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Although forward-looking statements in this Annual Report reflect our good faith judgment, such statements can only be based on facts and factors currently known by us. Consequently, forward-looking statements are inherently subject to risks and uncertainties and actual results and outcomes may differ materially from the results and outcomes discussed in or anticipated by the forward-looking statements. Factors that could cause or contribute to such differences in results and outcomes include without limitation those discussed under “Part I, Item 1A. Risk Factors” below, as well as those discussed elsewhere in this Annual Report. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report. We undertake no obligation to revise or update any forward-looking statements in order to reflect any event or circumstance that may arise after the date of this Annual Report. Readers are urged to carefully review and consider the various disclosures made in this Annual Report, which attempt to advise interested parties of the risks and factors that may affect our business, financial condition, results of operations and prospects.

## **PART I**

### **Item 1. Business**

We incorporated in California in 1985 and reincorporated in Delaware in 1991. We operate and report using a 52-53 week fiscal year ending on the last Sunday in September. Our 52-week fiscal years consist of four equal fiscal quarters of 13 weeks each, and our 53-week fiscal years consist of three 13-week fiscal quarters and one 14-week fiscal quarter. The financial results for our 53-week fiscal years and our 14-week fiscal quarters will not be exactly comparable to our 52-week fiscal years and our 13-week fiscal quarters. The fiscal years ended September 24, 2017, September 25, 2016 and September 27, 2015 included 52 weeks.

### **Overview**

We are a global leader in the development and commercialization of foundational technologies and products used in mobile devices and other wireless products, including network equipment, broadband gateway equipment and consumer electronic devices. Our inventions helped power the growth in smartphones, which have connected billions of people. We are a pioneer in 3G (third generation) and 4G (fourth generation) wireless technologies, and are now a leader in 5G (fifth generation) wireless technologies to empower a new era of intelligent, connected devices. Our technologies and products are also used in industry segments beyond mobile, including automotive, IoT (Internet of Things), data center, networking, computing and machine learning, and allow millions of devices to connect with each other in new ways. We derive revenues principally from sales of integrated circuit products and licensing our intellectual property, including patents, software and other rights.

The foundational technologies we invent help power the modern mobile experience. We share these inventions broadly through our licensing program, ensuring wide ecosystem access to technologies at the core of mobile innovation, and through the sale of our wireless chipset platforms and other products, which accelerates consumer adoption of experiences empowered by these inventions. As a company, we collaborate across the ecosystem, including manufacturers, operators, developers, governments and industry standards organizations, to create a global environment that drives continued progress and growth.

We have a long history of driving innovation. We played a leading role in developing the inventions that serve as the foundation for 3G and 4G wireless technologies, which are expected to serve as the basis for 5G wireless technologies. This includes the CDMA (Code Division Multiple Access) and OFDMA (Orthogonal Frequency Division Multiple Access) families of technologies, with the latter encompassing LTE (Long Term Evolution), which, along with TDMA (Time Division Multiple Access), are the primary digital technologies currently used to transmit a wireless device user’s voice or data over radio waves using a public cellular wireless network. We own significant intellectual property applicable to products that implement any version of CDMA and OFDMA, including patents, patent applications and trade secrets. Companies in the mobile communications industry generally recognize that any company seeking to develop, manufacture and/or sell

subscriber units or infrastructure equipment that use CDMA-based and/or OFDMA-based technologies will require a license or other rights to use our patents.

We also develop and commercialize numerous other key technologies used in handsets and other wireless devices that contribute to end-user demand, and we own substantial intellectual property related to these technologies. Some of these inventions were contributed to and are being commercialized as industry standards, such as certain video and audio codec, wireless LAN (local area network), GPS (global positioning system) and positioning and Bluetooth. Other technologies widely used by wireless devices that we have developed are not related to any industry standards, such as operating systems, user interfaces, graphics and camera processing functionality, RF (radio frequency) and antenna design and application processor architectures. Our patents cover a wide range of technologies across the entire wireless system (including wireless devices and infrastructure equipment) and not just what is embodied in chipsets.

We are organized on the basis of products and services and have three reportable segments. We conduct business primarily through our QCT (Qualcomm CDMA Technologies) semiconductor business and our QTL (Qualcomm Technology Licensing) licensing business. QCT develops and supplies integrated circuits (also known as chips or chipsets) and system software based on CDMA, OFDMA and other technologies for use in mobile devices, wireless networks, devices used in the Internet of Things (IoT), broadband gateway equipment, consumer electronic devices and automotive telematics and infotainment systems. QTL grants licenses to use portions of our intellectual property portfolio, which includes certain patent rights essential to and/or useful in the manufacture and sale of certain wireless products. Our QSI (Qualcomm Strategic Initiatives) reportable segment makes strategic investments. We also have nonreportable segments, including our mobile health, data center, small cell and other wireless technology and service initiatives.

## Industry Trends

The mobile industry has experienced tremendous growth for more than 20 years, growing from less than 60 million global connections in 1994 (WCIS+, October 2017) to approximately 7.8 billion global connections as of September 30, 2017 (GSMA Intelligence, October 2017). As the largest technology platform in the world, mobile has changed the way we work, the way we live and the way we connect with each other. The scale and pace of innovation in mobile, especially around connectivity and computing capabilities, is also impacting industries beyond wireless. Our business model and inventions have been integral to the mobile evolution, providing foundational technologies for this continued innovation and growth.

**Extending connectivity.** 3G/4G multimode mobile broadband technology has been a key growth driver of mobile, providing users with fast, reliable, always-on connectivity. As of September 30, 2017, there were approximately 4.7 billion 3G/4G connections globally (CDMA-based, OFDMA-based and CDMA/OFDMA multimode) representing nearly 60% of total mobile connections (GSMA Intelligence, October 2017). By 2020, global 3G/4G connections are projected to reach 6.3 billion, with approximately 83% of these connections coming from emerging regions (GSMA Intelligence, October 2017).

3G/4G multimode mobile broadband has also emerged as an important platform for extending the reach and potential of the Internet. In 2010, the number of broadband connections using mobile technology surpassed those using fixed technologies (GSMA Intelligence, October 2017), making mobile networks the primary method of access to the Internet for many people around the world. This is further amplified in emerging regions, where, as of September 30, 2017, 3G/4G connections are approximately six times the number of fixed Internet connections (GSMA Intelligence and WBIS, October 2017). In China, 3G/4G LTE multimode services have experienced strong adoption since being launched in the fourth quarter of calendar 2013, with more than 939 million connections reported as of September 30, 2017 (GSMA Intelligence, October 2017). In India, mobile operators continue to expand their 4G multimode services, providing consumers with the benefits of advanced mobile broadband connectivity while creating new opportunities for device manufacturers and other members of the mobile ecosystem. 3G/4G mobile broadband may be the first and, in many cases, the only way that people in these regions access the Internet.

Looking ahead, Qualcomm and the wireless industry are actively developing and standardizing 5G technology, which is the next generation of wireless technology, expected to be commercially deployed starting in 2019. While the 5G New Radio (NR) standard is still being defined, it is expected to provide a unified connectivity network for all spectrum and service types based on OFDM technology. 5G is being designed to support faster data rates, lower network latency and wider bandwidths of spectrum. Incorporating many of the innovations developed for 4G, 5G is also expected to be scalable and adaptable across a variety of use cases, which include, among others: empowering new industries and services, such as autonomous vehicles and industrial applications, through ultra-reliable, ultra-low latency communication links; and connecting a significant number of “things” (also known as the Internet of Things or IoT, including the connected home, smart cities devices, wearables and voice and music devices), with connectivity designed to meet ultra-low power, complexity and cost requirements. 5G is also expected to enhance mobile broadband services, including ultra-high definition (4K) video streaming and augmented and virtual reality, with multi-gigabit speeds.

Most 5G devices are expected to include multimode support for 3G, 4G and Wi-Fi, enabling service continuity where 5G has yet to be deployed and simultaneous connectivity across 4G and Wi-Fi technologies, while also allowing mobile operators to utilize current network deployments. At the same time, 4G is expected to continue to evolve in parallel with the development of 5G and become fundamental to many of the key 5G technologies, such as support for unlicensed spectrum, gigabit LTE user data rates and LTE IoT to meet the needs of ultra-low power, complexity and cost applications. The first phase of 5G networks are expected to support mobile broadband services for the smartphone form factor both in lower spectrum bands below 6 GHz as well as higher bands above 6 GHz, including millimeter wave (mmWave).

We continue to work closely with mobile operators and infrastructure companies around the world on 5G demonstrations and trials in preparation for commercial network launches.

**Growth in smartphones.** Smartphone adoption continues to expand globally, fueled by fast 3G/4G LTE multimode connectivity advanced multimedia features and enhanced location awareness capabilities, among others. In 2016, approximately 1.5 billion smartphones shipped globally, representing a year-over-year increase of approximately 5%, with cumulative smartphone shipments between 2017 and 2021 projected to reach approximately 8.6 billion (Gartner, September 2017). Most of this growth is happening in emerging regions, where smartphones accounted for approximately 75% of handset shipments in 2016 and are expected to reach approximately 92% in 2021 (Gartner, September 2017). Growth in smartphones has not only been driven by the success of premium-tier devices, but also by the number of affordable handsets that are fueling shipments in emerging regions and the variety of flexible and affordable data plans being offered by mobile operators.

Consumer demand for new types of experiences empowered by 3G/4G LTE connectivity, combined with the needs of mobile operators and device manufacturers to provide differentiated features and services, is driving continued innovation within the smartphone. We have been a leading contributor to this innovation that is happening across multiple technology dimensions, including connectivity, intelligence, camera, audio, video, sensors and security. As a result, the smartphone has become the go-to device for social networking, music, gaming, email and web browsing, among others. It is also replacing many traditional consumer electronics devices due to advanced capabilities, including digital cameras, video cameras, Global Positioning System (GPS) units and music players, combined with an always on and connected mobile platform.

**Transforming other industries.** With its significant scale, rapid development cycles and highly integrated solutions, a number of industries beyond mobile are leveraging technology innovations found in smartphones. Our inventions that contribute to the formation of advanced cellular technologies, such as 3G/4G LTE connectivity, are helping transform industry segments outside of the traditional cellular industry, including automotive and IoT, among others, and empowering companies to create new products and services.

The proliferation of intelligent, connected things is also enabling new types of user experiences, as smartphones are able to interact with and control more of the objects around us. Through the addition of embedded sensors and on-device artificial intelligence processing, connected things are able to collect data and learn about their environment, providing users with contextually relevant information and further increasing the device's utility and value.

## Wireless Technologies Overview

The growth in the use of wireless devices worldwide and the demand for data services and applications requires continuous innovation to further improve the user experience, support new services, increase network capacity, make use of different frequency bands and allow for dense network deployments. To meet these requirements, different wireless communications technologies continue to evolve. For nearly three decades, we have invested heavily in research and development to drive the evolution of wireless technologies, including CDMA and OFDMA. As a result, we have developed and acquired (and continue to develop and acquire) significant related intellectual property. This intellectual property has been incorporated into the most widely accepted and deployed cellular wireless communications technology standards, and we have licensed it to several hundred licensees, including leading wireless device and infrastructure manufacturers.

**Cellular wireless technologies.** Relevant cellular wireless technologies can be grouped into the following categories.

**TDMA-based.** TDMA (Time Division Multiple Access)-based technologies are characterized by their access method allowing several users to share the same frequency channel by dividing the signal into different time slots. Most of these systems are classified as 2G (second generation) technology. The main examples of TDMA-based technologies are GSM (deployed worldwide), IS-136 (deployed in the Americas) and Personal Digital Cellular (PDC) (deployed in Japan).

Since CDMA technologies are the basis for all 3G wireless systems, GSM connections are declining. According to GSMA Intelligence estimates as of September 30, 2017, there were approximately 3.1 billion GSM connections worldwide, representing approximately 39% of total cellular connections, down from 46% as of September 30, 2016. The transition of

wireless devices from 2G to 3G/4G technologies continued around the world with 3G/4G connections up 16% year-over-year (GSMA Intelligence, October 2017).

*CDMA-based.* CDMA-based technologies are characterized by their access method allowing several users to share the same frequency and time by allocating different orthogonal codes to individual users. Most of the CDMA-based technologies are classified as 3G technology.

There are a number of variants of CDMA-based technologies deployed around the world, in particular CDMA2000, EV-DO (Evolution Data Optimized), WCDMA (Wideband CDMA) and TD-SCDMA (Time Division-Synchronous CDMA) (deployed exclusively in China). CDMA-based technologies provide vastly improved capacity for voice and low-rate data services as compared to analog technologies and significant improvements over TDMA-based technologies such as GSM. To date, these technologies have seen many revisions, and they continue to evolve. New features continue to be defined in the 3rd Generation Partnership Project (3GPP), an industry standards development organization.

CDMA technologies ushered in a significant increase in broadband data services that continue to grow globally. According to GSMA Intelligence estimates as of September 30, 2017, there were approximately 2.4 billion CDMA-based connections worldwide, representing approximately 30% of total cellular connections.

*OFDMA-based.* OFDMA-based technologies are characterized by their access method allowing several users to share the same frequency band and time by allocating different subcarriers to individual users. Most of the OFDMA-based technologies to be deployed through 2017 are classified as 4G technology. It is expected that 5G will heavily leverage OFDM-based technologies. We continue to play a significant role in the development of LTE and LTE Advanced, which are the predominant 4G technologies currently in use, and their evolution to LTE Advanced Pro.

LTE is incorporated in 3GPP specifications starting from release 8 and uses OFDMA in the downlink and single carrier FDMA (SC-FDMA) in the uplink. LTE has two modes, FDD (frequency division duplex) and TDD (time division duplex), to support paired and unpaired spectrum, respectively, and is being developed by 3GPP. The principal benefit of LTE is its ability to leverage a wide range of spectrum (bandwidths of up to 20 MHz or more through aggregation). LTE is designed to seamlessly interwork with 3G through 3G/4G multimode devices. Most LTE devices rely on 3G for voice services across the network, as well as for ubiquitous data services outside the LTE coverage area, and on 4G for data services inside the LTE coverage area. LTE's voice solution, VoLTE (voice over LTE), is being commercially deployed in a growing number of networks.

Carrier aggregation, one of the significant improvements of LTE Advanced, was commercially launched in June 2013 and continues to evolve to aggregate additional carriers in the uplink as well as the downlink. Along with carrier aggregation, LTE Advanced brings many more enhancements, including advanced antenna techniques and optimization for small cells. Apart from improving the performance of existing networks, these releases also bring new enhancements under the umbrella of LTE Advanced Pro to which we have been a significant contributor, including, LTE Direct for proximity-based device-to-device discovery, cellular vehicle-to-everything (C-V2X) communication, improved LTE broadcast, optimizations of narrowband communications designed for IoT (known as eMTC and NB-IoT) and the ability to use LTE Advanced in unlicensed spectrum (LTE Unlicensed) as well as in emerging shared spectrum bands in various regions (such as the Citizens Broadband Radio Service or CBRS in the United States). There will be multiple options for deploying LTE Unlicensed for different deployment scenarios.

- LTE-U, which relies on an LTE control carrier based on 3GPP Release 12, uses carrier aggregation to combine unlicensed and licensed spectrum in the downlink and has been introduced in early mobile operator deployments in the United States and evolves to Licensed Assisted Access (LAA).
- LAA, introduced as part of 3GPP Release 13, also aggregates unlicensed and licensed spectrum in both up and downlink and is being deployed globally by mobile operators. LAA is a key technology for many operators with limited licensed spectrum to deliver Gigabit LTE speeds.
- MulteFire can operate in unlicensed spectrum without a licensed anchor control channel.

There also have been ongoing efforts to make the interworking between LTE and Wi-Fi more seamless and completely transparent to the users. Further integration is achieved with LTE Wi-Fi Link Aggregation (LWA), which will utilize existing and new carrier Wi-Fi deployments.

According to GSMA Intelligence estimates as of September 30, 2017, there were approximately 2.3 billion global LTE connections worldwide, representing approximately 30% of total cellular connections.

According to the Global mobile Suppliers Association (GSA), as of September 30, 2017, more than 810 wireless operators have commercially deployed or started testing LTE with 644 commercially launched in 200 countries. In addition, LTE Advanced standards featuring carrier aggregation have begun to be deployed, with 212 operators having commercially launched LTE Advanced networks in 105 countries (GSA, October 2017).

As we look forward, the wireless industry is actively building the next generation of cellular technologies under the name 5G in 3GPP. While 5G is still being defined, our inventions that serve as foundational technologies for 3G and 4G are expected to serve as the basis for 5G wireless technologies. 5G is expected to transform the role of wireless technologies and incorporate advancements on 3G/4G features available today, including further enhanced mobile broadband services, device-to-device capabilities, use of all different types of spectrum (including licensed, unlicensed and shared spectrum) and connectivity of a significant number of things. 5G is also expected to include operation in emerging higher frequency bands, such as those in the millimeter wave range to significantly increase the data rate offered to users. Furthermore, 5G is expected to offer techniques that will allow cellular networks to expand into new vertical product segments, such as enabling automation-based platforms for industrial companies (known as Industrial IoT), and define a radio link with much higher levels of reliability for control of vehicles and machines. This development, which builds on the various 3G and 4G features addressing IoT, will further sustain the trend of enabling cellular connectivity to non-handset categories of devices. We continue to play a significant role in driving 5G from standardization to commercialization, including contributing to 3GPP standardization activities to define the 5G New Radio (NR) and Next Generation Core (NGC) standard and collaborating with industry participants on 5G demonstrations and trials to prepare for commercial network launches. We continue to enhance and track the 3GPP standard in our 5G NR prototypes for spectrum below 6GHz and mmWave spectrum, as well as for shared and unlicensed spectrum. These prototypes will be used for interoperability device testing starting in late 2017 with infrastructure partners as well as for early trial activities with mobile operators.

**Other (non-cellular) wireless technologies.** There are other, non-cellular wireless technologies that have also been broadly adopted.

*Wireless Local Area Networks.* Wireless local area networks (WLAN), such as Wi-Fi, link two or more nearby devices wirelessly and usually provide connectivity through an access point. Wi-Fi systems are based on standards developed by the Institute of Electrical and Electronics Engineers (IEEE) in the 802.11 family of standards. 802.11ax, the latest standard, adds advanced features such as downlink and uplink OFDMA and uplink multiple user multiple in/multiple out (UL MU MIMO) to the 802.11 baseline standard. This technology primarily targets broadband connectivity for mobile devices, tablets, laptops and other consumer electronics devices using 2.4 GHz and 5 GHz spectrum. For 60GHz mmWave technology, 802.11ay adds wider channel bandwidth and the use of MIMO to the existing 802.11ad (also known as Gigabit Wi-Fi or WiGig) standard. 802.11ah was finalized in early 2017 and targets sub-1 GHz spectrum and is expected to be a solution for “connected home” applications that require long battery life. We played a leading role in the development of 802.11ac, 802.11ax, 802.11ay, 802.11ah and 802.11p, and we are actively involved in innovative programs developed in the context of the Wi-Fi Alliance.

*Bluetooth.* Bluetooth is a wireless personal area network that provides wireless connectivity between devices over short distances ranging from a few centimeters to a few hundred meters. Bluetooth technology provides wireless connectivity to a wide range of fixed or mobile consumer electronics devices. Bluetooth functionalities are standardized by the Bluetooth Special Interest Group in various versions of the specification (from 1.0 to 5.0), which include different functionalities, such as enhanced data rate, low energy and mesh technologies. In August 2015, we acquired CSR plc, a leading contributor to Bluetooth evolution in the areas of mobile devices, HID (human interface device), A/V (audio/video) and mesh technologies.

*Location Positioning Technologies.* Location positioning technologies have evolved rapidly in the industry over the past few years in order to deliver an enhanced location experience. We were a key developer of the Assisted-GPS (A-GPS) positioning technology used in most cellular handsets today. For uses requiring the best accuracy for E911 services and navigational based services, A-GPS provided a leading-edge solution.

The industry has now evolved to support additional inputs for improving the location experience. Our products and intellectual property now support multiple constellations, including: GPS, GLONASS, Galileo and BeiDou; terrestrial-based positioning using WWAN (Wireless Wide Area Network) and Wi-Fi-based inputs; Wi-Fi RSSI (received signal strength indication) and RTT (round-trip time) signals for indoor location; and third-party sensors combined with GNSS (Global Navigation Satellite System) measurements to provide interim support for location-based services in rural areas and indoors where other signal inputs may not be available.

#### **Other Significant Technologies used in Cellular and Certain Consumer Electronic Devices and Networks**

We have played a leading role in developing and/or acquired many of the other technologies used across the wireless system, such as cellular and certain consumer electronic devices and not just what is embodied in the chipsets, and networks, including:

- graphics and display processing functionality;
- video coding based on the HEVC (high efficiency video codec) standard, which is being deployed to support 4K video and immersive media content;
- audio coding, including EVS (enhanced voice services) and MPEG-H 3D Audio;

- the latest version of 3GPP's codec for multimedia use and for voice/speech use, which is being deployed commercially;
- multimedia transport, including MPEG-DASH (Dynamic Adaptive Streaming over HTTP) enabling advanced multimedia experiences;
- camera and camcorder functions;
- operating system and user interface features;
- machine learning platforms;
- augmented reality (AR) and virtual reality (VR) features enabling new types of user experiences;
- security and content protection systems for enhanced device security without compromising the user experience;
- volatile (LP-DDR2, 3, 4) and non-volatile (eMMC) memory and related controllers;
- power management systems for improved battery life and device charging; and
- RFFE (radio frequency front-end) system products for improved signal performance and reduced power consumption, while simplifying the design for manufacturers to develop LTE multimode, multiband devices.

## Acquisitions

**RF360 Holdings.** On February 3, 2017, we completed the formation of a joint venture with TDK Corporation (TDK), under the name RF360 Holdings Singapore Pte. Ltd. (RF360 Holdings), to enable delivery of radio frequency front-end (RFFE) modules and radio frequency (RF) filters into fully integrated products for mobile devices and Internet of Things (IoT) applications, among others. The joint venture is owned 51% by Qualcomm Global Trading Pte. Ltd. (Qualcomm Global Trading), a Singapore corporation and wholly-owned subsidiary of ours, and 49% by EPCOS AG (EPCOS), a German wholly-owned subsidiary of TDK. Certain intellectual property, patents and filter and module design and manufacturing assets were carved out of existing TDK businesses and are owned by the joint venture, and certain assets were acquired directly by affiliates of ours. Qualcomm Global Trading has the option to acquire (and EPCOS has an option to sell) EPCOS's interest in the joint venture for \$1.15 billion 30 months after the Closing Date. The total purchase price was \$3.1 billion. RF360 Holdings, which is included in our QCT segment, is a Singapore corporation with research and development and manufacturing and/or sales locations in the United States, Europe and Asia and its headquarters in Munich, Germany.

**NXP Semiconductors N.V.** On October 27, 2016, we announced a definitive agreement under which Qualcomm River Holdings, B.V. (Qualcomm River Holdings), an indirect, wholly owned subsidiary of QUALCOMM Incorporated, will acquire NXP Semiconductors N.V. (NXP). Pursuant to the definitive agreement, Qualcomm River Holdings has commenced a tender offer to acquire all of the issued and outstanding common shares of NXP for \$110 per share in cash, for estimated total cash consideration to be paid to NXP's shareholders of \$38 billion. NXP is a leader in high-performance, mixed-signal semiconductor electronics in automotive, broad-based microcontrollers, secure identification, network processing and RF power products.

The transaction is subject to receipt of regulatory approvals in various jurisdictions and other closing conditions, including the tender of at least 80% of the issued and outstanding common shares of NXP in the offer (provided that the minimum tender threshold may be reduced to a percentage not less than 70% with the prior written consent of NXP). While we continue to work to close by the end of calendar 2017, the transaction may close in early 2018. At an Extraordinary General Meeting of NXP's shareholders held on January 27, 2017, NXP's shareholders approved certain matters relating to the transaction, including the appointment of designees of Qualcomm River Holdings to NXP's board of directors (effective upon the closing of the transaction) and certain transactions that are intended to be consummated after the completion of the tender offer.

In May 2017, we issued an aggregate principal amount of \$11.0 billion of unsecured floating- and fixed-rate notes with varying maturities, of which a portion will be used to fund the purchase price and other related transactions. In addition, we have secured \$4.0 billion in committed financing through a Term Loan Facility, which is expected to be drawn on at the close of the NXP transaction (See "Notes to Consolidated Financial Statements, Note 6. Debt."). The remaining amount will be funded with cash held by our foreign entities.

Qualcomm River Holdings and NXP may terminate the definitive agreement under certain circumstances. If the definitive agreement is terminated by NXP in certain circumstances, NXP will be required to pay Qualcomm River Holdings a termination fee of \$1.25 billion. If the definitive agreement is terminated by Qualcomm River Holdings under certain circumstances involving the failure to obtain the required regulatory approvals or the failure of NXP to complete certain pre-closing reorganization steps in all material respects, Qualcomm River Holdings will be required to pay NXP a termination fee of \$2.0 billion.

## Operating Segments

We have three reportable segments. We conduct business primarily through QCT (Qualcomm CDMA Technologies) and QTL (Qualcomm Technology Licensing), and QSI (Qualcomm Strategic Initiatives) makes strategic investments. Revenues in fiscal 2017, 2016 and 2015 for our reportable segments were as follows (in millions, except percentage data):

	2017	2016	2015
QCT	\$ 16,479	\$ 15,409	\$ 17,154
<i>As a percent of total</i>	74%	65%	68%
QTL	\$ 6,445	\$ 7,664	\$ 7,947
<i>As a percent of total</i>	29%	33%	31%
QSI	\$ 113	\$ 47	\$ 4
<i>As a percent of total</i>	1%	—	—

**QCT Segment.** QCT is a leading developer and supplier of integrated circuits and system software based on CDMA, OFDMA and other technologies for use in wireless voice and data communications, networking, application processing, multimedia and global positioning system products. QCT's integrated circuit products are sold and its system software is licensed to manufacturers that use our products in mobile devices, tablets, laptops, data modules, handheld wireless computers and gaming devices, access points and routers, broadband gateway equipment, data cards and infrastructure equipment, other consumer electronics and automotive telematics and infotainment systems. Our Mobile Station Modem (MSM) integrated circuits, which include the Mobile Data Modem, Qualcomm® Single Chip and Qualcomm® Snapdragon™ mobile platforms and processors and LTE modems, perform the core baseband modem functionality in wireless devices providing voice and data communications, as well as multimedia applications and global positioning functions. In addition, our Snapdragon mobile platforms and processors provide advanced application and graphics processing capabilities. Because of our experience in designing and developing CDMA- and OFDMA-based products, we design both the baseband integrated circuit and the supporting system, including the RF (Radio Frequency), PM (Power Management) and wireless connectivity integrated circuits. This approach enables us to optimize the performance of the wireless device with improved product features and integration with the network system. QCT's system software helps enable the other device components to interface with the integrated circuit products and is the foundation software enabling manufacturers to develop devices utilizing the functionality within the integrated circuits. We also provide support, including reference designs and tools, to assist our customers in reducing the time required to design their products and bring their products to market.

QCT offers a broad portfolio of products, including both wireless device and infrastructure integrated circuits, in support of CDMA2000 1X and 1xEV-DO, as well as the EV-DO Revision A/B evolutions of CDMA 2000 technology. Leveraging our expertise in CDMA, we also develop and offer integrated circuits supporting the WCDMA version of 3G for manufacturers of wireless devices. Device manufacturers have widely adopted our WCDMA products that support GSM/GPRS, WCDMA, HSDPA (High-Speed Downlink Packet Access), HSUPA (High-Speed Uplink Packet Access) and HSPA+ for their devices. QCT also sells multimode products for the LTE standard, which are designed to support seamless backward compatibility to existing 3G technologies. Our integrated circuit products are included in a broad range of devices, from low-tier, entry-level devices for emerging regions, which may use our Qualcomm Reference Design (QRD) products, to premium-tier devices. In fiscal 2017, QCT shipped approximately 804 million MSM™ integrated circuits for wireless devices worldwide, compared to approximately 842 million and 932 million in fiscal 2016 and 2015, respectively.

Our modems are built to work with increasingly complex networks. They support the latest communication technologies and adapt to network conditions and user needs in real time to enable delivery of faster, smoother data and voice connections. Our 3G/4G modem roadmap delivers the latest network technologies across multiple product tiers and devices. This roadmap is the result of our years of research into emerging network standards and the development of chipsets that take advantage of these new standards, while maintaining backward compatibility with existing standards.

Each Snapdragon mobile platform and processor is a highly integrated, mobile optimized system on a chip incorporating our advanced technologies, including a Snapdragon modem for fast reliable mobile broadband connectivity, a high performance central processing unit (CPU), digital signal processor (DSP), graphics processing unit (GPU), image signal processor, multimedia subsystems, including high fidelity audio, high-definition video and advanced imaging capabilities, our mobile security technology, and accurate location positioning engines. Our CPU cores are designed to deliver high levels of compute performance at low power, allowing manufacturers to design powerful, slim and power-efficient devices. Our Qualcomm® Adreno™ GPUs are also designed to deliver high quality graphics performance for visually rich 3D gaming and

user interfaces. The heterogeneous compute architecture of our Snapdragon mobile platforms and processors is designed to help ensure that the CPU, DSP and GPU work efficiently together, each being utilized only when needed, which enhances the processing capacity, speed and efficiency of our Snapdragon mobile platforms and processors and the battery life of devices using our processors.

Our portfolio of RF products includes QFE (Qualcomm Front End) radio frequency front-end (RFFE) components that are designed to simplify the RF design for LTE multimode, multiband mobile devices, reduce power consumption and improve radio performance. Through our RF360 Holdings joint venture, QCT offers an expanded portfolio of RFFE products for mobile devices and IoT applications. Our technologies provide comprehensive RFFE product offerings with system level performance from the modem and transceiver to the antenna tuner that include power tracking, tuning systems, switching, multimode-multiband power amplification, low noise amplifiers, complex transmit and receive modules, in addition to discrete filtering applications across cellular, infrastructure and automotive markets.

Our wireless products also consist of integrated circuits and system software for WLAN, Bluetooth, Bluetooth Smart, frequency modulation (FM) and near field communications, as well as technologies that support location data and services, including GPS, GLONASS and BeiDou. Our WLAN, Bluetooth and FM products have been integrated with the Snapdragon mobile platforms and processors to provide additional connectivity for mobile devices, tablets, laptops, consumer electronics and automotive telematics and infotainment systems. QCT also offers standalone WLAN, Bluetooth, Bluetooth Smart, applications processor and Ethernet products for mobile devices, consumer electronics, computers, IoT applications, other connected devices and automotive telematics and infotainment systems. Our networking products include WLAN, Powerline and Ethernet chips, network processors and software. These products help enable home and business networks to support the growing number of connected devices, digital media, data services and other smart home applications.

QCT primarily utilizes a fabless production model, which means that we do not own or operate foundries for the production of silicon wafers from which our integrated circuits are made. Integrated circuits are die cut from silicon wafers that have completed the package assembly and test manufacturing processes. The semiconductor package supports the electrical contacts that connect the integrated circuit to a circuit board. Die cut from silicon wafers are the essential components of all of our integrated circuits and a significant portion of the total integrated circuit cost. We employ both turnkey and two-stage manufacturing models to purchase our integrated circuits. Under the turnkey model, our foundry suppliers are responsible for delivering fully assembled and tested integrated circuits. Under the two-stage manufacturing model, we purchase die in singular or wafer form from semiconductor manufacturing foundries and contract with separate third-party suppliers for manufacturing services such as wafer bump, probe, assembly and the majority of our final test requirements. RF360 Holdings uses certain internal fabrication facilities to manufacture RFFE modules and RF filter acoustic products, and its manufacturing operations consist of front-end and back-end processes. The front-end processes primarily take place at manufacturing facilities located in Germany and Singapore and involve the imprinting of substrate silicon wafers with the circuitry required for semiconductors to function (also known as wafer fabrication). The back-end processes involve the assembly, packaging and test of semiconductors to prepare RFFE modules and RF filter acoustic products for distribution. The back-end manufacturing facilities are located in China, Germany and Singapore.

Other than RF360 Holdings, we primarily rely on independent third-party suppliers to perform the manufacturing and assembly, and most of the testing, of our integrated circuits based primarily on our proprietary designs and test programs. Our suppliers also are responsible for the procurement of most of the raw materials used in the production of our integrated circuits. The primary foundry suppliers for our various digital, analog/mixed-signal, RF and PM integrated circuits are Global Foundries Inc., Samsung Electronics Co. Ltd., Semiconductor Manufacturing International Corporation, Taiwan Semiconductor Manufacturing Company and United Microelectronics Corporation. The primary semiconductor assembly and test suppliers are Advanced Semiconductor Engineering, Amkor Technology, Siliconware Precision Industries and STATSChipPAC. The majority of our foundry and semiconductor assembly and test suppliers are located in the Asia-Pacific region.

QCT's sales are primarily made through standard purchase orders for delivery of products. QCT generally allows customers to reschedule delivery dates within a defined time frame and to cancel orders prior to shipment with or without payment of a penalty, depending on when the order is canceled. The industry in which QCT operates is intensely competitive. QCT competes worldwide with a number of United States and international designers and manufacturers of semiconductors. As a result of global expansion by foreign and domestic competitors, technological changes, device manufacturer concentrations and the potential for further industry consolidation, we anticipate the industry to remain very competitive. We believe that the principal competitive factors for our products include performance, level of integration, quality, compliance with industry standards, price, time-to-market, system cost, design and engineering capabilities, new product innovation and customer support. QCT also competes in both single- and multi-mode environments against alternative communications technologies including, but not limited to, GSM/GPRS/EDGE and TDMA. Further, QCT is expanding its product offerings to



adjacent industry segments outside traditional cellular industries, including automotive, which is subject to long design-in time frames, long product life cycles and a high degree of regulatory and safety requirements, necessitating suppliers to the industry to comply with stringent qualification processes, very low defect rates and high reliability standards, all of which results in a significant barrier to entry and may result in increased costs.

QCT's current competitors include, but are not limited to, companies such as Broadcom Limited, Cirrus Logic, Cypress Semiconductor Corporation, HiSilicon Technologies, Intel, Marvell Technology, Maxim Integrated Products, MediaTek, Microchip Technology Inc., Murata Manufacturing Co., Ltd., Nordic Semiconductor, Nvidia, Qorvo Inc., Realtek Semiconductor, Renesas Electronics Corporation, Samsung Electronics, Sequans Communications S.A., Skyworks Solutions Inc., Sony Corporation and Spreadtrum Communications (which is controlled by Tsinghua Unigroup). QCT also faces competition from products internally developed by our customers, including some of our largest customers, and from some early-stage companies. Our competitors devote significant amounts of their financial, technical and other resources to develop and market competitive products and, in some cases, to develop and adopt competitive digital communication or signal processing technologies, and those efforts may materially and adversely affect us. Although we have attained a significant position in the industry, many of our current and potential competitors may have advantages over us that include, among others: motivation by our customers in certain circumstances to utilize their own internally-developed integrated circuit products, to use our competitors' integrated circuit products and/or sell such products to others, including by bundling with other products, or to choose alternative technologies; lower cost structures and/or a willingness and ability to accept lower prices and lower or negative margins for their products, particularly in China; foreign government support of other technologies or competitors; better known brand names; ownership and control of manufacturing facilities and greater expertise in manufacturing processes; more extensive relationships with local distribution companies and original equipment manufacturers in certain geographic regions (such as China) and/or experience in adjacent industry segments outside traditional cellular industries (such as automotive and IoT); and/or a more established presence in certain regions.

**QTL Segment.** QTL grants licenses or otherwise provides rights to use portions of our intellectual property portfolio, which, among other rights, includes certain patent rights essential to and/or useful in the manufacture and sale of certain wireless products, including, without limitation, products implementing CDMA2000, WCDMA, CDMA TDD and/or LTE standards and their derivatives. We have historically licensed our cellular standard-essential patents together with other Qualcomm patents that may be useful to such licensed products because licensees typically have desired to obtain the commercial benefits of receiving such broad patent rights from us. However, we also have licensed only our cellular standard-essential patents to certain licensees who have requested such licenses. In addition, our practice in China since 2015 is to offer licenses to our 3G and 4G standard-essential Chinese patents for devices sold for use in China separately from licenses to our other patents. Our licensees manufacture wireless products including mobile devices (also known as subscriber units, which include handsets), other consumer devices (e.g., tablets and laptops), machine-to-machine devices (e.g., telematics devices, meter reading devices), plug-in end user data modem cards, certain embedded modules for incorporation into end user products, infrastructure equipment required to establish and operate a network and equipment to test networks and subscriber units.

Since our founding in 1985, we have focused heavily on technology development and innovation. These efforts have resulted in a leading intellectual property portfolio related to, among other things, wireless technology. We have an extensive portfolio of United States and foreign patents, and we continue to pursue patent applications around the world. Our patents have broad coverage in many countries, including Brazil, China, India, Japan, South Korea, Taiwan, the United States and countries in Europe and elsewhere. A substantial portion of our patents and patent applications relate to digital wireless communications technologies, including patents that are essential or may be important to the commercial implementation of CDMA2000, WCDMA (UMTS), TD-SCDMA, TD-CDMA (Time Division CDMA) and OFDMA/LTE products. Our patent portfolio is the most widely and extensively licensed in the industry, with several hundred licensees. Additionally, we have a substantial patent portfolio related to key technologies used in communications and other devices and/or related services, some of which were developed in industry standards development bodies. These include certain video codec, audio codec, WLAN, memory interfaces, wireless power, GPS and positioning, broadcast and streaming protocols, and short range communication functionalities, including NFC and Bluetooth. Our patents cover a wide range of technologies across the entire wireless system, including the device (handsets and other wireless devices) and not just what is embodied in the chipsets. Over the years, a number of companies have challenged our patent position, but companies in the mobile communications industry generally recognize that any company seeking to develop, manufacture and/or sell subscriber units or infrastructure equipment that use CDMA-based and/or OFDMA-based technologies will require a license or other rights to use our patents.

We have licensed or otherwise provided rights to use our patents to hundreds of companies on industry-accepted terms. Unlike some other companies in our industry that hold back certain key technologies, we offer companies substantially our entire patent portfolio for use in cellular subscriber devices and cell site infrastructure equipment. Our strategy to make our

patented technologies broadly available has been a catalyst for industry growth, helping to enable a wide range of companies offering a broad array of wireless products and features while increasing the capabilities of and/or driving down average and low-end selling prices for 3G handsets and other wireless devices. By licensing or otherwise providing rights to use our patents to a wide range of equipment manufacturers, encouraging innovative applications, supporting equipment manufacturers with integrated chipset and software products and focusing on improving the efficiency of the airlink for wireless operators, we have helped 3G CDMA evolve and grow and reduced device pricing, all at a faster pace than the 2G (second generation) technologies such as GSM that preceded it.

Upon the initial deployment of OFDMA-based networks, the products implementing such technologies generally have been multimode and implement CDMA-based technologies. The licenses granted under our existing CDMA license agreements generally cover multimode CDMA/OFDMA (3G/4G) devices, and our licensees are obligated to pay royalties under their CDMA license agreements for such devices. Further, the majority of the leading handset and other wireless device companies (including Huawei, LG, Microsoft, Oppo, Samsung, Sony, vivo, Xiaomi and ZTE) have royalty-bearing licenses under our patent portfolio for use in LTE or other OFDMA-based products that do not implement any CDMA-based standards.

Standards bodies have been informed that we hold patents that might be essential for all 3G standards that are based on CDMA. We have committed to such standards bodies that we will offer to license our essential patents for these CDMA standards consistent with our commitments to those bodies. We have also informed standards bodies that we hold patents and pending patent applications that are potentially essential for certain standards that are based on OFDM/OFDMA technology (e.g., LTE, including FDD and TDD versions) and have committed to offer to license our essential patents for these OFDMA standards consistent with our commitments to those bodies. We have made similar commitments with respect to certain other technologies implemented in industry standards.

QTL licensing revenues include license fees and royalties based on sales by licensees of products incorporating or using our intellectual property. License fees are fixed amounts paid in one or more installments. License fees are recognized over the estimated period of benefit of the license to the licensee, typically 5 to 15 years. Royalties are generally based upon a percentage of the wholesale (i.e., licensee's) selling price of complete licensed products, net of certain permissible deductions (including transportation, insurance, packing costs and other items). We broadly provide per unit running royalty caps that apply to certain categories of complete wireless devices, namely smartphones, tablets and laptops, which effectively provide for a maximum running royalty amount per device (i.e., the royalty caps limit the running royalties due on a per unit basis). QTL recognizes royalty revenues based on royalties reported by licensees and when other revenue recognition criteria are met. Licensees, however, do not report and pay royalties owed for sales in any given quarter until after the conclusion of that quarter, which is generally the following quarter. Revenues generated from royalties are subject to quarterly and annual fluctuations. The vast majority of QTL revenues have been generated through our licensees' sales of CDMA2000-based, WCDMA-based and LTE-based products (including 3G and 4G multi-mode devices), such as feature phones and smartphones. We have invested and continue to invest in both the acquisition and development of OFDMA technology and intellectual property and have generated the industry leading patent portfolio applicable to LTE, LTE Advanced and LTE Advanced Pro. Additionally, we have invested and continue to invest in the development of 5G, which while still being defined, is expected to heavily leverage OFDMA-based technologies. Nevertheless, we face competition in the development of intellectual property for future generations of digital wireless communications technologies and services.

Separate and apart from licensing manufacturers of wireless devices and network equipment, we have entered into certain arrangements with competitors of our QCT segment, such as Broadcom Limited. A principal purpose of these arrangements is to provide our QCT segment and the counterparties certain freedom of operation with respect to each party's integrated circuits business. In every case, these agreements expressly reserve the right for QTL to seek royalties from the customers of such integrated circuit suppliers with respect to such suppliers' customers' sales of CDMA-, WCDMA- and OFDMA-based wireless devices into which such suppliers' integrated circuits are incorporated.

Our license agreements also may provide us with rights to use certain of our licensees' technology and intellectual property to manufacture and sell certain components (e.g., Application-Specific Integrated Circuits) and related software, subscriber units and/or infrastructure equipment.

We are currently subject to various governmental investigations and private legal proceedings challenging our patent licensing practices, which may require us to change our patent licensing practices as described more fully in this Annual Report in "Part I, Item 1A. Risk Factors" under the heading "If we are required to change our patent licensing practices due to governmental investigations and/or private legal proceedings challenging those practices, our business and results of operations could be adversely impacted" and in "Notes to Consolidated Financial Statements, Note 7. Commitments and Contingencies."

**QSI Segment.** QSI makes strategic investments that are focused on opening new or expanding opportunities for our technologies and supporting the design and introduction of new products and services (or enhancing existing products or services) for voice and data communications and new industry segments. Many of these strategic investments are in early-stage companies in a variety of industries, including, but not limited to, automotive, IoT, mobile, data center and healthcare. Investments primarily include non-marketable equity instruments, which generally are recorded using the cost method or the equity method, and convertible debt instruments, which are recorded at fair value. In addition, QSI segment results include revenues and related costs associated with license and development contracts with one of our equity method investees. As part of our strategic investment activities, we intend to pursue various exit strategies for each of our QSI investments in the foreseeable future.

**Other Businesses.** Nonreportable segments include our mobile health, data center, small cell and other wireless technology and service initiatives. Our nonreportable segments develop and sell products and services that include, but are not limited to: products and services for mobile health; license of chipset technology and products and services for use in data centers; products designed for implementation of small cells to address the challenge of meeting the increased demand for data; development, other services and related products to U.S. government agencies and their contractors; and software products and content and push-to-talk enablement services to wireless operators.

Additional information regarding our operating segments is provided in this Annual Report in “Notes to Consolidated Financial Statements, Note 8. Segment Information.” Information regarding seasonality is provided in this Annual Report in “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the “Our Business and Operating Segments” section under the heading “Seasonality.”

### **Strategic Realignment Plan**

In the fourth quarter of fiscal 2015, we announced a Strategic Realignment Plan designed to improve execution, enhance financial performance and drive profitable growth as we worked to create sustainable long-term value for stockholders. As part of this Strategic Realignment Plan, among other actions, we implemented a cost reduction plan, which included a series of targeted reductions across our businesses, particularly in QCT, and a reduction to annual share-based compensation grants. The cost reduction initiatives were achieved by the end of fiscal 2016 and other activities under the plan were completed by the end of fiscal 2017. Additional information regarding our Strategic Realignment Plan is provided in this Annual Report in “Notes to Consolidated Financial Statements, Note 10. Strategic Realignment Plan.”

### **Corporate Structure**

We operate our businesses through our parent company, QUALCOMM Incorporated, and multiple direct and indirect subsidiaries. We have developed our corporate structure in order to address various legal, regulatory, tax, contractual compliance, operations and other matters. Substantially all of our products and services businesses, including QCT, and substantially all of our engineering, research and development functions, are operated by QUALCOMM Technologies, Inc. (QTI), a wholly-owned subsidiary of QUALCOMM Incorporated, and QTI’s subsidiaries. QTL is operated by QUALCOMM Incorporated, which owns the vast majority of our patent portfolio. Neither QTI nor any of its subsidiaries has any right, power or authority to grant any licenses or other rights under or to any patents owned by QUALCOMM Incorporated.

### **Revenue Concentrations, Significant Customers and Geographical Information**

Revenues in fiscal 2017 were negatively impacted by the actions of Apple Inc. and Hon Hai Precision Industry Co., Ltd./Foxconn, its affiliates and other suppliers to Apple, as well as the previously disclosed dispute with another licensee, who underpaid royalties due in the second quarter of fiscal 2017 and did not report or pay royalties due in the third or fourth quarter of fiscal 2017. A small number of customers/licensees historically have accounted for a significant portion of our consolidated revenues.

In fiscal 2017, 2016 and 2015, revenues from suppliers to Apple Inc. and from Samsung Electronics each comprised more than 10% of consolidated revenues. Combined revenues from Guangdong OPPO Mobile Telecommunications Corp. Ltd. and vivo Communication Technology Co., Ltd., and their respective affiliates, also comprised more than 10% of consolidated revenues in fiscal 2017.

Consolidated revenues from international customers and licensees as a percentage of total revenues were 98%, 98% and 99% in fiscal 2017, 2016 and 2015, respectively. During fiscal 2017, 65% and 16% of our revenues were from customers and licensees based in China (including Hong Kong) and South Korea, respectively, compared to 57% and 17% during fiscal 2016, respectively, and 53% and 16% during fiscal 2015, respectively. We report revenues from external customers by country based on the location to which our products or services are delivered, which for QCT is generally the country in which our customers manufacture their products, or for licensing revenues, the invoiced addresses of our licensees. As a result, the revenues by country presented herein are not necessarily indicative of either the country in which the devices

containing our products and/or intellectual property are ultimately sold to consumers or the country in which the companies that sell the devices are headquartered. For example, China revenues could include revenues related to shipments of integrated circuits to a company that is headquartered in South Korea but that manufactures devices in China, which devices are then sold to consumers in Europe and/or the United States. Additional geographic information is provided in this Annual Report in “Notes to Consolidated Financial Statements, Note 8. Segment Information.”

## **Research and Development**

The communications industry is characterized by rapid technological change, evolving industry standards and frequent new product introductions, requiring a continuous effort to enhance existing products and technologies and to develop new products and technologies. We have significant engineering resources, including engineers with substantial expertise in CDMA, OFDMA and a broad range of other technologies. Using these engineering resources, we expect to continue to invest in research and development in a variety of ways in an effort to extend the demand for our products, including continuing the development of CDMA, OFDMA and other technologies, developing alternative technologies for certain specialized applications, participating in the formulation of new voice and data communication standards and technologies, assisting in deploying digital voice and data communications networks around the world and leveraging our existing technology in new and expanded product areas, such as RFFE, and adjacent industry segments outside of traditional cellular industries, such as automotive, IoT and networking. Our research and development team has a demonstrated track record of innovation in voice and data communication technologies and application processor technology, among others. Our research and development expenditures in fiscal 2017, 2016 and 2015 totaled approximately \$5.5 billion, \$5.2 billion and \$5.5 billion, respectively.

We continue to invest significant resources towards advancements in 4G OFDMA-based technologies (including LTE) and 5G-based technologies. We also engage in acquisitions and other transactions, such as joint ventures, to meet certain technology needs, to obtain development resources or open or expand opportunities for our technologies and supporting the design and introduction of new products and services (or enhancing existing products and services) for voice and data communications and new industry segments outside of the traditional cellular industry. Recent transactions include our acquisition of CSR plc, our RF360 Holdings joint venture with TDK Corporation and our proposed acquisition of NXP.

We make investments to provide our integrated circuit customers with chipsets designed on leading-edge technology nodes that combine multiple technologies for use in consumer devices (e.g., smartphones, tablets and laptops), consumer electronics and other products (e.g., access points and routers, data cards and infrastructure equipment). In addition to 3G and 4G LTE technologies, our chipsets support other wireless and wired connectivity technologies, including WLAN, Bluetooth, Ethernet, GPS, GLONASS, BeiDou and Powerline communication. Our integrated chipsets often include multiple technologies, including advanced multimode modems, application processors and graphics engines, as well as the tools to connect these diverse technologies. We continue to support Android, Windows and other mobile client software environments in our chipsets.

We develop on our own, and with our partners, innovations that are integrated into our product portfolio to further expand the opportunity for wireless communications and enhance the value of our products and services. These innovations are expected to enable our customers to improve the performance or value of their existing services, offer these services more affordably and introduce revenue-generating broadband data services ahead of their competition.

We have research and development centers in various locations throughout the world that support our global development activities and ongoing efforts to develop and/or advance 4G OFDMA, 5G and a broad range of other technologies. We continue to use our substantial engineering resources and expertise to develop new technologies, applications and services and make them available to licensees to help grow the communications industry and generate new or expanded licensing opportunities.

We also make investments in opportunities that leverage our existing technical and business expertise to deploy new and expanded product areas, such as RFFE, and enter into adjacent industry segments, such as products for automotive, IoT (including the connected home, smart cities, wearables, voice and music and robotics), data center, networking, computing and machine learning, among others.

## **Sales and Marketing**

Sales and marketing activities of our operating segments are discussed under Operating Segments. Other marketing activities include public relations, advertising, digital marketing and social media, participation in technical conferences and trade shows, development of business cases and white papers, competitive analyses, industry intelligence and other marketing programs, such as marketing development funds with our customers. Our Corporate Marketing department provides company information on our Internet site and through other channels regarding our products, strategies and technology to industry analysts and media.

## Competition

Competition faced by our operating segments is discussed under Operating Segments. Competition in the communications industry throughout the world continues to increase at a rapid pace as consumers, businesses and governments realize the potential of wireless communications products and services. We have facilitated competition in the wireless communications industry by licensing our technologies to a large number of manufacturers. Although we have attained a significant position in the traditional cellular industry, many of our current and potential competitors may have advantages over us that include, among others: motivation by our customers in certain circumstances to utilize their own internally-developed integrated circuit products, to use our competitors' integrated circuit products and/or sell such products to others, including by bundling with other products, or to choose alternative technologies; lower cost structures and/or a willingness and ability to accept lower prices and lower or negative margins for their products, particularly in China; foreign government support of other technologies or competitors; better known brand names; ownership and control of manufacturing facilities and greater expertise in manufacturing processes; more extensive relationships with local distribution companies and original equipment manufacturers in certain geographic regions (such as China) and/or experience in adjacent industry segments outside traditional cellular industries (such as automotive and IoT); and/or a more established presence in certain regions. These relationships may affect customers' decisions to purchase products or license technology from us. Accordingly, new competitors or alliances among competitors could emerge and rapidly acquire significant market positions to our detriment.

We expect competition to increase as our current competitors expand their product offerings and introduce new technologies and services in the future and as additional companies compete with our products or services based on 3G, 4G or other technologies. Although we intend to continue to make substantial investments in developing new products and technologies and improving existing products and technologies, our competitors may introduce alternative products, services or technologies that threaten our business. It is also possible that the prices we charge for our products and services may continue to decline as competition continues to intensify. See also the Risk Factor entitled *"Our industry is subject to competition in an environment of rapid technological change that could result in decreased demand and/or declining average selling prices for our products and/or those of our customers and/or licensees."*

## Corporate Responsibility and Sustainability

We strive to better our local and global communities through ethical business practices, socially empowering technology applications, educational and environmental programs and employee diversity and volunteerism.

- *Our Governance.* We aim to demonstrate accountability, transparency, integrity and ethical business practices throughout our operations and interactions with our stakeholders.
- *Our Products.* We strive to meet or exceed industry standards for product responsibility and supplier management.
- *Our Workplace.* We endeavor to provide a safe and healthy work environment where diversity is embraced and various opportunities for training, growth and advancement are encouraged for all employees.
- *Our Community.* We have strategic relationships with a wide range of local organizations and programs that develop and strengthen communities worldwide.
- *Our Environment.* We aim to expand our operations while minimizing our carbon footprint, conserving water and reducing waste.
- *Qualcomm® Wireless Reach™.* We invest in strategic programs that foster entrepreneurship, aid in public safety, enhance delivery of health care, enrich teaching and learning and improve environmental sustainability through the use of advanced wireless technologies.

## Employees

At September 24, 2017, we employed approximately 33,800 full-time, part-time and temporary employees. During fiscal 2017, the number of employees increased by approximately 3,300 primarily due to increases in engineering resources and the formation of our consolidated RF360 Holdings joint venture with TDK.

## Available Information

Our Internet address is [www.qualcomm.com](http://www.qualcomm.com). There we make available, free of charge, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission (SEC). We also make available on our Internet site public financial information for which a report is not required to be filed with or furnished to the SEC. Our SEC reports and other financial information can be accessed through the investor relations section

of our Internet site. The information found on our Internet site is not part of this or any other report we file with or furnish to the SEC.

## **Executive Officers**

Our executive officers (and their ages at September 24, 2017) are as follows:

Paul E. Jacobs, age 54, has served as Executive Chairman since March 2014, as Chairman of the Board of Directors since March 2009 and as a director since June 2005. He served as Chief Executive Officer from July 2005 to March 2014. In addition, he served as an Executive Vice President from February 2000 to June 2005. Dr. Jacobs joined Qualcomm as an intern in 1986 and full-time in 1990 as an engineer and throughout his tenure at Qualcomm has held several other leadership positions. Dr. Jacobs holds a B.S. degree in Electrical Engineering and Computer Science, an M.S. degree in Electrical Engineering and a Ph.D. degree in Electrical Engineering and Computer Science from the University of California, Berkeley.

Steve Mollenkopf, age 48, has served as Chief Executive Officer since March 2014 and as a director since December 2013. He served as Chief Executive Officer-elect and President from December 2013 to March 2014 and as President and Chief Operating Officer from November 2011 to December 2013. In addition, he served as Executive Vice President and Group President from September 2010 to November 2011 and as Executive Vice President and President, QCT from August 2008 to September 2010. Mr. Mollenkopf joined Qualcomm in 1994 as an engineer and throughout his tenure at Qualcomm has held several other technical and leadership positions. Mr. Mollenkopf has been a director of General Electric Company since November 2016. Mr. Mollenkopf holds a B.S. degree in Electrical Engineering from Virginia Tech and an M.S. degree in Electrical Engineering from the University of Michigan.

Derek K. Aberle, age 47, has served as President since March 2014. He served as Executive Vice President and Group President from November 2011 to March 2014 and as Executive Vice President and President, QTL from September 2008 to November 2011. Mr. Aberle joined Qualcomm in December 2000 as an attorney and throughout his tenure at Qualcomm has held several other legal and leadership positions. Mr. Aberle holds a B.A. degree in Business Economics from the University of California, Santa Barbara and a J.D. degree from the University of San Diego. Mr. Aberle will be leaving Qualcomm effective January 4, 2018.

Cristiano R. Amon, age 47, has served as Executive Vice President, Qualcomm Technologies, Inc. (QTI, a subsidiary of Qualcomm Incorporated) and President, Qualcomm CDMA Technologies (QCT) since November 2015. He served as Executive Vice President, QTI and Co-President, QCT from October 2012 to November 2015, Senior Vice President, Qualcomm Incorporated and Co-President, QCT from June 2012 to October 2012 and as Senior Vice President, QCT Product Management from October 2007 to June 2012. Mr. Amon joined Qualcomm in 1995 as an engineer and throughout his tenure at Qualcomm held several other technical and leadership positions. Mr. Amon holds a B.S. degree in Electrical Engineering from UNICAMP, the State University of Campinas, Brazil.

George S. Davis, age 59, has served as Executive Vice President and Chief Financial Officer since March 2013. Mr. Davis is responsible for leading Finance, Information Technology and Investor Relations. Prior to joining Qualcomm, Mr. Davis was Chief Financial Officer of Applied Materials, Inc., a provider of manufacturing equipment, services and software to the semiconductor, flat panel display, solar photovoltaic and related industries, from November 2006 to March 2013. Mr. Davis held several other leadership positions at Applied Materials from November 1999 to November 2006. Prior to joining Applied Materials, Mr. Davis served 19 years with Atlantic Richfield Company in a number of finance and other corporate positions. Mr. Davis holds a B.A. degree in Economics and Political Science from Claremont McKenna College and an M.B.A. degree from the University of California, Los Angeles.

Matthew S. Grob, age 51, has served as Executive Vice President, Qualcomm Technologies, Inc. (QTI) since March 2017. He served as Executive Vice President, QTI and Chief Technology Officer from October 2012 to March 2017. He served as Executive Vice President, Qualcomm Incorporated and Chief Technology Officer from July 2011 to October 2012. Mr. Grob joined Qualcomm in August 1991 as an engineer and throughout his tenure at Qualcomm held several other technical and leadership positions. Mr. Grob holds a B.S. degree in Electrical Engineering from Bradley University and an M.S. degree in Electrical Engineering from Stanford University.

Brian T. Modoff, age 58, has served as Executive Vice President, Strategy and Mergers & Acquisitions since October 2015. Prior to joining Qualcomm, Mr. Modoff was a Managing Director in Equity Research at Deutsche Bank Securities Inc. (Deutsche Bank), a provider of financial services, from March 1999 to October 2015. Prior to joining Deutsche Bank, Mr. Modoff was a research analyst at several financial institutions from November 1993 to March 1999. Mr. Modoff holds a B.A. degree in Economics from California State University, Fullerton and a Master of International Management from the Thunderbird School of Global Management.

Alexander H. Rogers, age 60, has served as Executive Vice President and President, QTL since October 2016. He served as Senior Vice President and President, QTL from September 2016 to October 2016, Senior Vice President, Deputy General Counsel and General Manager, QTL from March 2016 to September 2016, Senior Vice President and Deputy General Counsel from October 2015 to March 2016 and Senior Vice President and Legal Counsel from April 2007 to October 2015. Mr. Rogers joined Qualcomm in January 2001 as an attorney and throughout his tenure at Qualcomm held several other leadership positions in the legal department. Prior to joining Qualcomm, Mr. Rogers was a partner at the law firm of Gray, Cary, Ware & Friedenrich (now DLA Piper). Mr. Rogers holds B.A. and M.A. degrees in English Literature from Georgetown University and a J.D. degree from Georgetown University Law Center.

Donald J. Rosenberg, age 66, has served as Executive Vice President, General Counsel and Corporate Secretary since October 2007. He served as Senior Vice President, General Counsel and Corporate Secretary of Apple Inc. from December 2006 to October 2007. From May 1975 to November 2006, Mr. Rosenberg held numerous positions at IBM Corporation, including Senior Vice President and General Counsel. Mr. Rosenberg has served as a member of the board of directors of NuVasive, Inc. since February 2016. Mr. Rosenberg holds a B.S. degree in Mathematics from the State University of New York at Stony Brook and a J.D. degree from St. John's University School of Law.

Michelle Sterling, age 50, has served as Executive Vice President, Human Resources since May 2015. She served as Senior Vice President, Human Resources from October 2007 to April 2015. Ms. Sterling joined Qualcomm in 1994 and throughout her tenure at Qualcomm has held several other human resources and leadership positions. Ms. Sterling holds a B.S. degree in Business Management from the University of Redlands.

James H. Thompson, age 53, has served as Executive Vice President, Engineering, Qualcomm Technologies, Inc. and Chief Technology Officer since March 2017. He served as Executive Vice President, Engineering, Qualcomm Technologies, Inc. from October 2012 to March 2017 and as Senior Vice President, Engineering, Qualcomm Incorporated from July 1998 to October 2012. Dr. Thompson joined Qualcomm in 1992 as a senior engineer and throughout his tenure at Qualcomm held several other technical and leadership positions. Dr. Thompson holds B.S., M.S. and Ph.D. degrees in Electrical Engineering from the University of Wisconsin.

#### **Item 1A. Risk Factors**

You should consider each of the following factors in evaluating our business and our prospects. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently consider immaterial may also negatively impact our business and results of operations, and require significant management time and attention. In that case, the trading price of our common stock could decline. You should also consider the other information set forth in this Annual Report in evaluating our business and our prospects, including but not limited to our financial statements and the related notes, and "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations."

#### **Risks Related to Our Businesses**

***Our proposed acquisition of NXP Semiconductors N.V. involves a number of risks, including, among others, the risk that we fail to complete the acquisition, in a timely manner or at all, regulatory risks, risks associated with our use of a significant portion of our cash and our taking on significant indebtedness, other financial risks, integration risks, and risk associated with the reactions of customers, suppliers and employees.***

Our and NXP's obligations to consummate the proposed transaction are subject to the satisfaction or waiver of certain conditions, including, among others: (i) the tender of a minimum number of NXP's outstanding common shares in the tender offer commenced by a subsidiary of QUALCOMM Incorporated; (ii) the receipt of regulatory clearance under European Union and certain other foreign antitrust laws; (iii) the absence of any law or order prohibiting the proposed transaction; (iv) there being no event that would have a material adverse effect on NXP; (v) the accuracy of the representations and warranties of NXP, subject to certain exceptions, and NXP's material compliance with its covenants, in the definitive agreement; and (vi) the completion of certain internal reorganization steps with respect to NXP and the disposition of certain non-core assets of NXP. We cannot provide assurance that the conditions to the completion of the proposed transaction will be satisfied in a timely manner or at all, and if the proposed transaction is not completed, we would not realize any of the expected benefits.

The regulatory approvals required in connection with the proposed transaction may not be obtained or may contain materially burdensome conditions. If any conditions or changes to the structure of the proposed transaction are required to obtain these regulatory approvals, they may have the effect of jeopardizing or delaying completion of the proposed transaction or reducing our anticipated benefits. If we agree to any material conditions in order to obtain any approvals required to complete the proposed transaction, our business and results of operations may be adversely affected.