

DISH Network CORP
Form 10-K
February 22, 2017
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

(Mark One)

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

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2016

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: 0-26176

DISH Network Corporation

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(Exact name of registrant as specified in its charter)

Nevada
(State or other jurisdiction of incorporation or organization) 88-0336997
(I.R.S. Employer Identification No.)

9601 South Meridian Boulevard
Englewood, Colorado 80112
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (303) 723-1000

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

Title of each class	Name of each exchange on which registered
Class A common stock, \$0.01 par value	The Nasdaq Stock Market L.L.C.

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

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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

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

Large accelerated filer	Accelerated filer	Non-accelerated filer (Do not check if a smaller reporting company)	Smaller reporting company
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Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

As of June 30, 2016, the aggregate market value of Class A common stock held by non-affiliates of the registrant was \$11.5 billion based upon the closing price of the Class A common stock as reported on the Nasdaq Global Select Market as of the close of business on the last trading day of the month.

As of February 13, 2017, the registrant's outstanding common stock consisted of 226,918,482 shares of Class A common stock and 238,435,208 shares of Class B common stock, each \$0.01 par value.

DOCUMENTS INCORPORATED BY REFERENCE

The following documents are incorporated into this Form 10-K by reference:

Portions of the registrant's definitive Proxy Statement to be filed in connection with its 2017 Annual Meeting of Shareholders are incorporated by reference in Part III.

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DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

Unless otherwise required by the context, in this report, the words “DISH Network,” the “Company,” “we,” “our” and “us” refer to DISH Network Corporation and its subsidiaries, “EchoStar” refers to EchoStar Corporation and its subsidiaries, and “DISH DBS” refers to DISH DBS Corporation, a wholly-owned, indirect subsidiary of DISH Network, and its subsidiaries.

This Annual Report on Form 10-K contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, including, in particular, statements about our plans, objectives and strategies, growth opportunities in our industries and businesses, our expectations regarding future results, financial condition, liquidity and capital requirements, our estimates regarding the impact of regulatory developments and legal proceedings, and other trends and projections. Forward-looking statements are not historical facts and may be identified by words such as “future,” “anticipate,” “intend,” “plan,” “goal,” “seek,” “believe,” “estimate,” “expect,” “predict,” “will,” “would,” “could,” and similar terms. These forward-looking statements are based on information available to us as of the date of this Annual Report on Form 10-K and represent management’s current views and assumptions. Forward-looking statements are not guarantees of future performance, events or results and involve known and unknown risks, uncertainties and other factors, which may be beyond our control. Accordingly, actual performance, events or results could differ materially from those expressed or implied in the forward-looking statements due to a number of factors, including, but not limited to, the following:

Competition and Economic Risks

- As the pay-TV industry has matured and bundled offers combining video, broadband and/or wireless services have become more prevalent and competitive, we face intense and increasing competition from providers of video, broadband and/or wireless services, which may require us to further increase subscriber acquisition and retention spending or accept lower subscriber activations and higher subscriber churn.
- Changing consumer behavior and competition from digital media companies that provide or facilitate the delivery of video content via the Internet may reduce our gross new subscriber activations and may cause our subscribers to purchase fewer services from us or to cancel our services altogether, resulting in less revenue to us.
- Economic weakness and uncertainty may adversely affect our ability to grow or maintain our business.
- Our competitors may be able to leverage their relationships with programmers to reduce their programming costs and offer exclusive content that will place them at a competitive advantage to us.
-

Our over-the-top (“OTT”) Sling TV Internet-based services face certain risks, including, among others, significant competition.

- We face increasing competition from other distributors of unique programming services such as foreign language, sports programming, and original content that may limit our ability to maintain subscribers that desire these unique programming services.

Operational and Service Delivery Risks

- If we do not continue improving our operational performance and customer satisfaction, our gross new subscriber activations may decrease and our subscriber churn may increase.
- If our gross new subscriber activations continue to decrease, or if our subscriber churn, subscriber acquisition costs or retention costs increase, our financial performance will be adversely affected.
- Programming expenses are increasing and could adversely affect our future financial condition and results of operations.

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- We depend on others to provide the programming that we offer to our subscribers and, if we fail to obtain or lose access to this programming, our gross new subscriber activations may decline and our subscriber churn may increase.
- We may not be able to obtain necessary retransmission consent agreements at acceptable rates, or at all, from local network stations.
- We may be required to make substantial additional investments to maintain competitive programming offerings.
- Any failure or inadequacy of our information technology infrastructure and communications systems, including without limitation those caused by cyber-attacks or other malicious activities, could disrupt or harm our business.
- We currently depend on EchoStar to design, develop and manufacture substantially all of our new DISH branded pay-TV set-top boxes and certain related components, to provide the vast majority of our satellite transponder capacity, to provide digital broadcast operations and other services to us, and to provide streaming delivery technology and infrastructure for our Sling TV services. Our business would be adversely affected if EchoStar ceases to provide these products and services to us and we are unable to obtain suitable replacement products and services from third parties.
- Technology in the pay-TV industry changes rapidly, and our success may depend in part on our timely introduction and implementation of, and effective investment in, new competitive products and services and more advanced equipment, and our failure to do so could cause our products and services to become obsolete and could negatively impact our business.
- We rely on a single vendor or a limited number of vendors to provide certain key products or services to us such as information technology support, billing systems, and security access devices, and the inability of these key vendors to meet our needs could have a material adverse effect on our business.
- Our primary supplier of new set-top boxes, EchoStar, relies on a few suppliers and in some cases a single supplier, for many components of our new set-top boxes, and any reduction or interruption in supplies or significant increase in the price of supplies could have a negative impact on our business.
- Our programming signals are subject to theft, and we are vulnerable to other forms of fraud that could require us to make significant expenditures to remedy.
- We depend on independent third parties to solicit orders for our services that represent a significant percentage of our total gross new subscriber activations.
-

We have limited satellite capacity and failures or reduced capacity could adversely affect our DISH branded pay-TV service.

- Our owned and leased satellites are subject to construction, launch, operational and environmental risks that could limit our ability to utilize these satellites.
- We generally do not carry commercial launch or in-orbit insurance on any of the satellites that we use, other than certain satellites leased from third parties, and could face significant impairment charges if any of our owned satellites fail.
- We may have potential conflicts of interest with EchoStar due to our common ownership and management.
- We rely on key personnel and the loss of their services may negatively affect our business.

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Acquisition and Capital Structure Risks

- We have made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, we have made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses.
- We face certain risks related to our non-controlling investments in the Northstar Entities and the SNR Entities, which may have a material adverse effect on our business, results of operations and financial condition.
- To the extent that we commercialize our wireless spectrum licenses, we will face certain risks entering and competing in the wireless services industry and operating a wireless services business.
- We may pursue acquisitions and other strategic transactions to complement or expand our business that may not be successful, and we may lose up to the entire value of our investment in these acquisitions and transactions.
- We may need additional capital, which may not be available on acceptable terms or at all, to continue investing in our business and to finance acquisitions and other strategic transactions.
- We have substantial debt outstanding and may incur additional debt.
- The conditional conversion features of our 3 3/8% Convertible Notes due 2026 (the “Convertible Notes due 2026”), if triggered, may adversely affect our financial condition.
- The convertible note hedge and warrant transactions that we entered into in connection with the offering of the Convertible Notes due 2026 may affect the value of the Convertible Notes due 2026 and our Class A common stock.
- We are subject to counterparty risk with respect to the convertible note hedge transactions.
- From time to time a portion of our investment portfolio may be invested in securities that have limited liquidity and may not be immediately accessible to support our financing needs, including investments in public companies that are highly speculative and have experienced and continue to experience volatility.
- It may be difficult for a third party to acquire us, even if doing so may be beneficial to our shareholders, because of our ownership structure.
- We are controlled by one principal stockholder who is also our Chairman and Chief Executive Officer.

Legal and Regulatory Risks

- A ruling in the Do Not Call litigation requiring us to pay substantial civil penalties and/or damages and/or enjoining us, whether acting directly or indirectly through authorized telemarketers or independent third-party retailers, from certain activities could have a material adverse effect on our results of operations, financial condition and cash flow.
- Our business depends on certain intellectual property rights and on not infringing the intellectual property rights of others.
- We are, and may become, party to various lawsuits which, if adversely decided, could have a significant adverse impact on our business, particularly lawsuits regarding intellectual property.
- Our ability to distribute video content via the Internet, including our Sling TV services, involves regulatory risk.
- Changes in the Cable Act of 1992 (“Cable Act”), and/or the rules of the Federal Communications Commission (“FCC”) that implement the Cable Act, may limit our ability to access programming from cable-affiliated programmers at nondiscriminatory rates.

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- The injunction against our retransmission of distant networks, which is currently waived, may be reinstated.
- We are subject to significant regulatory oversight, and changes in applicable regulatory requirements, including any adoption or modification of laws or regulations relating to the Internet, could adversely affect our business.
- Our business depends on FCC licenses that can expire or be revoked or modified and applications for FCC licenses that may not be granted.
- We are subject to digital high-definition (“HD”) “carry-one, carry-all” requirements that cause capacity constraints.
- Our business, investor confidence in our financial results and stock price may be adversely affected if our internal controls are not effective.
- We may face other risks described from time to time in periodic and current reports we file with the Securities and Exchange Commission (“SEC”).

Other factors that could cause or contribute to such differences include, but are not limited to, those discussed under the caption “Risk Factors” in Part I, Item 1A in this Annual Report on Form 10-K, those discussed in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” herein and those discussed in other documents we file with the SEC. All cautionary statements made or referred to herein should be read as being applicable to all forward-looking statements wherever they appear. Investors should consider the risks and uncertainties described or referred to herein and should not place undue reliance on any forward-looking statements. The forward-looking statements speak only as of the date made, and we expressly disclaim any obligation to update these forward-looking statements.

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PART I

Item 1. BUSINESS

OVERVIEW

DISH Network Corporation was organized in 1995 as a corporation under the laws of the State of Nevada. We started offering the DISH® branded pay-TV service in March 1996 and are the nation's fourth largest pay-TV provider. Our common stock is publicly traded on the Nasdaq Global Select Market under the symbol "DISH." Our principal executive offices are located at 9601 South Meridian Boulevard, Englewood, Colorado 80112 and our telephone number is (303) 723-1000.

DISH Network Corporation is a holding company. Its subsidiaries operate two primary business segments.

Pay-TV and Broadband

We offer pay-TV services under the DISH® brand and the Sling® brand (collectively "Pay-TV" services). The DISH branded pay-TV service consists of, among other things, FCC licenses authorizing us to use direct broadcast satellite ("DBS") and Fixed Satellite Service ("FSS") spectrum, our owned and leased satellites, receiver systems, third-party broadcast operations, customer service facilities, a leased fiber optic network, in-home service and call center operations, and certain other assets utilized in our operations. The Sling branded pay-TV services consist of, among other things, live, linear streaming OTT Internet-based domestic, international and Latino video programming services ("Sling TV"). Prior to 2015, we launched our Sling International video programming service (formerly known as DishWorld), which historically represented a small percentage of our Pay-TV subscribers. In February and June 2015, we launched our Sling domestic and Sling Latino services, respectively. In addition to our original Sling domestic service that could only be streamed on one device at a time (single-stream service), in April 2016, we launched a live beta multi-stream Sling domestic service, which includes, among other things, the ability to stream on up to three devices simultaneously. In June 2016, our multi-stream Sling domestic service transitioned from its introductory beta period and was re-branded as Sling Blue. Meanwhile, we re-branded our original single-stream Sling domestic service as Sling Orange. All Sling branded pay-TV subscribers are included in our Pay-TV subscriber count. As of December 31, 2016, we had 13.671 million Pay-TV subscribers in the United States.

In addition, we market broadband services under the dishNET™ brand, which had 0.580 million subscribers in the United States as of December 31, 2016. Our satellite broadband service utilizes advanced technology and high-powered satellites launched by Hughes Communications, Inc. ("Hughes") and ViaSat, Inc. ("ViaSat") to provide

broadband coverage nationwide. This service primarily targets rural residents that are underserved, or unserved, by wireline broadband. In addition to the dishNET branded satellite broadband service, we also offer wireline broadband services under the dishNET brand as a competitive local exchange carrier to consumers in certain areas in 34 states and wireline voice services in certain areas of 14 of those states that are located in the western United States. We primarily bundle our dishNET branded services with our DISH branded pay-TV service.

Wireless

DISH Network Spectrum

We have invested over \$5.0 billion since 2008 to acquire certain wireless spectrum licenses and related assets. These wireless spectrum licenses are subject to certain interim and final build-out requirements. As we consider our options for the commercialization of our wireless spectrum, we may incur significant additional expenses and may have to make significant investments related to, among other things, research and development, wireless testing and wireless network infrastructure, as well as the acquisition of additional wireless spectrum.

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Auction 1000. On February 10, 2016, we filed an application with the FCC to potentially participate as a bidder in the forward auction phase of the broadcast incentive auction in the 600 MHz frequency range (“Auction 1000”). The available spectrum in each licensed geographic area in Auction 1000 is generally comprised of certain paired 5x5 spectrum blocks (5 MHz uplink spectrum and 5 MHz downlink spectrum). As a result, a nationwide footprint may be obtained by aggregating a single 5x5 spectrum block in each available licensed geographic area.

Auction 1000 has had multiple stages, with each stage having two phases. With respect to each stage, in the first phase, or reverse auction phase, participating television broadcasters “sell” their rights to use certain broadcast television spectrum in the 600 MHz frequency range to the FCC. Then following the first phase of a stage, in the second phase, or forward auction phase, the FCC will “resell” that spectrum to auction participants. In the event that certain criteria are not met within a particular stage for Auction 1000 to conclude, Auction 1000 then proceeds to a subsequent stage with less available spectrum than the immediately preceding stage and lower spectrum clearing targets.

Before the forward auction phase of Stage 1 of Auction 1000 began, a qualified bidder in the forward auction could make an upfront deposit of up to approximately \$5.4 billion. On July 15, 2016, the FCC announced that a subsidiary of DISH Network and 61 other applicants were qualified to participate in the forward auction. The FCC determined that bidding in Auction 1000 will be “anonymous,” which means that prior to and during the course of the auction, the FCC will not make public any information about a specific applicant’s upfront deposits or its bids. In addition, FCC rules restrict information that applicants may disclose about their participation in Auction 1000.

- Stage 1: The reverse auction phase of Stage 1 began on March 29, 2016 and ended on June 29, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 1, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 1 would have had to have exceeded approximately \$88.4 billion. The forward auction phase of Stage 1 included 100 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 1 began on August 16, 2016 and ended on August 30, 2016, but the aggregate bids of approximately \$23.1 billion did not exceed the approximately \$88.4 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 2.
- Stage 2: The reverse auction phase of Stage 2 began on September 13, 2016 and ended on October 13, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 2, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 2 would have had to have exceeded approximately \$56.5 billion. The forward auction phase of Stage 2 included 90 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 2 began and ended on October 19, 2016, but the aggregate bids of approximately \$21.5 billion did not exceed the approximately \$56.5 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 3.
- Stage 3: The reverse auction phase of Stage 3 began on November 1, 2016 and ended on December 1, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 3, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of

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Stage 3 would have had to have exceeded approximately \$42.3 billion. The forward auction phase of Stage 3 included 80 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters' indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 3 began and ended on December 5, 2016, but the aggregate bids of approximately \$19.7 billion did not exceed the approximately \$42.3 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 4.

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· Stage 4: The reverse auction phase of Stage 4 began on December 13, 2016 and ended on January 13, 2017. Pursuant to the FCC's procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 4, in order for Auction 1000 to ultimately conclude, the aggregate bids in the forward auction phase of Stage 4 would have to exceed approximately \$12.0 billion. The forward auction phase of Stage 4 includes 70 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters' indicated availability of spectrum in the reverse auction phase. The clock bidding portion of the forward auction phase of Stage 4 began on January 18, 2017 and ended on February 10, 2017. The aggregate bids of approximately \$19.6 billion exceeded the approximately \$12.0 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to the assignment portion of the forward auction phase in which winning bidders in the clock bidding portion have the opportunity to bid for frequency-specific licenses. The assignment portion is scheduled to begin on March 6, 2017, and all assignment rounds are expected to end no later than March 30, 2017. During the assignment portion, the FCC rules restricting information that forward auction applicants may disclose about their participation in Auction 1000 remain in place. As mentioned above, a subsidiary of DISH Network qualified to participate in the forward auction. To the extent that it is the winning bidder for any 600 MHz licenses, we would expect to pay for such licenses from any upfront deposit made with the FCC and/or existing cash and marketable investment securities balances.

See Note 14 "Commitments and Contingencies — Wireless — DISH Network Spectrum" in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses

Through our wholly-owned subsidiaries American AWS-3 Wireless II L.L.C. ("American II") and American AWS-3 Wireless III L.L.C. ("American III"), we have made over \$10.0 billion in certain non-controlling investments in Northstar Spectrum, LLC ("Northstar Spectrum"), the parent company of Northstar Wireless, LLC ("Northstar Wireless," and collectively with Northstar Spectrum, the "Northstar Entities"), and in SNR Wireless HoldCo, LLC ("SNR HoldCo"), the parent company of SNR Wireless LicenseCo, LLC ("SNR Wireless," and collectively with SNR HoldCo, the "SNR Entities"), respectively. On October 27, 2015, the FCC granted certain AWS-3 wireless spectrum licenses (the "AWS-3 Licenses") to Northstar Wireless and to SNR Wireless, respectively, which are recorded in "FCC authorizations" on our Consolidated Balance Sheets. Under the applicable accounting guidance in Accounting Standards Codification 810, Consolidation ("ASC 810"), Northstar Spectrum and SNR HoldCo are considered variable interest entities and, based on the characteristics of the structure of these entities and in accordance with the applicable accounting guidance, we have consolidated these entities into our financial statements beginning in the fourth quarter 2014. See Note 2 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

The AWS-3 Licenses are subject to certain interim and final build-out requirements. We may need to make significant additional loans to the Northstar Entities and to the SNR Entities, or they may need to partner with others, so that the Northstar Entities and the SNR Entities may commercialize, build-out and integrate these AWS-3 Licenses,

and comply with regulations applicable to such AWS-3 Licenses. Depending upon the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such loans or partnerships could vary significantly. There can be no assurance that we will be able to obtain a profitable return on our non-controlling investments in the Northstar Entities and the SNR Entities.

See Note 14 “Commitments and Contingencies — Wireless — DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses” in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

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Business Strategy

Our business strategy is to be the best provider of video services in the United States by providing products with the best technology, outstanding customer service, and great value. We promote our Pay-TV services as providing our subscribers with a better “price-to-value” relationship than those available from other subscription television service providers.

- **Products with the Best Technology.** We offer a wide selection of local and national HD programming and are a technology leader in our industry, offering award-winning DVRs (including our Hopper® whole-home HD DVR), multiple tuner receivers, 1080p video on demand, and external hard drives. We offer several Sling TV services, including Sling Orange (our single-stream Sling domestic service), Sling Blue (our multi-stream Sling domestic service), Sling International and Sling Latino.
- **Outstanding Customer Service.** We strive to provide outstanding customer service by improving the quality of the initial installation of subscriber equipment, improving the reliability of our equipment, better educating our customers about our products and services, and resolving customer problems promptly and effectively when they arise.
- **Great Value.** We have historically been viewed as the low-cost provider in the pay-TV industry in the U.S. because we seek to offer the lowest everyday prices available to consumers after introductory promotions expire. For example, during the third quarter 2016, we launched our Flex Pack skinny bundle with a core package of programming consisting of more than 50 channels and the choice of one of eight themed add-on channel packs, which include local broadcast networks and kids, national and regional sports and general entertainment programming. Subscribers can also add or remove additional channel packs to best suit their entertainment needs.

Products and Services

DISH branded pay-TV services. We offer a wide selection of video services under the DISH brand, with access to hundreds of channels depending on the level of subscription. Our standard programming packages generally include programming provided by national broadcast networks, local broadcast networks and national and regional cable networks. We also offer programming packages that include regional and specialty sports channels, premium movie channels and Latino and international programming. Our Latino and international programming packages allow subscribers to choose from over 250 channels in 28 languages.

In addition, we offer our DISH branded pay-TV subscribers streaming access through DISH On Demand® to thousands of movies and TV shows via their TV or Internet-connected tablets, smartphones and computers.

Our DISH branded pay-TV subscribers also have the ability to use dishanywhere.com and our mobile applications for smartphones and tablets to view authorized content, search program listings and remotely control certain features of their DVRs. Dishanywhere.com and our mobile applications provide access to thousands of movies and television shows.

Sling branded pay-TV services. We market our Sling TV services primarily to consumers who do not subscribe to traditional satellite and cable pay-TV services. Our Sling TV services require an Internet connection and are available on multiple streaming-capable devices including TVs, tablets, computers, game consoles and smart phones. We offer Sling International, Sling Latino and Sling domestic video programming services. In addition to our original Sling domestic service that could only be streamed on one device at a time (single-stream service), in April 2016, we launched a live beta multi-stream Sling domestic service, which includes, among other things, the ability to stream on up to three devices simultaneously. In June 2016, our multi-stream Sling domestic service transitioned from its introductory beta period and was re-branded as Sling Blue and our original single-stream Sling domestic service was re-branded as Sling Orange. All Sling branded pay-TV subscribers are included in our Pay-TV subscriber count.

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Technology. Our DISH branded pay-TV subscribers receive programming via equipment that includes a small satellite dish, digital set-top receivers, and remote controls. Our Hopper and Joey® whole-home DVR promotes a suite of integrated features and functionality designed to maximize the convenience and ease of watching TV anytime and anywhere. It also has several innovative features that a consumer can use, at his or her option, to watch and record television programming, through their televisions, Internet-connected tablets, smartphones and computers. During the first quarter 2016, we made our next generation Hopper, the Hopper 3, available to customers nationwide. Among other things, the Hopper 3 features 16 tuners, delivers an enhanced 4K Ultra HD experience, and supports up to seven TVs simultaneously. In December 2016, Sling TV launched a cloud DVR beta program available for customers who subscribe to Sling Orange and/or Sling Blue using Roku devices. In January 2017, we launched AirTV Player, a new 4K Android TV-based streaming device, and AirTV Pro Install, a service that offers expertise, installation and setup of over-the-air (“OTA”) antennas.

We rely on EchoStar to design and manufacture substantially all of our new receivers and certain related components. See “Item 1A — Risk Factors.”

Broadband. In addition to our wide selection of pay-TV programming and award-winning technology, we market a satellite broadband service under the dishNET brand. This service utilizes advanced technology and high-powered satellites launched by Hughes and ViaSat to provide broadband coverage nationwide. This service primarily targets rural residents that are underserved, or unserved, by wireline broadband, and provides download speeds of up to 15 megabits of data per second (“Mbps”). We lease the customer premise equipment to subscribers and generally pay Hughes and ViaSat a wholesale rate per subscriber on a monthly basis. Currently, we generally utilize our existing DISH Network distribution channels, including our DISH Network direct sales channels, under similar incentive arrangements as our DISH branded pay-TV business to acquire new broadband subscribers. New satellite launches by Hughes and ViaSat are expected to provide additional capacity in 2017. EchoStar XIX, a Hughes satellite, was launched on December 18, 2016.

In addition to the dishNET branded satellite broadband service, we also offer wireline broadband services under the dishNET brand as a competitive local exchange carrier to consumers in certain areas in 34 states and wireline voice services in certain areas of 14 of those states that are located in the western United States. Our dishNET branded wireline broadband service provides download speeds of up to 40 Mbps.

We primarily bundle our dishNET branded services with our DISH branded pay-TV service, to offer customers a single bill, payment and customer service option, which includes a discount for bundled services. In addition, we market and sell our dishNET branded services on a stand-alone basis.

New Business Opportunities

From time to time we evaluate opportunities for strategic investments or acquisitions that may complement our current services and products, enhance our technical capabilities, improve or sustain our competitive position, or otherwise offer growth opportunities.

Content Delivery

Digital Broadcast Operations Centers. The principal digital broadcast operations facilities that we use are EchoStar's facilities located in Cheyenne, Wyoming and Gilbert, Arizona. We also use seven regional digital broadcast operations facilities owned and operated by EchoStar that allow us to maximize the use of the spot beam capabilities of certain satellites. Programming content is delivered to these facilities by fiber or satellite and processed, compressed, encrypted and then uplinked to satellites for delivery to consumers. EchoStar provides certain broadcast services to us, including teleport services such as transmission and downlinking, channel origination services, and channel management services pursuant to a broadcast agreement that expires on December 31, 2017. See Note 18 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information on our Related Party Transactions with EchoStar.

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Satellites. Our DISH branded pay-TV programming is primarily delivered to customers using satellites that operate in the “Ku” band portion of the microwave radio spectrum. The Ku-band is divided into two spectrum segments. The portion of the Ku-band that allows the use of higher power satellites (12.2 to 12.7 GHz over the United States) is known as the Broadcast Satellite Service band, which is also referred to as the DBS band. The portion of the Ku-band that utilizes lower power satellites (11.7 to 12.2 GHz over the United States) is known as the FSS band.

Most of our DISH branded pay-TV programming is currently delivered using DBS satellites. To accommodate more bandwidth-intensive HD programming and other needs, we continue to explore opportunities to expand our satellite capacity through the acquisition of additional spectrum, the launching of more technologically advanced satellites, and the more efficient use of existing spectrum via, among other things, better compression technologies.

We own or lease capacity on 13 satellites in geostationary orbit approximately 22,300 miles above the equator. For further information concerning these satellites and satellite anomalies, please see the table and discussion under “Satellites” below.

Conditional Access System. Our conditional access system secures our programming content using encryption so that only authorized customers can access our programming. We use microchips embedded in credit card-sized access cards, called “smart cards,” or security chips in our receiver systems to control access to authorized programming content (“Security Access Devices”).

Our signal encryption has been compromised in the past and may be compromised in the future even though we continue to respond with significant investment in security measures, such as Security Access Device replacement programs and updates in security software, that are intended to make signal theft more difficult. It has been our prior experience that security measures may only be effective for short periods of time or not at all and that we remain susceptible to additional signal theft. We expect that future replacements of our Security Access Devices may be necessary to keep our system secure. We cannot ensure that we will be successful in reducing or controlling theft of our programming content and we may incur additional costs in the future if our system’s security is compromised.

Internet Connection. Our Sling TV services require an Internet connection and are available through multiple streaming-capable devices. Certain of our digital set-top boxes require an internet connection to enable full functionality, including streaming access through DISH On Demand, access to dishanywhere.com and other applications.

Distribution Channels

While we offer receiver systems and programming through direct sales channels, a significant percentage of our gross new subscriber activations are generated through independent third parties such as small satellite retailers, direct marketing groups, local and regional consumer electronics stores, nationwide retailers, and telecommunications companies. In general, we pay these independent third parties a mix of upfront and monthly incentives to solicit orders for our services and provide customer service. In addition, we partner with certain telecommunications companies to bundle DISH branded programming with broadband and/or voice services on a single bill.

Competition

Our business has historically focused on providing pay-TV services. We face substantial competition from established pay-TV providers and broadband service providers and increasing competition from companies providing/facilitating the delivery of video content via the Internet to computers, televisions, and other streaming and mobile devices, including wireless service providers. In recent years, the traditional pay-TV industry has matured, and industry consolidation and convergence has created competitors with greater scale and multiple product/service offerings. These developments, among others, have contributed to intense and increasing competition, and we expect such competition to continue.

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Our Pay-TV services continue to face intense competition from traditional satellite television providers, cable companies and large telecommunication companies such as AT&T Inc. (“AT&T”), Comcast Corp. (“Comcast”), Charter Communications, Inc. (“Charter”), Verizon Communications, Inc. (“Verizon”) and others, some of whom have greater financial, marketing and other resources than we do. Some of these companies also have significant investments in companies that provide programming content. In recent years, mergers and acquisitions, joint ventures and alliances among cable television providers, telecommunications companies and others have created, among other things, greater scale and financial leverage for the combined companies and increased the availability of bundled offerings combining video, broadband and/or wireless services. For example, in 2015 AT&T acquired DirecTV, our direct competitor and the largest satellite TV provider in the United States, which has recently launched an OTT service, DirecTV Now, that competes directly with our Sling branded pay-TV services. Furthermore, AT&T’s acquisition of DirecTV, among other things, allows DirecTV access to AT&T’s nationwide platform for wireless mobile video, and the ability to more seamlessly bundle its video services with AT&T’s broadband Internet access and wireless services. In some cases, certain competitors have been able to potentially subsidize the price of video services with the price of other bundled services, particularly broadband services.

We also face increasing competition from content providers and other companies who distribute video directly to consumers over the Internet. These content providers and other companies, as well as traditional satellite television providers, cable companies and large telecommunication companies, are rapidly increasing their Internet-based video offerings. Programming offered over the Internet has become more prevalent and consumers are spending an increasing amount of time accessing video content via the Internet on their mobile devices. In particular, consumers have shown increased interest in viewing certain video programming in any place, at any time and/or on any broadband-connected device they choose. Video content distributed over the Internet includes services with live linear television programming such as DirecTV Now and Sony Vue, single programmer offerings such as HBO GO and CBS All Access, and offerings of large libraries of on-demand content, including in certain cases original content, by companies such as Netflix, Hulu, Apple, Amazon, Google and Verizon.

In addition to the traditional competition we have faced, new technologies have been, and will likely continue to be, developed that further increase the number of companies with whom we compete for video subscribers. For example, we face increasing competition from wireless telecommunications providers who offer mobile video offerings, other telephone companies who are finding ways to deliver video programming services over their wireline facilities or in a bundle with other multichannel video programming distributors (“MVPDs”), including among others, AT&T, and fiber-based networks including Google Fiber.

For further information see “Item 1A — Risk Factors — Competition and Economic Risks — As the pay-TV industry has matured and bundled offers combining video, broadband and/or wireless services have become more prevalent and competitive, we face intense and increasing competition from providers of video, broadband and/or wireless services, which may require us to further increase subscriber acquisition and retention spending or accept lower subscriber activations and higher subscriber churn.” and “Changing consumer behavior and competition from digital media companies that provide or facilitate the delivery of video content via the Internet may reduce our gross new subscriber activations and may cause our subscribers to purchase fewer services from us or to cancel our services altogether, resulting in less revenue to us.”

Acquisition of New Subscribers

We incur significant upfront costs to acquire subscribers, including advertising, independent third-party retailer incentives, equipment, installation services and new customer promotions. Certain customer promotions to acquire new subscribers result in less programming revenue to us over the promotional period. While we attempt to recoup these upfront costs over the lives of their subscriptions, there can be no assurance that we will be successful in achieving that objective. With respect to our DISH branded pay-TV service, we employ business rules such as minimum credit requirements for prospective customers and contractual commitments. We strive to provide outstanding customer service to increase the likelihood of customers keeping their Pay-TV service over longer periods of time. Subscriber acquisition costs for Sling branded pay-TV subscribers are significantly lower than those for DISH branded pay-TV subscribers, and therefore, as Sling branded pay-TV subscriber activations increase, it will have a positive impact on subscriber acquisition costs. Our subscriber acquisition costs may vary significantly from period to period.

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Advertising. We use print, radio, television and Internet media, on a local and national basis to motivate potential subscribers to contact DISH Network and Sling TV, visit our websites or contact independent third-party retailers.

Retailer Incentives. In general, we pay independent third-party retailers an upfront incentive for each new DISH branded pay-TV subscriber they bring to DISH Network that results in the activation of qualified programming and generally pay independent third-party retailers small monthly incentives for up to 60 months; provided, among other things: (i) the independent third-party retailer continuously markets, promotes and solicits orders for DISH Network products and services; (ii) the independent third-party retailer continuously provides customer service to our DISH branded pay-TV subscribers; and (iii) the customer continuously subscribes to qualified programming.

Equipment. We incur significant upfront costs to provide our new DISH branded pay-TV subscribers with in-home equipment, including advanced HD and DVR receivers, which most of our new DISH branded pay-TV subscribers lease from us. While we seek to recoup these upfront equipment costs mostly through monthly fees, there can be no assurance that we will be successful in achieving that objective. In addition, upon deactivation of a subscriber we may refurbish and redeploy their equipment which lowers future upfront costs. However, our ability to capitalize on these cost savings may be limited as technological advances and consumer demand for new features may render the returned equipment obsolete.

Installation Services. We incur significant upfront costs to install satellite dishes and receivers in the homes of our new DISH branded pay-TV subscribers.

New Customer Promotions. We often offer our new DISH branded pay-TV subscribers programming at no additional charge and/or promotional pricing during introductory periods. While such promotional activities have an economic cost and reduce our subscriber-related revenue, they are not included in our definitions of subscriber acquisition costs or the Pay-TV SAC metric. We often offer our new Sling branded pay-TV subscribers free trials and/or streaming-capable devices at no additional charge and/or promotional pricing.

Customer Retention

We incur significant costs to retain our existing DISH branded pay-TV customers, mostly by upgrading their equipment to HD and DVR receivers and by providing retention credits. As with our subscriber acquisition costs, our retention upgrade spending includes the cost of equipment and installation services. In certain circumstances, we also offer programming at no additional charge and/or promotional pricing for limited periods for existing customers in exchange for a contractual commitment to receive service for a minimum term. A component of our retention efforts includes the re-installation of equipment for customers who move. Our subscriber retention costs may vary

significantly from period to period.

Customer Service

Customer Service Centers. We use both internally-operated and outsourced customer service centers to handle calls and e-mails from prospective and existing customers. We strive to answer customer calls and e-mails promptly and to resolve issues effectively on the first call or e-mail. We also use the Internet and other applications to provide our customers with self-service capabilities.

Installation and Smart Home Service Operations. High-quality installations, upgrades, and Smart Home services and repairs are critical to providing DISH branded pay-TV subscribers with quality customer service. Such services and repairs are performed by both DISH Network employees and a network of independent contractors and includes, among other things, TV mounting, set-up and installation of wireless networks, surround sound systems and home theaters, priority technical support, replacement equipment, cabling and power surge repairs.

Subscriber Management. We presently use, and depend on, software systems for subscriber billing and related functions, including, among others, CSG Systems International, Inc.'s software system used for the DISH branded pay-TV and DishNET branded broadband services.

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Relationship with EchoStar

On January 1, 2008, we completed the distribution of our technology and set-top box business and certain infrastructure assets (the “Spin-off”) into a separate publicly-traded company, EchoStar. DISH Network and EchoStar operate as separate publicly-traded companies and, except for the Satellite and Tracking Stock Transaction and Sling TV Holding L.L.C. (“Sling TV Holding”) discussed in Note 18 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K, neither entity has any ownership interest in the other. However, a substantial majority of the voting power of the shares of both DISH Network and EchoStar is owned beneficially by Charles W. Ergen, our Chairman and Chief Executive Officer, and by certain trusts established by Mr. Ergen for the benefit of his family. EchoStar is our primary supplier of digital set-top boxes and digital broadcast operations. In addition, EchoStar provides the vast majority of our satellite transponder capacity, is a key supplier of related services to us, and provides the streaming delivery technology and infrastructure for our Sling TV services. Furthermore, Hughes, a subsidiary of EchoStar, provides us with satellite broadband Internet services on a wholesale basis, which we then distribute under our dishNET™ brand. See “Item 1A. Risk Factors” and Note 18 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Recent Developments. On January 31, 2017, we and our indirect wholly-owned subsidiaries DISH Network L.L.C. (“DNLLC”) and DISH Operating L.L.C. (“DOLLC”), entered into a Share Exchange Agreement (the “Share Exchange Agreement”) with EchoStar, EchoStar Broadcasting Holding Parent L.L.C., an indirect wholly-owned subsidiary of EchoStar (“EB Holdco”), EchoStar Broadcasting Holding Corporation, a direct, wholly-owned subsidiary of EB Holdco (“EB Splitco”), EchoStar Technologies Holding Corporation, a direct wholly-owned subsidiary of EchoStar (“ET Splitco”), and EchoStar Technologies L.L.C., a direct wholly-owned subsidiary of EchoStar (“ETLLC”).

Pursuant to the Share Exchange Agreement, among other things: (i) EchoStar will complete the steps necessary for certain assets and liabilities of the EchoStar technologies and EchoStar broadcasting businesses, consisting primarily of the businesses that design, develop and distribute digital set-top boxes, provide satellite uplinking services and develop and support streaming video technology, as well as certain investments in joint ventures, spectrum licenses, real estate properties and EchoStar’s ten percent non-voting interest in Sling TV Holding (the “Transferred Businesses”), to be transferred to EB Splitco and ET Splitco; and (ii) EchoStar will transfer to us 100% of the equity of EB Splitco and ET Splitco, and in exchange, we will transfer to EchoStar the 6,290,499 shares of preferred tracking stock issued by EchoStar (the “EchoStar Tracking Stock”) and 81.128 shares of preferred tracking stock issued by Hughes Satellite Systems Corporation, a subsidiary of EchoStar (“HSSC”), (the “HSSC Tracking Stock,” and together with the EchoStar Tracking Stock, collectively, the “Tracking Stock”), that track the residential retail satellite broadband business of Hughes Network Systems, LLC, a wholly-owned subsidiary of HSSC (“HNS”) ((i) and (ii) collectively, the “Transaction”). The Transaction has been structured in a manner to be a tax-free exchange for each of us and EchoStar.

The closing of the Transaction is subject to various conditions. The Transaction is expected to be consummated three business days after the satisfaction or waiver of all of the closing conditions to the Transaction (other than conditions that by their nature are to be satisfied at the closing, but subject, among other things, to the satisfaction or waiver of those conditions at such time), but no earlier than February 28, 2017. The Share Exchange Agreement provides for customary termination rights, including the right of either party to terminate the Share Exchange Agreement if the

Transaction has not closed by March 31, 2017. In connection with the Share Exchange Agreement, we and EchoStar and certain of their subsidiaries will, at the closing, enter into certain customary agreements covering, among other things, tax matters, employee matters, intellectual property matters and the provision of transitional services. The financial results related to the Share Exchange Agreement are not included in our consolidated financial statements for all periods presented as the closing of the Transaction is subject to various conditions and is not expected to close prior to February 28, 2017. See Note 18 to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

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SATELLITES

Pay-TV Satellites. Most of our DISH branded pay-TV programming is currently delivered using DBS satellites. We continue to explore opportunities to expand our available satellite capacity through the use of other available spectrum. Increasing our available spectrum is particularly important as more bandwidth intensive HD programming is produced and to address new video and data applications consumers may desire in the future. We currently utilize 13 satellites in geostationary orbit approximately 22,300 miles above the equator as detailed in the table below.

Satellites	Launch Date	Degree Orbital Location	Estimated Useful Life (Years) / Lease Termination Date
Owned:			
EchoStar XV	July 2010	61.5	15
EchoStar XVIII	June 2016	61.5	15
Leased from EchoStar (1):			
EchoStar VII (2)	February 2002	119	June 2018
EchoStar IX	August 2003	121	Month to month
EchoStar X (2)	February 2006	110	February 2021
EchoStar XI (2)	July 2008	110	September 2021
EchoStar XII (2)	July 2003	61.5	September 2017
EchoStar XIV (2)	March 2010	119	February 2023
EchoStar XVI (3)	November 2012	61.5	January 2018
Nimiq 5	September 2009	72.7	September 2019
QuetzSat-1	September 2011	77	November 2021
Leased from Other Third Party:			
Anik F3	April 2007	118.7	April 2022
Ciel II	December 2008	129	January 2019

- (1) See Note 18 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information on our Related Party Transactions with EchoStar.
- (2) We generally have the option to renew each lease on a year-to-year basis through the end of the useful life of the respective satellite.
- (3) We have the option to renew this lease for an additional five-year period. If we exercise our five-year renewal option, we have the option to renew this lease for an additional five years.

Satellite Anomalies

Operation of our DISH branded pay-TV service requires that we have adequate satellite transmission capacity for the programming that we offer. While we generally have had in-orbit satellite capacity sufficient to transmit our existing channels and some backup capacity to recover the transmission of certain critical programming, our backup capacity is limited.

In the event of a failure or loss of any of our owned or leased satellites, we may need to acquire or lease additional satellite capacity or relocate one of our other owned or leased satellites and use it as a replacement for the failed or lost satellite. Such a failure could result in a prolonged loss of critical programming or a significant delay in our plans to expand programming as necessary to remain competitive and thus may have a material adverse effect on our business, financial condition and results of operations.

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In the past, certain of our owned and leased satellites have experienced anomalies, some of which have had a significant adverse impact on their remaining useful life and/or commercial operation. There can be no assurance that future anomalies will not impact the remaining useful life and/or commercial operation of any of the owned and leased satellites in our fleet. See “Impairment of Long-Lived Assets” in Note 2 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information on evaluation of impairment. There can be no assurance that we can recover critical transmission capacity in the event one or more of our owned or leased in-orbit satellites were to fail. We generally do not carry commercial launch or in-orbit insurance on any of the satellites that we use, other than certain satellites leased from third parties, and therefore, we will bear the risk associated with any uninsured launch or in-orbit satellite failures. In light of current favorable market conditions, in January 2016, we procured commercial launch and in-orbit insurance (for a period of one year following launch) for the EchoStar XVIII satellite, which was launched on June 18, 2016.

AWS-4 Satellites. We own two in-orbit AWS-4 satellites (D1 and T1), as detailed in the table below.

Satellites	Launch Date	Degree Orbital Location	Estimated Useful Life (Years)
Owned:			
T1	July 2009	111.1	15
D1	April 2008	92.85	N/A

See Note 8 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information on our satellites.

GOVERNMENT REGULATIONS

Our operations, particularly our pay-TV and broadband operations, and our wireless spectrum licenses are subject to significant government regulation and oversight, primarily by the FCC and, to a certain extent, by Congress, other federal agencies and foreign, state and local authorities. Depending upon the circumstances, noncompliance with legislation or regulations promulgated by these authorities could result in limitations on, or the suspension or revocation of, our licenses or registrations, the termination or loss of contracts or the imposition of contractual damages, civil fines or criminal penalties, any of which could have a material adverse effect on our business, financial condition and results of operations. These governmental authorities could also adopt regulations or take other actions that would adversely affect our business prospects.

Furthermore, the recent change in the Administration and any government policy changes it may institute, which may be substantial, could increase regulatory uncertainty. The adoption or modification of laws or regulations relating to video programming, satellite services, wireless telecommunications, broadband, the Internet or other areas of our business could limit or otherwise adversely affect the manner in which we currently conduct our business. In addition, the manner in which regulations or legislation in these areas, including the FCC's Open Internet rules, may be interpreted and enforced cannot be precisely determined, which in turn could have an adverse effect on our business, financial condition and results of operations.

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Wireless services and our wireless spectrum licenses are subject to regulation by the FCC and, depending on the jurisdiction, other federal, state and local, as well as international, governmental authorities and regulatory agencies, including, among other things, regulations governing the licensing, construction, operation, sale and interconnection arrangements of wireless telecommunications systems. In particular, the FCC imposes significant regulation on licensees of wireless spectrum with respect to how radio spectrum is used by licensees, the nature of the services that licensees may offer and how the services may be offered, and resolution of issues of interference between spectrum bands. The FCC grants wireless licenses for terms of generally 10-12 years that are subject to renewal or revocation. There can be no assurances that our wireless spectrum licenses will be renewed. Failure to comply with FCC build-out requirements in a given license area may result in acceleration of other build-out requirements or in the modification, cancellation, or non-renewal of licenses. For further information related to our licenses and build-out requirements related to our wireless spectrum licenses see “Item 1A. Risk Factors — Acquisition and Capital Structure Risks — We have made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, we have made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses.”

The following summary of regulatory developments and legislation in the United States is not intended to describe all present and proposed government regulation and legislation affecting the video programming distribution, satellite services, wireless telecommunications and broadband industries. Government regulations that are currently the subject of judicial or administrative proceedings, legislative hearings or administrative proposals could change these industries to varying degrees. We cannot predict either the outcome of these proceedings or any potential impact they might have on these industries or on our operations.

FCC Regulations Governing our Pay-TV Operations

FCC Jurisdiction over our DBS Satellite Operations. The Communications Act of 1934, as amended (the “Communications Act”), gives the FCC broad authority to regulate the operations of satellite companies. Specifically, the Communications Act gives the FCC regulatory jurisdiction over the following areas relating to communications satellite operations:

- the assignment of satellite radio frequencies and orbital locations, the licensing of satellites and earth stations, the granting of related authorizations, and evaluation of the fitness of a company to be a licensee;
- approval for the relocation of satellites to different orbital locations or the replacement of an existing satellite with a new satellite;
- ensuring compliance with the terms and conditions of such assignments, licenses, authorizations and approvals, including required timetables for construction and operation of satellites;
- avoiding interference with other radio frequency emitters; and
- ensuring compliance with other applicable provisions of the Communications Act and FCC rules and regulations.

To obtain FCC satellite licenses and authorizations, satellite operators must satisfy strict legal, technical and financial qualification requirements. Once issued, these licenses and authorizations are subject to a number of conditions

including, among other things, satisfaction of ongoing due diligence obligations, construction milestones, and various reporting requirements. Necessary federal approval of these applications may not be granted, may not be granted in a timely manner, or may be granted subject to conditions that may be cumbersome.

Overview of our DBS Satellites, Authorizations and Contractual Rights for Satellite Capacity. Our satellites are located in orbital positions, or slots, that are designated by their western longitude. An orbital position describes both a physical location and an assignment of spectrum in the applicable frequency band. Each DBS orbital position has 500 MHz of available Ku-band spectrum that is divided into 32 frequency channels. Several of our satellites also include spot-beam technology that enables us to increase the number of markets where we provide local channels, but reduces the number of video channels that could otherwise be offered across the entire United States.

The FCC has licensed us to operate a total of 50 DBS frequency channels at the following orbital locations:

- 21 DBS frequency channels at the 119 degree orbital location, capable of providing service to the continental United States (“CONUS”); and
- 29 DBS frequency channels at the 110 degree orbital location, capable of providing service to CONUS.

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In addition, we currently lease or have entered into agreements to lease capacity on satellites using the following spectrum at the following orbital locations:

- 500 MHz of Ku-band FSS spectrum that is divided into 32 frequency channels at the 118.7 degree orbital location, which is a Canadian FSS slot that is capable of providing service to CONUS, Alaska and Hawaii;
- 32 DBS frequency channels at the 129 degree orbital location, which is a Canadian DBS slot that is capable of providing service to most of the United States;
- 32 DBS frequency channels at the 61.5 degree orbital location, capable of providing service to most of the United States;
- 24 DBS frequency channels at the 77 degree orbital location, which is a Mexican DBS slot that is capable of providing service to most of the United States and Mexico; and
- 32 DBS frequency channels at the 72.7 degree orbital location, which is a Canadian DBS slot that is capable of providing service to CONUS.

We also have month-to-month FSS capacity available from EchoStar on a satellite located at the 121 degree orbital location and a lease for FSS capacity available from EchoStar on a satellite located at the 103 degree orbital location.

In June 2015, the FCC granted us authority to provide service to the United States from a Canadian-licensed satellite using Reverse Band Ka frequencies at the 103 degree orbital location.

Duration of our DBS Satellite Licenses. Generally speaking, all of our satellite licenses are subject to expiration unless renewed by the FCC. The term of each of our DBS licenses is ten years. Our licenses are currently set to expire at various times. In addition, at various times we have relied on special temporary authorizations for our operations. A special temporary authorization is granted for a period of only 180 days or less, subject again to possible renewal by the FCC. From time to time, we apply for authorizations to use new satellites at our existing orbital locations. Generally, our FCC licenses and special temporary authorizations have been renewed, and our applications for new satellites at our existing orbital locations have been approved, by the FCC on a routine basis, but there can be no assurance that the FCC will continue to do so.

Opposition and Other Risks to our Licenses. Several third parties have opposed in the past, and we expect these or other parties to oppose in the future, some of our FCC satellite authorizations and pending and future requests to the FCC for extensions, modifications, waivers and approvals of our licenses. In addition, we must comply with numerous FCC reporting, filing and other requirements in connection with our satellite authorizations. Consequently, it is possible the FCC could revoke, terminate, condition or decline to extend or renew certain of our authorizations or licenses.

4.5 Degree Spacing “Tweener” Satellites. The FCC has proposed to allow so-called “tweener” DBS operations — DBS satellites operating at orbital locations 4.5 degrees (half of the usual nine degrees) away from other DBS satellites. The FCC granted authorizations to EchoStar and Spectrum Five for tweener satellites at the 86.5 and 114.5 degree orbital locations, respectively. These authorizations were subsequently cancelled because the FCC determined that the licensees did not meet certain milestone requirements. Tweener operations close to our licensed orbital locations could cause harmful interference to our service and constrain our future operations. The FCC has not completed its rulemaking on the operating and service rules for tweener satellites.

Interference from Other Services Sharing Satellite Spectrum. The FCC has adopted rules that allow non-geostationary orbit (“NGSO”) fixed satellite services to operate on a co-primary basis in the same frequency band as DBS and FSS. The FCC has also authorized the use of multichannel video distribution and data service (“MVDDS”) licenses in the DBS band. MVDDS licenses were auctioned in 2004. MVDDS systems are now only beginning to be commercially deployed in a few markets. We have MVDDS licenses in 82 out of 214 geographical license areas. Despite regulatory provisions intended to protect DBS and FSS operations from harmful interference, there can be no assurance that operations by other satellites or terrestrial communication services in the DBS and FSS bands will not interfere with our DBS and FSS operations and adversely affect our business.

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OneWeb LLC (“OneWeb”) and others have filed requests with the FCC for authority to launch and operate, or provide service from, NGSO satellite systems using a variety of spectrum bands, including the 12.2-12.7 GHz band, which we use for our DBS service, and where we also have certain licenses to provide one-way terrestrial MVDDS service. If these requests are granted and these systems are launched and put into operation, there can be no assurance that they will not interfere with our DBS operations and adversely affect our business or that they will not hinder our ability to provide MVDDS service.

Satellite Competition from Additional Slots and Interference. AT&T, through DirecTV, has obtained FCC authority to provide service to the United States from a Canadian DBS orbital slot, and EchoStar has obtained authority to provide service to the United States from both a Mexican and a Canadian DBS orbital slot. Further, we have also received authority to do the same from a Canadian DBS orbital slot at 129 degrees and a Canadian FSS orbital slot at 118.7 degrees. The possibility that the FCC will allow service to the U.S. from additional foreign slots may permit additional competition against us from other satellite providers. It may also provide a means by which to increase our available satellite capacity in the United States. In addition, a number of administrations, such as Great Britain and the Netherlands, have requested authority to add orbital locations serving the U.S. close to our licensed slots. Such operations could cause harmful interference to our satellites and constrain our future operations.

Rules Relating to Broadcast Services. The FCC imposes different rules for “subscription” and “broadcast” services. We believe that, because our DISH-branded pay-TV service offers a subscription programming service, we are not subject to many of the regulatory obligations imposed upon broadcast licensees. However, we cannot be certain whether the FCC will find in the future that we must comply with regulatory obligations as a broadcast licensee. If the FCC determines that we are a broadcast licensee, it could require us to comply with all regulatory obligations imposed upon broadcast licensees, which in certain respects are subject to more burdensome regulation than subscription television service providers.

Public Interest Requirements. The FCC imposes certain public interest obligations on our DBS licenses. These obligations require us to set aside four percent of our channel capacity exclusively for noncommercial programming for which we must charge programmers below-cost rates and for which we may not impose additional charges on subscribers. The Satellite Television Extension and Localism Act of 2010 (“STELA”) required the FCC to decrease this set-aside to 3.5 percent for satellite carriers who provide retransmission of state public affairs networks in 15 states and are otherwise qualified. The FCC, however, has not yet determined whether we qualify for this decrease in set-aside. The obligation to provide noncommercial programming may displace programming for which we could earn commercial rates and could adversely affect our financial results. We cannot be sure that, if the FCC were to review our methodology for processing public interest carriage requests, computing the channel capacity we must set aside or determining the rates that we charge public interest programmers, it would find them in compliance with the public interest requirements.

Separate Security, Plug and Play. The STELA Reauthorization Act of 2014 (“STELAR”) ended the “integration ban” that required cable companies to separate security functionality from the other features of their set-top boxes and that required leased cable set-top boxes to include CableCARDS effective December 2015. Set-top boxes used by DBS providers were not subject to this separate security requirement. STELAR required the FCC to establish a working

group of technical experts to identify and report on downloadable security design options that are not unduly burdensome and that promote competition with respect to the availability of navigation devices. The working group released a report in August 2015, which declined to offer a consensus recommendation regarding downloadable security design options. However, we cannot predict whether the FCC will take further action regarding downloadable security. Also, the FCC adopted the so-called “plug and play” standard for compatibility between digital television sets and cable systems. That standard was developed through negotiations involving the cable and consumer electronics industries, but not the satellite television industry. The FCC’s adoption of the standard was accompanied by certain rules regarding copy protection measures that were applicable to us. We appealed the FCC’s decision regarding the copy protection measures to the U.S. Court of Appeals for the D.C. Circuit (“D.C. Circuit”) and on January 15, 2013 the D.C. Circuit vacated the FCC’s decision. The FCC is also considering various proposals to establish two-way digital cable “plug and play” rules. That proceeding also asks about means to incorporate all pay-TV providers into its “plug and play” rules. The cable industry and consumer electronics companies have reached a “tru2way” commercial arrangement to resolve many of the outstanding issues in this docket. We cannot predict whether the FCC will impose rules on our DBS operations that are based on cable system architectures or the private cable/consumer electronics tru2way commercial arrangement. Complying with the separate security and other “plug and play” requirements may not be technically feasible or may require potentially costly modifications to our set-top boxes and operations. We cannot predict the timing or outcome of this FCC proceeding.

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In 2016, the FCC adopted a notice of proposed rulemaking regarding possible new regulations that would generally require pay-TV providers, among others, to make their video services operate on any third-party device. Under the FCC's proposal, consumers would have the choice of accessing cable and satellite programming through the pay-TV operator's products and services, or through products and services offered by a third party. These regulations, if adopted, would have the potential to impose new costs on our DISH branded pay-TV business by, among other things, requiring us to deploy additional hardware or software to enable our DISH branded pay-TV service to operate with third-party devices. In February 2017, the FCC closed this rule making proceeding and no regulations were adopted. However, we cannot be certain that the FCC will not open a new proceeding in the future to pursue similar regulations.

Retransmission Consent. The Copyright Act generally gives satellite companies a statutory copyright license to retransmit local broadcast channels by satellite back into the market from which they originated, subject to obtaining the retransmission consent of local network stations that do not elect "must carry" status, as required by the Communications Act. If we fail to reach retransmission consent agreements with such broadcasters, we cannot carry their signals. This could have an adverse effect on our strategy to compete with cable and other satellite companies that provide local signals. While we have been able to reach retransmission consent agreements with most of these local network stations, from time to time there are stations with which we have not been able to reach an agreement. We cannot be sure that we will secure these agreements or that we will secure new agreements on acceptable terms, or at all, upon the expiration of our current retransmission consent agreements, some of which are short-term. In recent years, national broadcasters have used their ownership of certain local broadcast stations to require us to carry additional cable programming in exchange for retransmission consent of their local broadcast stations. These requirements may place constraints on available capacity on our satellites for other programming. Furthermore, the rates we are charged for retransmitting local channels have been increasing substantially and may exceed our ability to increase our prices to our customers, which could have a material adverse effect on our business, financial condition and results of operations. In addition, the broadcast stations' demands for higher rates have resulted in more frequent negotiating impasses and programming interruptions. During these programming interruptions, our subscribers in the affected markets lack access to popular programming and may switch to another multichannel distributor that may be able to provide them with such programming.

In 2015, the FCC commenced a rulemaking proceeding as required by STELAR to review its "totality of circumstances" test for ensuring that television stations and MVPDs negotiate retransmission consent agreements in "good faith." In 2016, the Chairman of the FCC announced that the FCC would not proceed at that time to adopt additional rules governing good faith negotiations for retransmission consent. STELAR prohibits television stations from coordinating or engaging in joint retransmission consent negotiations with any other local television stations, unless the stations are "directly or indirectly under common de jure control," expanding a previous FCC ruling prohibiting joint negotiations only among the top four stations in a market. In addition, STELAR prohibits a local television station from limiting an MVPD's ability to carry other television signals that have been deemed by the FCC to be "significantly viewed" or to carry any other television signal the MVPD is otherwise entitled to carry under the Communications Act, unless such stations are "directly or indirectly under common de jure control" pursuant to FCC regulations. We cannot predict if these restrictions on broadcasters will result in more effective retransmission consent negotiations.

ATSC 3.0. In April 2016, the broadcast industry petitioned the FCC to authorize the use of the “Next Generation TV” broadcast television standard, ATSC 3.0. The FCC is expected to commence a rulemaking in the first quarter of 2017 to consider rules authorizing broadcasters to use ATSC 3.0. If the FCC moves forward with enabling the transition to ATSC 3.0, supporting this new standard could, among other things, require us to deploy new equipment and may impact our carriage obligations. We cannot predict whether the FCC will change its rules to enable the use of ATSC 3.0 and the effect that any such changes could have on our equipment costs, carriage obligations, or the retransmission consent process.

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Media Ownership Rules. Also in 2016, the broadcast industry petitioned the FCC to relax its media ownership rules, which, among other things, limit the number of commonly owned TV stations per market and restrict newspaper/broadcast cross-ownership and radio/TV cross-ownership. If the FCC were to relax some or all of its media ownership rules, it could increase the negotiating leverage that broadcasters hold in retransmission consent negotiations. We cannot predict whether the FCC will change any of its media ownership rules and the effect that any such changes could have on our future retransmission consent negotiations.

Digital HD Carry-One, Carry-All Requirement. To provide any full-power local broadcast signal in any market, we are required to retransmit all qualifying broadcast signals in that market (“carry-one, carry-all”), including the carriage of full-power broadcasters’ HD signals in markets in which we elect to provide local channels in HD. The carriage of additional HD signals on our DISH branded pay-TV service could cause us to experience significant capacity constraints and prevent us from carrying additional popular national channels and/or carrying those national channels in HD.

Distant Signals. Pursuant to STELA, we obtained a waiver of a court injunction that previously prevented us from retransmitting certain distant network signals under a statutory copyright license. Because of that waiver, we may provide distant network signals to eligible subscribers. To qualify for that waiver, we are required to provide local service in all 210 local markets in the U.S. on an ongoing basis. This condition poses a significant strain on our capacity. Moreover, we may lose that waiver if we are found to have failed to provide local service in any of the 210 local markets. If we lose the waiver, the injunction could be reinstated. Furthermore, depending on the severity of the failure, we may also be subject to other sanctions, which may include, among other things, damages.

Cable Act and Program Access. We purchase a large percentage of our programming from cable-affiliated programmers. Pursuant to the Cable Act, cable providers had been prohibited from entering into exclusive contracts with cable-affiliated programmers. The Cable Act directed that this prohibition expire after a certain period of time unless the FCC determined that the prohibition continued to be necessary. On October 5, 2012, the FCC allowed this prohibition to expire. While the FCC has issued a Further Notice of Proposed Rulemaking aimed at serving some of the same objectives as the prohibition, there can be no assurances that such protections will be adopted or be as effective as the prohibition if they are adopted. In the event that this decision is reconsidered by the FCC or reviewed by a court of appeals, we cannot predict the timing or outcome of any subsequent FCC decision.

As a result of the expiration of this prohibition on exclusivity, we may be limited in our ability to obtain access at all, or on nondiscriminatory terms, to programming from programmers that are affiliated with cable system operators. In addition, any other changes in the Cable Act, and/or the FCC’s rules that implement the Cable Act, that currently limit the ability of cable-affiliated programmers to discriminate against competing businesses such as ours, could adversely affect our ability to acquire cable-affiliated programming at all or to acquire programming on nondiscriminatory terms.

Furthermore, the FCC had imposed program access conditions on certain cable companies as a result of mergers, consolidations or affiliations with programmers. The expiration of the exclusivity prohibition in the Cable Act triggered the termination of certain program access conditions that the FCC had imposed on Liberty Media Corporation (“Liberty”). In July 2012, similar program access conditions that had applied to Time Warner Cable Inc. (“Time Warner Cable”), which was acquired by Charter in 2016, expired as previously scheduled. These developments may adversely affect our ability to obtain Liberty’s and Charter’s programming, or to obtain it on nondiscriminatory terms. In the case of certain types of programming affiliated with Comcast through its control of NBCUniversal Media, LLC (“NBCUniversal”), the prohibition on exclusivity is set to expire in January 2018, and we will not be able to rely on these protections beyond that date. Until that time, we have the right to subject the terms of access to NBCUniversal’s programming to binding arbitration if we and the programmer cannot reach agreement on terms, subject to FCC review. There can be no assurance that this procedure will result in favorable terms for us.

In addition, affiliates of certain cable providers have denied us access to sports programming that they supply to their cable systems terrestrially, rather than by satellite. The FCC has held that new denials of such service are unfair if they have the purpose or effect of significantly hindering us from providing programming to consumers. However, we cannot be sure that we can prevail in a complaint related to such programming and gain access to it. Our continuing failure to access such programming could materially and adversely affect our ability to compete in regions serviced by these cable providers.

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MDU Exclusivity. The FCC has found that cable companies should not be permitted to have exclusive relationships with multiple dwelling units (e.g., apartment buildings). In May 2009, the D.C. Circuit upheld the FCC's decision. While the FCC requested comments in November 2007 on whether DBS and Private Cable Operators should be prohibited from having similar relationships with multiple dwelling units, it has yet to make a formal decision. If the cable exclusivity ban were to be extended to DBS providers, our ability to serve these types of buildings and communities would be adversely affected. We cannot predict the timing or outcome of the FCC's consideration of this proposal.

Open Internet. In 2015, the FCC imposed Open Internet rules, which apply to both fixed and mobile broadband access providers and prohibit them, among other things, from blocking or throttling traffic, from paid prioritization, and from unreasonably interfering with, or disadvantaging, consumers' or content providers' access to the Internet. In addition, because the FCC reclassified broadband access providers as common carriers, these providers are subject to the general common carrier requirements of reasonableness and nondiscrimination. The rules were affirmed by a panel of the D.C. Circuit. A number of broadband access providers and their associations have filed a petition for an "en banc" hearing by the full D.C. Circuit, and have stated that they intend to pursue the challenge to the United States Supreme Court if rehearing is denied. While this decision provides certain protections from discrimination by broadband access providers against our distribution of video content, including our Sling TV services, via the Internet, it may still permit broadband access providers to provide certain services over their network that are not subject to these requirements. In addition, obligations imposed under the rules on mobile access providers may hinder our ability to provide services using our wireless spectrum licenses.

Comcast-NBCUniversal. In January 2011, the FCC and the Department of Justice approved a transaction between Comcast and General Electric Company ("General Electric"), pursuant to which they joined their programming properties, including NBC, Bravo and many others, in a venture, NBCUniversal, controlled by Comcast. In March 2013, Comcast completed the acquisition of substantially all of General Electric's remaining interest in NBCUniversal. The FCC conditioned its approval on, among other things, Comcast complying with the terms of the FCC's order on network neutrality (even if that order is vacated by judicial or legislative action) and Comcast licensing its affiliated content to us, other traditional pay-TV providers and certain providers of video services over the Internet on fair and nondiscriminatory terms and conditions, including, among others, price. If Comcast does not license its affiliated content to us on fair and nondiscriminatory terms and conditions, we can seek binding arbitration and continue to carry such content while the arbitration is pending. However, it is uncertain how these conditions may be interpreted and enforced by the FCC; therefore, we cannot predict the practical effect of these conditions. In addition, as these conditions expire in January 2018, we will not be able to rely on these protections beyond that date.

Charter/Time Warner Cable. In May 2016, the FCC and the Department of Justice approved a merger transaction between Charter, Time Warner Cable, and Advance/Newhouse Partnership. The FCC conditioned its approval on, among other things, Charter not imposing data caps or usage-based pricing for its residential broadband service and a requirement that Charter provide settlement-free interconnection. These conditions last for seven years, with Charter having the option after four years to petition to shorten the term to five years. It is uncertain how these conditions may be interpreted or enforced by the FCC; therefore, we cannot predict the practical effect of these conditions. In addition, as these conditions are currently set to expire in 2023, we will not be able to rely on these protections beyond

that date.

Definition of MVPD. In December 2014, the FCC issued a Notice of Proposed Rulemaking regarding the definition of an MVPD. Among other things, the FCC is considering whether the definition of an MVPD should apply to Internet-based streaming services, thus making such services subject to the same regulations as an MVPD. The FCC is also considering the appropriate treatment of purely Internet-based linear video programming services that cable operators and DBS providers offer in addition to their traditional video services. We cannot predict the timing or outcome of this rulemaking process.

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FCC Regulation of Wireless Spectrum

DISH Network Spectrum

700 MHz Licenses. In 2008, we paid \$712 million to acquire certain 700 MHz E Block (“700 MHz”) wireless spectrum licenses, which were granted to us by the FCC in February 2009. At the time they were granted, these licenses were subject to certain interim and final build-out requirements. On October 29, 2013, the FCC issued an order approving a voluntary industry solution to resolve certain interoperability issues affecting the lower 700 MHz spectrum band (the “Interoperability Solution Order”), which requires us to reduce power emissions on our 700 MHz licenses. As part of the Interoperability Solution Order, the FCC, among other things, approved our request to modify the original interim and final build-out requirements associated with our 700 MHz licenses so that by March 2017, we must provide signal coverage and offer service to at least 40% of our total E Block population (the “Modified 700 MHz Interim Build-Out Requirement”). The FCC also approved our request to modify the 700 MHz Final Build-Out Requirement so that by March 2021, we must provide signal coverage and offer service to at least 70% of the population in each of our E Block license areas (the “Modified 700 MHz Final Build-Out Requirement”). While the modifications to our 700 MHz licenses provide us additional time to complete the build-out requirements, the reduction in power emissions could have an adverse impact on our ability to fully utilize our 700 MHz licenses. If the Modified 700 MHz Interim Build-Out Requirement is not met, the Modified 700 MHz Final Build-Out Requirement may be accelerated by one year, from March 2021 to March 2020, and we could face the reduction of license area(s). If the Modified 700 MHz Final Build-Out Requirement is not met, our authorization may terminate for the geographic portion of each license in which we are not providing service.

AWS-4 Licenses. On March 2, 2012, the FCC approved the transfer of 40 MHz of wireless spectrum licenses held by DBSD North America, Inc. (“DBSD North America”) and TerreStar Networks, Inc. (“TerreStar”) to us. On March 9, 2012, we completed the acquisition of 100% of the equity of reorganized DBSD North America (the “DBSD Transaction”) and substantially all of the assets of TerreStar (the “TerreStar Transaction”), pursuant to which we acquired, among other things, certain satellite assets and wireless spectrum licenses held by DBSD North America and TerreStar. The total consideration to acquire the DBSD North America and TerreStar assets was approximately \$2.860 billion.

On February 15, 2013, the FCC issued an order, which became effective on March 7, 2013, modifying our licenses to expand our terrestrial operating authority with AWS-4 authority (“AWS-4”). That order also mandated certain interim and final build-out requirements for the licenses. By March 2017, we must provide terrestrial signal coverage and offer terrestrial service to at least 40% of the aggregate population represented by all of the areas covered by the licenses (the “AWS-4 Interim Build-Out Requirement”). By March 2020, we were required to provide terrestrial signal coverage and offer terrestrial service to at least 70% of the population in each area covered by an individual license (the “AWS-4 Final Build-Out Requirement”).

On December 20, 2013, the FCC issued a further order that, among other things, extended the AWS-4 Final Build-Out Requirement by one year to March 2021 (the “Modified AWS-4 Final Build-Out Requirement”). If the AWS-4 Interim Build-Out Requirement is not met, the Modified AWS-4 Final Build-Out Requirement may be accelerated by one year, from March 2021 to March 2020. If the Modified AWS-4 Final Build-Out Requirement is not met, our terrestrial authorization for each license area in which we do not meet the requirement may terminate. The FCC’s December 20, 2013 order also conditionally waived certain FCC rules for our AWS-4 licenses to allow us to repurpose all 20 MHz of our uplink spectrum (2000-2020 MHz) for terrestrial downlink operations. On June 1, 2016, we notified the FCC that we had elected to use our AWS-4 uplink spectrum for terrestrial downlink operations, and effective June 7, 2016, the FCC modified our AWS-4 licenses, resulting in all 40 MHz of our AWS-4 spectrum being designated for terrestrial downlink operations.

H Block Licenses. On April 29, 2014, the FCC issued an order granting our application to acquire all 176 wireless spectrum licenses in the H Block auction. We paid approximately \$1.672 billion to acquire these H Block licenses, including clearance costs associated with the lower H Block spectrum. The H Block licenses are subject to certain interim and final build-out requirements. By April 2018, we must provide reliable signal coverage and offer service to at least 40% of the population in each area covered by an individual H Block license (the “H Block Interim Build-Out Requirement”). By April 2024, we must provide reliable signal coverage and offer service to at least 75% of the population in each area covered by an individual H Block license (the “H Block Final Build-Out Requirement”). If the H Block Interim Build-Out Requirement is not met, the H Block license term and the H Block Final Build-Out Requirement may be accelerated by two years (from April 2024 to April 2022) for each H Block license area in which we do not meet the requirement. If the H Block Final Build-Out Requirement is not met, our authorization for each H Block license area in which we do not meet the requirement may terminate.

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MVDDS Licenses. We have MVDDS licenses in 82 out of 214 geographical license areas, including Los Angeles, New York City, Chicago and several other major metropolitan areas. By August 2014, we were required to meet certain FCC build-out requirements related to our MVDDS licenses, and we are subject to certain FCC service rules applicable to these licenses. In January 2015, the FCC granted our application to extend the build-out requirements related to our MVDDS licenses. We now have until 2019 to provide “substantial service” on our MVDDS licenses, and the licenses expire in 2024. Our MVDDS licenses may be terminated, however, if we do not provide substantial service in accordance with the new build-out requirements.

In 2016, the MVDDS 5G Coalition, of which we are a member, filed a petition for rulemaking requesting the FCC to consider updating the rules to allow us to provide two-way 5G services using our MVDDS licenses. We cannot predict when or if the FCC will grant the petition and proceed with a rulemaking. If the FCC adopts rules that would allow us to provide two-way 5G services using our MVDDS licenses, the requests of OneWeb and others for authority to use the band for service from NGSO satellite systems may hinder our ability to provide 5G services using our MVDDS licenses.

DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses

Through our wholly-owned subsidiaries American II and American III, we have made over \$10.0 billion in certain non-controlling investments in Northstar Spectrum, the parent company of Northstar Wireless, and in SNR HoldCo, the parent company of SNR Wireless, respectively. On October 27, 2015, the FCC granted certain AWS-3 Licenses to Northstar Wireless and to SNR Wireless, respectively, which are recorded in “FCC authorizations” on our Consolidated Balance Sheets. The AWS-3 Licenses are subject to certain interim and final build-out requirements. By October 2021, Northstar Wireless and SNR Wireless must provide reliable signal coverage and offer service to at least 40% of the population in each area covered by an individual AWS-3 License (the “AWS-3 Interim Build-Out Requirement”). By October 2027, Northstar Wireless and SNR Wireless must provide reliable signal coverage and offer service to at least 75% of the population in each area covered by an individual AWS-3 License (the “AWS-3 Final Build-Out Requirement”). If the AWS-3 Interim Build-Out Requirement is not met, the AWS-3 License term and the AWS-3 Final Build-Out Requirement may be accelerated by two years (from October 2027 to October 2025) for each AWS-3 License area in which Northstar Wireless and SNR Wireless do not meet the requirement. If the AWS-3 Final Build-Out Requirement is not met, the authorization for each AWS-3 License area in which Northstar Wireless and SNR Wireless do not meet the requirement may terminate.

See “Item 1A. Risk Factors — Acquisition and Capital Structure Risks — We face certain risks related to our non-controlling investments in the Northstar Entities and the SNR Entities, which may have a material adverse effect on our business, results of operations and financial condition” in this Annual Report on Form 10-K for further information.

State and Local Regulation

We are also regulated by state and local authorities. While the FCC has preempted many state and local regulations that impair the installation and use of towers and consumer satellite dishes, our business nonetheless may be subject to state and local regulation, including, among others, zoning regulations that affect the ability to install consumer satellite antennas or build out wireless telecommunications networks.

International Regulation

We are subject to regulation by the International Telecommunication Union (“ITU”) and our satellites must be registered in the United Nations (“UN”) Registry of Space Objects. The orbital location and frequencies for certain of our satellites are subject to the frequency registration and coordination process of the ITU. The ITU Radio Regulations define the international rules, regulations, and rights for a satellite and associated earth stations to use specific radio frequencies at a specific orbital location. These rules, which include deadlines for the bringing of satellite networks into use, differ depending on the type of service to be provided and the frequencies to be used by the satellite. On our behalf, various countries have made and may in the future make additional filings for the frequency assignments at particular orbital locations that are used or to be used by our current satellite networks and potential future satellite networks we may build or acquire.

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Our satellite services also must conform to the ITU service plans for Region 2 (which includes the United States). If any of our operations are not consistent with this plan, the ITU will only provide authorization on a non-interference basis pending successful modification of the plan or the agreement of all affected administrations to the non-conforming operations. Certain of our satellites are not presently entitled to any interference protection from other satellites that are in conformance with the plan. Accordingly, unless and until the ITU modifies its service plans to include the technical parameters of our non-conforming operations, our non-conforming satellites, along with those of other non-conforming satellite operators, must not cause harmful electrical interference with other assignments that are in conformance with the ITU service plans.

Registration in the UN Registry of Space Objects

The United States and other jurisdictions in which we license satellites are parties to the UN Convention on the Registration of Objects Launched into Outer Space. The UN Convention requires a satellite's launching state to register the satellite as a space object. The act of registration carries liability for the registering country in the event that the satellite causes third-party damage. Administrations may place certain requirements on satellite licensees in order to procure the necessary launch or operational authorizations that accompany registration of the satellite. In some jurisdictions, these authorizations are separate and distinct, with unique requirements, from the authorization to use a set of frequencies to provide satellite services. There is no guarantee that we will be able to procure such authorizations even if we already possess a frequency authorization.

Export Control Regulation

The delivery of satellites and related technical information for purposes of launch by foreign launch service providers is subject to export control and prior approval requirements. We are required to obtain import and export licenses from the United States government to receive and deliver certain components of direct-to-home satellite television systems. In addition, the delivery of satellites and the supply of certain related ground control equipment, technical services and data, and satellite communication/control services to destinations outside the United States are subject to export control and prior approval requirements from the United States government (including prohibitions on the sharing of certain satellite-related goods and services with China).

PATENTS AND OTHER INTELLECTUAL PROPERTY

Many entities, including some of our competitors, have or may in the future obtain patents and other intellectual property rights that cover or affect products or services that we offer or that we may offer in the future. In general, if a court determines that one or more of our products or services infringe intellectual property rights held by others, we may be required to cease developing or marketing those products or services, to obtain licenses from the holders of the intellectual property rights at a material cost, or to redesign those products or services in such a way as to avoid

infringing any patent claims. If those intellectual property rights are held by a competitor, we may be unable to obtain the intellectual property rights at any price, which could adversely affect our competitive position.

We may not be aware of all intellectual property rights that our products or services may potentially infringe. In addition, patent applications in the United States are confidential until the Patent and Trademark Office either publishes the application or issues a patent (whichever arises first) and, accordingly, our products may infringe claims contained in pending patent applications of which we are not aware. Further, the process of determining definitively whether a claim of infringement is valid often involves expensive and protracted litigation, even if we are ultimately successful on the merits.

We cannot estimate the extent to which we may be required in the future to obtain intellectual property licenses or the availability and cost of any such licenses. Those costs, and their impact on our results of operations, could be material. Damages in patent infringement cases can be substantial, and in certain circumstances can be trebled. To the extent that we are required to pay unanticipated royalties to third parties, these increased costs of doing business could negatively affect our liquidity and operating results. We are currently defending multiple patent infringement actions. We cannot be certain the courts will conclude these companies do not own the rights they claim, that our products do not infringe on these rights and/or that these rights are not valid. Further, we cannot be certain that we would be able to obtain licenses from these persons on commercially reasonable terms or, if we were unable to obtain such licenses, that we would be able to redesign our products to avoid infringement.

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ENVIRONMENTAL REGULATIONS

We are subject to the requirements of federal, state, local and foreign environmental and occupational safety and health laws and regulations. These include laws regulating air emissions, water discharge and waste management. We attempt to maintain compliance with all such requirements. We do not expect capital or other expenditures for environmental compliance to be material in 2017 or 2018. Environmental requirements are complex, change frequently and have become more stringent over time. Accordingly, we cannot provide assurance that these requirements will not change or become more stringent in the future in a manner that could have a material adverse effect on our business.

SEGMENT REPORTING DATA AND GEOGRAPHIC AREA DATA

For segment reporting data and principal geographic area data for 2016, 2015 and 2014, see Note 15 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K.

EMPLOYEES

We had approximately 16,000 employees at December 31, 2016, most of whom were located in the United States. We generally consider relations with our employees to be good. Approximately 60 employees in two of our field offices have voted to have a union represent them in contract negotiations. While we are not currently a party to any collective bargaining agreements, we are currently negotiating collective bargaining agreements at these offices.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational requirements of the Exchange Act and accordingly file our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements and other information with the SEC. The public may read and copy any materials filed with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Please call the SEC at (800) SEC-0330 for further information on the operation of the Public Reference Room. As an electronic filer, our public filings are also maintained on the SEC's Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that website is <http://www.sec.gov>.

WEBSITE ACCESS

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act also may be accessed free of charge through our website as soon as reasonably practicable after we have electronically filed such material with, or furnished it to, the SEC. The address of that website is <http://www.dish.com>.

We have adopted a written code of ethics that applies to all of our directors, officers and employees, including our principal executive officer and senior financial officers, in accordance with Section 406 of the Sarbanes-Oxley Act of 2002 and the rules of the SEC promulgated thereunder. Our code of ethics is available on our corporate website at <http://www.dish.com>. In the event that we make changes in, or provide waivers of, the provisions of this code of ethics that the SEC requires us to disclose, we intend to disclose these events on our website.

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EXECUTIVE OFFICERS OF THE REGISTRANT

(furnished in accordance with Item 401(b) of Regulation S-K, pursuant to General Instruction G(3) of Form 10-K)

The following table and information below sets forth the name, age and position with DISH Network of each of our executive officers, the period during which each executive officer has served as such, and each executive officer's business experience during the past five years:

Name	Age	Position
Charles W. Ergen	63	Chairman, Chief Executive Officer and Director
W. Erik Carlson	47	President and Chief Operating Officer
Thomas A. Cullen	57	Executive Vice President, Corporate Development
James DeFranco	64	Executive Vice President and Director
R. Stanton Dodge	49	Executive Vice President, General Counsel and Secretary
Bernard L. Han	52	Executive Vice President, Strategic Planning
Vivek Khemka	44	Executive Vice President and Chief Technology Officer
Roger J. Lynch	54	Chief Executive Officer, Sling TV Holding L.L.C.
Michael K. McClaskey	53	Executive Vice President and Chief Human Resources Officer
Brian V. Neylon	51	Executive Vice President, Customer Acquisition and Retention
Paul W. Orban	48	Senior Vice President and Chief Accounting Officer
Warren W. Schlichting	55	Executive Vice President, Marketing,

Steven E. Swain	49	Programming, and Media Sales Senior Vice President and Chief Financial Officer
John W. Swieringa	39	Executive Vice President, Operations

Charles W. Ergen. Mr. Ergen is our executive Chairman and Chief Executive Officer and has been Chairman of the Board of Directors of DISH Network since its formation and, during the past five years, has held executive officer and director positions with DISH Network and its subsidiaries. Mr. Ergen also serves as executive Chairman and Chairman of the Board of Directors of EchoStar. Mr. Ergen co-founded DISH Network with his future spouse, Cantey Ergen, and James DeFranco, in 1980.

W. Erik Carlson. Mr. Carlson has served as President and Chief Operating Officer since December 2015 and is responsible for the day-to-day operations of DISH Network including Customer Acquisition and Retention, Operations, Finance and Accounting, Human Resources, Marketing, Media Sales, Information Technologies, Programming, and Product Management. Mr. Carlson previously served as our Executive Vice President, In-Home Service and Manufacturing Operations from February 2008 to December 2015. Mr. Carlson also served as Senior Vice President of Retail Services, a position he held since mid-2006. He joined DISH Network in 1995 and has held operating roles of increasing responsibility over the years.

Thomas A. Cullen. Mr. Cullen has served as Executive Vice President, Corporate Development for DISH Network since July 2011. Mr. Cullen previously served as our Executive Vice President, Sales, Marketing and Programming from April 2009 to July 2011 and as our Executive Vice President, Corporate Development from December 2006 to April 2009. Before joining DISH Network, Mr. Cullen held various executive positions in the telecommunications, cable and wireless industries.

James DeFranco. Mr. DeFranco is one of our Executive Vice Presidents and has been one of our vice presidents and a member of the Board of Directors of DISH Network since our formation. During the past five years he has held various executive officer and director positions with our subsidiaries. Mr. DeFranco co-founded DISH Network with Charles W. Ergen and Cantey Ergen, in 1980.

R. Stanton Dodge. Mr. Dodge has served as Executive Vice President, General Counsel and Secretary since June 2007 and is responsible for all legal, government affairs and corporate communications for DISH Network and its subsidiaries. Mr. Dodge has served on the Board of Directors of EchoStar since March 2009. Mr. Dodge also served as EchoStar's Executive Vice President, General Counsel and Secretary from October 2007 to November 2011 pursuant to a management services agreement between DISH Network and EchoStar. Since joining DISH Network in November 1996, he has held various positions of increasing responsibility in DISH Network's legal department.

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Bernard L. Han. Mr. Han has served as Executive Vice President, Strategic Planning for DISH Network since December 2015. Mr. Han previously served as our Executive Vice President and Chief Operating Officer from April 2009 to December 2015. Mr. Han also served as Executive Vice President and Chief Financial Officer of DISH Network from September 2006 to April 2009. Mr. Han also served as EchoStar's Executive Vice President and Chief Financial Officer from January 2008 to June 2010 pursuant to a management services agreement between DISH Network and EchoStar. Before joining DISH Network, Mr. Han served as Executive Vice President and Chief Financial Officer of Northwest Airlines, Inc.

Vivek Khemka. Mr. Khemka has served as Executive Vice President and Chief Technology Officer since December 2015 and is responsible for all development and execution of technology strategy for DISH Network. Since August 2016, Mr. Khemka also serves as the President of EchoStar Technologies L.L.C. pursuant to a professional services agreement between DISH Network and EchoStar. Mr. Khemka previously served as Senior Vice President of Product Management from March 2013 to December 2015. Mr. Khemka also served as Vice President of Customer Technology, a position he held from December 2011 to March 2013. He joined DISH Network in 2009 and has held various roles of increasing responsibility over the years. Before joining DISH Network, Mr. Khemka held various positions at Danaher, Motorola and McKinsey & Co.

Roger J. Lynch. Mr. Lynch has served as Executive Vice President, Advanced Technologies for DISH Network since November 2009. Mr. Lynch also served as EchoStar's Executive Vice President, Advanced Technologies from November 2009 to December 2014. In addition, Mr. Lynch has served as Chief Executive Officer of Sling TV Holding L.L.C. since July 2012. Prior to joining DISH Network, Mr. Lynch served as Chairman and CEO of Video Networks International, Ltd., an Internet protocol television ("IPTV") technology company in the United Kingdom.

Michael K. McClaskey. Mr. McClaskey has served as Executive Vice President and Chief Human Resources Officer since February 2014 and is responsible for the recruiting, benefits administration, compensation, and leadership and organizational development for DISH Network. Mr. McClaskey joined DISH Network in 2007 and previously served as our Senior Vice President and Chief Information Officer until February 2014. Prior to DISH Network, Mr. McClaskey spent 12 years at Perot Systems where he served as Vice President of Infrastructure Solutions and Chief Information Officer.

Brian V. Neylon. Mr. Neylon has served as Executive Vice President, Customer Acquisition and Retention since December 2015 and is responsible for all acquisition and sales operations functions for DISH Network. Mr. Neylon previously served as our Senior Vice President of Sales from June 2011 to December 2015. Since first joining DISH Network in September 1991, he has held various positions of increasing responsibility within various sales and distribution teams from time to time.

Paul W. Orban. Mr. Orban has served as Senior Vice President and Chief Accounting Officer since December 2015 and is responsible for all aspects of our accounting department including external financial reporting, technical accounting policy, income tax accounting and internal controls for DISH Network. Mr. Orban served as our Senior Vice President and Corporate Controller from September 2006 to December 2015 and as our Vice President and Corporate Controller from September 2003 to September 2006. He also served as EchoStar's Senior Vice President and Corporate Controller from 2008 to 2012 pursuant to a management services agreement between DISH Network and EchoStar. Since joining DISH Network in 1996, Mr. Orban has held various positions of increasing responsibility in our accounting department. Prior to DISH Network, Mr. Orban was an auditor with Arthur Andersen LLP.

Warren W. Schlichting. Mr. Schlichting has served as Executive Vice President, Marketing, Programming, and Media Sales for DISH Network since December 2015 and is responsible for the acquisition and renewal of all programming content, marketing for our DISH branded pay-TV business and the advertising sales division. Mr. Schlichting previously served as our Senior Vice President of Programming and Media Sales from October 2014 to December 2015. Mr. Schlichting joined DISH Network in September 2011 as Senior Vice President of Media Sales. Prior to DISH Network, Mr. Schlichting served as Senior Vice President of New Business Development for Comcast from August 2002 to September 2011, leading advanced advertising efforts on multiple media and ad delivery platforms including broadband, interactive television and video-on-demand.

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Steven E. Swain. Mr. Swain has served as Senior Vice President and Chief Financial Officer of DISH Network since October 2014. Mr. Swain served as our Senior Vice President of Programming from April 2014 to October 2014, overseeing the acquisition and renewal of all programming content for DISH Network. Mr. Swain joined DISH Network in 2011 as Vice President of Corporate Financial Planning and Analysis. Prior to DISH Network, Mr. Swain spent more than 15 years working in the telecommunications sector, most recently at CenturyLink, formerly Qwest Communications, where he served in multiple leadership roles in finance, including corporate financial planning and analysis, treasury and investor relations, as well as in-network engineering.

John W. Swieringa. Mr. Swieringa has served as Executive Vice President, Operations since December 2015 and is responsible for the in-home services operations, customer service and billing, and information technology for DISH Network. Mr. Swieringa previously served as Senior Vice President and Chief Information Officer from March 2014 to December 2015 and as Vice President of Information Technology Customer Applications from March 2010 to March 2014. Mr. Swieringa joined DISH Network in December 2007 serving in our finance department. Before joining DISH Network, Mr. Swieringa held corporate finance positions in various Fortune 500 companies.

There are no arrangements or understandings between any executive officer and any other person pursuant to which any executive officer was selected as such. Pursuant to the Bylaws of DISH Network, executive officers serve at the discretion of the Board of Directors.

Item 1A. RISK FACTORS

The risks and uncertainties described below are not the only ones facing us. If any of the following events occur, our business, financial condition or results of operations could be materially and adversely affected.

Competition and Economic Risks

As the pay-TV industry has matured and bundled offers combining video, broadband and/or wireless services have become more prevalent and competitive, we face intense and increasing competition from providers of video, broadband and/or wireless services, which may require us to further increase subscriber acquisition and retention spending or accept lower subscriber activations and higher subscriber churn.

Our business has historically focused on providing pay-TV services and we have traditionally competed against satellite television providers and cable companies, some of whom have greater financial, marketing and other

resources than we do. In recent years, industries have been converging as providers of video, broadband and wireless services compete to deliver the next generation of service offerings. The pay-TV industry has matured and bundled offers combining video, broadband and/or wireless services have become more prevalent and competitive. In some cases, certain competitors have been able to potentially subsidize the price of video services with the price of broadband and/or wireless services. These developments, among others, have contributed to intense and increasing competition, which we expect to continue.

With respect to our DISH branded pay-TV services, we and our competitors increasingly must seek to attract a greater proportion of new subscribers from each other's existing subscriber bases rather than from first-time purchasers of pay-TV services. In addition, because other pay-TV providers may be seeking to attract a greater proportion of their new subscribers from our existing subscriber base, we may be required to increase retention spending or we may provide greater discounts or credits to acquire and retain subscribers who may spend less on our services. If our Pay-TV ARPU decreases or does not increase commensurate with increases in programming or other costs, our margins may be reduced and the long-term value of a subscriber would then decrease. In addition, our Sling branded pay-TV subscribers on average purchase lower priced programming services than DISH branded pay-TV subscribers. Accordingly, an increase in Sling branded pay-TV subscribers has a negative impact on our Pay-TV ARPU.

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This increasingly competitive environment may require us to increase subscriber acquisition and retention spending or accept lower subscriber activations and higher subscriber churn. Further, as a result of this increased competitive environment and the maturation of the pay-TV industry, future growth opportunities of our DISH branded pay-TV business may be limited and our margins may be reduced, which could have a material adverse effect on our business, results of operations, financial condition and cash flow. Our gross new Pay-TV subscriber activations continue to be negatively impacted by stricter customer acquisition policies for our DISH branded pay-TV subscribers (including a focus on attaining higher quality subscribers) and increased competitive pressures, including aggressive marketing, more aggressive retention efforts, bundled discount offers combining broadband, video and/or wireless services and other discounted promotional offers.

In addition, MVPDs and other companies such as programmers are offering smaller packages of programming channels directly to customers, at prices lower than our video service package offerings. These offerings could adversely affect demand for our Pay-TV services or cause us to modify our programming packages, which may reduce our margins. During the third quarter 2016, we launched our Flex Pack skinny bundle, a smaller package of programming channels.

Moreover, mergers and acquisitions, joint ventures and alliances among cable television providers, telecommunications companies and others may result in, among other things, greater scale and financial leverage and increase the availability of offerings from providers capable of bundling video, broadband and/or wireless services in competition with our services, and may exacerbate the risks described above. For example, in May 2016, Charter completed its acquisition of Time Warner Cable and Bright House Networks (collectively “New Charter”), which created the second largest cable television provider and third largest MPVD in the U.S. This transaction created a duopoly, resulting in two broadband providers, New Charter and Comcast, controlling the vast majority of the high-speed broadband homes in the country. In addition, a significant proportion of New Charter’s high-speed broadband subscribers may lack access to alternative high-speed broadband options. Further, New Charter may be able to, among other things, foreclose or degrade our online video offerings at various points in the broadband pipe; impose data caps on consumers who access our online video offerings; and pressure third-party content owners and programmers to withhold online rights from us and raise our and other MVPDs’ third-party programming costs.

As a result of AT&T’s 2015 acquisition of DirecTV, our direct competitor and the largest satellite TV provider in the U.S. now has increased access to capital, access to AT&T’s nationwide platform for wireless mobile video, and the ability to more seamlessly bundle its video services with AT&T’s broadband Internet access and wireless services. AT&T also recently launched an OTT service, DirecTV Now, that distributes video directly to consumers over the Internet. The combined company may also be able to, among other things, utilize its increased leverage over third-party content owners and programmers to withhold online rights from us and reduce the price it pays for programming at the expense of other MVPDs, including us; thwart our entry into the wireless market, by, among other things, refusing to enter into data roaming agreements with us; underutilize key orbital spectrum resources that could be more efficiently used by us; foreclose or degrade our online video offerings at various points in the broadband pipe; and impose data caps on consumers who access our online video offerings.

In addition, in October 2016, AT&T announced its pending acquisition of Time Warner Inc. (“Time Warner”). If the proposed transaction ultimately is completed, the risks discussed above posed by the AT&T and DirecTV merger will be further exacerbated, as the addition of Time Warner’s media holdings, which include content, such as HBO, TBS, TNT, CNN, and movies, would, among other things, provide the combined company increased scale and leverage in the converging video, mobile, and broadband industries and may make it more difficult for us to obtain access to Time Warner’s programming networks on nondiscriminatory and fair terms, or at all. Furthermore, AT&T’s current practice of offering wireless subscribers access to owned video content over the Internet without counting against a subscriber’s monthly data caps (“zero rating”), may give an unfair advantage to AT&T’s own video content, which currently includes, among others, DirecTV services, including DirecTV Now, on mobile devices.

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As the pay-TV industry is mature, our strategy has included an increased emphasis on acquiring and retaining higher quality subscribers, even if it means that we will acquire and retain fewer overall subscribers. We evaluate the quality of subscribers based upon a number of factors, including, among others, profitability. Our Pay-TV subscriber base has been declining due to, among other things, this strategy and the factors described above. There can be no assurance that our Pay-TV subscriber base will not continue to decline. In the event that our Pay-TV subscriber base continues to decline, it could have a material adverse long-term effect on our business, results of operations, financial condition and cash flow.

Changing consumer behavior and competition from digital media companies that provide or facilitate the delivery of video content via the Internet may reduce our gross new subscriber activations and may cause our subscribers to purchase fewer services from us or to cancel our services altogether, resulting in less revenue to us.

Our business has historically focused on providing pay-TV services, including our DISH branded and Sling branded pay-TV services. We face competition from providers of digital media, including, among others, Netflix, Hulu, Apple, Amazon, Google, Verizon, DirecTV and Sony that offer online services distributing movies, television shows and other video programming as well as programmers, such as CBS and HBO, that began selling content directly to consumers over the Internet in 2015. Some of these companies have larger customer bases, stronger brand recognition and greater financial, marketing and other resources than we do. In addition, traditional providers of video entertainment, including broadcasters, cable channels and MVPDs, are increasing their Internet-based video offerings. Some of these services charge nominal or no fees for access to their content, which could adversely affect demand for our Pay-TV services. Moreover, new technologies have been, and will likely continue to be, developed that further increase the number of competitors we face with respect to video services, including competition from piracy-based video offerings.

These products and services are also driving rapid changes in consumer behavior as consumers seek more control over when, where and how they consume content and access communications services. In particular, through technological advancements and with the large increase in the number of consumers with broadband service, a significant amount of video content has become available through online content providers for users to stream and view on their personal computers, televisions, phones, tablets, videogame consoles, and other devices, some without charging a fee to access the content. Similarly, while our customers can use their traditional video subscription to access mobile programming, an increasing number of customers are also using mobile devices as the sole means of viewing video, and an increasing number of non-traditional video providers are developing content and technologies to satisfy that demand. These technological advancements, changes in consumer behavior, and the increasing number of choices available to consumers with regard to the means by which consumers obtain video content may cause DISH Network subscribers to disconnect our services (“cord cutting”), downgrade to smaller, less expensive programming packages (“cord shaving”) or elect to purchase through online content providers a certain portion of the services that they would have historically purchased from us, such as pay per view movies, resulting in less revenue to us. There can be no assurance that our Pay-TV services will be able to compete with these other providers of digital media. Therefore, these technological advancements and changes in consumer behavior could reduce our gross new subscriber activations and could have a material adverse effect on our business, results of operations and financial condition or otherwise disrupt our business.

Our failure to effectively anticipate or adapt to competition or changes in consumer behavior, including with respect to younger consumers, could have a material adverse effect on our business, results of operations and financial condition or otherwise disrupt our business.

Economic weakness and uncertainty may adversely affect our ability to grow or maintain our business.

A substantial majority of our revenue comes from residential customers whose spending patterns may be affected by economic weakness and uncertainty. Our ability to grow or maintain our business may be adversely affected by economic weakness and uncertainty and other factors that may adversely affect the pay-TV industry. In particular, economic weakness and uncertainty could result in the following:

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- Fewer gross new subscriber activations and increased subscriber churn. We could face fewer gross new subscriber activations and increased subscriber churn due to, among other things: (i) certain economic factors that impact consumers, including, among others, rising interest rates, a potential downturn in the housing market in the United States (including a decline in housing starts) and higher unemployment, which could lead to a lack of consumer confidence and lower discretionary spending; (ii) increased price competition for our products and services; and (iii) the potential loss of independent third-party retailers, who generate a significant percentage of our new subscribers, because many of them are small businesses that are more susceptible to the negative effects of economic weakness. In particular, subscriber churn may increase with respect to subscribers who purchase our lower tier programming packages and who may be more sensitive to economic weakness, including, among others, our pay-in-advance subscribers.
 - Lower pay-TV average monthly revenue per subscriber (“Pay-TV ARPU”). Our subscribers may disconnect our services and a growing share of pay-TV customers are “cord shaving” to downgrade to smaller, less expensive programming packages or electing to purchase through online content providers a certain portion of the services that they would have historically purchased from us, such as pay per view movies. Cord cutting and/or cord shaving by our subscribers could negatively impact our Pay-TV ARPU. In addition, Sling branded pay-TV subscribers on average purchase lower priced programming services than DISH branded pay-TV subscribers, and therefore, as Sling branded pay-TV subscribers increase, it will have a negative impact on Pay-TV ARPU.
- Higher subscriber acquisition and retention costs. Our profits may be adversely affected by increased subscriber acquisition and retention costs necessary to attract and retain subscribers during a period of economic weakness.

Our competitors may be able to leverage their relationships with programmers to reduce their programming costs and offer exclusive content that will place them at a competitive advantage to us.

The cost of programming represents the largest percentage of our overall costs. Certain of our competitors own directly or are affiliated with companies that own programming content that may enable them to obtain lower programming costs or offer exclusive programming that may be attractive to prospective subscribers. Unlike our larger cable and satellite competitors, some of which also provide IPTV services, we have not made significant investments in programming providers. For example, in January 2011, the FCC and the Department of Justice approved a transaction between Comcast and General Electric pursuant to which they joined their programming properties, including NBC, Bravo and many others that are available in the majority of our programming packages, in a venture, NBCUniversal, controlled by Comcast. In March 2013, Comcast completed the acquisition of substantially all of General Electric’s remaining interest in NBCUniversal. This transaction may affect us adversely by, among other things, making it more difficult for us to obtain access to NBCUniversal’s programming networks on nondiscriminatory and fair terms, or at all. The FCC conditioned its approval on, among other things, Comcast complying with the terms of the FCC’s order on network neutrality, even if that order is vacated by judicial or legislative action, and Comcast licensing its affiliated content to us, other traditional pay-TV providers and certain providers of video services over the Internet on fair and nondiscriminatory terms and conditions, including, among others, price. If Comcast does not license its affiliated content to us on fair and nondiscriminatory terms and conditions, we can seek binding arbitration and continue to carry such content while the arbitration is pending. However, it is uncertain how these conditions may be interpreted and enforced by the FCC; therefore, we cannot predict the practical effect of these conditions. Also, in October 2016, AT&T announced its pending

acquisition of Time Warner. This transaction would join DirecTV, which was acquired by AT&T in 2015, with Time Warner's media holdings, which include content such as HBO, TBS, TNT, CNN, and movies. If approved, this transaction may affect us adversely by, among other things, making it more difficult for us to obtain access to Time Warner programming networks on nondiscriminatory and fair terms, or at all.

Our OTT Sling TV Internet-based services face certain risks, including, among others, significant competition.

Our Sling TV services face a number of risks, including, among others, the following, which may have a material adverse effect on our Sling TV service offerings:

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- We face significant competition from programmers such as DirecTV Now and Sony Vue, which distribute live linear television programming over the Internet, from content providers such as CBS and HBO, which have begun selling content directly to consumers over the Internet, and other companies including, among others, Netflix, Hulu, Apple, Amazon, Google and Verizon, some of which have original content, larger customer bases, stronger brand recognition, and significant financial, marketing and other resources. We also face competition from piracy based video offerings;

- We offer a limited amount of programming content, and there can be no assurances that we will be able to maintain or increase the amount or type of programming content that we may offer to keep pace with, or to differentiate our Sling TV services from, other providers of online video content;

- We rely on streaming-capable devices to deliver our Sling TV services, and if we are not successful in maintaining existing, and creating new, relationships, or if we encounter technological, content licensing or other impediments to our streaming content, our ability to grow our Sling TV services could be adversely impacted;

- We may incur significant expenses to market our Sling TV services and build brand awareness, which could have a negative impact on the profitability of our Sling TV services;

- Since we rely upon the ability of consumers to access our Sling TV services through an Internet connection, changes in how network operators handle and charge for access to data that travel across their networks, such as implementing bandwidth caps or usage-based fees, could adversely impact our Sling TV services. In addition, many network operators that provide consumers with broadband service also provide these consumers with video programming, and these network operators may have an incentive to use their network infrastructure in a manner adverse to our continued growth and success. For example, as a result of AT&T's acquisition of DirecTV and the completion of the New Charter merger, these risks may be exacerbated to the extent these and other network operators are able to provide preferential treatment to their data. For example, AT&T's current zero rating practice may give an unfair advantage to AT&T's own video services, which currently include, among others, DirecTV services, including DirecTV Now;

- We may not be able to timely scale our technology, systems and operational practices related to our Sling TV services to effectively and reliably handle growth in subscribers and features related to our services;

- Our Sling Orange service has limitations that may not be applicable to our competitors, such as not being able to view content on more than one device simultaneously, and with respect to certain programming, not being able to provide a feature to record content for future viewing. If we are unable to remove those limitations and add such features to the Sling Orange service in the future, our ability to compete with other offerings could be adversely impacted;

- The adoption or modification of laws and regulations relating to the Internet could limit or otherwise adversely affect the manner in which we conduct our Sling TV services and could cause us to incur additional expenses or alter our business model; and

- We rely on EchoStar to provide the streaming delivery technology and infrastructure to support our Sling TV services. In addition, we license our OTT service brand name “Sling” from EchoStar, and there can be no assurance that we will be able to continue to license the “Sling” brand name on acceptable terms or at all.

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We face increasing competition from other distributors of unique programming services such as foreign language, sports programming, and original content that may limit our ability to maintain subscribers that desire these unique programming services.

We face increasing competition from other distributors of unique programming services such as foreign language, sports programming, and original content including programming distributed over the Internet. There can be no assurance that we will maintain subscribers that desire these unique programming services. For example, the increasing availability of foreign language programming from our competitors, which in certain cases has resulted from our inability to renew programming agreements on an exclusive basis or at all, as well as competition from piracy-based video offerings, could contribute to an increase in our subscriber churn. Our agreements with distributors of foreign language programming have varying expiration dates, and some agreements are on a month-to-month basis. There can be no assurance that we will be able to grow or maintain subscribers that desire these unique programming services such as foreign language and sports programming.

Operational and Service Delivery Risks

If we do not continue improving our operational performance and customer satisfaction, our gross new subscriber activations may decrease and our subscriber churn may increase.

If we are unable to continue improving our operational performance and customer satisfaction, we may experience a decrease in gross new subscriber activations and an increase in subscriber churn, which could have a material adverse effect on our business, financial condition and results of operations. To improve our operational performance, we continue to make investments in staffing, training, information systems, and other initiatives, primarily in our call center and in-home service operations. These investments are intended to help combat inefficiencies introduced by the increasing complexity of our business, improve customer satisfaction, reduce subscriber churn, increase productivity, and allow us to scale better over the long run. We cannot, however, be certain that our spending will ultimately be successful in improving our operational performance, and if unsuccessful, we may have to incur higher costs to improve our operational performance. While we believe that such costs will be outweighed by longer-term benefits, there can be no assurance when or if we will realize these benefits at all. If we are unable to improve our operational performance, our future gross new subscriber activations and existing subscriber churn may be negatively impacted, which could in turn adversely affect our revenue growth and results of operations.

If our gross new subscriber activations continue to decrease, or if our subscriber churn, subscriber acquisition costs or retention costs increase, our financial performance will be adversely affected.

We may incur increased costs to acquire new subscribers and retain existing subscribers. Our gross new Pay-TV subscriber activations, net Pay-TV subscriber additions, and Pay-TV churn rate continue to be negatively impacted by stricter customer acquisition and retention policies for our DISH branded pay-TV subscribers, including an increased emphasis on acquiring and retaining higher quality subscribers. In addition, our subscriber acquisition costs could increase as a result of increased spending for advertising and, with respect to our DISH branded pay-TV services, the installation of more HD and DVR receivers, which are generally more expensive than other receivers. Retention costs with respect to our DISH branded pay-TV services may be driven higher by increased upgrades of existing subscribers' equipment to HD and DVR receivers. Meanwhile, as part of our increased emphasis on retaining higher quality subscribers, we have been more selective in issuing retention credits, which has had a negative impact on our Pay-TV churn rate. Although we expect to continue to incur expenses, such as providing retention credits and other subscriber acquisition and retention expenses, to attract and retain subscribers, there can be no assurance that our efforts will generate new subscribers or result in a lower churn rate. Additionally, certain of our promotions, including, among others, pay-in-advance, continue to allow consumers with relatively lower credit scores to become subscribers. These subscribers typically churn at a higher rate.

Our subscriber acquisition costs and our subscriber retention costs can vary significantly from period to period and can cause material variability to our net income (loss) and free cash flow. Any material increase in subscriber acquisition or retention costs from current levels could have a material adverse effect on our business, financial condition and results of operations.