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

FORM 10-K

(Mark One)
☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2019

Commission File Number: 001-31588

COMMUNICATIONS SYSTEMS, INC.

(Exact name of registrant as specified in its charter)

Minnesota	**41-0957999**
(State or other jurisdiction of incorporation or organization)	(Federal Employer Identification No.)

10900 Red Circle Drive, Minnetonka, MN 55343
(Address of principal executive offices and zip code)

Registrant's telephone number, including area code: (952) 996-1674

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, $.05 par value	JCS	NASDAQ
Preferred Stock Purchase Rights		

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES ☐ NO ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES ☐ NO ☒

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company.

See the definitions of " large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.
Large Accelerated Filer ☐ Accelerated Filer ☐ Non-Accelerated Filer ☐
Smaller Reporting Company ☒ Emerging Growth Company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). YES ☐ NO ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the Registrant was approximately $21,641,000 based upon the closing sale price of the Company's common stock on the Nasdaq Capital Market on June 30, 2019.

As of March 1, 2020 there were outstanding 9,256,298 shares of the Registrant's common stock.

Documents Incorporated by Reference: Portions of the Company's Proxy Statement for its Annual Meeting of Shareholders to be held on June 17, 2020 are incorporated by reference into Part III of this Form 10-K.

PART I

ITEM 1. BUSINESS

(a) GENERAL DEVELOPMENT OF BUSINESS

Communications Systems, Inc. (herein collectively referred to as “CSI,” “our,” “we” or the “Company”) is a Minnesota corporation organized in 1969 that operates directly and through its subsidiaries located in the United States (U.S.) and the United Kingdom (U.K.). The Company maintains a website at www.commsystems.com. Our annual reports on Form 10-K, our quarterly reports on Form 10-Q and our periodic reports on Form 8-K (and any amendments to these reports) are available free of charge by linking from our website to the Securities and Exchange Commission website.

Recent Developments; Sale of Suttle Business; Continuing Operations

Suttle, Inc. was an important subsidiary of CSI since 1969. As a key element of the Company’s strategic plan, however, the Company sold substantially all of Suttle’s business, assets and operations pursuant to the following two transactions.

First, on April 5, 2019, Suttle sold its FutureLink™ Fiber business line, including inventory and customer relationships, to PPC Broadband Inc. (“PPC”), a leading provider of high quality, end-to-end signal transmission solutions for mission-critical applications. This transaction was structured as an Asset Purchase Agreement with a simultaneous signing and closing. The sale price was $5,000,000 cash, of which $500,000 was deferred into an escrow account until certain criteria are met. Concurrent with the closing of the Asset Purchase Agreement, Suttle and PPC entered into a Transition Services Agreement under which Suttle agreed to continue to manufacture products related to the FutureLink™ Fiber business line, and provide certain related services, for PPC for a period of six months following the closing.

Second, on March 11, 2020, CSI sold the remainder of its Suttle business lines, including working capital, certain capital equipment and customer relationships to Oldcastle Infrastructure, Inc. (“Oldcastle”). Oldcastle, a wholly-owned subsidiary of Ireland based CRH PLC, will operate the majority of the acquired Suttle business through its wholly-owned subsidiary, Primex Technologies, Inc., (“Primex”), a leading provider of indoor and outdoor enclosure solutions to the smart home and telecommunications industries.

This transaction was structured as an Asset Purchase Agreement by and among Oldcastle, Suttle and Communications Systems, Inc., with a simultaneous signing and closing on March 11, 2020. The sale price was $8,000,000 in cash, with a net working capital adjustment 90 days after closing. Under the Asset Purchase Agreement, CSI and Suttle agreed to indemnify Oldcastle for any breaches of representations, warranties, covenants or agreements contained in the Asset Purchase Agreement, as well as any liabilities arising out of the pre-closing operation of the business. Concurrently with the closing of the transaction, CSI, Suttle and Oldcastle entered into a Transition Services Agreement (“TSA”) under which Suttle will continue to manufacture products for Oldcastle for a period of six months after closing, to ensure seamless supply and quality assurance to the existing customer base. Concurrently with the closing of the transaction and the TSA, CSI and Oldcastle also entered into a two-year lease under which Oldcastle will lease two buildings in Hector, Minnesota, where Suttle had conducted operations. The lease automatically renews for additional one-year periods unless either party gives notice of non-renewal.

As a result of the Suttle sale, unless otherwise noted, all information in this Form 10-K about Suttle will be discussed and presented as discontinued operations and the Company will report its remaining business operations as continuing operations as described below.

After giving effect to the Suttle transactions, CSI is principally engaged through its Transition Networks, Inc. ("Transition Networks" or "Transition") business unit in the manufacture and sale of Ethernet switches, core media conversion products, and other connectivity and data transmission products. Through its JDL Technologies, Inc. ("JDL Technologies" or "JDL") business unit, CSI provides technology solutions including virtualization, managed services, wired and wireless network design and implementation, and hybrid cloud infrastructure and deployment. Through its Net2Edge Limited ("Net2Edge") U.K.-based business unit, the Company develops, manufactures and sells products that enable telecommunications carriers to connect legacy networks to high-speed services.

(b) FINANCIAL INFORMATION ABOUT INDUSTRY SEGMENTS

The Company classifies its remaining businesses into the following three segments:

- *Transition Networks* develops and markets Ethernet switches, media conversion products, and other connectivity and data transmission products;
- *JDL Technologies* is an IT managed services provider and value-added reseller; and
- *Net2Edge* develops, manufactures and sells products to transmit packetized voice and data across networks and between copper-wired and fiber optic equipment.

As noted within this Form 10-K, we have classified the operations of Suttle as discontinued operations for 2019 and 2018. Non-allocated general and administrative expenses are separately accounted for as "Other" in the Company's segment reporting. Additionally, any indirect general and administrative costs previously allocated to Suttle are also included in "Other." Intersegment revenues are eliminated upon consolidation. Further information regarding these segments, including customer and industry concentration, is set forth in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and in Note 13 of the Notes to Consolidated Financial Statements under Item 8.

(c) NARRATIVE DESCRIPTION OF BUSINESS

(1) Information Regarding Business Segments

(i) Transition Networks, Inc.

Transition Networks, Inc., based in Minnetonka, Minnesota, develops, markets and sells Power over Ethernet (PoE) switches, media converters, network interface cards (NICs), Ethernet switches, Small Form Factor Pluggable modules (SFP), and other connectivity products under the Transition Networks brand name. Transition sells its products through distributors, resellers, integrators, and original equipment manufacturers ("OEMs"). These media converters, NIDs, and Ethernet Switch products allow network operators to transmit voice and data across networks as well as provide connectivity and power in security and surveillance, smart building, smart city and intelligent transportation applications. Sales by Transition Networks were $44,860,000 in 2019 compared to $36,470,000 in 2018. International sales accounted for 11% of Transition's sales, or $5,112,000 in 2019, compared to $5,411,000, or 15% of Transition's sales in 2018.

Products

Transition Networks develops, markets and sells PoE switches, media converter devices, Ethernet switches and other connectivity products that enable customers to transmit voice and data across networks as well as provide connectivity and power to end devices in the IoT ecosystem. Our growing PoE products support remote devices such as cameras and wireless access points by passing electrical power along with data on Ethernet cabling, eliminating the need for traditional AC/DC electrical power in hard-to-reach locations. Our media converters and other customer premise equipment (CPE) assist customers in resolving challenges in the areas of bandwidth constraints, security risks, and distance limitations as networks extend from local area to wide area networks and adapt to ever increasing end-user demands. As more cities move to implement smart city technology, a major component will be solutions designed to protect and provide services to citizens, such as intelligent transportation and surveillance networks. Transition Networks switches deliver the necessary connectivity, bandwidth and power to enable these solutions. Many of our products incorporate features to perform advanced levels of fault management and diagnostics to troubleshoot networks and proactively fix problems.

Transition Networks develops product hardware and software internally, and expenses the related costs as they are incurred. In connection with the sale of its hardware products, Transition Networks provides its customers with a variety of software management options including Network Management System (NMS) software for providing superior provisioning and monitoring of its Ethernet switches and other managed devices. Transition has been developing and marketing Ethernet-based networking products for over 30 years. Transition Networks continues to develop products that address the enterprise, service provider, industrial, government, and security markets. Increasingly, Transition Networks Power-over-Ethernet products are used in smart building environments, intelligent transportation applications, and in security and surveillance networks.

Manufacturing and Sources of Supply

Transition Networks uses contract manufacturers to manufacture its products in different geographical locations, in addition to OEM partners through which the Company sources product and markets under its own name. In 2019, 81% of the total value of Transition Networks' products was manufactured in or sourced from Asia and the remaining 19% was manufactured in the US. Offshore sources of supply are subject to certain risks, including political risk.

Markets and Marketing

Transition Networks' products are used in a broad array of markets including federal government, enterprise, service provider, industrial, security, and surveillance markets. Transition Networks has a broad customer base that uses its products in a variety of applications.

The line of Ethernet switches (both PoE and non-PoE) is used in last-mile access, backhaul, wiring closets and at end-user stations. These are sold into security networks, intelligent transportation applications, smart buildings, corporate enterprise networks, and other Internet of Things (IoT) applications domestically and abroad. The media conversion product line is used in several applications. The ION chassis-based modular systems are used primarily in telecommunications closets for high-density applications or when multiple protocols need to be supported. Stand-alone media converters are used typically at customer premises or for lower density applications. The Carrier Ethernet NID line of products addresses the high-quality access requirements for both business services and wireless backhaul data communications and telecommunications applications.

Marketing primarily consists of direct marketing using a sales force, tradeshows, trade magazine advertising, on-line advertising, website, email, social media, and public relations activities. Transition Networks also provides and participates in advertising and cooperative marketing campaigns with distribution partners.

The "Transition Networks" brand name is important to the Company's business. The Company believes the Transition Networks name is well known in the marketplace and with trade advertising.

Research and Development

Transition Networks develops products for the federal government, enterprise, service provider, security, and industrial markets. This includes developing commercial and hardened PoE switches, converters for emerging protocols and existing protocols in new markets, as well as new industry standards. Some of these products include devices built on the IEEE 802.3ah, 802.3ag, ITU-T Y.1731 standards, Metro Ethernet Forum (MEF)® standards, and PoE devices based on the IEEE 802.3af, 802.3at, 802.3bt standards. Some design efforts are paced by the development of critical components such as integrated circuits and optical transceivers.

Research and development consists primarily of designing, prototyping, and testing of equipment and supplies associated with developing new products and enhancing existing products. Research and development costs are expensed when incurred and were $3,026,000 in 2019 compared to $2,664,000 in 2018.

Transition Networks conducts its research and development operations in the United States, at its Minnetonka, Minnesota headquarters location. While this U.S. location has primary engineering and product development responsibility, Transition Networks occasionally uses third party design services and Original Design Manufacturers ("ODM") to support specific product design requirements.

Competition

Transition Networks faces strong competition across its entire product line. A large number of competitors exist for high-volume products in Ethernet switches and media converters. Low-cost competitors from China and Taiwan are strongest in (i) Asian, (ii) European, Middle Eastern, and African ("EMEA") and (iii) South American markets. Transition Networks also faces new competitors as it enters new markets for smart cities, smart buildings, intelligent transportation systems, and higher performance devices for the service provider market.

Order Book

Outstanding customer orders for Transition Networks products were approximately $2,600,000 at March 1, 2020 and $1,470,000 at March 1, 2019. Transition Networks orders are fulfilled on a relatively short-term basis and therefore the Company does not consider the order book as a significant indicator of longer-term future results.

(ii) JDL Technologies, Inc.

JDL Technologies, Inc., based in Fort Lauderdale, Florida, is a managed service provider and value-added reseller supplying information technology ("IT") solutions focused on (a) IT managed services, which include (i) network design, deployment and integration; (ii) cloud hosted and virtualized services; and (iii) remote support and system management from our managed services operation center and (b) project revenue, which includes IT services project engagements. JDL's 2019 sales were $4,741,000 compared to 2018 sales of $5,134,000. Project revenue totaled $2,348,000 in 2019 or 50% of JDL sales compared to $3,005,000 in 2018 or 59% of JDL sales. Managed service revenues increased to $2,393,000 in 2019 from $2,129,000 in 2018.

Markets and Marketing

JDL differentiates itself from its competitors by continuously adopting and adapting to changes in available IT services, ensuring it continues to provide new and innovative solutions to its clients and prospective clients. This ensures JDL remains well qualified to help clients with their use of technology and IT resources to meet business objectives and regulatory requirements.

JDL partners with clients to provide complete support for their information technology environments, from servers to software applications, from the network-level down to the desktop level. Under a typical managed services agreement, JDL provides virtual CIO services to client management, deploys, manages, secures, and supports client's IT systems and services, provides helpdesk support to the client's user community, and adds value to the client's business by enabling the client to focus on its core competencies. JDL's key avenues for delivering on this commitment—and its competitive advantages—include JDL's on-premise managed services operations center and secure, state-of-the-art hosted datacenter and partnerships with industry leading solution providers. The managed services operations center leverages the best available tools, applications, practices, and resources to deliver a consistent, quality customer experience. JDL holds the MSP Trustmark credential from CompTIA and is a member of the MSP Alliance.

JDL's portfolio of technology solutions reflects the regular introduction of new technologies and delivery methodologies and the increasing demand among businesses for innovative solutions to strengthen their competitive edge and address prevailing IT challenges. With its team of professionally certified engineers, more than 250 years of technical experience, and talented leadership, JDL Technologies develops IT solutions that effectively meet these demands. To sustain its leading-edge position, JDL also maintains robust partnerships with strategic manufacturers and is a 3CX VoIP Gold Partner, HP Enterprise Gold Partner, Microsoft Partner, eMDs Solution Provider, and Citrix Solutions Service Provider.

Customers

In 2019, JDL Technologies aggressively targeted its primary vertical markets, healthcare and commercial business.

Healthcare:
JDL continues to serve as a trusted partner to its healthcare clients, offering an array of services that address HIPAA Security Rule and Privacy Rule compliance requirements, including its flagship cloud-based service, HIPAA FastTrack. JDL's managed services practice supports clients ranging from single-office providers, to multi-location regional specialists, to their regulated suppliers and business associates.

Commercial:
JDL Technologies provides support and service to a diverse commercial client set. In 2019, JDL continued to place emphasis on an expanded set of security solutions layered on top of its Cloud-Based IT Managed Services. This enabled JDL to provide an even more secure total solution that included security awareness testing and training of client end users which has become increasingly important as threats to an organization's security are focused more and more on end users as the weakest link.

Education:
JDL Technologies continues to support a multi-year project to provide wireless network services and datacenter upgrades for several hundred public K-12 schools in Florida. The education vertical remains an important element of JDL's overall market strategy.

<u>Products and Services</u>

As a managed service provider and value-added reseller, JDL Technologies specializes in delivering technology solutions that free organizations to focus on the strategic business activities critical to their financial success. JDL's technology solutions encompass an extensive range of networking, virtualization, cloud, cybersecurity, and infrastructure services, most of which are available under JDL managed services contracts. As technology continues its move to the cloud, JDL aggressively markets its portfolio of cloud-based service offerings to healthcare and commercial business. Its HIPAA FastTrack and Security FastTrack services, available in the JDL Cloud powered by Citrix, have won awards for product innovation, just as JDL Technologies has been recognized in the industry as a leading Managed Service Provider. JDL engineers are trained and certified in the newest cloud and other technology solutions.

Managed Services:
JDL Technologies continues to refine its Managed Services offering as the industry matures taking it from a traditional remote management model to a hosted service offering that grants JDL greater control, enables tighter service level agreements and increases margins while providing clients with a more service rich, cost effective, and secure environments for their IT systems. JDL serves a diverse base of clients with locations throughout the United States, offering managed service programs designed specifically for the healthcare and commercial markets. These robust programs meet HIPAA compliance standards and, while the majority of clients are supported remotely, independent of geographic borders, JDL is also able to provide on-site network management and help desk support for key enterprise clients in the South Florida and Atlanta, Georgia markets. JDL's managed services include network management, availability assurance, event alerting and incident management services; server, workstation, mobile device, and other asset management services; security services including software patching, firewall, antivirus, antimalware, and cybersecurity intrusion detection and prevention services; help desk support for client users; SIP trunking, voice over IP and office management services; migration, conversion and vendor management; and technical consulting services and training.

Cloud Solutions:
With widespread adoption of cloud solutions on the rise, JDL continues to focus on these solutions as key offerings with significant revenue growth potential. Azure® cloud solutions, wireless as a service, infrastructure as a service, and Citrix® as a service (sold as JDL FastTrack) are among JDL's the most successful cloud offerings, with others including backup, storage, voice over IP, firewall and email as cloud or hosted services. The benefits to clients are numerous and include vertical and horizontal scalability, internal bandwidth conservation, and simplification of IT management within client organizations, while JDL benefits from substantial economies of scale and standardization. All JDL cloud offerings are billable as monthly recurring revenue under its managed service model, and JDL is committed to bringing the benefits of cloud services to all clients.

Network Services:
JDL's roots are in network services, and these services remain central to its role as a managed service provider and value-added reseller. The JDL team has extensive experience and professional certifications in assessing, designing and implementing wired and wireless networks as well as entire technology infrastructures. Networking services also include network infrastructure as a service, network design and deployment, network and endpoint security, network tuning, and device installation/configuration services.

Virtualization:
Whether hosted on premise, in JDL's private cloud, or on third party platforms such as Azure or AWS (Amazon Web Services), using virtualization across an organization's IT environment delivers greater agility, mobility and efficiency. JDL's virtualization engineers assess, design, deploy, and manage virtualization programs that are designed to ensure user access to any workload, anytime, anywhere, on any device. JDL's virtualization services encompass desktops, servers, applications, storage, and any combination thereof, including connectivity and software licensing. As JDL clients continue to adopt virtualization, they experience the economies of scale, reduced capital requirements, enhanced security, and disaster recovery protections that are inherent in virtualized environments.

Competition

The Managed Services market continues to promise significant growth over the next several years, making it a highly competitive industry. In response to these pressures, JDL's focus is to quickly adapt to the changing needs of its clients through the adoption and productizing of new IT Service technologies as they become available. An example of this would be the addition of several security services to the JDL portfolio in 2019 including security tools to monitor the flow of sensitive data in and on the network, additional cloud-based services through Azure and AWS and enhanced end-point security services. By ensuring JDL continuously evaluates the services we offer with a focus on the changing market, we are able to provide a better range of services to our clients and prospects while increasing their reliance upon us as their IT service provider.

Order Book

Outstanding customer orders and contracts for JDL products and services were approximately $1,546,000 at March 1, 2020 and $1,203,000 at March 1, 2019. The Company does not consider current outstanding orders and contracts as a significant indicator of longer-term future results.

(iii) Net2Edge

Net2Edge Limited, based in Basingstoke, Hampshire, United Kingdom, designs and markets solutions for the Network Edge. Net2Edge™ uses a direct sales model and also markets its products through approved partners and integrators. Net2Edge also offers solutions that enable network operators to transmit packetized voice and data across networks and between copper-wired and fiber-optic equipment. Sales by Net2Edge were $2,330,000 in 2019 and $1,700,000 in 2018.

Products

Net2Edge designs and sells a range of solutions to address the needs of customers at the network edge. Specifically, this ranges from traditional Ethernet based switches, to circuit emulation devices, to bespoke niche solutions deploying LTE (Long Term Evolution) wireless communication standard products. The circuit emulation products range from legacy over packet interfaces such as Serial, TDM or ISDN. Net2Edge targets these products at telecommunications service providers, enterprises and system integrators. These solutions assist in resolving challenges in the areas of bandwidth constraints, security risks, and distance limitations as networks extend from local area to wide area networks and adapt to ever increasing end-user demands. As enterprise networks continue to change and evolve, our solutions enable customers to integrate multiple services into their existing infrastructure. All Net2Edge products incorporate features for performing advanced levels of management and automated provisioning minimizing the administrative burden of the operator.

Net2Edge products support a wide variety of protocols, including: 10 Gigabit Ethernet, Gigabit Ethernet, Fast Ethernet, Ethernet, T1/E1, DS3, Circuit Emulation Services (TDM or ISDN over Ethernet or IP), RS232, RS485, OC3, OC12, GFast, LTE, and more. Net2Edge develops product hardware and software internally, and expenses the related costs as they are incurred.

Manufacturing and Sources of Supply

Net2Edge uses contract manufacturers to manufacture its products in the UK and in Asia. Because some of Net2Edge's offshore sources of supply are subject to risks, including political, communication and logistic risk, and factors such as the coronavirus (COVID-19), when possible, Net2Edge takes steps to ensure it has multiple suppliers to ensure business continuity.

Markets and Marketing

Net2Edge's products are used in a broad array of market sectors including the Government, Enterprise, Utility, Industrial, and Surveillance markets. Net2Edge has a growing international customer base outside the United Kingdom and customers use its products in a variety of applications.

Net2Edge's marketing primarily consists of direct marketing using a sales force, tradeshows, trade magazine advertising, on-line advertising, website, email, social media, and public relations activities. Net2Edge also participates in advertising and cooperative marketing campaigns with its partners.

Research and Development

Net2Edge develops products for the service provider market including products for emerging protocols and existing protocols in new markets, as well as new industry standards. These products include remote management devices built on the IEEE® 802.3AH, 802.3AG, ITU-T Y.1731 standards, Metro Ethernet Forum ("MEF")®, and MEF 2.0 standards. Some design efforts are paced by the development of critical components such as integrated circuits, System on Chip ("SoC") silicon and optical transceivers.

Research and development consists primarily of designing, prototyping, testing equipment and supplies associated with enhancing existing products, and developing new products. Research and development costs are expensed when incurred and were $574,000 in 2019 and $878,000 in 2018.

Net2Edge conducts its research and development operations out of its Basingstoke, United Kingdom headquarters location. While this UK location has primary engineering and product development responsibility, Net2Edge will occasionally use third party design services and ODMs to support specific product design requirements.

Competition

Net2Edge faces strong competition across its entire product line. A large number of competitors exist for high volume products. There are low cost competitors from China and Taiwan and established competitors from the USA and Canada.

Order Book

Outstanding customer orders for Net2Edge products were approximately $213,000 at March 1, 2020 and $1,105,000 at March 1, 2019. Net2Edge orders are fulfilled on a relatively short-term basis and therefore the Company does not consider the order book as a significant indicator of longer-term future results.

(2) Employment Levels

As of March 15, 2020, the Company employed 203 people. Of this number, 80 were employed by Transition Networks, Inc., 23 by JDL Technologies, Inc., 19 by Net2Edge in the U.K., 17 in corporate general and administrative positions, and 64 by Suttle, who are being employed through the end of the TSA.

(3) Executive Officers of Registrant

The executive officers of the Company and their ages at March 1, 2020 are set forth below. See Item 9B of this Form 10-K for additional information on the Company's management.

Name	Age	Position[1]
Roger H.D. Lacey	69	Executive Chairman of the Company’s Board and Chief Executive Officer[2]
Mark D. Fandrich	58	Group Business President, Treasurer and Chief Financial Officer [3]
Scott Fluegge	50	President and General Manager, JDL Technologies, Inc[4]
Kristin A. Hlavka	38	Corporate Controller [5]

1 Additional footnotes indicate when officers began serving in their current capacity. Executive officers serve at the pleasure of the Board of Directors.

2 Mr. Lacey has served as the Company’s Chief Executive Officer since February 2015 and has served as the Executive Chairman of the Company’s Board of Directors since December 2018. Additional information about Mr. Lacey’s background will be contained in the 2020 Proxy Statement.

3 Mr. Fandrich was appointed Chief Financial Officer in August 2016, and effective January 1, 2019, was named Group President of the Suttle and JDL Technologies business segments. From July 2015 to August 2016, he served as Vice President of Finance of Suttle, Inc. From April 2004 to July 2015, he was Corporate Controller for The Bergquist Company, a global supplier of thermal interface material.

4 Mr. Fluegge was appointed Vice President and General Manager of JDL Technologies in December 2011, and was named President and General Manager in September 2013. Prior to this, he was the Vice President of Workload Automation at GSS AMERICA / GSS INFOTECH / INFOSPECTRUM CONSULTING.

5 Ms. Hlavka was appointed Corporate Controller in May 2011. From July 2008 to April 2011, she served as the Assistant Corporate Controller. Prior to July 2008, she was an auditor for Deloitte and Touche LLP.

(d) FINANCIAL INFORMATION ABOUT FOREIGN AND DOMESTIC OPERATIONS AND EXPORT SALES

Financial information about domestic and foreign operations and export sales may be obtained by reference to Note 13 of the “Notes to Consolidated Financial Statements” under Item 8 herein.

ITEM 1A. RISK FACTORS

Forward Looking Statements

Certain statements contained in this Annual Report on Form 10-K are “forward-looking” statements within the meaning of and in reliance on the Private Securities Litigation Reform Act of 1995, which provides a “safe harbor” for forward-looking statements. Actual events and results may differ materially from those expressed or forecasted in forward-looking statements due to a number of factors. The principal important risk factors that could cause our actual performance and future events and actions to differ materially from these forward-looking statements include, but are not limited to, the risk factors discussed below.

Risks Related to Our Business

The primary markets we serve are highly competitive, and our ability to compete requires continual focus on delivering high-quality, competitively priced products and services and the regular introduction of new products and services that meet evolving customer requirements.

Competition in the markets for enterprise networks and voice and data communications products is intense. Our ability to compete with other manufacturers and marketers of these products depends primarily on our engineering, OEM/ODM relationships, manufacturing, and marketing skills; the price, quality and reliability of our products; our delivery and service capabilities; and our control of operating expenses. Our JDL subsidiary experiences intense competition from other providers of IT products and services. We have experienced, and anticipate continuing to experience, pricing pressures from our customers as well as our competitors. The markets we serve are characterized by rapid technological advances and evolving industry standards. These markets can be significantly affected by new product introductions and marketing activities of industry participants. Some of our current competitors and potential competitors have greater financial, technological, manufacturing, marketing, and personnel resources than we possess. These current and future competitors may be able to identify new markets and develop new products that are superior to those we develop. They may also adapt new technologies faster, devote greater resources to research and development, promote products more aggressively, and price products more competitively. We cannot ensure that competition will not intensify or that we will be able to compete effectively in the markets in which we compete.

Our gross margins have fluctuated year to year, and we face many challenges in maintaining acceptable margins.

Gross margins among our products and services vary and are subject to fluctuation from quarter to quarter and year to year. The factors that may affect our gross margins adversely are numerous and include:

- Changes in customer, geographic, or product mix;
- Our ability to reduce product costs
- Royalties related to technology licensing
- Increases in material or labor costs
- Expediting costs incurred to meet customer delivery requirements
- Excess inventory and inventory carrying charges
- Tariffs on imported products
- Obsolescence charges
- Changes in shipment volume
- Changes in component pricing
- Changes in OEM/ODM pricing
- Increased price competition
- Changes in distribution channels
- Lower margins on competitive-bid contracts
- Increased warranty cost and
- Our ability to manage the impact of foreign currency exchange rate fluctuations.

Consolidation among our customers has occurred and further consolidation may occur, resulting in the loss of some customers and reducing revenue during the pendency of business combinations and related integration activities.

We believe future consolidation may occur among our customers as they attempt to increase market share and achieve greater economies of scale. Consolidation has affected our business as our customers focus on completing business combinations and integrating their operations. In some instances, customers integrating large-scale acquisitions have reduced their purchases of our products as they integrate.

The business effect on us of significant customer mergers is likely to be unclear until sometime after these transactions are completed. After a consolidation occurs, a customer may choose to reduce the number of vendors from which it purchases equipment and services and may choose one of our competitors as its preferred vendor. We cannot ensure that we will continue to supply equipment to the surviving communications service provider after a business combination is completed.

We cannot guarantee the ability of the Special Committee of our Board of Directors to develop strategic options for the Company and the Company's ability to implement these strategies.

In May of 2018 the Company announced it had appointed a special committee of the board to perform a strategic review of the Company's businesses to explore opportunities for enhancing shareholder value and had engaged an investment banking firm to advise it in this process. The disposition of the Suttle operations were a result of this initiative. Failure to develop a growth strategy, failure to maintain positive operating income or investing in technology ventures that do not enhance value or that we cannot incorporate into our products, could result in operating losses and lack of shareholder confidence, which could negatively impact cash flow and the trading price of our common stock.

Our information technology systems may be exposed to various cybersecurity risks and other disruptions that could impair our ability to operate, adversely affect our business, and damage our brand and reputation. Risks are particularly acute in the cloud-based technologies that we and other third parties operate and that form a part of our solutions.

We rely extensively on our information technology systems or on third parties for services including our enterprise resource planning ("ERP") system, banking, payroll, shipping, and e-mail systems to conduct business. We also collect, store and transmit sensitive data, including proprietary business information and personally identifiable information of our customers, suppliers and employees.

Despite our investment in our information technology systems and data security program, the implementation of security measures to protect our data and infrastructure against breaches and other cyber threats, and our use of internal processes and controls designed to protect the security and availability of our systems, our information technology and communication systems may be vulnerable to cybersecurity risks such as computer viruses, hacking, malware, denial of service attacks, cyber terrorism, circumvention of security systems, malfeasance, breaches due to employee error, natural disasters, telecommunications failure, at our facilities or at third-party locations.

The General Data Protection Regulation, or GDPR, took effect on May 25, 2018, in the European Union and introduced direct compliance obligations for data controllers and data processors. National Data Protection Agencies, or NDPAs, are now able to impose fines for violations ranging from 2% to 4% of annual worldwide turnover, or 10 million to 20 million euro, whichever is greater. NDPAs have the power to carry out audits, request information, and obtain access to premises. Businesses must be able to demonstrate that the personal data of any data subject can be lawfully processed on one of the six specified grounds. The GDPR adopts a risk-based approach to compliance, under which businesses bear responsibility for assessing the degree of risk that their processing activities pose to data subjects. Businesses are required to perform data protection impact assessments before any processing that uses new technology and is likely to result in a high risk to data subjects. The GDPR requires businesses to maintain records of their processing activities. The GDPR establishes clear rules around data breach notifications and the processing of personal data in such a manner that the personal data can no longer be attributed to a specific individual have been set out by the GDPR. In addition, under the GDPR, data subjects have new rights, for example, the right to request that businesses delete their personal data (the right to be forgotten); to object to their personal data being processed; and to obtain a copy of their personal data within a set time frame.

Similar to the GDPR, the California Consumer Privacy Act of 2018 ("CCPA"), which became effective January 1, 2020, grants California residents with several new rights relating to their personal information. The CCPA applies to businesses that conduct business in California and satisfies one of three financial conditions, including a business that has a gross revenue greater than $25 million. The CCPA sets forth several data protection obligations for applicable businesses, including the obligation to inform a consumer, at or before collection, of the purpose and intended use of the collection, and the obligation to delete a consumer's personal information upon request. The CCPA establishes a private right of action that allows consumers the right to seek damages for serious data breaches. The CCPA also allows the California Attorney General to bring actions against non-compliant businesses with fines of $2,500 per violation or, if intentional, up to $7,500 per violation. Any failure by us to comply with the GDPR or the CCPA could have a material adverse effect on our business, results of operations or financial condition.

Complying with these varying requirements could cause us to incur substantial costs or require us to change our business practices in a manner adverse to our business. Any failure, or perceived failure, by us to comply with any regulatory requirements or international privacy or consumer protection-related laws and regulations could result in proceedings or actions against us by governmental entities or others, subject us to significant penalties and negative publicity and adversely affect us. In addition, as noted above, we are subject to the possibility of security breaches, which themselves may result in a violation of these laws.

Any failure, breach or unauthorized access to our or third-party systems could result in the loss of confidential, sensitive or proprietary information, interruptions in our service or production or otherwise our ability to conduct business operations, and could result in potential reductions in revenue and profits, damage to our reputation or liability. There can be no assurance that our protective measures will prevent or timely detect security breaches that could have a significant impact on our business, reputation, operating results and financial condition.

In addition, our JDL Technologies subsidiary provides IT services for the Company internally and for third party customers. As we continue to direct a portion of our JDL sales efforts toward Cloud solutions, we expect to store, convey and potentially process increasing amounts of data produced by customer devices. This data may include confidential or proprietary information, intellectual property or personally identifiable information of our customers or other third parties with whom they do business. It is important that we maintain solutions and related infrastructure that are perceived by our customers and other parties with whom we do business as providing a reasonable level of reliability and security. Despite any available security measures and other precautions that we deploy, the infrastructure and transmission methods we use directly or through third parties, may be vulnerable to interception, attack or other disruptive problems. Continued high-profile data breaches at other companies evidence an external environment that is becoming increasingly hostile to information security. Improper disclosure of data or perception that our data security is insufficient could harm our reputation, give rise to legal proceedings, and subject our company to liability under laws that protect data, any of which could result in increased costs and loss of revenue.

If a cyberattack or other security incident were to allow unauthorized access to or modification of our customers' data or our own data, whether due to a failure with our systems or related systems operated by third parties, we could suffer damage to our brand and reputation. The costs we would incur to address and fix these incidents would increase our expenses. These types of security incidents could also lead to lawsuits, regulatory investigations and increased legal liability, including in some cases contractual costs related to customer notification and fraud monitoring. Further, as regulatory focus on privacy and data security issues continues to increase and worldwide laws and regulations concerning the protection of information become more complex, the potential risks and costs of compliance to our business will intensify.

Our financial results could be adversely affected if one or more of our key customers substantially reduces orders for our products.

Traditionally, we have derived a large portion of our revenues from a relatively small number of customers, with our top ten customers accounting for 74%, and 75% of net sales for 2019 and 2018, respectively. In fiscal 2019, two Transition Networks' customers accounted for 21% and 16% of consolidated sales. In fiscal 2018, two Transition Networks' customer accounted for 18% and 15% of consolidated sales. The loss of or a substantial reduction in purchases by any one or more of our top customers could have a material adverse effect on our business, financial position and results of operations.

Our market is subject to rapid technological change and, to compete effectively, we must continually introduce new products that achieve market acceptance.

The enterprise network and communications equipment industry is characterized by rapid technological changes, evolving industry standards, changing market conditions, short product life cycles, rapidly changing customer requirements, and frequent new product and service introductions and enhancements. The introduction of products using new technologies or the adoption of new industry standards can make our existing products, or products under development, obsolete or unmarketable. Our future success will depend on our ability to enhance our existing products, to introduce new products to meet changing customer requirements and emerging technologies, and to demonstrate the performance advantages and cost-effectiveness of our products over competing products. Our failure to modify our products to support alternative technologies or failure to achieve widespread customer acceptance of these modified products could cause us to lose market share and cause our revenues to decline.

We may not predict technological trends or the success of new products in the enterprise network and communications equipment markets accurately. New product development often requires forecasting of market trends, development and implementation of new technologies and processes and capital commitments. We do not know whether other new products we develop will gain market acceptance or result in profitable sales.

Some competitors have greater engineering and product development resources. Although we expect to continue to invest significant resources in product development activities, our efforts to achieve and maintain profitability will require us to be selective and focused with our research and development expenditures. If we fail to anticipate or respond in a cost-effective and timely manner to technological developments, changes in industry standards or customer requirements, or if we experience any significant delays in product development or introduction, our business, operating results and financial condition could be affected adversely.

We may experience delays in developing and marketing product enhancements or new products that respond to technological change, evolving industry standards and changing customer requirements. Specifically as we attempt to develop more software products and continue to expand our existing product set, we cannot ensure that we will not experience difficulties that could delay or prevent the successful development, introduction, and marketing of these products or product enhancements, or that our new products, including software-based products, and product enhancements will adequately meet the requirements of the marketplace and achieve any significant or sustainable degree of market acceptance in existing or additional markets. In addition, the future introductions or announcements of products by us or one of our competitors embodying new technologies or changes in industry standards or customer requirements could render our then-existing products obsolete or unmarketable. We cannot ensure that the introduction or announcement of new product offerings by us or one or more of our competitors will not cause customers to defer their purchase of our existing products, which could cause our revenues to decline.

Our business units are dependent upon federal government spending.

Our JDL Technologies and Transition Networks business units are involved in projects that receive much of their funding from the United States federal government. To the extent that federal government spending is delayed or curtailed by government actions, our revenues and operating results may be adversely affected.

We evaluate and frequently pursue acquisitions, but we may not successfully close these acquisitions and, if these acquisitions are completed, we may have difficulty integrating the acquired businesses with our existing operations.

We regularly consider the acquisition of complementary companies and product lines. We cannot, however, ensure that we will be able to find appropriate candidates for acquisitions, reach agreement to acquire them, or obtain any required shareholder or regulatory approvals needed to close strategic acquisitions, despite the effort and management attention invested.

The impact of future acquisitions on our business, operating results and financial condition is uncertain. In the case of businesses we may acquire in the future, we may have difficulty assimilating these businesses and their products, services, technologies and personnel into our operations. These difficulties could disrupt our ongoing business, distract our management and workforce, increase our expenses and materially adversely affect our operating results and financial condition. Also, we may not be able to retain key management and other critical employees after an acquisition. We may also acquire unanticipated liabilities. In addition to these risks, we may not realize all of the anticipated benefits of these acquisitions.

Our operating results fluctuate from quarter to quarter.

Our operating results are difficult to predict and may fluctuate significantly from quarter to quarter. Fluctuations in our quarterly operating results may be caused by many factors, including the following:

- the volume and timing of customer orders and our ability to fulfill those orders in a timely manner
- the overall level of capital expenditures by our customers

- factors such as the coronavirus (COVID-19), which may affect our supply stream, our employee work force, our customers, or the general United States and world economy
- work stoppages and other developments affecting the operations of our customers
- our ability to obtain new customers and customer contracts
- the timing of our revenue recognition
- the timing of our new product and service introductions
- the availability of products and services we need from our suppliers
- market acceptance of new and enhanced versions of our products and services
- variations in the mix of products and services we sell
- the timing of federal and state government funding of projects
- the location and utilization of our production capacity and employees and
- the availability and cost of key components of our products.

Our expense levels are based in part on expectations of future revenues. If revenue levels in a particular quarter are lower than expected, our operating results will be affected adversely.

We depend on OEM/ODM relationships and on limited-source suppliers and any disruptions in these relationships may cause damage to our customer relationships.

We procure all parts and certain services involved in the production of our products from, and subcontract much of our product manufacturing to outside firms that specialize in these services. Although most of the components of our products are available from multiple vendors, we have several single-source supplier relationships, either because alternative sources are not available or because the relationship is advantageous to us. We cannot ensure that our suppliers will be able to meet our future requirements for products and components in a timely fashion. In addition, the availability of many of these components to us is dependent in part on our ability to provide our suppliers with accurate forecasts of our future requirements. Delays or lost sales could be caused by other factors beyond our control, including defects in the quality of components or products supplied by others.

We are dependent upon our senior management and other critical employees.

Like all companies, our success depends on the efforts and abilities of our senior management personnel and other critical employees, including those in sales, marketing and product development functions. Our ability to attract, retain and motivate these employees is critical to our success. In addition, because we may acquire one or more businesses in the future, our success may depend, in part, upon our ability to retain and integrate our own personnel with personnel from acquired entities that are necessary to the continued success or the successful integration of the acquired businesses.

Managing our inventory is complex and may include write-downs of excess or obsolete inventory.

Managing our inventory of components and finished products is complicated by a number of factors, including the need to maintain a significant inventory of finished goods for orders we anticipate but do not receive. These issues may cause us to purchase and maintain significant amounts of inventory. If this inventory is not used as expected based on anticipated requirements, it may become excess or obsolete. The existence of excess or obsolete inventory can result in sales price reductions or inventory write-downs, which could adversely affect our business and results of operations.

We face risks associated with expanding our sales outside of the United States.

We believe that our future growth depends in part upon our ability to increase sales in international markets. These sales are subject to a variety of risks, including fluctuations in currency exchange rates, tariffs, import restrictions and other trade barriers, unexpected changes in regulatory requirements, longer accounts receivable payment cycles, potentially adverse tax consequences, and export license requirements. In addition, we are subject to the risks inherent in conducting business internationally, including political and economic instability and unexpected changes in diplomatic and trade relationships. We cannot ensure that one or more of these factors will not have a material adverse effect on our business strategy and financial condition.

Our failure to achieve and maintain effective internal controls could limit our ability to detect and prevent fraud and thereby adversely affect our business and stock price.

We have incurred, and expect to continue to incur, significant continuing costs, including accounting fees and staffing costs, to maintain compliance with the internal control requirements of the Sarbanes-Oxley Act of 2002. Expansion of our business, particularly internationally, would require ongoing changes to our internal control systems, processes and information systems. In addition, if we complete future acquisitions, our ability to integrate operations of the acquired company could affect our continued compliance with the internal control requirements of the Sarbanes-Oxley Act.

We maintain internal controls to generate reliable financial reports. All internal control systems, no matter how well designed, have inherent limitations. Even those systems determined to be effective can provide only reasonable assurance with respect to the consolidated financial system preparation and presentation. Our inability to maintain an effective control environment may cause investors to lose confidence in our reported financial information, which could in turn have a material adverse effect on our stock price.

Product defects or the failure of our products to meet specifications could cause us to lose customers and revenue or to incur unexpected expenses.

If our products do not meet our customers' performance requirements, our customer relationships may suffer. Also, our products may contain defects or fail to meet product specifications. Any failure or poor performance of our products could result in:

- delayed market acceptance of our products
- delayed product shipments
- unexpected expenses and diversion of resources to replace defective products or identify and correct the source of errors
- damage to our reputation and our customer relationships
- delayed recognition of sales or reduced sales, and
- product liability claims or other claims for damages that may be caused by any product defects or performance failures.

Our sales and operations may continue to be adversely affected by current global economic conditions.

Over the past several years, financial markets globally have experienced periods of extreme disruption. These have included, among other things, extreme volatility in securities prices, severely diminished liquidity and credit availability, ratings downgrades of some investments and declining valuations of others, tariffs on imports and exports. The frequency, severity and duration of these disruptions in the financial markets and the global economy are unknown. We cannot ensure that there will not be a further deterioration in financial markets and in business conditions generally. These economic developments have adversely affected our business in a number of ways and will likely continue to adversely affect our business during the foreseeable future.

Our sales and operations may be adversely affected by the coronavirus (COVID-19) epidemic.

While over 96% of our Transition Networks products are TAA compliant and therefore manufactured outside of China, there are some passive components and metals that may be sourced from China. We are making supply chain adjustments to source these components elsewhere. We are monitoring the situation very closely and will be proactive to maintain our supply chain.

Risks Related to Our Common Stock

Our stock price has been volatile historically and the price of our common stock may fluctuate significantly in the future.

The trading price of our common stock has been and may continue to be subject to wide fluctuations. Our stock price may fluctuate in response to a number of events and factors, such as quarterly variations in operating results, announcements of technological innovations or new products by us or our competitors, the operating and stock price performance of other companies that investors may deem comparable to us, and new reports relating to trends in our markets or general economic conditions.

In addition, the stock market in general, and prices for companies in our industry in particular, have experienced extreme volatility that often has been unrelated to the operating performance of these companies. These broad market and industry fluctuations may adversely affect the price of our common stock, regardless of our operating performance.

Anti-takeover provisions in our charter documents, our shareholder rights agreement and Minnesota law could prevent or delay a change in control of our company.

Provisions of our articles of incorporation and bylaws and Minnesota law may discourage, delay or prevent a merger or acquisition that a shareholder may consider favorable, and could limit the price that investors are willing to pay for our common stock. These provisions include the following:

- advance notice requirements for shareholder proposals
- authorization for our Board of Directors to issue preferred stock without shareholder approval
- limitations on business combinations with interested shareholders and
- a super majority vote by shareholders is required to approve certain corporate actions, including merger transactions.

Some of these provisions may discourage a future acquisition of our company even though our shareholders would receive an attractive value for their shares, or a significant number of our shareholders believe such a proposed transaction would be in their best interest.

The payment and amount of future dividends and number of shares we repurchase in the future under our Stock Repurchase Program is subject to Board of Director discretion and to various risks and uncertainties.

The payment and amount of future quarterly dividends is within the discretion of the Board of Directors and will depend on factors the Board deems relevant at the time declaration of a dividend is considered. These factors include, but are not limited to: available cash; management’s expectations regarding future performance and free cash flow; alternative uses of cash to fund R&D expenditures and capital expenditures required to fund future growth; and, the effect of various risks and uncertainties described in this “Risk Factors” section. In addition, we adopted a Stock Repurchase Program in 2019. Our ability to continue this program or conduct future stock repurchase programs will depend on some of these same factors.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

CSI conducts administrative, manufacturing and engineering functions at the following facilities:

- The Company owns a 105,000 square foot building in Minnetonka, Minnesota where its executive and administrative offices are located. Transition Networks uses this facility for its warehouse, assembly, engineering and administrative operations. JDL Technologies uses this facility for some administrative operations. In August of 2018, the Company entered into an agreement to sell its Minnetonka headquarters. There are several contingencies because of the due diligence to be completed by the buyer. If the sale proceeds, the Company expects the closing would occur late in 2020 or early in 2021.
- The Company owns three buildings in Hector, Minnesota totaling 109,000 square feet of manufacturing space situated on approximately 5 acres. Beginning in March 2020, two of these buildings totaling 26,000 square feet of manufacturing space, are being leased to Oldcastle as part of the March 2020 Suttle transaction.
- JDL leases 3,700 square feet of office space in Fort Lauderdale, Florida.

- Net2Edge leases 5,500 square feet of office space in Basingstoke, Hampshire, U.K.

CSI believes these facilities will be adequate to accommodate its administrative, manufacturing and distribution needs for the foreseeable future.

ITEM 3. LEGAL PROCEEDINGS

The Company is subject to claims and lawsuits that have been filed in the ordinary course of business. From time to time, the Company brings suit against others to enforce contract rights or property rights, or to collect debts in the ordinary course of business. Management believes that the resolution or settlement of any pending litigation will not have a material adverse effect on the results of operations or liquidity of the Company.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY AND RELATED STOCKHOLDERMATTERS AND ISSUER PURCHASE OF EQUITY SECURITIES

Market Information

The Company’s common stock trades on the Nasdaq Capital Market under the trading symbol JCS.

Holders

At March 1, 2020, there were approximately 494 registered holders of record of Communications Systems, Inc. common stock.

Information Regarding Equity Compensation Plans

The following table presents information about the Company’s equity compensation plans, under which equity securities of the Company are authorized for issuance, as of December 31, 2019:

Securities Authorized for Issuance Under Equity Compensation Plans

Plan Category (1)	Number of shares of common stock to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options warrants and rights	Number of shares of common stock available for future issuance under equity compensation plans (excluding shares in column (a))
Equity compensation plans approved by security holders:			
1992 Stock Plan-Nonemployee Director Plan	18,000	$ 11.82	—
1990 Employee Stock Purchase Plan	3,549	$ 5.24	89,122
2011 Executive Incentive Compensation Plan	1,433,699	$ 6.35	701,221
Equity compensation plans not approved by security holders:			

None

(1) The Company does not have individual compensation arrangements involving the grant of options, warrants and rights, but only grants equity awards under shareholder-approved plans.

Five-year Performance Graph

Not applicable because the Company is a smaller reporting company.

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

In the three months ended December 31, 2019, the company repurchased shares of stock as follows:

ISSUER PURCHASES OF EQUITY SECURITIES				
Period	**(a) Total Number of Shares Purchased (1)**	**Average Price Paid per Share (or Unit)**	**Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs**	**(b) Maximum Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs**
October 2019	55,080	$ 5.05	55,080	$ 1,527,801
November 2019	39,941	6.42	39,941	1,271,385
December 2019	95,283	7.26	95,283	625,583
Total	190,304	$ 6.44	190,304	$ 625,583

(1) The total number of shares purchased includes shares purchased under the Board’s authorization described above, including market purchases and privately negotiated purchases.

ITEM 6. SELECTED FINANCIAL DATA

Not applicable because the Company is a smaller reporting company.

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

Overview

Communications Systems, Inc. provides physical connectivity infrastructure products and services for global deployments of broadband networks through the following business units:

Transition Networks
With over 30 years of growth and expertise in hardware and software development, Transition Networks offers customers the ability to securely and reliably connect, power and manage edge devices in an IoT ("Internet of Things") ecosystem as well as affordably integrate the benefits of fiber optics into any data network, in any application, and in any environment. Offering support for multiple speeds and protocols, multiple Power over Ethernet options, any interface, and a multitude of hardware platforms, Transition Networks' portfolio gives customers simple, secure and intelligent solutions for the network edge. Transition Networks distributes hardware-based connectivity solutions through a network of resellers in over 90 countries.

JDL Technologies
JDL Technologies provides technology services and infrastructure to the commercial, healthcare and education market segments. JDL's portfolio of technology solutions includes managed services, virtualization and cloud solutions, wired and wireless network design and implementation services, and converged infrastructure configuration and deployment. JDL has provided many of these technology services to the education space, including one of the largest school districts in the US for more than 30 years, and also provides these services to a number of commercial and healthcare clients.

Net2Edge
Net2Edge designs and sells a range of solutions to address the needs of customers at the network edge. Specifically, this ranges from traditional Ethernet based switches, to circuit emulation devices, to bespoke niche solutions deploying LTE for example. The circuit emulation products range from legacy over packet interfaces such as Serial, TDM or ISDN. Net2Edge targets these products at telecommunications service providers, enterprises and system integrators. These solutions assist in resolving challenges in the areas of bandwidth constraints, security risks, and distance limitations as networks extend from local area to wide area networks and adapt to ever increasing end-user demands. As enterprise networks continue to change and evolve, our solutions enable customers to integrate multiple services into their existing infrastructure. All Net2Edge products incorporate features for performing advanced levels of management and automated provisioning minimizing the administrative burden of the operator.

Key 2019 Developments

- The Company's 2019 sales were $50.9 million, a 20% increase from 2018 sales of $42.4 million.
- The Company's 2019 net income from continuing operations was $251,000, or $0.03 per diluted share, compared to a net loss from continuing operations of $4.9 million or ($0.54) per diluted share in fiscal 2018.
- At 2019 year end, the Company had cash, cash equivalents and investments of $24.1 million and working capital of $38.1 million compared to cash, cash equivalents and investments of $11.1 million and working capital of $30.7 million at December 31, 2018.
- Transition Networks sales increased 23% to $44.9 million in 2019 from $36.5 million in 2018. Transition had increased operating income of $5.6 million in 2019, compared to operating income of $3.0 million in 2018.
- JDL Technologies sales decreased 8% to $4.7 million in 2019 from $5.1 million in 2018. JDL had an operating loss of $3,000 in 2019 compared to an operating loss of $300,000 in 2018.
- Net2Edge sales increased 37% to $2.3 million in 2019 from $1.7 million in 2018. Net2Edge had an operating loss of $1.5 million in 2019 compared to an operating loss of $2.8 million in 2018.

Forward Looking Statements

In this report and from time to time, in reports filed with the Securities and Exchange Commission, in press releases, and in other communications to shareholders or the investing public, we may make "forward looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. We may make these forward looking statements concerning possible or anticipated future financial performance, business activities, plans, pending claims, investigations or litigation, which are typically preceded by the words "believes," "expects," "anticipates," "intends" or similar expressions. For these forward-looking statements, the Company claims the protection of the safe harbor for forward-looking statements contained in federal securities laws. Shareholders and the investing public should understand that these forward looking statements are subject to risks and uncertainties that could cause actual performance, activities, anticipated results, outcomes or plans to differ significantly from those indicated in the forward-looking statements. For a detailed discussion of a number of these risk factors, please see Item 1A above.

Critical Accounting Policies

Inventory Valuation: We value inventories at the lower of cost or net realizable value. Reserves for excess and obsolescence are estimated and recorded to reduce the carrying value to estimated net realizable value. The amount of the reserve is determined based on historical usage, projected sales information, plans for discontinued products, and other factors. Though management considers these reserves adequate and proper, changes in sales volumes due to unexpected economic or competitive conditions are among the factors that could materially affect the adequacy of this reserve.

Income Taxes: In the preparation of the Company's consolidated financial statements, management calculates income taxes. This includes estimating the Company's current tax liability as well as assessing temporary differences resulting from different treatment of items for tax and book accounting purposes. These differences result in deferred tax assets and liabilities, which are recorded on the balance sheet. These assets and liabilities are analyzed regularly and management assesses the likelihood it will realize these deferred assets from future taxable income. We determine the valuation allowance for deferred income tax benefits based upon the expectation of whether the benefits are more likely than not to be realized. The Company records interest and penalties related to income taxes as income tax expense in the Consolidated Statements of Income.

Revenue Recognition: The Company recognizes revenue when a customer obtains control of promised goods or services. The amount of revenue recognized reflects the consideration that the Company expects to receive in exchange for these goods or services. In the Transition Networks and Net2Edge segments, revenue is recognized upon delivery of the Company's connectivity infrastructure and data transmission products. To determine when revenue should be recognized, it is important to determine when the transfer of control has occurred. The Company has determined that control transfers for these products upon shipment or delivery to the customer, in accordance with the agreed upon shipping terms. As such, the timing of revenue recognition occurs at a specific point in time.

The Company has determined that the following performance obligations identified in its JDL Technologies, Inc. business unit are transferred over time: managed services and professional services (time and materials ("T&M") and fixed price). JDL's managed services performance obligation is a bundled solution, a series of distinct services that are substantially the same and that have the same pattern of transfer to the customer and are recognized evenly over the term of the contract. T&M professional services arrangements are measured over time with an input method based on hours expended towards satisfying this performance obligation. Fixed price professional service arrangements under a relatively longer-term service will also be measured over time with an input method based on hours expended.

The Company has also identified the following performance obligations within its JDL Technologies business unit that are recognized at a point in time which include resale of third-party hardware and software, installation, arranging for another party to transfer services to the customer, and certain professional services. The resale of third-party hardware and software is recognized at a point in time, when the goods are shipped or delivered to the customer's location, in accordance with the shipping terms. Installation services are recognized at a point in time when the services are completed. The service the Company provides to arrange for another party to transfer services to the customer is satisfied at a point in time as the Company has transferred control upon the service first being made available to the customer by the third party vendor, which are required to be presented on a net basis. Depending on the nature of the service, certain professional services transfer control at a point in time. The Company evaluates these circumstances on a case by case basis to determine if revenue should be recognized over time or at a point in time.

Results of Operations

2019 Compared to 2018

Consolidated sales were $50,906,000 in 2019, a 20% increase from sales of $42,369,000 in 2018. Net income from continuing operations in 2019 was $251,000, or $0.03 per share compared to net loss of $4,931,000 or ($0.54) per share in 2018.

Transition Networks Results

Transition Networks develops, markets, and sells active networking hardware devices. Characteristics of this business include a rapid pace of change in technologies and alternative solutions to our products. Transition Networks derives the majority of its revenues from new installations and network upgrade projects, which tend not to recur frequently. The core markets for these products are enterprise, service providers, government, and industrial users. In 2019, roughly 89% of Transition Networks revenue came from North America, but we continue to see opportunity for long-term growth outside of North America and we continue to invest resources in sales, marketing, and infrastructure to grow that business.

Transition Networks sales increased 23% to $44,860,000 in 2019 compared to $36,470,000 in 2018. Transition Networks organizes its sales force by vertical markets and segments its customers geographically. Sales by customer groups in 2019 and 2018 were:

	Transition Networks Sales by Region	
	2019	2018
North America	$ 39,748,000	$ 31,059,000
Europe, Middle East, Africa ("EMEA")	2,651,000	2,017,000
Rest of world ("ROW")	2,461,000	3,394,000
	$ 44,860,000	$ 36,470,000

The following table summarizes Transition Networks' 2019 and 2018 sales by product group:

	Transition Networks Sales by Product Group	
	2019	2018
Media converters	$ 20,005,000	$ 20,226,000
Ethernet switches and adapters	18,845,000	9,694,000
Other products	6,010,000	6,550,000
	$ 44,860,000	$ 36,470,000

Sales in North America increased 28% or $8,689,000 in 2019 compared to 2018 due to deliveries for a major metropolitan smart city IoT project and other security and surveillance projects, partially offset by reduced spend from the federal government and a major telecommunications provider. International sales decreased $299,000, or 6%, due to the slower adoption of new PoE products in our rest of world region, partially offset by a significant project with a customer in our EMEA region for media converter products in the first quarter of 2019. Sales of media converters decreased 1% or $221,000 due to lower spend by the federal government. Sales of Ethernet switches and adapters increased 94% or $9,151,000 due to involvement in a major metropolitan smart city IoT project and strong demand for new products in North America for smaller security and surveillance projects. All other products decreased 8% or $540,000, due to competitive pricing pressures and reduced purchases from a major telecommunications provider.

Gross profit increased 23% to $20,602,000 in 2019 compared to $16,695,000 in 2018. Gross margin as a percentage of sales remained flat at 46% in both 2019 and 2018 due to reduced costs for larger volume product purchases and leveraging fixed supply chain costs on higher sales volume, offset by higher inventory adjustments for aged inventory and higher royalties.

Selling, general and administrative expenses increased 10% to $15,036,000, or 34% of sales, in 2019 from $13,716,000, or 38% of sales in 2018 due to higher employee related expenses, higher marketing spend and an increase in research and development spend. Operating income was $5,566,000 in 2019 compared to operating income of $2,979,000 in 2018.

JDL Technologies, Inc. Results

Sales by JDL Technologies decreased 8% to $4,741,000 in 2019 compared to $5,134,000 in 2018. The following table summarizes JDL's revenues by customer group in 2019 and 2018:

	JDL Revenue by Customer Group	
	2019	2018
Education	$ 1,926,000	$ 2,651,000
Healthcare and commercial clients	2,815,000	2,483,000
	$ 4,741,000	$ 5,134,000

Revenues from the education sector decreased $725,000 or 27% in 2019 due to fewer projects being funded in the fourth quarter as compared to the prior year. Federal and local funding for public school district investments in IT infrastructure and services varies substantially from year to year, and JDL Technologies expects to continue to experience notable swings in quarterly and annual revenues as a result.

Revenue from JDL Technologies' sales to small and medium-sized commercial businesses, which are primarily healthcare and commercial clients, increased by 13% or $332,000 due to ongoing efforts to expand managed services and infrastructure sales to these markets.

JDL gross profit increased 14% to $1,482,000 in 2019 compared to $1,304,000 in 2018. Gross margin as a percentage of sales increased to 31% in 2019 from 25% in 2018 due to a combination of price increases applied to monthly recurring contracts and the benefit of cost reduction efforts made in the prior year.

Selling, general and administrative expenses decreased 7% in 2019 to $1,485,000, or 31% of sales, compared to $1,603,000 in 2018, or 31% of sales due to cost saving measures put in place and lower facility costs driven by an office move during the first quarter of 2019. JDL reported an operating loss of $3,000 in 2019 compared to an operating loss of $299,000 in 2018.

JDL Technologies continues to aggressively leverage opportunities to provide managed services, cloud migration and virtualization services, HIPAA-compliant technology services, and other network and infrastructure services to the commercial and healthcare markets. This strategic, multiyear plan to reduce the impact of volatile government funding is beginning to produce favorable results.

Net2Edge Results

Net2Edge's sales increased 37% to $2,330,000 in 2019 compared to $1,700,000 in 2018 due to revenue from established CSI accounts with new higher featured carrier Ethernet products. Gross profit increased 98% to $959,000 in 2019 compared to $485,000 in 2018. Gross margin as a percentage of sales increased to 41% in 2019 from 29% in 2018 due favorable product mix at a key carrier customer and higher costs to expedite product in 2018. Selling, general and administrative expenses decreased 24% to $2,486,000 in 2019 compared to $3,279,000 in 2018 due to a reduction in selling expenses and an increase in research and development credits received in the U.K. Net2Edge reported an operating loss of $1,527,000 in 2019 compared to a loss of $2,794,000 in 2018.

Other

As a result of our treatment of Suttle as discontinued operations, "Other" includes non-allocated corporate overhead costs as well as costs allocated to Suttle that are not considered discontinued operations. Each year the Company estimates revenue and headcount for each of its three principal business units and allocates a portion of shared service corporate overhead costs based on these metrics. Projected Suttle revenue and headcount were lower in 2019 and therefore the Company allocated a lower percentage of allocable costs to Suttle. Because Suttle is now treated as discontinued operations, these costs are now included within Other.

The Company's income from continuing operations before income taxes was $235,000 in 2019 compared to a loss before income taxes of $4,527,000 in 2018. The Company's effective income tax rate was -6.5% in 2019 compared to -8.9% in 2018. The 2019 effective rate differed from the standard rate of 21% primarily due to the valuation allowances related to deferred tax assets, along with the impact of state income taxes, foreign tax rate differences, foreign losses not deductible for U.S. income tax purposes, and provisions for interest charges for uncertain income tax positions. See Note 12 for a reconciliation of the standard tax rate to the Company's effective tax rate for 2019 and 2018.

Acquisitions and Dispositions

The Company is a growth-focused supplier of IoT and edge management products and IT services, providing connectivity infrastructure and services for global deployments of broadband networks. The Company continually searches for acquisition candidates with products that would enable the Company to better serve its target markets.

Effects of Inflation

Inflation has not had a significant effect on operations in recent years. The Company does not have long-term production or procurement contracts and has historically been able to adjust pricing and purchasing decisions to respond to inflationary pressures.

Liquidity and Capital Resources

As of December 31, 2019, the Company had approximately $24,057,000 in cash, cash equivalents and investments, compared to $11,056,000 at December 31, 2018. Of this amount, $9,440,000 was invested in short-term money market funds that are not considered to be bank deposits and are not insured or guaranteed by the FDIC or other government agency. These money market funds seek to preserve the value of the investment at $1.00 per share; however, it is possible to lose money investing in these funds. The remainder in cash and cash equivalents is operating cash.

The Company had working capital of $38,052,000, consisting of current assets of approximately $49,402,000 and current liabilities of $11,350,000 at December 31, 2019 compared to working capital of $30,695,000, consisting of current assets of $42,335,000 and current liabilities of $11,640,000 at the end of 2018.

Cash flow provided by operating activities was approximately $10,231,000 in 2019 compared to $4,723,000 used in 2018. Significant working capital changes from 2018 to 2019 included a decrease in inventories of $2.5 million and in other assets of $1.3 million and an increase in accrued compensation and benefits of $1.1 million

Cash used in investing activities was $5,222,000 in 2019 compared to $4,812,000 provided in 2018, due to proceeds from discontinued operations, offset by additional investment purchases.

Net cash used by financing activities was $1,450,000 in 2019 compared to $1,417,000 in 2018. Cash dividends paid on common stock decreased to $743,000 in 2019 ($0.08 per common share) from $1,493,000 in 2018 ($0.16 per common share). Proceeds from common stock issuances, principally shares sold to the Company’s Employee Stock Ownership Plan and issued under the Company’s Employee Stock Purchase Plan, totaled approximately $715,000 in 2019 and $104,000 in 2018. The Company acquired $2,000 and $28,000 in 2019 and 2018, respectively, of Company stock from employees to satisfy withholding tax obligations related to share-based compensation, pursuant to terms of Board and shareholder-approved compensation plans. The Company also acquired $1,420,000 of Company stock under a $2,000,000 Stock Repurchase Program authorized by the Board of Directors in August 2019. The new 2019 Stock Repurchase Program replaced a 2008 Stock Repurchase Program that had authorized the repurchase of up to 411,910 additional shares, but had no specific dollar amount associated with it. The Company had not made any market repurchases under the 2008 Stock Repurchase Program in the past several years. At December 31, 2019, there remained $626,000 under the 2019 Stock Repurchase Program.

The Company has a $15,000,000 credit facility from Wells Fargo Bank. The Company had no outstanding obligations under this credit facility at December 31, 2019 and 2018. The total amount available for borrowings under this credit facility at December 31, 2019 was $7,335,000, based on the borrowing base calculation. Interest on borrowings on the credit line is currently set at LIBOR plus 2.0% (3.8% at December 31, 2019). The credit agreement expires August 12, 2021 and is secured by assets of the Company. In the opinion of management, based on the Company’s current financial and operating position and projected future expenditures, the Company has sufficient funds to meet its current anticipated operating and capital expenditure needs.

Contractual Obligation Summary

The following table summarizes our contractual obligations at December 31, 2019 and the effect these obligations are expected to have on our liquidity and cash flow in future periods:

	Less than One Year	1 – 3 Years	3 – 5 Years	More Than 5 Years
Operating leases	$ 130,000	$ 220,000	$ 52,000	$ —
Total	$ 130,000	$ 220,000	$ 52,000	$ —

As of December 31, 2019, the Company had no other material commitments (either cancelable or non-cancelable) for capital expenditures, short or long term debt, capital leases or other purchase commitments related to ongoing operations.

New Accounting Pronouncements

See Note 1 of the "Notes to the Consolidated Financial Statements" under Item 8 herein for a discussion of new accounting standards.

Off Balance Sheet Arrangements

None.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The Company has no freestanding or embedded derivatives. The Company's policy is to not use freestanding derivatives and to not enter into contracts with terms that cannot be designated as normal purchases or sales.

The vast majority of our transactions are denominated in U.S. dollars. Although products sold by our Net2Edge subsidiary are generally denominated in British pounds, Net2Edge sales represented less than 5% of our consolidated net sales in 2019 and 2018. Therefore, fluctuations in foreign currency exchange rates have historically not been material to the Company.

At December 31, 2019, our bank line of credit carried a LIBOR rate plus 2.0%. The Company's investments are money market, certificates of deposit, commercial paper, and corporate notes and bonds types of investments that earn interest at prevailing market rates and as such do not have material risk exposure.

Based on the Company's operations, in the opinion of management, the Company is not exposed to material future losses due to market risk.

The Company believes its risk of material loss due to fluctuations in foreign currency markets to be small, primarily resulting from its Net2Edge operations and sales.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

(a) FINANCIAL STATEMENTS

REPORT OF MANAGEMENT

The management of Communications Systems, Inc. and its subsidiary companies is responsible for the integrity and objectivity of the financial statements and other financial information contained in the annual report. The financial statements and related information were prepared in accordance with accounting principles generally accepted in the United States of America and include amounts that are based on management's informed judgments and estimates.

In fulfilling its responsibilities for the integrity of financial information, management maintains accounting systems and related controls. These controls provide reasonable assurance, at appropriate costs, that assets are safeguarded against losses and that financial records are reliable for use in preparing financial statements. Management recognizes its responsibility for conducting the Company's affairs according to the highest standards of personal and corporate conduct.

The Audit and Finance Committee of the Board of Directors, comprised solely of outside directors, meets with the independent auditors and management periodically to review accounting, auditing, financial reporting and internal control matters. The independent auditors have free access to this committee, without management present, to discuss the results of their audit work and their opinion on the adequacy of internal financial controls and the quality of financial reporting.

/s/ Roger H.D. Lacey	/s/ Mark D. Fandrich
Roger H.D. Lacey	Mark D. Fandrich
Chief Executive Officer	Chief Financial Officer

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the board of directors of Communications Systems, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Communications Systems, Inc. and subsidiaries (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of income (loss) and comprehensive income (loss), changes in stockholders' equity, and cash flows, for each of the two years in the period ended December 31, 2019, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Baker Tilly Virchow Krause, LLP
We have served as the Company's auditor since 2017.
Minneapolis, Minnesota
March 17, 2020

COMMUNICATIONS SYSTEMS, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	December 31 2019	December 31 2018
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 13,928,504	$ 11,056,426
Restricted cash	679,006	—
Investments	9,449,650	—
Trade accounts receivable, less allowance for doubtful accounts of $154,000 and $93,000, respectively	10,242,405	9,593,328
Inventories	8,531,112	11,998,638
Prepaid income taxes	72,994	148,036
Other current assets	1,160,865	1,462,691
Current assets held for sale	5,337,274	8,075,973
TOTAL CURRENT ASSETS	49,401,810	42,335,092
PROPERTY, PLANT AND EQUIPMENT, net	8,238,089	8,847,091
OTHER ASSETS:		
Investments	250,000	—
Deferred income taxes	9,534	19,068
Right of use asset	367,909	—
Other assets	—	4,765
Noncurrent assets held for sale	883,370	2,115,148
TOTAL OTHER ASSETS	1,510,813	2,138,981
TOTAL ASSETS	$ 59,150,712	$ 53,321,164
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 3,720,445	$ 4,086,205
Accrued compensation and benefits	3,517,331	2,892,199
Lease liability	115,935	—
Other accrued liabilities	2,602,752	3,096,694
Dividends payable	200,363	184,541
Current liabilities held for sale	1,193,218	1,380,131
TOTAL CURRENT LIABILITIES	11,350,044	11,639,770
LONG TERM LIABILITIES:		
Long-term compensation plans	164,348	—
Uncertain tax positions	—	28,267
Lease liability	244,038	—
TOTAL LONG-TERM LIABILITIES	408,386	28,267
COMMITMENTS AND CONTINGENCIES (Footnote 9)		
STOCKHOLDERS' EQUITY		
Preferred stock, par value $1.00 per share; 3,000,000 shares authorized; none issued Common stock, par value $.05 per share; 30,000,000 shares authorized; 9,252,749 and 9,158,438 shares issued and outstanding, respectively	462,637	457,922
Additional paid-in capital	42,977,914	42,680,499
Retained earnings (accumulated deficit)	4,649,395	(734,001)
Accumulated other comprehensive loss	(697,664)	(751,293)
TOTAL STOCKHOLDERS' EQUITY	47,392,282	41,653,127
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 59,150,712	$ 53,321,164

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

COMMUNICATIONS SYSTEMS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME (LOSS) AND COMPREHENSIVE INCOME (LOSS)

	Year Ended December 31 2019	Year Ended December 31 2018
Sales	$ 50,906,179	$ 42,369,232
Cost of sales	28,720,367	24,747,115
Gross profit	22,185,812	17,622,117
Operating expenses:		
Selling, general and administrative expenses	22,176,598	22,372,765
Total operating expenses	22,176,598	22,372,765
Operating income (loss) from continuing operations	9,214	(4,750,648)
Other income (expenses):		
Investment and other income	284,944	288,829
Loss on sale of assets	(20,368)	(26,445)
Interest and other expense	(38,440)	(38,355)
Other income, net	226,136	224,029
Operating income (loss) from continuing operations before income taxes	235,350	(4,526,619)
Income tax (benefit) expense	(15,269)	404,386
Net income (loss) from continuing operations	250,619	(4,931,005)
Net income (loss) from discontinued operations, net of tax	6,218,430	(1,860,730)
Net income (loss)	6,469,049	(6,791,735)
Other comprehensive (loss) income, net of tax:		
Unrealized (losses)/gains on available-for-sale securities	(1,793)	1,061
Foreign currency translation adjustment	55,422	(138,975)
Total other comprehensive income (loss)	53,629	(137,914)
Comprehensive income (loss)	$ 6,522,678	$ (6,929,649)
Basic net income (loss) per share:		
Continuing operations	$ 0.03	$ (0.54)
Discontinued operations	0.67	(0.21)
	$ 0.70	$ (0.75)
Diluted net income (loss) per share:		
Continuing operations	$ 0.03	$ (0.54)
Discontinued operations	0.66	(0.21)
	$ 0.69	$ (0.75)
Weighted Average Basic Shares Outstanding	9,272,259	9,108,777
Weighted Average Dilutive Shares Outstanding	9,337,422	9,108,777

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

COMMUNICATIONS SYSTEMS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY

	Common Stock		Additional Paid-in Capital	Retained Earnings (Accumulated Deficit)	Accumulated Other Comprehensive Income (Loss)	Total
	Shares	Amount				
BALANCE AT DECEMBER 31, 2017	8,973,708	$ 448,685	$ 42,006,750	$ 7,328,671	$ (613,379)	$ 49,170,727
Net loss	—	—	—	(6,791,735)	—	(6,791,735)
Issuance of common stock under Employee Stock Purchase Plan	29,614	1,481	100,507	—	—	101,988
Issuance of common stock to Employee Stock Ownership Plan	119,632	5,982	419,908	—	—	425,890
Issuance of common stock under Executive Stock Plan	43,501	2,175	—	—	—	2,175
Share based compensation	—	—	190,721	—	—	190,721
Other share retirements	(8,017)	(401)	(37,387)	9,325	—	(28,463)
Shareholder dividends ($0.14 per share)	—	—	—	(1,280,262)	—	(1,280,262)
Other comprehensive loss	—	—	—	—	(137,914)	(137,914)
BALANCE AT DECEMBER 31, 2018	9,158,438	457,922	42,680,499	(734,001)	(751,293)	41,653,127
Net income	—	—	—	6,469,049	—	6,469,049
Issuance of common stock under Employee Stock Purchase Plan	34,469	1,723	93,437	—	—	95,160
Issuance of common stock to Employee Stock Ownership Plan	132,826	6,641	262,995	—	—	269,636
Issuance of common stock under Executive Stock Plan	156,525	7,826	612,424	—	—	620,250
Share based compensation	—	—	412,776	—	—	412,776
Other share retirements	(229,509)	(11,475)	(1,084,217)	(326,556)	—	(1,422,248)
Shareholder dividends ($0.08 per share)	—	—	—	(759,097)	—	(759,097)
Other comprehensive income	—	—	—	—	53,629	53,629
BALANCE AT DECEMBER 31, 2019	9,252,749	$ 462,637	$ 42,977,914	$ 4,649,395	$ (697,664)	$ 47,392,282

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

COMMUNICATIONS SYSTEMS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31	
	2019	**2018**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income (loss)	$ 6,469,049	$ (6,791,735)
Net income (loss) from discontinued operations, net of tax	6,218,430	(1,860,730)
Net income (loss) from continuing operations	250,619	(4,931,005)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:		
Depreciation and amortization	1,032,797	1,261,235
Share based compensation	412,776	190,721
Deferred taxes	9,534	19,068
Loss on sale of assets	20,368	26,445
Changes in assets and liabilities:		
Trade accounts receivables	(618,663)	(2,270,429)
Inventories	2,469,800	(6,163,982)
Prepaid income taxes	75,298	343,381
Other assets	1,348,481	(924,952)
Accounts payable	(381,293)	1,062,360
Accrued compensation and benefits	1,057,428	888,376
Other accrued liabilities	(515,279)	1,690,598
Income taxes payable	(28,267)	24,202
Net cash provided by (used in) operating activities - continuing operations	5,133,599	(8,783,982)
Net cash provided by operating activities - discontinued operations	5,097,537	4,061,250
Net cash provided by (used in) operating activities	10,231,136	(4,722,732)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Capital expenditures	(424,988)	(693,659)
Purchases of investments	(18,673,530)	(6,580,917)
Proceeds from the sale of fixed assets	—	6,400
Proceeds from the sale of investments	8,972,087	12,122,722
Net cash (used in) provided by investing activities - continuing operations	(10,126,431)	4,854,546
Net cash provided by (used in) investing activities - discontinued operations	4,904,456	(42,605)
Net cash (used in) provided by investing activities	(5,221,975)	4,811,941
CASH FLOWS FROM FINANCING ACTIVITIES:		
Cash dividends paid	(743,276)	(1,492,871)
Proceeds from issuance of common stock, net of shares withheld	715,410	75,700
Purchase of common stock	(1,422,248)	—
Net cash used in financing activities	(1,450,114)	(1,417,171)
EFFECT OF FOREIGN EXCHANGE RATE CHANGES ON CASH	(7,963)	(69,275)
NET INCREASE (DECREASE) IN CASH, CASH EQUIVALENTS AND RESTRICTED CASH	3,551,084	(1,397,237)
CASH, CASH EQUIVALENTS AND RESTRICTED CASH AT BEGINNING OF YEAR	11,056,426	12,453,663
CASH, CASH EQUIVALENTS AND RESTRICTED CASH AT END OF YEAR	$ 14,607,510	$ 11,056,426
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:		
Income taxes refunded	$ (73,151)	$ (32,596)
Interest paid	37,974	38,030
Dividends declared not paid	200,363	184,541
Capital expenditures in accounts payable	10,663	—
Operating right of use assets obtained in exchange for lease obligations	449,995	—

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

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Description of business: Communications Systems, Inc. (herein collectively called "CSI," "our" or the "Company") is a Minnesota corporation organized in 1969 that operates directly and through its subsidiaries located in the United States and the United Kingdom. CSI is principally engaged through its Transition Networks business unit in the manufacture and sale of Ethernet switches, core media conversion products, and other connectivity and data transmission products. Through its JDL Technologies business unit the Company provides technology solutions including virtualization, managed services, wired and wireless network design and implementation, HIPAA-compliant IT services, and converged infrastructure configuration and deployment. Through its Net2Edge business unit, the Company enables telecommunications carriers to connect legacy networks to high-speed networks and services.

The Company classifies its businesses into three segments that correspond to these three business units. Non-allocated general and administrative expenses are separately accounted for as "Other" in the Company's segment reporting. Intersegment revenues are eliminated upon consolidation.

Principles of consolidation: The consolidated financial statements include the accounts of the Company and its subsidiaries. All intercompany transactions and accounts have been eliminated.

Use of estimates: The presentation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. The Company uses estimates based on the best information available in recording transactions and balances resulting from operations. Actual results could differ from those estimates. The Company's estimates consist principally of reserves for doubtful accounts, sales returns, warranty costs, asset impairment evaluations, accruals for compensation plans, self-insured medical and dental accruals, lower of cost or market inventory adjustments, provisions for income taxes and deferred taxes, and depreciable lives of fixed assets.

Cash equivalents: For purposes of the consolidated statements of cash flows, the Company considers all highly liquid investments with a maturity of three months or less at the time of purchase to be cash equivalents. As of December 31, 2019, the Company had $13,929,000 in cash and cash equivalents. Of this amount, $8,761,000 was invested in short-term money market funds that are not considered to be bank deposits and are not insured or guaranteed by the federal deposit insurance company (FDIC) or other government agency. These money market funds seek to preserve the value of the investment at $1.00 per share; however, it is possible to lose money investing in these funds. The remainder is operating cash and certificates of deposit which are fully insured through the FDIC.

Investments: Investments consist of certificates of deposit, corporate notes and bonds, and commercial paper that are traded on the open market and are classified as available-for-sale. Available-for-sale investments are reported at fair value with unrealized gains and losses excluded from operations and reported as a separate component of stockholders' equity, net of tax (see Accumulated other comprehensive loss below).

Inventories: Inventories are stated at the lower of cost or net realizable value. Cost is determined by the first-in, first-out method. Provision to reduce inventories to the lower of cost or net realizable value is made based on a review of excess and obsolete inventories, estimates of future sales, examination of historical consumption rates and the related value of component parts.

Property, plant and equipment: Property, plant and equipment are recorded at cost. Depreciation is computed using the straight-line method. Depreciation included in cost of sales and selling, general and administrative expenses for continuing operations was $1,028,000 and $1,249,000 for 2019 and 2018, respectively. Maintenance and repairs are charged to operations and additions or improvements are capitalized. Items of property sold, retired or otherwise disposed of are removed from the asset and accumulated depreciation accounts and any gains or losses on disposal are reflected in operations.

Intangible Assets: Intangible assets with indefinite useful lives are not amortized, but are tested at least annually for impairment.

Recoverability of long-lived assets: The Company reviews its long-lived assets periodically when impairment indicators exist as required under generally accepted accounting principles. Potential impairment is determined by comparing the carrying value of the assets with expected net cash flows expected to be provided by operating activities of the business or related products. If the sum of the expected future net cash flows is less than the carrying value, an impairment loss would be measured by comparing the amount by which the carrying value exceeds the fair value of the asset.

Warranty: The Company reserves for the estimated cost of product warranties at the time revenue is recognized. We estimate the costs of our warranty obligations based on our warranty policy or applicable contractual warranty, historical experience of known product failure rates, and use of materials and service delivery costs incurred in correcting product failures. Management reviews the estimated warranty liability on a quarterly basis to determine its adequacy.

The following table presents the changes in the Company's warranty liability, included in other accrued liabilities in the consolidated balance sheets, for the years ended December 31, 2019 and 2018, which relate to normal product warranties and a five-year obligation to provide for potential future liabilities for certain network equipment sales:

	Year Ended December 31	
	2019	2018
Beginning balance	$ 554,000	$ 543,000
Amounts charged to expense	10,000	97,000
Actual warranty costs paid	(51,000)	(86,000)
Ending balance	$ 513,000	$ 554,000

Accumulated other comprehensive loss: The components of accumulated other comprehensive loss are as follows:

	Foreign Currency Translation	Unrealized (loss)/gain on securities	Accumulated Other Comprehensive Loss
December 31, 2017	$ (625,000)	$ 12,000	$ (613,000)
Net current period change	(139,000)	1,000	(138,000)
December 31, 2018	$ (764,000)	$ 13,000	$ (751,000)
Net current period change	55,000	(2,000)	53,000
December 31, 2019	$ (709,000)	$ 11,000	$ (698,000)

Revenue recognition: The Company's manufacturing operations (Transition Networks and Net2Edge) recognize revenue upon delivery of the Company's connectivity infrastructure and data transmission products. To determine when revenue should be recognized, it is important to determine when the transfer of control has occurred. The Company has determined that control transfers for these products upon shipment or delivery to the customer, in accordance with the agreed upon shipping terms. As such, the timing of revenue recognition occurs at a specific point in time. Sales are made directly to customers and through distributors. Payment terms for distributors are consistent with the terms of the Company's direct customers. The Company records a provision for sales returns, sales incentives and warranty costs at the time of the sale based on historical experience and current trends.

The Company has determined that the following performance obligations identified in its JDL Technologies, Inc. business unit are transferred over time: managed services and professional services (time and materials ("T&M") and fixed price). JDL's managed services performance obligation is a bundled solution, a series of distinct services that are substantially the same and that have the same pattern of transfer to the customer and are recognized evenly over the term of the contract. T&M professional services arrangements are measured over time with an input method based on hours expended towards satisfying this performance obligation. Fixed price professional service arrangements under a relatively longer-term service will also be measured over time with an input method based on hours expended.

The Company has also identified the following performance obligations within its JDL Technologies business unit that are recognized at a point in time which include resale of third-party hardware and software, installation, arranging for another party to transfer services to the customer, and certain professional services. The resale of third-party hardware and software is recognized at a point in time, when the goods are shipped or delivered to the customer's location, in accordance with the agreed upon shipping terms. Installation services are recognized at a point in time when the services are completed. The service the Company provides to arrange for another party to transfer services to the customer is satisfied at a point in time as the Company has transferred control upon the service first being made available to the customer by the third party vendor, which are required to be presented on a net basis. Depending on the nature of the service, certain professional services transfer control at a point in time. The Company evaluates these circumstances on a case by case basis to determine if revenue should be recognized over time or at a point in time. See Note 2 for further discussion regarding revenue recognition.

Research and development: Research and development costs consist of outside testing services, equipment and supplies associated with enhancing existing products and developing new products. Research and development costs are expensed when incurred and totaled $3,600,000 in 2019 and $3,542,000 in 2018.

Employee Retirement Benefits: The Company has an Employee Savings Plan (401(k)) and matches a percentage of employee contributions up to six percent of compensation. Contributions to the plan in 2019 and 2018 were $401,000 and $450,000, respectively.

Net income per share: Basic net income per common share is based on the weighted average number of common shares outstanding during each year. Diluted net income per common share adjusts for the dilutive effect of potential common shares outstanding. The Company's only potential common shares outstanding are stock options and shares associated with the long-term incentive compensation plans, which resulted in a dilutive effect of 65,163 shares for 2019 and no dilutive effect in 2018. The Company calculates the dilutive effect of outstanding options and unvested shares using the treasury stock method. Options totaling 860,539 were excluded from the calculation of diluted earnings per share for year ended December 31, 2019, because the exercise price was greater than the average market price of common stock during the year and deferred stock awards totaling 178,278 shares were not included because of unmet performance conditions. Due to the net loss in 2018, there was no dilutive impact from outstanding stock options or unvested shares. Options totaling 1,320,492 would have been excluded from the calculation of diluted earnings per share for year ended December 31, 2018, because the exercise price was greater than the average market price of common stock during the year and deferred stock awards totaling 265,491 shares would not have been included because of unmet performance conditions.

Share based compensation: The Company accounts for share based compensation awards on a fair value basis. The estimated grant date fair value of each stock-based award is recognized in income over the requisite service period (generally the vesting period). The estimated fair value of each option is calculated using the Black-Scholes option-pricing model.

Accounting standards issued:
In June 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2016-13, "Financial Instruments - Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments." The amendments in this update replace the incurred loss impairment methodology in current U.S. GAAP with a methodology that reflects expected credit losses. This ASU is intended to provide financial statement users with more decision-useful information about expected credit losses and is effective for annual periods and interim periods for those annual periods beginning after December 15, 2022, which for us is the first quarter ending March 31, 2023. Entities may early adopt beginning after December 15, 2018. We are currently evaluating the impact of the adoption of ASU 2016-13 on our consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, "Fair Value Measurement." This new standard requires changes to the disclosure requirements for fair value measurements for certain Level 3 items and specifies that some of the changes must be applied prospectively, while others should be applied retrospectively. This standard is effective for public business entities in fiscal years beginning after December 15, 2019, and for interim periods within those fiscal years, with early adoption permitted. We are currently evaluating the impact of the adoption of ASU 2018-13 on our consolidated financial statements.

Accounting standards adopted:
In February 2016, the FASB issued ASU 2016-02, "Leases (Topic 842)", which amends existing guidance and requires an entity to recognize both assets and liabilities arising from financing and operating leases, along with additional qualitative and quantitative disclosures. The new standard is effective for fiscal years beginning after December 15, 2018, including interim periods within that reporting period. The Company adopted the accounting standard effective January 1, 2019. Please see Note 3 for the required disclosures related to the impact of adopting this standard.

NOTE 2 – REVENUE RECOGNITION

In accordance with Accounting Standards Codification ("ASC") 606, revenue is recognized when a customer obtains control of promised goods or services. The amount of revenue recognized reflects the consideration that the Company expects to receive in exchange for these goods or services.

Transition Networks

The Company's Transition Networks business unit develops and manufactures Power over Ethernet (PoE) switches, media converters, network interface cards (NICs), Ethernet switches and other connectivity products that offer the ability to affordably integrate the benefits of fiber optics into any data network as well as provide connectivity and power to end devices in the IoT ecosystem. Transition sells its products through distributors, resellers, integrators, and OEMs.

The Company has determined that revenue recognition for its Transition Networks business unit occurs upon delivery of the Company's connectivity infrastructure and data transmission products. To determine when revenue should be recognized, it is important to determine when the transfer of control has occurred. The Company has determined that control transfers for these products upon shipment or delivery to the customer, in accordance with the agreed upon shipping terms. As such, the timing of revenue recognition occurs at a specific point in time.

JDL Technologies, Inc.

The Company's JDL Technologies, Inc. business unit is a managed service provider and a value-added reseller supplying IT solutions focused on IT service and support management; network design, deployment and integration; cloud, hosted and virtualized services; and network operations center management. Major technology solutions include networking, virtualization, cloud and infrastructure services, most of which are available under JDL managed service contracts.

The Company has determined that the following performance obligations identified in its JDL Technologies, Inc. business unit are transferred over time: managed services and professional services (time and materials ("T&M") and fixed price). JDL's managed services performance obligation is a bundled solution, a series of distinct services that are substantially the same and that have the same pattern of transfer to the customer and are recognized evenly over the term of the contract. T&M professional services arrangements are measured over time with an input method based on hours expended towards satisfying this performance obligation. Fixed price professional service arrangements under a relatively longer-term service will also be measured over time with an input method based on hours expended.

The Company has also identified the following performance obligations within its JDL Technologies business unit that are recognized at a point in time which include resale of third-party hardware and software, installation, arranging for another party to transfer services to the customer, and certain professional services. The resale of third-party hardware and software is recognized at a point in time, when the goods are shipped or delivered to the customer's location, in accordance with the agreed upon shipping terms. Installation services are recognized at a point in time when the services are completed. The service the Company provides to arrange for another party to transfer services to the customer is satisfied at a point in time as the Company has transferred control upon the service first being made available to the customer by the third party vendor, which are required to be presented on a net basis. Depending on the nature of the service, certain professional services transfer control at a point in time. The Company evaluates these circumstances on a case by case basis to determine if revenue should be recognized over time or at a point in time.

Net2Edge Limited

The Company's Net2Edge division manufactures and markets Ethernet based network access devices. The Company principally sells its products through approved partners and integrators outside the United States. The Company has determined that the performance obligation in the Net2Edge division is recognized at a point in time, upon the delivery of its connectivity infrastructure and data transmission products.

Significant Judgments

To determine the transaction price, the Company estimates the amount of variable consideration at the outset of the contract, depending on the facts and circumstances relative to the contract. The Company may provide credits or incentives to its customers, which are accounted for as either variable consideration or consideration payable to the customer. The Company estimates product returns based on historical return rates. The Company constrains (reduces) the estimates of variable consideration such that it is probable that a significant revenue reversal of previously recognized revenue will not occur throughout the life of the contract. When determining if variable consideration should be constrained, management considers whether there are factors outside the Company's control that could result in a significant reversal of revenue. In making these assessments, the Company considers the likelihood and magnitude of a potential reversal of revenue. The Company will assess if any incentives it offers to its customer is a consideration payable. The Company accounts for consideration payable to a customer as a reduction of the transaction price, and therefore, of revenue. For contracts with more than one performance obligation, the consideration is allocated between separate products and services based on their stand-alone selling prices. Judgment is required to determine standalone selling prices for each distinct performance obligation. The Company generally determines standalone selling prices based on the actual prices charged to customers and has an established range of amounts that fall within stand-alone selling price for its distinct performance obligations. The Company evaluates this range quarterly.

Costs to Obtain or Fulfill a Contract

The Company evaluates "Other Assets and Deferred Costs" (ASC 340-40), for the accounting for certain costs to obtain and fulfill contracts (or, in some cases, an anticipated contract) with a customer. ASC 340-40 is applicable only to incremental contract costs, those that an entity would not have incurred if the contract had not been obtained, and requires the capitalization of these costs as well as provides guidance on the amortization and impairment considerations. The Company elects the practical expedient and expenses certain costs to obtain contracts when applicable. There were no material costs to obtain a contract in the years ended December 31, 2019 and 2018.

Transaction Price Allocated to Future Performance Obligations

To determine the allocation of the transaction price and amounts allocated to the performance obligations, the Company first determined the standalone selling price for each distinct performance obligation in the contract in order to determine the allocations of the transaction price in proportion to the standalone selling price for each performance obligation in the contract in accordance with ASC 606-10-32-31 and 32-33. Judgment is required to determine standalone selling price for each distinct performance obligation. The Company generally determines standalone selling prices based on the actual prices charged to customers and has an established range of amounts that fall within stand-alone selling price for its distinct performance obligations. The Company evaluates this range quarterly.

Practical Expedients and Exemptions

The Company adopted various practical expedients and policy elections related to the accounting for significant finance components, sales taxes, shipping and handling, costs to obtain a contract and immaterial promised goods or services. The practical expedient to disclose the unfulfilled performance obligations was not made as they are expected to be fulfilled within one year.

Disaggregation of revenue

Revenues are recognized when control of the promised goods or services is transferred to our customers, in an amount that best reflects the consideration we expect to receive in exchange for those goods or services. In accordance with ASC 606-10-50-5, the following tables present how we disaggregate our revenues, which is different for each segment.

For Transition Networks, we analyze revenue by region and product group, which is as follows for the years ended December 31, 2019 and 2018:

	Transition Networks Revenue by Region			
		2019		2018
North America	$	39,748,000	$	31,059,000
Europe, Middle East, Africa ("EMEA")		2,651,000		2,017,000
Rest of World		2,461,000		3,394,000
	$	44,860,000	$	36,470,000

	Transition Networks Revenue by Product Group			
		2019		2018
Media converters	$	20,005,000	$	20,226,000
Ethernet switches and adapters		18,845,000		9,694,000
Other products		6,010,000		6,550,000
	$	44,860,000	$	36,470,000

For JDL, we analyze revenue by customer group, which is as follows for the years ended December 31, 2019 and 2018:

	JDL Revenue by Customer Group			
		2019		2018
Education	$	1,926,000	$	2,651,000
Healthcare and commercial clients		2,815,000		2,483,000
	$	4,741,000	$	5,134,000

The Company does not currently analyze revenue for Net2Edge on a disaggregated basis. Revenues from Net2Edge were $2,330,000 and $1,700,000 for the years ended December 31, 2019 and 2018, respectively.

Contract Balances

The Company does not have material costs to obtain a contract or material contract liabilities.

NOTE 3 – LEASES

In February 2016, FASB issued ASU No. 2016-02,*Leases* (ASC Topic 842), which is intended to improve financial reporting of leasing transactions by requiring organizations that lease assets to recognize assets and liabilities for the rights and obligations created by leases that extend more than twelve months from the date of the balance sheet. This accounting update also requires additional disclosures surrounding the amount, timing, and uncertainty of cash flows arising from leases. This standard is effective for financial statements issued for annual and interim periods beginning after December 15, 2018 for public business entities.

The Company adopted this standard as of January 1, 2019, the beginning of the period of adoption. The Company has elected the package of practical expedients permitted in ASC Topic 842. Adoption of the new standard resulted in the recording of right of use ("ROU") assets and lease liabilities of approximately $280,000 and $259,000, respectively as of January 1, 2019. ROU assets represent our right to use an underlying asset for the lease term, while lease liabilities represent our obligation to make lease payments arising from the lease. Lease ROU assets and liabilities are recognized at the commencement date of a lease based on the present value of lease payments over the lease term. Because the rate implicit in each individual lease is not readily determinable, the Company uses its incremental borrowing rate to determine the present value of the lease payments. Adoption of the standard did not materially impact the Company's consolidated balance sheets, consolidated statement of income (loss) and comprehensive income (loss) or consolidated statements of cash flows.

The Company has entered into operating leases for two office locations, including one in February 2019. These leases have remaining lease terms of 5 to 8 years. One of the leases includes two options to extend the lease for 5 years each, and the other lease includes an option to terminate the lease in 2022. One of the leases includes a 3% rent adjustment on each anniversary of the lease. As of December 31, 2019, total ROU assets and operating lease liabilities were $368,000 and $360,000, respectively. All operating lease expense is recognized on a straight-line basis over the lease term. In the years ended December 31, 2019 and 2018, the Company recognized $124,000 and $223,000 in lease expense, respectively.

Information related to the Company's ROU assets and related lease liabilities were as follows:

		Year Ended December 31, 2019
Cash paid for operating leases	$	112,000
Right-of-use assets obtained in exchange for new operating lease obligations(1)		450,000

	As of December 31, 2019
Weighted-average remaining lease term	3.3 years
Weighted-average discount rate	4.5%

(1) Includes $280,000 for operating leases existing on January 1, 2019 and $188,000 for operating leases that commenced in the first quarter of 2019.

Maturities of lease liabilities as of December 31, 2019 were as follows:

2020	$	130,000
2021		131,000
2022		89,000
2023		48,000
2024		4,000
Total lease payments		402,000
Less imputed interest		(42,000)
Total operating lease liabilities	$	360,000

Future minimum lease commitments under operating leases based on accounting standards applicable as of December 31, 2018 were as follows:

Year Ending December 31:		
2019	$	106,000
2020		86,000
2021		86,000
2022		50,000
	$	328,000

As of December 31, 2019, the Company does not have any additional future operating lease obligations that have not yet commenced.

NOTE 4 – DISCONTINUED OPERATIONS

On April 5, 2019, the Company sold its Suttle FutureLink™ Fiber business line, including inventory, equipment, and customer relationships, to PPC Broadband Inc. ("PPC"). The transaction was structured as an Asset Purchase Agreement with a simultaneous signing and closing. The sale price was $5,000,000 cash, of which $500,000 was deferred into an escrow account until certain criteria are met and is recorded as restricted cash within the consolidated balance sheet. The Company recognized a gain on the sale of inventory and capital equipment totaling $2,967,000 during the second quarter of 2019. Concurrent with the closing of the transaction, Suttle and PPC entered into a Transition Services Agreement under which Suttle agreed to manufacture products related to the FutureLink™ Fiber business line until September 30, 2019, to ensure seamless supply to the customer base.

On March 11, 2020, the Company sold the remainder of its Suttle business lines, including the SoHo, MediaMAX, and SpeedStar brands and inventory as well as working capital, certain capital equipment and customer relationships to Oldcastle Infrastructure, Inc. ("Oldcastle") for $8,000,000. Oldcastle, a wholly-owned subsidiary of Ireland based CRH PLC, will operate the majority of the acquired Suttle business through its wholly-owned subsidiary, Primex Technologies, Inc. Concurrent with the closing of the transaction, the Company and Oldcastle entered into a Transition Services Agreement ("TSA") under which Suttle will continue to manufacture products for Oldcastle for six months, to ensure seamless supply and quality assurance to the existing customer base. Concurrently with the closing of the transaction and the TSA, the Company and Oldcastle also entered into a lease agreement under which Oldcastle will lease two buildings in Hector, Minnesota, where Suttle had conducted operations. Base rents under the lease agreement range from $6,970 to $7,180 per month. The parties intend to work with Suttle's existing suppliers to ensure continued support and delivery of all Suttle products during the transition period. The associated assets and liabilities related to this sale are classified as held for sale in the consolidated balance sheets. The presentation of discontinued operations has been retrospectively applied to all prior periods presented.

The assets and liabilities of this discontinued operation that are classified as held for sale are as follows:

	December 31, 2019	December 31, 2018
Trade accounts receivable	$ 2,235,000	$ 3,808,000
Inventories	3,009,000	4,177,000
Other current assets	93,000	91,000
Total current assets	$ 5,337,000	$ 8,076,000
Property, plant, and equipment	$ 883,000	$ 2,115,000
Total noncurrent assets	$ 883,000	$ 2,115,000
Total assets held for sale	$ 6,220,000	$ 10,191,000
Accounts payable	$ 1,111,000	$ 1,309,000
Other accrued liabilities	82,000	71,000
Total liabilities held for sale	$ 1,193,000	$ 1,380,000

The financial results of the discontinued operations are as follows:

	Year Ended December 31 2019	2018
Sales	$ 18,879,000	$ 23,394,000
Cost of sales	12,965,000	19,709,000
Selling, general and administrative expenses	2,684,000	5,129,000
Restructuring expenses	—	364,000
(Gain) loss on sale of assets	(2,990,000)	63,000
Other income	—	(11,000)
Operating income before income taxes	6,220,000	(1,860,000)
Income tax expense	2,000	1,000
Income (loss) from discontinued operations	$ 6,218,000	$ (1,861,000)

During the year ended December 31, 2018, the Company recorded $364,000 in restructuring expense. This consisted of severance and related benefits costs due to organizational restructuring within the Suttle business segment. The Company paid $364,000 in restructuring charges during 2019 and had no restructuring accruals recorded at December 31, 2019.

NOTE 5 –CASH EQUIVALENTS AND INVESTMENTS

The following tables show the Company's cash equivalents and available-for-sale securities' amortized cost, gross unrealized gains, gross unrealized losses and fair value by significant investment category recorded as cash equivalents or short and long term investments as of December 31, 2019 and December 31, 2018:

December 31, 2019

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Cash Equivalents	Short-Term Investments	Long-Term Investments
Cash equivalents:							
Money Market funds	$ 8,761,000	$ —	$ —	$ 8,761,000	$ 8,761,000	$ —	$ —
Subtotal	$ 8,761,000	$ —	$ —	$ 8,761,000	$ 8,761,000	$ —	$ —
Investments:							
Commercial Paper	8,695,000	—	(1,000)	8,694,000	—	8,694,000	—
Corporate Notes/Bonds	756,000	—	—	756,000	—	756,000	—
Convertible Debt	250,000	—	—	250,000	—	—	250,000
Subtotal	9,701,000	—	(1,000)	9,700,000	—	9,450,000	250,000
Total	$ 18,462,000	$ —	$ (1,000)	$ 18,461,000	$ 8,761,000	$ 9,450,000	$ 250,000

December 31, 2018

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Cash Equivalents	Short-Term Investments	Long-Term Investments
Cash equivalents:							
Money Market funds	$ 8,428,000	$ —	$ —	$ 8,428,000	$ 8,428,000	$ —	$ —
Total	$ 8,428,000	$ —	$ —	$ 8,428,000	$ 8,428,000	$ —	$ —

The Company tests for other than temporary losses on a quarterly basis and has considered the unrealized losses indicated above to be temporary in nature. The Company intends to hold the investments until it can recover the full principal amount and has the ability to do so based on other sources of liquidity. The Company expects such recoveries to occur prior to the contractual maturities. All unrealized losses as of December 31, 2019 were in a continuous loss position for less than twelve months and are not deemed to be other than temporarily impaired as of December 31, 2019.

The Company did not recognize any gross realized gains or gross realized losses during the years ending December 31, 2019 and 2018, respectively. If the Company had realized gains or losses, they would be included within investment and other income in the accompanying consolidated statements of income (loss).

NOTE 6 - INVENTORIES

Inventories consist of:

	December 31	
	2019	2018
Finished goods	$ 6,728,000	$ 7,140,000
Raw and processed materials	1,803,000	4,859,000
	$ 8,531,000	$ 11,999,000

NOTE 7 - PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment and the estimated useful lives are as follows:

	Estimated useful life	December 31	
		2019	2018
Land		$ 2,965,000	$ 2,965,000
Buildings and improvements	3-40 years	8,727,000	8,782,000
Machinery and equipment	3-15 years	9,347,000	11,406,000
Furniture and fixtures	3-10 years	3,628,000	3,750,000
Construction in progress		—	127,000
		24,667,000	27,030,000
Less accumulated depreciation		(16,429,000)	(18,183,000)
		$ 8,238,000	$ 8,847,000

NOTE 8 –INTANGIBLE ASSETS

The Company's identifiable intangible assets with finite lives are being amortized over their estimated useful lives and are included within other assets in the consolidated balance sheets and were as follows:

	December 31, 2019				
	Gross Carrying Amount	Accumulated Amortization	Impairment Loss	Foreign Currency Translation	Net
Trademarks	$ 98,000	$ (78,000)	$ —	$ (20,000)	$ —
Customer relationships	491,000	(230,000)	(154,000)	(107,000)	—
Technology	229,000	(189,000)	—	(40,000)	—
	$ 818,000	$ (497,000)	$ (154,000)	$ (167,000)	$ —

	December 31, 2018									
	Gross Carrying Amount		Accumulated Amortization		Impairment Loss		Foreign Currency Translation		Net	
Trademarks	$	98,000	$	(74,000)	$	—	$	(19,000)	$	5,000
Customer relationships		491,000		(230,000)		(154,000)		(107,000)		—
Technology		229,000		(178,000)		—		(51,000)		—
	$	818,000	$	(482,000)	$	(154,000)	$	(177,000)	$	5,000

Amortization expense on these identifiable intangible assets was $5,000 and $12,000 in 2019 and 2018 respectively. The amortization expense is included in selling, general and administrative expenses.

NOTE 9 – COMMITMENTS AND CONTINGENCIES

Line of credit: The Company has a $15,000,000 credit facility from Wells Fargo Bank. The Company had no outstanding borrowings against the credit facility at December 31, 2019 and 2018. Due to the revolving nature of loans under our credit facility, additional borrowings and periodic repayments and re-borrowings may be made until the maturity date. The total amount available for borrowings under this credit facility at December 31, 2019 was $7,335,000, based on the borrowing base calculation. Interest on borrowings on the credit facility is set at LIBOR plus 2.0% (3.8% at December 31, 2019). The credit agreement expires August 12, 2021 and is secured by assets of the Company. The credit agreement contains financial covenants including a minimum liquidity balance of $10,000,000. Liquidity is defined as the sum of unrestricted cash, marketable securities and the availability on the line of credit.
As of December 31, 2019, the Company had no other material commitments (either cancelable or non-cancelable) for capital expenditures or other purchase commitments related to ongoing operations.

Long-term compensation plans: The Company has a long-term incentive plan that provides long-term competitive compensation to enable the Company to attract and retain qualified executive talent and to reward employees for achieving goals and improving company performance. The plan provides grants of "performance units" made at the beginning of performance periods and paid at the end of the period if performance goals are met. Awards were previously made every other year and are paid following the end of the cycle with annual vesting. Payment in the case of retirement, disability or death will be on a pro rata basis. The Company recognized expense/(income) of $164,000 and $ (11,000) in 2019 and 2018, respectively. Accrual balances for long-term compensation plans at December 31, 2019 and 2018 were $164,000 and $0, respectively. There were no award payouts in 2019 and 2018. Awards under the 2017 to 2019 and 2018 to 2020 plans will be paid out 50% in cash and 50% in stock. Awards under the 2019 to 2021 plans will be paid out 75% in stock and 25% in cash. The stock portion of these awards are treated as equity plans and included within the Stock Compensation footnote within the Deferred Stock Outstanding section below.

Other contingencies: In the ordinary course of business, the Company is exposed to legal actions and claims and incurs costs to defend against these actions and claims. Company management is not aware of any outstanding or pending legal actions or claims that would materially affect the Company's financial position, results of operations, or cash flows.

NOTE 10 – STOCK COMPENSATION

2011 Executive Incentive Compensation Plan

On March 28, 2011 the Board adopted and on May 19, 2011 the Company's shareholders approved the Company's 2011 Executive Incentive Compensation Plan ("2011 Incentive Plan"). The 2011 Incentive Plan authorizes incentive awards to officers, key employees and non-employee directors in the form of options (incentive and non-qualified), stock appreciation rights, restricted stock, restricted stock units, performance stock units ("deferred stock"), performance cash units, and other awards in stock, cash, or a combination of stock and cash. The 2011 Incentive Plan, as amended, allows the issuance of up to 2,500,000 shares of common stock.

During 2019, stock options covering 100,769 shares were awarded to key executive employees and non-employee directors, which options expire seven years from the date of award and generally vest 25% each year beginning one year after the date of award. The Company also granted deferred stock awards of 157,907 shares to key employees during 2019 under the Company's long-term incentive plan for the 2019 to 2021 period. These awards vest over three years with the first vesting date being March 28, 2020.

At December 31, 2019, 365,080 shares have been issued under the 2011 Incentive Plan, 1,433,699 shares are subject to currently outstanding options, deferred stock awards, and unvested restricted stock units, and 701,221 shares remained available for future issuance under the 2011 Incentive Plan.

Stock Option Plan for Directors

Shares of common stock are reserved for issuance to non-employee directors under options granted by the Company prior to 2011 under its Stock Option Plan for Non-Employee Directors (the "Director Plan"). Under the Director Plan nonqualified stock options to acquire 3,000 shares of common stock were automatically granted to each non-employee director concurrent with annual meetings of shareholders in 2010 and earlier years and vested immediately. The exercise price of options granted was the fair market value of the common stock on the date of the respective shareholder meetings. Options granted under the Director Plan expire 10 years from date of grant. No options have been granted under the Director Plan since 2011 when the Company amended the Director Plan to prohibit future option grants. As of December 31, 2019, there were 18,000 shares subject to outstanding options under the Director Plan.

Stock Options Outstanding

The following table summarizes changes in the number of outstanding stock options under the Director Plan, Stock Plan and the 2011 Incentive Plan during the two years ended December 31, 2019.

	Options	Weighted average exercise price per share	Weighted average remaining contractual term
Outstanding – December 31, 2017	1,172,659	$ 8.63	4.55 years
Awarded	278,665	3.43	
Exercised	—	—	
Forfeited	(70,832)	8.56	
Outstanding – December 31, 2018	1,380,492	$ 7.56	4.18 years
Awarded	100,769	2.69	
Exercised	(151,950)	4.08	
Forfeited	(198,839)	9.33	
Outstanding – December 31, 2019	1,130,472	7.28	3.48 years
Exercisable at December 31, 2019	871,430	$ 8.33	2.96 years
Expected to vest December 31, 2019	1,130,472	7.28	3.48 years

The fair value of awards issued under the Company's stock option plan is estimated at grant date using the Black-Scholes option-pricing model. The following table displays the assumptions used in the model.

	Year Ended December 31	
	2019	2018
Expected volatility	31.3%	28.6%
Risk free interest rate	2.2%	2.7%
Expected holding period	6 years	6 years
Dividend yield	3.0%	4.1%

Total unrecognized compensation expense was $61,000 as of December 31, 2019, which is expected to be recognized over the next 1.9 years. The aggregate intrinsic value of all outstanding options, exercisable options, and options expected to vest (the amount by which the market price of the stock on the last day of the period exceeded the market price of the stock on the date of grant) was $1,178,000 based on the Company's stock price at December 31, 2019. The intrinsic value of options exercised during the year was $380,000 in 2019 and $0 in 2018. Net cash proceeds from the exercise of all stock options were $0 in 2019 and 2018. The following table summarizes the status of stock options outstanding at December 31, 2019:

Range of Exercise Prices	Shares	Weighted Average Remaining Option Life	Weighted Average Exercise Price
$2.54 to $5.24	449,989	5.2 years	$ 3.57
$5.25 to $7.49	256,433	3.3 years	6.58
$7.50 to $9.74	0	0 years	0.00
$9.75 to $11.99	347,863	1.8 years	11.35
$12.00 to $14.15	76,187	1.2 years	12.97

The Company receives an income tax benefit related to the gains received by officers and key employees who make disqualifying dispositions of stock received on exercise of qualified incentive stock options and on non-qualified options. The amount of tax benefit received by the Company was $0 in both 2019 and 2018. The tax benefit amounts have been credited to additional paid-in capital.

Deferred Stock Outstanding

The following table summarizes the changes in the number of deferred stock shares under the Stock Plan and 2011 Incentive Plan over the period from December 31, 2017 to December 31, 2019:

	Shares	Weighted Average Grant Date Fair Value
Outstanding – December 31, 2017	190,524	$ 6.60
Granted	163,002	3.56
Vested	(29,708)	10.51
Forfeited	(53,752)	5.31
Outstanding – December 31, 2018	270,066	4.48
Granted	161,107	2.76
Vested	(4,575)	4.56
Forfeited	(105,371)	3.90
Outstanding – December 31, 2019	321,227	3.37

The grant date fair value is calculated based on the Company's closing stock price as of the grant date. As of December 31, 2019, the total unrecognized compensation expense related to the deferred stock shares was $266,000 and is expected to be recognized over a weighted-average period of 2.0 years.

Restricted Stock Units Outstanding

The following table summarizes the changes in the number of restricted stock units under the 2011 Incentive Plan over the period December 31, 2017 to December 31, 2019:

	Shares	Weighted Average Grant Date Fair Value
Outstanding – December 31, 2017	13,793	6.33
Vested	(13,793)	6.33
Outstanding – December 31, 2018	—	—
Vested	—	—
Outstanding – December 31, 2019	—	—

The grant date fair value is calculated based on the Company's closing stock price as of the grant date. As of December 31, 2019, the total unrecognized compensation expense related to the restricted stock units was $0.

Compensation Expense

Share-based compensation expense is recognized based on the fair value of awards granted over the vesting period of the award. Share-based compensation expense recognized for 2019 and 2018 was $413,000 and $191,000 before income taxes and $326,000 and $151,000 after income taxes, respectively. Share-based compensation expense is recorded as a part of selling, general and administrative expenses.

Employee Stock Purchase Plan

Under the Company's Employee Stock Purchase Plan ("ESPP"), employees are able to acquire shares of common stock at 85% of the price at the end of each current quarterly plan term. The most recent term ended December 31, 2019. The ESPP is considered compensatory under current rules. At December 31, 2019, after giving effect to the shares issued as of that date, 89,122 shares remain available for purchase under the ESPP.

Employee Stock Ownership Plan (ESOP)

All eligible employees of the Company participate in the ESOP after completing one year of service. Contributions are allocated to each participant based on compensation and vest 20% after two years of service and incrementally thereafter, with full vesting after six years. At December 31, 2019, the ESOP held 786,026 shares of the Company's common stock, all of which have been allocated to the accounts of eligible employees. Contributions to the plan are determined by the Board of Directors and can be made in cash or shares of the Company's stock. The 2019 ESOP contribution was $407,584 for which the Company issued 66,059 shares in March 2020. The 2018 ESOP contribution was $256,462 for which the Company issued 126,336 shares in 2019.

NOTE 11 – COMMON STOCK

In August 2019, the Company announced the adoption of a $2.0 million stock repurchase program running through the end of 2020. Under the stock repurchase program, repurchases can be made from time to time using a variety of methods, including through open market purchases or in privately negotiated transactions in compliance with the rules of the United States Securities and Exchange Commission and other applicable legal requirements. This new $2.0 million repurchase program replaces a stock repurchase program that the Company had adopted in 2008. At December 31, 2019, there remained $625,583 under this repurchase program.

NOTE 12 - INCOME TAXES

Income tax (benefit) expense from continuing operations consists of the following:

	Year Ended December 31	
	2019	2018
Current year income taxes (benefit):		
Federal	$ (45,000)	$ 3,000
State	20,000	133,000
Foreign	—	249,000
	(25,000)	385,000
Deferred income taxes:		
Federal	$ 10,000	$ 19,000
	10,000	19,000
	$ (15,000)	$ 404,000

The Company's Austin Taylor Communications, Ltd. unit operated in the United Kingdom (U.K.) and is subject to U.K. rather than U.S. income taxes. Austin Taylor had no activity in 2019 and 2018. At the end of 2019, Austin Taylor's net operating loss carry-forward was $7,462,000. The Company remains uncertain whether it will be able to generate the future income needed to realize the tax benefit of the carry-forward. Accordingly, the Company has continued to maintain its deferred tax valuation allowance against any potential carry-forward benefit from Austin Taylor.

Net2Edge, Ltd., formally known as Transition Networks EMEA, Ltd., operates in the U.K. and is subject to U.K. rather than U.S. income taxes. Net2Edge, Ltd. had pretax losses of $1,519,000 and $2,772,000 in 2019 and 2018, respectively. At the end of 2019, Net2Edge, Ltd.'s net operating loss carry-forward was $8,745,000, of which a full valuation allowance is recorded.

In 2007, Transition Networks China began operations in China and is subject to Chinese taxes rather than U.S. income taxes. Transition Networks China had no activity in 2019 and 2018. At the end of 2019, Transition Networks China's net operating loss carry-forward was $29,000. Due to the history of losses in China, the Company remains uncertain whether it will be able to generate the future income needed to realize the tax benefit of the carry-forward. Accordingly, the Company has continued to maintain its deferred tax valuation reserve against any potential carry-forward benefit. Transition Networks China ceased operations in 2014 and incurred minor non-operating expenditures in 2015 to close the operations. As of 2016, Transition Networks China no longer has any operational activity.

Suttle Costa Rica operated in Costa Rica and was subject to Costa Rica income taxes. As of December 31, 2019, the amount of unremitted earnings outside of the United States was not significant to the Company's liquidity and was available to fund investments abroad. The Company closed its Costa Rica facility in 2017 and no longer has any operational activity in Costa Rica. Suttle Costa Rica had no activity in 2019 and pretax losses of $45,000 in 2018. At the end of 2019, Suttle Costa Rica's net operating loss carry-forward was $0.

The provision for income taxes for continuing operations varied from the federal statutory tax rate as follows:

	Year Ended December 31	
	2019	2018
Tax at U.S. statutory rate	21.0%	21.0%
State income taxes, net of federal benefit	26.2	(0.4)
Foreign income taxes, net of foreign tax credits	98.9	(6.2)
Other nondeductible items	(2.1)	(0.6)
Effect of increase in uncertain tax positions	17.2	(0.4)
Change in valuation allowance	(181.7)	(20.6)
Expense of prior year tax receivable	—	(5.5)
Other	14.0	3.8
Effective tax rate	(6.5%)	(8.9%)

Deferred tax assets and liabilities as of December 31 related to the following:

	2019	2018
Deferred tax assets:		
Allowance for doubtful accounts	$ 29,000	$ 25,000
Inventory	1,254,000	1,718,000
Accrued and prepaid expenses	302,000	348,000
Lease liability	44,000	—
Domestic net operating loss carry-forward	2,141,000	3,425,000
Long-term compensation plans	248,000	233,000
Nonemployee director stock compensation	514,000	499,000
Other stock compensation	51,000	19,000
Intangible assets	253,000	275,000
Foreign net operating loss carry-forwards and credits	3,087,000	2,885,000
Federal and state credits	767,000	845,000
Other	17,000	17,000
Gross deferred tax assets	8,707,000	10,289,000
Valuation allowance	(8,170,000)	(9,834,000)
Net deferred tax assets	537,000	455,000
Deferred tax liabilities		
Depreciation	(485,000)	(436,000)
Lease right-of-use asset	(42,000)	—
Net deferred tax liability	(527,000)	(436,000)
Total net deferred tax asset	$ 10,000	$ 19,000

The Company assesses available positive and negative evidence to estimate if sufficient future taxable income will be generated to use the existing deferred tax assets. A significant piece of objective negative evidence evaluated was the cumulative loss incurred over the three-year period ending December 31, 2019. This objective evidence limits the ability to consider other subjective evidence such as the projections for future growth. On the basis of this evaluation, as of December 31, 2019, a valuation allowance of $8,170,000 has been recorded to reflect the portion of the deferred tax asset that is more likely to not be realized. The amount of the deferred tax asset considered realizable, however, could be adjusted if estimates of future taxable income during the carryforward period are reduced or increased or if objective negative evidence in the form of cumulative losses is no longer present and additional weight may be given to subjective evidence such as the Company's projections for growth.

At December 31, 2019, the Company has a federal net operating loss carryforward from 2015 through 2019 activity of approximately $7,687,000 that is available to offset future taxable income and begins to expire in 2035. The Company also has a federal capital loss carryforward from 2018 of approximately $1,930,000 that is available to offset future capital gains and expires in 2023.

During 2015, the Company engaged in a research and development tax credit study for the tax years 2011 to 2014. As a result of this study, the Company claimed $1,554,000 of federal and $1,024,000 of state research and development credits. The Company amended prior year tax returns to claim these credits and offset prior year taxes paid. Credits not used to reduce taxes are available to be carried forward. At December 31, 2019, the Company has an estimated federal research and development credit carryforward of approximately $467,000 and a state research and development credit carryforward of approximately $594,000.

The Company assesses uncertain tax positions in accordance with ASC 740. Under this method, the Company must recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from these uncertain tax positions are measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate resolution. The Company's practice is to recognize interest and penalties related to income tax matters in income tax expense.

Changes in the Company's uncertain tax positions are summarized as follows:

	2019	2018
Uncertain tax positions – January 1	$ 60,000	$ 41,000
Gross increases - current period tax positions	41,000	28,000
Settlements	—	—
Expiration of statute of limitations	—	(9,000)
Uncertain tax positions – December 31, 2019	$ 101,000	$ 60,000

Included in the balance of uncertain tax positions at December 31, 2019 are $101,000 of tax benefits that if recognized would affect the tax rate. The Company's unrecognized tax benefits will be reduced by $1,000 in the next twelve months due to statute of limitations expirations. There are no other expected significant changes in the Company's uncertain tax positions in the next twelve months. The Company's income tax liability accounts included accruals for interest and penalties of $0 at December 31, 2019. The Company's 2019 income tax expense decreased by $0 due to net decreases for accrued interest and penalties.

The Company's federal and state tax returns and tax returns it has filed in Costa Rica and the United Kingdom are open for review going back to the 2016 tax year.

NOTE 13 - INFORMATION CONCERNING INDUSTRY SEGMENTS AND MAJOR CUSTOMERS

As previously noted, the Company classifies its remaining businesses into three segments as follows:

- Transition Networks develops and manufactures PoE switches, media converters, NICs, Ethernet switches and other connectivity products that offer the ability to affordably integrate the benefits of fiber optics into any data network as well as provide connectivity and power to end devices in the IoT ecosystem;
- JDL Technologies provides technology solutions that address prevalent IT challenges, including virtualization and cloud solutions, managed services, wired and wireless network design and implementation, and converged infrastructure configuration and deployment; and
- Net2Edge develops, manufactures and sells products to transmit packetized voice and data across networks and between copper-wired and fiber optic equipment.

Management has chosen to organize the enterprise and disclose reportable segments based on products and services. Intersegment revenues are eliminated upon consolidation. “Other” includes non-allocated corporate overhead costs. As a result of our treatment of Suttle as discontinued operations, “Other” includes amounts previously allocated to Suttle that do not meet the criteria to be included in income from discontinued operations.

Transition Networks manufactures its products in Asia and the United States and makes sales in both the U.S. and international markets. JDL Technologies operates in the U.S. and makes sales in the U.S. Net2Edge operates in the U.K. and primarily makes sales in the international markets. Net long-lived assets held in foreign countries were approximately $112,000 and $159,000 at December 31, 2019 and 2018, respectively. Consolidated sales to U.S. customers were approximately 74% and 77% of sales from continuing operations in 2019 and 2018 respectively. In 2019, sales to two of Transition Networks’ customers accounted for 21.2% and 16.2% of consolidated sales. In 2018, sales to two of Transition Networks’ customers accounted for 17.6% and 15.4% of consolidated sales. At December 31, 2019, Transition Networks had two customers that made up 45% and 17% of consolidated accounts receivable. At December 31, 2018, Transition Networks had two customers that made up 23% and 19% of consolidated accounts receivable and JDL had one customer that made up 21% of accounts receivable.

Information concerning the Company’s operations in the various segments for the years ended December 31, 2019 and 2018 is as follows:

	Transition Networks	JDL Technologies	Net2Edge	Other	Intersegment Eliminations	Total
2019						
Sales	$ 44,860,000	$ 4,741,000	$ 2,330,000	$ —	$ (1,025,000)	$ 50,906,000
Cost of sales	24,258,000	3,259,000	1,371,000	—	(168,000)	28,720,000
Gross profit	20,602,000	1,482,000	959,000	—	(857,000)	22,186,000
Selling, general and administrative expenses	15,036,000	1,485,000	2,486,000	4,027,000	(857,000)	22,177,000
Operating income (loss)	5,566,000	(3,000)	(1,527,000)	(4,027,000)	—	9,000
Other income (expense)	(15,000)	(10,000)	8,000	243,000	—	226,000
Income (loss) from continuing operations before tax	$ 5,551,000	$ (13,000)	$ (1,519,000)	$ (3,784,000)	$ —	$ 235,000
Depreciation and amortization	$ 286,000	$ 92,000	$ 74,000	$ 581,000	$ —	$ 1,033,000
Capital expenditures	$ 62,000	$ 69,000	$ 19,000	$ 275,000	$ —	$ 425,000
Assets	$ 16,682,000	$ 1,694,000	$ 3,220,000	$ 37,582,000	$ (27,000)	$ 59,151,000

	Transition Networks	JDL Technologies	Net2Edge	Other	Intersegment Eliminations	Total
2018						
Sales	$ 36,470,000	$ 5,134,000	$ 1,700,000	$ —	$ (935,000)	$ 42,369,000
Cost of sales	19,775,000	3,830,000	1,215,000	—	(73,000)	24,747,000
Gross profit	16,695,000	1,304,000	485,000	—	(862,000)	17,622,000
Selling, general and administrative expenses	13,716,000	1,603,000	3,279,000	4,637,000	(862,000)	22,373,000
Operating income (loss)	2,979,000	(299,000)	(2,794,000)	(4,637,000)	—	(4,751,000)
Other income (expense)	(31,000)	3,000	22,000	230,000	—	224,000
Income (loss) from continuing operations before tax	$ 2,948,000	$ (296,000)	$ (2,772,000)	$ (4,407,000)	$ —	$ (4,527,000)
Depreciation and amortization	$ 420,000	$ 179,000	$ 65,000	$ 597,000	$ —	$ 1,261,000
Capital expenditures	$ 81,000	$ —	$ 127,000	$ 486,000	$ —	$ 694,000
Assets	$ 19,228,000	$ 2,572,000	$ 1,894,000	$ 29,654,000	$ (27,000)	$ 53,321,000

NOTE 14 – FAIR VALUE MEASUREMENTS

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Assets and liabilities measured at fair value are classified using the following hierarchy, which is based upon the transparency of inputs to the valuation as of the measurement date:

Level 1 – Observable inputs that reflect unadjusted quoted prices for identical assets or liabilities in active markets that the Company has the ability to access at the measurement date.

Level 2 – Observable inputs such as quoted prices for similar instruments and quoted prices in markets that are not active, and inputs that are directly observable or can be corroborated by observable market data. The types of assets and liabilities included in Level 2 are typically either comparable to actively traded securities or contracts, such as treasury securities with pricing interpolated from recent trades of similar securities, or priced with models using highly observable inputs, such as commodity options priced using observable forward prices and volatilities.

Level 3 – Significant inputs to pricing that have little or no observability as of the reporting date. The types of assets and liabilities included in Level 3 are those with inputs requiring significant management judgment or estimation, such as the complex and subjective models and forecasts used to determine the fair value of financial instruments.

Financial assets and liabilities measured at fair value on a recurring basis as of December 31, 2019 and 2018, are summarized below:

	December 31, 2019			
	Level 1	**Level 2**	**Level 3**	**Total Fair Value**
Cash equivalents:				
Money Market funds	$ 8,761,000	$ —	$ —	$ 8,761,000
Subtotal	8,761,000	—	—	8,761,000
Short-term investments:				
Commercial Paper	—	8,694,000	—	8,694,000
Corporate Notes/Bonds	—	756,000	—	756,000
Subtotal	—	9,450,000	—	9,450,000
Long-term investments:				
Convertible Debt	—	—	250,000	250,000
Subtotal	—	—	250,000	250,000
Total	$ 8,761,000	$ 9,450,000	$ 250,000	$ 18,461,000

	December 31, 2018			
	Level 1	Level 2	Level 3	Total Fair Value
Cash equivalents:				
Money Market funds	$ 8,428,000	$ —	$ —	$ 8,428,000
Total	$ 8,428,000	$ —	$ —	$ 8,428,000

We record transfers between levels of the fair value hierarchy, if necessary, at the end of the reporting period. There were no transfers between levels during 2019 and 2018.

NOTE 15 – GENERAL COMMITMENTS

On August 2, 2018, the Company entered into a purchase agreement with Launch Properties, LLC for the sale of the Company's building located at 10900 Red Circle Drive, Minnetonka, MN for $10,000,000. The building currently includes the Company's corporate administrative offices, as well as some operations for Transition Networks and JDL Technologies. The closing of the transaction is subject to a number of closing conditions, including the buyer's ability to complete due diligence within 180 days and the buyer's ability to obtain regulatory approval for its intended use of the property. The due diligence period lapsed on January 29, 2019 and the buyer met certain required obligations. One of the conditions of the agreement included non-refundable deposits into an escrow account. As of December 31, 2019, the balance within this escrow account was $175,000 and is included within restricted cash within the consolidated balance sheet. If the sale proceeds, the Company currently expects the transaction to close late in 2020 or early 2021.

NOTE 16 – SUBSEQUENT EVENTS

The Company has evaluated subsequent events through the date of this filing. Other than those disclosed in Note 4, we do not believe there are any material subsequent events which would require further disclosure.

(b) SUPPLEMENTAL FINANCIAL INFORMATION

Quarterly Operating Results
(in thousands except per share amounts)
Unaudited

	Quarter Ended			
	March 31	**June 30**	**Sep 30**	**Dec 31**
2019				
Sales	$ 11,216	$ 10,704	$ 13,622	$ 15,364
Operating (loss) income from continuing operations	(821)	(1,129)	772	1,187
Net (loss) income from continuing operations	(771)	(1,069)	877	1,214
Net income from discontinued operations	1,010	3,842	860	506
Net income	239	2,773	1,737	1,720
Basic net (loss) income per share				
Continuing operations	$ (0.08)	$ (0.11)	$ 0.09	$ 0.13
Discontinued operations	$ 0.11	$ 0.41	$ 0.09	$ 0.06
Diluted net (loss) income per share				
Continuing operations	$ (0.08)	$ (0.11)	$ 0.09	$ 0.13
Discontinued operations	$ 0.11	$ 0.41	$ 0.09	$ 0.05
2018				
Sales	$ 9,800	$ 9,165	$ 10,283	$ 13,121
Operating (loss) income from continuing operations	(1,916)	(1,804)	(1,251)	220
Net loss from continuing operations	(1,826)	(1,719)	(1,189)	(197)
Net loss from discontinued operations	(34)	(922)	(356)	(549)
Net loss	(1,860)	(2,641)	(1,545)	(746)
Basic net loss per share				
Continuing operations	$ (0.20)	$ (0.19)	$ (0.13)	$ (0.02)
Discontinued operations	$ (0.00)	$ (0.10)	$ (0.04)	$ (0.07)
Diluted net loss per share				
Continuing operations	$ (0.20)	$ (0.19)	$ (0.13)	$ (0.02)
Discontinued operations	$ (0.00)	$ (0.10)	$ (0.04)	$ (0.07)

The company recorded a gain of $2,967,000 on the sale of inventory and capital equipment to PPC in the second quarter.

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

None.

ITEM 9A: CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

In connection with the filing of this Form 10-K, under the supervision and with the participation of our management, including our Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), we evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act")) as of December 31, 2019. Based on that evaluation, as detailed below, management concluded that the Company's disclosure controls and procedures are effective.

Management Report on Internal Control over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting, as that term is defined in Rule 13a-15(f) and 15d-15(f) of the Exchange Act. Under the supervision and with the participation of the Company's management, including the CEO and CFO, the Company conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2019, based on *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (the "Framework"). Based on that evaluation, management concluded that the Company's internal controls and procedures are effective.

Inherent Limitations on Control Systems

Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, will be or have been detected. These inherent limitations include the realities that judgments in decision making can by faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate.

Changes in Internal Control

Except as noted above, there were no other changes in the Company's internal control over financial reporting that occurred during the Company's most recently completed fiscal quarter that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

This annual report does not include an attestation report of the Company's independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's registered public accounting firm pursuant to rules of the Securities and Exchange Commission that permit the Company to provide only management's report in this annual report.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by Item 401 under Regulation S-K, to the extent applicable to the Company's directors, will be set forth under the caption "Election of Directors" in the Company's definitive proxy material for its June 17, 2020 Annual Meeting of Shareholders ("2020 Proxy Materials") and is incorporated herein by reference. The information required with respect to the Company's officers by paragraph (b) of Item 401 is set forth under Item 1(c) (3) of this Form 10-K.

The information required by Item 405 regarding compliance with Section 16 (a) will be set forth under the caption "Delinquent Section 16(a) Reports" in the Company's 2020 Proxy Materials, and is incorporated herein by reference.

Code of Ethics

The Company has adopted a Code of Ethics applicable to all officers of the Company as well as certain other key accounting personnel. A copy of the Code of Ethics can be obtained free of charge upon written request directed to the Company's Assistant Secretary at the executive offices of the Company.

The information required called for by Item 407 regarding corporate governance will be set forth under the caption "Corporate Governance and Board Matters" in the 2020 Proxy Materials and is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information called for by Item 402 under Regulation S-K, will be set forth under the caption "Executive Compensation" in the Company's 2020 Proxy Materials, and is expressly incorporated herein by reference.

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

The information called for by Item 403 under Regulation S-K will be set forth under the captions “Security Ownership of Certain Beneficial Owners and Management” and “Election of Directors” in the Company’s 2020 Proxy Materials, and is incorporated herein by reference.

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

The information required by Item 404 under Regulation S-K will be set forth under the caption “Certain Relationship and Related Transaction” in the Company’s 2020 Proxy Materials, and is incorporated herein by reference.

The information required by Item 407(a) will be set forth in the Company’s 2020 Proxy Materials caption “Corporate Governance and Board Matters” and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by Item 14 of Form 10K and 9(e) of Schedule 14A will be set forth under the caption “Principal Accountant Fees and Services” in the Company’s 2020 Proxy Materials, and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) (1) **Consolidated Financial Statements**

The following Consolidated Financial Statements of Communications Systems, Inc. and subsidiaries appear at pages 28 to 51 herein:

- Report of Independent Registered Public Accounting Firm
- Consolidated Balance Sheets as of December 31, 2019 and 2018
- Consolidated Statements of Income (Loss) and Comprehensive Income (Loss) for the years ended December 31, 2019 and 2018
- Consolidated Statements of Changes in Stockholders’ Equity for the years ended December 31, 2019 and 2018
- Consolidated Statements of Cash Flows for the years ended December 31, 2019 and 2018
- Notes to Consolidated Financial Statements

(a) (2) **Consolidated Financial Statement Schedules**

The schedules are omitted as the required information is inapplicable or the information is presented in the consolidated financial statements or related notes.

(a) (3) **Exhibits**

Regulation S-K Reference	Title of Document	Location
3.1	Articles of Incorporation, as amended	Filed as Exhibit 3.1 to the Form 10-Q for the quarter ended June 30, 2014 and incorporated herein by reference.
3.2	Bylaws, as amended	Filed as Exhibit 3.2 to the Form 10-Q for the quarter ended June 30, 2014 and incorporated herein by reference.

3.3		Amended and Restated Certificate of Designation, Preferences and Rights of Series A Junior Participating Preferred Stock	Filed as Exhibit 4(a) to Form 8-A dated December 28, 2009 and incorporated herein by reference.
4.1		Description of Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934	Filed herewith.
10.1		Amended and Restated Credit Agreement dated August 12, 2016 by and among Communications Systems, Inc., JDL Technologies, Inc., Transition Networks, Inc., Suttle, Inc. and Wells Fargo Bank, National Association	Filed as Exhibit 10.1 to the Form 8-K dated August 12, 2016 and incorporated herein by reference.
10.1.1		First Amendment dated September 30, 2016 to Amended and Restated Credit Agreement dated August 12, 2016 by and among Communications Systems, Inc., JDL Technologies, Inc., Transition Networks, Inc., Suttle, Inc. and Wells Fargo Bank, National Association	Filed as Exhibit 10.1 to the Form 10-Q for the quarter ended September 30, 2016 and incorporated herein by reference.
10.2		Amended and Restated Security Agreement dated August 12, 2016 by and among Communications Systems, Inc., JDL Technologies, Inc., Transition Networks, Inc., Suttle, Inc. and Wells Fargo Bank, National Association	Filed as Exhibit 10.2 to the Form 8-K dated August 12, 2016 and incorporated herein by reference.
10.3		Amended and Restated Note dated August 12, 2016 by and among Communications Systems, Inc., JDL Technologies, Inc., Transition Networks, Inc., Suttle, Inc. to Wells Fargo National Bank, National Association	Filed as Exhibit 10.3 to the Form 8-K dated August 12, 2016 and incorporated herein by reference.
10.4	*	Employee Stock Ownership Plan and Trust, effective as of January 1, 2009	Filed as Exhibit 10.3 to the Form 10-K for the year ended December 31, 2011 (2011 Form 10-K) and incorporated herein by reference.
10.4.1	*	First Amendment, dated October 21, 2011, to the Communications Systems, Inc. Employee Stock Ownership Plan and Trust.	Filed as Exhibit 10.3.1 to the 2011 Form 10-K and incorporated herein by reference.
10.4.2	*	Third Amendment, dated December 14, 2012 to the Communications Systems, Inc. Employee Stock Ownership Plan and Trust.	Filed as Exhibit 10.1 to the Form 8-K dated December 14, 2012 and incorporated herein by reference.
10.4.3	*	Fourth Amendment, dated January 1, 2015 to the Communications Systems, Inc. Employee Stock Ownership Plan and Trust	Filed as Exhibit 10.3.3 to the Form 10-K for the year ended December 31, 2014 and incorporated herein by reference.
10.5	*	1990 Employee Stock Purchase Plan, as amended May 21, 2015	Filed as Appendix B to the Proxy Statement dated April 10, 2015 for the 2015 Annual Meeting of Shareholders and incorporated herein by reference.

10.6	*	1990 Stock Option Plan for Nonemployee Directors, as amended May 19, 2011	Filed as Exhibit 10.4 to the Form 10-Q for the quarter ended September 30, 2011 and incorporated herein by reference.
10.7	*	1992 Stock Plan, as amended August 11, 2011	Filed as Exhibit 10.3 to the Form 10-Q for the quarter ended September 30, 2011 and incorporated herein by reference.
10.8	*	Supplemental Executive Retirement Plan	Filed as Exhibit 10.8 to the 1993 Form 10-K and incorporated herein by reference.
10.9	*	Communications Systems Inc. Long Term Incentive Plan, as amended through March 1, 2012	Filed as Exhibit 99.2 to the Company's Form 8-K dated March 9, 2012 and incorporated herein by reference.
10.10	*	Communications Systems Inc. 2011 Executive Incentive Compensation Plan, as amended May 23, 2018	Filed as Appendix A to the Proxy Statement dated April 10, 2018 for the 2018 Annual Meeting of Shareholders and incorporated herein by reference.
10.11	*	Communications Systems Inc. Annual Bonus Plan	Filed as Exhibit 99.1 to the Company's Form 8-K dated March 9, 2012 and incorporated herein by reference.
10.12		Form of Rights Agreement, dated as of December 23, 2009 between Communications Systems, Inc. and Wells Fargo Bank National Association	Filed as Exhibit 4(b) to Form 8-A on December 28, 2009 and incorporated herein by reference.
10.13		Form of Communications Systems, Inc. Change of Control Agreement for Executives	Filed as Exhibit 10.13 to the 2018 Form 10-K and incorporated herein by reference.
10.14		Asset Purchase Agreement dated as of March 11, 2020, by and among Oldcastle Infrastructure, Inc., a Washington corporation, Suttle, Inc., a Minnesota corporation, and Communications Systems, Inc., a Minnesota corporation	Filed as Exhibit 10.1 to Form 8-K dated March 11, 2020 and incorporated herein by reference.
21		Subsidiaries of the Registrant	Filed herewith.
23.1		Consent of Independent Registered Public Accounting Firm	Filed herewith.
24		Power of Attorney	Included in signatures at page 57.
31.1		Certification of Chief Executive Officer	Filed herewith.
31.2		Certification of Chief Financial Officer	Filed herewith.
32		Certification under USC § 1350	Filed herewith.

The exhibits referred to in this Exhibit Index will be supplied to a shareholder at a charge of $0.25 per page upon written request directed to CSI's Assistant Secretary at the executive offices of the Company.

ITEM 16. FORM 10-K SUMMARY

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

COMMUNICATIONS SYSTEMS, INC.

Dated: March 17, 2020

/s/ Roger H.D. Lacey
Roger H.D. Lacey, Chief Executive Officer and Chairman of the Board of Directors

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated:

Each person whose signature appears below constitutes and appoints ROGER H.D. LACEY and MARK D. FANDRICH as his true and lawful attorneys-in-fact and agents, each acting alone, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any or all amendments to this Annual Report on Form 10-K and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, each acting alone, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all said attorneys-in-fact and agents, each acting alone, or his substitute or substitutes, may lawfully do or cause to be done by virtue thereof.

Signature	Title	Date
/s/Roger H.D. Lacey Roger H.D. Lacey	Chief Executive Officer and Chairman of the Board of Directors	March 17, 2020
/s/Mark D. Fandrich Mark D. Fandrich	Group Business President and Chief Financial Officer (Principal Financial Officer)	March 17, 2020
/s/Kristin A. Hlavka Kristin A. Hlavka	Corporate Controller (Principal Accounting Officer)	March 17, 2020
/s/Curtis A. Sampson Curtis A. Sampson	Chairman Emeritus of the Board of Directors and Director	March 17, 2020
/s/Randall D. Sampson Randall D. Sampson	Director	March 17, 2020
/s/Richard A. Primuth Richard A. Primuth	Director	March 17, 2020
/s/Steven C. Webster Steven C. Webster	Director	March 17, 2020

Exhibit 4.1

**DESCRIPTION OF THE REGISTRANT'S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF THE
SECURITIES EXCHANGE ACT OF 1934**

Communications Systems, Inc. ("CSI," "we," "our," or "us") has one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended: our common stock.

DESCRIPTION OF CAPITAL STOCK

The following summary of the general terms and provisions of our capital stock does not purport to be complete and is based upon and qualified by reference to our articles of incorporation and bylaws, which are either filed as exhibits to our Annual Report on Form 10-K or are incorporated by reference to our Annual Report on Form 10-K. We encourage you to read our articles of incorporation, our bylaws and the applicable provisions of the Minnesota Business Corporation Act, or MBCA, for additional information.

Authorized Shares of Capital Stock

The aggregate number of shares of capital stock that the Company has authority to issue is as follows

3,000,000 shares of preferred stock, $1.00 par value

30,000,000 shares of common stock, par value $.05

Preferred Stock

We have no preferred stock outstanding.

On December 18, 2009, the Board of Directors of the Company (the "Board") authorized and declared a dividend distribution of one Right for each outstanding share of the Company's Common Stock value per share outstanding at the close of business on January 4, 2010 (the "Record Date"), each Right representing the right to purchase one one-hundredth of a share of Series A Junior Participating Preferred Stock of the Company having the rights, powers and preferences set forth in the form of Amended and Restated Certificate of Designation, Preferences and Rights of Series A Junior Participating Preferred Stock and further authorized the issuance of one Right with respect to each share of Common Stock that would become outstanding after the close of business on the Record Date. This Shareholder Rights Plan expired in December 2019.

Common Stock

Holders of the Company's common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the shareholders and do not have cumulative voting rights. Except as otherwise provided by law, our articles of incorporation or our bylaws, matters will generally be decided by the vote of the holders of a majority of the voting power present in person or represented by proxy. Our bylaws provide that the authorized number of directors will be fixed by the shareholders at each annual meeting and that either the shareholders or the board of directors may increase or decreases the number of directors. Our board of directors is not classified.

Holders of our common stock are entitled to receive dividends declared by our board of directors out of funds legally available for the payment of dividends. In the event of any liquidation, dissolution or winding-up of our affairs, holders of common stock will be entitled to share ratably in our assets that are remaining after payment or provision for payment of all of our debts and obligations.

Holders of common stock have no preemptive, conversion or subscription rights, and there are no redemption provisions applicable to the common stock.

All outstanding shares of our common stock are fully paid and nonassessable.

The transfer agent and registrar for our common stock is Equiniti Trust Company, 1110 Centre Pointe Curve, Suite 101, South St. Paul, Minnesota 55120-4100

Our common stock is currently listed on The NASDAQ Stock Market LLC under the trading symbol “JCS.”

Anti-Takeover Effects of Provisions of our Articles of Incorporation, our Bylaws and Minnesota Law

Specific provisions of Minnesota law, our articles of incorporation and our bylaws may be deemed to have an anti-takeover effect.

The Company’s Bylaws of the Company establish an advance notice procedure with regard to (i) certain business to be brought before an annual meeting of shareholders of the Company and (ii) the nomination by shareholders of candidates for election as directors.

Properly Brought Business

The Bylaws provide that at the annual meeting only such business may be conducted as is of a nature that is appropriate for consideration at an annual meeting and has been either specified in the notice of the meeting, otherwise properly brought before the meeting by or at the direction of the Board of Directors, or otherwise properly brought before the meeting by a shareholder who has given timely written notice to the Secretary of the Company of the shareholder’s intention to bring the business before the meeting. To be timely, the notice must be given by such shareholder to the Secretary of the Company not less than 45 days or more than 75 days prior to a meeting date corresponding to the previous year’s annual meeting. Notice relating to the conduct of such business at an annual meeting must contain certain information as described in Section 2.9 of the Company’s Bylaws, which are available for inspection by shareholders at the Company’s principal executive offices pursuant to Section 302A.441, subd. 4 of the Minnesota Statutes. Nothing in the Bylaws precludes discussion by any shareholder of any business properly brought before the annual meeting in accordance with the Company’s Bylaws.

Shareholder Nominations

The Bylaws provide that a notice of proposed shareholder nominations for the election of directors must be timely given in writing to the Secretary of the Company prior to the meeting at which directors are to be elected. To be timely, the notice must be given by the shareholder to the Secretary of the Company not less than 45 days or more than 75 days prior to a meeting date corresponding to the previous year's annual meeting. The notice to the Company from a shareholder who intends to nominate a person at the meeting for election as a director must contain certain information as described in Section 3.7 of the Company's Bylaws, which are available for inspection by shareholders as described above. If the presiding officer of a meeting of shareholders determines that a person was not nominated in accordance with the foregoing procedure, that person will not be eligible for election as a director.

Shareholder Meetings

Under our bylaws, regular meetings of our shareholders may be called only by our board of directors, or by written consent of all the shareholders entitled to vote at the annual meeting. If the Board fails to designate a time for a regular meeting for any consecutive period of 15 months, the board must cause such regular meeting to be called within 90 days of receipt of the written demand of any shareholder owning one percent or more of all voting shares of the corporation

Under our bylaws, special meetings of our shareholders may be called by the Chief Executive Officer, the Chief Financial Officer, any two or more directors, or upon request by shareholders holding ten percent or more of the voting power of the shareholders.

Provisions of Minnesota Law

The following provisions of the MBCA may have an effect of delaying, deterring or preventing an unsolicited takeover of the Company or make an unsolicited takeover of the Company more difficult.

MBCA Section 302A.553 [**Power to acquire shares]** subd 3, **[limitation on share purchases]** prohibits a publicly held corporation such as CSI from purchasing shares entitled to vote for more than market value from a person that beneficially owns more than 5% of the voting power of the corporation if the shares have been beneficially owned for less than two years unless the purchase or agreement to purchase is approved at a meeting of shareholders by the affirmative vote of the holders of a majority of the voting power of all shares entitled to vote or the corporation makes an offer, of at least equal value per share, to all shareholders for all other shares of that class or series and any other class or series into which they may be converted.

MBCA Section 302A.671 [**Control share acquisitions]** provides that shares of an "issuing public corporation," such as Electro-Sensors, Inc. acquired by an "acquiring person" in a "control share acquisition" that exceed the threshold of voting power of any of the three ranges identified below will not have voting rights, unless the issuing public company's shareholders vote to accord these shares the voting rights normally associated with these shares. A "control share acquisition" is an acquisition, directly or indirectly, by an "acquiring person" (as defined in the MBCA) of beneficial ownership of shares of an issuing public corporation that, but for Section 302A.671, would, when added to all other shares of the issuing public corporation beneficially owned by the acquiring person, entitle the acquiring person, immediately after the acquisition, to exercise or direct the exercise of a new range of voting power of the issuing public corporation with any of the following three ranges: (i) at least 20 percent but less than 33-1/3 percent; (ii) at least 33-1/3 percent but less than or equal to 50 percent; and (iii) over 50 percent. The issuing public company also has an option to call for redemption all, but not less than all, shares acquired in the control share acquisition that exceed the threshold of voting power of any of the specified ranges at a price equal to the fair market value of the shares at the time the call is given if (i) the acquiring person fails to deliver the information statement to the issuing public company by the tenth day after the control share acquisition; or (ii) shareholders have voted not to accord voting rights to the shares acquired in the control share acquisition.

MBCA Section 302A.673 [**Business combinations]** prohibits a public Minnesota corporation, such as Electro-Sensors, Inc. from engaging in a business combination with an interested shareholder for a period of four years after the date of the transaction in which the person became an interested shareholder, unless either (i) the business combination or (ii) the acquisition by which the person becomes an interested shareholder is approved in a prescribed manner before the person became an interested shareholder. The term "business combination" includes mergers, asset sales and other transactions resulting in a financial benefit to the interested shareholder. An "interested shareholder" is a person who is the beneficial owner, directly or indirectly, of 10% or more of a corporation's voting stock, or who is an affiliate or associate of the corporation, and who, at any time within four years before the date in question, was the beneficial owner, directly or indirectly, of 10% or more of the corporation's outstanding voting stock.[1]

If a takeover offer is made for our stock, MBCA Section 302A.675 **[Takeover offer; fair price]** precludes the offeror from acquiring additional shares of stock (including in acquisitions pursuant to mergers, consolidations or statutory share exchanges) within two years following the completion of the takeover offer, unless shareholders selling their shares in the later acquisition are given the opportunity to sell their shares on terms that are substantially the same as those contained in the earlier takeover offer. A "takeover offer" is a tender offer that results in an offeror who owned ten percent or less of a class of our shares acquiring more than ten percent of that class, or that results in the offeror increasing its beneficial ownership of a class of our shares by more than ten percent of the class, if the offeror owned ten percent or more of the class before the takeover offer. Section 302A.675 does not apply if a committee of our board of directors formed in accordance with Section 302A.675 approves the proposed acquisition before any shares are acquired pursuant to the earlier tender offer.

Exhibit 21

SUBSIDIARIES OF COMMUNICATIONS SYSTEMS, INC.

Subsidiaries	Jurisdiction of Incorporation
Suttle, Inc.	Minnesota
Austin Taylor Communications, Ltd.	United Kingdom
JDL Technologies, Inc.	Minnesota
Twisted Technologies, Inc.	Georgia
Transition Networks, Inc.	Minnesota
LANart Corporation	Massachusetts
MiLAN Technology Corporation	California
Image Systems Corporation	Minnesota
Transition Networks Europe	United Kingdom
Transition Networks EMEA, Ltd.	United Kingdom
Net2Edge, Ltd.	United Kingdom

All these subsidiaries are 100%-owned directly by Communications Systems, Inc. The financial statements of all these subsidiaries are included in the consolidated financial statements of Communications Systems, Inc.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statements on Form S-8 (File No. 333-98325, 333-120561, 333-161376, 333-177890, 333-204379, 333-230157, and 333-231666) of Communications Systems, Inc. and subsidiaries of our report dated March 17, 2020, relating to the consolidated financial statements, which appears on page 27 of this Annual Report on Form 10-K for the year ended December 31, 2019.

/s/ Baker Tilly Virchow Krause,LLP
Minneapolis, Minnesota
March 17, 2020

Exhibit 31.1

Certifications

I, Roger H.D. Lacey certify that:

1. I have reviewed this annual report on Form 10-K of Communications Systems, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):

    a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 17, 2020

/s/ Roger H.D. Lacey
Roger H.D. Lacey
Chief Executive Officer

Certifications

I, Mark D. Fandrich certify that:

1. I have reviewed this annual report on Form 10-K of Communications Systems, Inc;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):

   a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 17, 2020

/s/ Mark D. Fandrich
Mark D. Fandrich
Chief Financial Officer

Exhibit 32

CERTIFICATION PURSUANT TO SECTION 906 OF THE
SARBANES-OXLEY ACT OF 2002

Pursuant to 18 U.S.C. § 1350, we the undersigned Chief Executive Officer and Chief Financial Officer, respectively of Communications Systems, Inc. (the "Company") hereby certify:

(1) That the accompanying Annual Report of the Company on Form 10-K for the period ended December 31, 2019 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

	/s/ Roger H.D. Lacey
	Roger H.D. Lacey
Date: March 17, 2020	Chief Executive Officer
	/s/ Mark D. Fandrich
	Mark D. Fandrich
Date: March 17, 2020	Group Business President and Chief Financial Officer