

**ITEM 6. RESERVED.**

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

**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. During the first quarter of 2021, the Company completed a reorganization of its reporting structure into three operating and reportable segments: Fiber Internet Services, Mobile Services and Domain Services. Previously, we disclosed two operating and reportable segments: Network Access Services and Domain Services. The change to our reportable operating segments was the result of a shift in our business and management structures that was initiated in 2020 and completed during the first quarter of 2021. The operations supporting what was previously known as our Network Access Services segment have become increasingly distinct between our mobile services (which includes both retail mobile MVNO based services and wholesale MSE services) and our fiber Internet services which were also included in our Network Access Services segment. We are now both organized and managed, and also report our financial results as three segments: Fiber Internet Services, Mobile Services and Domain Services. The three segments 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 three segments: Fiber Internet Services - which primarily derives revenue from Fiber Internet services and billing solutions to small ISPs, Mobile Services - which primarily derives revenues from three distinct service offerings including retail mobile services, platform services and professional services, and Domain Services - which derives revenue from three distinct service offerings including wholesale domain services, wholesale value added services and retail. To assist us in forecasting growth and to help us monitor the effectiveness of our operational strategies, our management regularly reviews revenues, cost of revenues, gross profit and adjusted EBITDA as a key measure of segment performance in order to gain more depth and understanding of the key business metrics driving our business. Effective January 1, 2022, our existing Mobile Services segment will be renamed to the communication service providers ("CSPs") Platform Services segment, and no longer include the 10-year payment stream on transferred legacy subscribers earned as part of the DISH Purchase Agreement as well as the retail sale of mobile phones, retail telephony services and transition services, all of which are not considered a part of our core business operations with the shift from MVNO to MSE. The renamed CSP Platform Services segment will continue to contain our MSE and professional services product offerings; since branded as Wavelo, as well as the billing solutions to Internet service providers ("ISPs"), that was previously reported under Fiber Internet Services segment. The Fiber segment will now only contain the operating results of our retail high speed Internet access operations, excluding the billing solutions moved to the new CSP Platform Services segment. The product offerings included in the Domain Services segment will remain unchanged.

For the years ended December 31, 2021, 2020 and 2019, we reported revenue of \$304 million, \$311 million and \$337 million, respectively.

***Fiber Internet Services***

Fiber Internet Services includes the provision of fixed high-speed Internet access services and other revenues, including billing solutions to small ISPs.

The Company also derives revenue from the sale of fixed high-speed Internet access, Ting Internet, in select towns throughout the United States, with further expansion underway to both new and existing Ting towns. Our primary sales channel of Ting Internet is through the Ting website. The primary focus of Ting Internet is to provide reliable Gigabit Internet services to consumer and business customers. Revenues from Ting Internet are all generated in the U.S. and are provided on a monthly basis. Ting Internet services have no fixed contract terms.

As of December 31, 2021, Ting Internet had access to 82,000 serviceable addresses and 26,000 active accounts under its management compared to having access to 56,000 serviceable addresses and 15,000 active accounts under its management as of December 31, 2020.

***Mobile Services***

Mobile Services includes the provision of Mobile Services Enabler ("MSE") platform and professional services, as well as the sale of retail mobile phone and retail telephone services for a small subset of retail customers.

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

Revenues from our retail mobile services, MSE platform and professional services are all generated in the U.S. and are provided on a monthly basis. Our MSE customer agreements have set contract lengths with the underlying Mobile Virtual Network Operator ("MVNO"). As part of the DISH Purchase Agreement, as a form of consideration for the sale of the customer relationships, the Company receives a payout on the margin associated with the legacy customer base sold to DISH. This has been classified as Other Income and not considered revenue in the current period.

**Domain Services**

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

Our primary distribution channel is a global network of approximately 35,000 web hosts, ISPs and other resellers around the world 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 generic top-level domain (“gTLD”) and the country code top-level domain options and related services, a white-label platform that facilitates the provisioning and management of domain names, a powerful Application Program Interface, easy-to-use interfaces, comprehensive management and reporting tools, and proactive and attentive customer service. Our services are integral to the solutions that our resellers deliver to their customers. We provide “second tier” support to our resellers by email, chat and phone in the event resellers experience issues or problems with our services. In addition, our Network Operating Center proactively monitors all services and network infrastructure to address deficiencies before customer services are impacted. We believe that the underlying platforms for our services are among the most mature, reliable and functional reseller-oriented provisioning and management platforms in our industry, and we continue to refine, evolve and improve these services for both resellers and end-users. Our business model is characterized primarily by non-refundable, up-front payments, which lead to recurring revenue and positive operating cash flow.

Wholesale, primarily branded as OpenSRS, eNom, EPAG and Ascio, derives revenue from its domain name registration service. Together the OpenSRS, eNom, EPAG and Ascio Domain Services manage 25.2 million domain names under the Tucows, eNom, EPAG and Ascio ICANN registrar accreditations and for other registrars under their own accreditations. Domains under management has decreased by 0.2 million domain names since December 31, 2020. The decrease is driven by lower renewal rates from the normalization of registration growth back to pre-pandemic levels, along with the continued erosion of registrations related to non-core customers from our eNom brand.

Value-Added Services include hosted email which provides email delivery and webmail access to millions of mailboxes, Internet security services, WHOIS privacy, publishing tools and other value-added services. All of these services are made available to end-users through a network of 35,000 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 or auction sale.

Retail, primarily the Hover and eNom portfolio of websites, including eNom, and eNom Central, derive revenues from the sale of domain name registration and email services to individuals and small businesses. Our retail domain services also include 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. The retail segment now includes the sale of the rights to its portfolio of surname domains used in connection with our Realnames email service and our Exact Hosting Service, that provides Linux hosting services for individual and small business websites.

**KEY BUSINESS METRICS AND NON-GAAP MEASURE**

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

**Adjusted EBITDA**

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

**Ting Internet**

	For the year ended December 31,		
	2021	2020	2019
	(in '000's)		
Ting Internet accounts under management	26	15	10
Ting Internet serviceable addresses (1)	82	56	36

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

**Domain Services**

	For the year ended December 31,(1)		
	2021	2020	2019
	(in '000's)		
Total new, renewed and transferred-in domain name registrations provisioned	17,374	18,220	17,285
Domains under management			
Registered using Registrar Accreditation belonging to the Tucows Group	18,909	19,685	19,233
Registered using Registrar Accreditation belonging to Resellers	6,254	5,692	4,540
Total domain names under management	25,163	25,377	23,773

(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.

## **OPPORTUNITIES, CHALLENGES AND RISKS**

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

### ***Fiber Internet Services***

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

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

### ***Mobile Services***

The prior year sale of substantially all of the Company's mobile customer base and pivot from MVNO to MSE was a strategic shift for our Mobile Services segment. At this time, DISH is our sole customer and represents 100% of our MSE platform and professional services revenues until such time that we are able to scale our services to other customers interested in our enablement services. With all our MSE platform and professional services revenues concentrated with one customer, we are exposed to significant risk if we are unable to maintain this customer relationship or establish new relationships in the future. Additionally, our revenues as an MSE are directly tied to the subscriber volumes of DISH's MVNO or MNO networks, so our profitability is contingent on the ability of DISH to continue to add subscribers onto our platform.

Additionally, as described above, the Company is entitled to a long-term payment stream that is a function of the margin generated by the transferred subscribers over the 10-year term of the DISH Purchase Agreement. This consideration structure may not prove to be successful or profitable in the long-term to us if the existing subscriber base churns at an above average rate. Additionally, given DISH controls the revenues and costs incurred associated with the acquired subscribers, there could arise a situation where profitability for the subscriber base is diminished either by lower price points or cost inflation.

As part of the transactions contemplated by the DISH Purchase agreement in the prior year, the Company retained a small number of customer accounts associated with one MNO agreement that was not reassigned to DISH at time of sale. We continue to be subject to the minimum revenue commitments previously agreed to with this excluded MNO agreement. The Company is able to continue adding customers under the excluded MNO network. However, with no direct ability to change customer pricing or renegotiate contract costs or terms, the Company may be unable to meet the minimum commitments with this MNO partner and could incur significant and recurring penalties until such a time that the contract is complete. These penalties would negatively impact our operational performance and financial results if enforced by the MNO.

### ***Domain Services***

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

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

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

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

## Critical Accounting Policies and Estimates

The following is a discussion of our critical accounting policies and methods. Critical accounting policies are defined as those that are both important to the portrayal of our financial condition and results of operations and are reflective of significant judgments and uncertainties made by management that may result in materially different results under different assumptions and conditions. “Note 2 – Significant Accounting Policies” of the Notes to the Consolidated Financial Statements for the year ended December 31, 2021 (“Fiscal 2021”) included in Part II, Item 8 of this Annual Report, includes further information on the significant accounting policies and methods used in the preparation of our consolidated financial statements.

The preparation of the consolidated financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. Management bases its estimates on historical experience, available market information as applicable, and on various other assumptions that are believed to be reasonable under the circumstances at the time they are made. Under different assumptions or conditions, the actual results will differ, potentially materially, from those previously estimated. Many of the conditions impacting these assumptions and estimates are outside of the Company’s control. Management evaluates its estimates on an on-going basis.

### *Contracts with multiple performance obligations*

Our mobile platform service contract contains multiple performance obligations with DISH. We are required to allocate the transaction price between performance obligations - Mobile Platform Services and Professional Services, which impacts the timing of revenue recognition. We determine the stand-alone selling price of Mobile Platform Services using the residual method, which requires us to make estimates of future consideration earned during the entire term of the mobile platform service contract as well as the stand-alone selling price of Professional Services. Changes in assumptions could cause an increase or decrease in the amount of revenue that we report in a particular period.

### *Acquired customer relationships*

For acquired customer relationships, the Company estimates the fair value based on the income approach. The income approach is a valuation technique that calculates the fair value of an intangible asset based on the present value of future cash flows expected to be generated over the remaining useful life of the asset. This valuation involves significant subjectivity and estimation uncertainty, including assumptions related to future revenues attributable to acquired customer relationships, attrition rates and discount rates.

### *Loss contingencies*

We are sometimes subject to claims, suits, regulatory and government investigations, and other proceedings involving competition, intellectual property, privacy, tax and related compliance, labor and employment, commercial disputes, and other matters. Certain of these matters include speculative claims for substantial or indeterminate amounts of damages. We record a liability when we believe that it is probable that a loss has been incurred and the amount can be reasonably estimated.

We evaluate, on a regular basis, developments in our legal matters that could affect the amount of liability that has been previously accrued, and the matters and related reasonably possible losses disclosed, and make adjustments and changes to our disclosures as appropriate. Significant judgment is required to determine both the likelihood and the estimated amount of a loss related to such matters. Until the final resolution of such matters, there may be an exposure to loss in excess of the amount recorded, and such amounts could be material.

### *Impairment of Goodwill and intangibles*

We evaluate factors such as macro-economic, industry and market conditions including the capital markets and the competitive environment amongst others. We concluded 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.

### *Changes in estimates*

There were no material changes to our critical accounting estimates during Fiscal 2021.

## Revenue Recognition Policy

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

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

*Nature of goods and services*

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

(a) Fiber Internet Services

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

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

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

(b) Mobile Services

*Retail Mobile Services*

Ting Mobile wireless usage contracts grant customers access to standard talk, text and data mobile services. Ting Mobile contracts are billed based on the customer’s selected rate plan, which can either be usage based or an unlimited plan. All rate plan options are charged to customers on a postpaid, monthly basis at the end of their billing cycle. As discussed previously, in the past fiscal year the Company sold substantially all of its retail mobile customer relationships, and mobile handset and SIM inventory to DISH and granted the right to use and option to purchase the Ting brand. The Company only retains a small subset of customers to which it continues to provide retail mobile services. All future revenues associated with Retail Mobile Services stream will only be for this subset of customers retained by Ting, Inc.

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

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

*Mobile Platform Services*

Tucows’ MSE platform provides network access, provisioning and billing services for MVNOs as well as a fixed number of professional service hours. Our MVNO customers are billed monthly, on a postpaid basis. The monthly fees are variable, based on the volume of their subscribers utilizing the platform during a given month, to which minimums may apply. Customers may also be billed fixed platform fees and granted fixed credits as part of the consideration for long-term contracts. Consideration received for MSE platform services is allocated to MSE services and professional services and recognized as each service obligation is fulfilled. Fixed fees for Mobile Platform Services are recognized into revenue evenly over the service period, while variable usage fees are recognized each month as they are consumed. Professional services revenue is recognized as the hours of professional services granted to the customer are used or expire. When consideration for Mobile Platform Services is received before the service is delivered, the revenue is initially deferred and recognized only as the Company performs its obligation to provide services. Likewise, if Mobile Platform Services are delivered before the Company has the unconditional right to invoice the customer, revenue is recognized as a Contract Asset.

*Other Professional Services*

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

(c) Domain Services

*Wholesale - Domain Services*

Domain registration contracts, which can be purchased for terms of one to ten years, provide our resellers and retail registrant customers with the exclusive right to a personalized internet address from which to build an online presence. The Company enters into domain registration contracts in connection with each new, renewed and transferred-in domain registration. At the inception of the contract, the Company charges and collects the registration fee for the entire registration period. Though fees are collected upfront, revenue from domain registrations are recognized 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.

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

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

#### *Wholesale – Value-Added Services*

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

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

#### *Retail*

We derive revenues mainly from Hover and eNom's retail properties through the sale of retail domain name registration and email services to individuals and small businesses. The retail segment now includes the sale of the rights to its portfolio of surname domains used in connection with our Realnames email and Linux hosting services for websites through our Exact Hosting brand.

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

#### **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, 2021, we had \$130.4 million in goodwill related to our acquisitions and \$50.4 million in intangible assets comprised of indefinite life intangibles of \$12.3 million and finite life intangible assets of \$38.1 million. At December 31, 2020, we had \$116.3 million in goodwill related to our acquisitions and \$47.4 million in intangible assets comprised of indefinite life intangibles of \$12.3 million and finite life intangible assets of \$35.1 million. As described above, we report our financial results as three operating segments, Fiber Internet Services, Mobile Services and Domain Services. Eighty-three percent of goodwill relates to our Domain Services operating segment and 17% of goodwill relates to our Fiber Internet Services segment. Of our goodwill balance, \$91.4 million is not deductible for tax purposes. Seventy-three percent of intangible assets relate to our Domain Services operating segment and 27% of intangible assets relate to our Fiber Internet Services segment.

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

Our indefinite life intangible assets consist of surname domain names and direct navigation domain names. In order to maintain our rights to these domain names, we pay annual renewal fees to the applicable domain name registries. Over the course of time, we sometimes decide not to renew certain under-performing domain names and incur an impairment charge associated with such non-renewal. There was no impairment recorded on indefinite-life intangible assets during 2021, 2020 and 2019.

With regard to long-lived assets comprised of property and equipment and finite life intangible assets, we continually evaluate whether events or circumstances have occurred that indicate the remaining estimated useful lives of our definite-life intangible assets may warrant revision or whether the carrying amount of such assets may not be recoverable and exceed their fair value. We use an estimate of the related undiscounted cash flows over the remaining life of the asset in measuring whether the asset is recoverable. During Fiscal 2021 there was no impairment recorded on definite-life intangible assets and property and equipment. In 2020 there was a \$1.4 million impairment recorded on definite-life intangible assets associated with the shutdown of the Roam Mobility brands discussed above. There was no impairment recorded on definite-life intangible assets and property and equipment recorded during 2019.

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.

In connection with business acquisitions that we have completed, we identify and estimate the fair value of net assets acquired, including certain identifiable intangible assets (other than goodwill) and liabilities assumed. The determination of acquisition date fair values requires us to make significant estimates and assumptions regarding projected revenues, costs, earnings before interest, taxes, depreciation and amortization, attrition rates and discount rates. Changes to these assumptions may result in material differences depending on the size of the acquisition completed.

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 2021, 2020 or 2019.

## 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, 2021, the valuation allowance of \$13.5 million was related to foreign tax credits that we are not expected to realize, compared to \$11.2 million at December 31, 2020.

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.

## Recently Issued Accounting Standards

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

## Current COVID-19 response and expected impacts

The ongoing global COVID-19 pandemic continued to characterize Fiscal 2021, however the financial and operational impacts from COVID-19 on our business have been limited. Over the past year, we've monitored the situation and its impacts on our business but have ultimately seen trends stabilize, with continued recovery in U.S. markets due to large-scale vaccination programs. Management continues to assess the impact regularly but expects limited financial and operational impact through the upcoming fiscal year, should the COVID-19 pandemic persist. While the spread of COVID-19 may eventually be contained or mitigated, there is no guarantee that a future outbreak will not occur as evidenced by numerous variants of the virus emerging, including Omicron. Since the onset of this pandemic in 2020, all employees who could conceivably work from home were and continue to be encouraged to do so. Since then we have transitioned to defining ourselves as a remote-first organization, and for the small group of employees who are unable work from home, including our order fulfillment and Fiber installation teams, many of whom work in the field, they are encouraged to practice social distancing and to continue to follow hygiene best practices and safety protocols as outlined by the Centers for Disease Control and Prevention in connection with the COVID-19 pandemic. In the past year, the Ting Fiber Internet team established an installation solution for our employees and customers that minimizes risks associated with person-to-person contact and they continue to effectively deploy this installation solution currently. We have also implemented a vaccination policy requiring those employees who work from a Company office, meet in person with customers or travel by plane or train for business purposes to be fully vaccinated.

We have not experienced any productivity issues, material resource constraints nor do we foresee requiring any material expenditures to continue to implement our business continuity plans described above. Likewise, we have not experienced nor do we foresee any future impacts to our liquidity position, credit risk, internal controls or impacts to our accounting policies as a result of the COVID-19 pandemic.

**RESULTS OF OPERATIONS FOR THE YEAR ENDED DECEMBER 31, 2021 AS COMPARED TO THE YEAR ENDED DECEMBER 31, 2020**

**NET REVENUES**

**Fiber Internet Services**

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

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

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

**Mobile Services**

*Mobile Services - Retail Mobile Services*

Ting Mobile wireless usage contracts grant customers access to standard talk, text and data mobile services. Ting Mobile contracts are billed based on the customer's selected rate plan, which can either be usage based or an unlimited plan. All rate plan options are charged to customers on a postpaid, monthly basis at the end of their billing cycle. As discussed previously, in the past fiscal year the Company sold substantially all of its retail mobile customer relationships, and mobile handset and SIM inventory to DISH and granted the right to use and option to purchase the Ting brand. The Company only retains a small subset of customers to which it continues to provide retail mobile services. All future revenues associated with Retail Mobile Services stream will only be for this subset of customers retained by Ting, Inc.

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

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

*Mobile Services - Mobile Platform Services*

Tucows' MSE platform provides network access, provisioning and billing services for MVNOs as well as a fixed number of professional service hours. Our MVNO customers are billed monthly, on a postpaid basis. The monthly fees are variable, based on the volume of their subscribers utilizing the platform during a given month, to which minimums may apply. Customers may also be billed fixed platform fees and granted fixed credits as part of the consideration for long-term contracts. Consideration received for MSE platform services is allocated to MSE services and professional services and recognized as each service obligation is fulfilled. Fixed fees for Mobile Platform Services are recognized into revenue evenly over the service period, while variable usage fees are recognized each month as they are consumed. Professional services revenue is recognized as the hours of professional services granted to the customer are used or expire. When consideration for Mobile Platform Services is received before the service is delivered, the revenue is initially deferred and recognized only as the Company performs its obligation to provide services. Likewise, if Mobile Platform Services are delivered before the Company has the unconditional right to invoice the customer, revenue is recognized as a Contract Asset.

*Mobile Services - Other Professional Services*

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

**Domain Services**

*Wholesale - Domain Services*

Domain registration contracts, which can be purchased for terms of one to ten years, provide our resellers and retail registrant customers with the exclusive right to a personalized internet address from which to build an online presence. The Company enters into domain registration contracts in connection with each new, renewed and transferred-in domain registration. At the inception of the contract, the Company charges and collects the registration fee for the entire registration period. Though fees are collected upfront, revenue from domain registrations are recognized 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.

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

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

*Wholesale – Value-Added Services*

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

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

*Retail*

We derive revenues mainly from Hover and eNom’s retail properties through the sale of retail domain name registration and email services to individuals and small businesses. The retail segment now includes the sale of the rights to its portfolio of surname domains used in connection with our Realnames email service and Linux hosting services for websites through our Exact Hosting brand.

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

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

	<b>Year ended December 31,</b>	
	<b>2021</b>	<b>2020</b>
<b>Fiber Internet Services:</b>		
Fiber Internet Services	\$ 26,445	\$ 18,428
<b>Mobile Services:</b>		
Retail mobile services	9,395	46,540
Mobile platform services	11,912	564
Other professional services	11,009	3,416
Total Mobile	32,316	50,520
<b>Domain Services:</b>		
<b>Wholesale</b>		
Domain Services	189,091	186,893
Value Added Services	20,942	18,526
Total Wholesale	210,033	205,419
<b>Retail</b>		
Total Domain Services	35,543	36,835
	245,576	242,254
	\$ 304,337	\$ 311,202
(Decrease) increase over prior period	\$ (6,865)	
(Decrease) increase - percentage	(2)%	

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

	<b>Year ended December 31,</b>	
	<b>2021</b>	<b>2020</b>
<b>Fiber Internet Services:</b>		
Fiber Internet Services	9%	6%
<b>Mobile Services:</b>		
Retail mobile services	3%	15%
Mobile platform services	4%	0%
Other professional services	4%	1%
Total Mobile	11%	16%
<b>Domain Services:</b>		
<b>Wholesale</b>		
Domain Services	61%	61%
Value Added Services	7%	6%
Total Wholesale	68%	67%
<b>Retail</b>		
Total Domain Services	12%	11%
	80%	78%
	100%	100%

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Total net revenues for Fiscal 2021 decreased by \$6.9 million, or 2%, to \$304.3 million from \$311.2 million for the fiscal year ended December 31, 2021 ("Fiscal 2021"). The overall decrease in revenue was primarily driven by the \$18.2 million reduction of revenues attributable to our Mobile Services segment. This decrease in Mobile Services revenues was directly related to the DISH Purchase Agreement as well as the shutdown of Roam Mobility brands in the past year. As part of the DISH Purchase Agreement, as a form of consideration for the sale of the customer relationships, the Company receives a payout on the margin associated with the legacy customer base sold to DISH over the 10-year term of the agreement. This has been classified as Other Income and not considered revenue in the current period. This decrease in Mobile Services revenues was partially offset by a \$8.0 million increase related to Fiber Internet Services revenues, a result of both growth in customers as we continue to build out our Ting Internet footprint as well as acquisition led revenue growth from our fourth quarter acquisition of Simply Bits. Additionally, smaller increases from Domain Services of \$3.3 million also helped partially offset any revenue decreases in period, which was driven by outsized proceeds from our domain expiry revenue streams relative to the fiscal year ending December 31, 2020 ("Fiscal 2020").

Deferred revenue at December 31, 2021 decreased to \$147.8 million from \$152.2 million at December 31, 2020. This decrease was primarily driven by our Domain Services segment, accounting for \$3.5 million of the decrease due to recognition of previously deferred billings for registrations and renewals growth experienced in Fiscal 2020 in connection with COVID-19. This decrease is followed by a decrease related to Mobile Services, accounting for \$2.1 million of the decrease due to the recognition of previously deferred bundled and other professional services revenues. These professional services revenues were recognized as the Company performed its obligation to provide these services to DISH. These decreases were partially offset by an increase in deferred revenue associated with Fiber Internet Services of \$1.1 million, which is reflective of the continued growth in customer base and billings for that segment relative to December 31, 2020.

No customer accounted for more than 10% of revenue during Fiscal 2021 or during Fiscal 2020. As of December 31, 2021 DISH accounted for 46% of total accounts receivable and as at December 31, 2020, DISH accounted for 59% of total accounts receivable.

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

### **Fiber Internet Services**

Revenues from Ting Internet and billing solutions generated \$26.4 million in revenue during Fiscal 2021, up \$8.0 million or 43% compared to Fiscal 2020. This growth is driven by continued subscriber growth across our Fiber network relative to Fiscal 2021, as well as the continued expansion of our Ting Internet footprint to new Ting towns throughout the United States. Of this \$8.0 million increase, \$1.3 million related to our fourth quarter acquisition of Simply Bits.

As of December 31, 2021, Ting Internet had access to 82,000 serviceable addresses and 26,000 active accounts under its management compared to having access to 56,000 serviceable addresses and 15,000 active accounts under its management as of December 31, 2020. These figures exclude the increase in serviceable addresses and accounts attributable to the Simply Bits acquisition.

### **Mobile Services**

#### *Retail Mobile Services*

Net revenues from Retail Mobile Services for the Fiscal 2021, decreased by \$37.1 million compared to Fiscal 2020, to \$9.4 million. This decrease is a result of the significant changes to our Mobile Services segment that occurred during Fiscal 2020 as we transitioned from MVNO to MSE. These changes include both the shutdown of the Roam Mobility brands in the second quarter of 2020 followed by the sale of substantially all of the Ting Mobile customer base as part of the DISH Purchase Agreement. Ting Mobile accounts for substantially all of this decrease (of which \$4.4 million is reduced device revenues and \$31.4 million relates to service revenues), followed by Roam Mobility at \$1.3 million of the total decrease.

The revenues earned from Retail Mobile Services for Fiscal 2021 is only reflective of the mobile telephony services and device revenues associated with the small group of customers retained by the Company from the sale of the historically larger Ting Mobile customer base to DISH. As mentioned above, the payout the Company receives from the aforementioned sale has been classified as Other Income and not considered revenue in the current period.

#### *Mobile Platform Services*

Net revenues from Mobile Platform Services for the Fiscal 2021, increased by \$11.3 million compared to Fiscal 2020, to \$11.9 million. This increase is a result of the new MSE business created as a result of the DISH Purchase Agreement in the past year. Only five months of comparable revenues existed during Fiscal 2020. Additionally, during Fiscal 2021 the net revenues recognized include both platform fee billings as well as revenues recognized from the previous deferral of bundled professional fees offered in connection with Mobile Platform Services. The Company has satisfied its obligations to provide any bundled professional services revenues recognized in the current period. Tucows' MSE platform provides network access, provisioning and billing services for MVNOs, of which DISH is currently our sole customer.

#### *Other Professional Services*

Net revenues from Other Professional Services for the Fiscal 2021, increased by \$7.6 million compared to Fiscal 2020, to \$11.0 million. Similar to above, this increase is a result of the new MSE business created as a result of the DISH Purchase Agreement in the past year. Tucows' other professional services include both standalone technology services development work and other transitional services including sales, marketing, customer support, order fulfillment, and data analytics for MVNOs, of which DISH is currently our sole customer. During Fiscal 2021, we earned revenues for both provision of standalone technology services development work as well as a full year of transitional services. This is in contrast to Fiscal 2020 which was characterized by only five months of solely transitional services revenues.

**Domain Services**

*Wholesale - Domain Services*

During Fiscal 2021, Wholesale Domain Services revenue increased by \$2.2 million or 1% to \$189.1 million. The increase in revenue compared to Fiscal 2020 was primarily driven by the recognition of previously deferred billings from the past year, as discussed above in the change in deferred revenue. As more businesses established an online presence during the onset of the COVID-19 pandemic in Fiscal 2020 we experienced domain name registration growth from our large volume resellers across our Domain Services brands. Fiscal 2021 was then characterized by a normalization of this COVID-19 registration growth back to historically experienced pre-pandemic levels as well as some erosion in renewal rates in the last half of the year. The increase in revenues from deferred revenue discussed above is offset by a small decrease in billings of \$0.3 million, largely driven by our eNom brand which has seen continued decline in registrations by non-core customers relative to Fiscal 2020.

Together the OpenSRS, eNom, EPAG and Ascio Domain Services manage 25.2 million domain names under the Tucows, eNom, EPAG and Ascio ICANN registrar accreditations and for other registrars under their own accreditations. Domains under management has decreased by 0.2 million domain names since December 31, 2020. The decrease is driven by lower renewal rates from the normalization of registration growth back to pre-pandemic levels, along with the continued erosion of registrations related to non-core customers from our eNom brand.

*Wholesale - Value Added Services*

Net revenues from value-added services increased by \$2.4 million to \$20.9 million compared to Fiscal 2020. The increase in value-added service revenue over Fiscal 2020 was primarily driven by an increase in expiry stream proceeds across our Domain Services brands. As a result of the normalization of renewal rates and domains under management discussed above in connection to COVID-19, Fiscal 2021 benefited from a significant volume of expired domain names registered in the past year being available for our expiry streams, which returned favorable proceeds at auction and drove our revenue growth for value added services.

*Retail*

Net revenues from retail decreased by \$1.3 million to \$35.5 million compared to Fiscal 2020. The decrease in revenue was primarily related to domain portfolio sales, which decreased by \$0.9 million as a result of the Company disposing of its entire domain portfolio, excluding surname domains used in the RealNames email service during the fourth quarter of Fiscal 2020. This decrease was compounded by a \$0.5 million decrease in retail domain name registrations from the erosion of retail customers away from our eNom Central brand. These decreases were partially offset by an increase in Exact Hosting revenues of \$0.1 million.

**COST OF REVENUES**

**Fiber Internet Services**

Cost of revenues primarily includes the costs for provisioning high speed Internet access, which is comprised of network access fees paid to third-parties to use their network, leased circuit costs to directly support enterprise customers, the personnel and related expenses (net of capitalization) related to the physical planning, design, construction and build out of the physical Fiber network and as well as personnel and related expenses (net of capitalization) related to the installation, repair, maintenance and overall field service delivery of the Fiber business. Hardware costs include the cost of equipment sold to end customers, including routers, ONTs, and IPTV products, and any inventory adjustments on this inventory. Other costs include field vehicle expenses, small sundry equipment and supplies consumed in building the Fiber network and fees paid to third-party service providers primarily for printing services in connection with billing services to ISPs.

**Mobile Services**

*Retail Mobile Services*

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

*Mobile Platform Services*

Cost of revenues, if any, to provide the MSE Platform services including network access, provisioning and billing services for MVNOs. This includes the amortization of any capitalized contract fulfillment costs over the period consistent with the pattern of transferring network access, provisioning and billing services to which the cost relates.

*Other Professional Services*

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

**Domain Services**

*Wholesale - Domain Services*

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

*Wholesale - Value-Added Services*

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

*Retail*

Costs of revenues for our provision and management of Internet services through our retail sites, Hover.com and the eNom branded sites, include the amortization of registry fees on a basis consistent with the recognition of revenues from our customers, namely ratably 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 and are expensed ratably over the renewal term. Costs of revenues for our surname 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.

**Network expenses**

Network expenses include personnel and related expenses related to the network operations, IT infrastructure and supply chain teams that support our various business segments. It also includes network depreciation and amortization, communication and productivity tool costs, and equipment maintenance costs. Communication and productivity tool costs includes collaboration, customer support, 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)*

	<b>Year ended December 31,</b>	
	<b>2021</b>	<b>2020</b>
<b>Fiber Internet Services:</b>		
Fiber Internet Services	\$ 12,120	\$ 6,982
<b>Mobile Services:</b>		
Retail mobile services	6,012	22,942
Mobile platform services	419	56
Other professional services	7,000	2,970
Total Mobile	13,431	25,968
<b>Domain Services:</b>		
<b>Wholesale</b>		
Domain Services	147,213	146,788
Value Added Services	2,544	3,016
Total Wholesale	149,757	149,804
<b>Retail</b>		
Total Domain Services	17,731	17,647
	167,488	167,451
<b>Network Expenses:</b>		
Network, other costs	14,769	10,194
Network, depreciation and amortization costs	18,035	13,484
Network, impairment	201	1,638
	33,005	25,316
	\$ 226,044	\$ 225,717
Increase over prior period	\$ 327	
Increase - percentage		0%

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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,	
	2021	2020
<b>Fiber Internet Services:</b>		
Fiber Internet Services	5%	3%
<b>Mobile Services:</b>		
Retail mobile services	3%	10%
Mobile platform services	0%	1%
Other professional services	3%	1%
Total Mobile	6%	12%
<b>Domain Services:</b>		
<b>Wholesale</b>		
Domain Services	65%	64%
Value Added Services	1%	1%
Total Wholesale	66%	65%
<b>Retail</b>		
Total Domain Services	8%	8%
	74%	73%
<b>Network Expenses:</b>		
Network, other costs	7%	5%
Network, depreciation and amortization costs	8%	6%
Network, impairment	0%	1%
	15%	12%
	100%	100%

Total cost of revenues for Fiscal 2021 increased by \$0.3 million to \$226.0 million, from \$225.7 million in Fiscal 2020. The decrease was primarily driven by the \$12.5 million of reduced costs attributable to our Mobile Services segment that was impacted by both the DISH Purchase Agreement and the shutdown of Roam Mobility brands in late Fiscal 2020. When compared to Fiscal 2020, the Mobile Services segment looks different as a result of our shift from MVNO to MSE. Both these factors contribute to Fiscal 2021 having significantly lower costs for the Mobile Services segment. This decrease in overall cost of revenues is partially offset by increases from Fiber Internet Services costs, Network Expenses costs as well as increases in Domain Services costs of \$5.1 million, \$7.6 million and less than \$0.1 million, respectively. The increase from Fiber Internet Services is related to the continued expansion of both serviceable addresses and active subscriptions as well as the fourth quarter acquisition of Simply Bits. This is aligned with the discussion above in the Net Revenue section for this segment. The increase from Network Expenses is a result of the expansion of the Company's increased network infrastructure associated with the continuing expansion of the Ting Fiber footprint and an increase in communication and productivity tool costs across our service lines. Domain Services costs of revenues increased as a result of recognition of registration costs from previously deferred billed costs related to the strong performance and additions to domains under management as a result of the COVID-19 pandemic.

Deferred costs of fulfillment as of December 31, 2021 increased by \$1.6 million, or 1%, to \$112.7 million from \$111.1 million at December 31, 2020. This increase was primarily driven by Mobile Services, accounting for \$3.4 million of the increase which is due to the increase in current period costs incurred in connection with the fulfillment of our MSE agreement and other professional services with DISH. This increase was partially offset by a decrease in deferred costs of fulfillment related to domain name registration and service renewals of \$1.8 million, decreasing as registration costs are recognized from previously deferred billed costs from registrations driven by the COVID-19 pandemic. Relative to COVID-19 pandemic levels, Fiscal 2021 was characterized by slowing growth in additions and renewals to domains under management, which has appropriately translated to less deferred costs of fulfillment for our Domain Services segment. Additionally, our Fiber Internet Services segment contributed to partially offset this overall decrease with an increase in deferred costs of fulfillment of less than \$0.1 million relative to the past year.

**Fiber Internet Services**

In Fiscal 2021, costs related to provisioning high speed Internet access and billing solutions increased \$5.1 million, or 73%, to \$12.1 million as compared to \$7.0 million during Fiscal 2020. The increase in costs were primarily driven by increased direct costs and, bandwidth and colocation costs related to the continued expansion of the Ting Fiber network. Although directionally aligned with the experienced growth in revenue over the same period, the outpaced increase in cost of revenues for Fiber Internet services is a result of the necessary upfront investment and expenditure needed to build out the network in advance of anticipated revenue growth in any particular location. Of this \$5.1 million increase, \$0.4 million related to our fourth quarter acquisition of Simply Bits.

**Mobile Services**

*Retail Mobile Services*

Cost of revenues from Retail Mobile Services for Fiscal 2021 decreased by \$16.9 million to \$6.0 million, when compared to Fiscal 2020. The decrease is consistent with the above discussion around net revenues, and is a result of the significant changes to our Mobile Services segment that occurred during Fiscal 2020 as we transitioned from MVNO to MSE. Ting Mobile accounts for \$16.1 million of this decrease (of which \$5.2 million is reduced device costs and \$10.9 million relates to reduced service costs), followed by Roam Mobility at less than \$0.8 million of the total decrease. The cost of revenues incurred from Retail Mobile Services during Fiscal 2021 is only reflective of the mobile telephony services and device costs associated with the small group of customers retained by the Company from the DISH Purchase Agreement. The decline also included reduced minimum commitment charges which decreased by \$0.3 million as compared to Fiscal 2020.

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*Mobile Platform Services*

Cost of revenues from Mobile Platform Services for Fiscal 2021 increased by \$0.3 million to \$0.4 million, when compared to Fiscal 2020. The increase was the result of the new MSE business created as a result of the DISH Purchase Agreement in the past year. Only five months of comparable cost of revenues existed during Fiscal 2020. Tucows' MSE platform provides network access, provisioning and billing services for MVNOs, of which DISH is currently our sole customer. Costs incurred represent the amortization of previously capitalized costs incurred to fulfill the DISH MSE agreement over the term of the agreement.

*Other Professional Services*

Cost of revenues from Other Professional Services for Fiscal 2021 increased by \$4.0 million to \$7.0 million, when compared to Fiscal 2020. The increase was the result of the new MSE business created as a result of the DISH Purchase Agreement in the past year. Tucows' professional services include standalone technology services development and other transitional services including sales, marketing, customer support, order fulfillment, and data analytics for MVNOs, of which DISH is currently our sole customer. During Fiscal 2021, we incurred cost of revenues for both provision of standalone technology services development work as well as a full year of transitional services. This is in contrast to Fiscal 2020 which was characterized by only five months of solely transitional services cost of revenues. Costs incurred represent any personnel and contractor fees for any client service resources retained by the Company to provide either standalone technology services development work or transitional services to DISH.

**Domain Services**

*Wholesale - Domain Services*

Costs for wholesale domain services for Fiscal 2021 increased by \$0.4 million to \$147.2 million, when compared to Fiscal 2020. The increase is consistent with the above discussion around net revenues, where registration costs were recognized in Fiscal 2021 from previously deferred billed costs incurred from experienced domain name registration growth and domains under management in connection with the COVID-19 pandemic. The overall increase was also impacted by decreases in current year billed costs from our eNom brand, which has seen a decline in registrations and domains under management in the current year, beyond the impacts of normalization from COVID-19 impacts.

*Wholesale - Value Added Services*

Costs for wholesale value-added services for Fiscal 2021 decreased by \$0.5 million to \$2.5 million, when compared to Fiscal 2020. The decrease in cost of revenue is primarily related to decreases in Digital Certificates and other value added service costs compared to Fiscal 2020.

*Retail*

Costs for retail for Fiscal 2021 increased by less than \$0.1 million, to \$17.7 million, when compared to Fiscal 2020. The was driven by increased costs related to Exact Hosting and was partially offset by declining volume of retail domain name registrations related to the eNom retail brands.

**Network Expenses**

Network costs for Fiscal 2021 increased by \$7.7 million to \$33.0 million when compared to Fiscal 2020. The comparative increase was primarily driven by both increased network costs and depreciation as a result of the expansion of the Company's increased network infrastructure associated with the continuing expansion of the Ting Fiber footprint. These increases were partially offset by a decrease in impairment of property, plant and equipment, due to Fiscal 2020 including a \$1.6 million impairment charge for Ting TV, a product formerly under development for Ting Internet. Additionally, Fiscal 2021 benefited from a decrease in amortization charges from the full amortization of the Ascio Technology intangible asset acquired in 2019.

**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,	
	2021	2020
Sales and marketing	\$ 39,471	\$ 34,274
Increase over prior period	\$ 5,197	
Increase - percentage	15%	
Percentage of net revenues	13%	11%

Sales and marketing expenses for Fiscal 2021 increased by \$5.2 million, or 15%, to \$39.5 million when compared to Fiscal 2020. The increase in costs relate primarily to increased salaries and benefits driven by an expanding workforce and wage inflation focused on our Fiber Internet services teams, as well as increased marketing related costs to drive active subscription growth given the increase in serviceable addresses available to our Fiber Internet Services segment. In addition to this, we also experienced an increase in costs related to stock-based compensation expenses in an effort to attract and retain labor and an increase in facility costs increased directly related to the expansion of our Ting Fiber internet footprint and workforce in select Ting towns across the United States.

Excluding movements in exchange rates, we expect sales and marketing expenses for the fiscal year ending December 31, 2022 ("Fiscal 2022") to increase in absolute dollars, as we adjust our marketing programs and sales and customer support personnel costs to support our Fiber Internet marketing and customer service needs.

**TECHNICAL OPERATIONS AND DEVELOPMENT**

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

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

	Year ended December 31,	
	2021	2020
Technical operations and development	\$ 14,310	\$ 12,427
Increase over prior period	\$ 1,883	
Increase - percentage	15%	
Percentage of net revenues	5%	4%

Technical operations and development expenses for Fiscal 2021 increased by \$1.9 million, or 15%, to \$14.3 million. The increase in costs relates primarily to increased spending on external contractors to provide development resources to assist our internal shared services and engineering teams with development aspects of the MSE platform. In addition to increased spending on external contractors, a slight increase in salaries and benefits driven by an expanding workforce and wage inflation focused on our shared services and engineering teams contributed to the overall increase in costs for the period along with stock-based compensation expenses to attract and retain labor

Excluding movements in exchange rates, we expect technical operations and development expenses for Fiscal 2022, in absolute dollars, to increase when compared to Fiscal 2021 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,	
	2021	2020
General and administrative	\$ 22,370	\$ 20,268
Increase over prior period	\$ 2,102	
Increase - percentage	10%	
Percentage of net revenues	7%	7%

General and administrative expenses for Fiscal 2021 increased by \$2.1 million, or 10%, to \$22.4 million as compared to Fiscal 2020. The increase was primarily driven increases in personnel and related expenses as well as stock-based compensation expenses in order to attract, retain and scale core administrative teams including Human Resources and Finance to meet projected Company growth. Additionally, we experienced an increase in professional accounting and legal fees associated with our growing Fiber Internet segment. These increases were partially offset by reduced Mobile Services credit card fees as a result of the DISH Purchase Agreement that closed in the past year, as well as a decrease in facility related costs and foreign exchange expenses.

Excluding movements in exchange rates, we expect general and administrative expenses for Fiscal 2022, in absolute dollars, to increase when compared to Fiscal 2021 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,			
	2021		2020	
Depreciation of property and equipment	\$	534	\$	488
Increase over prior period	\$	46		
Increase - percentage		9%		
Percentage of net revenues		0%		0%

Depreciation costs for Fiscal 2021 remained relatively flat at \$0.5 million as compared to Fiscal 2020. The slight increase was due to the depreciation of additions to property and equipment, in particular computer hardware purchased in support of our expanding workforce.

**LOSS (GAIN) ON DISPOSAL OF PROPERTY AND EQUIPMENT***(Dollar amounts in thousands of U.S. dollars)*

	Year ended December 31,			
	2021		2020	
Loss on disposition of property and equipment	\$	234	\$	(17)
Increase over prior period	\$	251		
Decrease - percentage		(1,476)		
Percentage of net revenues		0%		(0)%

Loss on disposal of property and equipment increased by \$0.2 million to \$0.2 million as compared to Fiscal 2020. The increase was a result of Fiscal 2021 including a disposal of minor internal use software for which the Company no longer expects to realize the initial use and intended benefit that it initially did when those development costs were initially capitalized.

**AMORTIZATION OF INTANGIBLE ASSETS***(Dollar amounts in thousands of U.S. dollars)*

	Year ended December 31,			
	2021		2020	
Amortization of intangible assets	\$	9,424	\$	10,080
Decrease over prior period	\$	(656)		
Decrease - percentage		(7)%		
Percentage of net revenues		3%		3%

Amortization of intangible assets decreased \$0.7 million for Fiscal 2021, to \$9.4 million. The decrease is primarily driven by the write-off of Mobile Services related intangible assets in connection with the both the sale of the Ting Mobile customer base and the shutdown of Roam Mobility brands in Fiscal 2020.

Network rights, brand and customer relationships acquired in connection with the following acquisitions are amortized on a straight-line basis over a range of two to seven years: eNom in January 2017, Ascio in March of 2019, Cedar in January 2020 and Simply Bits in November 2021.

**IMPAIRMENT OF DEFINITE LIFE INTANGIBLE ASSETS***(Dollar amounts in thousands of U.S. dollars)*

	Year ended December 31,			
	2021		2020	
Impairment of definite life intangible assets	\$	-	\$	1,431
Decrease over prior period	\$	(1,431)		
Decrease - percentage		(100)%		
Percentage of net revenues		-%		0%

Impairment of definite life intangible assets for Fiscal 2021 was nil compared to \$1.4 million in Fiscal 2020. The decrease is driven by the write-off of Roam Mobility brands customer relationships that were written off in Fiscal 2020 when the Company decided to shut down the related businesses as a result of lack of demand for SIM-enabled roaming services due to the COVID-19 pandemic.

**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,	
	2021	2020
Loss (gain) on currency forward contracts	\$ (277)	\$ (383)
Increase over prior period	\$ 106	
Decrease - percentage	28%	
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 2021. During Fiscal 2021, the Company recorded a net gain of \$0.3 million on the change in fair value of outstanding contract as well as realized matured contracts. In Fiscal 2020 the Company recorded a net gain of \$0.4 million in the change in fair value of outstanding contract as well as realized matured contracts.

At December 31, 2021, our balance sheet reflects a derivative instrument asset of \$0.3 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.

**OTHER INCOME (EXPENSES)**

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

	Year ended December 31,	
	2021	2020
Other income (expense), net	\$ 15,043	\$ 3,843
Increase over prior period	\$ 11,200	
Increase - percentage	291%	
Percentage of net revenues	5%	1%

Other income increased by \$11.2 million when compared to Fiscal 2020. This was driven by a \$12.4 million increase due to the gain on sale of Ting Customer Assets to DISH. As described above, the Company receives a payout on the margin associated with the legacy customer base sold to DISH over the 10-year term of the agreement, as form of consideration for the sale of the legacy customer relationships. Comparatively, the gain in Fiscal 2020 represented the net effect of proceeds earned from DISH in regards to the legacy customer base of \$11.1 million offset by the write off of certain Mobile intangible and contract assets totaling \$3.5 million. This overall increase in other income was partially offset by higher interest expense from higher variable interest rates incurred on our Amended 2019 Credit Facility. Other expense consists primarily of the interest we incur in connection with our Amended 2019 Credit Facility. The interest incurred primarily relates to our loan balances obtained to fund the acquisition of eNom, Ascio, Cedar and Simply Bits and funding for expenditures associated with the Company's Fiber to the Home build program.

**INCOME TAXES**

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

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

	Year ended December 31,	
	2021	2020
Provision for income taxes	\$ 3,906	\$ 4,985
Decrease in provision over prior period	\$ (1,079)	
Decrease - percentage	(22)%	
Effective tax rate	54%	46%

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.

Income taxes decreased by \$1.1 million and the effective tax rate increased from 46% to 54% when compared to Fiscal 2020. The increase in effective tax rate is primarily due to changes in blended tax rates and is partially offset by an increase in stock option benefit deduction. Our Fiscal 2021 income tax expense includes a tax recovery of \$1.6 million related to the adoption of ASU 2016-09, which requires all excess tax benefits and tax deficiencies related to employee share-based payments to be recognized through income tax expense on a prospective basis. The Fiscal 2020 tax recovery related to excess tax benefits related to employee share-based compensation was \$0.4 million.

In Fiscal 2021, the Company did not utilize the bonus depreciation with respect to its continued investment in the Ting Fiber business. Despite this, due to the reduction in tax rate to 21%, it is unlikely we will ultimately be able to fully claim the Fiscal 2021 foreign taxes paid in future years as a foreign tax credit. As such, we have taken a valuation allowance on foreign tax credits not utilized for 2021 income tax purposes, the net negative effect of which is a \$2.3 million addition to income tax expense, as compared to \$2.9 million additional tax expense in Fiscal 2020.

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

#### ADJUSTED EBITDA

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

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

The following table reconciles net income to adjusted EBITDA:

Reconciliation of Adjusted EBITDA to Income before Provision for Income Taxes (In Thousands of US Dollars) (unaudited)	Twelve months ended December 31,		
	2021 (unaudited)	2020 (unaudited)	2019 (unaudited)
Adjusted EBITDA	\$ 48,821	\$ 50,972	\$ 51,905
Depreciation of property and equipment	17,986	12,632	8,961
Impairment and loss on disposition of property and equipment	435	1,621	73
Amortization of intangible assets	10,007	11,420	10,333
Impairment of definite life intangible assets	-	1,431	-
Write-down on disposal of Ting Mobile customer assets	-	3,513	-
Interest expense, net	4,617	3,611	4,769
Accretion of contingent liability	383	344	-
Stock-based compensation	4,592	3,718	2,876
Unrealized loss (gain) on change in fair value of forward contracts	606	(500)	(313)
Unrealized loss (gain) on foreign exchange revaluation of foreign denominated monetary assets and liabilities	219	461	(581)
Acquisition and other costs <sup>1</sup>	2,706	1,961	1,216
<b>Income before provision for income taxes</b>	<b>\$ 7,270</b>	<b>\$ 10,760</b>	<b>\$ 24,571</b>

<sup>1</sup> Acquisition and other costs represents transaction-related expenses, transitional expenses, such as redundant post-acquisition expenses, primarily related to our acquisition of Cedar in January 2020 and Simply Bits in November 2021 and the disposition of certain Ting Mobile assets in August 2020. Expenses include severance or transitional costs associated with department, operational or overall company restructuring efforts, including geographic alignments.

Adjusted EBITDA for the year ended December 31, 2021 decreased by \$2.2 million, or 4% to \$48.8 million when compared to the year ended December 31, 2020. The decrease in adjusted EBITDA from period-to-period was primarily driven by the increased investment in Ting Fiber due to the ramp of expenditures related to the Fiber network build and expansion plan. This decrease was partially offset by increased contributions from both Mobile Services due to the gain on sale of Ting Customer Assets earned as Other Income and new MSE Platform revenues growing in the current period and from Domain Services; due to strong performance in both Domain Services and Value added Services such as expiry revenues. When comparing Adjusted EBITDA in Fiscal 2020 to the year ended December 31, 2019 (“Fiscal 2019”), the lower contribution stemmed from the erosion of wholesale and retail registrations from our eNom brand as well as Mobile Services due to the sale of Ting Mobile customer relationships to DISH as well as the shutdown of Roam Mobility. The overall decrease in Adjusted EBITDA in Fiscal 2020 was partially offset by an increased contribution from wholesale domain registrations from our OpenSRS and EPAG brands who experienced an increase in domains under management at the onset of the COVID-19 pandemic as more businesses moved online in early Fiscal 2020. The increase was also impacted by increased contribution from Ascio, with a full year of contribution in Fiscal 2020 relative to the stub period in Fiscal 2019 due to acquisition timing. Additionally, the acquisition of Cedar and continued expansion of the Ting Fiber network contributed to increased contribution from Fiber year-over-year.

**OTHER COMPREHENSIVE INCOME (LOSS)**

To mitigate the impact of the change in fair value of our foreign exchange contracts on our financial results, in October 2012 we begun applying hedge accounting for the majority of the contracts we need to meet our Canadian dollar requirements on a prospective basis. The impact of the fair value adjustment on outstanding hedged contracts for Fiscal 2021 was a net loss in other comprehensive income of \$2.0 million compared to a net gain of \$1.9 million for Fiscal 2020.

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

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

	<b>Year ended December 31,</b>	
	<b>2021</b>	<b>2020</b>
Other comprehensive income (loss)	\$ (1,993)	\$ 1,863
Decrease over prior period	\$ (3,856)	
Decrease - percentage	(207)%	
Percentage of net revenues	(1)%	1%

The impact of the fair value adjustments on outstanding hedged contracts during 2021 was a gain in OCI of \$0.6 million as compared to a gain of \$1.7 million during 2020.

The net amount reclassified to earnings during 2021 was a loss of \$2.6 million compared to a gain of \$0.2 million during 2020.

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

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

**NET REVENUES**

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

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

	<b>Year ended December 31,</b>	
	<b>2020</b>	<b>2019</b>
<b>Fiber Internet Services:</b>		
Fiber Internet Services	\$ 18,428	\$ 11,006
<b>Mobile Services</b>		
Retail mobile services	46,540	84,657
Mobile platform services	564	-
Other professional services	3,416	-
Total Mobile	50,520	84,657
<b>Domain Services:</b>		
<b>Wholesale</b>		
Domain Services	186,893	182,957
Value Added Services	18,526	18,922
Total Wholesale	205,419	201,879
<b>Retail</b>		
Total Domain Services	36,835	39,603
	242,254	241,482
	\$ 311,202	\$ 337,145
(Decrease) increase over prior period	\$ (25,943)	
(Decrease) increase - percentage	(8)%	

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

	Year ended December 31,	
	2020	2019
<b>Fiber Internet Services:</b>		
Fiber Internet Services	6%	3%
<b>Mobile Services</b>		
Retail mobile services	15%	25%
Mobile platform services	0%	0%
Other professional services	1%	0%
Total Mobile	16%	25%
<b>Domain Services:</b>		
<b>Wholesale</b>		
Domain Services	61%	55%
Value Added Services	6%	6%
Total Wholesale	67%	61%
<b>Retail</b>		
Total Domain Services	11%	12%
	78%	72%
	100%	100%

Total net revenues for Fiscal 2020 decreased by \$25.9 million, or 8%, to \$311.2 million from \$337.1 million for Fiscal 2019. The overall decrease in revenue was primarily driven by the \$34.1 million reduction of revenues attributable to our Mobile Services segment that was impacted by both the sale of the majority of the customer base of Ting Mobile to DISH Wireless on August 1, 2020 and the shutdown of Roam Mobility brands impacted by loss of mobile subscribers and reduced usage related to COVID-19 when compared to Fiscal 2019. As part of the DISH Purchase Agreement, as a form of consideration for the sale of the customer relationships, the Company receives a payout on the margin associated with the legacy customer base sold to DISH over the 10-year term of the agreement. This has been classified as Other Income and not considered revenue in Fiscal 2020. This decrease in revenues was offset by a \$7.4 million increase related to Fiber Internet services revenues, driven by our acquisition of Cedar as well as through the expansion of our existing Ting Internet footprint. Additionally, smaller increases from Domain Services of \$0.8 million also helped offset any revenue decreases in period, which was driven by an overall increase in domains under management relative to the prior year as more businesses established online presences due to the COVID-19 pandemic.

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

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

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

**Fiber Internet Services**

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

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

**Mobile Services**

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

**Domain Services**

*Wholesale - Domain Services*

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

Together the OpenSRS, eNom, EPAG and Ascio Domain Services manage 25.2 million domain names under the Tucows, eNom, EPAG and Ascio ICANN registrar accreditations and for other registrars under their own accreditations. Domains under management has increased by 1.6 million domain names in Fiscal 2020 since December 31, 2019. The increase is driven by increased registrations experienced by our brands during the COVID-19 pandemic, which saw more businesses establish and expand their online presence, offset by the continued erosion of registrations related to non-core customers from our eNom brand.

*Wholesale - Value Added Services*

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

*Retail*

Net revenues from retail decreased by \$0.5 million to \$34.3 million compared to Fiscal 2019. The decrease in revenue was primarily driven by the erosion of retail customers away from our eNom Central brand. Additionally portfolio revenues decreased by \$3.5 million to \$1.3 million compared to Fiscal 2019. This decrease was expected after the Company disposed of its entire domain portfolio in the fourth quarter of Fiscal 2019, excluding surname domains used in the RealNames email service.

**COST OF REVENUES**

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

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

	<b>Year ended December 31,</b>	
	<b>2020</b>	<b>2019</b>
<b>Fiber Internet Services:</b>		
Fiber Internet Services	\$ 6,982	\$ 3,928
<b>Mobile Services</b>		
Retail mobile services	22,942	44,415
Mobile platform services	56	-
Other professional services	2,970	-
Total Mobile	25,968	44,415
<b>Domain Services:</b>		
<b>Wholesale</b>		
Domain Services	146,788	148,530
Value Added Services	3,161	2,986
Total Wholesale	149,949	151,516
Retail	17,502	17,720
Total Domain Services	167,451	169,236
<b>Network Expenses:</b>		
Network, other costs	10,194	9,190
Network, depreciation and amortization costs	13,484	9,599
Network, impairment	1,638	-
	25,316	18,789
	\$ 225,717	\$ 236,368
(Decrease) increase over prior period	\$ (10,651)	
(Decrease) increase - percentage		(5%)

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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,	
	2020	2019
<b>Fiber Internet Services:</b>		
Fiber Internet Services	3%	2%
<b>Mobile Services</b>		
Retail mobile services	10%	19%
Mobile platform services	1%	0%
Other professional services	1%	0%
Total Mobile	12%	19%
<b>Domain Services:</b>		
<b>Wholesale</b>		
Domain Services	64%	63%
Value Added Services	1%	1%
Total Wholesale	65%	64%
Retail	8%	7%
Total Domain Services	73%	71%
<b>Network Expenses:</b>		
Network, other costs	5%	4%
Network, depreciation and amortization costs	6%	4%
Network, impairment	1%	0%
	12%	8%
	100%	100%

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

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

**Fiber Internet Services**

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

**Mobile Services**

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

**Domain Services***Wholesale - Domain Services*

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

*Wholesale - Value Added Services*

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

*Retail*

Costs for retail for Fiscal 2020 decreased by \$0.1 million, to \$17.0 million, when compared to Fiscal 2019. The decrease was a result of an overall declining volume of transactions related to the eNom retail brands. Costs for portfolio decreased by \$0.1 million for Fiscal 2020, to \$0.5 million when compared to Fiscal 2019. This decrease was expected after the Company disposed of its entire domain portfolio in the fourth quarter of Fiscal 2019, excluding surname domains used in the RealNames email service.

**Network Expenses**

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

**SALES AND MARKETING**

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

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

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

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

**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)*

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

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

**GENERAL AND ADMINISTRATIVE**

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

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

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

General and administrative expenses for Fiscal 2020 increased by \$2.4 million, or 13%, to \$20.3 million as compared to Fiscal 2019. The increase was primarily driven by an increase in people costs of \$1.5 million, an increase in foreign exchange expense of \$1.4 million, and an increase in professional fees of \$0.6 million in connection with the sale of the Ting Mobile customer relationships to DISH. These increases in general and administrative expenses were offset by a decrease in both credit card fees and bad debts associated with the Mobile Services business, in the amounts of \$0.8 million and \$0.2 million, respectively. Additionally, the current year saw a decrease in transitional costs related to Ascio and eNom of \$0.2 million and \$0.2 million, respectively.

**DEPRECIATION OF PROPERTY AND EQUIPMENT**

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

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

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

**LOSS (GAIN) ON DISPOSAL OF PROPERTY AND EQUIPMENT**

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

	Year ended December 31,			
	2020		2019	
Loss on disposition of property and equipment	\$	(17)	\$	73
Decrease over prior period	\$	(90)		
Decrease - percentage		(123)%		
Percentage of net revenues		(0)%		0.02%

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

**AMORTIZATION OF INTANGIBLE ASSETS**
*(Dollar amounts in thousands of U.S. dollars)*

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

Amortization of intangible assets increased \$0.9 million for Fiscal 2020, to \$10.1 million. The increase is primarily driven by the acquisition of Cedar as well as a full year's worth of amortization of acquired Ascio intangible assets for which Fiscal 2019 represented a stub period.

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

**IMPAIRMENT OF DEFINITE LIFE INTANGIBLE ASSETS**
*(Dollar amounts in thousands of U.S. dollars)*

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

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

**LOSS (GAIN) ON CURRENCY FORWARD CONTRACTS**

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

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

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

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

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

**OTHER INCOME AND (EXPENSES)**
*(Dollar amounts in thousands of U.S. dollars)*

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

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

**INCOME TAXES**

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

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

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

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

Fiscal 2020 includes tax on profits of \$10.8 million compared to \$24.6 million for Fiscal 2019. Our Fiscal 2020 income tax expense includes a tax expense of less than \$0.1 million related to the adoption of ASU 2016-09, which requires all excess tax benefits and tax deficiencies related to employee share-based payments to be recognized through income tax expense on a prospective basis. The Fiscal 2019 tax recovery related to excess tax benefits related to employee share-based compensation was \$0.6 million. On December 22, 2017, the Act was signed into law making significant changes to the Internal Revenue Code. Changes include, but are not limited to, a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017, the transition of U.S. international taxation from a worldwide tax system to a territorial system, bonus depreciation that will allow for full expensing of qualified property, and a one-time transition tax on the mandatory deemed repatriation of foreign earnings.

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

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

**OTHER COMPREHENSIVE INCOME (LOSS)**

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

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

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

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

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

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

**Liquidity and Capital Resources**

As of December 31, 2021, our cash and cash equivalents balance increased \$0.8 million when compared to December 31, 2020. Our principal uses of cash were \$73.9 million for the continued investment in property, equipment and intangible assets, \$24.0 million for the acquisition of Simply Bits, \$2.5 million for the acquisition of Uniregistry, \$2.0 million related to an investment in an unrelated entity, and \$0.7 million of other costs, including tax payment associated with stock option exercises and loan payable costs. These uses of cash were offset by cash provided by operating activities of \$29.6 million, advances of \$69 million from our *Second Amended* 2019 Credit Facility (as defined below), \$4.8 million of proceeds received on exercise of stock options, and \$0.5 million from proceeds on disposal of property and equipment.

*Amended 2019 Credit Facility*

On June 14, 2019, the Company and its wholly-owned subsidiaries, Tu cows.com Co., Ting Fiber, Inc., Ting Inc., Tu cows (Delaware) Inc. and Tu cows (Emerald), LLC, entered into an Amended and Restated Senior Secured Credit Agreement with Royal Bank of Canada (“RBC”), as administrative agent, and lenders party thereto (collectively with RBC, the “Lenders”) under which the Company has access to an aggregate of up to \$240 million in funds, which consists of \$180 million guaranteed credit facility and a \$60 million accordion facility. In connection with the Amended 2019 Credit Facility, the Company incurred an additional \$0.3 million of fees paid to lenders and \$0.2 million of legal fees related to the debt issuance. Of these fees, \$0.4 million are debt issuance costs, which have been reflected as a reduction to the carrying amount of the loan payable and will be amortized over the term of the credit facility agreement and \$0.1 million have been recorded in General and administrative expenses. On November 27, 2019, the Company entered into Amending Agreement No. 1 to the Amended and Restated Senior Secured Credit Agreement (collectively with the Amended and Restated Senior Secured Credit Agreement, the “Amended 2019 Credit Facility”) to amend certain defined terms in connection with the Cedar acquisition.

The Amended 2019 Credit Facility replaced a secured Credit Agreement dated January 20, 2017 with Bank of Montreal, RBC and Bank of Nova Scotia.

The obligations of the Company under the Amended 2019 Credit Agreement are secured by a first priority lien on substantially all of the personal property and assets of the Company and has a four-year term, maturing on June 13, 2023.

*Second Amended 2019 Credit Facility*

On October 26, 2021, the Company entered into a Second Amended and Restated Senior Secured Credit Agreement (the “Second Amended 2019 Credit Agreement”) with the Lenders and Toronto-Dominion Bank (collectively the “New Lenders”) to, among other things, increase the existing revolving credit facility from \$180 million to \$240 million. The Amended Credit Agreement provides the Company with access to an aggregate of \$240 million in committed funds. Under the Amended Credit Agreement, the Company has agreed to 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 Adjusted EBITDA Ratio of 4.50:1.00 until March 31, 2023 and 4.00:1.00 thereafter; and (ii) minimum Interest Coverage Ratio of 3.00:1.00. The Amended Credit Agreement also provides for two additional interest rate tiers if the Company exceeds a 3.50x Total Funded Debt to Adjusted EBITDA Ratio.

As of December 31, 2021, the Company held contracts in the amount of \$25.2 million with BMO to trade U.S. dollars in exchange for Canadian dollars under an uncommitted treasury risk management facility which assists the Company with hedging Canadian dollar exposures.

***Cash Flow from Operating Activities***

***Year ended December 31, 2021***

Net cash inflows from operating activities were \$29.6 million, a decrease of 18% when compared to the prior year. Net income, after adjusting for non-cash charges, during Fiscal 2021 was \$31.6 million, a decrease of 12% when compared to the prior year. Net income included non-cash charges and recoveries of \$28.3 million such as depreciation, amortization, impairment of indefinite life intangible asset, loss on write-off of property and equipment, write-down on disposal of Ting Mobile customer assets and contract costs, excess tax benefits on stock-based compensation, stock-based compensation, the provision for unrealized losses on currency forward contracts and a recovery for deferred tax. This generation of cash from net income was reduced by a working capital change of \$2.0 million. We generated \$11.1 million from movements in accounts receivable, accounts payable, accrued liabilities, and customer deposits. These positive contributions were offset by cash use of \$13.1 million from deferred revenue, prepaid expenses and deposits, deferred costs of fulfillment, income taxes recoverable, contract asset, inventory, and accreditation fees payable.

***Year ended December 31, 2020***

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

***Year ended December 31, 2019***

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

### **Cash Flow from Financing Activities**

#### **Year ended December 31, 2021**

Net cash inflows from financing activities during Fiscal 2021 totaled \$73.1 million as compared to cash inflows of \$5.1 million during Fiscal 2020. Net cash inflows of \$69 million resulting from draws on the Second Amended 2019 Credit Facility and \$4.8 million from proceeds received on the exercise of stock options. These cash inflows were partially offset by \$0.4 million outflow from the net impact of exercise of stock options and \$0.3 million of loan costs.

#### **Year ended December 31, 2020**

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

#### **Year ended December 31, 2019**

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

### **Cash Flow from Investing Activities**

#### **Year ended December 31, 2021**

Investing activities during the Fiscal 2021 used net cash of \$102.0 million as compared to using \$53.3 million during Fiscal 2020. Cash outflows of \$73.9 million related to the investment in property, equipment and intangible assets, primarily to support the continued expansion of our fiber footprint. The Company continues to invest in our existing Ting Towns of Centennial, Colorado, Charlottesville, Virginia, Fuquay-Varina, North Carolina, Wake Forest, North Carolina, Holly Springs, North Carolina, Sandpoint, Idaho, Rolesville, North Carolina and Culver City, California as we seek to extend both our current network and expand to new markets. We expect our capital expenditures on building and expanding our fiber network to continue to increase during Fiscal 2022. In addition to investment in property, equipment and intangible assets, the current period used \$24 million in connection with the acquisition of Simply Bits, used \$2.5 million in connection with the acquisition of Uniregistry and used \$2.0 million for an investment in an unrelated entity. These cash outflows were partially offset by \$0.5 million from proceeds on disposal of property and equipment.

#### **Year ended December 31, 2020**

Investing activities during the Fiscal 2020 used net cash of \$53.3 million as compared to using \$76.1 million during Fiscal 2019. Cash outflows of \$44.5 million related to the investment in property, equipment and intangible assets, primarily to support the continued expansion of our fiber footprint. In addition, the Company used \$8.8 million in connection with the acquisition of Cedar. The Company continues to invest in our existing Ting Towns of Centennial, Colorado, Charlottesville, Virginia, Fuquay-Varina, North Carolina, Wake Forest, North Carolina, Holly Springs, North Carolina, and Sandpoint, Idaho as well ramping construction in Roaring Fork, Colorado, Rolesville, North Carolina, and Culver City, California, as we seek to extend both our current network and expand to new towns. We expect our capital expenditures on building and expanding our fiber network to continue to increase significantly during Fiscal 2021.

#### **Year ended December 31, 2019**

Investing activities during the Fiscal 2019 used net cash of \$76.1 million as compared to using \$29.7 million during Fiscal 2018. Cash outflows of \$28.5 million related to the acquisition of Ascio Technologies, Inc., \$3.6 million related to the acquisition of intangible assets, of which \$3.5 million related to the acquisition of mobile subscribers of the FreedomPop and Unreal MVNO brands, and \$44.1 million of cash outflows was invested in property and equipment, primarily to support the continued expansion of our fiber footprint. The Company continues to invest in our existing Ting Towns of Charlottesville, Virginia, Holly Springs, North Carolina and Westminster, Maryland as well ramping construction in Sandpoint, Idaho, Centennial, Colorado, and Fuquay Varina, North Carolina, as we seek to extend both our current network and expand to new towns. We expect our capital expenditures on building and expanding our fiber network to continue to increase significantly during Fiscal 2019.

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, 2021.

### **Material Cash Requirements**

The Company's material cash requirements include the following contractual and other obligations.

#### **Debt**

As of December 31, 2021, the Company's Second Amended 2019 Credit Facility had an outstanding balance of \$191.4 million. There are no scheduled principal repayments within 12 months. As of December 31, 2021, the Company has entered into floating-to-fixed interest rate swap instruments with a notional value of \$70 million. Future interest payments associated with the Second Amended 2019 Credit Facility are estimated to total \$10.4 million, with \$6.9 million payable within 12 months using current interest rates, net of our interest rate swaps. See Note 8 to the Consolidated Financial Statements for information regarding the terms of the Second Amended Credit Facility.

**Leases**

The Company has lease arrangements for certain Internet infrastructure, data center space and corporate facilities. As of December 31, 2021, the Company had fixed lease payment obligations of \$16.7 million, with \$3.5 million payable within 12 months.

**Other Expenditures**

We have entered into purchase obligations of \$12.2 million to be settled in fiscal 2022, which are related to the Company's ongoing operations. Other than operating expenses, cash requirements for fiscal 2022 are expected to consist primarily of fiber network capital expenditures to expand our footprint in new and existing Ting towns. Total fiber network capital expenditures for fiscal 2022 are expected to double from 2021 to approximately \$130 million, of which \$21.5 million are subject to purchase obligations. Other than the \$21.5 million purchase obligations, the Company's remaining planned capital expenditures are discretionary in nature. In order to fund the discretionary portion of capital expenditures, the Company will seek alternative sources of financing, which could include but are not limited to additional financing arrangements beyond the Company's current revolving credit facility as well as private or public share offerings.

**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, 2021. We are also subject to market risk exposure related to changes in interest rates under our Second Amended 2019 Credit Facility. We do not expect that any changes in interest rates will be material; however, fluctuations in interest rates are beyond our control. We will continue to monitor and assess the risks associated with interest expense exposure and may take additional actions in the future to mitigate these risks.

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

As of December 31, 2021, we had the following outstanding foreign exchange forward contracts to trade U.S. dollars in exchange for Canada dollars:

Maturity date (Dollar amounts in thousands of U.S. dollars)	Notional amount of U.S. dollars	Weighted average exchange rate of U.S. dollars	Fair value
January - March 2022	11,518	1.2561	(82)
April - June 2022	6,453	1.2801	73
July - September 2022	3,779	1.2801	39
October - December 2022	3,476	1.2801	32
	\$ 25,226	1.2691	\$ 62

As of December 31, 2021, the Company had \$25.2 million of outstanding foreign exchange forward contracts which will convert to CDN \$32.0 million. Of these contracts, \$25.2 million met the requirements for hedge accounting.

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

We have performed a sensitivity analysis model for foreign exchange exposure over the year ended December 31, 2021. 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, 2021. 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, 2021 of approximately \$0.6 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 Second Amended 2019 Credit Facility.

As of December 31, 2021, we had an outstanding balance of \$191.4 million on the Second Amended 2019 Credit Facility. The Second Amended 2019 Credit Facility bears a base interest rate based on borrowing elections by the Company with a marginal rate calculated as a function the Company's total Funded Debt to EBITDA, plus the applicable LIBOR rate. In May 2020, the Company entered into a pay-fixed, receive-variable interest rate swap with a Canadian chartered bank to limit the potential interest rate fluctuations incurred on its future cash flows related to variable interest payments on the Credit facility. The notional value of the interest rate swap was \$70 million. The Company does not use the interest rate swap for trading or speculative purposes. The contract is coterminous with the Credit facility, maturing in June 2023. As of December 31, 2021, an adverse change of one percent on the interest rate would have the effect of increasing our annual interest payment on the Second Amended 2019 Credit Facility by approximately \$1.2 million, assuming that the loan balance as of December 31, 2021 is outstanding for the entire period.