

COMTECH TELECOMMUNICATIONS CORP /DE/  
Form 10-K  
September 26, 2012  
Index

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 July 31, 2012

Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Commission File Number: 0-7928

(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of incorporation  
/organization)

68 South Service Road, Suite 230,  
Melville, NY  
(Address of principal executive offices)

11-2139466  
(I.R.S. Employer Identification Number)

11747  
(Zip Code)

(631) 962-7000  
(Registrant's telephone number, including area code)

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

Title of each class	Name of each exchange on which registered
Common Stock, par value \$.10 per share	NASDAQ Stock Market LLC
Series A Junior Participating Cumulative Preferred Stock, par value \$.10 per share	NASDAQ Stock Market LLC

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

None  
(Title of class)

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

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

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



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Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data file required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes            No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting  
company

Indicate by check mark whether registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes            No

The aggregate market value of the registrant's voting stock held by non-affiliates of the registrant, computed by reference to the closing sales price as quoted on the NASDAQ National Market on January 31, 2012 was approximately \$583,157,000.

The number of shares of the registrant's common stock outstanding on September 21, 2012 was 17,369,120.

DOCUMENTS INCORPORATED BY REFERENCE.

Certain portions of the document listed below have been incorporated by reference into the indicated Part of this Annual Report on Form 10-K:

Proxy Statement for 2012 Annual Meeting of Stockholders - Part III

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Note: As used in this Annual Report on Form 10-K, the terms “Comtech,” “we,” “us,” “our” and “our Company” mean Comtech Telecommunications Corp. and Comtech’s subsidiaries.

PART I

ITEM 1. BUSINESS

We design, develop, produce and market innovative products, systems and services for advanced communications solutions. We believe many of our solutions play a vital role in providing or enhancing communication capabilities when terrestrial communications infrastructure is unavailable, inefficient or too expensive. We conduct our business through three complementary segments: telecommunications transmission, RF microwave amplifiers and mobile data communications. We sell our products to a diverse customer base in the global commercial and government communications markets. We believe we are a leader in the market segments that we serve.

For the past several years, we have operated our business in extremely challenging adverse macroeconomic and political environments. During this time, we have focused on long-term organic growth opportunities that we believe exist in each of our three business segments.

During fiscal 2012, we reported consolidated net sales of \$425.1 million and consolidated operating income of \$51.3 million. In addition, during fiscal 2012, we completed the repositioning of our mobile data communications segment to align with our expectations of materially lower levels of future net sales and operating income in this segment. This repositioning included targeted actions to adjust our cost structure and eliminate certain product lines, including our microsatellite product line. In connection with this repositioning, we recorded a restructuring charge of \$2.6 million and anticipate additional charges of approximately \$1.0 million in fiscal 2013.

As of July 31, 2012, we had cash and cash equivalents of \$367.9 million. We expect to supplement organic growth opportunities by making one or more acquisitions.

Our Internet website is [www.comtechtel.com](http://www.comtechtel.com) and we make available on our website; our annual reports, quarterly reports, current reports and any related amendments. Unless specifically noted, the reference to our website address does not constitute incorporation by reference of the information contained therein into this Form 10-K. In addition, any materials filed with the SEC may be read and copied by the public at the SEC’s Public Reference Room at 100 F Street, N.E., Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

We are incorporated in the state of Delaware and were founded in 1967.

Business Conditions and Industry Background

We participate in the global commercial and government communications markets which are characterized by rapid technological advances and constant changes.

For the past several years, our customers and the end-markets that we serve have been significantly impacted by adverse global economic conditions. In the past few years, European monetary issues and concerns have intensified, raising concern of another possible worldwide credit crisis. Although the impact, severity and duration of these conditions are impossible to predict with precision, we believe the current economic environment has resulted, and may continue to result, in: (i) changes to our commercial and government customers’ historical spending priorities, (ii) reduced military budgets and (iii) extreme pressures on government budgets throughout the world.

In addition to operating in a difficult global economic environment, some of our end customers are located in emerging countries that are currently undergoing sweeping political changes. We believe that the aggregation of these conditions has resulted in the current suppression of end-market demand for many of the products that we sell and services that we provide.

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Although it is uncertain how long the current adverse global economic conditions will last, we believe that both we and our end-markets will ultimately experience long-term growth due to many factors, including the following:

**Continued Reliance on Communications Systems.** Businesses, governments and consumers around the world have become increasingly reliant upon advanced communications systems to communicate with their customers, suppliers, and employees. In particular, there has been a significant increase in global demand for products and services that are utilized for wireless and cellular-based communications, broadcasting (including high definition television (“HDTV”) for cable and over-the-air broadcast), Internet Protocol (“IP”)-based communications (including voice, broadband video and data), long distance telephony and highly secure defense applications. Because of the continued reliance on communications systems and increased utilization of satellite transponders, communications network providers have been forced to increase their investments in new and updated satellite-based transmission systems in order to maintain the quality and availability of their services.

**Growing Demand for Increased Cost Efficiencies.** We expect that the insatiable global demand for voice, broadband video and data communications will cause increased satellite transponder utilization that will, over time, result in increased transponder costs in many areas of the world. Particularly in light of current adverse global economic conditions, we believe that communications network providers and end-users will seek solutions that increase the efficiency of their networks in order to reduce operating costs. In light of the relatively high cost of satellite transmission versus other transmission channels, we believe that communications network providers will make their vendor selections based upon the operating efficiency and quality of the products and solutions they offer.

**The Shift to Information-Based, Network-Centric Warfare.** Militaries around the world, including the United States (“U.S.”) military, have become increasingly reliant on information and communications technology to provide critical advantages in battlefield, support and logistics operations. Situational awareness, defined as knowledge of the location and strength of friendly and unfriendly forces during battle, can increase the likelihood of success during a conflict. As evidenced by the conflicts in Iraq and Afghanistan, stretched battle and supply lines have used satellite-based (including mobile satellite-based) and over-the-horizon microwave communications solutions to span distances that normal radio communications, such as terrestrial-based systems, are unable to cover.

**The Need for Developing Countries to Upgrade Their Commercial and Defense Communication Systems.** We believe many developing countries will be required to further develop and upgrade their commercial and defense communications systems. Many of these countries lack the financial resources to install extensive land-based networks, particularly where they have large geographic areas or unfriendly terrain that make the installation of land-based networks more costly. We believe satellite-based and over-the-horizon microwave technologies often provide affordable and effective solutions to meet the requirements for communications services in these countries.

Although the health of the global economy and political stability directly impacts the speed at which industry advances and changes, we expect that we will be able to participate in the industry’s expected long-term growth by focusing research and development resources across all three of our business segments to produce secure, scalable and reliable technologies to meet these evolving market needs.

Corporate Strategies

We manage our business with the following principal corporate business strategies:

- Seek leadership positions in markets where we can provide specialized products and services;
- Identify and participate in emerging technologies that enhance or expand our product portfolio;



Operate business segments flexibly to maximize responsiveness to our customers;

Strengthen our diversified and balanced customer base; and

Pursue acquisitions of businesses and technologies.

We believe that, as a result of these business strategies, we are well positioned to continue to capitalize on growth opportunities in the global commercial and government communications markets.

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### Competitive Strengths

The successful execution of our principal corporate strategies is based on our competitive strengths, which are briefly described below:

**Leadership Positions in All Three Business Segments** – In our telecommunications transmission segment, we believe we are the leading provider of single channel per carrier (“SCPC”) satellite earth station modems and over-the-horizon microwave systems. Many of our products incorporate Turbo Product Code (“TPC”) forward error correction technology and our licensed DoubleTalk® Carrier-in-Carrier® bandwidth compression technology which enable our customers to optimize their satellite network by either reducing their satellite transponder lease costs or increasing data throughput. In our RF microwave amplifiers segment, we believe we are a leader in the satellite earth station traveling wave tube amplifier market and one of the largest independent suppliers of broadband, high-power, high-performance RF microwave amplifiers. In our mobile data communications segment, we are a key legacy supplier to the U.S. Army’s war-fighter orientated satellite-based, tracking and communications system known as Blue-Force Tracking-1 (“BFT-1”).

**Innovative Leader with Emphasis on Research and Development** – We have established a leading technology position in our fields through internal and customer-funded research and development activities. We believe we were the first company to begin full-scale deployment of TPC forward error correction technology and licensed DoubleTalk® Carrier-in-Carrier® bandwidth compression technology in digital satellite earth station modems. Our field-proven over-the-horizon microwave systems utilize a proprietary 16 megabits per second (“Mbps”) adaptive digital modem and we have developed a troposcatter modem that can exceed 22 Mbps. In our RF microwave amplifiers segment, we are incorporating Gallium Nitride technology into our products which allows us to offer customers more powerful and higher efficiency RF microwave amplifiers. In addition, our traveling wave tube amplifiers have built-in block up converters (“BUCs”) that significantly reduce operating costs for domestic and international broadcasters. In our mobile data communications segment, we believe that our internally developed BFT-1 technologies are critical components of the U.S. Army’s satellite communications network.

**Diverse Customer Base with Long-Standing Relationships** – We have established long-standing relationships with leading domestic and international system and network suppliers in the satellite, defense, broadcast and aerospace industries, as well as the U.S. government and foreign governments. Our products are in service around the globe and we continue to expand our geographic distribution. For instance, our satellite earth station products and our high-power amplifiers are used by hundreds of mobile cellular network providers and governments around the world. We believe that our customers recognize our ability to develop new technologies and to meet stringent program requirements. In recent years, we have expanded our relationships with several agencies of the U.S. government. For instance, our high-power amplifiers will be used in a major network expansion for the U.S. Air Force.

**Core Manufacturing Expertise That Can Support All Three Business Segments** – Our high-volume technology manufacturing center located in Tempe, Arizona utilizes state-of-the-art design and production techniques, including analog, digital and RF microwave production, hardware assembly and full-service engineering. All three of our business segments have utilized this manufacturing center for certain high-volume production which allows us to secure volume discounts on key components, control the quality of our manufacturing processes and maximize the utilization of our manufacturing capacity. Because of our expert capability and quality reputation, several prime contractors to the U.S. government have outsourced a portion of their manufacturing to us. Although revenue from outsourced manufacturing has historically been modest, we are actively seeking appropriate opportunities to expand this part of our business.

**Successful and Disciplined Acquisition Track Record** – We have demonstrated that we can successfully integrate acquired businesses, achieve increased efficiencies and capitalize on market and technological synergies. We believe

that our disciplined approach in identifying, integrating and capitalizing on acquisitions provides us with a proven platform for additional growth. The Radyne acquisition that we completed in fiscal 2009 was the largest acquisition in our history and we achieved all of the strategic goals and operating efficiency targets that we originally established when we announced the acquisition.

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### Our Three Business Segments

We conduct our business through three complementary business segments: telecommunications transmission, RF microwave amplifiers and mobile data communications. By operating independently, our business segments are able to maintain a high level of focus on their respective businesses, activities and customers. Our corporate senior management team supports the business segments by, among other things, actively seeking to exploit synergies that exist between the segments, including areas such as manufacturing, technology, sales, marketing and customer support. Financial information about our business segments is provided in “Notes to Consolidated Financial Statements – Note (13) Segment Information” included in “Part II — Item 8. — Financial Statements and Supplementary Data.”

### Telecommunications Transmission Segment

#### Overview

Our telecommunications transmission segment provides equipment and systems that are used to enhance satellite transmission efficiency and that enable wireless communications in environments where terrestrial communications are unavailable, inefficient or too expensive. These products and systems are used in a wide variety of commercial and government applications including the backhaul of wireless and cellular traffic, broadcasting (including HDTV), IP-based communications traffic, long distance telephony and highly secure defense applications.

#### Products, Services and Applications

The following are the key products and systems, along with related markets and applications, for our telecommunications transmission segment:

**Satellite Earth Station Equipment and Systems** – We provide customers a one-stop shopping approach by offering a broad range of satellite earth station equipment. Our product offerings include satellite earth station modems, BUCs, power amplifiers, frequency converters, transceivers, access devices, voice gateways, IP encapsulators and media routers. We market our products under a variety of brand names including Comtech EF Data, Radyne, Vipersat, Memotec, AHA, Verso and Stampede. Our satellite earth station modems and products include:

**CDM-600** – One of our all-time best selling modems, the CDM-600 includes an option that allows end-users to incorporate our patented TPC, a forward error correction technology which can significantly reduce satellite transponder lease costs or increase satellite earth station modem data throughput. The CDM-600 provides connectivity up to 20 Mbps.

**CDM-625** – The CDM-625 was our first modem to combine advanced forward error correction (“FEC”), such as VersaFEC® and low density parity check (“LDPC”) codes with DoubleTalk Carrier-in-Carrier® bandwidth compression, a technique that allows satellite earth stations to transmit and receive at the same frequency, effectively reducing transponder bandwidth requirements by 50%. The packet processor enables efficient IP networking and transport over satellite by adding routing capability with very low overhead encapsulation, header compression, payload compression and Quality of Service (“QoS”) to the CDM-625. The advanced QoS combined with header and payload compression ensures the highest quality of service with minimal jitter and latency for real-time traffic, priority treatment of mission critical applications and maximum bandwidth efficiency. The CDM-625 is marketed to users who require connectivity up to 25 Mbps and we continue to add new features to meet customer needs.

**CDM-750 Advanced High-Speed Trunking Modem** – The CDM-750, which received the 2011 Next Generation Networks (“NGN”) Magazine Leadership award, accommodates the most demanding Internet Service Provider (“ISP”) and telecommunications backhaul links by offering users an advanced combination of space segment saving

capabilities while minimizing the need for unnecessary overhead.

- Advanced Very Small Aperture Terminal ("VSAT") Series of Products – Launched in March 2010, this growing product suite includes our CDM-800 Gateway Router, CDM-840 Remote Router, the CDD-880 Multi-Receiver Router, the CXU-810 RAN Optimizer and our Stampede FX series and is ideally suited for cellular backhaul, universal service obligation networks and other applications which require high performance in a hub-spoke environment. These products incorporate Radio Access Network Optimization and other advanced FEC and modulation techniques. Our Stampede FX series includes WAN optimization that uses content reduction techniques and acceleration techniques that can significantly reduce access time to data.

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DMD20 – Because it has been designed to minimize configuration changes, the DMD20 modem can be used by virtually our entire global customer base. The DMD20 is compatible with our CDM-600 and, with an optional communication link, allows network operators to monitor and control their BUCs. The DMD now offers DoubleTalk® Carrier-in-Carrier® bandwidth compression.

SLM-5650A – Fully compliant with key U.S. military standards, our SLM-5650A can transmit data up to 155 Mbps and can also be integrated with our Vipersat Management System ("VMS") to provide fully automated network and capacity management. An AES-256 TRANSEC module, compliant with the FIPS-140-2 NIST standard is also available as an option. All traffic (including overhead and all VMS control traffic) is encrypted when using the TRANSEC module.

DMD2050E – Designed for the U.S. Department of Defense ("DoD") and compliant with a wide range of U.S. government and commercial standards, this modem also offers DoubleTalk® Carrier-in-Carrier® bandwidth compression, which can reduce the DoD's transponder bandwidth requirements by 50%.

CDM-570 – An entry level modem that provides performance and flexibility at a lower price point; it is marketed to users who require connectivity up to 5 Mbps.

Many of our satellite earth station modems are available with customer selectable features including LDPC, DoubleTalk® Carrier-in-Carrier®, VersaFEC® and optional IP modules which can provide advanced features and bandwidth efficiencies. Our satellite earth station equipment and systems also include frequency conversion and amplifier solutions for indoor and outdoor environments. Our products are deployed globally by commercial and government users, supporting a variety of fixed and mobile/transportable applications. We offer new Low Power Outdoor ("LPOD") and High Power Outdoor ("HPOD") amplifiers which feature a versatile chassis, field replaceable supplies and phase combining for higher power.

Our global commercial and government customers are increasingly looking for integrated solutions to meet their operational needs. In recent years we have expanded our product offerings. We offer our customers pre-integrated network management systems which allow them to locally or remotely manage our Advanced VSAT series of network products using a single graphical user interface and which incorporates industry-leading optimization. For instance, in fiscal 2012, we were awarded a contract to deploy our Advanced VSAT solution to Harris CapRock Communications in five of their operational hubs and onboard its maritime customer's vessels. We also offer customers our Vipersat and SkyWire™ managed bandwidth products.

Over-the-Horizon Microwave Equipment and Systems – We design, develop, produce and market over-the-horizon microwave (also known as troposcatter) communications equipment and systems that can readily transmit digitized voice, video and data over unfriendly or inaccessible terrain from 20 to 200 miles by reflecting transmitted signals off of the troposphere, an atmospheric layer located approximately seven miles above the earth's surface. Over-the-horizon microwave communication is a cost-effective, secure alternative to satellite communication as it does not require the leasing of expensive satellite transponder space with its attendant recurring costs. Traditional end-users of our equipment have included the U.S. government and foreign governments and militaries who use our over-the-horizon microwave systems to, among other things, transmit radar tracking, Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance information (also known as "C4ISR") and air defense information as well as connecting remote border locations. Additionally, energy companies use our systems to enable communication links for offshore oil rigs and other remote locations as well as exploration activities. Over the past several years, we have introduced the following digital troposcatter modems:

CS6716 – With speeds up to 16 Mbps, our CS6716 modem includes advanced features such as forward error correction technology and embedded TPC. Our digital troposcatter modem upgrade kit is based on the CS6716 and has been

purchased by the U.S. military to enhance the capability of its AN/TRC-170 digital troposcatter terminals which are used to transmit C4ISR information.

CS6716A – A more advanced 22 Mbps version of the CS6716, incorporating most of the capabilities of the CS67200 modem with the addition of backward compatibility to existing U.S. military troposcatter assets.

CS67200i – Our 22 Mbps digital troposcatter modem is a state-of-the-art modem whose performance, we believe, exceeds any digital troposcatter modem on the market. It is IP-ready and supports Voice over Internet Protocol ("VoIP"), data and video transmission. Under certain conditions, because it has built-in redundancy, it can be configured to reach transmission capacities of up to 40 Mbps. This modem offers a more compact design, lighter weight and 70% less power consumption than our earlier S575 modem. Additionally, its powerful forward error correction capabilities enhance efficiency and its built in transmit power control system monitors and maintains the power of a troposcatter terminal to reduce the possibility of interception and interference.

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Recently, we introduced our Modular Tactical Transmission System ("MTTS"), a high capacity, beyond line of sight modular communications system designed for easy and rapid deployment. The MTTS solution delivers high-throughput capacity to enable mission-critical surveillance, situational awareness and real-time data to remote, infrastructure-challenged locations. Our MTTS allows direct transmission between sites, eliminates recurring costs, and reduces the complexity and delay in satellite communications currently used today. The MTTS solution enhances communications capabilities with seamless compatibility and interoperability with legacy-fielded troposcatter systems used currently by the U.S. military, including the AN/TRC-170. MTTS, the first truly modular, rapidly deployable, transit case-based troposcatter system, represents a major advancement in rapidly deployable troposcatter systems. The MTTS cases are designed to be used in line-of-sight ("LOS"), beyond-line-of-sight ("BLOS") dual diversity, and full over-the-horizon microwave quad diversity applications. The U.S. Army has recently deployed Secret Internet Protocol Router and Non-secure Internet Protocol Router Access Point ("SNAP") Tactical Transportable TROPO ("3T") and deployable communication equipment that incorporates our MTTS systems.

Our telecommunications transmission segment operates our high-volume technology manufacturing center located in Tempe, Arizona which has been utilized by all three of our business segments and, to a much lesser extent, by third-party commercial customers, including prime contractors to the U.S. government, who have outsourced a portion of their manufacturing to us. This allows us to secure volume discounts on key components, better control the quality of our manufacturing process and maximize the utilization of our manufacturing capacity. Accordingly, our telecommunications transmission segment's operating results are impacted positively or negatively by the level of utilization of our high-volume technology manufacturing center. Our telecommunications transmission segment also markets data compression integrated circuits based, in part, on our forward error correction technology.

## Business Strategies

Our telecommunications transmission segment business strategies are as follows:

**Expand Leadership Position in Satellite Earth Station Market** – Our satellite earth station modems, which incorporate leading technologies and standards such as TPC, LDPC, Digital Video Broadcasting Standard 2 ("DVB-S2") and DoubleTalk® Carrier-in-Carrier® bandwidth compression and Adaptive Coding and Modulation ("ACM") have established us as a leading provider to domestic and international commercial satellite systems and network customers, as well as U.S. and foreign governments. A majority of our satellite earth station products have historically been deployed by our customers for use with applications that require a SCPC transmission mode which, in non-technical terms, refers to using satellite bandwidth in a dedicated manner. Because information is being transmitted continuously, the backhauling of wireless and cellular traffic and the broadcasting of HDTV and satellite radio are ideal applications for SCPC-based transmission. Our bandwidth compression technologies allow customers to reduce recurring satellite transponder costs. Thus, we are increasingly developing products to compress and optimize IP-based traffic to provide increased value to our customers and facilitate ongoing and incremental demand for our products. We continue to share forward error correction and licensed technology across all of our branded product lines, and over time, we expect our individual brands to become less distinguishable from each other. We are continuing to market integrated product offerings that include access devices and voice gateways which allow our customers to consolidate multi-service network traffic such as voice, video and data. When combined with our satellite earth station modems, the solution is ideal for backhauling cellular traffic using satellites, which can significantly reduce bandwidth requirements. We expect to continue expanding our leadership position by offering new products and integrated solutions to meet the expected increased demand from commercial, government and defense customers.

**Participate in the Anticipated Growth of Wireless and Cellular Backhaul Applications** – Our satellite earth station equipment enables mobile cellular network providers to cost-effectively backhaul wireless and cellular traffic from main cities to more remote cities via satellite. We believe that demand for our satellite earth station equipment will



continue to grow for many years because of the important role it plays in facilitating increasing wireless and mobile phone usage, particularly in developing areas of the world such as China, Russia, Latin America, the Middle East and Africa, where fiber or terrestrial-based systems are generally more expensive to deploy. Our marketing in this area focuses on our modems which incorporate DoubleTalk® Carrier-in-Carrier® bandwidth compression.

Continue our Marketing and Sales Efforts to the U.S. Government – Although the U.S. government budget is under extreme spending pressures, we believe that long-term demand by the U.S. government for our equipment will be strong due to a number of factors, including the ever increasing amount of C4ISR information that is being generated. For instance, in fiscal 2012, we were awarded a \$1.8 million contract by the U.S. military for our DMD2050 MIL-STD-188-165A modem, our first order with the U.S. government that includes our DoubleTalk® Carrier-in-Carrier® bandwidth compression technology. The DoubleTalk® Carrier-in-Carrier® technology allows transmit and receive carriers of a duplex link to share the same transponder space, which can reduce bandwidth utilization by 50%. The modems purchased on this contract will be utilized in deployable terminals to support a satellite-based network expansion for battlefield communications.

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Capitalize on Increased Demand for Over-the-Horizon Microwave Systems and Upgrades – We have designed, manufactured and sold over-the-horizon microwave products and systems for approximately forty years and believe we are the leading supplier in this specialized product line. Over-the-horizon microwave systems are sometimes referred to as troposcatter systems and are extremely reliable and secure when compared to satellite-based systems. These products have an extremely long sales cycle due to the complexity of the overall network that they must operate with. Our over-the-horizon microwave systems, which include our patented TPC forward error correction technology, are able to transmit video and other broadband applications at throughput speeds in excess of 20 Mbps (and when deployed in dual-mode, can reach speeds in excess of 40 Mbps). In connection with these large troposcatter system deployments, we offer related equipment and systems to our customers for their network needs. To date, the largest single end-customer for our over-the-horizon microwave systems has been a North African country. In fiscal 2012, we were awarded a \$55.0 million contract to design and furnish a telecommunications system for use in this country's communications network and we expect to record related revenue over the next three years. We believe that, over time, we will be able to obtain additional large contracts to support the U.S. and other militaries. In the past few years, the DoD purchased our 16 Mbps adaptive digital modem upgrade kits to be used on a portion of the DoD's inventory of AN/TRC-170 digital troposcatter terminals. We recently entered into a teaming agreement with TeleCommunication Systems, Inc. to offer the U.S. military a troposcatter system in a transportable flyaway configuration (known as "SNAP-3T") which is capable of providing seamless compatibility and interoperability with legacy-fielded over-the-horizon microwave systems. To date, we have shipped forty-eight of our MTTTS systems for deployment by the U.S. Army in its SNAP-3T communication equipment. As a result of our historical successes in North Africa and with the U.S. DoD in Iraq and Afghanistan, other foreign countries and militaries have shown interest in our over-the-horizon microwave systems technology and we believe the overall market for these products and systems is expanding.

Continue to Develop, License or Acquire Technology for Efficient Bandwidth Utilization – Because we expect long-term demand for satellite bandwidth to increase, we intend to develop, license or acquire technology (including complementary products) to provide affordable bandwidth solutions for our customers. Specifically, we expect to develop next-generation advances of our forward error correction technology and believe this will have important utility in responding to the increasing demand for satellite bandwidth utilization, particularly by the U.S. military, security and intelligence agencies. We intend to continue to enhance our Internet, TDMA and SCPC-based software and products which enable customers to utilize bandwidth management techniques to facilitate, among others, applications such as video teleconferencing, distance learning, telemedicine and Internet content delivery. We have incorporated our licensed DoubleTalk® Carrier-in-Carrier® technology into many of our products and are combining it with other technologies such as VersaFEC®, a next-generation forward error correction technology. In recent years, we have expanded our satellite earth station product offerings and began selling IP encapsulators and media routers, that, when combined with our bandwidth efficient satellite earth station modems, can reduce operating expenses for service providers delivering IP-based broadcast connectivity. We also expect to continue to offer NetPerformer products which combine the functionality of voice gateway and data routers and provide data compression over a single wide area network, thereby enabling our customers to potentially bypass toll costs on public networks. Through our distribution channel, we also continue to market Skywire™ products that combine SCPC-based systems with TDMA-like bandwidth efficiency.

## RF Microwave Amplifiers Segment

### Overview

We believe we are one of the leading companies designing, developing, manufacturing and marketing satellite earth station traveling wave tube amplifiers ("TWTA") and solid-state, high-power, narrow and broadband amplifiers ("SSPA"). All of our amplifiers reproduce signals with high power and are extremely complex and critical to the performance of the systems into which they are incorporated.

Our TWTA and narrow-band SSPA products can boost the strength of a signal prior to transmission to satellites, which are often more than 22,000 miles from the surface of the earth. Our broadband SSPA products can efficiently increase the power of broadband radio frequency signals with high degrees of clarity to provide for effective jamming and communication power capability required by sophisticated defense programs including those used to counter remote controlled improvised explosive devices.

We sell our amplifiers to domestic and foreign commercial and government users and market our products under a variety of brand names including Comtech XICOM Technology, Comtech PST and Hill Engineering.

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### Products, Services and Applications

Our RF microwave amplifiers are generally built-to-order and are used in the following markets and applications:

**Broadcast and Broadband Satellite Communication Applications** – We offer our customers TWTA products for use in a variety of telecommunications applications used to transmit and amplify signals from satellite earth stations throughout the world. Our amplifiers can provide power levels that are vital to satellite communication applications including traditional broadcast, direct-to-home broadcast, satellite newsgathering and the broadband communications markets, specifically in the emerging High Throughput Satellite systems. Through programs such as the Light Multi-Band Satellite Terminal and Ground Multi-Band Terminal, our amplifiers support high capacity U.S. military satellite systems such as the Wideband Global Satellite Constellation. Our narrow-band SSPA products are a key component in communications systems used to support U.S. special operations forces around the world.

**Electronic Warfare and Other Defense Applications** – U.S. and foreign military customers use our amplifiers in a variety of telecommunications systems (such as transmitting and boosting signals) and electronic warfare systems (such as simulation, communications, radar, jamming and in identification friend or foe (“IFF”) systems). The U.S. military also uses our amplifiers in systems designed to help protect U.S. troops from radio-controlled roadside bombs. We have delivered thousands of amplifiers and switches in support of the Counter Remote Controlled Improvised Explosive Device Electronic Warfare (“CREW”) Program as well as low rate production and engineering development model amplifiers and switches for the CREW 3.2 and 3.3 programs, respectively. Our amplifiers are also used in the U.S. military's Communications Electronic Attack with Surveillance and Reconnaissance (“CEASAR”) system. CEASAR is a pod-mounted electronic attack system which provides U.S. troops with a “jammer-on-demand” capability. Our TWTA and SSPA amplifiers are used by military customers throughout the world for mobile applications, including those on helicopters and ships and in support of U.S. Special Forces. We believe that the recent focus on mobile and special operations by the U.S. military and heightened homeland security concerns should result in continuing demand for our amplifier products.

**Sophisticated Commercial Applications** – Our amplifiers are key components in sophisticated commercial applications. For example, our amplifiers are used in oncology treatment systems that allow doctors to give patients, who are suffering from cancer, higher doses of radiation while focusing more closely on the tumors, thereby avoiding damage to healthy tissue. In addition, our amplifiers are used to amplify signals carrying voice, video or data for air-to-satellite-to-ground communications. For example, our amplifiers, when incorporated into an aircraft satellite communication system, can provide passengers with email, Internet access and video conferencing.

### Business Strategies

We manage our RF microwave amplifiers segment with the following principal strategies:

**Continue to Develop a One-Stop Shopping Approach for RF Microwave Amplifiers** – In recent years, we have expanded our product line of RF microwave amplifiers to include both TWTA and SSPA technologies, and today we are one of only a few companies to offer both technologies. We intend to continue this effort and over time, we believe that we can offer customers a one-stop shopping approach by offering a broad range of RF microwave amplifier equipment for use in commercial and government applications. This strategy will include maintaining our internal research and development activities as well as pursuing customer funded research and development to fuel new product development. We expect this emphasis on research and development to enable us to enhance our existing product lines, develop new capabilities and solidify and strengthen our position in our principal markets. In order to fully develop a global one-stop shop approach, we may also seek to expand our product line through acquisitions.

Continue to Penetrate the Market for Outsourced Amplifier Production – Because solid-state, high-power, broadband amplifiers are important to the performance and quality of the larger systems into which they are incorporated, many large systems companies have historically preferred to manufacture these amplifiers in-house. We believe that our focus on and expertise in designing and manufacturing solid-state, high-power, broadband amplifiers, as well as our high-volume manufacturing capability, often makes us a cost-effective and technologically superior alternative to such in-house manufacturing. Some of the companies who have outsourced amplifier production to us include Rockwell Collins, Inc., Thales Group, European Aeronautic Defense and Space Company (“EADS”), Telephonics Corporation, Northrop Grumman Corporation, BAE Systems PLC, Exelis Inc. (formerly part of ITT Corporation) and Raytheon Company.

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Secure Additional Business Related to Next Generation CREW Programs – In the past few years, a significant portion of our sales in our RF microwave amplifiers segment had come from our participation in the CREW 2.1 program. The CREW 2.1 program uses our broadband, solid-state high-power radio signal jamming amplifiers and switches in systems to help protect U.S. troops from the ever-evolving threat of radio-controlled roadside bombs. We expect to ship the remaining CREW 2.1 backlog we had as of July 31, 2012 in early fiscal 2013.

Although the U.S. government budget remains under significant pressure and the U.S. government has initiated and continues to plan on troop withdrawals from Iraq and Afghanistan, we believe the remaining troops, as well as troops deployed in other areas in the future, will ultimately require upgraded systems that will need to be purchased. We expect that the CREW 3.3 program will be the program of choice to address the ongoing threat of improvised explosive devices. We have delivered on design and development contracts from a prime contractor to the U.S. military in support of the CREW 3.3 program and have been selected as the sole source and/or primary amplifier supplier for a variety of different CREW 3.3 amplifier configurations. Although we initially believed CREW 3.3 production would commence in fiscal 2013, for reasons unrelated to our product offerings, we now expect CREW 3.3 sales to begin to ramp up in fiscal 2014.

Continue our Marketing and Sales Efforts in the Defense Market – In addition to the CREW program, we believe there are a number of other long-term opportunities in the defense markets, particularly electronic warfare applications, and that we can increase our share of this market through partnering arrangements with prime contractors. For instance, in fiscal 2011, we received a multi-year award to provide certain of our high-power satellite amplifiers which will be used in a major network expansion for the U.S. Air Force. We believe this award represents a testament to the quality and high reliability of our amplifiers and we intend to seek additional sales in the market.

Continue to Expand our Presence in the Mobile Military Satellite Communications Market – Over the last decade, the military satellite communications (“Milsatcom”) market for mobile systems has increased significantly. While programs we've historically participated in , such as the Lightweight Multi-Band Satellite Terminal (used by the U.S. Air Force, Army and Marines) and Ground Multi-Band Terminal (used by the U.S. Air Force), have now been largely completed, we expect to continue our strong presence in the mobile military communications market by participating in new programs such as the U.S. Army's Warfighter Information Network-Tactical Program (“WIN-T”) and the Family of Terminals program (used by the U.S. Special Operations Command (“SOCOM”)). We intend to increase our focus on these types of programs and believe that we can increase our penetration into both mobile ground and airborne Milsatcom markets.

Mobile Data Communications Segment

Overview

Our mobile data communications segment provides government and commercial customers with integrated solutions to enable global satellite-based communications when mobile, real-time, secure transmission is required.

The vast majority of sales in this segment have historically come from sales relating to two U.S. military programs known as the U.S. Army’s Movement Tracking System (“MTS”) program and the Force XXI Battle Command, Brigade and Below (“FBCB2”) command and control system's Blue Force Tracking (“BFT-1”) program. Our combined MTS and BFT-1 sales for fiscal 2010 through 2012 were as follows:

Net Sales (in millions)	Percentage of Mobile Data Communications Segment Net Sales	Percentage of Consolidated Net Sales
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2012	\$87.8	78.0	% 20.6	%
2011	248.6	86.2	% 40.6	%
2010	423.2	94.8	% 54.4	%

We have supplied mobile satellite transceivers, vehicle and command center application software, third-party produced ruggedized computers and satellite earth station network gateways and associated installation, training and maintenance to the MTS program which now operates under the auspices of the BFT-1 program under the direction of the FBCB2-BFT program office. Our MTS-related services also included the monitoring of satellite packet data networks.

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In July 2010, a third party vendor was selected by the U.S. Army to develop a next generation BFT program known as BFT-2. The U.S. Army has stated that it expects to transition to BFT-2 as quickly as possible. We expect that future MTS and BFT-1 orders and related sales will largely be dependent on the ability and speed of the U.S. Army to transition to the BFT-2 system.

### Products, Services and Applications

Our mobile data satellite transceivers and related proprietary technology have been installed on a variety of U.S. military vehicles (both logistics-centric and war-fighter-centric) including: Abrams tanks, Bradley Fighting Vehicles, helicopters such as the Apache, Black Hawk and Chinook and High Mobility Multipurpose Wheeled Vehicles ("HMMWV"). When equipped with this technology, soldiers operating these vehicles are able to be continually tracked and, at the same time, are able to maintain communications with a command center as well as fellow soldiers in the field. Our extremely reliable proprietary network service employs full end-to-end path redundancy as well as back-up capability in the event of a major catastrophe or service interruption, and we can maintain and/or operate a 24 x 7 network operations and customer care center that provides customers with ongoing support any time, day and night.

Our mobile data satellite transceiver products and related proprietary technology can also be used to facilitate communications in the event that natural disasters or other situations, such as a terrorist attack, disable or limit existing terrestrial communications. In the past, the Army National Guard has purchased our mobile data communication products to better prepare for and react to disaster recovery operations at the local, state and national levels.

Our Sensor Enabled Notification System ("SENS") technology-based solutions offer customers a low-cost, spread-spectrum technology-based system which can remotely track a large number of remote assets via low earth-orbit satellites and miniaturized satellite transmitters. The information received is processed and distributed to users through an Internet Portal at [www.assetview.comtechmobile.com](http://www.assetview.comtechmobile.com). Messages can be retrieved via several methods including the Internet, email, voice or fax and can be forwarded to a user-designated site. Our SENS technology is integrated with a variety of mapping solutions and can provide our customers with features such as geo-fencing which allows customers to track whether or not their assets or vehicles stay within pre-defined boundaries.

Our geoOps™ Enterprise Location Management System ("geoOps™") is a configurable network and web-based software platform that provides an integrated capability to command, control and manage mobile ground vehicles. Our geoOps™ software baseline is incorporated into the North Atlantic Treaty Organization's ("NATO") International Security Assistance Force Tracking System ("NATO IFTS"), a multi-national satellite-based friendly force tracking system.

### BFT-1 Sustainment Activities

We are currently providing BFT-1 sustainment services pursuant to a three-year indefinite delivery/indefinite quantity ("IDIQ") BFT-1 sustainment contract that we were awarded in March 2012. This three-year contract has a not-to-exceed value of \$80.7 million and a base performance period that began April 1, 2012 and ends March 31, 2013. The contract provides for two twelve-month option periods exercisable by the U.S. Army and, except for a fixed annual intellectual property license ("IP license") fee of \$10.0 million, the three-year \$80.7 million contract value is subject to finalization and downward negotiation. Effective July 1, 2012, we are no longer procuring satellite bandwidth for the U.S. Army.

Under the terms of the BFT-1 sustainment contract, we agreed to perform certain satellite network and related engineering services (including program management) on a cost-plus-fixed-fee basis. In addition, the contract allows the U.S. Army to purchase certain mobile satellite transceivers on a firm fixed-price basis. Specific terms and



conditions related to the IP license are covered by a separate licensing agreement that provides for annual renewals, at the U.S. Army's option, for up to a five-year period, after which time the U.S. Army will have a limited non-exclusive right to use certain of our IP for no additional IP licensing fee. Payments of annual IP license fees beyond the base year are contingent upon the U.S. Army's exercise of optional performance periods.

In connection with the initial three-year \$80.7 million IDIQ BFT-1 sustainment contract award, we received a funded order for the initial base year of \$17.0 million, of which \$10.0 million was designated for payment of the first year IP license fee and \$7.0 million was designated for engineering services, program management and satellite network operations. Pricing for the engineering services, program management and satellite network operations has not yet been finalized and it is possible that we can receive incremental funding of up to \$8.6 million upon finalization.

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Our BFT-1 sustainment contract can be terminated by the government at any time and is not subject to automatic renewal. Except for orders received to date, the U.S. Army is not obligated to purchase any additional equipment or services under this IDIQ contract. We believe that any future MTS and BFT-1 orders and related sales will largely be dependent on the ability and speed of the U.S. Army to transition to the BFT-2 system and we expect future annual sales (and related operating income) from both of these programs to materially decline from current levels.

Business Strategies

Although we expect materially lower annual BFT-1 and MTS revenues in future years and have discontinued sales of our microsatellite products (which, in fiscal 2012 accounted for \$17.7 million or 4.2% of consolidated net sales), we are focusing on long-term growth opportunities and will:

Work Cooperatively with the U.S. Army to Support Its Planned Transition to BFT-2 – We believe that the reliable and effective performance of our MTS and BFT-1 solutions has demonstrated to the U.S. Army the value of our mobile, global satellite-based communications network when near real-time, secure transmissions are required. Although we do not have specific visibility into the U.S. Army’s BFT-2 transition plan, the U.S. Army has indicated to us that it may require certain sustaining network engineering related services and our intellectual property for several years. We intend to support the U.S. Army through our existing three-year BFT-1 contract.

Leverage our Current Installed Base into Other Military Commands and the Civil Government Market – In the past, we have demonstrated that there are a number of opportunities for us to market our products and solutions to other military commands, both in the U.S. and internationally. For example, the Army National Guard has received funding in the past to purchase our products and services. Our geoOps™ software platform has also been incorporated into NATO’s IFTS, a satellite-based friendly force tracking system. We currently provide mobile tracking solutions to the U.S. Department of State and U.S. Department of Homeland Security. During fiscal 2013, we intend to invest modest amounts in research and development and sales and marketing to develop and market new solutions in a methodical way and target them to those potential customers whose needs would be well met by our technology offerings. We do not, however, expect a significant amount of sales in new markets or to new customers in fiscal 2013.

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Summary of Key Products, Systems and Services by Business Segment

Business Segment	Products/Systems and Services	Representative Customers	End-User Applications
Telecommunications transmission	Satellite earth station equipment and systems including: modems, frequency converters, power amplifiers, transceivers, access devices, voice gateways and network management systems	Satellite systems integrators, wireless and other communication service providers, broadcasters and defense contractors as well as U.S. and foreign governments. End-customers include AT&T Inc., BT Group plc., China Mobile Limited, Embratel Participações S.A., Harris Corporation, Intelsat, Ltd., Globecom Systems, Inc., L-3 Communications and Rockwell Collins, Inc.	Commercial and defense applications including the transmission of voice, video and data over the Internet, broadband, long distance telephone, broadcast (including high-definition television) and cable, distance learning and telemedicine
	Over-the-horizon microwave systems and adaptive modems	U.S. government customers, foreign governments such as Middle Eastern and North African customers and related prime contractors, systems integrators, as well as oil companies such as Shell Oil Company	Secure defense applications, such as transmission of U.S. military digital voice and data, modular tactical transmission systems ("MTTS") which have been incorporated into the U.S. military's SNAP communication equipment, and commercial applications such as the transmission of IP-based communications to and from oil platforms
RF microwave amplifiers	Traveling wave tube amplifiers and solid-state amplifiers	Domestic and international defense customers, prime contractors and system suppliers such as L-3 Communications, Harris Corporation, General Dynamics Corporation, ViaSat Inc. and satellite broadcasters such as The DIRECTV Group and EchoStar Corporation	Satellite broadcast and broadband satellite communications and defense applications

	<p>Solid-state, high-power, broadband RF microwave amplifiers</p>	<p>Domestic and international defense customers, prime contractors and system suppliers such as Raytheon Company, Exelis Inc., EADS and Thales Group, medical equipment companies such as Varian Medical Systems, Inc., and aviation industry system integrators such as Rockwell Collins, Inc.</p>	<p>Defense applications including communications, radar, jamming and IFF and commercial applications such as medical applications (oncology treatment systems) and satellite communications (including air-to-satellite-to-ground communications)</p>
<p>Mobile data communications</p>	<p>Mobile satellite transceivers, satellite network services, installation, training and maintenance and SENS technology-based products</p>	<p>U.S. Army logistics community, the U.S. Army war-fighter community, foreign governments, and prime contractors to the U.S. Armed Forces, NATO and commercial customers</p>	<p>Two-way satellite-based mobile tracking, messaging services (U.S. Army's MTS), battlefield command and control applications (BFT-1) and RFID applications</p>

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## Acquisitions

We have made acquisitions of businesses and enabling technologies over the past several years and have followed a disciplined approach in identifying, executing and capitalizing on these acquisitions.

On August 1, 2008 (the beginning of our fiscal 2009), we acquired Radyne, the largest acquisition in our history which we believe strengthened our leadership position in our satellite earth station product lines in our telecommunications transmission segment, more than doubled the size of our RF microwave amplifiers segment and further diversified our overall global customer base and expanded our addressable markets.

None of our other recent tactical and product line acquisitions, either individually, or in the aggregate, were material to our results of operations and the effects of those acquisitions, either individually, or in the aggregate, were not material to our historical consolidated financial statements.

## Sales, Marketing and Customer Support

Sales and marketing strategies vary with particular markets served and include direct sales through sales, marketing and engineering personnel and indirect sales through independent representatives, value-added resellers or a combination of the foregoing. We devote time to evaluating and responding to requests for proposals by governmental agencies around the world, and as needed, we employ the use of specialized consultants to develop our proposals and bids.

We intend to continue to expand international marketing efforts by engaging additional independent sales representatives, distributors and value-added resellers and by establishing additional foreign sales offices.

Our management, technical and marketing personnel establish and maintain relationships with customers. Our strategy includes a commitment to provide ongoing customer support for our systems and equipment. This support involves providing direct access to engineering staff or trained technical representatives to resolve technical or operational issues. As appropriate and as guided by corporate senior management, our three business segments capitalize on manufacturing, technology, sales, marketing and customer support synergies between them.

Our over-the-horizon microwave systems, amplifier product lines, satellite earth station products and mobile data communications products and services that use relatively new technology have long sales cycles. Once a product is designed into a system, customers may be reluctant to change the incumbent supplier due to the extensive qualification process and potential redesign required in using alternative sources. Accordingly, management is actively involved in key aspects of relations with our major customers.

Sales by geography and customer type, as a percentage of consolidated net sales, are as follows:

	Fiscal Years Ended July 31,			
	2012	2011	2010	
United States				
U.S. government	48.9	% 61.7	% 71.1	%
Commercial customers	12.4	% 8.1	% 6.0	%
Total United States	61.3	% 69.8	% 77.1	%
International	38.7	% 30.2	% 22.9	%

Sales to U.S. government customers include sales to the DoD and intelligence and civilian agencies, as well as sales directly to or through prime contractors. International sales for fiscal 2012, 2011 and 2010, which include sales to U.S. domestic companies for inclusion in products that will be sold to international customers, were \$164.5 million, \$184.8 million and \$178.5 million, respectively. When we sell internationally, we primarily price our contracts in U.S. dollars. Some of our exports are paid for by letters of credit, with the balance carried either on an open account or on an installment note basis. Significant international contracts generally require us to provide performance guarantees. For fiscal 2012, 2011 and 2010, except for sales to the U.S. government which include sales to prime contractors of the U.S. government, no other customer or individual country, including sales to U.S. domestic companies for inclusion in products that will be sold to a foreign country, represented more than 10% of consolidated net sales.

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Backlog

Our backlog as of July 31, 2012 and 2011 was \$153.9 million and \$145.0 million, respectively. Included in these amounts, as of July 31, 2012 and 2011, is approximately \$16.6 million and \$38.9 million, respectively, related to our BFT-1 sustainment activities. We expect that a majority of the backlog as of July 31, 2012 will be recognized as sales during fiscal 2013.

At July 31, 2012, 36.2% of the backlog consisted of U.S. government contracts, subcontracts and government funded programs, 53.0% consisted of orders for use by international customers (including sales to U.S. companies for inclusion in products that will be sold to international customers) and 10.8% consisted of orders for use by U.S. commercial customers.

Our backlog consists solely of orders that we believe to be firm; however, almost all of the contracts in our backlog are subject to cancellation at the convenience of the customer or for default in the event that we are unable to perform under the contract. Backlog that is derived from U.S. government orders relates to U.S. government contracts that have been awarded, signed and funded. Backlog for our U.S. government customers includes amounts appropriated by Congress and allotted to the contract by the procuring government agency. Our backlog does not include the value of options that may be exercised in the future on multi-year contracts, nor does it include the value of additional purchase orders that we may receive under IDIQ contracts or basic ordering agreements.

In fiscal 2012, 86.2% of our consolidated U.S. government net sales were derived from firm fixed-price contracts. Under these types of contracts, we perform for an agreed-upon price and we can derive benefits from cost savings, but bear the risk of cost overruns. Our cost-plus-fixed-fee contracts, which to date have not been a significant percentage of our consolidated net sales, typically provide for reimbursement of allowable costs incurred plus a negotiated fee.

Variations in backlog from time to time are attributable, in part, to changes in product mix, the timing of contract proposals, and the timing of contract awards and delivery schedules on specific contracts. Our satellite earth station equipment and our traveling wave tube amplifier product lines operate under short lead times and usually generate sales out of inventory. Our mobile data communications backlog is highly influenced by the nature and timing of orders received from the U.S. government which is subject to unpredictable funding, deployment and technology decisions. As a result, we believe our backlog at any p