Iridium Communications Inc. Form 10-K March 04, 2014

# 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  $^{\rm X}$  OF 1934

For the fiscal year ended December 31, 2013

OR

.. TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to

Commission File Number 001-33963

Iridium Communications Inc. (Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 26-1344998 (I.R.S. Employer Identification No.)

1750 Tysons Boulevard, Suite 1400, McLean, Virginia 22102 (Address of principal executive offices, including zip code)

703-287-7400 (Registrant's telephone number, including area code)

Securities Registered Pursuant to Section 12(b) of the Act:

Title of Each Class Common Stock, \$0.001 par value Name of Each Exchange on Which Registered NASDAQ Global Select Market

**NASDAQ Global Select Market** 

# Warrants, exercisable for Common Stock at an exercise price of \$11.50 per share

# 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 x

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 x

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 x No "

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 x 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. x

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 definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer " Accelerated filer x

Non-accelerated filer " (Do not check if a smaller reporting company) Smaller Reporting Company "

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes "No x

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold as of June 30, 2013 was approximately \$494.3 million.

The number of shares of the registrant's common stock, par value \$0.001 per share, outstanding as of February 27, 2014 was 76,689,814.

# DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for its 2014 annual meeting of stockholders to be filed pursuant to Regulation 14A with the Securities and Exchange Commission not later than 120 days after the registrant's fiscal year end of December 31, 2013, are incorporated by reference into Part III of this Form 10-K.

# IRIDIUM COMMUNICATIONS INC.

# ANNUAL REPORT ON FORM 10-K Year Ended December 31, 2013

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# **Forward-Looking Statements**

This report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. For this purpose, any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. Such forward-looking statements include those that express plans, anticipation, intent, contingencies, goals, targets or future development or otherwise are not statements of historical fact. Without limiting the foregoing, the words "believes," "anticipates," "plans," "expects," "intends" and similar expressions are intended to identif forward-looking statements. These forward-looking statements are based on our current expectations and projections about future events, and they are subject to risks and uncertainties, known and unknown, that could cause actual results and developments to differ materially from those expressed or implied in such statements. The important factors discussed under the caption "Risk Factors" in this Form 10-K could cause actual results to differ materially from those indicated by forward-looking statements made herein. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

#### PART I

#### Item 1. Business

# Corporate Background

We were formed as GHL Acquisition Corp., a special purpose acquisition company, in November 2007, for the purpose of effecting a merger, capital stock exchange, asset acquisition, stock purchase, reorganization or other similar business combination. On February 21, 2008, we consummated our initial public offering. On September 29, 2009, we acquired, directly and indirectly, all the outstanding equity of Iridium Holdings LLC, or Iridium Holdings, and changed our name from GHL Acquisition Corp. to Iridium Communications Inc.

Iridium Holdings was formed under the laws of Delaware in 2000, and on December 11, 2000, Iridium Holdings, through its wholly owned subsidiary Iridium Satellite LLC, or Iridium Satellite, acquired certain satellite assets from Iridium LLC, a non-affiliated debtor in possession, pursuant to an asset purchase agreement.

#### **Business Overview**

We are the second largest provider by revenue of mobile voice and data communications services via satellite, and the only commercial provider of communications services offering true global coverage. Our satellite network provides communications services to regions of the world where existing wireless or wireline networks do not exist or are limited, including remote land areas, open ocean, the polar regions and regions where the telecommunications infrastructure has been affected by political conflicts or natural disasters.

We provide voice and data communications services to businesses, the U.S. and foreign governments, non-governmental organizations and consumers via our constellation of 66 in-orbit satellites, in-orbit spares and related ground infrastructure. We utilize an interlinked mesh architecture to route traffic across our satellite constellation using radio frequency crosslinks between satellites. This unique architecture minimizes the need for local ground facilities to support the constellation, which facilitates the global reach of our services and allows us to offer services in countries and regions where we have no physical presence.

Our commercial end user base, which we view as our primary growth engine, is diverse and includes markets such as emergency services, maritime, government, utilities, oil and gas, mining, recreation, forestry, heavy equipment, construction and transportation. Many of our end users view our products and services as critical to their daily operations and integral to their communications and business infrastructure. For example, multinational corporations in various sectors use our services for business telephony, e-mail and data transfer services, including telematics, and

to provide mobile communications services for employees in areas inadequately served by terrestrial networks. Ship crews and passengers use our services for ship-to-shore calling as well as to send and receive e-mail and data files, and to receive electronic media, weather reports, emergency bulletins and electronic charts. Shipping operators use our services to manage operations on board ships and to transmit data, such as course, speed and fuel stock. Aviation end users use our services for air-to-ground telephony and data communications for position reporting, emergency tracking, weather information, electronic flight bag updates and fleet information.

The U.S. government, directly and indirectly, has been and continues to be our largest single customer, generating \$74.7 million in service and engineering and support service revenue, or 19% of our total revenue, for the year ended December 31, 2013. This does not include revenue from the sale of equipment that may be ultimately purchased by U.S. or non-U.S. government agencies through third-party distributors, or airtime services purchased by U.S. or non-U.S. government agencies that are provided through our commercial gateway, as we lack visibility into these activities and the related revenue. In October 2013, we entered into a new multi-year, fixed-price contract with the U.S. government to provide satellite airtime services for an unlimited number of U.S. Department of Defense, or DoD, and other federal government subscribers, with a total contract value of \$400 million over its five-year term.

The DoD owns and operates a dedicated gateway in Hawaii that is only compatible with our satellite network. The U.S. armed services, State Department, Department of Homeland Security, Federal Emergency Management Agency, or FEMA, Customs and Border Protection, and other U.S. government agencies, as well as other nations' governmental agencies, use our voice and data services for a wide variety of applications. Our voice and data products are used for numerous primary and backup communications solutions, including logistical, administrative, morale and welfare, tactical and emergency communications. In addition, our products are installed in ground vehicles, ships, rotary-wing and fixed-wing aircraft and are used for command-and-control and situational awareness purposes. Our satellite network provides increased network security to the DoD because traffic is routed across our satellite constellation before being brought down to earth through the dedicated, secure DoD gateway, thus providing additional levels of protection. Since our network was launched in the mid-1990s, the DoD has made significant investments to build and upgrade its dedicated gateway and to purchase our handsets and voice and data devices, all of which are only compatible with our satellite network. In addition, the DoD continues to invest directly and indirectly in additional services on our network such as Distributed Tactical Communications Services, which we refer to as Netted Iridium<sup>®</sup>.

We sell our products and services to commercial end users exclusively through a wholesale distribution network, encompassing 75 service providers, more than 190 value-added resellers, or VARs, and 55 value-added manufacturers, or VAMs, which create and sell Iridium®-based technology either directly to the end user or indirectly through other service providers, VARs or dealers. These distributors often integrate our products and services with other complementary hardware and software and have developed a broad suite of applications using our products and services to target specific lines of business. We expect that demand for our services will increase as more applications are developed and deployed that utilize our technology.

At December 31, 2013, we had approximately 664,000 billable subscribers worldwide, representing a 9% increase compared to December 31, 2012. Total revenue decreased slightly from \$383.5 million in 2012 to \$382.6 million in 2013.

# Industry

We compete in the mobile satellite services sector of the global communications industry. Mobile satellite services operators provide voice and data services to people and machines on the move or in fixed locations using a network of satellites and ground facilities. Mobile satellite services are intended to meet users' needs for connectivity in all locations. Customers typically use satellite voice and data communications in situations where existing terrestrial wireline and wireless communications networks do not exist, do not provide sufficient coverage, or are impaired. Further, many regions of the world benefit from satellite networks, such as rural and developing areas that lack adequate wireless or wireline networks, ocean and polar regions where few alternatives exist, and regions where the telecommunications infrastructure has been affected by political conflicts or natural disasters.

Government organizations, including military and intelligence agencies and disaster response agencies, non-governmental organizations and industrial operations and support teams depend on mobile and fixed voice and data satellite communications services on a regular basis. Businesses with global operations require reliable communications services when operating in remote locations around the world. Mobile satellite services users span many sectors, including emergency services, maritime, aviation, government, utilities, oil and gas, mining, recreation, forestry, heavy equipment, construction and transportation, among others. Many of our customers view satellite communications services as critical to their daily operations.

We believe that increasing penetration will provide a significant market opportunity for the mobile satellite services industry. According to a 2013 report produced by A.T. Kearney for the GSM Association, total mobile connections were expected to reach 7.4 billion throughout the world as of the end of 2013. We believe that growth in the terrestrial wireless industry has increased awareness of the need for reliable mobile voice and data communications services. In addition, despite significant penetration and competition, terrestrial wireless systems only serve a small fraction of the

earth's surface and are focused mainly in those areas where people live, excluding oceans and other remote regions where ships, airplanes and other remote assets may be located or in transit. By offering mobile communications services with global voice and data coverage, mobile satellite service providers address the demand from businesses, governments and individuals for connectivity and reliability in locations not consistently served by wireline and wireless terrestrial networks.

The mobile satellite services industry also benefits from the continued development of innovative, lower-cost technology and applications integrating mobile satellite products and services. We believe that growth in demand for mobile satellite services is driven in large part by the declining cost of these services, the diminishing size and lower costs of voice, data and machine-to-machine, or M2M, devices, the rollout of new applications tailored to the specific needs of customers across a variety of markets, and a more favorable regulatory environment in international markets.

# Communications industry sectors include:

mobile satellite services, which provide customers with voice and data connectivity to mobile and fixed devices using ground facilities and networks of geostationary, or GEO, satellites, which are located approximately 22,300 miles above the equator, medium earth orbit satellites, which orbit between approximately 6,400 and 10,000 miles above the earth's surface, or low earth orbit, or LEO, satellites, such as those in our constellation, which orbit between approximately 300 and 1,000 miles above the earth's surface;

fixed satellite services, which use GEO satellites to provide customers with broadband communications links between fixed points on the earth's surface; and

terrestrial services, which use a network of land-based equipment, including switching centers and radio base stations, to provide wireless or wireline connectivity and are complementary to satellite services.

Within the major satellite sectors, fixed satellite services and mobile satellite services operators differ significantly from each other with respect to size of antenna and types of services offered. Fixed satellite services providers, such as Intelsat S.A., Eutelsat Communications S.A. and SES S.A., are characterized by large, often stationary or fixed ground terminals that send and receive high-bandwidth signals to and from the satellite network for video and high-speed data customers and international telephone markets. By contrast, mobile satellite services providers, such as us, Inmarsat plc, Globalstar, Inc., and ORBCOMM Inc. focus more on voice and data services, where mobility and small-sized terminals are essential.

A LEO system, such as the system we operate, generally has lower transmission delays than a GEO system, such as that operated by Inmarsat, due to the shorter distance signals have to travel, which also enables the use of smaller antennas on mobile devices. We believe the unique interlinked mesh architecture of our constellation, combined with the global footprint of our satellites, distinguishes us from other regional LEO satellite operators such as Globalstar and ORBCOMM, by allowing us to route voice and data transmissions to and from anywhere on the earth's surface via a single gateway. As a result, we are the only mobile satellite services operator offering real-time, low-latency services with true global coverage, including full coverage of the polar regions.

#### Our Competitive Strengths

Attractive and growing markets. We believe that the mobile satellite services industry will continue to experience growth driven by the increasing awareness of the need for reliable mobile voice and data communications services, the lack of coverage by terrestrial wireless systems of most of the earth's surface, and the continued development of innovative, lower cost technology and applications integrating mobile satellite products and services. Only satellite providers can offer global coverage, and the satellite industry is characterized by significant financial, technological and regulatory barriers to entry.

True global coverage. Our network provides true global coverage, which none of our competitors, whether LEO or GEO, can offer. Our network of 66 operational satellites relies on an interlinked mesh architecture to transmit signals from satellite to satellite, which reduces the need for multiple local ground stations around the world and facilitates the global reach of our services. GEO satellites orbit above the earth's equator, limiting their visibility to far northern or southern latitudes and polar regions. LEO satellites from operators like Globalstar and ORBCOMM use an architecture commonly referred to as "bent pipe", which requires voice and data transmissions to be immediately routed to ground stations in the same region and can only provide real-time service when they are within view of a ground station, limiting coverage to areas near where they have been able to license and locate ground infrastructure. The LEO design of our satellite constellation produces minimal transmission delays compared to GEO systems due to the shorter distance our signals have to travel. Additionally, LEO systems typically have smaller antenna requirements and are less prone to signal blockage caused by terrain than GEO satellite networks. As a result, we believe that we are well-positioned to capitalize on the growth in our industry from end users who require reliable, easy-to-use communications services in all locations.

Innovations for a broad range of markets at lower costs. The specialized needs of our global end users span many markets, including emergency services, maritime, aviation, government, utilities, oil and gas, mining, recreation, forestry, heavy equipment, construction and transportation. We sell our products and services to commercial end users exclusively through a wholesale distribution network of service providers, VARs and VAMs, which often specialize in a particular line of business. Our distributors use our products and services to develop innovative and integrated communications solutions for their target markets, often combining our products with other technologies, such as GPS

and terrestrial wireless technology. In addition to promoting innovation, our wholesale distribution model allows us to capitalize on the research and development expenditures of our distributor partners, while lowering overall customer acquisition costs and mitigating some risks, such as consumer relationship risks. By partnering with these distributors to develop new products, services and applications, we believe we create additional demand for our products and services and expand our target markets at a lower cost than would a more direct marketing model. We believe our distribution network can continue to grow with us and increase our market penetration.

Strategic relationship with the U.S. government. The U.S. government is our largest single customer, and we have had a relationship with the DoD since our inception. We believe the DoD views our Netted Iridium, M2M devices, encrypted handset and other products as mission-critical services and equipment. The DoD has made significant investments in a dedicated gateway on a U.S. government site to provide operational security and allow DoD handset users to communicate securely with other U.S. government communications equipment. This gateway is only compatible with our satellite network. In October 2013, we entered into a new five-year, fixed-price contract with the U.S. government to provide satellite airtime services for an unlimited number of DoD and other federal government subscribers, with a total contract value of \$400 million.

# Our Business and Growth Strategies

Leverage our largely fixed-cost infrastructure by growing our service revenue. Our business model is characterized by high capital costs, primarily incurred every 10 to 15 years, in connection with designing, building and launching new generations of our satellite constellation, but the incremental cost of providing service to additional end users is relatively low. We believe that service revenue will be our largest source of future growth and profits, and we intend to focus on growing both our commercial and government service revenue in order to leverage our largely fixed-cost infrastructure. In particular, we believe that M2M services, where we are engaging large, global enterprises as long-term customers for telematics solutions, represent an opportunity for service revenue growth.

Accelerate the development of personal communications capabilities. Iridium For® is our strategy for the development of personal mobile satellite communications: allowing users to connect to our network in more ways, including from devices such as smartphones, tablets and laptops; making our technology more accessible and cost-effective for our distribution partners to integrate by licensing our core technologies; integrating location-based services for location-specific applications and personal security capabilities; and providing rugged, dependable devices and services. As part of this strategy, in February 2014 we announced our plans for Iridium GO!<sup>TM</sup>, a personal satellite connectivity device (a "satellite hotspot") that will allow the use of smartphones and tablets over our network. We expect this device to be available in the second quarter of 2014.

Continue to expand our distribution network. We believe our wholesale distribution network lowers our costs and risks, and we plan to continue to selectively expand our network of service providers, VAMs and VARs. We expect that our current and future value-added partners will continue to develop customized products, services and applications targeted to the land-based handset, maritime, aviation, M2M and government markets. We believe these markets represent an attractive opportunity for continued subscriber growth. We also expect to continue to expand our sales and distribution efforts geographically by seeking authorization to operate and engaging distribution partners in additional countries.

Continued growth in services provided to the DoD. In October 2013, we executed a new five-year Enhanced Mobile Satellite Services, or EMSS, contract with the Defense Information Systems Agency, or DISA. Under the terms of this new agreement, we provide Iridium airtime and airtime support to U.S. government and other authorized customers, including voice, low and high speed data, paging, and Distributed Tactical Communication, or netted, services. The service fees we will receive under the EMSS contract are fixed and increase from \$64 million and \$72 million in the first two years to \$88 million in each of the next three years. In addition, other services we are developing, such as future broadcast capabilities, provide us with opportunities to offer new products and services to the DoD for an additional fee.

Develop the Iridium NEXT constellation. We are developing our next-generation satellite constellation, Iridium NEXT, which will replace our existing constellation with a more powerful satellite network while maintaining backward compatibility with our current system and end-user devices. Iridium NEXT will maintain our current system's key attributes, including the capability to upload new software, while providing new and enhanced capabilities, such as higher data speeds and increased capacity. We believe Iridium NEXT's increased capabilities will expand our target markets by enabling us to develop and offer a broader range of products and services, including a wider array of cost-effective and competitive broadband data services. We completed the critical design review phase of the development of Iridium NEXT in 2013, and we expect to proceed to full-scale production in 2014 in anticipation of our first launch scheduled for 2015.

Continue to develop Aireon and other hosted payloads, including Iridium PRIME<sup>M</sup>. Iridium NEXT is designed to host secondary payloads, which have the potential to generate cash flows and deferred revenue during the construction phase of Iridium NEXT and the potential to generate recurring service revenue once Iridium NEXT is launched. Our primary hosted payload customer is Aireon LLC, or Aireon, which is a joint venture between us and four air

navigation service providers, NAV CANADA, Enav (Italy), Naviair (Denmark) and the Irish Aviation Authority. Aireon is developing an automatic dependent surveillance-broadcast, or ADS-B, receiver to be hosted on Iridium NEXT, to provide a global air traffic surveillance service, which Aireon plans to offer to air navigation service providers, including our co-investors in Aireon and the U.S. Federal Aviation Administration. We have allocated the remaining hosted payload space on the original 81 Iridium NEXT satellites to Harris Corporation, which is building the Aireon payload. In addition, in September 2013 we announced Iridium PRIME, which will allow customers to host payloads on stand-alone satellites, giving them greater volume, weight, power and data capacity, as well as flexibility of launch schedule, while holding costs down compared to an independent satellite development effort.

#### **Distribution Channels**

We sell our products and services to customers through a wholesale distribution network of 75 service providers, more than 190 VARs and 55 VAMs. These distributors sell our products and services to end users, either directly or indirectly through service providers, VARs or dealers. Of these distributors, approximately 30 sell primarily to U.S. and international government customers. Our distributors often integrate our products and services with other complementary hardware and software and have developed individual solutions targeting specific lines of business. We also sell airtime services directly to U.S. government customers, including the DoD, for resale to other government agencies. The U.S. government and international government agencies may purchase additional services as well as our products and related applications through our network of distributors.

We provide our distributors with support services, including assistance with coordinating end user sales, strategic planning and training and second-tier customer support, as well as helping them respond to new opportunities for our products and services. We have representatives covering three regions around the world to better manage our distributor relationships: the Americas, which includes North, South and Central America; Asia Pacific, which includes Australia and Asia; and Europe, the Middle East, Africa and Russia. We have also established a global support service program to provide portside service for Iridium OpenPort® maritime customers at major ports worldwide. In addition, we maintain various online management tools that allow us to communicate efficiently with our distributors, and allow them to manage their customers' Iridium devices from anywhere in the world. By relying on our distributors to manage end user sales, we believe that we reduce some of the risks and costs related to our business, such as consumer relationship risks and sales and marketing costs, while providing a broad and expanding distribution network for our products and services with access to diverse and geographically dispersed niche markets. We are also able to rely on the specialized expertise of our distributors, who continue to develop innovative and improved solutions and applications integrating our product and service offerings, providing us with an attractive platform to support our growth.

#### Commercial Markets

We view our commercial end user base as our primary growth engine. Service providers and VARs serve as our main distribution channel by purchasing our products and services and marketing them directly to their customers or indirectly through independent dealers. They are each responsible for customer billing, end user customer care, managing credit risk and maintaining all customer account information. If our service providers or VARs provide our services through dealers, these dealers will often provide such services directly to the end user. Service providers typically purchase our most basic products and services, such as mobile voice services and related satellite handsets, and offer additional services such as voice mail. Unlike service providers, our VARs typically focus more on data applications and provide a broader array of value-added services specifically targeted to the niche markets they serve, such as maritime, M2M, aviation and government markets, where high-use customers with specialized needs are concentrated. These VARs integrate our handsets, transceivers, high-speed data devices and short-burst data modems with other hardware and software to create packaged solutions for end users. Examples of these applications include cockpit voice and data solutions for use by the aviation sector and voice, data and tracking applications for industrial customers, the DoD and other U.S. and international government agencies. Our service providers include dedicated satellite service providers such as Airbus Defense and Space and Inmarsat, as well as some of the largest telecommunications companies in the world, including Telstra Corporation Limited, KDDI Corporation and Singapore Telecommunications Limited. Our VARs include AirCell Inc., ARINC Incorporated, Blue Sky Network, LLC, DeLorme Publishing Company Inc., General Dynamics Corporation, Joubeh Technologies Inc., Kore Telematics Inc., NAL Research Corporation and Zunibal S.A.

We also sell our products to VAMs, who integrate our transceivers into their propriety hardware and software. These VAMs produce specialized equipment, including integrated ship communications systems, global asset tracking devices and secure satellite handsets, such as our Iridium 9505A handset coupled with U.S. National Security Agency Type I encryption capability, which they offer to end users in maritime, aviation, government and M2M markets. As with our service providers and VARs, VAMs sell their products either directly or through other distributors, including some of our service providers and VARs. Our VAMs include Applied Satellite Engineering, Inc., Beam Communications Pty Ltd., Digi International, Inc., InovarEMS, International Communications Group, Inc., ITT Exelis, Quake Global, Inc. and Cobham plc.

In addition to VARs and VAMs, we maintain relationships with more than 40 value-added developers, or VADs. We typically provide technical information to these companies on our products and services, which they then use to develop software and hardware that complements our products and services in line with the specifications of our VARs and VAMs. These products include handset docking stations, airline tracking and flight management applications and crew e-mail applications for the maritime industry. We believe that working with VADs allows us to

create new platforms for our products and services and increases our market opportunity while reducing our overall research and development, marketing and support expenses. Our VADs include Active Web Solutions Inc., Global Marine Networks, LLC, Hirschmann Automation and Controls, Inc., Maxtena, Inc. and Ontec Inc.

We maintain a pricing model for our commercial products and services with a consistent wholesale rate structure. Under our distribution agreements, we charge our distributors wholesale rates for commercial products and services, subject to discount and promotional arrangements and geographic pricing. We also charge fixed monthly access fees per subscriber for some of our services. Our distributors are in turn responsible for setting their own pricing to their customers. Our agreements with distributors typically have terms of one year and are automatically renewable for additional one-year terms, subject to termination rights. We believe this business model provides incentives for distributors to focus on selling our commercial product and service portfolio and developing additional applications. An additional benefit of this model is simplicity. This model reduces back-office complexities and costs and allows distributors to remain focused on revenue generation.

Our two largest distributors, Airbus Defense and Space and Inmarsat, each represented 8% of our revenue for the year ended December 31, 2013.

#### **Government Markets**

We provide mission-critical mobile satellite products and services to all military branches of the DoD as well as other U.S. government departments and agencies. These users require voice and two-way data capability with global coverage, low latency, mobility and security and often operate in areas where no other terrestrial or wireless means of communications are available. We believe we are well-positioned to satisfy demand from these users. Our 9505A satellite handset is the only commercial, mobile handheld satellite phone that is capable of Type I encryption accredited by the U.S. National Security Agency for Top Secret voice communications. In addition, the DoD has made significant investments in a dedicated gateway that provides operational security and allows users of encrypted DoD handsets to communicate securely with other U.S. government communications equipment. These investments include upgrading the gateway to take advantage of the enhanced capabilities of Iridium NEXT. This gateway is only compatible with our satellite network.

We provide Iridium airtime and airtime support to U.S. government and other authorized customers pursuant to our EMSS contract. Our previous EMSS contract, entered into in April 2008, provided for a one-year base term and four additional one-year options, all of which were exercised at the election of the U.S. government. The EMSS contract expired in 2013 and effective as of October 22, 2013, we executed a new five-year EMSS contract. Under the terms of this new agreement, authorized customers will continue to utilize Iridium airtime services, provided through the DoD's dedicated gateway. These services will include unlimited global secure and unsecure voice, low and high-speed data, paging, and Distributed Tactical Communications System, or DTCS, services for an unlimited number of DoD and other federal subscribers. The fixed-price rates in each of the five contract years, which run from October 22 through the following October 21 of each year, are \$64 million and \$72 million in years one and two, respectively, and \$88 million in each of the years three through five. While we sell airtime directly to the U.S. government for resale to end users, our hardware products are sold to U.S. government customers through our network of distributors, which typically integrate them with other products and technologies. Pursuant to federal acquisition regulations, the U.S. government may terminate the EMSS contract, in whole or in part, at any time.

We also provide maintenance services for the DoD gateway pursuant to our Gateway Maintenance and Support Services, or GMSS, contract managed by the DISA. We also entered into our previous GMSS contract in April 2008. This contract had a one-year base year and four additional one-year options exercisable at the election of the U.S. government. The U.S. government exercised all of the options under the April 2008 contract and exercised its ability under federal acquisition regulations to extend the agreement for an additional six months. During September 2013, upon expiration of the April 2008 contract, we entered into a new GMSS contract. This new agreement is structured similar to the April 2008 agreement and provides for a one-year base term and up to four additional one-year options exercisable at the election of the U.S. government. If the U.S. government elects to exercise all available one-year options, the total value of the contract to us would be approximately \$38.0 million. The U.S. government may terminate the GMSS contract, in whole or in part, at any time.

In October 2012, we were also awarded a five-year indefinite-delivery/indefinite-quantity contract from DISA to upgrade the DoD gateway and ensure its compatibility with Iridium NEXT. This contract has a one-year base period and four one-year options, the first of which has been exercised, and has a maximum potential value of \$47 million to us over the full five-year period, if all options are exercised.

U.S. government services accounted for approximately 19% of our total revenue for the year ended December 31, 2013. Our reported U.S. government revenue includes airtime revenue derived from the EMSS contract and services provided through the GMSS contract and other engineering and support contracts with the U.S. government. This revenue does not include airtime services purchased by U.S. or non-U.S. government agencies that are provided through our commercial gateway, which we report as commercial service revenue, or equipment purchased by government customers from third-party distributors. We are unable to determine the specific amount of U.S. government revenue derived from these commercial sources.

# Lines of Business

The specialized needs of our global customers span many markets. Our system is able to offer our customers cost-effective communications solutions with true global coverage in areas unserved or underserved by existing telecommunications infrastructure. Our mission-critical communications solutions have become an integral part of the communications and business infrastructure of many of our end users. In many cases, our service is the only connectivity for these critical applications or is used to complement terrestrial communications solutions.

Our current principal lines of business include land-based handset, M2M, maritime, aviation, and government.

#### Land-based Handset

We are the leading provider of mobile satellite communications services to the land-based handset sector, providing handset services to areas not served or inconsistently served by existing terrestrial communications networks. In a 2013 report, Euroconsult estimated that there were approximately 675,000 active satellite handsets in the market in 2012. Mining, forestry, construction, oil and gas, utilities, heavy industry and transport companies as well as the military, public safety and disaster relief agencies constitute the largest portion of our land-based handset end users. We believe that demand for mobile communications devices operating outside the coverage of terrestrial networks, combined with our small, lightweight, durable handsets with true global coverage, will allow us to capitalize on growth opportunities among these users.

Our land-based handset end users utilize our satellite communications services for:

Voice and data: Multinational corporations in various sectors use our services for business telephony, e-mail and data transfer services, location-based services and to provide pay telephony services for employees in areas inadequately served by terrestrial networks. Oil and gas and mining companies, for example, provide their personnel with our equipment solutions while surveying new drilling and mining opportunities and while conducting routine operations in remote areas that are not served by terrestrial wireless communications networks. In addition, a number of recreational, scientific and other outdoor segments rely on our mobile handheld satellite phones and services for use when beyond terrestrial wireless coverage.

*Mobile and remote office connectivity:* A variety of enterprises use our services to make and receive voice calls and to establish data, e-mail, internet and corporate network connections.

Public safety and disaster relief: Relief agencies, such as FEMA, and other agencies, such as the Department of Homeland Security, use our products and services in their emergency response plans, particularly in the aftermath of natural disasters such as Hurricane Sandy, the Haitian and Chilean earthquakes, the Japanese earthquake and tsunami and Typhoon Haiyan. These agencies generate significant demand for both our voice and data products, especially in advance of the hurricane season in North America.

Public telephone infrastructure: Telecommunications service providers use our services to satisfy regulatory mandates to provide communications services to rural populations currently not served by terrestrial infrastructure. Telstra Corporation, for example, uses our services to comply with its obligations to provide communications services to customers in certain remote parts of Australia.

#### Machine-to-Machine

We are one of the leading providers of satellite-based M2M services. We believe the early stage of this market and its significant under-penetration present opportunities for future growth. As with land-based handsets, our largest M2M users include mining, construction, oil and gas, utilities, heavy industry, maritime, forestry and transport companies, as well as the military, public safety and disaster relief agencies. We believe increasing demand for automated data collection processes from mobile and remote assets operating outside the coverage of terrestrial wireline and wireless networks, as well as the continued need to integrate the operation of such assets into enterprise management and information technology systems, will likewise increase demand for our M2M applications.

#### Our M2M services are used for:

Fleet management: Our global coverage permits our products and services to be used to monitor the location of vehicle fleets, hours of service and engine telemetry data, as well as to conduct two-way communications with drivers around the world. Long distance drivers need reliable communication with both dispatchers and their destinations to coordinate changing business needs, and our satellite network provides continuous communications coverage while they are in transit. We expect that the need for more efficient, cost-effective and safer fleet operations as well as the imposition of regulatory mandates related to driver safety, such as drive-time monitoring, will increase demand for our services in this area.

*Fixed-asset monitoring:* Multinational corporations, such as oil-field service companies like Schlumberger Limited and ConocoPhillips Company, use our services to run applications that allow remote monitoring and operation of equipment and facilities around the globe, such as oil pipelines and offshore drilling platforms.

Asset tracking: Leveraging M2M applications developed by several of our distributors, companies use our services and related devices to track assets, including personnel, for logistics, theft-prevention and safety purposes. Companies

and organizations that have fleets of vehicles use M2M solutions from Iridium distributors to improve the efficiency of their operations . For example, Halliburton uses inthinc's waySmart M2M solution to reduce accidents and increase vehicle uptime, and the Department of Homeland Security Office of Enforcement and Removal uses Fleet Management Solutions' M2M solution to transmit position, direction, speed and other data for management of its vehicle fleet.

Resource management: Our global coverage and data throughput capabilities support natural resource management applications such as fisheries management systems. Marine Instruments and Zunibal S.A., two of our VARs, have developed applications for the fishing industry to assist fishing fleets in pursuing more efficient fishing practices.

Scientific data monitoring: The global coverage of our network supports many scientific data collection applications such as the Argo float program of the National Oceanographic and Atmospheric Administration, or NOAA. This program relies on our M2M services to collect climate data from buoys located throughout the world's oceans for monitoring and analysis. We believe the increased need for monitoring climate and environmental data associated with global climate change and human impact on the planet will increase demand for these services.

Personal Tracking Devices and Location-Based Services: Several of our VAMs and VARs, such as Briartek, Inc., DeLorme, Global Satellite Engineering, NAL Research, Pieps GmbH and Solara Remote Data Delivery Incorporated, have introduced small, portable personal tracking devices that will provide personal tracking and data communications services to commercial end users. In addition, the Iridium Extreme® handset offers personal tracking and location-based services. These devices use M2M data services to send location information and other data to web-based portals for tracking of and messaging with users.

#### Maritime

We believe the maritime market is one of our most significant market opportunities. End users of our services in the maritime sector include companies engaged in merchant shipping, passenger transport, fishing, energy and recreation. Merchant shipping accounts for a significant portion of our maritime revenue, as those ships spend the majority of their time at sea away from coastal areas and out of reach of terrestrial communications services. Our products and services targeting the maritime market typically have high average revenue per subscriber, with multiple users utilizing a single subscriber account. Once a system is installed on a vessel, it often generates a multi-year recurring revenue stream from the customer. As a consequence, from time to time we may offer promotions or rebates to accelerate new customer acquisitions and a long-term revenue stream.

We believe increased regulatory mandates and increased demand for higher-speed, low-cost data services will allow us to capitalize on growth opportunities in this market. We believe Iridium Pilot®, which uses our Iridium OpenPort service to offer uncompressed data speeds of up to 134 kbps and three independent voice lines, presents a competitive, broadband communication alternative to end users in the maritime market. In 2012 and 2013, Iridium Pilot experienced higher than expected failure rates in the field primarily due to failures of a power amplifier component. The problems were addressed by mid-2013 and new Iridium Pilot units shipped since then have been operating as expected. We increased the warranty reserve provision in 2013 to provide for projected higher warranty claims and other warranty-related initiatives.

Maritime end users utilize our satellite communications services for the following:

Data and information applications: Ship operators and crew use our services to send and receive e-mail and data files and to receive other information services such as electronic media, weather reports, emergency bulletins and electronic charts. We believe Iridium Pilot provides an attractive alternative for shipping operators and fishing fleets seeking increased functionality at competitive prices, as well as for yachts, work boats and other vessels for which traditional marine satellite systems have typically been costly and underperforming.

*Voice services:* Maritime global voice services are used for both vessel operations and communications for crew welfare. Merchant shipping operators use prepaid phone cards for crew use at preferential around-the-clock flat rates.

Vessel management, procurement and asset tracking: Shipping operators, such as Exmar Shipmanagement N.V., Lauritzen Fleet Management A/S and Zodiac Shipping Ltd., use our services to manage operations on ships and to transmit data, such as course, speed and fuel stock. Our services can be integrated with GPS to provide a position reporting capability. Many fishing vessels are required by law to carry terminals using approved mobile satellite services for tracking purposes as well as to monitor catches and to ensure compliance with geographic fishing restrictions. European Union regulations, for example, require EU-registered fishing vessels of over 15 meters to carry terminals for the purpose of positional reporting of those vessels. Furthermore, new security regulations in some jurisdictions are expected to require tracking of merchant vessels in territorial waters, which would provide an additional growth opportunity for us.

Safety applications: Ships in distress, including as a result of potential piracy, hijack or terrorist activity, rely on mobile satellite voice and data services. The Ship Security and Alert Systems regulations were adopted by the

International Maritime Organization, or IMO, to enhance maritime security in response to the threat from terrorism and piracy. Most deep-sea passenger and cargo ships must be fitted with a device that can send an alert message containing the ship's ID and position whenever the ship is under threat or has been compromised. We and our distribution partners have developed several product solutions to meet this requirement for merchant vessels. The Global Maritime Distress and Safety System, or GMDSS, is a maritime service built to alert a maritime rescue coordination center of each vessel's situation and position, information that can then be used to coordinate search and rescue efforts among ships in the area. The IMO requires all vessels flagged by signatories to the International Convention for the Safety of Life at Sea (SOLAS) over 300 gross tons and certain passenger vessels, irrespective of size, that travel in international waters to carry distress and safety terminals that use GMDSS applications. Although our products and services are currently not certified to be used in GMDSS applications, we have initiated the approval process with the IMO for inclusion in the GMDSS, which we currently anticipate receiving in 2015.

#### Aviation

We are one of the leading providers of mobile satellite communications services to the aviation sector. Our services are increasingly used in commercial and global government aviation applications, principally by corporate jets, corporate and government helicopter fleets, specialized general aviation fleets, such as medevac companies and fire suppression and other specialized transport fleets, and high-end personal aircraft. Our services are also employed by commercial airline operators for cockpit voice and data link services for aircraft operational and safety communications. As a result of the 2011 FAA announcement that it will approve Iridium for flight safety data communications and the U.S. Federal Communications Commission's, or FCC, approval of flight safety communications, commercial operators are installing Iridium-based avionics on the flight deck to comply with international air navigation communications requirements to operate in oceanic and remote airspace. Our voice and data devices from our VAMs and VARs have been adopted as standard equipment and as factory options for a range of airframe manufacturers in business aviation and air transport, such as Gulfstream Aerospace Corporation, Bombardier Inc., Cessna Aircraft Company, Boeing and Airbus. Our devices are also installed in the aftermarket on large volume and a variety of other types of aircraft.

Aviation end users utilize our satellite communications services for:

Aviation operational communications: Aircraft crew and ground operations use our services for air-to-ground telephony and data communications. This includes the automatic reporting of an aircraft's position and mission-critical condition data to the ground and controller-pilot data link communication for clearance and information services. We provide critical communications applications for airlines and air transport customers such as Delta Airlines, United Airlines, UPS, Lufthansa, Cathay Pacific Airways and El Al Airlines. These operators rely on our services because other forms of communication may be unaffordable or unreliable in areas such as the polar regions. ARINC Incorporated and SITA, SC, the two leading providers of voice and data link communications services and applications to the airline industry, integrate our products and services into their offerings.

Aviation passenger communications: Corporate and private fleet aircraft passengers use our services for air-to-ground telephony and data communications. Operators are currently using our services to enable passengers to e-mail using their own Wi-Fi-enabled mobile devices, including smartphones, without causing interference with aircraft operation. We believe our distributors' small, lightweight, cost-effective solutions offer an attractive alternative for aircraft operators, particularly small fleet operators.

Rotary and general aviation applications: We are also a major supplier for rotary aviation applications to end users in a number of markets, including medevac, law enforcement, oil and gas, and corporate work fleets. Companies such as Air Logistics, EagleMed and Air Evac Lifeteam rely on applications from our distributors for traditional voice communications, fleet tracking and management and real-time flight diagnostics. VARs and VAMs such as Avidyne Corporation, Flightcell International Ltd., Garmin International, Inc., Honeywell International, Inc., SkyTrac and Spider Tracks Limited incorporate Iridium products and services into applications for this market.

Air traffic control communications and safety applications: The International Civil Aviation Organization, or ICAO, has approved standards and recommended practices allowing us to provide Aeronautical Mobile Satellite (Route) Services to commercial aircraft on long-haul routes. This allows member states to evaluate and approve our services for safety communications on flights in oceanic and remote airspace. After several years of working with the Performance Based Aviation Rules Making Committee, or PARC, and illustrating a successful operational evaluation using Iridium data services, in 2011 the FAA announced that it would approve Iridium for use in the Future Air Navigation Services (FANS) and Automatic Dependent Surveillance Contract (ADS-C) datalink communications with Air Traffic Control, or ATC. We are currently coordinating with PARC on an operational evaluation of our voice communications services for ATC. As our services become approved by regulatory organizations and member states, aircraft crew and air traffic controllers will be able to use our services for data and voice communications between the

flight deck and ground-based air traffic control facilities. We are the only satellite provider capable of offering such critical flight safety applications around the entire globe, including the polar regions. We believe this particular sector of the market will present us with significant growth opportunities, as our services and applications will serve as a cost-effective alternative to systems currently in operation.

#### Government

We are one of the leading providers of mobile satellite communications services to the U.S. government, principally the DoD. We provide mobile satellite products and services to all branches of the U.S. armed forces. Our voice products are used for a variety of primary and backup communications solutions, including logistical, administrative, morale and welfare, and emergency communications. In addition, our products and related applications are installed on ground vehicles, ships, rotary- and fixed-wing aircraft, embedded in unattended sensors and used for command and control and situational awareness purposes. Global security concerns are among the factors driving demand for our products and services in this sector. See "U.S. Government Services" for more information.

# **Seasonality**

Our business is subject to seasonal usage changes for commercial customers, and we expect it to be affected by similar seasonality going forward. March through October are typically the peak months for commercial voice traffic and related subscriber equipment sales, given the predominance of population and activity in the northern hemisphere. U.S. government usage and commercial M2M usage have been less subject to seasonal changes.

#### Services and Products

At December 31, 2013, we had approximately 664,000 billable subscribers worldwide. Our principal services are mobile satellite services, including mobile voice and data services, M2M services and high-speed data. Sales of our commercial services collectively accounted for approximately 62% of our total revenue for the year ended December 31, 2013. We also sell related voice and data equipment to our customers, which accounted for approximately 19% of our total revenue for the year ended December 31, 2013. In addition, we offer services to U.S. government customers, including the DoD. U.S. government services accounted for approximately 19% of our total revenue for the year ended December 31, 2013.

#### Commercial Services

# Postpaid Mobile Voice and Data Satellite Communications Services

We sell our mobile voice and data services to service providers and VARs who in turn offer such services to end users, either directly or indirectly through dealers, using various packaged solutions such as monthly plans with differing price levels that vary depending upon expected usage. In exchange for these services, we typically charge service providers and VARs a monthly access fee per subscriber, as well as usage fees for airtime minutes used by their respective subscribers.

# Prepaid Mobile Voice Satellite Communications Services

We also offer mobile voice services to service providers and VARs through prepaid plans. Service providers and VARs pay us in advance for defined blocks of airtime minutes with expiration periods in various configurations, ranging from 30 days to two years. These services are then generally sold to subscribers in the form of prepaid scratch cards and e-vouchers that enable subscribers to use our services on a per-minute basis. Unused minutes are forfeited on the applicable expiration date. We believe service providers and VARs are drawn to these services because they enable greater cost control by eliminating the need for monthly billings and reducing collection costs, and can be sold in countries where credit may not be readily available for end users. Our distributors often offer our prepaid voice services through fixed devices to subscribers in rural villages, at remote industrial, commercial and residential sites and on ships at sea, among other places. Fixed voice satellite communications services are in many cases an attractive alternative to handheld mobile satellite communications services in situations where multiple users will access the service within a defined geographic area and terrestrial wireline or wireless service is not available. Fixed phones, for example, can be configured as pay phones that accept prepaid scratch cards and can be installed at a central location, for example in a rural village or on a maritime vessel.

# **Broadband Data Services**

Our broadband data service, Iridium OpenPort, which is currently offered to maritime users through our Iridium Pilot terminals, offers maritime and aviation end users speeds of up to 128 kbps and three independent voice lines that can be used simultaneously without interference. We believe Iridium OpenPort offers a competitive alternative to other satellite broadband services that offer fewer features at higher costs. Data rates on this service can be adjusted up or down without making hardware or software changes, giving subscribers options that allow them to balance needs for

data transmission speeds against cost considerations on a real-time basis. In conjunction with our distributors, we offer additional services that permit service providers and VARs to offer complete integrated solutions for prepaid calling, e-mail and IP-based data communications. For example, in January 2012, KVH Industries, Inc., one of our distribution partners, began offering a product that integrates Iridium Pilot with its mini-VSAT<sup>SM</sup> broadband service to provide backup connectivity when the mini-VSAT terminal is out of its coverage area or out of service. For our Iridium OpenPort service, we typically charge service providers usage fees for airtime consumed by the respective subscribers for voice and data communications.

# Machine-to-Machine Services

Our M2M services are designed to address the market need for a small and cost-effective solution for sending and receiving data, such as location, from fixed and mobile assets in remote locations to a central monitoring station. This service operates through a two-way short-burst data transmission between our network and a telemetry unit, which may be located, for example, on a container in transit or a buoy monitoring oceanographic conditions. The small size of our units makes them attractive for use in applications such as tracking asset shipments, monitoring unattended remote assets, including oil and gas assets, vehicle tracking and mobile security. We sell our M2M services to our distributors, who in turn offer them to a number of U.S. and international governmental agencies, including NOAA, as well as commercial and other entities such as Schlumberger Limited and ConocoPhillips. Increasingly, our M2M modems are being built into products for consumer markets, such as personal location devices that provide two-way messaging. As with our mobile voice and data offerings, we typically charge service providers and VARs a monthly access fee per subscriber as well as usage fees for data used by their respective subscribers.

# Other Services

In addition to access and usage fees, we generate revenue from several ancillary services related to our core service offerings, such as inbound connections from the public switched telephone network, or PSTN, short message services, or SMS, subscriber identity module, or SIM, activation, customer reactivation and other peripheral services. We also provide research and development services to assist customers in developing new technologies compatible with our system, which we may leverage for use in service and product offerings in the future. We charge our distributors fees for these services.

We also offer hosted payload services on our next-generation constellation, Iridium NEXT, which will replace our current satellite constellation. We have entered into agreements with our subsidiary, Aireon, to host its ADS-B payload on our satellites in exchange for hosting cost reimbursement fees plus recurring service revenue to be paid during the life of the hosted application. We have also entered into an agreement with Harris Corporation, the manufacturer of the Aireon hosted payload, to permit Harris to allocate the remaining hosted payload capacity to its customers.

In addition, in September 2013, we announced Iridium PRIME, a turnkey hosted payload solution. Iridium PRIME addresses the traditional challenges of hosted payload missions, which include inflexible launch schedules, "one-off" mission control systems and ground connectivity challenges, by providing customers access to the Iridium NEXT satellite constellation with flexibility as to the number of payloads they can deploy, number of planes they occupy, and independent mission control, at substantial cost savings compared to current stand-alone solutions.

#### U.S. Government Services

We provide U.S. government customers bulk access to our services, including voice, netted voice, data, messaging and paging services, as well as maintenance services for the DoD's dedicated gateway. We provide airtime to U.S. government subscribers through DoD's gateway, under the EMSS contract, which is a fixed-price contract covering voice, low- and high-speed data, paging, and DTCS or netted services. Additional services, such as future broadcast capabilities, would be provided at an additional fee. To comply with U.S. government regulations, we ensure handsets sold for use by the U.S. government are manufactured in the United States. U.S. government customers procure our voice and data products through our network of distributors. Our VARs and VAMs typically integrate our products with other products, which they then offer to U.S. government customers as customized products. Our voice and data solutions include:

personnel tracking devices;

asset tracking devices for equipment, vehicles and aircraft;

beyond-line-of-sight aircraft communications applications;

submarine communications applications;

specialized communications solutions for high-value individuals; and

specialized, secure, mobile communications and data devices for the military and intelligence community, such as secure satellite handsets with U.S. National Security Agency Type I encryption capability.

With funding support from the DoD, we continue to invest in research and development to develop new products and applications for use by all branches of the U.S. armed forces. In conjunction with DISA, we and our distribution partners offer Netted Iridium, which uses a line of radio-only devices that permit beyond-line-of-sight push-to-talk

group calling services for a user-defined group, or net. We expect Netted Iridium to provide us with the potential for future new commercial applications in public safety, fishing and field worker communications.

#### Our Products

We offer a broad array of voice and data products for customers that work worldwide. In most cases, our devices or an antenna must be located outside and within view of a satellite to be able to access our network.

#### Satellite Handsets

Our principal handset offerings are the Iridium 9555 and Iridium Extreme satellite handset phones, which are similar in functionality to ordinary cellular phones but with the solid, durable feel that many satellite phone users demand. We believe our reputation for industrial-strength products is critical for customers, many of whom are located in the most inhospitable spots on the planet and require rugged and reliable communications equipment.

*Iridium 9555.* The Iridium 9555 provides voice, SMS and data connectivity. This model introduced several features including a larger, brighter screen, improved SMS and e-mail capabilities, an integrated antenna and speakerphone. The Iridium 9555 weighs 9.4 ounces and offers up to 3.1 hours of talk time. The Iridium 9555 has an industrial feel, with a rugged housing to protect its sophisticated satellite transceiver.

*Iridium Extreme*. The Iridium Extreme adds to the Iridium 9555's capabilities by providing a rugged exterior that meets DoD Military Standard 810F for durability, a dedicated, two-way emergency SOS button and fully integrated GPS and location-based services. These extra features are provided in a handset that is even smaller than the Iridium 9555, weighing 8.7 ounces and offering up to four hours of talk time. An emergency response service provided by GEOS Travel Safety Group, or GEOS, is included with the purchase of the phone and airtime usage. The two-way emergency SOS button initiates a phone call and an emergency message via SMS to GEOS, which then coordinates with local emergency responders.

We expect these devices to maintain our competitive position as premium offerings in the market due to their capabilities, mobility, reliability and global coverage. In addition to these devices, we manufacture the Iridium 9505A handset, which is qualified for sale to U.S. government customers, and in January 2012 we introduced a variant of the Iridium 9555 handset that is qualified for sale to U.S. government customers that purchase through the General Services Administration (GSA) schedule. We also introduced a GSA-qualified version of the Iridium Extreme handset in October 2012 for sale to U.S. government customers.

#### Iridium GO!

The Iridium GO! is a small, rugged, personal connectivity device that connects to the Iridium network to create a Wi-Fi hotspot, enabling the use of smartphones and tablets to make voice calls, send text messages and emails, post to social networking sites, and use the mobile web. Iridium GO! also has an emergency SOS button and GPS and location-based services. Smartphone or tablet access is provided through special applications downloaded for free from the Apple iTunes store or through Google Play for Android smartphones or tablets. A software development kit is available to enable the creation of additional applications, targeted to specific customer segments. We expect Iridium GO! to be commercially available in the second quarter of 2014.

#### Wi-Fi Accessories

Our suite of Iridium AxcessPoint products and services, including the Iridium AxcessPoint Wi-Fi hotspot accessory, the free Iridium Mail & Web optimization software and the Iridium AxcessPoint Connect downloadable application, complements our handset offerings. AxcessPoint products and services enable the connection of smartphones, tablets and personal computers to the Iridium network via a Wi-Fi hotspot linked to an Iridium Extreme, Iridium 9555 or Iridium 9505A.

#### Voice and Data Modems

We also offer a combined voice transceiver and data modem, which our distributors integrate into a variety of communications solutions that are deployed in different applications around the world. Our principal offering in this space is the Iridium 9522B L-Band transceiver, which utilizes the transceiver core of our Iridium 9555 satellite handset. In March 2012, we introduced the Iridium Core 9523 L-Band transceiver, which utilizes the smaller form factor transceiver core of our Iridium Extreme satellite handset. The Iridium Core 9523 complements the Iridium 9522B by providing a small voice and data module that can be integrated with other components to create a modem tailored for typical VAM applications as well as specific applications, such as a dual-mode terrestrial radio and satellite phone or M2M applications that require larger data packets. Our principal customers for our L-Band transceivers are VAMs, who integrate them into specialized devices that access our network.

#### **Broadband Data Devices**

Our Iridium Pilot terminal provides up to three independent voice lines and an internet connection for data speeds from 9.6 to 134 kbps over our Iridium OpenPort service. All voice and data capabilities can be used simultaneously. Our principal customers for Iridium Pilot are service providers who integrate the device with their own hardware and

software products to provide a suite of customer-focused voice and IP-based data packages for ship business, crew calling and e-mail. We believe the low cost of our Iridium Pilot terminal, combined with our high bandwidth and flexible service options, will allow us to grow our share of the existing maritime market while opening up new market sectors, such as luxury yachts, tug boats and other fishing and cruising vessels for which traditional marine satellite systems have typically been too costly. We also believe Iridium Pilot will increasingly be adopted as a complement to maritime Very Small Aperture Terminal, or VSAT, systems providing broadband and unlimited data services for ships, where Iridium Pilot can fill in coverage gaps, provide services where the VSAT terminal is not licensed to operate, and provide an alternate channel for VSAT maintenance and configuration. In February 2014, we introduced Iridium Pilot Land Station, which will allow remote individuals and businesses from off-the-grid terrestrial locations to obtain reliable internet connections and voice calling no matter where they are located.

#### Machine-to-Machine Data Devices

Our principal M2M devices are the Iridium 9602 and 9603 full-duplex short-burst data transceivers. The Iridium 9602 is a small data device with two-way transmission, capable of sending packet data to and from any point in the world with low latency. The principal customers for our Iridium 9602 data modems are VARs and VAMs, who embed the Iridium 9602 into their tracking, sensor, and data applications and systems, such as asset tracking systems. The Iridium 9602 is often combined with a GPS receiver to provide location information to customer applications. In May 2012, we introduced the Iridium 9603, an even smaller transceiver that is functionally identical to the Iridium 9602. In addition, an increasing number of VARs and VAMs are including a terrestrial global system for mobile communication (GSM) packet radio service modem as part of their Iridium applications to provide low-cost cellular data transmission when available. These types of multiband applications are adopted by end users who require the ability to regularly transfer data but operate in areas with inconsistent cellular coverage. We provide gap-filler coverage for these applications, allowing users to operate anywhere on the globe. We continue to invest in research and development to develop smaller, lighter products in this market. In February 2014, we introduced Iridium Burst?, our one-to-many global data broadcast service, which enables enterprises to send data to an unlimited number of devices anywhere in the world, even inside buildings, vehicles or aircraft.

# Device Development and Manufacturing

We contract with Cambridge Consulting Ltd. and other suppliers to develop all of our devices, and with two contract manufacturers, to manufacture all of our devices in facilities in Thailand, Malaysia, Singapore and the United States. Pursuant to our contracts with these manufacturers, we may be required to purchase excess materials at cost plus a contractual markup if the materials are not used in production within the periods specified in the agreement. The manufacturers generally repurchase the materials from us at the same price we paid, as required for the production of the devices. Our agreements with these manufacturers are automatically renewable for additional one-year terms unless terminated by either party. We generally provide our distributors with a warranty on subscriber equipment for one to five years from the date of activation, depending on the product. We also utilize other suppliers, some of which are the only source, to manufacture some of the component parts of our devices.

In addition to our principal products, we also offer a selection of accessories for our devices, including extended-life batteries, holsters, earbud headphones, portable auxiliary antennas, antenna adaptors, USB data cables and charging units, among others. We purchase these products from several third-party suppliers either pursuant to contractual agreements or off the shelf at market prices.

# Our Spectrum

We hold licenses to use 8.725 MHz of continuous spectrum in the L-Band, which operates at 1.6 GHz, and allows for two-way communication between our devices and our satellites. In addition, we are authorized to use 200 MHz of K-Band (23 GHz) spectrum for satellite-to-satellite communications, known as inter-satellite links, and 400 MHz of Ka-Band spectrum (19.4 GHz to 19.6 GHz and 29.1 to 29.3 GHz) for two-way communication between our satellites and our gateways, known as feeder links. In February 2013, we filed an application with the FCC for an additional 1.775 MHz of L-band spectrum to increase our total amount to 10.5 MHz of continuous spectrum. Our products and services are offered in over 100 countries, and we and our distributors continue to seek authorizations in additional countries. Access to this spectrum enables us to design satellites, network and terrestrial infrastructure enhancements cost effectively because each product and service can be deployed and sold worldwide.

Our use of spectrum is globally coordinated and recorded by, and subject to the frequency rules and regulations of, the International Telecommunication Union, or ITU. The ITU is the United Nations organization responsible for worldwide co-operation in the telecommunications sector. In order to protect satellite systems from harmful radio frequency interference from other satellite systems, the ITU maintains a Master International Frequency Register of

radio frequency assignments. Each ITU administration is required to give notice of, coordinate and record its proposed use of radio frequency assignments with the ITU's Radiocommunication Bureau. The coordination negotiations are conducted by the national administrations with the assistance of satellite operators. When the coordination process is completed, the ITU formally notifies all proposed users of frequencies and orbital locations in order to protect the recorded assignments from subsequent nonconforming or interfering uses by member states of the ITU. Only member states have full standing within this inter-governmental organization. Filings to the ITU for our current constellation have been made on our behalf by the United States.

The ITU also controls the assignment of country codes used for placing telephone calls between different countries. Our network has been assigned the 8816 and 8817 country codes and uses these numbers for calling and communications between terminals.

# Domestic and Foreign Revenue

We supply services and products to customers in a number of foreign countries. We allocate revenue geographically based on where we invoice our distributors, whom we bill for mobile satellite services and related equipment sales, and not according to the location of the end user. These distributors sell services directly or indirectly to end users, who may be located elsewhere. It is not possible for us to determine the geographical distribution of revenue from end users, as we do not contract directly with them. Substantially all of our revenue is invoiced in U.S. dollars. The table below sets forth the percentage of our revenue by country for the last three years.

	Year Ended December 31,						
	2013		2012		2011		
United States	46	%	46	%	46	%	
Canada	13	%	14	%	13	%	
United Kingdom	10	%	11	%	13	%	
Other Countries (1)	31	%	29	%	28	%	

<sup>(1)</sup> No other single country represented more than 10% of our revenue for any of the periods indicated.

For more information about our revenue from sales to foreign and domestic customers, see Note 11 to our consolidated financial statements.

# Traffic Originating Outside the United States

A significant portion of our voice and data traffic originates outside the United States. The table below sets forth the percentage of our commercial voice and data traffic originating outside the United States, excluding Iridium OpenPort traffic, for the last three years.

	Year Ended December 31,							
	2013		2012		2011			
Commercial voice traffic (minutes)	90	%	90	%	90	%		
Commercial data traffic (kilobytes)	67	%	69	%	70	%		

# Our Network

#### **Current Constellation**

Our satellite network includes 66 in-orbit LEO satellites, in addition to four in-orbit spares. We also maintain a non-service in-orbit spare, which we use for testing purposes. The satellites operate in six orbital planes of eleven vehicles each in nearly circular polar orbits. Our operational satellites orbit at an altitude of approximately 483 miles (778 kilometers) above the earth and travel at approximately 16,689 mph, resulting in a complete orbit of the earth approximately every 100 minutes. The design of our constellation ensures that generally at least one satellite is visible to subscribers from any point on the earth's surface, covering all of the world's population. While our constellation offers true global coverage, most of our satellite services are not available in locations where a satellite signal cannot be transmitted or received or when the device or antenna does not have a direct line of sight to a satellite, such as inside a building.

Our constellation is unique among commercial constellations in its usage of radio frequency crosslinks between our satellites. These crosslinks enable each satellite to communicate with up to four other satellites in space, two in the same orbital plane and two in adjacent planes. Our traffic is generally routed automatically between satellites, which minimizes the ground infrastructure necessary to support the constellation by allowing the satellite that is then passing

over the ground station to transmit all traffic to and from the rest of the satellite constellation to terrestrial-based networks such as the PSTN. This interlinked architecture enables our primary ground station gateway to support most commercial traffic globally. We have also deployed a teleport network, or TPN, to allow grounding traffic at multiple locations within our ground network infrastructure. This added flexibility allows for rapid reconfiguration of grounding traffic from the satellites in the event of a space, antenna or ground routing anomaly and results in greater reliability of our network.

We believe our interlinked satellite infrastructure provides several advantages over networks that rely on multiple terrestrial gateways like Globalstar's and ORBCOMM's networks. We have the only satellite network with true global coverage, and our constellation is less vulnerable to single points of failure, since traffic can be routed around any one satellite problem to complete the communications path. In addition, the small number of ground stations increases the security of our constellation, a factor that makes our network particularly attractive to government institutions and large enterprises. The low orbit of our constellation also allows our network to operate with low latency and with smaller antennas due to the proximity of our satellites to the earth.

Our constellation provides significant coverage overlap for mitigation of service gaps from individual satellite outages, particularly at higher northern and southern latitudes. Each satellite was designed with a high degree of on-board subsystem robustness, an on-board fault detection system, and isolation and recovery capabilities for safe and quick risk mitigation. Our ability to reconfigure the orbital location of each satellite provides us with operating flexibility and enhances our ability to maintain a commercially acceptable level of service. If a satellite should fail or become unusable, in most cases, we can reposition one of our in-orbit spare satellites to take over its functions. If there is an in-orbit spare located in the orbital plane of the failed satellite, such repositioning can often be accomplished within days, with minimal impact on our services. If there is no in-orbit spare located in the relevant orbital plane, redeploying an in-orbit spare into the affected plane will take at least one year. The design of our space and ground control system facilitates the real-time intervention and management of the satellite constellation and service upgrades via software enhancements.

Our commercial gateway is located in Tempe, Arizona. Our network has multiple antennas, located at the gateway and TPN facilities, that communicate with our satellites and pass calls between the gateway and the satellites as the satellites traverse our antennas, thereby connecting signals from the terminals of end users to our gateway. This system, together with our satellite crosslinks, enables dedicated communications links between the terminals of end users that are not dependent on satellite antennas for grounding traffic in the region where subscribers are using our services. A gateway can also generate and control all user information pertaining to our registered users, such as user identity, geo-location and call detail records. The DoD owns and operates a dedicated gateway for U.S. government users to take advantage of this capability. This gateway provides an interface between voice and data devices and the Defense Information Systems Network and other terrestrial infrastructure, providing DoD users with secure communications capabilities.

In 2013, we commenced the provision of Iridium voice and data satellite communications services in Russia to commercial and government subscribers through a local subsidiary and its authorized Russian service providers. In addition to procuring and implementing local billing and operation support services infrastructure, we also secured a site and commenced construction on dedicated earth station facilities in Russia. We have also had discussions to build or reactivate additional gateways in other countries, such as China and India, that require gateways in their jurisdictions. These gateways would connect the commercial traffic to the constellation coming to and from their territory.

We operate our satellite constellation from our satellite network operations center in Leesburg, Virginia. This facility manages the performance and status of each of our satellites, developing and distributing routing tables for use by the satellites, TPN facilities and gateways, directing traffic routing through the network and controlling the formation of coverage areas by the satellites' main mission antennas. We also operate TPN facilities in Fairbanks, Alaska and Chandler, Arizona in the United States, and in northern Canada and Norway that perform telemetry, tracking and control functions. Three of our northern ground stations also provide supplemental earth terminal capability for the Tempe gateway.

From time to time, individual satellites in our constellation experience operating problems that may result in a satellite outage, but due to overlapping coverage within our constellation, the individual satellite outages typically do not negatively affect our customers' use of our system for a prolonged period. In addition, most system processing related to our service is performed using software onboard each satellite instead of on the ground. We believe this provides us with significant flexibility and has contributed to the longevity of the system by enabling engineers to develop additional functionality and software-based solutions to occasional faults and anomalies in the system.

We have experienced ten satellite losses since we reintroduced commercial satellite services in 2001 that have resulted in the complete loss of the affected satellites or the loss of the ability of the satellite to carry traffic on the network, most recently in January 2014. Nine of these losses were from satellites that failed in orbit, and one satellite was lost as a result of a 2009 collision with a non-operational Russian satellite. To date, each time we have lost a satellite we have had an in-orbit spare available to replace it.

Based on the failures and anomalies we have experienced to date, and considering the potential for future anomalies, we believe our current constellation will provide a commercially acceptable level of service through the transition to Iridium NEXT. We expect to be able to mitigate most satellite failures through the use of the remaining in-orbit spares, the implementation of software solutions, and by landing communications traffic using the sites within the TPN infrastructure and backhauling traffic to the Tempe gateway for processing and termination. Accordingly, we believe our constellation can provide a commercially acceptable level of service with fewer than 66 satellites.

In addition to our in-orbit spare satellites, we own spare parts for some of the equipment in our gateway and TPN facilities. We selectively replace parts for our gateway and TPN facilities as necessary and maintain an inventory of spare parts which we continuously monitor. When we do not have necessary spares in inventory or our spares become

obsolete, we rely on third parties to develop necessary parts.

In 2010, we entered into an amended and restated long-term operations and maintenance agreement with Boeing, which we refer to as the O&M Agreement. Under the O&M Agreement, Boeing operates and maintains our satellite constellation. The term of the O&M Agreement runs concurrently with the operational life of the current constellation. The O&M Agreement provides for annual price reductions and other cost-saving opportunities and converts the fee for Boeing's operations and maintenance services from a fixed-price fee to a time-and-materials fee with an annual limit on amounts paid.

We have also entered into an agreement with Boeing pursuant to which Boeing provides services in support of the development of Iridium NEXT and will operate and maintain Iridium NEXT. Boeing provides these services on a time-and-materials fee basis. The term of the agreement runs concurrently with the operational life of the Iridium NEXT constellation. We are entitled to terminate the agreement for convenience and without cause commencing in 2019.

Pursuant to an amended and restated transition services, products and asset agreement, or the TSA, with Motorola, and a separate agreement with Boeing, Motorola, and the U.S. government, we are required to maintain an in-orbit liability insurance policy with a de-orbiting endorsement to cover the de-orbiting of our satellite constellation in the amount of \$500.0 million per occurrence, and \$1.0 billion in the aggregate. The current policy together with the de-orbiting endorsement covers amounts that we and other specified parties may become liable to pay for bodily injury or property damage to third parties related to processing, maintaining and operating our satellite constellation and, in the case of the de-orbiting endorsement, de-orbiting the satellite constellation, although it contains exceptions for third-party damages which may result from the 2009 in-orbit satellite collision. The policy covers us, the U.S. government, Boeing, as operator of our system, Motorola Solutions, Inc., or Motorola Solutions, as successor to Motorola, and other named beneficiaries. The policy has been renewed annually since the expiration of the original policy's three-year term in 2003 and currently expires on December 8, 2014. In addition, we ma