eResearch

Company Report – Watch List

Edgewater Wireless Systems Inc. (TSXV:YFI) Addressing the Wi-Fi Bottleneck with Patented Multi-Channel, High-Density Solutions

Prior

COMPANY DESCRIPTION:

Edgewater Wireless Systems, Inc. ("Edgewater" or "the Company") develops and commercializes technologies and intellectual property ("IP") with a focus on the wireless communications market. With over \$60 million invested in product development and backed by a portfolio of 25 patents, Edgewater is a pioneer in the next generation of high-density Wi-Fi solutions. Utilizing Wi-Fi Spectrum Slicing technology, Edgewater has created a family of products and solutions under its MCSRTM (Multi-Channel, Single Radio) brand. With the explosive growth in Wi-Fi connected devices, a \$33 billion market, Edgewater's Spectrum Slicing solution enable multiple, concurrent data communication channels within a single coverage area, thereby delivering a more reliable Wi-Fi service, reducing congestion, and allowing more users on a single device.

KEY UPCOMING CATALYSTS: PRODUCT & IP LICENSING

- Viewed as complementary to traditional implementations, such as Wi-Fi6, the Company's primary focus is securing IP license deals from silicon companies to implement Wi-Fi Spectrum Slicing on their platforms. Depending on the terms of the contract, revenue could come from an upfront fee, a royalty for each device or module sold, as well as annual support fees. The potential market – nine billion Wi-Fi devices are in use with three billion new Wi-Fi devices shipped annually.
- A key driver for adoption is that recently, a global standard's body, **Cable Television Laboratories, Inc.** (*private*; "CableLabs"; www.cablelabs.com), has validated Edgewater's work in high-density Wi-Fi using multi-channel, Spectrum Slicing techniques. **CableLabs**, in collaboration with **Edgewater**, has developed a new Dual Channel Wi-FiTM standard. This new standard is the first affirmation by a global standards body that one channel is not enough to meet the current Wi-Fi market needs for higher-density solutions.
- In the Enterprise market, we expect that the Company will deliver on the first phase of the **Kroger** (NYSE:KR) contract and continue product delivery for Mediacom's (*private*) rollout.
- In the Residential market, we expect its two-pronged approach of selling into (1) terminal equipment providers, and (2) silicon vendors could give rise to IP licensing deals with both groups that will result in upfront revenue in F2020 and royalty revenue in subsequent years.
- We expect that Edgewater could be a potential takeover target by a Wi-Fi chip manufacturer or hardware provider (see Appendix A) who would want to acquire Edgewater's patent portfolio and high-density Wi-Fi chip designs.

THREE-YEAR REVENUE FORECAST: For F2020, we expect that Edgewater could generate revenue between \$0.25 million-\$0.50 million, ramping up to \$5 million-\$10 million in F2021, and \$13 million-\$14 million in F2022.



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Rev

Rating	Watch List
Target Price	Watch List
Revenue F2020E (M)	\$0.5
Revenue F2021E (M)	\$7.5
MARKET DATA	
Date:	Dec 16, 2019
Current Price (C\$):	\$0.09
52-Week Range:	\$0.07 / \$0.15
Shares O/S (M):	169.7
Mkt Cap (\$M);	\$14.4
EV (\$M):	\$14.4
Avg. Weekly Vol. (M):	0.54

Website: www.edgewaterwireless.com

FINANCIALS

REVISIONS

FISCAL YEAR END	1:	30-Apr	
	F2019A	F2020E	F2021E
Revenue (\$M)	\$0.4	\$0.5	\$7.5
		F2019A	FQ1/2020A
Cash (\$M)		\$0.1	\$0.1
Current Assets	(\$M)	\$0.8	\$1.0
Net Cash (\$M)		\$0.0	\$0.0
Total Assets (\$M)		\$0.8	\$1.1
Debt (\$M)		\$0.0	\$0.0
Total Liabilities (\$M)		\$2.1	\$2.0
Key Shareholde	ers	(M)	% Held
Edgewater Computer		7.198	4.24%
Skafel, Andrew		1.465	0.86%
Imrie, Brian		1.193	0.70%
Dillman, J. Lew	Dillman, J. Lewis		0.56%
Andrews, Stepl	nen	0.338	0.20%

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Source: Company Reports, S&P Capital IQ, Yahoo!Finance, eResearch Corp.

Chris Thompson, CFA, MBA, P.Eng. Director of Equity Research

December 16, 2019

COMPANY INFORMATION

Company Summary

Based in Ottawa, Canada, but with a worldwide presence, **Edgewater Wireless Systems** Inc. develops and commercializes technologies and IP with a focus on the wireless communications market.

Edgewater Wireless was spun out of **Edgewater Computer Systems**, Inc. (*private*; "**ECSI**"; www.edgewater.ca) in 2011 as part of a reverse takeover (RTO) with **KIK Polymers Inc.** Founded in 1988, **ECSI**, a defense research and development company, is currently the largest shareholder in **Edgewater Wireless**.

Edgewater Wireless is managed by a team with extensive technology commercialization and development expertise in data communications, wireless technologies, and semiconductor solutions. See Appendix B for more information on Edgewater's management and board of directors.

Barriers to Entry

With over \$60 million invested so far in product development and backed by a portfolio of 25 patents, **Edgewater** focuses on the next generation of Wi-Fi solutions. Often, development of similar silicon chipsets would cost in the hundreds of millions of dollars but Edgewater has found cost-effective methods to get its IP into silicon chipsets.

In 2016, Edgewater decided to pivot its business and became a pioneer in the development of high-density Wi-Fi products and technology. By utilizing Spectrum Slicing techniques, **Edgewater** has created a family of products and solutions under the MCSRTM (Multi-Channel, Single Radio) brand.

Figure 1: Edgewater's Timeline Post-Pivot



Source: Company Reports

With the explosive growth in Wi-Fi connected devices, **Edgewater's** Spectrum Slicing solutions enable multiple, concurrent data communication channels within a single coverage area, thereby delivering a more reliable Wi-Fi service, reducing congestion, and allowing more users on a single device.

As validation of its approach, **Edgewater** has worked with technology companies such as **Apple Inc.**, **CableLabs**, and **Mediacom**, and business such as **Kroger** and **Wagener Stadium** (Netherlands' National Hockey Stadium), as these companies recognized the benefits of **Edgewater's** high-density Wi-Fi solutions.

In 2016, Edgewater was one of four companies chosen by **UpRamp** (sponsored by **CableLabs**). **UpRamp** is a tech accelerator and a way for Edgewater to connect with 65 of the world's leading cable operators. The **UpRamp** program is designed to accelerate companies that have already built their technology and could provide tremendous value to the \$500 billion cable industry.

With Edgewater's technology and solutions, besides allowing service providers to deliver reliable, high-density broadband services, with fewer serviceable products required. Service providers report that 40% of customer care calls come from Wi-Fi related issues; with a more reliable service, these support calls can be reduced.

Cable Television Laboratories, Inc. (*private*; "**CableLabs**"; www.cablelabs.com) is a not-for-profit innovation lab founded in 1988 by American cable operators but membership is open to any cable operator from around the world. **CableLabs** is a global standards body for the cable industry whose mandate is to determine what service requirements are to be supported by new technologies and products.

CableLabs has validated Edgewater's work in high-density Wi-Fi using multi-channel, Spectrum Slicing techniques, as CableLabs, in collaboration with Edgewater, has developed a new Dual Channel Wi-Fi[™] standard. This new standard is the first affirmation by a global standards body that one channel is not enough to meet the current Wi-Fi market needs for higher-density solutions.

What is the Problem Edgewater Solves?

Wi-Fi technology uses wireless transmitters and chipsets to send information between internet access points and mobile devices (or wireless nodes) for wireless networking. These chipsets access Wi-Fi access points (at home, in public spaces, or at work), commonly referred to as "hotspots", which enable users to access networked services without using physical cables.

These wireless chipsets are found in wireless cellular phones, hubs, laptops, routers and tablets, and with the advent of the applications of the Internet of Things ("IoT"), these wireless chipsets are being incorporated into internetenabled devices, such as security systems, televisions, and household appliances.

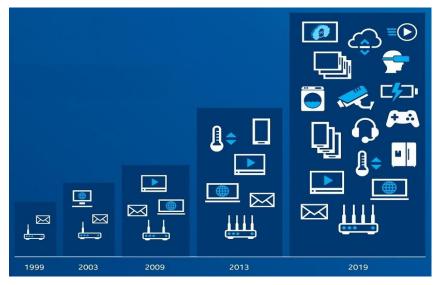


Figure 2: Home Wireless Evolution – Severe Competition for Network Access

The world is exploding with Wi-Fi devices and data communications providers need to keep pace. The next generation Wi-Fi solutions need to address issues such as performance in high-density user areas, complex physical environments, and higher definition content but keep solutions cost effective for network providers.

Source: Intel Corp.

As little as 20 years ago, the only devices connecting to the Internet through a home's Wi-Fi was a laptop. Fast forward to today and a home has a dozen different device types (computers, laptops, tablets, cell phones, internet televisions, home security, virtual assistants, etc.) that are all competing for bandwidth (see Figure 2).

IoT and IIoT Adoption Will Cause Bottlenecks

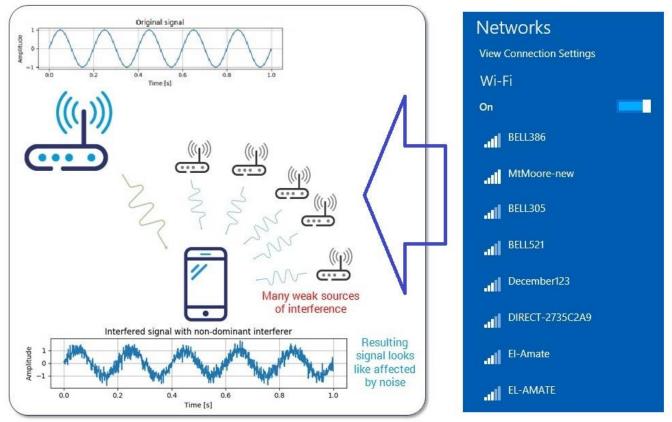
Five years from now, *most* electrical devices will be connected to the Internet so they can communicate with other devices and receive software updates - this is commonly referred to as the Internet of Things ("IoT").

The growth witnessed in internet-connected devices is also increasing the bandwidth requirements in buildings, convention centres, factories, hotels, stadiums, and multi-dwelling units ("MDU's"), such as condominiums and apartment buildings. This is referred to as the Industrial Internet of Things ("IIoT") as interconnected devices, instruments and sensors connect, allowing for data collection, exchange, and analysis with the various industrial software applications, for productivity improvement, better efficiency, as well as other economic benefits.

A problem arises because the current Wi-Fi technology is single channel radio technology and can only work on one channel at any given time. The single channel radio technology was not intended for high-density user environments like stadiums and concert halls.

Using the current technology, all users and devices initiate contact with a Wi-Fi access device at the same data rate regardless of the type of data (email, text, audio, video, etc.) – every device is vying for the same attention. As the number of users and devices grow, an ever-increasing number of simultaneous users are vying for the same bandwidth.

Figure 3: Wi-Fi Interference from Other Access Points; More Powerful Access Points Means More Interference – What is Required is Higher Density Access Points



Source: grandmetric.com; eResearch Corp.

When devices compete for "attention", there is a need to ensure a reliable and high-quality connection that can handle the performance requirements and low-latency for audio and video communications. As more single channel Wi-Fi access devices are deployed in an area, the broadcast signals emanating from each access device actually cause more noise (interference) in the environment, which reduces the quality of service ("QoS").

Adding additional access devices does not solve the issues, as illustrated in Figure 3, the "Original Signal" (top wave) is the signal emanating from the access node, however when it reaches the cell phone device, the signals from the other access nodes have caused interference and the "Interfered Signal" (bottom wave) shows the effects of the noise.

The Solution

The solution to the bottlenecks is a wireless network utilizing Wi-Fi Spectrum Slicing technology to allow the network to assign different channels to different users or nodes thereby improving throughput, reducing delay, and maximizing the number of users. Wi-Fi Spectrum Slicing optimizes performance for all devices in a coverage area and allows spectrum to be "sliced", enabling more radios to operate in a given area.

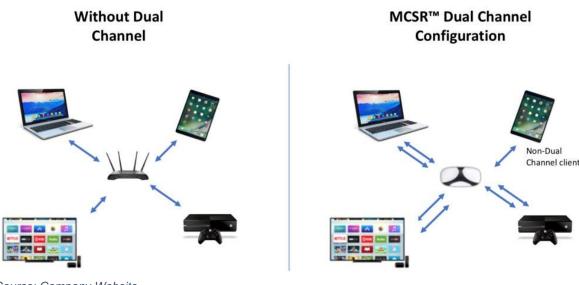
Edgewater is the first to market with Wi-Fi Spectrum Slicing enabled chipsets, creating its branded MCSR[™] silicon solutions and, with its IP licensing, is positioned as complementary to traditional, single channel implementations such as Wi-Fi6.

With the multi-channel radio chipsets, **Edgewater** has created a family of multi-channel Wi-Fi access point products as well as licensing the IP to other companies that want to incorporate **Edgewater's** MCSRTM solution into their own products.

Currently used by telecommunication and enterprise companies around the world, **Edgewater's** multi-channel technology advantages include:

- i. greater bandwidth density;
- ii. improved security; and
- iii. carrier grade reliability.

Figure 4: Internet Traffic Flow Without and With MCSR™ Powered Dual Channel Wi-Fi



Source: Company Website

Reduces Costs for Service Providers

Edgewater's MCSRTM technology and solutions allow service providers to deliver reliable, high-density indoor and outdoor broadband services, with fewer serviceable products required. Service providers report that 40% of customer care calls come from Wi-Fi related issues; with a more reliable service, these support calls can be reduced.

This results in a lower CapEx deployment investment and a lower OpEx for any Wi-Fi deployment – residential, commercial, or enterprise. Lower cost deployments are achieved by having fewer access points. In addition, remote and rural infrastructure deployments can also be achieved due to the technology's extended network coverage and performance capabilities.

Edgewater's solutions have been proven to perform well in high-density Wi-Fi environments. These are the key features required to meet the explosive growth in Wi-Fi data communications over the next few years.

Product Momentum and Validations

- Dual Channel Wi-FiTM Standard:
 - ➤ Co-innovated with CableLabs, the emerging Dual Channel Wi-FiTM standard is the industry's first declaration that "one channel is not enough" to meet the increased demand for Wi-Fi and is a first step toward multi-channel Wi-Fi.
- CableLabs:
 - One of four companies selected for the first CableLabs-backed accelerator program (UpRamp), which validated Edgewater's approach to high-density Wi-Fi and led to additional engagements with cable companies.
- Wireless Broadband Alliance (WBA):
 - Selected for the WBA Accelerator track, which provides a global platform for introducing Wi-Fi Spectrum Slicing to members such as Intel, Broadcom, Qualcomm, and British Telecom (BT).
- Kroger:
 - First access point hardware design win for Edgewater's MCSRTM silicon solutions.
 - Kroger is incorporating Edgewater's technology in an access point device that Kroger is custom building for its stores.
- Mediacom:
 - Successfully completed the Cable industry's first Proof-of-Concept, which led to additional deployments in the hospitality industry.
- Comcast & Nokia:
 - Successfully demonstrated 5G Interconnectivity with Comcast, Global Reach, and Nokia to help establish Wi-Fi as a foundation to the emerging 5G standard and positioning Edgewater's technology with the major industry players.
- Apple:
 - Completed a sale for a non-core patent with Apple, thus validating Edgewater's IP portfolio.

Edgewater's Products and Solutions Include:

- 1) AERA[™] Access Point Solutions (<u>www.aera.io</u>):
 - Complete suite of access point solutions powered by Edgewater's MCSRTM chipsets.
 - World's first access points to concurrently transmit and receive on multiple in-band channels from a single Wi-Fi standard compliant radio.
 - Includes the latest in wireless network security.
 - Products:

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- AERA3: (Indoor)
 - Three concurrent channels in 2.4GHz.
- o AERA4: (Indoor)
 - Three concurrent bands in 2.4GHz and one band in 5Ghz.
- o AERA6: (Indoor)
 - Three bands of Wi-Fi in 2.4GHz & three bands in 5Ghz.
 - Six-channel access point.
- EAP3030 Three-channel MCSRTM AP: (Indoor/Outdoor)
 - Three concurrent channels in 2.4GHz.
- EAP3031 Four-channel Dual Band MCSRTM AP: (Indoor/Outdoor)
 - Dual-frequency, multi-channel Wi-Fi access point with three concurrent channels in 2.4GHz and one channel in 5GHz.
- EAP3033 Six-channel Dual Band MCSRTM AP: (Indoor/Outdoor)
 - Dual-frequency, multi-channel Wi-Fi access point with three concurrent channels in 2.4GHz and three concurrent channels in 5GHz.
- FLUID MX Controller Series
 - Capable of controlling multiple Edgewater access points to provide high reliability and simpler wireless management.
- Current clients: Mediacom, Wagener Stadium
- 2) MCSRTM Silicon Solutions
 - MCSRTM chipsets, radio cards, and silicon solutions with software drivers.
 - Used by OEM (original equipment manufacturer) and OED (original equipment designer) companies to incorporate **Edgewater's** technology.
 - Current client: **Kroger**
 - Target: Carrier, large enterprise and residential applications
- 3) MCSRTM Licensing
 - Third Party Computer Chip ("Silicon") fabricators can licence **Edgewater's** IP into their solutions to add the MCSR[™] Wi-Fi technology.
 - Target: Mainstream Chip Manufacturers (see Appendix A)

Figure 6: Edgewater Silicon Chipsets and Radio Cards





Source: Company Website



Figure 5: AERA Wi-Fi Access Point

Source: Company Website

INDUSTRY OPPORTUNITY

Wi-Fi Industry Overview

According to the Wi-Fi Alliance, in 2018, the Wi-Fi industry contributed nearly \$2.0 trillion in economic value and is expected to exceed \$3.5 trillion in economic value by 2023. Wi-Fi plays an important role in society as users rely on it every day and is critical to most businesses.

The WBA reported in its Annual Industry Report 2020 that, in 2018, there were over 9 billion Wi-Fi devices globally and expect that over 26 billion Wi-Fi enabled IoT devices will be online by 2020, with 16-18 connected devices per household. According to the Wi-Fi Alliance, more than 4 billion Wi-Fi devices will ship in 2019, expanding the current installed base to over 13 billion devices.

Wi-Fi Usage Continues with Strong Growth Over Next Five Years

According to Cisco's Visual Networking Index, Wi-Fi will continue to grow and expand over the next three to five years:

- By 2022, 59% of mobile data will be offloaded from cellular networks onto Wi-Fi;
- Globally, public Wi-Fi hotspots will grow by almost 350% from 124 million in 2017 to 549 million by 2022;
- Wi-Fi traffic from mobile devices and Wi-Fi-only devices will account for 51% of total IP traffic by 2022, up from 43% in 2017 (see Figure 7).

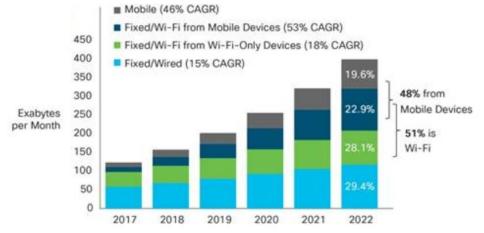


Figure 7: IP Traffic by Access Technology

Source: Cisco Visual Networking Index (2019)

Enterprises are in an uphill battle to upgrade their wireless infrastructure as users and devices rely on an everincreasing selection of bandwidth-heavy applications, including Disney's (NYSE:DIS) recent launch of Disney+ and the popularity of multi-player online video games.

Data communication providers will need to adopt new technologies and standards to increase the speed and performance of Wi-Fi, especially in congested environments including arenas, stadiums, MRU's, and even Smart homes with multiple devices.

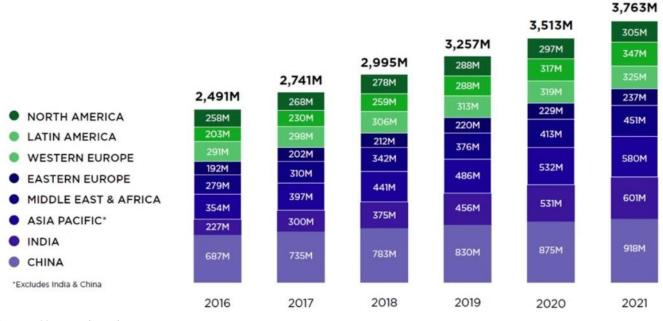
Data communication providers will also need to upgrade Wi-Fi security, as public venues with open Wi-Fi and homes need to ensure the protection of personal information.

Spending on Wi-Fi

According to IMARC's latest report, the global Wi-Fi chipset market was US\$17.2 billion in 2018 and is expected to reach US\$21.4 billion by 2024, a CAGR of 3.7%.

The growth in the overall wireless industry is benefiting from the growth in smartphone and mobile devices, as Wi-Fi is the primary method of connecting. According to a 2018 Newzoo market survey, the number of active smartphones could reach 3.3 billion by the end of 2019, and 39% of the population will have access to a smartphone. By 2021, the report estimates 3.8 billion active smartphones worldwide, reaching almost half (49%) of the world's population.

Figure 8: Global Smartphone Users by Region (in Millions)



Source: Newzoo (2018)

The growth in the overall wireless industry will also benefit from the growth in IoT spending. According to IDC's semi-annual Internet of Things Spending Guide, worldwide spending on the IoT is forecasted to reach \$745 billion in 2019, an increase of 15.4% year-over-year, and maintain a double-digit annual growth rate to surpass \$1 trillion in 2022.

IDC found that IoT adoption is occurring across industries, governments, and in consumers' daily lives. Data that is generated by connected devices is often transmitted by Wi-Fi.

EDGEWATER'S OPPORTUNITY & KEY DRIVERS

Edgewater's market opportunity has two distinct segments:

- 1) Enterprise market:
 - According to IDC, the Wi-Fi Enterprise market is a US\$5.8 billion opportunity.
 - Solutions:
 - i. Silicon solutions: chipsets & modules into third-party manufacturers (see Hardware Providers Access Nodes).
 - ii. Complete access points AERATM.
 - Clients:
 - i. Kroger
 - In the last quarter of FY2018, **Edgewater** secured a win with a US\$1.1 million purchase order from **Kroger**. **Kroger** is largest operator of supermarkets and second largest retailer in the U.S.A.
 - Product: Modules that incorporate Edgewater's chipsets.
 - Edgewater believes that the total opportunity at Kroger could be in the US\$20-\$25 million range.
 - We expect Edgewater to recognize \$1 million of revenue in the next 12 months.
 - ii. Mediacom
 - In FY2019, **Edgewater** was approved as a vendor with **Mediacom**, the fifth largest cable operation in the U.S.A.
 - Product: AERATM access devices and controllers.
 - The focus is on rolling AERATM solutions into hotels and MRU's. We expect this partnership to continue delivering revenue in the current fiscal year.
- 2) Residential (Home) market:
 - Developing opportunities from its alliance with **CableLabs**. In 2016, Edgewater was one of four companies to be chosen by **UpRamp** (sponsored by **CableLabs**). **UpRamp** is a tech accelerator and for Edgewater to connect with 65 of the world's leading cable operators.
 - According to **Transparency Market Research**, the home market is a US\$12.9 billion opportunity.
 - **Edgewater** is taking a two-pronged approach, selling into:
 - i. The terminal equipment providers (Arris, Technicolor, Hitron, Cisco, Belkin, etc.);
 - ii. The silicon (chip) vendors that supply chipsets to terminal equipment providers.
 - With the silicon (chip) vendors, **Edgewater's** focus is on IP licensing agreements from its Patent Portfolio.

Other segments include large audience venues such as concert halls, public spaces and stadiums, which would benefit from **Edgewater's** high-density technology. These facilities are at the forefront of fan engagement and increasing revenue and fulfillment with in-seat sales.

Figure 9: US Top Broadband Providers

US Top Broadband Providers	Subscribers Q3/2019
Cable Companies	
Comcast Xfinity	28,186,000
Charter Spectrum	26,325,000
Cox Communications	5,145,000
Altice (Suddenlink)	4,180,300
Mediacom	1,316,000
WOW (WideOpenWest)	773,900
Cable ONE	689,138
Atlantic Broadband	446,137
Total Top Cable	67,061,475
Phone Companies	
AT&T Internet	15,575,000
Verizon	6,961,000
CenturyLink	4,714,000
Frontier Communications	3,555,000
Windstream	1,040,000
Consolidated	784,151
TDS	437,700
Cincinnati Bell	425,100
Total Top Telco	33,491,951
Total Top Broadband	100,553,426

Source: Wikipedia

Product enhancements:

• This year, **Edgewater** announced that it designed the next generation of its MCSR[™] silicon chipset with enhancements that were aimed toward improving production yield, reducing costs, and increasing performance.

Revenue Model and Forecast

Edgewater generates revenue from three sources:

- 1) Licensing its IP to third parties;
- 2) Manufacturing silicon computer processors' "chipsets" or full circuit boards for sale to be incorporated into other data communication devices; and
- 3) Selling its own data communication devices, under the brand name AERA[™] (<u>www.aera.io</u>).

Edgewater is taking a top-down approach with broadband providers (see Figure 9: US Top Broadband Providers) to show them how its multi-channel products can deal with capacity, interference, and density.

Edgewater has already reached out to chipset manufacturers and access point hardware providers to get its IP or chipsets included in their products.

The Company's primary focus is securing IP license deals for third parties to use its patented Wi-Fi IP solutions and, depending on the terms of the contract, could mean earning an upfront fee, a royalty for each device or module sold, as well as annual support fees.

In addition, with its patent portfolio, it is also possible that **Edgewater** can sell a patent. In January 2015, **Edgewater** announced that it sold one of its patents to Apple.

Revenue Forecast

Over the next 12 months, we expect that Edgewater could generate revenue from \$1-\$2 million, ramping up to \$5-\$10 million in FY2021 and \$13-\$14 million in FY2022. With its year-end in April, we expect 25-40% of revenue to be recognized in FY2020, which is approximately \$250,000-\$500,000 of revenue.

Over the next 12 months, our breakdown is as follows:

- **Kroger**: We expect **Edgewater** to recognize between \$0.5-\$1.0 million of revenue on the Kroger contract over the next 12 months;
- **Mediacom**: We expect this partnership to continue delivering revenue in each fiscal year of between \$250,000-\$500,000;
- Licensing deal: We expect Edgewater to sign a licensing deal and receive an upfront payment. The amount of the upfront payment could range from \$500,000 to \$5 million.

APPENDIX A: Wi-Fi CHIPSET MANUFACTURERS AND ACCESS NODE HARDWARE PROVIDERS

Wi-Fi Chipset Manufacturers Market

The key players in the Wi-Fi chipset market are highlighted below.

Atmel Corporation (private; subsidiary of Microchip	MediaTek Inc. (TSEC:2454)
Technology: NasdaqGS:MCHP)	• www.mediatek.com
• www.atmel.com	 Market Cap (M): TWD65,0070; Revenue-LTM (M): TWD242,405.2
Broadcom Inc. (NasdaqGS:AVGO)	Peraso Technologies (private)
• www.broadcom.com	• perasotech.com
• Market Cap (M): \$124,919.6; Revenue-LTM (M): \$22,265	
Celeno Communications (private)	QUALCOMM (NasdaqGS:QCOM)
• www.celeno.com	• www.qualcomm.com
	• Market Cap (M): \$96,931.2; Revenue-LTM (M): \$24,273
Cypress Semiconductor (NasdaqGS:CY)	Quantenna Communications (private; subsidiary of ON
• www.cypress.com	Semiconductor Corporation: NasdaqGS:ON)
• Market Cap (M): \$8,675.5; Revenue-LTM (M): \$2,250.2	• www.quantenna.com
Espressif Systems (SHSE:688018)	Samsung Electronics (KOSE:A005930)
www.espressif.com	• www.samsung.com
• Market Cap (M): CNY12,841.6; Revenue-LTM	• Market Cap (M): KRW342,314,010.6; Revenue-
(M): CNY672.2	LTM (M): KRW229,781,171
Intel Corporation (NasdaqGS:INTC)	STMicroelectronics (ENXTPA:STM)
• www.intel.com	• www.st.com
• Market Cap (M): \$250,603.5; Revenue-LTM (M):	• Market Cap (M): EUR19,378.3; Revenue-LTM
\$70,413	(M): EUR9,413
Marvell Technology (NasdaqGS:MRVL)	Texas Instruments (NasdaqGS:TXN)
• www.marvell.com	• www.ti.com
• Market Cap (M): \$17,330.5; Revenue-LTM (M): \$2,914.9	• Market Cap (M): \$109,378.1; Revenue-LTM (M): \$14,750

Hardware Providers – Access Nodes

The top five WLAN vendors in the wireless hardware market are illustrated below.

ARRIS (private; subsidiary of CommScope: NasdaqGS:COMM)	Huawei (private) www.huawei.com
• www.arris.com	
Cisco Systems (NasdaqGS:CSCO)	Ubiquiti Inc. (NYSE:UI)
• www.cisco.com	• www.ui.com
• Market Cap (M): \$190,265.5; Revenue-LTM (M): \$51991	• Market Cap (M): \$12,563.8; Revenue-LTM (M): \$1,202.1
HPE Aruba (private; subsidiary of Hewlett Packard: NYSE:HPE)	
• www.arubanetworks.com	
• Market Cap (M): N/A; Revenue-LTM (M): \$812.4	

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APPENDIX B: MANAGEMENT, TECHNICAL ADVISOR & BOARD OF DIRECTORS

Management

Mr. Andrew Skafel, President & Chief Executive Officer

Andrew Skafel has been the President of Edgewater since 2011 and CEO since 2014. Prior to working at Edgewater, Mr. Skafel was based in Asia for seven years where he worked for Newbridge Networks/Alcatel and Silicon Valleybased, InterWAVE Communications, and he also founded a GSM operator in Brazil. Mr. Skafel received a B.A. in Economics & Politics from the University of Western Ontario (London, Canada), a graduate diploma from the McRae Institute of International Management (Vancouver, Canada), and an MBA from INSEEC (Paris, France).

Mr. Robert ("Bob") Harper, Chief Financial Officer

Bob Harper has served as the CFO since 2015. Mr. Harper has over 40 years of experience in corporate development, enterprise creation, corporate finance, financial advisory and banking in the technology, resource and real estate industries.

Mr. Eric Smith, Vice President – Product

Eric Smith is Vice President – Product for Edgewater Wireless, where he oversees the development of the Company's next-generation Wi-Fi products and solutions. Mr. Smith has over 20 years of experience in technology innovation, from the start of High-Speed Internet to advancements in 5G. During his career, he has developed and brought to market products acquired, deployed, or purchased by industry leading companies including Comcast, Mitel, Windstream, and Zayo.

Technical Advisor

Mr. Duane Anderson – Founder of Edgewater Wireless Systems Inc., Chief Financial Officer of Edgewater Computer Systems, Inc., and Chairman of Wireless Technology Advisory Panel

Duane Anderson founded Edgewater Computer Systems, Inc. (ECSI), the previous parent company of Edgewater Wireless before Edgewater Wireless went public in 2011. ECSI remains the largest shareholder in Edgewater Wireless. Mr. Anderson served as Chief Technology Officer of Edgewater Wireless until January 2018 and currently serves as the Chairman of the Technology Advisory Panel and the CEO of ECSI. Mr. Anderson received an Electrical Engineering degree from the University of Saskatchewan (Saskatoon, Canada) and a Master of Science in Geophysics & Geology from the University of Hawaii (Honolulu, U.S.A.).

Board of Directors

Mr. Stephen Andrews, Director

Stephen Andrews has been a director of Edgewater since February 2018. Mr. Andrews has over 30 years of experience in the global communications industry, including working for British Telecom. He has extensive experience in business management, customer engagement, M&A, product development and telecom operations. Mr. Andrews served as the Chairman of Azzurri Communications from November 2013 until May 9, 2016. Mr. Andrews currently serves as an Advisor to MiMedia. Mr. Andrews is also an independent Technology, Media & Telecommunications Advisor and Investor of AbbeyBarn Communications. He is a Board Advisor to the WBA, which formulates industry strategies for Wi-Fi and related technologies. Mr. Andrews received a Full Technological Certificate in Telecommunications from Bristol University (Bristol, U.K.).

Ms. Jane Barratt, Director

Jane Barratt has been a director of Edgewater since December 2016. Ms. Barratt currently serves as the Chief Advocacy Officer at MX Technologies. Ms. Barratt is the Founder and former Chief Executive Officer at Vested Interest Co. (DBA GoldBean). Her experience as a global branding and digital expert spans three continents and almost 20 years working with Fortune 500 companies and some of the world's strongest brands. Her advertising roles included serving as Chief Operations Officer (International) of McGarry Bowen and Chief Executive Officer of Young & Rubicam (New York), part of WPP plc.

Mr. Brian Imrie, Director

Brian Imrie has been a director of Edgewater since December 2016. Mr. Imrie is a retired investment banker with 30 years of experience, who has worked for Morgan Stanley, National Bank Financial, and Credit Suisse, providing advice and raising capital for companies in various industries. He is currently the Chairman/owner of Debro Inc, a chemical distribution company and serves on several other public and private boards. Mr. Imrie received an MBA from Harvard University in 1987 and a B.A. in Economics from the University of Toronto in 1983.

Mr. Christopher R. McGillivray, Director

Chris McGillivray has been a director of Edgewater since June 2018. Mr. McGillivray is a financial and real estate industry executive with more than 20 years of experience in the industry. Mr. McGillivray advises and structures various types of business credit, investments, public market financings and cash management services, with a focus on complex, high value investments of \$5-\$50 million.

Dr. Richard N. Nottenburg, Director

Dr. Nottenburg was voted in as a director of Edgewater at the Company's Annual General Meeting (AGM) in April 2019. He is currently an Executive Partner at OceanSound Partners LP, a private equity firm. Previously, Dr. Nottenburg served as President and CEO of Sonus Networks (2008-2010) and Executive Vice President, Chief Strategy Officer and Chief Technology Officer at Motorola. Dr. Nottenburg is currently a member of the board of directors of Verint Systems Inc. and Sequans Communications S.A. Dr. Nottenburg received a B.S. in Electrical Engineering from New York University Polytechnic School of Engineering (Brooklyn, U.S.A.), an M.S. from Colorado State University (Fort Collins, U.S.A.), and a Ph.D. from École Polytechnique Fédérale de Lausanne (Switzerland).

Mr. Andrew Skafel, President & Chief Executive Officer, Director

Andrew Skafel has been a Director since February 2018. Please see his biography in the Management section above.

Mr. Hubert A.J. Whyte, Director

Hubert Whyte has been a director of Edgewater since March 2012.

Mr. Whyte is a retired business executive with over 40 years of experience in the communication technology industry, working at British Telecom, Ericsson, Mitel, Network Equipment, Newbridge Networks, Shell Oil, and Siemens. He was President and CEO of Advanced Computer Communication, which was sold to Ericsson for approximately \$300 million in 1998.

eResearch Corporation

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APPENDIX C: RECENT NEWS RELEASES

Edgewater Wireless Announces Grant of Stock Options

November 15, 2019

Edgewater has granted stock options to a director of the Company to purchase up to 250,000 shares that are exercisable at a price of \$0.085 per share for a period of 10 years.

Edgewater's Wi-Fi Spectrum Slicing: Powering the Wi-Fi Future

November 1, 2019

Edgewater announced that Dual Channel Wi-Fi[™] has been accepted to the OpenWrt code repository. OpenWrt (OPEN Wireless RouTer) is an open source project that focuses on an operating system for network devices (e.g. routers) and incorporates Wi-Fi improvements to support higher data rates. Edgewater believes this acceptance represents a milestone in promoting the emerging Dual Channel Wi-Fi standard to help with Wi-Fi congestion and a stepping-stone for Edgewater's Wi-Fi Spectrum Slicing approach that creates even more channels.

Edgewater Wireless to be Awarded Patent for Method and Apparatus to Track Gain Variation in Orthogonal Frequency Division Multiplexing (OFDM) Systems

October 10, 2019

Edgewater reported that it will be granted a patent by the United States Patent and Trademark Office (USPTO) for its "Method and Apparatus to Track Gain Variation in Orthogonal Frequency Division Multiplexing (OFDM) Systems".

Edgewater Wireless Reports FY2020 First Quarter Financial Results September 30, 2019

Edgewater announced the financial and operating results for its quarter ended July 31, 2019.

Although Q1/FY2020 was a "challenging" quarter for the Company as it faced silicon-manufacturing issues, Edgewater believes the problems are resolved and it is now in a position to resume generating revenue later in its current fiscal year.

Edgewater Expands into Licensing of Breakthrough IP September 5, 2019

Edgewater announced the launch of its Licensing program including access to its breakthrough IP and expertise. Edgewater's Licensing program will enable silicon manufacturers to implement its patented Wi-Fi Spectrum Slicing on their platforms.

Edgewater Wireless Reports FY2019 Financial Results August 29, 2019

Edgewater announced the financial and operating results for its year ended April 30, 2019. FY2019 revenues were \$420,650 with post-packaging issues negatively affecting Q4/FY2019 revenues. For the year, Gross Margins were 25.6% which were consistent with the Company's expectations; with higher volume production, Edgewater believes it can achieve 45-50% Gross Margins. Current open orders backlog is \$839,873.

Edgewater Wireless Unveils Revolutionary Dual Channel Wi-Fi™ Source Code to Opensource August 7, 2019

Edgewater officially unveiled new Dual Channel Wi-Fi[™] software for the global Linux OpenWrt development community. The work was done in conjunction with CableLabs, to drive global adoption of Dual Channel Wi-Fi[™] as a more efficient and reliable connectivity method.

Edgewater Wireless Cancels Final Tranche of Private Placement July 29, 2019

Edgewater announced that it is cancelling the proposed second and final tranche of its non-brokered private placement announced on May 10, 2019. Edgewater decided to close the financing at the first tranche amount of \$1,100,000 as published in a news release dated June 26, 2019.

APPENDIX D: EDGEWATER'S FINANCIAL STATEMENTS

Figure 10: YFI Income Statement

Edgewater Wireless Systems	Inc. (TSXV:Y	FI)									
Income Statement										T	
(C\$, in thousands)	F2017 Apr 30	F2018 Apr 30	FQ1/2019 Jul 31	FQ2/2019 Oct 31	FQ3/2019 Jan 31	FQ4/2019 Apr 30	FY2019 Apr 30	FQ1/2020 Jul 31	FY2020 Apr 30	FY2021 Apr 30	FY2022 Apr 30
Total Revenue	0.273	0.073	0.078	0.128	0.189	0.026	0.421	0.000	0.500	7.500	13.500
Cost Of Goods Sold	0.202	0.074	0.058	0.095	0.142	0.018	0.313	0.000			
Gross Profit	0.072	(0.002)	0.020	0.033	0.047	0.008	0.108	0.000			
Gross Profit (%)	26.2%	-2.1%	25.5%	25.9%	24.8%	30.9%	25.6%	N/A			
Sales & Marketing	0.387	0.849	0.055	0.100	0.113	0.115	0.383	0.228			
General & Administrative	1.877	1.547	0.227	0.210	0.503	0.312	1.253	0.230			
Product development	1.864	1.411	0.214	0.379	0.212	0.334	1.140	0.216			
Other Operating Expense/(Income)	0.101	0.110	0.027	0.025	0.027	0.031	0.110	0.028			
Other Operating Exp., Total	4.228	3.917	0.523	0.715	0.856	0.792	2.886	0.701			
Operating Income	(4.156)	(3.919)	(0.503)	(0.682)	(0.810)	(0.784)	(2.778)	(0.701)			
Interest Expense	0.030	0.016	0.000	0.003	0.000	0.005	0.009	0.004			
Interest and Invest, Income	(0.007)	(0.001)	(0.002)	(0.001)	0.000	(0.001)	(0.003)	(0.000)			
Net Interest Exp.	0.024	0.015	(0.001)	0.002	(0.0)	0.005	0.005	0.004			
Currency Exchange Gains (Loss)	(0.093)	0.066	(0.006)	(0.03)	(0.004)	0.017	(0.023)	0.008			
EBT Excl. Unusual Items	(4.273)	(3.867)	(0.508)	(0.714)	(0.813)	(0.771)	(2.806)	(0.696)			
Income Tax Expense	-	-	-	-	-	-	-	-			
Earnings from Cont. Ops.	(4.273)	(3.867)	(0.508)	(0.714)	(0.813)	(0.771)	(2.806)	(0.696)			
Net Income	(4.273)	(3.867)	(0.508)	(0.714)	(0.813)	(0.771)	(2.806)	(0.696)			

Source: Company Reports; eResearch Corp.

Figure 11: YFI Balance Sheet

	FY2016	F2017	F2018	FY2019	FQ1/2020
(\$C, in thousands)	Apr 30	Apr 30	Apr 30	Apr 30	Jul 31
ASSETS	- P - C				
Cash And Equivalents	0.718	0.070	0.066	0.063	0.139
Accounts Receivable	0.035	0.171	0.021	0.029	0.002
Other Receivables	0.119	0.212	0.386	0.150	0.23
Inventory	-	0.218	0.151	0.096	0.096
Prepaid Exp.	0.030	0.033	0.201	0.433	0.572
Total Current Assets	0.902	0.704	0.825	0.770	1.041
Gross Property, Plant & Equipment	0.253	0.262	0.283	0.300	0.300
Accumulated Depreciation	(0.224)	(0.236)	(0.253)	(0.273)	(0.277
Net Property, Plant & Equipment	0.029	0.026	0.030	0.027	0.024
Other Intangibles	0.801	0.270	0.002	0.001	0.001
Total Assets	1.732	0.999	0.857	0.798232	1.065
IABILITIES					
Accounts Payable	0.971	1.215	1.056	1.525	1.37
Accrued Exp.	0.163	0.161	0.171	0.248	0.220
Short-term Borrowings	-	0.000	0.000	0.095	0.098
Curr. Port. of LT Debt	0.236	0.287	0.013	0.013	0.013
Unearned Revenue, Current	0.026	0.026	0.335	0.246	0.246
Total Current Liabilities	1.396	1.689	1.574	2.126	1.960
Long-Term Debt	0.384	0.154	0.000	0.000	
Total Liabilities	1.780	1.843	1.574	2.126	1.960
QUITY					
Common Stock	28.208	29.706	32.474	33.623	34.486
Additional Paid In Capital	3.220	3.916	4.459	4.956	5.03
Retained Earnings	(31.801)	(36.074)	(39.941)	(42.747)	(43.443
Comprehensive Inc. and Other	0.324	1.609	2.290	2.840	3.029
Total Common Equity	(0.049)	(0.843)	(0.717)	(1.327)	(0.895
Total Liabilities And Equity	1.731	0.999	0.857	0.798	1.06
Total Shares Outstanding (Millions)	127.4	135.1	146.7	158.7	169.7

Source: Company Reports; eResearch Corp.

Figure 12: YFI Cash Flow Statement

	F2016	F2017	F2018	F2019	FQ1/2020
(\$C, in thousands)	Apr 30	Apr 30	Apr 30	Apr 30	Jul 31
Net Income	(2.325)	(4.273)	(3.867)	(2.806)	(0.696
Depreciation & Amort.	0.008	0.012	0.017	0.020	0.00
Amort. of Goodwill and Intangibles	0.534	0.533	0.268	0.001	0.00
(Gain) Loss From Sale Of Assets					
Stock-Based Compensation	0.201	1.018	0.602	0.414	0.06
Other Operating Activities	(0.021)	0.038	(0.003)	0.026	0.00
Change in Acc. Receivable	(0.049)	(0.229)	(0.024)	0.229	(0.05
Change In Inventories	0.028	(0.218)	0.066	0.055	
Change in Acc. Payable	(0.088)	0.242	(0.181)	0.536	(0.16
Change in Unearned Rev.	-		0.309	(0.089)	(0.14
Change in Other Net Operating Assets	(0.012)	(0.003)	(0.168)	(0.232)	
Cash Used in Operting Activities	(1.726)	(2.879)	(2.981)	(1.846)	(0.99
Capital Expenditure	(0.032)	(0.009)	(0.010)	(0.029)	
Sale (Purchase) of Intangible assets	(0.003)	(0.002)			
Cash from Investing	(0.035)	(0.011)	(0.010)	(0.029)	0.00
Short Term Debt Issued					
Long-Term Debt Issued				0.090	0.00
Total Debt Issued				0.090	0.00
Short Term Debt Repaid					
Long-Term Debt Repaid	(0.190)	(0.218)	(0.153)		
Total Debt Repaid	(0.190)	(0.218)	(0.153)	0.000	0.00
Issuance of Common Stock	1.703	2.551	3.260	1.799	1.08
Other Financing Activities	(0.011)	(0.091)	(0.120)	(0.017)	(0.017
Cash from Financing	1.502	2.242	2.987	1.872	1.07
Net Change in Cash	(0.259)	(0.648)	(0.004)	(0.003)	0.07
Cash and Cash Equivalents, beginning of year	0.977	0.718	0.070	0.066	0.06
Cash and Cash Equivalents, end of year	0.718	0.070	0.066	0.063	0.13

Source: Company Reports; eResearch Corp.

APPENDIX E: OUTSTANDING SHARES, OPTIONS & WARRANTS

Figure 13: Shares Outstanding

Shares Outstanding	Number
Shares Outstanding at end of the Previous Quarter (Apr. 30, 2019)	158,738,630
Shares issued in the Quarter	11,000,000
Shares Outstanding at end of the Quarter (July 31, 2019)	169,738,630
Shares Outstanding (July 31, 2019)	169,738,630
- In the money Options (total number of options: 13.76M)	3,050,001
- In the money Warrants (total number of warrants: 36.3M)	-
Shares Outstanding - Fully Diluted	172,788,631

Source: Company Reports; eResearch Corp.

Figure 14: Shareholders

Holder	Number of Shares	%
Edgewater Computer Systems, Inc.	7,197,601	4.24%
Skafel, Andrew	1,465,000	0.86%
Imrie, Brian	1,193,136	0.70%
Dillman, J. Lewis	958,161	0.56%
Andrews, Stephen	337,808	0.20%

Туре	Number of Shares	%
Institutions	15,666	0.01%
Corporations (Private)	7,197,601	4.24%
Individuals/Insiders	4,375,675	2.58%
Public and Other	158,149,688	93.17%
Total	169,738,630	100.00%

	No. of Shares	Options	Warrants	Con. Debt
Edgewater Computer Systems	7,197,601			
Andrews, Stephen	337,808	300,000	262,808	
Barratt, Jane Marita		475,000		
Harper, Robert	10,000	932,500		
Imrie, Brian Crompton	1,193,136	525,000	426,929	
McGillivray, Christopher Richard	267,250	275,000	126,250	
Skafel, Andrew	1,465,000	5,490,000	50,000	
Whyte, Hubert Anthony John	144,320	1,400,000	10,000	

Source: SEDI.ca; Company Reports

APPENDIX F: PATENT PORTFOLIO

Number	Patent No.	Title									
1	<u>6,597,299</u>	Compensation Techniques for Electronic Circuits									
2	<u>6,621,439</u>	Method for Implementing Segmented Current Mode DACs with Matched Time Constants									
3	<u>6,650,265</u>	Method and Architecture for Varying the Power Consumption of a Current Mode DA Proportion to Performance Parameters									
4	<u>6,661,365</u>	Circuit Architecture and Method for A/D Conversion									
5	<u>6,778,121</u>	High Linearity Digital to Analog Converter									
6	<u>6,809,589</u>	Low Voltage Large Swing/High Linearity analog Buffer with Servo Amplifier and Feedback Loop									
7	<u>6,906,652</u>	High Linearity Current Mode DAC Architecture									
8	7,248,189	Programmable Sample Rate Conversion Engine for Wideband Systems									
9	<u>7,295,601</u>	Method and Apparatus for Performing Digital Timing Recovery on Oversampled 802.11b Baseband Signals									
10	7,324,034	Method and Apparatus to Balance Reference settling in Switched Cap Pipelined DACs									
11	7,339,512	ADC Without Track and Hold									
12	7,400,587	Optimum Frame Fragmentation Method for Communication over Error Prone Channels									
13	<u>7,403,148</u>	Method and Apparatus to Balance Reference Settling in Switched Cap Pipelined DACs									
14	7,415,059	Method and System for Fast Timing Recovery for Preamble Based Transmission Systems									
15	<u>7,453,792</u>	Receiver Architecture for Pilot Based OFDM Systems									
16	<u>7,733,764</u>	Method and System for Dynamically Reducing Length of a Delay Chain									
17	<u>7,835,701</u>	Detecting and Eliminating Spurious Energy in Communications Systems via Multi-Channel Processing									
18	7,894,325	Receiver Architecture for Pilot based OFDM Systems									
19	<u>7,978,785</u>	Quadrature Frequency Doubler with Adjustable Phase Offset									
20	<u>9,136,811</u>	Automatic Gain Control for Multichannel Wideband Communication Systems									
21	<u>9,338,044</u>	Method and Apparatus to Track Gain Variations in OFDM Systems									
22	<u>9,705,715</u>	Automatic Gain Control for Multichannel Wideband Communication Systems									
23	9,722,849	Method and Apparatus to Track Gain Variations in OFDM Systems									
24	10,200,223	Automatic Gain Control for Multichannel Wideband Communication Systems									
25	15/661,885 ALLOWED	Method and Apparatus to Track Gain Variations in OFDM Systems									
26	16/266,920	Automatic Gain Control for Multichannel Wideband Communication Systems									

Source: Company Reports (as of August 1, 2019)

APPENDIX F: COMPARABLES

Figure 15: Silicon Company Comparables

		Close	Mkt Cap	Cash	EV	Revenue US\$ (M)			EBITDA US\$ (M)			EV/Revenue		EV/EBITDA	
Name	Ticker	Dec 16	US\$ (M)	(US\$M)	(US\$M)	2018A	2019E	LTM	2018A	2019E	LTM	2018A	2019E	2018A	2019E
Edgewater Wireles	TSXV:YFI	\$0.09	\$14.4	\$0.1	\$14.4	\$0.4	\$0.0	\$0.3	-\$2.9	\$0.0	-\$3.0	36.6x	n/a	n/a	n/a
LARGE CAP															
Analog Devices	NASDAQGS:ADI	\$118.59	\$43,675.1	\$648.3	\$48,657.5	\$6,175.2	\$5,756.6	\$5,991.1	\$2,722.7	\$2,503.5	\$2,617.7	7.9x	8.5x	17.9x	19.4x
Broadcom Inc.	NASDAQGS:AVGO	\$324.12	\$128,567.0	\$5,055.0	\$161,077.0	\$21,310.0	\$22,815.0	\$22,597.0	\$9,931.0	\$12,516.2	\$10,340.0	7.6x	7.1x	16.2x	12.9x
Intel Corporation	NasdaqGS:INTC	\$57.95	\$252,082.5	\$12,025.0	\$269,537.5	\$70,848.0	\$70,982.2	\$70,413.0	\$32,329.0	\$31,993.5	\$32,101.0	3.8x	3.8x	8.3x	8.4x
Marvell Tech	NasdaqGS:MRVL	\$25.95	\$17,404.7	\$438.4	\$18,794.9	\$2,865.8	\$2,691.2	\$2,726.3	\$346.9	\$739.4	\$160.4	6.6x	7.0x	54.2x	25.4x
NXP Semiconductors	NasdaqGS:NXPI	\$124.33	\$34,753.6	\$3,537.0	\$40,175.6	\$9,407.0	\$8,850.1	\$8,979.0	\$2,655.0	\$3,043.6	\$2,658.0	4.3x	4.5x	15.1x	13.2x
QUALCOMM Inc	NasdaqGS:QCOM	\$88.81	\$101,407.2	\$12,260.0	\$105,080.2	\$21,539.0	\$19,431.7	\$24,273.0	\$6,389.0	\$6,138.9	\$9,482.0	4.9x	5.4x	16.4x	17.1x
Texas Instruments	NASDAQGS:TXN	\$127.48	\$119,160.5	\$5,067.0	\$120,240.5	\$15,784.0	\$14,247.2	\$14,750.0	\$7,589.0	\$6,626.8	\$6,942.0	7.6x	8.4x	15.8x	18.1x
	-														
MID CAP															
Ambarella	NASDAQGS: AMBA	\$56.50	\$1,895.3	\$400.8	\$1,505.2	\$227.8	\$228.7	\$222.6	-\$37.9	\$25.0	-\$45.2	6.6x	6.6x	n/a	60.1x
Cypress	NASDAQGS:CY	\$23.40	\$8,671.8	\$343.0	\$9,195.5	\$2,483.8	\$2,209.7	\$2,250.2	\$540.8	\$0.0	\$469.8	3.7x	4.2x	17.0x	n/a
Inphi Corporation	NYSE:IPHI	\$73.13	\$3,339.8	\$424.8	\$3,396.5	\$294.5	\$362.8	\$349.3	\$10.1	\$159.0	\$49.0	11.5x	9.4x	336.6x	21.4x
Lattice Semiconductor	NASDAQGS:LSCC	\$19.75	\$2,637.1	\$97.4	\$2,723.2	\$398.8	\$403.9	\$399.8	\$76.1	\$113.2	\$91.9	6.8x	6.7x	35.8x	24.1x
ON Semiconductor	NasdagGS:ON	\$23.51	\$9,656.1	\$928.7	\$12,485.7	\$5,878.3	\$5,492.3	\$5,619.2	\$1,363.6	\$1,188.4	\$1,298.6	2.1x	2.3x	9.2x	10.5x
			. ,		. ,		. ,	. ,	. ,		. ,				
SM ALL CAP															
DSP Group, Inc.	NasdagGS:DSPG	\$15.40	\$354.3	\$49.5	\$317.6	\$117.4	\$117.4	\$114.4	-\$2.3	\$5.6	-\$3.8	2.7x	2.7x	n/a	57.0x
GSI Technology	NasdagGS:GSIT	\$7.25	\$167.2	\$68.1	\$100.1	\$50.0	\$47.6	\$52.1	\$0.9	\$0.0	\$0.9	2.0x	2.1x	115.6x	n/a
Pixelworks, Inc.	NasdagGM:PXLW	\$3.04	\$116.5		\$99.2	\$76.6	\$68.5	\$73.3		-\$0.8	-\$5.0		1.4x	108.4x	n/a
SiTime Corporation	NasdaqGM:SITM	\$20.70	\$296.0		\$341.0	\$85.2	\$81.9	\$78.8		\$2.8	\$4.5		4.2x	n/a	124.0x
Mean (excludes Re	v Multiple >10		ultiple >50)	<u> </u>								4.8x	5.3x	16.7x	17.1x
Median											4.6x	6.9x	17.0x	19.4x	

Source: S&P Capital IQ; eResearch Corp.

APPENDIX G: ERESEARCH DISCLOSURE *e*RESEARCH CORPORATION

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ANALYST ACCREDITATION

eResearch Analyst on this Report: Chris Thompson CFA, MBA, P.Eng.

Analyst Affirmation: I, <u>Chris Thompson</u>, hereby state that, at the time of issuance of this research report, I do not own common shares, share options or share warrants of Edgewater Wireless Systems Inc. (TSXV:YFI).

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