCI is associated with the fact that at December 31, 2018, the Company had $36.5 million outstanding hedged forward contracts, as compared to Fiscal 2017 the Company had nil outstanding hedged forward contracts.

The net amount reclassified to earnings during 2018 was a gain of $0.2 million compared to a loss of $0.6 million during 2017.

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RESULTS OF OPERATIONS FOR THE YEAR ENDED DECEMBER 31, 2017 AS COMPARED TO THE YEAR ENDED DECEMBER 31, 2016

NET REVENUES

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.

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

(Dollar amounts in thousands of U.S. dollars)	**Year ended December 31,**	
	2017	**2016**
Network Access Services:		
Mobile Services	$83,885	$70,127
Other Services	5,567	4,179
Total Network Access Services	89,452	74,306
Domain Services:		
Wholesale		
Domain Services	183,731	89,010
Value Added Services	17,832	8,642
Total Wholesale	201,563	97,652
Retail	31,649	14,630
Portfolio	6,757	3,231
Total Domain Services	239,969	115,513
	$329,421	$189,819
Increase over prior period	$139,602	
Increase - percentage	74 %	

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

Year ended
December

	31, 2017	2016
Network Access Services:		
Mobile Services	25 %	37 %
Other Services	2 %	2 %
Total Network Access Services	27 %	39 %
Domain Services:		
Wholesale		
Domain Services	56 %	46 %
Value Added Services	5 %	5 %
Total Wholesale	61 %	51 %
Retail	10 %	8 %
Portfolio	2 %	2 %
Total Domain Services	73 %	61 %
	100 %	100 %

Total net revenues for Fiscal 2017 increased by $139.6 million, or 74%, to $329.4 million from $189.8 million for the fiscal year ended December 31, 2016 ("Fiscal 2016"). Deferred revenue from domain name registrations and other Internet services at December 31, 2017 increased to $160.6 million from $77.8 million at December 31, 2016.

No customer accounted for more than 10% of revenue during Fiscal 2017 or Fiscal 2016, and no customers accounted for more than 10% of accounts receivable as of December 31, 2017 and 2016. 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 Ting Mobile phone equipment and services for Fiscal 2017, as compared to Fiscal 2016, increased by $13.8 million or 20% to $83.9 million. This increase primarily reflects the impact the larger Ting subscriber base is having on Ting Mobile service revenue which grew by $11.1 million to $73.6 million as compared to Fiscal 2016 as well as the acquisition of the consumer related mobile roaming assets from Otono Networks Inc. (“Otono”) in September 2017. Revenues from the sale of mobile hardware and related accessories increased slightly by $2.7 million to $10.3 million in Fiscal 2017. This increase was due to increased mix of higher priced devices attributed to the increased sales of new Apple mobile devices under the direct supply agreement signed in the second quarter of 2017.

High speed Internet access, and network consulting services generated $5.6 million in revenue during Fiscal 2017, up $1.4 million from Fiscal 2016. Growth in High speed Internet access revenues was as a result of the increased Ting Fiber Internet footprint in Holly Springs, NC and Westminster, MD in Fiscal 2017. We expect continued expansions in Westminster, MD, Holly Springs, NC and Charlottesville, VA as well as new builds in Sandpoint, ID and Centennial, CO to contribute to revenue growth in 2018.

As of December 31, 2017, Ting Mobile had 166,000 mobile subscribers and 282,000 mobile devices under its management compared to 147,000 subscribers and 245,000 devices under its management as of December 31, 2016.

Domain Services

Wholesale

During Fiscal 2017, domain services revenue increased by $94.7 million to $183.7 million and the number of transactions from all new, renewed and transferred-in domain name registrations that we processed increased to 19.4 million from 9.9 million when compared to Fiscal 2016. These increases were primarily due to the acquisition of eNom and to a lesser extent the acquisition of the international reseller channel of Melbourne IT on April 1, 2016. Our gross margins were negatively impacted by amortizing into revenue, deferred revenue that was recorded at fair value at the acquisition date which was approximately 10% lower than the historical cost basis of eNom. The increase from the acquisition was somewhat impacted by the continued and ongoing migration of a few large, low margin customers. These customers have been moving their domain management and domain transaction processing to their own accreditations and in-house systems. We anticipate that the number of new, renewed and transferred-in domain name registrations will continue to be impacted by decisions that large volume customers make with regard to acquiring their own accreditations, as well as the impact on the market, of the significant expansion in the number of new gTLDs added pursuant to the implementation of ICANN's new gTLD program. 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. Primarily for the same factors impacting domain transactions mentioned above, total domains that we manage under our own accreditation increased to 22.3 million as of December 31, 2017, when compared to 11.4 million at December 31, 2016. In January 2018, the Company transferred on a bulk basis 2.65 million names under management for Namecheap. Also, as of December 31, 2017, total domains that we manage on behalf of other accredited registrars who use our technical systems to process domain registrations with their own accreditation, increased to 5.4 million when compared to 3.5 million at the end of December 31, 2016, primarily as a result of the acquisition of eNom.

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Value-added services increased by $9.2 million to $17.8 million when compared to Fiscal 2016. This increase was primarily due to the acquisition of eNom. Our gross margins were negatively impacted by amortizing into revenue, deferred revenue that was recorded at fair value at the acquisition date which was approximately 10% lower than the historical basis of eNom.

Retail

Net revenues from retail for Fiscal 2017, as compared to Fiscal 2016, increased by $17.0 million to $31.6 million. This increase was primarily due to the acquisition of eNom and to a lesser extent growth in our incumbent retail operations, Hover. Our gross margins were negatively impacted by amortizing into revenue, deferred revenue that was recorded at fair value at the acquisition date which was approximately 10% lower than the historical basis of eNom.

Portfolio

Net revenues from portfolio for Fiscal 2017, as compared to Fiscal 2016, increased by $3.5 million to $6.8 million. The increase is primarily due to a large bulk sale of names in the fourth quarter of 2017.

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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,**	
	2017	**2016**
Network Access Services:		
Mobile Services	$45,335	$35,915
Other Services	3,305	1,910
Total Network Access Services	48,640	37,825
Domain Services:		
Wholesale		
Domain Services	161,013	72,948
Value Added Services	2,450	2,032
Total Wholesale	163,463	74,980
Retail	17,346	6,766
Portfolio	1,151	616
Total Domain Services	181,960	82,362
Network Expenses:		
Network, other costs	9,324	5,210
Network, depreciation and amortization costs	4,976	1,368
	14,300	6,578
	$244,900	$126,765
Increase over prior period	$118,135	
Increase - percentage	93 %	

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

	Year ended December 31,	
	2017	**2016**
Network Access Services:		
Mobile Services	19 %	28 %

Other Services	1	%	2	%
Total Network Access Services	20	%	30	%
Domain Services:				
Wholesale				
Domain Services	66	%	59	%
Value Added Services	1	%	2	%
Total Wholesale	67	%	61	%
Retail	7	%	5	%
Portfolio	0	%	0	%
Total Domain Services	74	%	66	%
Network Expenses:				
Network, other costs	4	%	3	%
Network, depreciation and amortization costs	2	%	1	%
	6	%	4	%
	100	%	100	%

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Total cost of revenues for Fiscal 2017 increased by $118.1 million, or 93%, to $244.9 million from $126.8 million in Fiscal 2016. This increase primarily resulted from the acquisition of eNom on January 20, 2017, acquisition of the international reseller channel of Melbourne IT on April 1, 2016 and the impact Ting's larger subscriber base has on network access service costs. Prepaid domain registration and other Internet services fees as of December 31, 2017 increased by $66.6 million, or 110%, to $127 million from $60.4 million at December 31, 2016.

Network Access Services

Mobile and Other Services

Cost of revenues from Ting Mobile phone equipment and services for Fiscal 2017, as compared to Fiscal 2016, increased by $9.4 million or 26% to $45.3 million. This increase primarily reflects the impact the larger subscriber base had on Ting Mobile service cost of revenue as well as the acquisition of the mobile roaming assets from Otono Networks in September 2017 which combined grew by $5.7 million to $34.1 million as compared to Fiscal 2016. Mobile hardware, shipping and related accessories costs increased $3.7 million to $11.2 million reflecting an increased mix of higher cost devices attributed to the increased sales of new Apple mobile devices under the direct supply agreement signed in the second quarter of 2017.

In addition, in Fiscal 2017, we incurred costs of $3.3 million in provisioning high speed Internet access and network consulting services as compared to $1.9 million during Fiscal 2016. The increase in costs was primarily due to the expansion of the Ting Fiber foot print and increasing subscriber base.

Domain Services

Wholesale

Costs for wholesale domain and value-added services for Fiscal 2017 increased by $88.5 million to $163.5 million, when compared to Fiscal 2016. These increases were due to the acquisition of eNom and to a lesser extent acquisition of the international reseller channel of Melbourne IT in 2016.

Retail

Costs for retail for Fiscal 2017 increased by $10.6 million, to $17.3 million, when compared to Fiscal 2016. These increases resulted primarily from the acquisition of eNom and to a lesser extent the increased cost of additional volume in Hover services.

Portfolio

Costs for portfolio increased by $0.5 million for Fiscal 2017, to $1.2 million when compared to Fiscal 2016, primarily as a result of a bulk sale of names in the fourth quarter 2017 acquired in the June 2006 acquisition of Mailbank.com Inc.

Network Expenses

Network costs for Fiscal 2017 increased by $7.7 million to $14.3 million when compared to Fiscal 2016. The increase is primarily due to the acquisition of eNom, including acquired developed platform technology.

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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,**	
	2017	**2016**
Sales and marketing	$29,423	$20,755
Increase over prior period	$8,668	
Increase - percentage	42 %	
Percentage of net revenues	9 %	11 %

Sales and marketing expenses for Fiscal 2017 increased by $8.7 million, or 42%, to $29.4 million as compared to Fiscal 2016. This increase primarily related to a $6.6 million increase in workforce, travel and other workforce related costs driven by the growth in network access initiatives and the acquisition of eNom. In addition, marketing and other expenses increased $2.1 million largely to support and acquire Ting Mobile and fixed Ting Internet access subscribers.

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. All technical operations and development costs are expensed as incurred.

(Dollar amounts in thousands of U.S. dollars)	**Year ended December 31,**	
	2017	**2016**
Technical operations and development	$7,258	$4,495
Increase over prior period	$2,763	
Increase - percentage	61 %	
Percentage of net revenues	2 %	2 %

Technical operations and development expenses for Fiscal 2017 increased by $2.8 million, or 61%, to $7.3 million due to mainly to the acquisition of eNom.

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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,**	
	2017	**2016**
General and administrative	$13,594	$11,405
Decrease over prior period	$2,189	
Decrease - percentage	19 %	
Percentage of net revenues	4 %	6 %

General and administrative expenses for Fiscal 2017 increased by $2.2 million, or 19%, to $13.6 million as compared to Fiscal 2016. This was primarily the result of professional fees increase of $0.8 million related to the acquisition of eNom and the Namecheap litigation. Workforce related costs increased $1.0 million due mainly to the acquisition of eNom. Credit card processing fees, facilities costs and other expenses increased $1.2 million primarily to support growth of network access and also due to the acquisition of eNom. These increases were offset by a reduction expenses due to foreign exchange gains as the Company experienced a foreign exchange gain of $0.7 million in Fiscal 2017 as compared to a $0.1 million loss in Fiscal 2016.

DEPRECIATION OF PROPERTY AND EQUIPMENT

(Dollar amounts in thousands of U.S. dollars)	**Year ended December 31,**	
	2017	**2016**
Depreciation of property and equipment	$585	$504
Decrease over prior period	$82	
Decrease - percentage	16 %	
Percentage of net revenues	0 %	0 %

Depreciation costs for Fiscal 2017 increased to $0.6 million when compared to $0.5 million for Fiscal 2016 driven primarily by the acquisition of eNom.

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AMORTIZATION OF INTANGIBLE ASSETS

(Dollar amounts in thousands of U.S. dollars)	**Year ended December 31,**	
	2017	**2016**
Amortization of intangible assets	$6,566	$905
Increase over prior period	$5,661	
Increase - percentage	625 %	
Percentage of net revenues	2 %	0 %

Amortization of intangible assets increased $5.7 million for Fiscal 2017, to $6.6 million. The increase in amortization reflects the impact of the acquisition of eNom. In the acquisition, the Company acquired intangible assets related to brand and customer relationships totaling $40.4 million.

Network rights, brand and customer relationships acquired in connection with the acquisitions the BRI Group in February 2015, the international reseller channel of Melbourne IT in April 2016, and eNom in January 2017 are amortized on a straight-line basis over seven years.

IMPAIRMENT OF INDEFINITE LIFE INTANGIBLE ASSETS

(Dollar amounts in thousands of U.S. dollars)	**Year ended December 31,**	
	2017	**2016**
Impairment of indefinite life intangible assets	$111	$ 43
Increase over prior period	$69	
Increase - percentage	161%	
Percentage of net revenues	0 %	0 %

As part of our normal renewal process during Fiscal 2017 and Fiscal 2016, we assessed that certain domain names acquired in the June 2006 acquisition of Mailbank.com Inc. should not be renewed and were allowed to expire. Accordingly, these domain names, with a book value of $0.1 million and less than $0.1 million have been written off and recorded as impairment of indefinite life intangible assets for Fiscal 2017 and Fiscal 2016, respectively.

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,**	
	2017	**2016**
Loss (gain) on currency forward contracts	$(98)	$(99)
Increase over prior period	$1	
Increase - percentage	(1)%	
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 2017. The impact of the fair value adjustment on outstanding contracts for Fiscal 2017 was a net loss of less than $0.1 million compared to net gain of $0.3 million for Fiscal 2016. The impact of the fair value adjustment on outstanding contracts was decreased by a realized gain upon settlement of currency forward contracts of $0.1 million for Fiscal 2017 compared to a realized loss of $0.2 million for Fiscal 2016.

At December 31, 2017, we did not hold any forward contracts.

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OTHER INCOME AND (EXPENSES)

(Dollar amounts in thousands of U.S. dollars)	**Year ended December 31,**	
	2017	**2016**
Other income (expense), net	$(3,007)	$ 66
Increase over prior period	$(3,073)	
Increase - percentage	(4,630)%	
Percentage of net revenues	(1)%	0 %

Other income decreased by $3.1 million when compared to Fiscal 2016 primarily due to interest incurred on our credit facility with the majority of the borrowings on the credit facility to support the acquisition of eNom. Within Other income we also recognized $0.5 million of a positive financial contribution from a Joint Marketing agreement that we entered into in February 2015 where we waived our rights under a proposed joint venture to operate the .online registry. The recognition of this gain was consistent with the amount recognized in Fiscal 2016.

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,**	
	2017	**2016**
Provision for income taxes	$1,748	$9,046
Decrease in provision over prior period	$(7,298)	
Decrease - percentage	(81)%	
Effective tax rate	7.3 %	36.0 %

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 2017 includes tax on profits of $24.1 million compared to $25.1 million for Fiscal 2016. Our Fiscal 2017 income tax expense benefited from a net $5.8 million positive implementation impact from the Act, more fully described below, as well as the inclusion of a $2.8 million tax recovery related to the adoption of ASU 2016-09 in Fiscal 2017, 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.

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, and a one-time transition tax on the mandatory deemed repatriation of foreign earnings. We have calculated our best estimate of the impact of the Act in our year end income tax provision in accordance with our understanding of the Act and guidance available as of the date of this filing and as a result have recorded $5.8 million in reduced income tax expense in the fourth quarter of 2017, the period in which the legislation was enacted. The provisional amount related to the remeasurement of certain deferred tax assets and liabilities, based on the rates at which they are expected to reverse in the future, was $10.0 million. This amount was partially offset by our recording a valuation allowance of $1.3 million related to prior year Foreign Tax Credits that we have determined are no longer more likely than not to be used because the tax rate in the jurisdiction where these Foreign Tax Credits is generated is higher than the 21% corporate tax rate. In addition, in connection with the eNom acquisition, 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 legacy domain services. The impact of this together with the reduction in tax rate to 21% make it unlikely we will be able to claim the fiscal 2017 foreign taxes paid in future years and as such opted to utilise the foreign taxes paid as a deduction for 2017 income tax purposes, the net negative effect of which is a $2.9 million addition to income tax expense. The provisional amount related to the one-time transition tax on the mandatory deemed repatriation of foreign earnings was less than $0.1 million.

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We had approximately $15,000 of total gross unrecognized tax benefit as of December 31, 2017 compared to $0.1 million as of December 31, 2016 which if recognized would favorably affect our income tax rate in future periods. The unrecognized tax benefit relates primarily to insignificant U.S. state taxes.

A reconciliation of the federal statutory income tax rate to our effective tax rate is set forth in "Note 9 – Income Taxes" of Notes to 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 2017 was a net loss in other comprehensive income of $0.1 million compared to a net gain of $1.2 million for Fiscal 2016.

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

(Dollar amounts in thousands of U.S. dollars)	**Year ended December 31,**	
	2017	**2016**
Other comprehensive income (loss)	$(99)	$1,209
Decrease over prior period	$(1,308)	
Decrease - percentage	(108)%	
Percentage of net revenues	(0)%	1%

Liquidity and capital resources

As of December 31, 2018, our cash and cash equivalents balance decreased $5.4 million when compared to December 31, 2017. Our principal uses of cash were $19.6 million in loan repayments, $1.2 million for the remaining 10% interest in Ting Virginia, LLC, $0.3 million of other costs including tax payment associated with stock option exercises net of proceeds, $0.6 million of acquisitions of customer relationships and continued investment in property and equipment of $27.9 million. These uses of cash were offset by proceeds from an advances of $7.0 million from our 2017 Amended Credit Facility (defined below) to fund Fiber to the Home program (“FTTH”) and cash provided by operating activities of $37.2 million.

2017 Amended Credit Facility

On January 20, 2017, the Company and certain of its subsidiaries entered into a First Amended and Restated Credit Agreement (the “2017 Amended Credit Agreement”) with Bank of Montreal (“BMO”), Royal Bank of Canada (“RBC”) and Bank of Nova Scotia (the “Lenders”) under which the Company increased its access to funds to an aggregate of $140 million. The 2017 Amended Credit Agreement amends and restates the Company’s Credit Agreement, dated as of August 18, 2016, with BMO and RBC (the “2016 Credit Agreement”). The 2017 Amended Credit Agreement, among other things, reduced the existing Tucows non-revolving facility (such existing non-revolving facility, together with other existing facilities, the “Existing Facilities”) from $40.0 million to $35.5 million, and established a new non-revolving credit facility of $85 million (the “New Facility”, and together with the Existing Facilities, the “2017 Amended Credit Facility”). The obligations of the Company under the 2017 Amended Credit Agreement are secured by a first priority lien on substantially all of the personal property and assets of the Company.

Borrowings under the 2017 Amended Credit Agreement accrue interest and standby fees at variable rates based on borrowing elections by the Company and the Company’s total funded debt to EBITDA as described below and set forth in more detail in the 2017 Amended Credit Agreement. The table below summarizes the details of the 2017 Amended Credit Facility.

Facility	Purpose	Repayment Terms	Amortization Terms
Facility A	General working capital and general corporate requirements	Monthly interest payments; final principal payment due upon maturity	n/a
Facility B	Share repurchases, acquisitions, and capital expenditures associated with FTTH program	Outstanding balances as of December 31 drawn during year payable on quarterly basis beginning in first quarter of following year for applicable period of amortization	Four to seven years depending on purpose of draw

Facility C	Share repurchases, acquisitions, and capital expenditures associated with FTTH program	Each draw payable beginning the first full quarter post-initial draw for applicable period of amortization	Four to seven years depending on purpose of draw
Facility D (1)	eNom acquisition	Each draw payable beginning the first full quarter post-initial draw for applicable period of amortization	Five years

(1) Contemporaneously with entering into the 2017 Amended Credit Agreement, the Company drew down $84.5 million to fund the acquisition of eNom. The unused portion of the New Facility, approximately $0.5 million was cancelled in accordance with the terms of the 2017 Amended Credit Agreement.

The 2017 Amended Credit Agreement includes an additional repayment mechanism that is triggered based on the Company's total funded debt to EBITDA calculation at the end of each fiscal year. If total funded debt to EBITDA exceeds 2.25:1 at December 31 of each year during the term, the Company is obligated to make a repayment of 50% of excess cash flow, all as set forth in the 2017 Amended Credit Agreement.

The 2017 Amended Credit Agreement contains customary events of default and affirmative and negative covenants and restrictions, including certain financial maintenance covenants such as a maximum total funded debt to EBITDA ratio and a minimum fixed charge ratio. As of December 31, 2018, we were in compliance with all our covenants.

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On June 6, 2017, the Company entered into the First Amendment to the 2017 Amended Credit Agreement (the “First Amendment”) with BMO and the Lenders. Among other things, the First Amendment (i) increases the amount available for borrowing under Facility C, a committed, non-revolving credit facility by $502,500, which was the portion of Facility D which was not used by the Company to fund its acquisition of eNom and was cancelled in accordance with the Credit Agreement, (ii) allows the Company to maintain bank accounts with Commonwealth Bank of Australia, subject to certain restrictions, (iii) provides for an extension of time for the Company to transfer its bank accounts from Silicon Valley Bank, and (iv) amends certain definitions, including the definition of “EBITDA” to provide for an add-back in respect of certain liabilities.

On December 5, 2017, the Company entered into the Interim Amendment to the 2017 Amended Credit Agreement (the “Interim Amendment”) with BMO and the Lenders. The Interim Amendment provides that BMO and the Bank of Nova Scotia may establish corporate credit card facilities with the Company and amends the definition of “Obligations” to include an aggregate amount of up to $5.0 million of the credit card facilities in the definition of Obligations.

On January 24, 2018, the Company entered into the Second Interim Amendment to the 2017 Amended Credit Agreement (the “Second Interim Amendment”) with BMO and the Lenders. The Second Interim Amendment provides that certain defined terms in Section 1.01 of the 2017 Amended Credit Agreement are added and updated to reflect the inclusion of liabilities to Sprint Mobile similar to the previous inclusion of T-Mobile liabilities. The Second Interim Amendment also permits Tucows to retain bank accounts with Silicon Valley Bank with the aggregate amount held in such accounts not to exceed $3.0 million.

For more information on the 2017 Amended Credit Agreement, please see Note 8 -Loan Payable of the Notes to the Consolidated Financial Statements of the Company.

Other Credit Facilities

In addition to the 2017 Amended Credit Agreement, the Company is party to a Loan Agreement with BMO, as amended from time to time, most recently in June 2017 (the “2012 Amended Credit Agreement”), pursuant to which the Company currently maintains a treasury risk management facility and credit card facility.

The treasury risk management facility under the 2012 Amended Credit Agreement provides for a $3.5 million settlement risk line to assist the Company with hedging Canadian dollar exposure through foreign exchange forward contracts and/or currency options. Under the terms of the 2012 Amended Credit Agreement, the Company may enter into such agreements at market rates with terms not to exceed 18 months. As of December 31, 2018, the Company held contracts in the amount of $40.5 million to trade U.S. dollars in exchange for Canadian dollars.

In the fourth quarter of 2017, the Company entered into a corporate credit card program with the Bank of Nova Scotia and the remaining Lenders. The program provides that BMO and the Bank of Nova Scotia may establish corporate credit card facilities with the Company in an amount of up to $5 million.

The 2012 Amended Credit Agreement also provided the Company with access to two revolving demand loan facilities (the “2012 Demand Loan Facilities”), and an operating demand loan. In connection with entering into the 2016 Credit Agreement, the Company repaid its outstanding indebtedness of the 2012 Demand Loan Facilities. With the settlement of the outstanding indebtedness, the 2012 Demand Loan Facilities and the operating demand loan were simultaneously terminated and the outstanding balances were fully repaid through advances made under the 2016 Credit Agreement.

Cash Flow from Operating Activities

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.

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Year ended December 31, 2017

Net cash inflows from operating activities were $31.9 million, an increase of 42% when compared to the prior year. Net income, after adjusting for non-cash charges, during Fiscal 2017 was $30.0 million, an increase of 43% when compared to the prior year. Net income included non-cash charges and recoveries of $7.7 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 $1.9 million. We generated $11.1 million from movements in accounts receivables, deferred revenue, deferred registration costs income taxes recoverable and customer deposits. These positive contributions were offset by cash use of $9.2 million to invest in accounts payables, accreditation fees, inventory, prepaid expenses and deposits and accrued liabilities.

Year ended December 31, 2016

Net cash inflows from operating activities were $22.5 million, an increase of 34% when compared to the prior year. Net income, after adjusting for non-cash charges, during Fiscal 2016 was $21.0 million, an increase of 20% when compared to the prior year. Net income included non-cash charges and recoveries of $4.9 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 $1.5 million. We generated $11.4 million from movements in accounts payable, deferred revenue, income taxes recoverable, customer deposits and accrued liabilities. These positive contributions were offset by cash use of $9.9 million to invest in deferred registration costs, accounts receivable, inventory, prepaid expenses and deposits.

Cash Flow from Financing Activities

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.

Year ended December 31, 2017

Net cash inflows from financing activities during Fiscal 2017 totaled $65.2 million as compared to cash outflows of $0.7 million during Fiscal 2016. Net cash inflows of $87.0 million resulting from draws on the 2017 Amended Credit Facility to fund the acquisition of eNom and to fund FTTH capital expenditures. These cash inflows were partially offset by outflows of $20.0 million of principal repayments relating to our 2017 Credit Amended Credit Facility, $1.2 million outflow from the net impact of exercise of stock options and $0.6 million of debt issuance costs.

Year ended December 31, 2016

Net cash inflows from financing activities during Fiscal 2016 totaled $0.7 million as compared to cash outflows of $20.6 million during the year ended December 31, 2015. Net cash inflows of $11.0 million resulting from draws on the 2016 Credit Facility to repay balances outstanding of the 2012 Demand Loan Facilities and to fund FTTH capital expenditures and the proceeds from a $6.0 million draw on the 2012 Demand Loan Facilities to fund the Melbourne IT reseller channel acquisition. These cash inflows were partially offset by outflows of $7.2 million resulting from the repurchasing of 308,416 of our shares during Fiscal 2016 through our open market stock buyback that commenced on February 9, 2016, principal repayments of $9.8 million relating to our 2012 Demand Loan Facilities and 2016 Credit Facility, $0.5 million of discount and debt issuance costs, and a $0.2 million outflow from the net impact of exercise of stock options.

Cash Flow from Investing Activities

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.

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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, VA, Holly Springs, NC and Westminster, MD. We expect our capital expenditures on building and expanding our fiber network to remain significant during Fiscal 2019, including construction of new networks in the greater Raleigh-Durham area.

Year ended December 31, 2017

Investing activities during the Fiscal 2017 used net cash of $94.1 million as compared to using $14.4 million during Fiscal 2016.

On January 20, 2017, the Company entered into a Stock Purchase Agreement (the “Purchase Agreement”) with its indirect wholly owned subsidiary, Tucows (Emerald), LLC, Rightside Group, Ltd., and Rightside Operating Co., pursuant to which Tucows (Emerald), LLC purchased from Rightside Operating Co. all of the issued and outstanding capital stock of eNom, a domain name registrar business. The purchase price was $76.2 million, net of cash of $1.6 million and purchase price adjustments of $5.7 million relating primarily to a working capital deficit. In 2017, the Company incurred acquisition related expenditures of $0.3 million in connection with this acquisition. The purchase price and the majority of the related acquisition costs were financed through borrowings under Facility D of the 2017 Amended Credit Agreement. On June 13, 2017, the parties entered into an amendment to the Purchase Agreement, which, among other things, amended certain definitions contained in the Purchase Agreement.

On February 1, 2017, the Company acquired an additional 20% interest in Ting Virginia, LLC. for a consideration of $2.0 million. The consideration was funded through cash flow from operations. For additional details, see Note 3(a) to the consolidated financial statements included in this report.

In the second half of Fiscal 2017, the Company purchased customer relationships related to shared hosting and domain services for $0.3 million.

On September 19, 2017, the Company acquired the consumer related assets of Otono, Networks Inc. for consideration of $2.6 million and assumed working capital liabilities of $1.4 million. The intangible assets acquired relate to customer relationships and are being amortized on a straight-line basis over a period of seven years.

In addition, the Company invested $12.9 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, VA, Holly Springs, NC and Westminster, MD. We expect our capital expenditures on building and expanding our fiber network to increase significantly during Fiscal 2018, including construction ramping in Sandpoint, ID and Centennial, CO, as we seek to extend both our current network and expand to new towns.

Year ended December 31, 2016

Investing activities during Fiscal 2016 used net cash of $14.4 million as compared to our generating net cash of $3.3 million during Fiscal 2015.

On April 1st, 2016, the Company acquired the international reseller channel from Melbourne IT Limited for consideration of $6.0 million, excluding legal and registry related transaction costs of $0.2 million. The consideration was funded through a $6.0 million draw on the 2012 Demand Loan Facilities. The Company also acquired the customer bases of a series of small hosting companies for total consideration of $0.3 million.

In addition, the Company invested $7.9 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, VA, Holly Springs, NC, and Westminster, MD.

Based on our operations, we believe that our cash flow from operations will be adequate to meet our anticipated requirements for working capital, capital expenditures and our loan repayments for at least the next 12 months.

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, 2018.

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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, 2018. 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, 2018 (Dollar amounts in thousands of US dollars):

Contractual Obligations for the year ending December 31,	**Contractual Lease Obligations** [(1)]	**Purchase Obligations** [(2)]	**Total Obligations**
2019	1,748	44,938	46,686
2020	1,084	5,068	6,152
2021	1,198	388	1,586
2022	1,182	379	1,561
2023	1,153	370	1,523
Thereafter	7,195	795	7,990
	$ 13,560	$ 51,938	$ 65,498

(1) Contractual lease obligations include an agreement to extend the lease of the Company's principal administrative office located in Toronto, ON. Prior to the extension, the lease agreement was set to expire on December 31, 2020. The

new agreement extends the lease period from 2021 to 2030. Not including additional building operating expenses, the Company has committed to lease payments of $7.4 million over the term of the lease extension.

(2) Purchase obligations include all other legally binding service contracts for mobile telephone services and other operational agreements to be delivered during Fiscal 2019 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, 2018. We are also subject to market risk exposure related to changes in interest rates under our 2017 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.

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As of December 31, 2018, 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 of liability**
January - March 2019	9,955	1.3131	355
April - June 2019	10,381	1.3154	332
July - September 2019	9,881	1.3136	310
October - December 2019	10,327	1.3174	279
	$ 40,544	1.3149	$ 1,276

As of December 31, 2018, the Company had $40.5 million of outstanding foreign exchange forward contracts which will convert to CDN $53.3 million. Of these contracts, $36.5 million met the requirements for hedge accounting.

As of December 31, 2017, the Company did not have any outstanding foreign exchange forward contracts.

We have performed a sensitivity analysis model for foreign exchange exposure over the year ended December 31, 2018. 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, 2018. 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, 2018 of approximately $3.4 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 2017 Amended Credit Facility.

As of December 31, 2018, we had an outstanding balance of $64.6 million on the 2017 Amended Credit Facility. The 2017 Amended Credit Facility bears a base interest rate based on borrowing elections by the Company and the Company’s total Funded Debt to EBITDA plus LIBOR. As of December 31, 2018, an adverse change of one percent on the interest rate would have the effect of increasing our annual interest payment on 2017 Amended Credit Facility by approximately $0.7 million, assuming that the loan balance as of December 31, 2018 is outstanding for the entire period.

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, 2018 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, 2018. 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, 2018.

KPMG LLP, 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, 2018. 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 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

Mr. Burnham, a member of our Board, is a member of Union Square Ventures, LLC ("USV LLC") and entered into a fee compensation agreement with USV LLC on December 1, 2017, 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.

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PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Allen Karp Chairman of the Board since September 2012 and Director since October 2005

Mr. Karp, 78, 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, 56, 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, 60, 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. All of these qualities qualify Mr. Gissin to be a director of Tucows.

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Elliot Noss Director since August 2001

Mr. Noss, 56, 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, 56, 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 Chairman of our Audit Committee since 2005), qualifies him to be a director of Tucows.

Robin Chase Director since October 2014

Robin Chase, 60, is a transportation entrepreneur. She is co-founder and former CEO of Zipcar, founded in 2000, the world's leading carsharing 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*.

She sits on the Boards of the Tucows, 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 Transportations 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.

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Brad Burnham Director since January 2017

Brad Burnham, 64, 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, and Foursqare Labs, Inc. Prior to USV, Brad 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, Brad 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. Our Board approved updated Charters and policies in November 2018 at the regular meeting of the Board and the approved documents are posted on our website.

Mr. Karp and Mr. Ralls, two of our independent directors, served as Co-Chairmen of the Board until September 2018. Mr. Ralls stepped down as co-chair at the Annual General Meeting on September 4, 2018 and Mr. Karp now serves as lead independent director. Our Board currently consists of seven directors, six of whom the Board has determined 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 during Fiscal 2018. Our Board also took action by unanimous written consent on one occasion during Fiscal 2018. Each director attended at least 80% of the total number of meetings of the Board during Fiscal 2018.

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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. Jeffrey Schwartz attended our 2018 annual meeting of shareholders in person and the Board of Directors were available by teleconference.

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 2018. The Audit Committee also took action by unanimous written consent on one occasion during Fiscal 2018. Each member of the Audit Committee each attended at least 80% of the total number of meetings of the committee during Fiscal 2018. 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 five meetings during Fiscal 2018. The Corporate Governance, Nominating and Compensation Committee took action by unanimous written consent on two occasions during the 2018 fiscal year. Each member of the Corporate Governance, Nominating and Compensation Committee each attended at least 80% of the total number of meetings of the committee during Fiscal 2018. 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.

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- 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 Johannson, our Vice President, Human Resources ("VP HR"), reviews (i) information the Company purchased from PayScale Surveys 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 VP, HR 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 Chairman to facilitate their differing roles in the leadership of our company. The role of the Chairman 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 Chairman 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 Chairman 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 Chairman is Mr. Karp, while Mr. Noss serves as our Chief Executive Officer. Mr. Karp is an independent director. Mr. Karp has extensive executive leadership skills, long-standing senior management and board experience, a strong ethics and compliance focus and 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.

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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 chairman 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.

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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 Chairman of the Board, the Chairman 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 Chairman 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.

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The table below shows all compensation paid to each of our non-employee directors during 2018. 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	$60,300	$136,800
Rawleigh Ralls	53,250	60,300	113,550
Erez Gissin	42,000	60,300	102,300
Robin Chase	42,000	60,300	102,300
Jeffrey Schwartz	61,500	60,300	121,800
Brad Burnham	30,000	60,300	90,300
	$305,250	$361,800	$667,050

(1) On September 4, 2018 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 $57.95. All these options remained outstanding as of December 31, 2018 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 13 – 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.

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 2018, our NEO's include Messrs. Noss, Singh Woroch, Silverstein and Fausett.

This Compensation Discussion and Analysis ("CD&A") provides comprehensive information about our executive compensation program for our Fiscal 2018 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")
David Woroch	Executive Vice-President, Domains ("EVP, Domains")
Jason Silverstein	Vice-President, Corporate Operations ("VP, Corporate Operations")
Bret Fausett	Chief Legal Officer & General Counsel ("General Counsel")

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 PayScale Surveys; 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.

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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.

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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 5, 2017, 98% 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 2017 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 2017.

At the 2014 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 upcoming 2020 Annual Meeting.

Determining Total Compensation

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 Vice President, Human Resources 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 the Vice President, Human Resources, 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, each of our NEOs were awarded standard merit increases effective January 1, 2018 and 2019. Exceptions were made in 2018 for Mr. Noss who was awarded an additional ten vacation days in lieu of an increase and Mr. Singh who was awarded a 20% increase to reflect the promotion to CFO from Vice-President, Finance.

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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.

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Incentive Bonus program

The table below summarizes the 2018 and 2019 incentive bonus opportunities for our NEOs.

Named Officer	Target incentive Bonus Opportunity[1]		Basis for Target incentive Bonus
	2019	2018	
Elliot Noss	$154,735	$168,088	100% Corporate Adjusted EBITDA for Compensation[2]
Davinder Singh	$39,665	$43,088	100% Corporate Adjusted EBITDA for Compensation[2]
David Woroch	$101,422	$110,175	100% Domain Services targets
Jason Silverstein	$47,250	$47,250	100% Corporate Adjusted EBITDA for Compensation[2]
Bret Fausett	$63,000	$63,000	100% Corporate Adjusted EBITDA for Compensation[2]

(1) All dollar amounts below are shown U.S. dollars. Amounts payable in Canadian dollars for 2019

have been converted into U.S. dollars based upon the exchange rate of 1.3633 Canadian dollars for each U.S. dollar, the Oanda exchange rate as at December 31, 2018. Amounts that were payable in Canadian dollars during the 2018 fiscal year have been converted into U.S. dollars based upon the exchange rate of 1.2550 Canadian dollars for each U.S. dollar, which represents the average Oanda exchange rate for 2017.

(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, net

deferred revenue, which comprises the change in deferred revenue, net of prepaid domain name registry and other Internet services fees, to reflect the material amount of cash we collect and pay for domain registrations and other Internet services at the time of activation, gains and losses from unrealized foreign currency transactions and infrequently occurring items. 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.

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Our Corporate Governance, Nominating and Compensation Committee met in February 2019 and determined the achievement of the financial objectives applicable under the management incentive compensation plan for 2018 had been not been fully achieved. As the Company did not meet its Adjusted EBITDA for Compensation targets for the fiscal year ended December 31, 2018, the Corporate Governance, Nominating and Compensation Committee assessed that 82% of the incentive bonuses for all our NEO's was payable. With the exception of Mr. Woroch, who earned 92% of his targeted bonus, all other bonuses were assessed at 82% of target.

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 2019 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 2018, the Corporate Governance, Nominating and Compensation Committee deemed that no overachievement bonus should be payable for Fiscal 2018.

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 June 5, 2018, 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 2019.

Name	Number of stock options	Aggregate Grant Date Fair Value (US dollars)
Elliot Noss	4,500	$105,930
Davinder Singh	2,250	52,965
David Woroch	2,250	52,965
Jason Silverstein	2,250	52,965
Bret Fausett	1,125	26,483

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.

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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.

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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

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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 2018. 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 the 2018 fiscal year were converted into U.S. dollars based upon the exchange rate of 1.2945 Canadian dollars for each U.S. dollar, which represents the average Oanda exchange rate for 2018.

Name and Principal Position	**Year**	**Salary ($)**	**Bonus [1] ($)**	**Stock Awards ($)**	**Option Awards [2] ($)**	**All Other Compensation [3] ($)**	**Total ($)**
(a)	**(b)**	**(c)**	**(d)**		**(f)**	**(i)**	**(j)**
Elliot Noss	2018	$320,587	$141,359	$ —	$105,930	$ 8,111	$575,987
President and Chief Executive Officer	2017	$319,797	$123,853	$ —	$—	$ 8,091	$451,741
	2016	$304,075	$147,210	$ —	$136,420	$ 7,924	$595,629
Davinder Singh(4)	2018	229,915	34,254	—	52,965	6,953	324,087
Chief Financial Officer	2017	170,687	31,748	—	42,240	6,935	251,610
	2016	148,742	18,868	—	127,555	5,377	300,542
Bret Fausett(5)	2018	250,000	51,660	—	26,483	—	328,143
Chief Legal Officer	2017	81,571	—	—	196,300	—	277,871
Jason Silverstein(6)	2018	236,385	38,845	—	52,965	7,500	335,695
Vice President, Corporate Operations	2017	218,249	33,000	—	172,494	6,250	429,993
David Woroch	2018	215,473	99,041	—	52,965	6,953	374,432
Executive Vice President, Domains	2017	208,677	106,549	—	—	6,935	322,161
	2016	198,415	102,834	—	68,210	6,566	376,025

(1) Represents bonus earned under our incentive programs during the fiscal years ended December 31, 2018, 2017 and 2016 and bonus earned under our overachievement bonus programs during the fiscal year ended December 31, 2016.

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

Elliot Noss	$58,461
Davinder Singh	$14,986
Bret Fausett	$22,601
Jason Silverstein	$16,951
David Woroch	$41,790

Of the 2017 amount, the following amounts were paid in February 2018:

Elliot Noss	$55,347
Davinder Singh	$14,187
Jason Silverstein	$15,225
David Woroch	$49,012

Of the 2016 amount, the following amounts were paid in February 2017:

Elliot Noss	$64,404
Davinder Singh	$16,054
David Woroch	$46,605

(2) Represents the aggregate grant date fair value of such awards, calculated in accordance with FASB ASC 718. Please see "Note 13 "Stock Options" 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:

	Year	Additional Health Spending Credits ($)	Car Allowance ($)	Health Club Membership ($)	All Other Compensation ($)
Elliot Noss	2018	$ 1,159	$ 6,952	$ —	$ 8,111
	2017	1,156	6,935	—	8,091
	2016	1,132	6,792	—	7,924
Davinder Singh	2018	1,159	5,794	—	6,953
	2017	1,156	5,779	—	6,935
	2016	1,132	4,245	—	5,377
Bret Fausett	2018	—	—	—	—
	2017	—	—	—	—
Jason Silverstein	2018	—	7,500	—	7,500
	2017	—	6,250	—	6,250
David Woroch	2018	1,159	5,794	—	6,953
	2017	1,156	5,779	—	6,935
	2016	1,132	5,434	—	6,566

(4) Mr. Singh was appointed to his position as CFO effective April 1, 2017.

(5) Mr. Fausett joined the Company in October 2017.

(6) Mr. Silverstein joined the Company in January 2017 as a result of our acquisition of eNom.

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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 2018 for our PEO was $513,652, and for the median employee was $39,056. The resulting ratio of our PEO's pay to the pay of our median employee for fiscal year 2018 is 13 to 1.

The measurement was prepared as of December 31, 2018 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 2018 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 2018:

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 (000's)[1]

Elliot Noss	06/05/2018	4,500	$64.10	$105,930
Davinder Singh	06/05/2018	2,250	$64.10	$52,965
David Woroch	06/05/2018	2,250	$64.10	$52,965
Jason Silverstein	06/05/2018	2,250	$64.10	$52,965
Bret Fausett	06/05/2018	1,125	$64.10	$26,483

(1) Represents the grant date fair value of such awards, calculated in accordance with FASB ASC 718. Please see “Note 13 “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.

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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, 2018:

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date
Elliot Noss	1,875	—	5.52	05/17/2019
	6,250	—	5.76	12/31/2019
	6,250	—	10.16	11/10/2020
	10,000	—	19.41	12/31/2021
	7,500	2,500	21.10	12/31/2022
	—	4,500	64.10	06/04/2025
	31,875	7,000		
Davinder Singh	2,000	—	19.95	02/11/2023
	2,500	2,500	19.95	02/11/2023
	500	1,500	55.65	07/23/2024
	—	2,250	64.10	06/04/2025
	5,000	6,250		
Bret Fausett	2,500	7,500	53.20	09/04/2024
	—	1,125	64.10	06/04/2025
	2,500	8,625		
Jason Silverstein	4,500	—	43.15	01/19/2024
	1,125	3,375	43.15	01/19/2024
	300	900	55.65	07/23/2024
	—	2,250	64.10	06/04/2025
	5,925	6,525		
David Woroch	7,500	—	5.52	05/17/2019
	6,250	—	5.76	12/31/2019

6,250	—	10.16	11/10/2020
5,000	—	19.41	12/31/2021
3,750	1,250	21.10	12/31/2022
—	2,250	64.10	06/04/2025
28,750	3,500		

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.

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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.

Elliot Noss (1) 2018	Termination without Cause (Dollar amounts in U.S. dollars)	Change in Control (Dollar amounts in U.S. dollars)
Compensation		
Base Salary/Severance (2)	$641,174	$2,641,174
Bonus Plan (3)	325,917	325,917
Acceleration of Unvested Equity Awards (4)	97,400	97,400
Benefits (5)		
Car Allowance	13,905	13,905
Healthcare Flexible Spending Account	2,317	2,317
	$1,080,713	$3,080,713

Davinder Singh (1) 2018	Termination	Change in

	without Cause (Dollar amounts in U.S. dollars)	Control (Dollar amounts in U.S. dollars)
Compensation		
Base Salary/Severance (2)	$ 114,072	$ —
Bonus Plan (3)	27,849	—
Acceleration of Unvested Equity Awards (4)	52,343	—
Benefits (5)		
Car Allowance	3,862	—
Healthcare Flexible Spending Account	772	—
	$ 198,898	$ —

Bret Fausett (1) 2018	Termination without Cause (Dollar amounts in U.S. dollars)	Change in Control (Dollar amounts in U.S. dollars)
Compensation		
Base Salary/Severance (2)	$ 145,833	$ —
Bonus Plan (3)	36,750	—
Acceleration of Unvested Equity Awards (4)	—	—
Benefits (5)		
Car Allowance	—	—
Healthcare Flexible Spending Account	—	—
	$ 182,583	$ —

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Jason Silverstein (1) 2018	Termination without Cause (Dollar amounts in U.S. dollars)	Change in Control (Dollar amounts in U.S. dollars)
Compensation		
Base Salary/Severance (2)	$ 177,289	$ —
Bonus Plan (3)	35,438	—
Acceleration of Unvested Equity Awards (4)	20,347	—
Benefits (5)		
Car Allowance	5,625	—
Healthcare Flexible Spending Account	—	—
	$ 238,699	$ —

David Woroch (1) 2018	Termination without Cause (Dollar amounts in U.S. dollars)	Change in Control (Dollar amounts in U.S. dollars)
Compensation		
Base Salary/Severance (2)	$ 418,386	$ 418,386
Bonus Plan (3)	213,625	213,625
Acceleration of Unvested Equity Awards (4)	48,700	48,700
Benefits (5)		
Car Allowance	11,587	11,587
Healthcare Flexible Spending Account	2,317	2,317
	$ 694,615	$ 694,615

(1) For the purpose of the table we assumed an annual base salary at the executive's level as of December 31, 2018

(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, Silverstein and Woroch, severance compensation is for six months plus one-month additional compensation for each completed year of service.

(3) For the purpose of the table we assumed that the annual incentive bonus target as of December 31, 2018 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, Silverstein 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, Silverstein 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, 2018, 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, 2018 was $60.06.

(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.

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Employment Agreements—Termination

Employment contracts are currently in place for each of the NEO. 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, Silverstein 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, Silverstein 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.

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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 2018 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.

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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 1, 2019, 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	Beneficial Ownership of Common Stock						
	Common Stock Beneficially Owned Excluding Options		Stock Options Exercisable within 60 Days of March 5, 2019		Total Common Stock Beneficially Owned	Percent of Class[1]	
Elliot Noss	739,902	(2)	31,875		771,777	7.2	%
Davinder Singh	—		6,250		6,250	*	
Bret Fausett	—		2,500		2,500	*	
Jason Silverstein	—		7,050		7,050	*	
David Woroch	122,606	(3)	28,750		151,356	1.4	%
Allen Karp	13,578	(4)	15,000		28,578	*	
Rawleigh Ralls	2,261		3,750		6,011	*	
Robin Chase	4,375		13,750		18,125	*	
Erez Gissin	2,887		18,750		21,637	*	
Jeffrey Schwartz	15,625		11,250		26,875	*	
Brad Burnham	353,982	(5)	8,125	(6)	362,107	3.4	%
All directors and executive officers as a group (15 persons)	1,295,404		186,002		1,481,406	13.7	%

* Less than 1%.

(1) Based on 10,639,329 shares outstanding as of March 1, 2019, and stock options exercisable within 60 days of March 5, 2019.

(2) Includes an aggregate of 120,670 shares of common stock that are held in Mr. Noss's RRSP accounts. Includes an aggregate of 1,639 shares of common stock that are held in Mr. Noss's TFSA account. Includes 56,127 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 an aggregate of 6,206 shares of common stock that are held in trust for Mr. Noss's children. Includes 555,260 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. Burhham 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.

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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 1, 2019 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 Invetoren TGV Ruengsdorfer Str. 2e 53173 Bonn, Germany	1,204,293 [2]	11.3 %
CLS Investments, LLC 17605 Wright St Omaha, NE 68130	583,000 [3]	5.5 %

(1) Based on 10,639,329 shares outstanding as of March 1, 2019.

(2) Investmentaktiengesellschaft fuer langfristige Invetoren TGV had sole dispositive power and sole voting power over 732,828 shares of common stock. This information is based solely on a review of a Schedule 13G filed with the SEC on January 29, 2019 by Investmentaktiengesellschaft fuer langfristige Invetoren TGV.

(3) CLS Investments, LLC had shared voting power over 64,000 shares of common stock and sole dispositive power over 583,000 shares of common stock. This information is based solely on a review of a Schedule 13G filed with the SEC on February 8, 2019 by CLS Investments, LLC.

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Equity Compensation Plan Information

The following table provides information for our equity compensation plans as of December 31, 2018:

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	702,337	$ 43.80	341,648
Equity compensation plans not approved by security holders	—	—	—
Total	702,337	$ 43.80	341,648

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.

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ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

A summary of the fees of KPMG LLP for the years ended December 31, 2018 and 2017 are set forth below:

	2018 Fees	2017 Fees
Audit Fees (1)	$515,000	$490,000
Audit-Related Fees (2)	-	12,000
Tax Fees (3)	70,000	125,000
All Other Fees	-	-
Total Fees	$585,000	$627,000

(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.

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 chairman of the audit committee for consideration and approval, and the engagement may commence upon the approval of the chairman. The chairman 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.

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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 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).
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).
10.1*	2006 Equity Compensation Plan, as amended and restated effective as of July 29, 2010 (Incorporated by reference to Exhibit 99(d)(1) filed with Tucows' Schedule TO, as filed with the SEC on September 17, 2010).
10.2*	Employment Agreement dated 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).

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Exhibit No.	Description
10.3*	Employment Agreement dated March 11, 2003 between Tucows.com Co. and Michael Cooperman (Incorporated by reference to Exhibit 10.4 filed with Tucows' annual Report on Form 10-K for the year ended December 31, 2001, as filed with the SEC on March 28, 2003).
10.4	Lease between 707932 Ontario Limited and Tucows International Corporation, dated 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).
10.5	Lease extension between 707932 Ontario Limited and Tucows Inc. and Tucows.com Co., dated 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).
10.6#	Lease extension between 707932 Ontario Limited and Tucows (Delaware) Inc. and Tucows.com Co., dated January 1, 2019
10.7*	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).
10.8	Offer Letter, dated November 19, 2012, between Tucows.com Co. and the Bank of Montreal (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on November 21, 2012).
10.9	Amended and Restated Supplemental Agreement, dated December 14, 2012, between Tucows.com Co., Tucows (Delaware), Inc. and the Bank of Montreal (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on December 20, 2012).
10.10	Guaranty, dated December 14, 2012, by Ting Inc. in favor of the Bank of Montreal (Incorporated by reference to Exhibit 10.2 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on December 20, 2012).
10.11	Loan Agreement, dated as of July 25, 2007, by and among Tucows.com Co., Tucows (Delaware) Inc., Tucows Inc., Mailbank Nova Scotia Co., Tucows Domain Holdings Co., Innerwise, Inc. and Bank of Montreal (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on July 31, 2007).
10.12	Credit Agreement, dated as of August 18, 2016, by and among Tucows.com Co., Ting Fiber, Inc., Ting Inc., as Borrowers, Tucows Inc., as Guarantor, and Bank of Montreal and Royal Bank of Canada, as Lenders (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on August 19, 2016).
10.13	First Amended and restated Credit Agreement, dated as of January 20, 2017, by and amount Tucows.com Co., Ting Fiber, Inc., Ting Inc., Tucows (Emerald) LLC, as Borrowers, Tucows Inc., as Guarantor, and Bank of Montreal, Royal Bank of Canada and Bank of Nova Scotia, as Lenders (Incorporated by reference to

	Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on January 23, 2017).
10.14	First Amendment dated June 6, 2017 to the Amended and restated Credit Agreement, dated as of January 20, 2017, by and amount Tucows.com Co., Ting Fiber, Inc., Ting Inc., Tucows (Emerald) LLC, as Borrowers, Tucows Inc., as Guarantor, and Bank of Montreal, Royal Bank of Canada and Bank of Nova Scotia, 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 9, 2017).
10.15	Interim Amendment dated December 5, 2017 to the Amended and restated Credit Agreement, dated as of January 20, 2017, by and amount Tucows.com Co., Ting Fiber, Inc., Ting Inc., Tucows (Emerald) LLC, as Borrowers, Tucows Inc., as Guarantor, and Bank of Montreal, Royal Bank of Canada and Bank of Nova Scotia, as Lenders (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on December 8, 2017).

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Exhibit No.	Description
10.16	Second Interim Amendment, dated as of January 24, 2018, to the First Amended and Restated Credit Agreement, dated as of January 20, 2017, by and among Tucows.com Co., Ting Fiber, Inc., Ting Inc., Tucows (Delaware), Inc., Tucows (Emerald) LLC, as Borrowers, Tucows Inc., as Guarantor, and Bank of Montreal, Royal Bank of Canada and Bank of Nova Scotia, as Lenders (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on January 24, 2018).
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#	XBRL Instance
101.SCH#	XBRL Taxonomy Extension Schema
101.CAL#	XBRL Taxonomy Extension Calculation
101.DEF#	XBRL Taxonomy Extension Definition
101.LAB#	XBRL Taxonomy Extension Labels
101.PRE#	XBRL Taxonomy Extension Presentation

* Management or compensatory contract.

\# Filed herewith.
† Furnished herewith.

INDEX TO FINANCIAL STATEMENTS

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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* ("the Company") internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the 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, 2018 and 2017, 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, 2018, and the related notes (collectively, the consolidated financial statements) and our report dated March 5, 2019 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 Form-10K for the fiscal year ended December 31, 2018. 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 5, 2019

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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. (“the Company”) as of December 31, 2018 and 2017, 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, 2018, 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, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three year period ended December 31, 2018, 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, 2018, 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 5, 2019 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, on January 1, 2018, the Company adopted Accounting Standards Codification (“ASC”) Topic 606, *Revenue from Contracts with Customers* (“ASC 606”), using the modified retrospective method by recognizing the cumulative effect of initially applying ASC 606 as an adjustment to the opening balance of equity as at January 1, 2018.

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.

/s/ KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

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

Vaughan, Canada

March 5, 2019

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Tucows Inc.

Consolidated Balance Sheets

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

	December 31, 2018	**December 31, 2017 ***
Assets		
Current assets:		
Cash and cash equivalents	$ 12,637	$ 18,049
Accounts receivable, net of allowance for doubtful accounts of $132 as of December 31, 2018 and $168 as of December 31, 2017	10,837	12,376
Inventory	3,775	2,944
Prepaid expenses and deposits	15,472	14,186
Prepaid domain name registry and ancillary services fees, current portion (note 11 (b))	87,782	103,302
Income taxes recoverable	1,423	3,004
Total current assets	131,926	153,861
Prepaid domain name registry and ancillary services fees, long-term portion (note 11 (b))	18,745	23,701
Property and equipment (note 4)	48,065	24,620
Contract costs (note 11 (a))	1,390	-
Intangible assets (note 5)	49,395	58,414
Goodwill (note 5)	90,054	90,054
Total assets	$ 339,575	$ 350,650
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 8,445	$ 7,026
Accrued liabilities	5,899	6,412
Customer deposits	11,919	15,255
Derivative instrument liability (note 7)	1,276	-
Deferred rent, current portion	21	21
Loan payable, current portion (note 8)	18,400	18,290
Deferred revenue, current portion	116,734	129,155
Accreditation fees payable, current portion	985	1,175

Income taxes payable (note 9)	1,668	1,226
Total current liabilities	165,347	178,560
Deferred revenue, long-term portion	26,960	31,427
Accreditation fees payable, long-term portion	250	289
Deferred rent, long-term portion	116	130
Loan payable, long-term portion (note 8)	46,201	58,634
Deferred gain	-	429
Deferred tax liability (note 9)	20,925	19,834
Redeemable non-controlling interest (note 3 (a))	-	1,136
Stockholders' equity (note 12)		
Preferred stock - no par value, 1,250,000 shares authorized; none issued and outstanding	-	-
Common stock - no par value, 250,000,000 shares authorized; 10,627,988 shares issued and outstanding as of December 31, 2018 and 10,583,879 shares issued and outstanding as of December 31, 2017	15,823	15,368
Additional paid-in capital	3,953	2,167
Retained earnings	60,810	42,676
Accumulated other comprehensive income (loss)	(810)	-
Total stockholders' equity	79,776	60,211
Total liabilities and stockholders' equity	$ 339,575	$ 350,650

Commitments and contingencies (note 17)

Subsequent events (note 19)

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

See accompanying notes to consolidated financial statements

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Tucows Inc.

Consolidated Statements of Comprehensive Income

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

	Year ended December 31,		
	2018	**2017 ***	**2016 ***
Net revenues (note 10)	$346,013	$329,421	$189,819
Cost of revenues (note 10)			
Cost of revenues	232,103	230,600	120,187
Network expenses	9,846	9,324	5,210
Depreciation of property and equipment	5,298	3,142	1,320
Amortization of intangible assets (note 5)	1,996	1,834	48
Total cost of revenues	249,243	244,900	126,765
Gross profit	96,770	84,521	63,054
Expenses:			
Sales and marketing	33,063	29,423	20,755
Technical operations and development	8,748	7,258	4,495
General and administrative	17,710	13,594	11,405
Depreciation of property and equipment	424	585	504
Amortization of intangible assets (note 5)	7,247	6,566	905
Impairment of indefinite life intangible assets (note 5)	-	111	42
Loss (gain) on currency forward contracts (note 7)	254	(98)	(99)
Total expenses	67,446	57,439	38,007
Income from operations	29,324	27,082	25,047
Other income (expenses):			
Interest expense, net	(3,687)	(3,567)	(450)
Other income, net	518	560	516
Total other income (expenses)	(3,169)	(3,007)	66
Income before provision for income taxes	26,155	24,075	25,113
Provision for income taxes (note 9)	9,020	1,748	9,046

Net income before redeemable non-controlling interest	17,135	22,327	16,067
Redeemable non-controlling interest	(26)	(387)	(871)
Net income attributable to redeemable non-controlling interest	26	387	871
Net income for the period	17,135	22,327	16,067
Other comprehensive income, net of tax			
Unrealized income (loss) on hedging activities (note 7)	(1,022)	550	568
Net amount reclassified to earnings (note 7)	212	(650)	641
Other comprehensive income (loss) net of tax (expense) recovery of $259, $(56) and $(668) for the years ended December 31, 2018, 2017 and 2016 (note 7)	(810)	(100)	1,209
Comprehensive income, net of tax for the period	$16,325	$22,227	$17,276
Basic earnings per common share (note 16)	$1.62	$2.12	$1.53
Shares used in computing basic earnings per common share (note 16)	10,604,722	10,537,356	10,524,856
Diluted earnings per common share (note 16)	$1.59	$2.07	$1.50
Shares used in computing diluted earnings per common share (note 16)	10,794,170	10,793,622	10,713,595

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

See accompanying notes to consolidated financial statements

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Tucows Inc.

Consolidated Statements of Stockholders’ Equity

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

	Common stock		**Additional paid in**	**Retained**	**Accumulated other comprehensive income (loss)**	**Total stockholders'**
	Number	**Amount**	**capital**	**earnings**		**equity**
Balances, December 31, 2015*	10,685,599	$ 14,531	$ 8,526	$ 4,382	$ (1,109)	$ 26,330
Exercise of stock options	109,963	350	(204)	-	-	146
Shares deducted from exercise of stock options for payment of withholding taxes and exercise consideration	(25,572)	-	(363)	-	-	(363)
Repurchase and retirement of shares (note 12)	(308,416)	(421)	(6,759)	-	-	(7,180)
Income tax effect related to stock options exercised	-	-	859	-	-	859
Stock-based compensation (note 13)	-	-	799	-	-	799
Net income	-	-	-	16,067	-	16,067
Accretion of redeemable non-controlling interest in Ting Virginia, LLC. (note 3(a))	-	-	-	(49)	-	(49)
Other comprehensive income (loss) (note 7)	-	-	-	-	1,209	1,209
Balances,December 31, 2016*	10,461,574	14,460	2,858	20,400	100	37,818
Exercise of stock options	172,759	908	(686)	-	-	222
Shares deducted from exercise of stock options for payment of withholding taxes and exercise consideration	(50,454)	-	(1,462)	-	-	(1,462)
Stock-based compensation (note 13)	-	-	1,457	-	-	1,457
Net income	-	-	-	22,327	-	22,327
Accretion of redeemable non-controlling interest in Ting Virginia, LLC. (note 3(a))	-	-	-	(51)	-	(51)
	-	-	-	-	(100)	(100)

Other comprehensive income (loss) (note 7)						
Balances, December 31, 2017*	10,583,879	15,368	2,167	42,676	-	60,211
Adoption of Topic 606 (note 2)	-	-	-	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 13)	-	-	2,574	-	-	2,574
Net income	-	-	-	17,135	-	17,135
Accretion of redeemable non-controlling interest in Ting Virginia, LLC. (note 3(a))	-	-	-	(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

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

See accompanying notes to consolidated financial statements

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Tucows Inc.

Consolidated Statements of Cash Flows

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

	Year ended December 31,		
	2018	**2017 ***	**2016 ***
Cash provided by:			
Operating activities:			
Net income for the period	$17,135	$22,327	$16,067
Items not involving cash:			
Depreciation of property and equipment	5,722	3,727	1,824
Loss on write off of property and equipment	-	17	-
Amortization of debt discount and issuance costs	281	273	31
Amortization of intangible assets	9,243	8,400	953
Net amortization contract costs	14	-	-
Impairment of indefinite life intangible asset	-	111	43
Deferred income taxes (recovery)	1,038	(3,337)	1,194
Excess tax benefits on share-based compensation expense	(697)	(2,796)	859
Amortization of deferred rent	(14)	6	25
Loss on disposal of domain names	341	291	30
Other income	(429)	(515)	(515)
Loss (gain) on change in the fair value of forward contracts	207	17	(323)
Stock-based compensation	2,574	1,457	799
Change in non-cash operating working capital:			
Accounts receivable	1,539	1,010	(3,754)
Inventory	(831)	(1,733)	(307)
Prepaid expenses and deposits	(1,286)	(1,642)	(1,183)
Prepaid domain name registry and ancillary services fees	20,476	4,030	(4,641)
Income taxes recoverable	2,691	(426)	3,177
Accounts payable	171	(3,826)	391
Accrued liabilities	(513)	(1,275)	1,243
Customer deposits	(3,336)	1,085	282
Deferred revenue	(16,888)	4,933	6,255
Accreditation fees payable	(229)	(238)	59
Net cash provided by operating activities	37,209	31,896	22,509
Financing activities:			
Proceeds received on exercise of stock options	112	222	146
Payment of tax obligations resulting from net exercise of stock options	(445)	(1,462)	(363)

Repurchase of common stock	-	-	(7,180)
Proceeds received on loan payable	7,000	86,998	16,989
Repayment of loan payable	(19,596)	(19,976)	(9,758)
Payment of loan payable costs	(8)	(620)	(514)
Net cash (used in) provided by financing activities	(12,937)	65,162	(680)
Investing activities:			
Additions to property and equipment	(27,919)	(12,935)	(7,918)
Acquisition of a portion of the minority interest in Ting Virginia, LLC (note 3(a))	(1,200)	(2,000)	-
Acquisition of Enom Incorporated, net of cash (note 3(b))	-	(76,237)	-
Acquisition of intangible assets	(565)	(2,942)	(6,529)
Net cash used in investing activities	(29,684)	(94,114)	(14,447)
(Decrease) increase in cash and cash equivalents	(5,412)	2,944	7,382
Cash and cash equivalents, beginning of period	18,049	15,105	7,723
Cash and cash equivalents, end of period	$12,637	$18,049	$15,105

Supplemental cash flow information:			
Interest paid	$3,712	$3,587	$420
Income taxes paid, net	$6,799	$7,815	$3,767
Supplementary disclosure of non-cash investing and financing activities:			
Property and equipment acquired during the period not yet paid for	$1,462	$214	$447

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

See accompanying notes to consolidated financial statements

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Tucows Inc.

Notes to Consolidated Financial Statements

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

1. Organization of the Company:

Tucows Inc. (the “Company”) 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 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.

The Company has reclassified certain prior period income statement amounts and related notes to conform to the financial statement presentation adopted in the current year. As a result of these reclassifications, there were no changes to previously reported Income from operations, Net income, Earnings per share, or on previously reported Consolidated Balance Sheets or Consolidated Statements of Cash Flows.

Commencing with this annual report on Form 10-K for the year ended December 31, 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.

(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 carrying values of revenues, bad debts, goodwill and intangible assets which require estimates of future cash flows and discount rates, 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.

(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.

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(d) Inventory

Inventory primarily consists of mobile devices, mobile sim cards and related accessories, and Internet optical network terminals and are 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
Land	N/A
Leasehold improvements	Over term of lease
Assets under construction	N/A

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.

(f) Derivative Financial Instruments

The Company uses derivative financial instruments to manage foreign currency exchange risk. 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. Any ineffective or excluded portion of a designated cash flow hedge, if applicable, is recognized in net income.

For certain 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.

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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 and forward 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.

In performance of 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.

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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.

(j) Contract Costs

See Note 11 – Contract Costs for a description of the Company's Contract Cost recognition policy.

(k) 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.

(l) Prepaid domain name registry fees

Prepaid domain name registry and other Internet services fees represent amounts paid to registries, and country code domain name operators for updating and maintaining the registries, as well as to suppliers of other Internet services. Domain name registry and other Internet services fees are recognized on a straight-line basis over the life of the contracted registration term.

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(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 and forward foreign exchange 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.

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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 Toronto, 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 Kirkland, Washington location are attributable to the United States because it is impracticable to determine the country of the customer. The Company's Network Access Services which consist primarily of mobile telephony services, as well as the provisioning of high speed Internet access and consulting services, which are generated primarily through its business operations in the United States.

The Company's assets are located in Canada, the United States and Germany.

(u) Recent Accounting Pronouncements

Recent Accounting Pronouncements Adopted

On January 1, 2018, the Company adopted Accounting Standards Updates ("ASU") No. 2017-01, *Business Combinations (Topic* 805*): Clarifying the Definition of a Business* and ASU 2015-16, *Simplifying the Accounting for Measurement-Period Adjustments.* The adoption of these updates did not have a significant impact on the consolidated financial statements. We also adopted ASU 2014-09 on January 1, 2018. The impact of such adoption is described in more detail below.

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).

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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.

The impact of the changes to the Company's financial statements in the current period are as follows *(Dollar amounts in thousands of U.S. dollars)*:

	December 31, 2018		
Consolidated Balance Sheet	**As reported**	**Adjustments**	**Balances without adoption of Topic 606**
Assets			
Contract Costs (note 11)	$1,390	$ (1,390)	$-
Total assets	339,575	$ (1,390)	$338,185
Liabilities and Shareholders' Equity			
Deferred tax liability (note 9)	$20,925	$ (338)	$20,587
Retained earnings	60,810	(1,052)	59,758
Total Liabilities and Shareholders' Equity	$339,575	$ (1,390)	$338,185

	Year ended, December 31, 2018		
Consolidated Statements of Operations and Comprehensive Income	**As reported**	**Adjustments**	**Balances without adoption of Topic 606**

Expenses			
Sales and marketing	$33,063	$ (14)	$33,049
Income before provision for income taxes	26,155	14	26,169
Provision for income tax (note 9)	9,020	3	9,023
Net income for the period	$17,135	$ 11	$17,146

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	Year ended, December 31, 2018		
Consolidated Statements of Cash Flows	**As reported**	**Adjustments**	**Balances without adoption of Topic 606**
Net income for the period	$17,135	$ 11	$17,146
Items not involving cash			
Net amortization of contract costs	14	(14)	-
Deferred income taxes (recovery)	1,038	3	1,041
All other items	19,022	-	19,022
Net cash provided by operating activities	$37,209	$ -	$37,209

Recent Accounting Pronouncements Not *Yet Adopted*

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic* 842*)* ("ASU 2016-02"). ASU 2016-02 requires lessees to recognize the assets and liabilities that arise from leases on the balance sheet. More specifically, ASU 2016-02 requires the recognition on the balance sheet of a lease liability to make lease payments by lessees and a right-of-use asset representing its right to use the underlying asset for the lease term. The new guidance will also require significant additional disclosure about the amount, timing and uncertainty of cash flows from leases. The new guidance is effective for annual and interim reporting periods beginning after December 15, 2018, which begins on January 1, 2019 for the Company. The amendments should be applied at the beginning of the earliest period presented using a modified retrospective approach with earlier application permitted as of the beginning of an interim or annual reporting period. The Company will adopt this guidance in the first quarter of Fiscal 2019. The standard is expected to have a material impact on our consolidated balance sheets. The most significant impact will be the recognition of ROU assets and lease liabilities for operating leases. The Company is currently in the process of finalizing the quantification of the impact and the impact of transition methods. While we are continuing to assess all potential impacts of the standard, we currently believe the most significant impact relates to our accounting for administrative office operating leases.

In August 2017, the 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. This ASU is effective for annual and

interim reporting periods beginning after December 15, 2018. The Company will adopt ASU 2017-12 in the first quarter of 2019, however we do not expect the new guidance to have a material impact on our consolidated financial statements.

In August 2018, the Financial Accounting Standards Board ("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 licence 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. ASU 2018-15 will be effective for the Company for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. The Company is currently in the process of evaluating the quantitative impact of this Update and transition methods.

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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) eNom, Incorporated

On January 20, 2017, the Company entered into a Stock Purchase Agreement with its indirect wholly owned subsidiary, Tucows (Emerald), LLC, Rightside Group, Ltd., and Rightside Operating Co., pursuant to which Tucows (Emerald), LLC purchased from Rightside Operating Co. all of the issued and outstanding capital stock of eNom, Incorporated, a domain name registrar business. The purchase price was $77.8 million, which represented the agreed upon purchase of $83.5 million less an amount of $5.7 million related to the 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 goodwill related to this acquisition is primarily attributable to synergies expected to arise from the acquisition and is not deductible for tax purposes.

The Company has prepared a final purchase price allocation of the assets acquired and the liabilities assumed of eNom based on management's best estimates of fair value. The final purchase price reflects the final appraisals, valuations and analyses of the fair value of the acquired assets and assumed liabilities.

The following table shows the final allocation of the purchase price for eNom to the acquired identifiable assets and liabilities assumed (*thousands of U.S. dollars*):

Goodwill	$69,048
Cash	1,594
Brand	12,400
Developed technology	3,900
Customer relationships	28,000
Prepaid domain registry fees	70,644
Other assets	10,171
Total assets	195,757
Deferred Revenue	(77,799)
Deferred Tax Liabilities	(24,223)
Other liabilities	(15,903)
Total liabilities	(117,925)
Consideration Paid	$77,832

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 goodwill related to this acquisition is primarily attributable to synergies expected to arise from the acquisition and is *not* deductible for tax purposes.

4. Property and Equipment:

Property and equipment consist of the following (Dollar amounts in thousands of U.S. dollars):

	December 31, 2018	**December 31, 2017**
Computer equipment	$ 13,566	$ 12,312
Computer software	1,496	1,449
Furniture and equipment	1,364	1,308
Vehicles and tools	2,323	1,306
Fiber network	30,215	14,053
Customer equipment and installations	4,939	2,570
Land	823	
Assets under construction	10,030	4,204
Leasehold improvements	229	171
	64,985	37,373
Less:		
Accumulated depreciation	16,920	12,753
	$ 48,065	$ 24,620

Depreciation of property and equipment (Dollar amounts in thousands of U.S. dollars):

	Year ended December 31, 2018	Year ended December 31, 2017	Year ended December 31, 2016
Depreciation of property and equipment	$ 5,722	$ 3,727	$ 1,824

During the year ended December 31, 2018, property, plant and equipment with a net book value of nil was written off. During the years ended December 31, 2017 and 2016, property, plant and equipment write-offs were a net book value of less than $0.1 million and $nil, respectively.

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.

The Company's Goodwill balance is $90.1 million as of December 31, 2018 and December 31, 2017. The Company's goodwill relates 98% ($88.0 million) to its Domain Services operating segment and 2% ($2.1 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) and there were no indications of impairment for 2018 and 2017.

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 2018, we assessed that 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 year ended December 31, 2018, domain names, with a book value of nil, were not renewed and were recorded as an impairment of indefinite life intangible assets. During the year ended December 31, 2017 domain names, with a book value of $0.1 million, were not renewed and were recorded as impairments of indefinite life intangible assets. Impairment of less than $0.1 million was recorded for the year ended December 31, 2016.

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.

On January 20, 2017, the Company acquired eNom, a wholesale and retail domain registrar. The Company acquired the assets and liabilities of eNom including wholesale and retail brands, proprietary technology and the existing customer relationships. The Company has accounted for these on a fair value basis and each intangible asset is being amortized over the estimated useful life. The amortization for the brands, technology and customer relationships are 7, 2 and 7 years, respectively. See Note 3(b) for further details.

On September 19, 2017, the Company acquired the consumer related assets of Otono, Networks Inc. for consideration of $2.6 million and assumed working capital liabilities of $1.4 million. The intangible assets acquired relate to customer relationships and are being amortized on a straight-line basis over a period of 7 years.

In Fiscal 2017, the Company also completed two smaller domain related asset acquisitions, primarily domain hosting customer relationships, for a total consideration of $0.3 million. These assets have been assigned to Customer Relationships and are being amortized over 7 years.

On November 16, 2018, the Company acquired the right from The People's Operator USA, LLC ("TPO") to mass migrate TPO MVNO customers based in the United States, for consideration of $0.4 million. These assets have been assigned to Customer Relationships and are being amortized over 3 years.

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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, 2016	$ 11,295	$ 1,869	$ 49	6,153	$ -	$ 607	$ 19,973
Acquisition of Enom (note 3(b))	-	-	12,400	28,000	3,900	-	44,300
Acquisition of consumer related assets of Otono Networks, Inc.	-	-	-	2,623	-	-	2,623
Acquisition of customer relationships	-	-	-	320	-	-	320
Additions to/(disposals from) domain portfolio, net	(38)	(253)	-	-	-	-	(291)
Impairment of indefinite life intangible assets	-	(111)	-	-	-	-	(111)
Amortization expense	-	-	(1,656)	(4,911)	(1,787)	(46)	(8,400)
Balances December 31, 2017	$ 11,257	$ 1,505	$ 10,793	$ 32,185	$ 2,113	$ 561	58,414
Acquisition of customer relationships	-	-	-	565	-	-	565
Additions to/(disposals from) domain portfolio, net	(81)	(260)	-	-	-	-	(341)
Amortization expense	-	-	(1,789)	(5,458)	(1,950)	(46)	(9,243)
Balances December 31, 2018	$ 11,176	$ 1,245	$ 9,004	$ 27,292	$ 163	$ 515	$ 49,395

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,
2019	$ 7,488
2020	7,326
2021	7,315
2022	7,187
2023	7,187
Thereafter	469
Total	$ 36,972

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, 2018 (Dollar amounts in thousands of U.S. dollars):

	December 31, 2018 Fair Value Measurement Using			**Liabilities at**
	Level 1	Level 2	Level 3	**Fair Value**
Derivative instrument liability	$—	$(1,276)	$ —	$ (1,276)
Total Liabilities	$—	$(1,276)	$ —	$ (1,276)

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, 2017 (Dollar amounts in thousands of U.S. dollars):

	December 31, 2017 Fair Value Measurement Using			**Liabilities at**
	Level 1	Level 2	Level 3	**Fair Value**
Derivative instrument liability	$ —	$ —	$ —	$ —
Total Liabilities	$ —	$ —	$ —	$ —

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7. Derivative Instruments and Hedging Activities:

Foreign currency forward contracts

In October 2012, the Company entered into 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.

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, 2018 and 2017, 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, 2018, the notional amount of forward contracts that the Company held to sell U.S. dollars in exchange for Canadian dollars was $40.5 million, of which $36.5 million met the requirements of ASC Topic 815 and were designated as hedges. As of December 31, 2017 the Company held no contracts to trade U.S. dollars in exchange for Canadian dollars.

As of December 31, 2018, 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	Fair value

		of U.S. dollars	
January - March 2019	9,955	1.3131	355
April - June 2019	10,381	1.3154	332
July - September 2019	9,881	1.3136	310
October - December 2019	10,327	1.3174	279
	$ 40,544	1.3149	$ 1,276

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, 2018 and 2017, 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*)*

Derivatives (Dollar amounts in thousands of U.S. dollars)	**Balance Sheet Location**	**December 31, 2018 Liability at Fair Value**	**December 31, 2017 Liability at Fair Value**
Foreign currency forward contracts designated as cash flow hedges	Derivative instruments	$ 1,069	$ —
Foreign currency forward contracts not designated as cash flow hedges	Derivative instruments	$ 207	$ —
Total foreign currency forward contracts	Derivative instruments	$ 1,276	$ —

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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 accumulated other comprehensive income	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)

Movement in AOCI balance for the year ended December 31, 2017 *(Dollar amounts in thousands of U.S. dollars)*

	Gains and losses on cash flow hedges	**Tax impact**	**Total AOCI**
Opening AOCI balance – December 31, 2016	$156	$ (56)	$ 100
Other comprehensive income (loss) before reclassifications	863	(313)	550
Amount reclassified from accumulated other comprehensive income	(1,019)	369	(650)
Other comprehensive income (loss) for the year ended December 31, 2017	(156)	56	(100)
Ending AOCI balance – December 31, 2017	$—	$ —	$ —

Movement in AOCI balance for the year ended December 31, 2016 *(Dollar amounts in thousands of U.S. dollars)*

	Gains and losses on cash flow hedges	**Tax impact**	**Total AOCI**
Opening AOCI balance – December 31, 2015	$(1,721)	$ 612	$(1,109)
Other comprehensive income (loss) before reclassifications	872	(304)	568
Amount reclassified from accumulated other comprehensive income	1,005	(364)	641
Other comprehensive income (loss) for the year ended December 31, 2016	1,877	(668)	1,209
Ending AOCI balance – December 31, 2016	$156	$ (56)	$100

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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 (Effective Portion)**	**Location of Gain or (Loss) Reclassified from Accumulated OCI into Income (Effective Portion)**	**Amount of Gain or (Loss) Reclassified from Accumulated OCI into Income, (Effective Portion)**	**Location of Gain or (Loss) Recognized in Income on Derivative (ineffective Portion and Amount Excluded from Effectiveness Testing)**	**Amount of Gain or (Loss) Recognized in Income on Derivative (ineffective Portion and Amount Excluded from Effectiveness**
Foreign currency forward contracts – year ended December 31, 2018		Operating expenses	$ (245)		
	$ (810)	Cost of revenues	$ (36)	Operating expenses	$ —
		Operating expenses	$ 879		
Foreign currency forward contracts – year ended December 31, 2017	$ (100)	Cost of revenues	$ 140	Operating expenses	$ —
		Operating expenses	$ (737)		
Foreign currency forward contracts – year ended December 31, 2016	$ 1,209	Cost of revenues	$ (221)	Operating expenses	$ (47)

In addition to the above, for those foreign currency forward contracts not designated as hedges, the Company has recorded a loss of less than $0.1 million upon settlement and a loss of $0.2 million for the change in fair value of outstanding contracts for the year ended December 31, 2018. For the year ended December 31, 2017, the Company has recorded a gain of $0.1 million upon settlement in the consolidated statement of comprehensive income, with no contracts outstanding at December 31, 2017. The Company has recorded a loss of $0.2 million upon settlement and a gain of $0.3 million for the change in fair value of outstanding contracts for the year ended December 31, 2016, in the consolidated statement of comprehensive income.

8. Loan Payable:

2017 *Amended Credit Facility*

On January 20, 2017, the Company entered into an amended and restated secured Credit Agreement (the "2017 Amended Credit Agreement") with Bank of Montreal ("BMO"), Royal Bank of Canada and Bank of Nova Scotia (collectively with "Lenders") under which the Company increased its access to funds to an aggregate of $140 million. This amendment and restatement to the Company's 2016 Credit Facility (defined below), among other things, reduced the existing Tucows non-revolving facility (such existing non-revolving facility, together with other existing facilities, the "Existing Facilities") from $40.0 million to $35.5 million, and established a new non-revolving credit facility of $84.5 million (the "Facility D"). The Company immediately drew down $84.5 million under Facility D to fund the acquisition of eNom (Note 3(b)). The "2016 Credit Facility" refers to the credit facility established under the Company's secured credit agreement (the "2016 Credit Agreement") among the Company, BMO and the Lenders, dated as of August 18, 2016.

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In connection with the 2017 Amended Credit Agreement, the Company incurred $0.6 million of fees paid to lenders and 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.

The obligations of the Company under the 2017 Amended Credit Facility are secured by a first priority lien on substantially all of the personal property and assets of the Company.

The 2017 Amended Credit Facility has a four-year term. Under the 2017 Amended Credit Facility, the Company has access to an aggregate of up to $140 million in funds that are available as follows:

- a $5 million revolving credit facility (“Facility A”);
- a $15 million revolving reducing term facility (“Facility B”);
- a $35.5 million non-revolving facility (“Facility C”); and
- a $84.5 million non-revolving facility (“Facility D”).

Borrowings under the 2017 Amended Credit Facility accrue interest and standby fees at variable rates based on borrowing elections by the Company and the Company’s Total Funded Debt to EBITDA as described below. The purpose of Facility A is for general working capital and general corporate requirements, while Facility B and Facility C support share repurchases, acquisitions and capital expenditures associated with the Company’s Fiber to the Home program (“FTTH”). Facility D was provided and used for the acquisition of eNom.

The repayment terms for Facility A require monthly interest payments with any final principal payment becoming due upon maturity of the 2017 Amended Credit Facility. Under the repayment terms for Facility B, at December 31st of each year, balances drawn during the year that remain outstanding will become payable on a quarterly basis commencing the first quarter of the following year, for the period of amortization based on the purpose of the draw. For Facilities C and D, each draw will become payable beginning the first full quarter post initial draw for the period of amortization based on the purpose of the draw. The amortization periods for Facilities B, C and D are based on the purposes of the draws as follows: draws for share repurchases are repaid over four years, draws for acquisitions over five years and draws for FTTH capital expenditures over seven years. The 2017 Amended Credit Facility also includes a mechanism that is triggered based on the Company’s Total Funded Debt to EBITDA calculation at the end of each fiscal year. If Total Funded Debt to EBITDA exceeds 2.25:1 at December 31 of each year during the term, the Company is obligated to make a repayment of 50% of Excess Cash Flow as defined under the agreement.

The 2017 Amended Credit Facility contains customary representations and warranties, affirmative and negative covenants, and events of default. The 2017 Amended Credit Facility requires that the Company comply with the following financial covenants at all times, which are to be calculated on a rolling four quarter basis: (i) maximum Total Funded Debt to EBITDA Ratio of 2.25:1 and (ii) minimum Fixed Charge Coverage Ratio of 1.20:1. Further, the Company's maximum annual Capital Expenditures cannot exceed $50.0 million per year, which limit will be reviewed on an annual basis. In addition, funded share repurchases are not to exceed $20 million, or up to $40 million so long as the total loans related to share repurchases do not exceed 1.5 times of trailing twelve months EBITDA. As at and for the year ended December 31, 2018, the Company was in compliance with these covenants.

On January 24, 2018, the Company entered into the Second Interim Amendment to First Amended and Restated Credit Agreement (the "Second Interim Amendment") with BMO and the Lenders. The Second Interim Amendment provides that certain defined terms in Section 1.01 of the Credit Agreement are added and updated to reflect the inclusion of liabilities to Sprint Mobile similar to the previous inclusion of T-Mobile liabilities. The Second Interim Amendment also permits Tucows to retain bank accounts with Silicon Valley Bank with the aggregate amount held in such accounts not to exceed $3.0 million.

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Borrowings under the 2017 Amended Credit Facility will accrue interest and standby fees based on the Company's Total Funded Debt to EBITDA ratio and the availment type as follows:

	If Total Funded Debt to EBITDA is:			
Availment type or fee	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 2.25	Greater than or equal to 2.25
Canadian dollar borrowings based on Bankers' Acceptance or U.S. dollar borrowings based on LIBOR (Margin)	2.00%	2.25 %	2.75 %	3.25 %
Canadian or U.S. dollar borrowings based on Prime Rate or U.S. dollar borrowings based on Base Rate (Margin)	0.75%	1.00 %	1.50 %	2.00 %
Standby fees	0.40%	0.45 %	0.55 %	0.65 %

The following table summarizes the Company's borrowings under the credit facilities (Dollar amounts in thousands of U.S. dollars):

	December 31, 2018	December 31, 2017
Facility A	1,000	-
Facility B	6,000	-
Facility C	3,232	5,930
Facility D	54,924	71,823
Less: unamortized debt discount and issuance costs	(555)	(829)
Total loan payable	64,601	76,924
Less: loan payable, current portion	18,400	18,290

Loan payable, long-term portion	46,201	58,634

The following table summarizes our scheduled principal repayments as of December 31, 2018 (Dollar amounts in thousands of U.S. dollars):

2019	18,400
2020	18,400
2021	28,356
	$65,156

Other Credit Facilities

Prior to the Company entering into the 2016 Credit Facility, the Company had credit agreements (collectively the "Amended Credit Facility") with BMO that were amended on November 19, 2012, and which provided the Company with access to two revolving demand loan facilities (the "2012 Demand Loan Facilities"), a treasury risk management facility, an operating demand loan and a credit card facility. In connection with the 2016 Credit Facility, the Company repaid its outstanding indebtedness of the 2012 Demand Loan Facilities. With the settlement of the outstanding indebtedness, the 2012 Demand Loan Facilities and the operating demand loan were simultaneously terminated and the outstanding balances were fully repaid through advances on the 2016 Credit Facility. The Company continues to have access to the treasury risk management facility and credit card facility.

The treasury risk management facility under the Amended Credit Facility provides for a $3.5 million settlement risk line to assist the Company with hedging Canadian dollar exposure through foreign exchange forward contracts and/or currency options. Under the terms of the Amended Credit Facility, the Company may enter into such agreements at market rates with terms not to exceed 18 months. As of December 31, 2018, the Company held $40.5 million of contracts to trade U.S. dollars in exchange for Canadian dollars (Note 7).

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In the fourth quarter of, 2017, the Company entered into a corporate credit card program with the Bank of Nova Scotia and the Lenders. The program provides that BMO and the Bank of Nova Scotia may establish corporate credit card facilities with the Company in an amount of up to $5 million, which was established in the same quarter.

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 year ended December 31, 2018 and 35% for the years ended December 31, 2017 and December 31, 2016, 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,		
	2018	2017	2016
Income for the year before provision for income taxes	$26,155	$24,075	$25,113
Computed tax expense	5,492	8,185	8,538
Increase (reduction) in income tax expense resulting from:			
State income taxes	846	657	532
Effect of the decrease in Federal tax rate on deferred taxes	-	(10,036)	-
Change in Valuation allowance	2,811	1,276	-
Non-creditable Foreign Tax	-	2,903	-
Excess tax benefits on share-based compensation expense	(697)	(2,796)	-
Permanent differences	159	1,636	290
Others	409	(77)	(314)
Provision for income taxes	$9,020	$1,748	$9,046

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 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.

In Fiscal 2017, we reflected a net $5.8 million non-cash tax benefit through income from continuing operations for the re-measurement impact related to the changes in tax laws included in the Tax Act. The primary driver of this re-measurement was the result of the reduction in the corporate tax rate from 35% to 21% which resulted in our recognizing, based on the rates at which they are expected to reverse in the future, a $10.0 million non-cash tax benefit through income from continuing operations for the re-measurement of our deferred tax assets and liabilities. This amount was partially offset by our recording a valuation allowance of $1.3 million related to prior year Foreign Tax Credits that we have determined are no longer more likely than not to be used as the tax rate in the jurisdiction where these Foreign Tax Credits were generated is higher than the 21% corporate tax rate. In addition, the impact of the prepaid registry fee deduction, more fully described below, together with the reduction in the tax rate to 21% made it unlikely we would be able to claim the Fiscal 2017 foreign taxes paid in future years and as such opted to utilise the foreign taxes paid as a deduction for 2017 income tax purposes, the net negative effect of which was a $2.9 million addition to income tax expense.

On December 22, 2017, the SEC issued guidance to address the application of GAAP in situations when a registrant does not have the necessary information available, prepared or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Tax Act. The completion of our 2017 income tax returns, future guidance and additional information and interpretations with the respect to the Tax Act resulted in insignificant adjustments related to provisional impact estimates from Fiscal 2017.

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The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and liabilities as of December 31, 2018, and 2017 are presented below (Dollar amounts in thousands of U.S. dollars):

	December 31, 2018	**December 31, 2017**
Deferred tax assets (liabilities):		
Deferred tax assets:		
Deferred revenue	$ 6,497	$ 7,573
Foreign tax credits	3,865	1,276
Amortization	(5,872)	(1,937)
Net operating losses	1,892	2,545
Accruals, including foreign exchange and other	1,955	517
Sub-total Deferred tax assets	8,337	9,974
Valuation allowance	(4,087)	(1,276)
Total deferred tax assets	$ 4,250	$ 8,698
Deferred tax liabilities:		
Prepaid registry fees and expenses	$ (15,950)	$ (18,051)
Limited life intangible assets	(6,115)	(7,371)
Indefinite life intangible assets	(3,110)	(3,110)
Total deferred tax liability	$ (25,175)	$ (28,532)
Net deferred tax asset (liability)	$ (20,925)	$ (19,834)

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 benefit as of December 31, 2018, and $15 (in thousands of U.S. dollars) as of December 31, 2017.

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, 2018, and December 31, 2017.

The following is a reconciliation of Tucows' change in uncertain tax position (Dollar amounts in thousands of U.S. dollars):

Total Gross Unrecognized Tax Benefits	December 31, 2018	December 31, 2017
Balance, beginning of year	$ 15	$ 117
Change in uncertain tax benefits	(15)	(102)
Balance, end of year	$ -	$ 15

In Fiscal 2017, in connection with the eNom acquisition, 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 Fiscal 2018, 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. Based on the Company's examination of administrative practices and precedents by the IRS, we believe that on a more likely than not basis that our tax position will be sustained. If the position is not sustained, then the accounting method change would be deferred into the following taxation period and we may be subject to incremental taxes as well as interest and penalties.

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10. Revenue:

Significant accounting 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, domain sale contracts, and other advertising revenue. 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 18 – Segment reporting for more information.

(a) Network Access Services

The Company generates Network Access Services revenues primarily through the provisioning of mobile services ("Ting Mobile"). Other sources of revenue include the provisioning of fixed high-speed Internet access ("Ting Internet") as well as billing solutions to Internet Service Providers ("ISPs").

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.

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.

Our Roam Mobility brand also offers standard talk, text and data mobile services. Roam customers prepay for their usage through the Roam Mobility website. When prepayments are received the amount is deferred, and subsequently recognized as the Company satisfies its obligation to provide mobile services. In addition, revenues associated with the sale of SIM cards 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 ratably 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.

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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.

Advertising revenue is derived through domain parking monetization, whereby the Company contracts with third-party Internet advertising publishers to direct web traffic from the Company's domain expiry stream domains and Internet portfolio domains to advertising websites. Compensation from Internet advertising publishers is calculated variably on a cost-per-action basis based on the number of advertising links that have been visited in a given month. Given that the variable consideration is calculated and paid on a monthly basis, no estimation of variable consideration is required.

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):

	Year ended December 31,		
	2018	**2017**	**2016**
Network Access Services:			
Mobile Services	$89,340	$83,885	$70,127

Other Services	7,984	5,567	4,179
Total Network Access Services	97,324	89,452	74,306
Domain Services:			
Wholesale			
Domain Services	189,434	183,731	89,010
Value Added Services	17,756	17,832	8,642
Total Wholesale	207,190	201,563	97,652
Retail	34,524	31,649	14,630
Portfolio	6,975	6,757	3,231
Total Domain Services	248,689	239,969	115,513
	$346,013	$329,421	$189,819

During the years ended December 31, 2018, December 31, 2017 and December 31, 2016 no customer accounted for more than 10% of total revenue and no customer accounted for more than 10% of accounts receivable.

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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):

	Year ended December 31,		
	2018	2017	2016
Network Access Services:			
Mobile Services	$46,061	$45,335	$35,915
Other Services	3,994	3,305	1,910
Total Network Access Services	50,055	48,640	37,825
Domain Services:			
Wholesale			
Domain Services	160,216	161,013	72,948
Value Added Services	3,154	2,450	2,032
Total Wholesale	163,370	163,463	74,980
Retail	17,725	17,346	6,766
Portfolio	953	1,151	616
Total Domain Services	182,048	181,960	82,362
Network Expenses:			
Network, other costs	9,846	9,324	5,210
Network, depreciation and amortization costs	7,294	4,976	1,368
	17,140	14,300	6,578
	$249,243	$244,900	$126,765

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 $160.6 million as of January 1, 2018. Significant changes in deferred revenue were as follows (Dollar amounts in thousands of U.S. dollars):

	Year ended December 31, 2018
Balance, beginning of period	$ 160,582
Deferred revenue	222,208
Recognized revenue [1]	(239,096)
Balance, end of period	$ 143,694

[1]As a result of the bulk transfers of 2.8 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.

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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, 2018 (Dollar amounts in thousands of U.S. dollars):

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) (Dollar amounts in thousands of US dollars).

	Year ended December 31, 2018
2019	$ 116,398
2020	12,751
2021	5,498
2022	3,456
2023	2,163
Thereafter	3,074
Total	$ 143,340

11. Contract Costs:

(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 $1.4 million at December 31, 2018.

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, 2018, the Company capitalized $0.9 million and also amortized $0.9 million of contract costs, respectively. There was no impairment loss recognized in relation to the costs capitalized during the year ended December 31, 2018. The breakdown of the movement in the contract costs balance for the year ended December 31, 2018 is as follows (Dollar amounts in thousands of U.S. dollars):

	Year ended December 31, 2018[(1)]
Balance, beginning of period	$ 1,404
Capitalization of costs	913
Amortization of costs	(927)
Balance, end of period	$ 1,390

[(1)]The beginning balance consists entirely of a cumulative adjustment recorded on January 1, 2018 as a result of the modified retrospective adoption of Topic 606. See Note 2 – "Recent accounting pronouncements" of Notes to Consolidated Financial Statements for more information.

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.

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(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 Prepaid domain name registry and ancillary services fees. These costs are deferred and amortized over the life of the domain which generally ranges from one to ten years. For the year ended December 31, 2018, the Company capitalized $163.5 million and also amortized $183.9 million of contract costs. There was no impairment loss recognized in relation to the costs capitalized during the year ended December 31, 2018. Amortization expense is primarily included in cost of revenue. The breakdown of the movement in the prepaid domain name registry and ancillary services fees balance for the year ended December 31, 2018 is as follows (Dollar amounts in thousands of U.S. dollars).

	Year ended December 31,		
	2018		
Balance, beginning of period	$	127,003	
Deferral of costs		163,447	
Recognized costs [1]		(183,923	)
Balance, end of period	$	106,527	

[1]As a result of the bulk transfer of 2.8 million domain names to Namecheap throughout 2018, recognized costs for the year ended December 31, 2018 includes $16.7 million related to previously deferred prepaid registry fees, a portion of which would have otherwise been recognized after December 31, 2018.

12. Common Shares:

The Company’s authorized common share capital is 250 million shares of common stock without nominal or par value. On December 31, 2018, there were 10,627,988 shares of common stock outstanding (2017: 10,583,879).

Repurchase of common shares:

(a) Normal Course Issuer Bids:

On February 13, 2019, 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 14, 2019 and is expected to terminate on February 13, 2020. Please see "Note 19 – Subsequent Events" for more information on the 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.

On March 1, 2017, the Company announced that its Board had approved a stock buyback program to repurchase of up to $40 million of the Company's common stock in the open market. The $40 million buyback program commenced on March 1, 2017 and terminated on February 14, 2018. No repurchases were made under this program.

On February 9, 2016, 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. Purchases were made exclusively through the facilities of the NASDAQ Capital Market. The stock buyback program commenced on February 10, 2016 and terminated on February 9, 2017. The Company repurchased 308,416 shares under this program during the year ended December 31, 2016 for a total $7.2 million.

(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.

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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,		
	2018	2017	2016
Common stock repurchased on the open market or through tender offer			
Number of shares	—	—	308,416
Aggregate market value of shares (in thousands)	$—	$—	$7,180
Average price per share	$—	$—	$23.28
Common stock received in connection with share-based compensation			
Number of shares	19,777	50,454	25,572
Aggregate market value of shares (in thousands)	$1,138	$2,602	$634
Average price per share	$57.56	$51.58	$24.80

13. 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. 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.

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The fair value of stock options granted during the years ended December 31, 2018, 2017 and 2016 was estimated using the following weighted average assumptions:

	Year ended December 31,		
	2018	**2017**	**2016**
Volatility	37.9 %	41.6 %	66.1 %
Risk-free interest rate	2.7 %	1.8 %	1.3 %
Expected life (in years)	4.48	4.55	4.3
Dividend yield	— %	— %	— %
The weighted average grant date fair value for options issued, with the exercise price equal to market value on the date of grant	$22.22	$20.08	$11.18

Details of stock option transactions are as follows:

	Year ended December 31, 2018		**Year ended December 31, 2017**		**Year ended December 31, 2016**	
	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	653,571	$ 36.69	474,501	$ 12.67	513,366	$ 9.24
Granted	163,366	62.80	370,025	54.10	81,750	22.66
Exercised	(63,886)	12.86	(172,759)	7.88	(109,963)	3.79
Forfeited	(50,714)	52.33	(18,196)	37.70	(9,902)	16.80
Expired	—	—	—	—	(750)	3.76
Outstanding, end of period	702,337	43.80	653,571	36.69	474,501	12.67
Options exercisable, end of period	326,937	$ 28.91	243,771	$ 14.79	332,192	$ 10.08

As of December 31, 2018, the exercise prices, weighted average remaining contractual life of outstanding options and intrinsic values were as follows:

	Options outstanding				Options exercisable			
Exercise price	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
$5.52 - $8.56	58,135	$ 6.92	0.9	$ 3,089	58,135	$ 6.92	0.9	$ 3,090
$10.16 - $19.95	99,588	16.44	2.5	4,344	97,088	16.35	2.5	4,244
$21.10 - $27.53	65,000	23.47	3.2	2,378	55,000	23.91	3.0	1,988
$35.25 - $37.35	14,375	35.89	4.4	347	10,625	36.11	4.2	254
$43.15 - $47.00	18,500	44.19	5.1	294	8,000	43.75	5.1	131
$53.20 - $58.65	328,387	55.67	5.4	1,443	98,089	55.21	5.1	476
$64.10 - $64.10	118,352	64.10	6.4	—	—	—	—	—
	702,337	$ 43.80	4.6	$ 11,895	326,937	$ 28.91	3.2	$ 10,183

Total unrecognized compensation cost relating to unvested stock options at December 31, 2018, prior to the consideration of expected forfeitures, is approximately $6.5 million and is expected to be recognized over a weighted average period of 2.7 years.

The total intrinsic value of options exercised during the years ended December 31, 2018, 2017 and 2016 was $2.9 million, $7.6 million and $2.4 million, respectively. Cash received from the exercise of stock options during the years ended December 31, 2018, 2017 and 2016 was $0.1 million, $0.2 million and $0.1 million respectively.

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The Company recorded stock-based compensation amounting to $2.6 million, $1.5 million and $0.8 million for the years ended December 31, 2018, 2017 and 2016 respectively. Stock-based compensation has been included in operating expenses as follows (Dollar amounts in thousands of US dollars):

	Year ended December 31, 2018	**Year ended December 31, 2017**	**Year ended December 31, 2016**
Network expenses	$ 223	$ 110	$ 22
Sales and marketing	1,025	573	236
Technical operations and development	636	360	98
General and administrative	690	414	443
	$ 2,574	$ 1,457	$ 799

14. Foreign Exchange:

A foreign exchange loss amounting to $0.9 million has been recorded in general and administrative expenses during the year ended December 31, 2018. A foreign exchange gain amounting to $0.7 million has been recorded in general and administrative expenses during the year ended December 31, 2017. A foreign exchange loss amounting to $0.1 million has been recorded in general and administrative expenses during the year ended December 31, 2016.

15. Other Income, Net:

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 is being recognized over the term of three years. An amount of $0.5 million of this gain was recognized for the years ended December 31, 2018, 2017 and 2016 respectively. As of December 31, 2018 the gain has been fully recognized.

16. 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, 2018	**Year ended December 31, 2017**	**Year ended December 31, 2016**
Numerator for basic and diluted earnings per common share:			
Net income for the year	$17,135	$22,327	$16,067
Denominator for basic and diluted earnings per common share:			
Basic weighted average number of common shares outstanding	10,604,722	10,537,356	10,524,856
Effect of stock options	189,448	256,266	188,739
Diluted weighted average number of shares outstanding	10,794,170	10,793,622	10,713,595
Basic earnings per common share	$1.62	$2.12	$1.53
Diluted earnings per common share	$1.59	$2.07	$1.50

Options to purchase 451,739 common shares were outstanding during 2018 (2017: 341,650; 2016: 76,750) 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.

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17. 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** [1]	**Purchase Obligations** [2]	**Total Obligations**
2019	1,748	44,938	46,686
2020	1,084	5,068	6,152
2021	1,198	388	1,586
2022	1,182	379	1,561
2023	1,153	370	1,523
Thereafter	7,195	795	7,990
	$ 13,560	$ 51,938	$ 65,498

[1] Contractual lease obligations include an agreement to extend the lease of the Company's principal administrative office located in Toronto, ON. Prior to the extension, the lease agreement was set to expire on December 31, 2020. The new agreement extends the lease period

from 2021 to 2030. Not including additional building operating expenses, the Company has committed to lease payments of $7.4 million over the term of the lease extension.

[2] Purchase obligations include all other legally binding service contracts for mobile telephone services and other operational agreements to be delivered during Fiscal 2019 and subsequent years. Note, Purchase Obligations do not include interest payments on the Company's credit facilities.

Rental expense under operating lease agreements was $2.3 million, $1.9 million and $1.2 million for the years ended December 31, 2018, 2017 and 2016, respectively.

(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, 2018, the City has drawn $13.4 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 2019.

(c) On September 17, 2018 Ting entered into a non-exclusive access and use agreement with a private infrastructure group. 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 a city in the United States. Under the terms of the agreement, the private infrastructure group is fully responsible for constructing, operating and maintaining a wholesale fiber optic network, as well as the financing of those activities.

Ting will be responsible for paying a fee per subscriber to the private infrastructure group. 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 17(a).

(d) 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, 2018 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.

(e) On August 30, 2017, Namecheap, Inc. (“Namecheap”) filed a compliant against the Company, eNom, Inc., and unknown John Does in the United States District Court for the Western District of Washington alleging breach of contract, breach of the implied duty of good faith and fair dealing, and unjust enrichment (the “Namecheap Federal Action”). On September 6, 2018, Tucows and Namecheap entered into a settlement agreement, pursuant to which the matter was amicably resolved, and the case dismissed. Namecheap has provided Tucows an administrative fee for services in connection with transferring its domain names off Tucows’ platform.

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18. 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 sale of mobile phones, telephony services, high speed Internet access, billing solutions to individuals and small businesses primarily through the Ting website. 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	Domain Services	Consolidated Totals

Year ended December 31, 2018	**Services**		
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
Impairment of indefinite life intangible assets			-
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

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Year ended December 31, 2017	Network Access Services	Domain Services	Consolidated Totals
Net Revenues	$ 89,452	$ 239,969	$ 329,421
Cost of revenues			
Cost of revenues	48,640	181,960	230,600
Network expenses	1,861	7,463	9,324
Depreciation of property and equipment	2,201	941	3,142
Amortization of intangible assets	46	1,788	1,834
Total cost of revenues	52,748	192,152	244,900
Gross Profit	36,704	47,817	84,521
Expenses:			
Sales and marketing			29,423
Technical operations and development			7,258
General and administrative			13,594
Depreciation of property and equipment			585
Amortization of intangible assets			6,566
Impairment of indefinite life intangible assets			111
Loss (gain) on currency forward contracts			(98)
Income from operations			27,082
Other income (expenses), net			(3,007)
Income before provision for income taxes			$ 24,075

Year ended December 31, 2016	Network Access Services	Domain Services	Consolidated Totals
Net Revenues	$ 74,306	$ 115,513	$ 189,819
Cost of revenues			
Cost of revenues	37,825	82,362	120,187
Network expenses	1,399	3,811	5,210
Depreciation of property and equipment	977	343	1,320
Amortization of intangible assets	48	-	48
Total cost of revenues	40,249	86,516	126,765
Gross Profit	34,057	28,997	63,054

Expenses:	
Sales and marketing	20,755
Technical operations and development	4,495
General and administrative	11,405
Depreciation of property and equipment	504
Amortization of intangible assets	905
Impairment of indefinite life intangible assets	42
Loss (gain) on currency forward contracts	(99)
Income from operations	25,047
Other income (expenses), net	66
Income before provision for income taxes	$ 25,113

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(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):

	Year ended December 31,		
	2018	**2017**	**2016**
Network Access Services:			
Mobile Services	$46,061	$45,335	$35,915
Other Services	3,994	3,305	1,910
Total Network Access Services	50,055	48,640	37,825
Domain Services:			
Wholesale			
Domain Services	160,216	161,013	72,948
Value Added Services	3,154	2,450	2,032
Total Wholesale	163,370	163,463	74,980
Retail	17,725	17,346	6,766
Portfolio	953	1,151	616
Total Domain Services	182,048	181,960	82,362
Network Expenses:			
Network, other costs	9,846	9,324	5,210
Network, depreciation and amortization costs	7,294	4,976	1,368
	17,140	14,300	6,578
	$249,243	$244,900	$126,765

(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, 2018	**December 31, 2017**
Canada	$ 1,393	$ 1,176
United States	46,631	23,417
Germany	41	27
	$ 48,065	$ 24,620

(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, 2018	December 31, 2017
Canada	$ 6,553	$ 7,749
United States	30,421	37,783
Germany	-	120
	$ 36,974	$ 45,652

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(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, 2018	December 31, 2017
Canada	$ -	$ -
	$ -	$ -

(f) Valuation and qualifying accounts (Dollar amounts in thousands of US dollars):

Allowance for doubtful accounts excluding provision for credit notes	Balance at beginning of period	Charged to costs and expenses	Write-offs during period	Balance at end of period
Year ended December 31, 2018	$ 168	$ (36)	$ -	$ 132
Year ended December 31, 2017	$ 164	$ 4	$ -	$ 168

19. Subsequent Events:

a. On February 14, 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. Purchases will be made exclusively through the facilities of the NASDAQ Capital Market. The stock buyback program commenced on February 14, 2019 and will terminate on or before February 13, 2020. The previously announced $40 million buyback program for the period February 14, 2018 to February 13, 2019 was terminated on February 13, 2019.

b. In January 2019, the Company entered into an agreement to a lease extension of its principal administrative office located in Toronto, ON. Prior to the extension, the lease agreement expired on December 31, 2020. The new

agreement extends the lease period from 2021 to 2030. Not including additional building operating expenses, the Company has committed to lease payments of $7.4 million over the term of the lease extension.

20. Selected Quarterly Financial Data (Unaudited):

	December 31	**September 30**	**June 30**	**March 31**
	(in thousands, except for per share data)			
2018				
Total revenues	$85,612	$ 83,519	$81,087	$95,795
Gross profit	27,731	24,262	22,158	22,619
Net income	4,436	5,347	3,608	3,744
Earnings per share:				
Basic	$0.42	$ 0.50	$0.34	$0.35
Diluted	0.41	0.50	0.33	0.35
2017				
Total revenues	$90,621	$ 85,008	$84,223	$69,568
Gross profit	25,736	20,494	21,347	16,944
Net income	11,199	3,439	5,241	2,446
Earnings per share:				
Basic	$1.06	$ 0.33	$0.50	$0.23
Diluted	1.04	0.32	0.49	0.23

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EXHIBIT INDEX

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 to Stock Purchase Agreement, dated as of June 13, 2017, by and among Tucows Inc., Tucows (Emerald), LLC, Rightside Group, Ltd., Rightside Operating Co. and eNom, Incorporated (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on June 13, 2017).
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).
10.1*	2006 Equity Compensation Plan, as amended and restated effective as of July 29, 2010 (Incorporated by reference to Exhibit 99(d)(1) filed with Tucows' Schedule TO, as filed with the SEC on September 17, 2010).
10.2*	Employment Agreement dated 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*	Employment Agreement dated March 11, 2003 between Tucows.com Co. and Michael Cooperman (Incorporated by reference to Exhibit 10.4 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).
10.4	Lease between 707932 Ontario Limited and Tucows International Corporation, dated 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).
10.5	Lease extension between 707932 Ontario Limited and Tucows Inc. and Tucows.com Co., dated 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).
10.6#	Lease extension between 707932 Ontario Limited and Tucows (Delaware) Inc. and Tucows.com Co., dated January 1, 2019.
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).
10.7	Offer Letter, dated November 19, 2012, between Tucows.com Co. and the Bank of Montreal (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on November 21, 2012).
10.8	Amended and Restated Supplemental Agreement, dated December 14, 2012, between Tucows.com Co., Tucows (Delaware), Inc. and the Bank of Montreal (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on December 20, 2012).
10.9	Guaranty, dated December 14, 2012, by Ting Inc. in favor of the Bank of Montreal (Incorporated by reference to Exhibit 10.2 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on December 20, 2012).

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Exhibit No.	Description
10.10	Loan Agreement, dated as of July 25, 2007, by and among Tucows.com Co., Tucows (Delaware) Inc., Tucows Inc., Mailbank Nova Scotia Co., Tucows Domain Holdings Co., Innerwise, Inc. and Bank of Montreal (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on July 31, 2007).
10.11	Credit Agreement, dated as of August 18, 2016, by and among Tucows.com Co., Ting Fiber, Inc., Ting Inc., as Borrowers, Tucows Inc., as Guarantor, and Bank of Montreal and Royal Bank of Canada, as Lenders (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on August 19, 2016).
10.12	First Amended and Restated Credit Agreement, dated as of January 20, 2017, by and among Tucows.com Co., Ting Fiber, Inc., Ting Inc., Tucows (Delaware), Inc., Tucows (Emerald) LLC, as Borrowers, Tucows Inc., as Guarantor, and Bank of Montreal, Royal Bank of Canada and Bank of Nova Scotia, as Lenders (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on January 23, 2017).
10.13	First Amendment, dated as of June 6, 2017, to the First Amended and Restated Credit Agreement, dated as of January 20, 2017, by and among Tucows.com Co., Ting Fiber, Inc., Ting Inc., Tucows (Delaware), Inc., Tucows (Emerald) LLC, as Borrowers, Tucows Inc., as Guarantor, and Bank of Montreal, Royal Bank of Canada and Bank of Nova Scotia, 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 9, 2017).
10.14	Interim Amendment, dated as of December 5, 2017, to the First Amended and Restated Credit Agreement, dated as of January 20, 2017, by and among Tucows.com Co., Ting Fiber, Inc., Ting Inc., Tucows (Delaware), Inc., Tucows (Emerald) LLC, as Borrowers, Tucows Inc., as Guarantor, and Bank of Montreal, Royal Bank of Canada and Bank of Nova Scotia, as Lenders (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on December 8, 2017).
10.15	Second Interim Amendment, dated as of January 24, 2018, to the First Amended and Restated Credit Agreement, dated as of January 20, 2017, by and among Tucows.com Co., Ting Fiber, Inc., Ting Inc., Tucows (Delaware), Inc., Tucows (Emerald) LLC, as Borrowers, Tucows Inc., as Guarantor, and Bank of Montreal, Royal Bank of Canada and Bank of Nova Scotia, as Lenders (Incorporated by reference to Exhibit 10.1 filed with Tucows' Current Report on Form 8-K, as filed with the SEC on January 24, 2018).
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# XBRL Instance

101.SCH# XBRL Taxonomy Extension Schema

101.CAL# XBRL Taxonomy Extension Calculation

101.DEF# XBRL Taxonomy Extension Definition

101.LAB# XBRL Taxonomy Extension Labels

101.PRE# XBRL Taxonomy Extension Presentation

* Management or compensatory contract.

Filed herewith.

† Furnished herewith.

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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.

	Tucows Inc.
DATE: March 5, 2019	**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 of behalf of the registrant and in the capacities and on the dates indicated.

Signature	**Title**	**Date**
/s/ Elliot Noss Elliot Noss	President, Chief Executive Officer (Principal Executive Officer) and Director	March 5, 2019
/s/ Davinder Singh Davinder Singh	Chief Financial Officer (Principal Financial and Accounting Officer)	March 5, 2019
/s/ Allen Karp Allen Karp	Director	March 5, 2019
/s/ Rawleigh Ralls Rawleigh Ralls	Director	March 5, 2019
/s/ Robin Chase Robin Chase	Director	March 5, 2019
/s/ Erez Gissin Erez Gissin	Director	March 5, 2019
/s/ Jeffrey Schwartz	Director	March 5, 2019

Jeffrey Schwartz

/s/ Brad Burnham	Director	March 5, 2019
Brad Burnham		

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