TIVO INC
Form 10-K
March 23, 2016

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549
FORM 10-K

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

For the fiscal year ended January 31, 2016

o 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 000-27141

TIVO INC.
(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	77-0463167 (IRS Employer Identification No.)
2160 Gold Street, San Jose, CA (Address of principal executive offices)	95002 (Zip Code)

(408) 519-9100
(Registrant's telephone number including area code)

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

Title of each class	Name of each exchange on which registered
Common Stock, $0.001 par value	The NASDAQ Stock Market LLC (Nasdaq Global Market)

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 x No o

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 o No x

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

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 during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No o

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.

Yes o No x

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

Large accelerated filer x Accelerated filer o Non-accelerated filer o Smaller Reporting Company o

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

The aggregate market value of the registrant’s common stock, $0.001 par value per share, held by non-affiliates of the registrant on July 31, 2015, the last business day of the registrant’s most recently completed second fiscal quarter, was approximately $0.9 billion (based on the closing sales price of the registrant’s common stock on that date as reported in the Nasdaq Global Market). Shares of the registrant's common stock held by each officer and director and each person that controls, is controlled by or is under common control of the registrant have been excluded in that such persons may be deemed to be affiliates. This calculation does not exclude shares held by such organizations whose ownership exceeds 5% of the registrant's outstanding common stock that the registrant believes are registered investment advisers or investment companies registered under section 8 of the Investment Company Act of 1940. This determination of affiliate status is not a determination for other purposes.

On March 11, 2016, the Registrant had 97,863,989 outstanding shares of common stock.

DOCUMENTS INCORPORATED BY REFERENCE

Part III incorporates by reference certain information from the registrant’s definitive proxy statement (the “Proxy Statement”) for the 2016 Annual Meeting of Shareholders to be filed on or before May 31, 2016.

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For the Fiscal Year Ended January 31, 2016

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Except as the context otherwise requires, the terms “TiVo,” “Registrant,” “Company,” “we,” “us,” or “our” as used herein are references to TiVo Inc. and its consolidated subsidiaries.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This annual report on Form 10-K contains certain forward-looking statements within the meaning of section 27A of the Securities Act of 1933, as amended, and section 21E of the Securities Exchange Act of 1934, as amended. These statements relate to, among other things:

- our financial results, including our expectations of future revenues and profitability;
- our intention and ability to protect our intellectual property in the future and the strength and future value of our intellectual property;
- our TiVo-Owned retail subscriptions, our future investments in subscription acquisition activities, future advertising expenditures, hardware costs and associated hardware subsidies, and other sales and marketing activities, including our sales and marketing, subscription acquisition cost (SAC), and average revenue per subscription (ARPU), and subscription churn;
- our TiVo-Owned Subscriptions, our estimates of the useful life of TiVo-enabled digital video recorders (DVRs) and Minis in connection with the recognition of revenue received from product lifetime subscriptions and the expected future increase in the number of fully-amortized TiVo-Owned product lifetime subscriptions, and our estimates of the effects of product lifetime subscriptions on churn;
- our expectations regarding the seasonality of our business and subscription additions to the TiVo service;
- our expectations regarding future growth in subscriptions to the TiVo service;
- our expectations that we will launch a new class of consumer products beyond our current offering;
- our expectations regarding future changes in our TiVo-Owned ARPU as well as fees paid by multiple system operators and broadcasters (MSOs), including decreases in TiVo-Owned ARPUs as a result of increased sales of non-DVR devices such as TiVo Mini which have lower product lifetime service fees than DVRs;
- our expectations regarding future media services and other revenues; including growth from TiVo Research, Digitalsmiths, and Cubiware;
- our expectations regarding future audience research and measurement revenues;
- our future service and hardware revenues from TiVo-Owned subscriptions and future service, technology, and hardware revenues from MSOs;
- our expectations regarding growth in the future next-generation video services market for our services, software, and technology for both our hardware and in-home and outside-of-the-home cloud-based solutions, which will be impacted by alternatives to and competitors with our products, such as broadband content delivered by MSOs to their customers' computers and mobile devices (such as TV Everywhere), video delivered on demand to an MSO customer's set-top box (VOD), and network DVRs;
- our expectations regarding continued regulatory required access to and installation and operational issues surrounding cable-operator provided CableCARDs™ and switched digital devices essential for TiVo consumer devices in cable homes;

- our expectations that in the future we may also offer services for additional non-DVR products that may or may not incorporate the TiVo user interface and non-DVR software including a network DVR service;
- our expectations of the future decrease in hardware revenues and hardware margin as our U.S. MSO customers transition their hardware purchases to third-party hardware manufacturers such as Arris and our belief that this will enable us to gain additional MSO Subscriptions;
- our expectations of the growth of the TiVo service and technology revenues outside the United States;
- our expectations regarding a future decrease in the amount of our research and development spending and our associated ability to remain a competitive technology innovator and invest significant resources in next-generation video services ;
- our expectations regarding future increases in the amount of deferred expenses in costs of technology revenues related to development work for our television distribution partners and our ability to receive revenues equal to or greater than such deferred expenses from such television distribution partners;
- our expectations regarding future changes in our operating expenses, including changes in general and administrative expenses, litigation expenses, and sales and marketing, subscription acquisition costs;
- our expectations regarding our ability to oversee outsourcing of our manufacturing processes and engineering work and our ability to support the hardware, inventory, and hardware customization needs of our MSO customers;
- our expectations regarding the usability of our finished goods inventory of DVRs and non-DVR products and the risks that hardware forecasts of our MSO customers may be reduced or delayed after we have committed manufacturing resources due to long lead times, which may require us to record write-downs if such inventory exceeds forecasted demand;
- our expectations regarding our ability to perform or comply with laws, regulations, and requirements different than those in the United States;
- our expectations regarding future capital allocation activities including share buy-backs, mergers and acquisitions, issuance of debt, and other alternative capital distribution activities;
- our expectations and estimates related to long-term investments and their associated carrying value.; and
- our expectations of growth from our acquisitions of Digitalsmiths Corporation ("Digitalsmiths") and Cubiware Sp. Z.o.o. ("Cubiware").

Forward-looking statements generally can be identified by the use of forward-looking terminology such as “believe,” “expect,” “may,” “will,” “intend,” “estimate,” “continue,” “ongoing,” “predict,” “potential,” and “anticipate” or similar express negative of those terms or expressions. These statements involve known and unknown risks, uncertainties and other factors, which may cause our actual results, performance or achievements to differ materially from those expressed or implied by such forward-looking statements. Such factors include, among others, the information contained under the caption Part I, Item 1A. “Risk Factors” in this annual report on Form 10-K The reader is cautioned not to place undue reliance on these forward-looking statements, which reflect management's analysis only as of the date of this annual report, and we undertake no obligation to publicly update or revise any forward-looking statements in this annual report. The reader is strongly urged to read the information set forth under the caption Part I, Item 1, "Business" and Part II, Item 7, “Management's Discussion and Analysis of Financial Condition and Results of Operations,” and Part I, Item 1A, “Risk Factors” for a more detailed description of these significant risks and uncertainties.

PART I.
ITEM 1. BUSINESS
The Company

TiVo is a leader in next-generation video technology software services and innovative cloud-based software-as-a-service solutions. TiVo’s software and cloud-based services provide an all-in-one approach for navigating ‘content chaos’ by seamlessly combining live, recorded, Video on Demand ("VOD"), and over-the-top (e.g. Netflix, Amazon, Hulu Plus, Vudu, and YouTube, among others) content into one intuitive user interface with simple universal search, discovery, viewing and recording, creating a unified viewing experience. This experience is distributed both directly to consumers and through distribution relationships with approximately 70 television service providers who utilize some or all of TiVo’s software, hardware, and cloud services to power their own television products. This includes the traditional TiVo products as well as our cloud-based search and discovery capabilities for non-TiVo user experiences and our emerging market television experiences, which were gained through the Cubiware acquisition. As of January 31, 2016, TiVo had distribution relationships with television service providers representing 90 million global households as well as close to 1 million direct to consumer relationships.
We generate revenues primarily from four sources:
•Television Service Providers (also referred to as MSOs or Pay-TV Operators). We work with a growing number of television service providers, who typically pay us recurring monthly fees or an upfront software fee, which we recognize as service and software revenues. We also receive revenues for providing licensing and professional services, and in some instances we sell television service providers hardware based on retail set-top boxes ("STBs"). The service and software revenue we receive from these television service providers has continued to grow and we expect it to be a larger percentage of our total revenue in the future.
•Consumer Service. One of our largest sources of revenues is from consumers in our direct to consumer business, who subscribe to the TiVo service directly with us and typically pay us monthly fees, or in some cases pay for TiVo service for the life of their product upfront, which we report as our TiVo-Owned service subscriptions.
•Data Analytics Services. We work directly with television advertisers, agencies, and networks to offer a variety of solutions for television audience measurement and advertising analytics. These include unique second-by-second audience measurement metrics that anonymously combine television viewing data with other types of data, including with Internet viewing data, purchase activity or demographic attributes. Additionally, we are focused on providing our data to programmatic and targeting advertising platforms and networks.
•Licensing. We derive revenues from our licensing agreements associated with our litigation settlements. In connection with settlements of litigation, TiVo has entered into agreements with multiple television service providers and hardware manufacturers in which we provide rights to use certain TiVo patents. With one exception these agreements expire in June 2018. TiVo is currently engaged in patent litigation with Samsung.
We continue to be subject to a number of risks, including the continued need for significant research and development and the related costs of such research and development activities; delays in product and service developments; competitive service offerings; lack of market acceptance; dependence on third-parties for technology, manufacturing, marketing, and sales support, as well as third-party rollout schedules and software development issues related to third-party products which contain our technology; access to television programming including digital cable signals in connection with CableCARD™ and switched digital technologies; dependence on our relationships with third-party service providers for our MSO subscription growth; intellectual property claims by and against us and the related costs of such intellectual property litigation; and our ability to maintain our TiVo-Owned subscription base and consumer service business.
We conduct our operations through one operating segment. See Part II, Item 6, Selected Financial Data for our historical financial results. In our fiscal year ended January 31, 2016, we had net income of $21.7 million and cash provided by operating activities was $0.3 million. As of January 31, 2016, we had an accumulated deficit of $358.0 million. We anticipate that our TiVo-Owned business will continue to be seasonal and expect to generate a significant number of our new TiVo-Owned subscriptions during and immediately after the holiday shopping season. We remain cautious about our ability to limit declines or even maintain our current number of TiVo-Owned

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subscriptions in our fiscal year ending January 31, 2017, despite recent improvements in TiVo-Owned subscription net additions driven by an improved product offering, pricing changes, and stable churn. See the discussion in Part l, Item 1A. Risk Factors, relating to risks related to our business, including risks specific to our deployments with our television service provider customers.

Our Strategy

We believe the television world is rapidly evolving with proliferating content choice including traditional linear programming, VOD, TV Everywhere solutions and over-the-top services ("OTT"). Further, consumers are accessing and subscribing to video content in new ways such as "skinny bundles" (which include smaller groups of channels) from incumbent Pay-TV Operators or through OTT services on tablets, smart televisions, and streaming devices. This is leading to pressure on the current content and distribution models and we believe that our advanced television offerings and analytics help consumers, Pay-TV Operators and non-traditional players navigate the changing environment.

We believe we have created a unique set of technologies, products, and services that meet the needs of consumers, television service providers, and the advertising community. Our goal is to change the way consumers access and watch linear television, on-demand television, and broadband video by offering a best in class user experience and search and discovery services to generate revenue through the licensing of both our TiVo branded services and technology and non-branded services and technology delivered by Digitalsmiths and Cubiware to television viewing households worldwide.

Provide Compelling, Easy-to-Use Television Offering. Our video technology solutions have an easy, intuitive user interface and many features that we believe dramatically improve a consumer's television viewing experience. Our video technology solutions can support linear television delivered through cable, satellite, from the cloud, or over-the-air, television service provider VOD, and broadband video and consumed either on the television or on mobile devices, including tablets and smartphones. Our technology, including Digitalsmiths, enables consumers to find and watch their favorite content, whether it is on TV, VOD, or OTT, and helps them discover new programming through features that search and browse for content by subject, title, genre, actor, director, or channel, enjoy access to extra content via broadband and comprehensive episode guides, as well as suggesting programs that consumers may like through a variety of TiVo recommendation features. Our goal is to lead the market with innovations that expand the value and potential of our products and services. We plan to continue to invest significant resources in innovation to improve consumer choice, convenience, and control over their home entertainment and to make our services more compelling for both current and potential customers. We expect that a significant portion of our future product development efforts will be focused on OTT and mobile capabilities, enabling the TiVo experience on additional consumer devices and screens, cloud-based services, personalization, and integration of new discovery paradigms like social network recommendations.

Develop Solutions for Television Service Providers. A critical part of our strategy focuses on developing video technology for the global pay television market, which is estimated to grow to more than 1 billion subscribers by 2020. Currently, we have distribution relationships with more than 70 television service providers representing 90 million homes in North America, Europe, Latin America, Asia, and the Middle East/Africa through our TiVo, Digitalsmiths, and Cubiware products. Our focus is on both expanding current relationships with additional products, for example providing non-DVR software, enhanced search & recommendation, or IP services such as a network DVR management, and through working with additional operators. We believe that our breadth of offerings, which include an end-to-end multiscreen next-generation video service, a cloud-based search & recommendation service that helps power non-TiVo branded user experiences, IP/network DVR solutions, and lighter advanced television offerings geared toward lower video ARPU markets, provide a competitive portfolio of products and services for the global television market. Additionally, we believe our retail business uniquely positions us versus other vendors to bring new products and innovations to market in rapid fashion because we are able to leverage our product development across our direct to consumer products as well as products and services provided to television service providers.

Extend the TiVo Service to the Cloud. TiVo has transitioned much of its service to the cloud, which allows TiVo to offer its products on a multitude of devices beyond the set-top box. Further, TiVo is in the process of developing and testing a network DVR service that will allow Pay-TV Operators to offer storage in the cloud reducing their expenditures on hardware, allowing recorded shows to be easily delivered to mobile devices, and enabling features and controls for both consumers and operators that weren’t possible with a set-top box based DVR. Additionally, our Digitalsmiths' service, which provides a software-as-a-service search and recommendation service, enables TiVo to extend its portfolio of products and services through non-TiVo branded user experiences, and to offer services that can be deployed on less expensive STBs or devices that lack built-in DVR capability. We believe these efforts could expand our ability to service market segments beyond traditional television providers such as mobile or online video.

Extend and Protect Our Intellectual Property. The convenience, control, and ease of use of the TiVo service is derived largely from the technology we have developed. Our intellectual property portfolio continues to grow and includes fundamental innovations and corresponding patents, that we believe, among other things, cover many core elements of modern video transport, processing, and consumption.

We have adopted a proactive patent and trademark strategy designed to protect and extend our technology and intellectual property. We have filed patent applications relating to numerous inventions resulting from TiVo research and development, including many critical aspects of the design, functionality, and operation of TiVo products and services as well as technology that we may incorporate in future products and services.

We have engaged in significant intellectual property litigation with certain television service and technology providers in the United States to protect our technology from infringement. To date, we have received cash and future technology revenue payment commitments totaling approximately $1.6 billion from intellectual property litigation. We are currently involved in litigation against Samsung, where we have alleged that Samsung is infringing our intellectual property in connection with certain Samsung DVRs and mobile devices.

Generate Revenue from Media Services.

We offer data analytics products focused on television audiences through TiVo Research whose customers include advertisers, agencies, broadcast and cable networks, and programmatic/target advertising marketplaces. These customers use TiVo Research's software and advanced data analytics which anonymously match TV tuning and purchase data in order to optimize advertising to the right audience. We believe this creates ad placement efficiency, drives more product sales for brands, and a higher return on media investment for advertisers while increasing advertising revenues for networks. We plan to continue to develop and enhance our data analytics capabilities to generate additional revenues and provide additional innovative solutions.

Further, we offer Seamless Insights, an analytics platform from Digitalsmiths, that provides television service providers data both on the consumption of content by network and program and the interactions their customers have with their advanced television interface and interactive advertising products on the TiVo-Owned and MSO subscription bases.

Our Technology

We have developed a technology portfolio that makes the TiVo service available on a standalone retail DVR product line that is capable of receiving over-the-air digital signals, cable through the use of CableCARDs™, and from broadband video sources. The TiVo service is also deployed directly by close to 20 global Pay-TV Operators. We also offer search & discovery products through our Digitalsmiths product and advanced television experiences for emerging markets through our Cubiware product. Our strategy is to sign additional distribution agreements to make the TiVo service and products available on additional set-top boxes and mobile devices such as tablets or computers and other connected devices. We also offer innovative data analytics solutions for advertisers, agencies and TV networks in the television industry through the sale of cross-platform audience research data by our subsidiary, TiVo Research. We believe that our commitment to research and development will allow us to continue to innovate new products for our customers, even while we continue to focus on managing and reducing our overall research and development expenses as compared to fiscal year 2016.

TiVo Service Client Software. The TiVo service client software functions on set-top boxes, and as an app on tablets, and mobile devices which run the TiVo software. We have enhanced the client software to support multiple services and applications, such as receipt of broadband video content, digital music, and photos. The TiVo client software manages interaction with the TiVo service infrastructure in the cloud. After the initial set-up of the TiVo service, the TiVo-enabled set-top box will automatically connect to the TiVo service infrastructure over broadband connection to download the program guide data, client software upgrades, advertising content, and other broadband content. We have also enabled the TiVo service client software to operate on certain third-party set-top boxes, such as on a Cisco, Samsung, or Arris (formerly Pace) manufactured set-top box.

TiVo & Digitalsmiths Service Infrastructure. The TiVo service infrastructure operates the TiVo service, managing the distribution of proprietary services, and specialized content such as program guide data, interactive advertising, and TiVo client software upgrades. It interfaces with our billing and customer support systems for service authorization and bug tracking, among other activities. In addition, the TiVo service infrastructure collects anonymous viewing information uploaded from TiVo-enabled set-top boxes for use in recommendations and personalization, and our audience data analytics efforts. The infrastructure has also been designed to work with the networks of service provider customers.

Cubiware Middleware. In the fiscal year ended January 31, 2016, we acquired Cubiware Sp. Z.o.o. ("Cubiware"), a privately-held provider of cost-effective software solutions for emerging market Pay-TV Operators, based in Warsaw, Poland. Cubiware provides flexible middleware solutions targeted towards Pay-TV Operators - cable, satellite, terrestrial, and telecommunications operators - in developing and emerging markets globally who want to introduce advanced TV services to their networks. Leveraging Cubiware’s advanced software technology, such as CubiTV and CubiConnect, Cubiware gives emerging market Pay-TV Operators the ability to cost-effectively deliver a wide range of interactive services along with a superior user experience to their subscribers. Cubiware's multiscreen technology also enables these Pay-TV Operators to cost-effectively deliver video-oriented services through consumer electronics devices, such as tablets, PCs, and smart phones. Cubiware's technology, through the Cubiware software development kit, also allows Cubiware's Pay-TV Operators to customize their implementation of Cubiware's middleware and user experience to their unique requirements.

TiVo-Enabled Hardware Design. The TiVo-enabled hardware designs, including our latest TiVo BOLT and Roamio DVRs and TiVo Mini non-DVR set-top boxes, are specifications developed by TiVo for set-top boxes and other devices. We provide this design to our contract manufacturer that produces TiVo-branded hardware. The TiVo-enabled hardware design includes a modular front-end that allows the basic platform to be used for digital and analog broadcast, cable, OTT, and VOD. In addition, the TiVo-enabled hardware design allows for connection to broadband networks and mobile devices to enable existing and future services. We believe that the TiVo-enabled hardware design and our lack of dependence on third-party hardware design, which can delay time to market, allows us to innovate our client software at a faster pace.

Data Analytics. Through our subsidiary TiVo Research, we provide data analytic solutions to advertisers, agencies and television networks to improve their advertising targeting, accountability, and return on media investment. TiVo Research provides cross media research, measurement and analytics to its customers that are based upon a nationally representative single-source set of data anonymously linked to purchases made at the household level. TiVo Research’s solutions help its customers with custom research, media planning, post-advertising campaign analysis, media measurement, and attribution.

Significant Relationships

DIRECTV. DIRECTV is the largest provider of satellite television in the U.S. and was recently acquired by AT&T. We have had a longstanding relationship with DIRECTV from 1999 to the present to provide the TiVo service to DIRECTV's customer base. As of January 31, 2016, DIRECTV was our largest MSO customer by service revenue, but no longer represents a meaningful portion of our 5.8 million MSO subscription base. Historically, DIRECTV has paid us a recurring monthly per-household fee for access to the technology needed to provide its customers the TiVo service subject to an aggregate minimum monthly amount. However, due to the decline in the number of DIRECTV MSO subscriptions in recent years, in fiscal year 2016, we recognized the monthly minimum amount each month during the entire year. We incur limited recurring expenses related to the DIRECTV relationship.

In August 2014, our agreement with DIRECTV was extended. The fees paid by DIRECTV are subject to monthly minimum payments that escalate during the term of the agreement; however the agreement will expire on February 15, 2018. The revenues from DIRECTV are material to TiVo's net income. If we are unable to renew this agreement on favorable terms or not at all, our revenues and profits would be negatively impacted by the loss of these DIRECTV payments.

Customer Service and Support

For our TiVo-Owned service, we provide customer support through outsourced service providers as well as our internal customer service personnel. In most cases, when our product is distributed through a television service provider (such as Grande, ONO, RCN, Suddenlink, Cogeco, GCI, and Virgin) the service provider is primarily responsible for customer support. We offer training, network operating center services (NOC support), and other assistance to these service providers.

Individual customers have access to an Internet-based repository for technical information and troubleshooting techniques. They also can obtain support through other means such as the TiVo website, web forums, email, and telephone support.

We offer a manufacturer’s warranty of 90 days for labor and one year for parts on the DVRs TiVo manufacturers, which enable our TiVo-Owned subscriptions. The one year warranty for parts is extended for customers on monthly service plans who also use our latest BOLT and Roamio DVRs for as long as such customers remain active. We contract with third-parties to handle warranty repair. Warranties provided to service providers who distribute TiVo hardware vary in length depending on the agreement.

Research and Product Development

Our research and development efforts are focused on designing and developing the elements necessary to enable the TiVo service. These activities include hardware and software development.

	Fiscal Year Ended January 31,		
	2016	2015	2014
	(in millions)		
Research and Development Expenses	$107.8	$102.2	$106.9

We increased research and development spend by 5% in the fiscal year ended January, 31, 2016 as the number of our regular, temporary, and part-time employees engaged in research and development between January 31, 2015 and January 31, 2016 grew. In the fiscal year ending January 31, 2017, we currently expect our research and development expense to decrease from fiscal year 2016 levels through a combination of resetting research and development priorities and lowering our costs through utilizing international development in Romania and elsewhere.

Manufacturing and Supply Chain

We outsource the manufacturing of our products to third-party manufacturers. This outsourcing extends from prototyping to volume manufacturing and includes activities such as material procurement, final assembly, test, quality control, and shipment to distribution centers. Today the majority of our products are assembled in Mexico, with the majority of our components delivered from manufacturers overseas. Our primary distribution center is operated on an outsourced basis in Texas.

The components that make up our products are purchased from various vendors, including key suppliers such as Broadcom, which supplies system controllers. Some of our components, including system controllers, chassis, remote controls, and certain discrete components are currently supplied by sole source suppliers. Our dependence on these sole source suppliers could expose us to the risk of supply shortages, unexpected price increases, and increased compliance risks with new conflict mineral requirements in the future.

We often require substantial lead time to purchase components and manufacture anticipated quantities of devices that enable the TiVo service. This long lead time requires us to make component purchasing and inventory decisions well in advance of our peak selling periods. We offer our individual end-users who purchase from TiVo.com a 30-day money back guarantee. We typically do not offer a right of return or significant extended payment terms to our retailers.

Seasonality

Sales of our TiVo-Owned devices and subscriptions to the TiVo service are affected by seasonality. Thus, we generate a significant number of our annual device sales and new TiVo-Owned subscriptions during and immediately after the holiday shopping season with associated increases in revenue. We also incur significant increases in expenses in the second half of the year related to hardware costs, marketing development funds and other payments to channel partners, and sales and marketing, subscription acquisition costs in anticipation of the holiday shopping season. There is less seasonality associated with our MSO, Digitalsmiths, Cubiware, and TiVo Research customers.

Competition

We believe that the principal competitive factors in the advanced television market, which includes DVRs, other broadband enabled consumer electronic devices, and mobile apps, are brand recognition and awareness, functionality, ease of use, mobility, personalization, content availability, and pricing. We currently see two primary categories of competitors for the TiVo-Owned channel: DVRs offered by satellite, cable, and telecommunications operators and advanced television products offered by consumer electronics and software companies. The role of the DVR is changing due to on-demand content from VOD, TV Everywhere, Netflix, Hulu, and applications designed to provide programming.

Competition in the TiVo-Owned Subscription Business. Our retail products compete in the United States against solutions sold directly by television service providers. These solutions often have similar feature sets, such as DVR capabilities, search and discovery, multi-room viewing, and TV Everywhere ("TVE") access for mobile devices; Some of these solutions are offered at lower prices but in many cases are bundled with other services provided by the operator and the price for the DVR and DVR service may not be apparent to the consumer. In addition, the DVRs are usually professionally installed and may appeal to consumers who do not pro-actively select a DVR service. TVE for mobile devices and for website portals, could, over time, serve as a substitute to our retail products.

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Our retail products also compete against products with on-demand OTT streaming-enabled devices offered by consumer electronics companies. Though these devices do not offer the breadth of the TiVo service, they do offer alternative ways to access TVE content and OTT internet-delivered video content through devices that many consumers may seek to acquire for other purposes. For example, many consumer electronics companies have television or DVD products that are Internet enabled and others have built dedicated devices for accessing video over the Internet such as AppleTV, FireTV, and Roku. Similarly, companies such as Sony, Sling, and Microsoft have now enabled the digital delivery of video programming over the internet to game consoles and other consumer devices.
Competition in our MSO Business. Our MSO revenues depend upon both our ability to successfully negotiate agreements with our service provider customers and, in turn, upon our customers' successful commercialization of their underlying products. We face competition from companies such as NDS/Cisco, Ericsson (Mediaroom), Motorola/Arris, and from MSO internally developed solutions such as Comcast X1 and Liberty Global's Horizon, which have created competing products that provide user interface software for use on television set-top boxes and consumer electronic and mobile devices. Such companies may offer more economically attractive agreements to service providers and consumer electronics manufacturers by bundling multiple products together.
Competition in the Data Analytics Business. We collect and analyze audience research data in an area where companies such as Nielsen and comScore/Rentrak and other online data analytics companies compete for research spend from advertisers, advertising agencies, and television networks. Other large companies are also focusing resources in this area including: Comcast, Facebook, and Google.

Patents and Intellectual Property

We have filed patent applications relating to numerous inventions resulting from TiVo research and development, including many critical aspects of the design, functionality, and operation of TiVo products and services as well as technology that we may incorporate in future products and services. We have been awarded approximately 533 foreign and domestic patents and have approximately 298 foreign and domestic patent applications pending. For example, we own U.S. Patent No. 6,233,389, titled "Multimedia Time Warping System" (referred to as the Time Warp patent or the '389 patent) which describes an invention that allows an user to store selected television shows while the user is simultaneously watching or storing another program and expires in July 2018. The Time Warp patent has been through reexamination at the United States Patent Office twice and had its claims upheld without modification. The majority of our patents have expirations beyond 2018. In fiscal year ended January 31, 2016, we initiated a patent infringement lawsuit against Samsung in connection with Samsung's making and selling DVRs and mobile devices, and related software, that fall within the scope of one or more claims of the our patents. See Part 1. Item 3. Legal Proceedings for more information on our patent infringement lawsuit with Samsung.
During the fiscal year ended January 31, 2014 we entered into a settlement and patent license agreement with ARRIS Group, Inc. ("Arris") (owner of General Instrument Corporation, formerly a subsidiary of Motorola Mobility, Inc.), Cisco Systems, Inc. ("Cisco"), and Google Inc. ("Google") (owner of Motorola Mobility, LLC formerly Motorola Mobility, Inc.), pursuant to which the parties agreed to settle and dismiss all outstanding litigation between them, including related litigation involving Time Warner Cable (as described in TiVo's periodic reports filed with the Securities and Exchange Commission), provide licenses to certain patents between the parties, and release patent infringement claims between the parties with respect to all outstanding litigation in exchange for a payment of $490 million to TiVo by Google and Cisco in connection with the Motorola/Cisco settlement. During the fiscal year ended January 31, 2012, we entered into separate settlements of pending intellectual property lawsuits we had filed against DISH and AT&T Inc. for $500 million and $215 million, respectively. During the fiscal year ended January 31, 2013 we entered into a settlement of pending intellectual property lawsuit against Verizon for $250.4 million. To date, we have received cash and future technology revenue payment commitments totaling approximately $1.6 billion from intellectual property litigation.
We have secured numerous foreign and domestic trademark registrations for our distinctive marks, including but not limited to registrations, for the marks "TiVo," the TiVo logo, "Season Pass," Thumbs logos, and certain sound marks. We anticipate ongoing progress in our establishment of a defensible and useful intellectual property portfolio; however, we cannot assure you that current patents will be enforceable or our current patent applications will ever be allowed or granted. See Part I. Item 1A. Risk Factors under the headings "Our success depends on our ability to secure and protect our patents, trademarks, and other proprietary rights" and "Intellectual Property claims against us could be

extremely costly, result in the loss of significant rights, require us to alter our current product and business strategy and force us to cease operating our business, in which case our business would be harmed" for additional information concerning our intellectual property.

Privacy Policy

We have adopted a privacy policy, which we make available on our website at www.tivo.com/privacy and make available to each new subscriber to the TiVo service. This policy was last updated in August 2013 to cover new features that we have introduced and plan to introduce in the future. Among other things, this policy explains how we collect, use, disclose, and protect information.

Employees

As of March 11, 2016, we employed approximately 724 full-time employees. We also employ, from time to time, a number of temporary and part-time employees as well as consultants on a contract basis. Our future success will depend in part on our ability to attract, train, retain, and motivate highly qualified employees. We may not be successful in attracting and retaining such personnel. Our employees are not represented by a collective bargaining organization and we have never experienced a work stoppage or strike. Our management considers employee relations to be good.

Executive Officers and Key Employees (as of March 11, 2016):

Name	Age	Position
Naveen Chopra	42	Interim Chief Executive Officer and Senior Vice President, Chief Financial Officer
Charles (Dan) Phillips	57	Chief Operating Officer
Matthew Zinn	51	Senior Vice President, General Counsel, Secretary and Chief Privacy Officer
Pavel Kovar	42	Vice President, Chief Accounting Officer

Naveen Chopra was appointed Interim Chief Executive Officer on January 30, 2016, as well as maintaining his position as the Company's Chief Financial Officer. Since 2012, Mr. Chopra has been responsible for overseeing the Company's accounting and financial reporting, planning, tax, and treasury functions. In addition, Mr. Chopra is responsible for the Company's long-term business strategy and corporate development. Mr. Chopra joined TiVo in 2003 as Director, Business Development, where he later served as Vice President, Business Development, before being promoted to Senior Vice President, Corporate Development and Strategy. Since July 2014, Mr. Chopra has served as a member of the Board of Directors of Vonage Holdings Corp. (NASDAQ:VG). He holds bachelor degrees in computer science and economics from Stanford University and an M.B.A. from the Stanford Graduate School of Business.

Charles (Dan) Phillips was named Chief Operating Officer on December 20, 2012. Prior to that Mr. Phillips had served as Senior Vice President of Engineering and Operations from June 21, 2010 to December 19, 2012. Mr. Phillips oversees Engineering and Operations company-wide, which includes engineering activity for consumer product distribution, service providers, advertising and audience research efforts, as well as manufacturing, distribution, call center, service operations, information technology, facilities, and broadcast center operations. Until that time, Mr. Phillips had served as Vice President, Chief Information Officer and Engineering from November 2009 to June 2010 and as Vice President, Chief Information Officer from October 2006 until November 2009. Prior to joining TiVo, Mr. Phillips held several leadership positions in the high-tech industry. From May 2002 to January 2006, he served as Senior Vice President of Products at TRADOS Software, a globalization software company. Mr. Phillips served as Senior Vice President of Product Development at Uniscape Inc. from December 2000 until it merged with TRADOS in 2002. In July 1996, Mr. Phillips joined CrossWorlds' Software and held multiple executive positions including Vice President of Product Management and Vice President of Engineering until December 2000. From February 1995 to June 1997, Mr. Phillips held several senior management positions at SGI. Mr. Phillips co-founded Meta Systems in May 1991. Mr. Phillips holds B.A. degrees in Business Administration and Computer Information Systems from Humboldt State University.

Matthew Zinn was named Senior Vice President, General Counsel, Secretary, and Chief Privacy Officer in April 2006. Mr. Zinn had served as Vice President, General Counsel, and Chief Privacy Officer since July 2000 and as Corporate Secretary since November 2003. From May 1998 to July 2000, Mr. Zinn was the Senior Attorney, Broadband Law and Policy for the MediaOne Group, a global communications company. From August 1995 to May 1998, Mr. Zinn served as corporate counsel for Continental Cablevision, the third largest cable television operator in the United States. From November 1993 to August 1995, he was an associate with the Washington, D.C., law firm of Cole, Raywid & Braverman, where he represented cable operators in federal, state, and local matters. Mr. Zinn holds a B.A. degree in Political Science from the University of Vermont and holds a J.D. degree from the George Washington

University National Law Center.
Pavel Kovar was named Vice President, Chief Accounting Officer in March 2013, prior to that Mr. Kovar had served as Vice President, Corporate Controller and Treasurer from June 2010 to January 2013. From September

2008 to June 2010, Mr. Kovar served as Senior Director, Corporate Controller. From February 2007 to September 2008 Mr. Kovar served as Director, Chief Accountant. Prior to that Mr. Kovar served as a Senior Manager at Ernst and Young LLP. Mr. Kovar holds a master's degree in International Trade from the University of Economics, Prague, Czech Republic and is a Certified Public Accountant in the State of California.

Other Information

TiVo was incorporated in August 1997 as a Delaware corporation and is located in San Jose, California. In August of 2000, we formed a wholly owned subsidiary, TiVo (U.K.) Ltd., in the United Kingdom. In October of 2001, we formed a subsidiary, TiVo International, Inc., a Delaware corporation. On January 12, 2004, we acquired Strangeberry, Inc., a Palo Alto based technology company specializing in using home network and broadband technologies to create new entertainment experiences on television. On July 16, 2004, TiVo Intl. II, Inc., a wholly owned subsidiary of TiVo Inc., was incorporated in the Cayman Islands. On March 22, 2005, TiVo Brands LLC, a wholly owned subsidiary of TiVo Inc., was incorporated in the State of Delaware. On July 18, 2012, we acquired TRA Global, Inc. a privately-held, media and marketing research company headquartered in New York, New York, now named TiVo Research and Analytics, Inc. ("TiVo Research"). On February 14, 2014, we acquired Digitalsmiths Corporation, a privately-held cloud based video search and recommendation service for the pay-TV industry, based in Raleigh, North Carolina. On May 22, 2015 we acquired Cubiware Sp. Z.o.o. ("Cubiware"), a privately-held provider of cost-effective software solutions for emerging market Pay-TV Operators, based in Warsaw, Poland.

We maintain an Internet website at the following address: www.tivo.com. Financial news and reports and related information about our company as well as non-GAAP to GAAP reconciliation can also be found on this website. The information on our website is not incorporated by reference in this annual report on Form 10-K or in any other filings we make with the Securities and Exchange Commission ("SEC").

We make available on or through our website certain reports and amendments to those reports that we file with or furnish to the SEC in accordance with the Securities Exchange Act of 1934, as amended ("Exchange Act"). These include our annual reports on Form 10-K, our quarterly reports on Form 10-Q, and our 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. We make this information available on or through our website free of charge as soon as reasonably practicable after we electronically file the information with, or furnish it to, the SEC. The public may read and copy any material we file with the SEC at the SEC’s Public Reference Room at 100 F Street, NE, Washington, DC 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at: http://www.sec.gov. The contents of these websites are not incorporated into this filing. Further, the Company’s references to the URLs for these websites are intended to be inactive textual references only.

ITEM 1A. RISK FACTORS

Risk Factors

An investment in our securities involves risks. You should carefully consider the risk factors set forth below as well as the other information contained or incorporated by reference in our filings with the Securities and Exchange Commission before investing in our securities. Any of the following risks could materially and adversely affect our business, financial condition, results of operations or prospects, which in turn could adversely affect our ability to repay our outstanding convertible senior notes and the trading price of our common stock. Additional risks and uncertainties not currently known to us or those currently viewed by us to be immaterial may also materially and adversely affect our business, financial condition or results of operations.

We have incurred significant net losses in the past and may never achieve sustained profitability from our non-licensing related operations. We generate a significant amount of revenue from our patent settlement agreements with DISH, AT&T, Verizon, Motorola/Cisco which expire in calendar year 2018 or later, and if we are unable to renew or replace these revenues, our business would be harmed.

During the fiscal years ended January 31, 2016, 2015, and 2014, our net income was $21.7 million, $30.8 million, and $271.8 million, respectively. As of January 31, 2016, we had an accumulated deficit of $(358.0) million. The size of future net losses or income will be impacted by a number of factors, including the timing of the development or deployment of solutions under our television service provider arrangements, the growth or decline in the number of

TiVo subscriptions, the prices at which we sell TiVo set-top boxes, the amount of research and development expenses we incur to fund new product development and expand our engineering services capacity, and the amount and timing of settlement payments. In fiscal year 2012, we entered into patent settlement

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agreements with DISH and AT&T and in fiscal year 2013, we entered into a patent settlement agreement with Verizon. In fiscal year 2014, we entered into a patent settlement agreement with Motorola/Cisco. The patent settlement agreements with DISH, AT&T, Verizon, and Motorola/Cisco will generate recurring revenues for us until 2024, with the majority of these revenues received by 2019. We generate a significant amount of revenues as a result of these settlement agreements. If we are unable to renew or replace these revenues through similar or other business arrangements, our revenues would decline and our business would be harmed as a result. Unless and until we generate significant additional revenues from our operations or substantially reduce our expenses, we are likely to continue to incur losses in future fiscal years, including after we cease further receipt of our current legal settlement payments and we may never achieve sustained profitability. As such, in the future, continued net losses and negative cash flow could drain our existing cash balance.

We are party to a patent infringement lawsuit involving Samsung. We expect to incur significant expenses as a result, and an adverse outcome in the lawsuit could harm our business.

Our claims against Samsung. On September 8, 2015, the Company filed a complaint against Samsung Electronics Co., LTD, Samsung Electronics America, Inc., and Samsung Telecommunications America, LLC. (“Samsung”) in the United States District Court for the Eastern District of Texas. The complaint asserts U.S. Patent No. 6,233,389, titled “Multimedia Time Warping System,” U.S. Patent No. 6,792,195, titled “Method And Apparatus Implementing Random Access And Time-Based Functions On A Continuous Stream Of Formatted Digital Data,” U.S. Patent No. 7,558,472, titled “Multimedia Signal Processing System,” and U.S. Patent No. 8,457,476, titled “Multimedia Signal Processing System.” The complaint claims that Samsung infringes the Company’s patents by making and selling Samsung DVRs and mobile devices, and related software, that fall within the scope of one or more claims of the Company’s patents. The Company’s complaint also claims that Samsung’s infringement is willful, and seeks, among other things, an unspecified amount in damages as well as an injunction.

Samsung’s claims against us.: On February 11, 2016, Samsung amended its answer to assert U.S. Patent No. 5,978,043, titled “TV Graphical User Interface That Provides Customized Lists Of Programming,” U.S. Patent No. 6,181,333, titled “Television Graphical User Interface Having Channel And Program Sorting Capabilities,” U.S. Patent No. 7,231,592, titled “Method And Apparatus For A Home Network Auto-Tree Builder,” and U.S. Patent No. 8,233,090, titled “Method Of Linkage-Viewing TV Broadcasting Program Between Mobile Communication Apparatus And Digital TV, And Mobile Communication Apparatus And Digital TV Thereof” against the Company. In its amended answer, Samsung counterclaims that the Company infringes Samsung’s patents by making and selling TiVo DVRs, and related software, that fall within the scope of one or more claims of Samsung’s patents. Samsung’s complaint claims that the Company’s infringement is willful, and seeks, among other things, damages in an unspecified amount.

We may make patent assertions, or initiate patent infringement or patent interference actions or other litigation to protect our IP, which could be costly and harm our business.

We are currently engaged in litigation, and litigation may be necessary in the future, to enforce our patents and other IP rights, to protect our trade secrets or to determine the validity and scope of the proprietary rights of others.

We, and many of our current and potential competitors, dedicate substantial resources to protection and enforcement of IP rights. We believe that companies will continue to take steps to protect their technologies, including, but not limited to, seeking patent protection. Companies in the technology and content-related industries have frequently resorted to litigation regarding IP rights. Disputes regarding the ownership of technologies and their associated rights are likely to arise in the future and we may be forced to litigate to determine the validity and scope of other parties' proprietary rights. Any such litigation is inherently risky, the outcome is uncertain, could be costly, could distract our management from focusing on operating our business, could delay recognition of revenue until a settlement or decision is ultimately reached, could result in the invalidation or adverse claims construction of patents, and might ultimately be unsuccessful. The existence and/or outcome of such litigation could harm our business.

In 2014, the Supreme Court of the United States decided the Alice Corp v. CSL Bank International ("Alice") case. The Alice case generally addresses patentable subject matter, and specifically an exception to patentable subject matter for "abstract ideas." In the Alice case, the court provides some general interpretive guidance to be considered when determining whether patent claims are directed to patent-ineligible abstract ideas, along with a two-step test for determining patentable subject matter eligibility going-forward. Practically, the effects of the Alice decision are still being assessed by patent holders, attorneys, the United States Patent & Trademark Office and various courts, all of which are attempting to determine the appropriate analysis and boundaries of the Alice decision on other patents. In any event, the Alice decision will provide potential licensees and accused infringers of

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certain patents - including our patents - new arguments to challenge the validity of such patents, which could cause some delays or risk in pending or future patent negotiations or litigation.
Additionally, the relationships with our customers, suppliers and technology collaborators may be disrupted or terminated as a result of patent assertions that we may make against them, which could harm our business.
Finally, adverse legal rulings could result in the invalidation of our patents, the narrowing of the claims of our patents, or fostering of the perception by licensees or potential licensees that a judicial finding of their infringement is unlikely. Such results or perceptions could decrease the likelihood that licensees or potential licensees may be interested in licensing our patents, or could decrease the amounts of license fees that they are willing to pay, which could harm our business.
We may not be able to join standards bodies, license technologies or integrate with platforms that are necessary or helpful to our product or services businesses because of the encumbrances that the proposed associated agreements place on our patents.
Standards bodies often require, as a condition of joining such bodies, that potential members license, agree to license, disclose or place other burdens on their patents. Similarly, technology licensors and platform operators often require that licensees cross license, or agree not to assert, their patents. In order to develop, provide or distribute certain products or services, we may find it necessary or helpful to join these standard bodies, license these technologies or contract with these platform operators. However, in order to do so, we might have to sign agreements under which we would have to license or agree not to assert patents without being able to collect royalties or for fees that we believe are less than those that we could otherwise collect. Similarly, these agreements could require us to disclose invention-related information that we would otherwise prefer to keep confidential. This inability to be part of standards bodies, to license certain technologies, or to contract with certain platform operators, could harm our business.
Intellectual property claims against us could be extremely costly, result in the loss of significant rights, require us to alter our current product and business strategy and force us to cease operating our business, in which case our business would be harmed.
From time to time, we are sued in court or receive letters from third-parties alleging that we are infringing on their intellectual property. Regardless of their merit, we are forced to devote time and resources to respond to these lawsuits and letters. In addition, if any of these third-parties or others were to be successful in suing us, our business would be harmed because intellectual property litigation may:
•be time-consuming and expensive;
•divert management's attention and resources away from our business;
•cause delays in product delivery and new service introduction;
•cause the cancellation of current or future products, features, functionality or services, or the inability to include certain features or functionality;
•require us to pay significant amounts in damages, royalties and/or licensing fees;
•cause us to incur material expenses as a result of our indemnification obligations; and
•result in an injunction that could force us to limit the functionality of our products and services, stop importing our products and services into certain markets, or cease operating our business altogether.
The emerging advanced-television industry is highly litigious. Additionally, many patents covering interactive television technologies have been granted but have not been commercialized. A number of companies in the advanced-television industry earn substantial profits from technology licensing, and the introduction of new technologies by us is likely to provoke lawsuits from such companies. A successful claim of infringement against us, our inability to obtain an acceptable license from the holder of the patent or other right, or our inability to design around an asserted patent or other right could cause our manufacturers to cease manufacturing DVRs that enable the TiVo service, our retailers to stop selling the product or us to cease providing our service, or all of the above, which would eliminate our ability to generate revenues.
Under our agreements with many of our manufacturing and licensing partners, we may be required to indemnify them in the event that our technology infringes upon the intellectual property rights of third-parties. Due to indemnity obligations which include infringement of third-party intellectual property rights and may also include indemnification

for open source software violations, we could be forced to incur material expenses if our manufacturing and licensing partners are sued. In addition, because the products sold by our manufacturing

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and licensing partners often involve the use of other persons' technology, this increases our exposure to litigation in circumstances where there is a claim of infringement asserted against the product in question, even if the claim does not pertain to our technology.

Our success depends in part on our ability to secure and protect our patents, trademarks, and other proprietary rights.

Our success and ability to compete are substantially dependent upon our internally developed technology. We rely on patent, trademark and copyright law, trade secret protection, as well as confidentiality and license agreements with our employees, customers, partners, and others to protect our intellectual property rights. However, the steps we take to protect our proprietary rights may be inadequate. We have filed patent applications and provisional patent applications covering much of the unique technology used to deliver the TiVo service and its features and functionality. To date, several of these patents have been granted, but we cannot assure you that any additional patents will ever be granted, that any issued patents will protect our intellectual property or that third-parties will not challenge any issued patents. Opposition proceedings may result in changes to certain claims or revocation of a patent. In addition, other parties may independently develop similar or competing technologies that design around any patents that may be issued to us. Our failure to secure and protect our proprietary rights could harm our business.

If cable operators were to cease supporting and providing CableCARDs to consumers or cable operators were to transmit television programs using technology that prevents our retail products from receiving and displaying television programs, the functionality of our current retail products would be severely limited, in which case our business would be harmed.

The cable industry in the United States is currently required to provide access to digital high definition television signals to retail products by supplying separable security modules to decrypt encrypted signals. Traditionally, cable operators have satisfied this separable security requirement by supplying CableCARD conditional access security cards. We rely on cable operators to supply CableCARDs for certain types of our DVRs to receive encrypted digital television signals without a cable operator supplied set-top box. With the limited exception of high definition over the air broadcast channels, our DVRs presently are limited to using CableCARDs to access digital cable, high definition, and premium cable channels (such as HBO) that are delivered in a linear fashion where all programs are broadcast to all subscribers all the time. Our retail cable products are unable to access the encrypted digital television signals of satellite providers such as DIRECTV and Dish as well as alternative television service providers such as AT&T U-verse and Google Fiber. And without CableCARDs, there presently is no alternative way for us to sell a retail cable product that works across cable systems nationwide. Furthermore, to the extent more pay TV customers obtain television service from satellite television providers and alternative television providers such AT&T U-verse and Google Fiber, the desirability of our retail products and service will be harmed.

In November 2014, Congress passed the Satellite Television Extension and Localism Act Reauthorization ("STELAR"). Among other things, STELAR repealed an FCC requirement that cable operators employ separable security (i.e., CableCARDs) in the set-top boxes they lease to their subscribers effective December 4, 2015. STELAR did not alter the requirement that cable operators provide separable security to retail devices and the cable industry has represented to Congress that it would continue to provide and support retail CableCARD devices in compliance with the separable security requirement. However, without continued use by operator leased devices, the prices charged by operators to consumers for CableCARDs could increase and support for retail CableCARD devices could deteriorate.

As part of STELAR, the FCC Chairman established a working group of technical experts, including a representative from TiVo, representing a wide range of stakeholders, to identify, report, and recommend performance objectives, technical capabilities, and technical standards of a not unduly burdensome uniform, and technology and platform neutral software based downloadable security system designed to allow retail devices to access multichannel video programming.

The working group submitted its report to the FCC on August 28, 2015. On February 18, 2016, the FCC initiated a proceeding proposing rules intended to allow companies to build retail devices or software solutions that can navigate the universe of multichannel video programming with a competitive user interface as well as continued support for retail CableCARD devices. If cable operators were to cease supporting and providing CableCARDs to consumers without providing TiVo with a commercially viable alternative method of accessing digital cable, high definition, and premium cable channels that works across cable systems nationwide, we would be unable to sell most of our current retail products, may be unable to create future retail products, and our business would be harmed as the market for devices which only receive over the air broadcast television signals is significantly smaller than the current pay TV market.

Certain cable operators are deploying switched digital video technologies to transmit television programs in an on demand fashion (switched digital) only to subscribers who request to watch a particular program. Although cable operators are deploying a solution to enable our customers to receive channels delivered with switched technologies (known as the "Tuning Adapter"), if this technology is not successful or is not adopted by our customers (due to cost, complexity, functionality, or other reasons), then the increased use of switched technologies and the continued inability of our products to receive switched cable programming without a Tuning Adapter may reduce the desirability and competitiveness of our products and services and adversely affect sales of our TiVo-Owned subscriptions in which case our business would be harmed.

Similarly, if cable operators implement new technologies in the future to transmit television programming that do not allow programs to be received and displayed on our retail products, the desirability and competitiveness of our products and services will be adversely affected and impact the sales of our TiVo-Owned products and services, in which case our business would be harmed.

Legislation, laws or regulations that govern the consumer electronics and television industry, the delivery of programming, access to television signals, and the collection of viewing information from subscriptions could expose us to legal action if we fail to comply and could adversely impact and/or could require us to change our business.

The delivery of television programming, access to television signals by consumer electronics devices, and the collection of viewing information from subscriptions via the TiVo service and a DVR represent a relatively new category in the television and home entertainment industries. As such, it is difficult to predict what laws or regulations will govern our business. Changes in the regulatory climate, the enactment of new legislation, or the expansion, contraction, enforcement or interpretation of existing laws or regulations could expose us to additional costs and expenses and could adversely impact or require changes to our business. For example, legislation regarding customer privacy or copyright could be enacted or expanded in ways that apply to the TiVo service, which could adversely affect our business. Laws or regulations could be interpreted to prevent or limit access to some or all television signals by certain consumer electronics devices, or impose limits on the number of copies, the ability to transfer or move copies, or the length of time a consumer may retain copies of some or all types of television programming. New or existing copyright laws could be applied to restrict the capture of television programming, which would adversely affect our business. It is unknown whether existing laws and regulations will apply to the digital video recorder market. Therefore, it is difficult to anticipate the impact of current or future laws and regulations on our business. We may have significant expenses associated with staying appraised of and in compliance with local, state, federal, and international legislation and regulation of our business and in presenting TiVo's positions on proposed laws and regulations.

The FCC has broad jurisdiction over the telecommunications and cable industries in the U.S. The FCC could promulgate new regulations, or interpret existing regulations in a manner that would cause us to incur significant compliance costs or force us to alter or eliminate certain features or functionality of the TiVo products or services which may adversely affect our business. For example, the FCC could determine that certain of our products fail to comply with regulations concerning matters such as electrical interference, copy protection, digital tuners, or display of television programming based on rating systems. The FCC could also impose limits on the number of copies, the ability to transfer or move copies, the length of time a consumer may retain copies, or the ability to access some or all types of television programming. New regulations could reduce the desirability of our products and services, require us to make changes to our products or services, or increase our compliance costs.

In the future, our revenues and operating results may fluctuate significantly, which may adversely affect the market price of our common stock.

We expect our revenues and operating results to fluctuate significantly due to a number of factors, many of which are outside of our control. Therefore, you should not rely on period-to-period comparisons of results of operations as an indication of our future performance. It is possible that in some periods our operating results may fall below the expectations of market analysts and investors. In such event, the market price of our common stock would likely fall.

Factors that may affect our annual operating results include:

•demand for TiVo products and the TiVo service;
•the timing and introduction of new services and features on the TiVo service;

•seasonality and other consumer and advertising trends;
•entering into new strategic partnerships or amending or terminating existing strategic partnerships;
•timing of the roll-out of the TiVo service and delivery of customized set-top boxes to our strategic partners;
•changes in our pricing policies, the pricing policies of our competitors and general pricing trends in the consumer electronics market;
•timing of revenue recognition under our agreements;
•loss of subscriptions to the TiVo service;
•recruiting and retention of key personnel; and
•general economic conditions.

Because our expenses precede associated revenues, unanticipated shortfalls in revenues could adversely affect our results of operations for any given period and cause the market price of our common stock to fall.

Our future growth depends substantially on the contributions and abilities of key executives. Our business could be harmed if we are unable to recruit, retain and motivate key personnel and our management team.

We must continue to recruit, retain and motivate key personnel and members of our management in order to maintain our current business and support our projected growth. As originally announced on November 17, 2015, we began an executive transition plan whereby our chief executive officer transitioned to non-executive chairman of our Board of Directors on January 30, 2016. As announced on January 12, 2016, we appointed our current chief financial officer, Naveen Chopra, as interim chief executive officer, effective January 30, 2016. The transition of our chief executive officer involves significant risks, and our ability to successfully manage this transition, recruit a new qualified chief executive officer, retain key personnel and members of our management team and manage other organizational changes resulting from this transition could adversely impact our business. If we are unable to identity or employ a permanent chief executive officer in a timely manner, our operational performance could be negatively impacted.

We generate a significant portion of our service and software revenue from our agreement with DIRECTV, which expires in February 15, 2018, which would lead to substantial revenue loss and possible litigation if not renewed. Our contract with DIRECTV, which was recently acquired by AT&T (who is also a TiVo licensee), expires on February 15, 2018. We cannot assure you that our license agreement with DIRECTV will be renewed on terms acceptable to us or at all. If we are unable to replace the revenue associated with this agreement through similar or other business arrangements, our revenues and profit margins would decline and our business would be harmed as a result. While it is our intent to renew both our DIRECTV and AT&T agreements, as a result of AT&Ts acquisition of DIRECTV, the timing and structure of such renewals with AT&T/DIRECTV could have a negative impact on our future revenues. We also cannot assure you that these license agreements will be renewed. Additionally, we may become involved in litigation with these licensees in connection with attempting to negotiate new agreements. The existence and/or outcome of such litigation could harm our business.

We face risks in connection with our marketing and distribution agreements for the development and deployment of TiVo’s advanced television solutions and services to our television service provider customers, including our ability to gain access to certain necessary third-party technologies and possible conflicts between our marketing of a retail DVR service and related products that compete with the products we offer our television service providers.

We face significant technological challenges in our development of TiVo products and services for our television service provider customers as well as challenges related to our dependence on certain third-party technology providers upon whom we depend to provide technology to us to allow us to meet the agreed upon feature and technology requirements requested by our television service provider customers. We also face challenges in managing our television service provider customer relationships while offering and marketing a competing retail DVR service. For example, we rely on access to and receipt of certain technologies from third-parties to enable Video on Demand and other content and search features on our products. Additionally, we have engaged in intellectual property infringement suits with parties that we may otherwise rely on for the delivery of necessary technologies for the enablement of key features of our products and as required by our contractual arrangements with our television service provider customers. For example, we previously engaged in patent infringement litigation with Motorola and Microsoft, who also license technology to us for use in our products to

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enable certain features. If we were unable to gain access to such technologies on reasonable commercial terms, we may be unable to provide certain features and functionalities in our products. In such an event, our products may not be competitive with similar products in the market and further we may not be able to comply with the contractual arrangements with certain of our television service provider customers, and in either case our business would be harmed as a result. Our ability to benefit from these agreements is dependent upon the mass deployment and adoption of our TiVo-branded and non-branded advanced television solutions, which may include TiVo-branded DVRs, third-party set-top boxes which run TiVo software, mobile (iOS and Android) apps, and DVR and non-DVR set-top boxes, among other solutions, by the customers of our television service provider customers. If our television service provider customers do not market our service to their customers, either because of feature limitations due to our inability to access third party technologies or because of channel conflicts between our retail DVR service and our DVR service offered to our television service providers, then our business will be harmed. If we are unable to complete development of these products in a timely and efficient manner to the satisfaction of our television service provider customers, which includes hiring and retaining the necessary number of engineers and software developers to develop each partner’s customized solution, correctly estimating the amount of time and resources that are necessary to develop each such solution, licensing necessary third-party technology (such as, for example, technology which enables the display of VOD content from our partners), and enabling full-scale deployment of our TiVo-branded and non-branded advanced television solutions and services with our television service provider customers, we may not be able to acquire new subscribers from them under these agreements and our business would be harmed.
Furthermore, some of our television service provider customers have the right to receive certain most favored terms from us such that if we were to license similar products and services to other parties at more attractive terms than what such partners receive under their agreements with us, then such partners may be entitled to receive the new more favorable terms. Additionally, such partners may have the right to terminate their agreements with us in the event we are subject to certain specified change of control transactions involving companies specified in their agreements. Further, if any of our partners are subject to a change of control transaction, our business could be harmed if such acquiring company chose to favor a technology provider other than us, despite the fact that many of our agreements with our partners include exclusivity provisions, minimum deployment commitments, or minimum financial commitments. If any of these events occur, including our inability to develop, license, and deploy in a timely, efficient, and on a full-scale basis, we will have difficulty generating revenues and new subscriptions under these agreements and our business would be harmed.
If we fail to adequately manage our increasingly complex distribution agreements, including licensing, development, and engineering services, we could be subjected to unexpected delays in the deployment of TiVo's advanced television solutions, increased costs, possible penalties and adverse accounting and contractual consequences, including termination of such distribution arrangements. In any such event, our business would be harmed.
In connection with our deployment arrangements, we engage in complex licensing, development, and engineering services arrangements with our marketing partners and distributors. These deployment agreements with television service providers usually provide for some or all of the following deliverables: software engineering services, solution integration services, hosting of the TiVo service, maintenance, and support. In general, these contracts are long-term and complex and often rely on the timely performance of such television service provider's third-party vendors that are outside TiVo's control. The engineering services and technology we agree to provide and/or develop may be essential to the functionality of the licensed software and delivered product or such software may involve significant customization and modification for each customer. We have experienced or may experience delays in delivery with television service providers including, for example, Com Hem and Virgin, as well as significant increases in expected costs of development and performance in certain instances in the past. Additional delays could lead to additional costs and adverse accounting treatments forcing us to recognize costs earlier than expected. If we are unable to deliver the contracted for technology, including specified customizations and modifications, and services in a timely manner or at all, then we could face penalties in the form of unreimbursed engineering development work, loss of subscriber or minimum financial commitments on the part of our partners or in extreme cases the early termination of such distribution agreements. In any such case our business would be harmed.

If we fail to properly estimate, manage, and perform the development and engineering services for our television service provider customers, we could incur additional unexpected expenses and losses which could reduce or even eliminate any profit from these deployment arrangements, in which case our business would be harmed.

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When we enter into deployment agreements with television service providers, we are typically required to make cost estimates based on historical experience and various other assumptions. These estimates are assessed continually during the term of the contract and revisions are reflected when the conditions become known. Using different cost estimates related to engineering services may produce materially different operating results, in addition to differences in timing and income statement classification of related expenses and revenues. An unfavorable change in estimates could result in a reduction of profit due to higher cost or the recording of a loss once such a loss becomes known to us that would be borne solely by us. We also recognize revenues for software engineering services that are essential to the functionality of the software or involve significant customization or modification using the percentage-of-completion method. We recognize revenue by measuring progress toward completion based on the ratio of costs incurred, principally labor, to total estimated costs of the project, an input method. If we are unable to properly measure and estimate our progress toward completion in such circumstances, we could incur unexpected additional costs, be required to recognize certain costs earlier than expected, or otherwise be required to delay recognition of revenues unexpectedly. A material inability to properly manage, estimate, and perform these development and engineering services for our television service provider customers could cause us to incur unexpected losses and reduce or even eliminate any profit from these arrangements, and in such a case our business would be harmed.

Many of our current deployment arrangements with television service providers require us to incur significant upfront development, set-up and integration engineering expenses for which we are in total or in part compensated through future service fees received after a solution is launched. If we are required to incur such upfront development and integration costs in excess of any development revenues and we are reasonably assured that these excess upfront development costs are recoverable, we will defer such cost. However, despite the deferral of these development costs, we do incur cash outflows associated with these development efforts resulting in potentially higher cash usage in the near term. The assessment of recoverability is highly dependent on our estimates of engineering and operating costs related to the project. For operators for which we are not hosting the TiVo service (generally outside North America), we would recognize them on a zero margin basis and then start recognizing service revenues (and related margin) only after the initial project-specific development costs are fully recovered. For operators for which we are hosting the TiVo service (generally in North America), we would recognize these deferred integration costs on a straight-line basis after the solution is launched, while at the same time recognizing service revenues (and related margin). As of January 31, 2016, we had approximately $16.2 million in such project-specific deferred costs. As a consequence, it may either be a significant period of time after a solution launches and after we are adding new subscriptions from such deployment arrangement before we experience a corresponding impact on our service revenues (and related margins) from such a deployment arrangement or our overall profitability will be reduced by continued recognition of integration cost. If we fail to properly estimate, manage, and perform these development and engineering services and otherwise comply with the terms of these deployment arrangements, we could incur additional unexpected expenses and losses in connection with these arrangements.

In the event of an early termination of these arrangements with our television service provider customers, we would be forced to recognize any deferred development costs which we have incurred but not recognized without corresponding revenues from development or subscription fees, and in such an event we would be forced to incur unexpected losses. From time to time during development and integration for our television service provider customers, we or our customers may request to revise certain terms of our contracts or statements of work to modify the deliverables required or to otherwise address circumstances and technological requirements not anticipated by the parties when the contract or statement of work was originally agreed upon. Additionally, from time to time, we have experienced delays and may in the future experience delays in our development work with our television service provider customers, which may cause us to modify the terms of those arrangements. If we were to fail in modifying the terms of these arrangements to the satisfaction of both parties and the arrangements were unexpectedly terminated early, we would have to recognize immediately any associated deferred costs that may no longer be deemed recoverable. In such an event that we would have to recognize early such deferred development and integration costs, we would be required to do so without any corresponding revenue in which case we would incur unexpected losses which would harm our business.

We face risks from the consolidation or change of control of television service providers both in the U.S. and internationally. We have marketing and distribution agreements with a number of different television service providers for the licensing and distribution of our technology, products, and services. To the extent our existing television service providers merge or are acquired by other television service providers, we risk losing an existing customer whose new owner may have an existing relationship with a competitor or an existing relationship with us on more favorable terms, or we risk the loss of a potential customer who otherwise may have been interested in our products and services but whose new owner may not. We may also experience delays in

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adoption of our products or services due to a change in control of such television service providers. In the past year, Vodafone acquired our customer Ono and AT&T acquired our customer DIRECTV. In the event of such consolidation in the television industry, our business could be harmed by the loss of existing or potential future customers opportunities.

We face intense competition from a number of sources, which may impair our revenues, increase our subscription acquisition costs, and hinder our ability to generate new subscriptions.

The DVR and advanced television solutions market is rapidly evolving, and we face significant competition. Moreover, the market for in-home entertainment is intensely competitive and subject to rapid technological change. As a result of this intense competition, we could incur increased subscription acquisition costs that could adversely affect our ability to reach or sustain profitability in the future. If new technologies (such as internet streaming) render the DVR market obsolete, we may be unable to generate sufficient revenue to cover our expenses and obligations.

We believe that the principal competitive factors in the DVR and advanced television solutions market are brand recognition and awareness, functionality, ease of use, mobility, personalization, content availability, and pricing. We currently see two primary categories of DVR competitors and advanced television solutions competitors: DVRs and advanced television solutions (e.g. VOD, TVE ("TV Everywhere"), and OTT capabilities) offered by telecommunications, cable and satellite operators and DVRs and other advanced television solutions (e.g. VOD based services on set-top boxes or other consumer electronic devices (TV, BluRay player, tablets, streaming boxes, etc.) which stream content remotely) offered by consumer electronics and software companies. To the extent consumer preferences for the consumption of video evolve to favor advanced television solutions that stream video (such as VOD, TV Everywhere (the delivery of linear TV channels and video via website and mobile and tablet apps), and OTT services (such as Netflix, Amazon Instant Video, Sling TV, and other services) to devices other than the TV rather than record TV on a DVR, consumers may be less likely to purchase our products and services and our business could be harmed.

Our revenues depend both upon our ability to successfully negotiate agreements with service provider customers and, in turn, upon our customers' successful commercialization of our licensed products and technology. We face competition from companies such as Ericsson (Mediaroom), Arris, Cisco/NDS, and Rovi. Such companies may offer more economically attractive agreements to service providers and manufacturers of DVRs. We also face competition from solutions that MSOs may internally develop such as the Comcast X1, DISH Hopper, and DIRECTV Genie.

We face a number of competitive challenges in the sale and marketing of the TiVo service and products that enable the retail version of the TiVo service.

Our success depends upon the successful retail marketing of the TiVo service and related DVRs.

We compete with other consumer electronics products and home entertainment services for consumer spending. DVRs and the TiVo service compete in markets that are crowded with other consumer electronics products and home entertainment services. The competition for consumer spending is intense, and many consumers may choose other products and services over ours. DVRs compete for consumer spending with products such as DVD players, satellite television systems, personal computers, video game consoles, and other dedicated over-the-top video streaming devices (such as Roku, AppleTV, and Amazon Fire TV). The TiVo service competes with home entertainment services such as cable and satellite television, movie rentals, pay-per-view, video on demand, and mail-order DVD services. Such competition could harm our business, financial condition, and results of operations.

Many of these products or services have established markets, broad user bases, and proven consumer acceptance. In addition, many of the manufacturers and distributors of these competing devices and services have substantially greater brand recognition, market presence, distribution channels, advertising and marketing budgets and promotional activities, and more strategic partners. Faced with this competition, we may be unable to effectively differentiate our DVRs and the TiVo service from other consumer electronics devices or entertainment services and our business, financial condition, and results of operations would be harmed.

Consumers may not be willing to pay for our products and services, we may be forced to discount our products and services, and we may introduce products and services at lower price points which could impact our revenues. Many of our customers already pay monthly fees for cable or satellite television. We must convince these consumers to pay a separate subscription fee to receive the TiVo service. Consumers may perceive the TiVo service and related DVR and non-DVR products as too expensive. In order to continue to grow our subscription base, we have lowered the price of our DVRs in the past and raised our subscription pricing and alternatively we may choose to raise our DVR pricing and lower our subscription pricing in the future. As a result of lower hardware pricing and higher subscription pricing, the profitability of such newly acquired customers was shifted outward in time as we need to first recoup the expenses incurred in connection with the sale of a heavily subsidized DVR. For competitive and financial reasons, we may need to change the pricing of our DVRs and our service fees again in the future. Furthermore, we have introduced non-DVR products such as TiVo Mini meant to expand the TiVo experience throughout the home, but such a product has a lower hardware cost and lower associated service fees and it may impact our total revenues as well as our ARPU per subscription to the extent these products are offered at lower subscription price points. The availability of competing services that do not require subscription fees or that are enabled by low or no cost DVRs will harm our ability to effectively attract and retain subscriptions, and in such an event our business would be harmed.

Growth in our TiVo-Owned subscriptions and related revenues could be harmed by offerings by our television distribution partners who also would be able to offer the TiVo service in the future. Our ability to grow our TiVo-Owned subscriptions and related revenues could be harmed by competition from our television distribution partners, such as RCN, Suddenlink, and others, who may be able to offer TiVo-branded DVR and non-DVR solutions to their customers at more attractive pricing than we may be able to offer the TiVo service to our TiVo-Owned customers. Furthermore, if we are unable to sufficiently differentiate the TiVo service offered direct to consumers by TiVo from the TiVo-branded DVR solutions offered by our licensing partners, customers who would have otherwise chosen the TiVo service offered direct to consumers by us may instead choose to purchase the TiVo-branded DVR solution from our licensing partners. Additionally, to the extent that potential customers defer subscribing to the TiVo service in order to wait for announced, but not yet deployed in their geographic area, TiVo-branded DVR solutions from our licensing partners, the growth of our TiVo-Owned subscriptions could be reduced. If our TiVo-Owned subscriptions continue to decrease, our business will be harmed.

We compete with digital cable, satellite, and telecommunications DVRs. Cable, satellite, and telecommunications service providers are accelerating deployment of integrated cable and satellite receivers with DVRs that bundle DVR services with other digital services and do not require their customers to purchase hardware. If we are not able to enter into agreements with these service providers to embed the TiVo service into their offerings, our ability to attract their subscribers to the TiVo service will be limited and our business, financial condition, and results of operations would be harmed.

We also expect to compete with digital cable, satellite, and telecommunications services that provide consumers with DVR and VOD-based services via a broadband connection on an on-demand basis. We are aware of at least two U.S. cable operators, Cablevision, Inc. and Comcast, as well as a number of international television operators, which have deployed server-based DVR technology. To the extent that cable, satellite, or telecommunication operators offer regular television programming with DVR services as part of their server-based VOD offerings or offer linear television programming in other VOD-based broadband delivered services, consumers would have an alternate means of watching time-shifted shows besides physical DVRs. In such an event, competitors would be able to deploy competing DVR services or equivalent VOD-based viewing services (such as the increasing TV Everywhere services from most pay TV) without the expense of deploying DVR hardware in consumer homes. Such an event would impair our ability to compete in a cost-effective manner with these television providers as well as attract and retain customers, in which case, our business, financial condition, and results of operations would be harmed.

It is expensive to establish a strong brand. We believe that establishing and strengthening the TiVo brand is critical to achieving widespread acceptance of our products and services and to establishing key strategic relationships. The importance of brand recognition will increase as current and potential competitors enter the DVR market with competing products and services. Our ability to promote and position our brand depends largely on the success of our marketing efforts and our ability to provide high quality services and customer support. These activities are expensive and we may not generate a corresponding increase in subscriptions or revenues to justify these costs. If we fail to establish and maintain our brand, or if our brand value is damaged or diluted, we may be unable to attract subscriptions and effectively compete in the DVR market.

We rely on our retail partners and service providers to market and distribute our products and services. In addition to our own efforts, our retail partners distribute DVRs that enable the TiVo service. We rely on their sales forces, marketing budgets, and brand images to promote and support DVRs and the TiVo service. Additionally, we now have arrangements with many service providers, both domestically and internationally, to market and promote the TiVo service. We expect to continue to rely on our relationships with these companies to promote and support DVRs and other devices that enable the TiVo service. The loss of one or more of these companies could require us to undertake more of these activities on our own. Further, if any of our service providers elect to support a competing technology, our business could be harmed despite the fact that many of our

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agreements with our service providers include exclusivity provisions, minimum deployment commitments, or minimum financial commitments. As a result, we would spend significant resources to support the TiVo service and DVRs and other devices that enable the TiVo service or would otherwise see a reduction in new and existing service provider deployments from such service providers. The failure of one or more of these companies to provide anticipated marketing support will require us to divert more of our limited resources to marketing the TiVo service. If we are unable to provide adequate marketing support for DVRs and the TiVo service, our ability to attract additional subscriptions to the TiVo service will be limited.

To remain competitive, we must continue to innovate and develop new features and products and make our customers aware of the benefits of our video products. DVR products and services and consumer video technology generally are a continually evolving . Retailers, consumers, and potential partners may perceive little or no benefit from DVR products and services in the evolving consumer electronics world. Many consumers are not aware of the benefits of our video products, including our DVR and non-DVR products, such as the ability to seamlessly integrate linear and broadband/VOD-based video, time-shifting of linear television, fast forward through advertisements/commercials, transfer of recorded programs to portable devices, and access to web based and broadband delivered content not available through traditional cable and satellite operators, and therefore may not value the benefits of the TiVo service and products. We will need to continue to devote a substantial amount of time and resources to educate consumers and promote our products in order to increase our subscriptions. We cannot be sure that a broad base of consumers will ultimately subscribe to the TiVo service or purchase the products that enable the TiVo service.

We face competitive risks in the provision of an entertainment offering involving the distribution of digital content through broadband, including from broadband devices connected directly to the TV or through a PC or other device connected to the TV or to mobile devices.

We have previously launched access to the entertainment offerings of Amazon Video on Demand service, Netflix, Hulu Plus, VUDU, Pandora, and others for the distribution of digital content directly to broadband-connected TiVo devices. Our offerings with Amazon Video On Demand, Netflix, Hulu Plus, Pandora, and others typically involve no significant long-term commitments. We face competitive, technological, and business risks in our ongoing provision of an entertainment offering involving the distribution of digital content through broadband to consumer televisions with Amazon, Netflix, and others, including the availability of premium and high-definition content, as well as the speed and quality of the delivery of such content to TiVo devices. For instance, we face increased competition from a growing number of broadband-enabled devices from providers such as Roku, AppleTV, Amazon, and Google that provide broadband delivered digital content directly to a consumer's television connected to such a device. Additionally, we face competition from online content providers and other PC software providers who deliver digital content directly to a consumer's personal computer, which in some cases may then be viewed on a consumer's television. If we are unable to provide a competitive entertainment offering with Amazon Instant Video, Netflix, Hulu Plus, Pandora, and our other partners, on our own, or an equivalent offering with other third-parties, the attractiveness of the TiVo service to new subscribers would be harmed as consumers increasingly look for new ways to receive and view digital content and our ability to retain and attract subscribers would be harmed.

Our ability to retain our current customers may continue to decrease in the future which could increase our TiVo-Owned subscription monthly churn rate and could cause our revenues to suffer.

We believe factors such as increased competition in the DVR marketplace, failure by us to continue to innovate and deliver new features on current deployed DVRs as well as deliver new DVR models in the future, changing television technologies such as the increasing penetration of high definition, the use of switched digital technology to deliver encrypted digital television signals, and the failure of cable operators in the future to transmit both an analog and digital transmission thus impacting our Series2 DVRs, increased price sensitivity in the consumer base, any deterioration in the quality of our service, and product lifetime subscriptions no longer using our service may cause our TiVo-Owned subscription monthly churn rate to increase. If we are unable to retain our subscriptions by limiting the factors that increase subscription churn, our ability to grow our subscription base could suffer and our revenues would be harmed.

The product lifetime subscriptions to the TiVo service that we currently are obligated to service commit us to providing services for an indefinite period. The revenue we generate from these subscriptions may be insufficient to cover future costs and will negatively impact our TiVo-Owned Average Revenue per Subscription.

We offer a product lifetime subscription option to the TiVo service that commits us to provide the TiVo service for as long as the DVR is in service. We receive product lifetime subscription fees for the TiVo service in advance

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and amortize these fees as subscription revenue over 66 months for product lifetime subscriptions which is our current estimate of the service life of the DVR. If these product lifetime subscriptions use the DVR for longer than anticipated, we will incur costs such as telecommunications and customer support costs without a corresponding subscription revenue stream and therefore will be required to fund ongoing costs of service from other sources, such as advertising revenue. Additionally, if these product lifetime subscriptions use the DVR for longer than the period in which we recognize revenue, our average revenue per subscription ("ARPU") for our TiVo-Owned subscriptions will be negatively impacted as we continue to count these customers as subscriptions without corresponding subscription revenue thus lowering our average revenues across our TiVo-Owned subscription base. As of January 31, 2016, we had approximately 153,000 product lifetime subscriptions that had exceeded the 66 month period we use to recognize product lifetime subscription revenues and had made contact with the TiVo service within the prior six-month period. We will continue to monitor the useful life of a TiVo-enabled DVR and the impact of higher churn, increased competition, and compatibility of our existing TiVo units with high-definition programming. Future results will allow us to determine if our useful life is shorter or longer than currently estimated, in which case we may revise the estimated life and we would recognize revenues from this source over a shorter or longer period.

We face intense competition for advertising and research revenues.

DVR services, in general, and TiVo, specifically, compete with other advertising media such as print, radio, television, Internet, VOD, and other emerging advertising platforms for a share of advertisers' total advertising budgets. If advertisers do not perceive digital video recording services, in general, and TiVo specifically, as an effective advertising medium, they may be reluctant to advertise on the TiVo service. In addition, advertisers may not support or embrace the TiVo technology due to a belief that our technology's ability to fast-forward through commercials will reduce the effectiveness of general television advertising.

We may not fully realize the anticipated positive impacts to future financial results from our restructuring efforts.

We have undertaken recent restructuring efforts to streamline operations and reduce operating expenses. Our ability to achieve the anticipated cost savings and other benefits from our restructuring efforts within expected time frames is subject to many estimates and assumptions, and may vary materially based on factors such as market conditions and the effect of our restructuring efforts on our work force. These estimates and assumptions are subject to significant economic, competitive and other uncertainties, some of which are beyond our control. There can be no assurance that we will fully realize the anticipated positive impacts to future financial results from our current or future restructuring efforts. If our estimates and assumptions are incorrect or if other unforeseen events occur, we may not achieve the cost savings expected from such restructurings, and our business and results of operations could be adversely affected.

The nature of some of our business relationships may restrict our ability to operate freely in the future.

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From time to time, we have engaged and may engage in the future in discussions with other parties concerning business relationships, which have and may in the future include equity investments by such parties in us or may include exclusivity provisions (such as geographic or product specific limitations), most favored customer limitations, and patent licensing arrangements. While we believe that such business relationships have historically enhanced our ability to finance and develop our business model or otherwise were justified by the terms of the particular relationship, the terms and conditions of such business relationships may place some restrictions on the operation of our business, including where we operate, who we work with, and what kinds of activities we may engage in, in the future.

Entertainment companies and other content owners may claim that some of the features of our DVRs violate copyright or trademark laws, which could force us to incur significant costs in defending such actions and affect our ability to market the TiVo service and the products that enable the TiVo service.

Although we have not been the subject of such actions to date, a past competitor's DVRs were the subject of several copyright infringement lawsuits by a number of major entertainment companies, including the major television networks. These lawsuits alleged that the competitor's DVRs violate copyright laws by allowing users to skip commercials, delete recordings only when instructed and use the Internet to send recorded materials to other users. TiVo-enabled DVRs have some similar features, including the ability to fast-forward as well as skip (in certain newer models) through commercials, the ability to speed up the play back of recordings (in certain newer models), the ability to delete recordings only when instructed and the ability to transfer recordings from a TiVo-enabled DVR to a personal computer and/or portable media devices. Based on market or consumer pressures, we may decide in the future to add additional features that may be objectionable to entertainment companies. If similar actions are filed against us based on current or future features of our DVRs and non-DVR products, entertainment companies may seek injunctions to prevent us from including these features and/or damages. Such litigation can be costly, even if we prevail in the litigation, and may divert the efforts of our management. Furthermore, if we were ordered to remove features from our DVRs or other products, we may experience increased difficulty in marketing the TiVo service and related TiVo products and may suffer reduced revenues as a result.

We depend on a limited number of third-parties to manufacture, distribute, and supply critical components, technologies, assemblies, and services for the DVRs that enable the TiVo service. We may be unable to operate our business if these parties do not perform their obligations or we are unable to incorporate such critical components or technologies into our products.

The TiVo service is enabled through the use of a DVR manufactured for us by a third-party contract manufacturer. In addition, we rely on sole suppliers for a number of key components and technologies for these DVRs and other devices we manufacture. We also rely on third-parties with whom we outsource supply-chain activities related to inventory warehousing, order fulfillment, distribution, and other direct sales logistics. We cannot be sure that these parties will perform their obligations as expected or that any revenue, cost savings, or other benefits will be derived from the efforts of these parties. If any of these parties breaches or terminates its agreement with us or otherwise fails to perform its obligations in a timely manner or we are unable to purchase or license such third party components or technologies, we may be delayed or prevented from commercializing our products and services. Because our relationships with these parties are non-exclusive, they may also support products and services that compete directly with us, or offer similar or greater support to our competitors. Any of these events could require us to undertake unforeseen additional responsibilities or devote additional resources to commercialize our products and services or require us to remove certain features or functionalities from our products which may decrease the commercial appeal of our products for our customers. Any of these outcomes would harm our ability to compete effectively and achieve increased market acceptance and brand recognition.

In addition, we face the following risks in relying on these third-parties:

If our manufacturing relationships are not successful, we may be unable to satisfy demand for our products and services. We manufacture DVRs and non-DVRs that enable the TiVo service through a third-party contract manufacturer, Flextronics. Delays, product shortages, and other problems could impair our distribution and brand image and make it difficult for us to attract subscriptions and service our Pay-TV Operator customers. In addition, as we are dependent on Flextronics as our sole third-party contract manufacturer, the loss of this manufacturer would require us to identify and contract with alternative sources of manufacturing, which we may be unable to do or which could prove time-consuming and expensive.

We are dependent on sole suppliers for key components, technologies and services. If these suppliers fail to perform their obligations or we are unable to purchase or license such third party components, technologies or services, we may be unable to find alternative suppliers or deliver our products and services to our customers on time or with the features and functionality they expect. We currently rely on sole suppliers for a number of the key components used in the TiVo-enabled DVRs and the TiVo service, of which we may not have written supply agreements with certain sole suppliers for key components or services for our products. For example, Broadcom is the sole supplier of the system controller for our DVR. We do not currently have a long-term written supply agreement with Broadcom although we do have limited rights to continue to purchase from Broadcom in the event Broadcom notifies us a product is being discontinued. Therefore, Broadcom is not contractually obligated to supply us with these key components on a long-term basis or at all. In addition, because we are dependent on sole suppliers for key components and services, our ability to manufacture our DVRs and other devices is subject to increased risks of supply shortages (without immediately available alternatives), exposure to unexpected cost increases in such sole supplied components, as well as other risks to our business if we were to fail to comply with conflict mineral requirements due to our reliance on these suppliers. Additionally, certain features and functionalities of our TiVo service and DVRs are dependent on third party components and technologies. If we are unable to purchase or license such third party components or technologies, we would be unable to offer certain related features and functionalities to our customers. In such a case, the desirability of our products to our customers could be reduced, thus harming our business.

Gracenote (formerly known as Tribune Media Services, Inc.) is the sole supplier of the program guide data for the TiVo service. Gracenote, is the current sole supplier of program guide data for the TiVo service. Our current Television Listings Data Agreement with Gracenote originally became effective on May 14, 2007 and had an initial term of five years which TiVo has renewed for four additional years, and will expire on May 14, 2016. If we are unable to renew our agreement with Gracenote on terms acceptable to TiVo, our business could be harmed. The agreement provides each party with a termination right if the other party becomes controlled by certain third parties. If Gracenote breaches its obligation to provide us with data, rejects the agreement or otherwise fails to perform its obligations under our agreement, we would be unable to provide certain aspects of the TiVo service to our customers until we are able to incorporate an alternate source of guide data. We currently do not use any alternative television guide data nor have a license to use any alternative guide data. If we were forced to seek an alternative provider of television guide data, there would be significant cost and delay involved in integrating such an alternative source of guide data should we do so in the future. Depending upon the amount of notice we receive of such a breach or rejection of our agreement or notice that we will be unable to renew our agreement by the time it expires, and the amount of development work required by us to incorporate an alternate source of guide data, we may be subject to a period of time in which we are unable to provide the TiVo service to our customers and distribution partners. In such an event, our business would be harmed.

If our arrangements with Broadcom or Gracenote or with our third-party contract manufacturer or other suppliers of critical third party components or technologies were to terminate or expire without a replacement arrangement in place, or if we or our manufacturers were unable to obtain sufficient quantities of these components, technologies, or required program guide data from our suppliers, our search for alternate suppliers could result in significant delays, added expense or disruption in product or service availability.

We depend upon third-parties to provide supply chain services related to inventory management, order fulfillment, and direct sales logistics. We rely on third-party vendors to provide cost-effective and efficient supply chain services. Among other activities, these outsourced services relate to direct sales logistics, including order fulfillment, inventory management and warehousing, and distribution of inventory to third-party retailers. If one or several of our third-party supply chain partners were to discontinue services for us, our ability to fulfill direct sales orders and distribute inventory timely, cost effectively, or at all, would be hindered which could in turn harm our business.

We are dependent on our major retail partners for distribution of our products to consumers. We currently rely on our relationships with major retail distributors including Best Buy, Amazon, and others for distribution of TiVo-enabled DVRs. We do not typically enter into long-term volume commitments with our major retail distributors. If one or several of our major retail partners were to discontinue selling our products, the volume of TiVo-enabled DVRs sold to consumers could decrease which could in turn harm our business.

We face significant risks in overseeing our outsourcing of manufacturing processes as well as in the management of our inventory, and failure to properly oversee our manufacturing processes or to effectively manage our inventory levels may result in product recalls or supply imbalances that could harm our business.

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We have contracted for the manufacture of certain TiVo-enabled DVRs with a contract manufacturer. We sell these units to retailers and distributors, as well as through our own online sales channels. Product manufacturing is outside our core business and we face significant risks if our contract manufacturer does not perform as expected. If we fail to effectively oversee the manufacturing process, including the work performed by our contract manufacturer, we could suffer from product recalls, poorly performing product, and higher than anticipated warranty costs.

In connection with our manufacturing operations, we maintain a finished goods inventory of the DVR units we produce throughout the year. Due to the seasonality in our business and our long-lead time product development and manufacturing cycles, we need to make forecasts of demand and commit significant resources towards manufacturing of our DVR units well in advance of our peak selling periods. We also have risks with respect to changing hardware forecasts with our television service provider customers who may revise their purchase forecasts lower or higher after we have committed manufacturing resources to meeting such forecasts due to long-lead times and prior to the time in which such television service provider forecasts become contractually binding. As such, we are subject to significant risks in managing the inventory needs of our business during the year, including estimates of the appropriate mix of demand across our older and newer DVR models. If we were to overestimate demand for our DVRs, we may end up with inventories that exceed currently forecasted demand which would require us to record additional write-downs. If we were to underestimate demand for our DVRs, we may end up with inventory shortages causing us to fail to meet actual customer demand. Should actual market conditions differ from our estimates, our future results of operations could be materially affected. In the future, we may be required to record write-downs of finished products and materials on-hand and/or additional charges for excess purchase commitments as a result of future changes in our sales forecasts.

Breaches of our cybersecurity systems could degrade our ability to conduct our business operations and deliver products and services to our MSO and retail customers, delay our ability to recognize revenue, compromise the integrity of our products and services, result in significant data losses and the theft of our intellectual property, damage our reputation, result in the breach and termination of our agreements with our MSO customers, expose us to liability to third parties and require us to incur significant additional costs to maintain the security of our networks and data.

We increasingly depend upon our IT systems to conduct virtually all of our business operations, ranging from our internal operations and product development activities to the provision of the TiVo service to our MSO and retail customers to our marketing and sales efforts as well as communications with our MSO and retail customers and business partners. Computer hackers and other criminal elements have attempted to penetrate our network security and our website. Such cyberattacks threaten to misappropriate our proprietary information and cause interruption of our ability to provide the TiVo service to our MSO and retail customers and disrupt our back-end IT services. Because the techniques used by such computer programmers to access or sabotage networks change frequently and may not be recognized until launched against a target, we may be unable to anticipate these techniques. In addition, sophisticated hardware and operating system software, services, and applications that we produce or procure from third parties may contain defects in design or manufacture, including “bugs” and other problems that could unexpectedly interfere with the operation of such systems, services and technologies. We have also outsourced a number of our business functions, including manufacturing, software development, and other activities, to third party contractors, and our business operations also depend, in part, on the success of our contractors’ own cybersecurity measures. Similarly, we rely upon distributors, resellers, and third party manufacturers and licensees to sell our products and our sales operations depend, in part, on the reliability of their cybersecurity measures. Additionally, we depend upon our employees to appropriately handle confidential data and deploy our IT resources in safe and secure fashion that does not expose our network systems to security breaches and the loss of data. Accordingly, if our cybersecurity systems and those of our contractors fail to protect against unauthorized access, sophisticated cyberattacks and the mishandling of data by our employees and contractors, our ability to conduct our business effectively could be damaged in a number of ways, including:

- sensitive data regarding our business and our customers’ businesses, including intellectual property and other proprietary data, could be stolen;

• our electronic communications systems, including email and other methods, could be disrupted, and our ability to conduct our business operations could be seriously damaged until such systems can be restored and secured;

•our ability to process customer orders and electronically deliver products and services could be degraded, and our distribution channels could be disrupted, resulting in delays in revenue recognition;

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- defects and security vulnerabilities could be exploited or introduced into our software products, thereby damaging the reputation and perceived reliability and security of our products and potentially making the data systems of our customers vulnerable to further data loss and cyberincidents; and
- personally identifiable data of our customers, employees and business partners could be stolen or lost.

Should any of the above events occur, we could be subject to significant claims for liability from our customers, and regulatory actions from governmental agencies, our ability to protect our intellectual property rights could be compromised and our reputation and competitive position could be significantly harmed. Also, the regulatory and contractual actions, litigations, investigations, fines, penalties and liabilities relating to data breaches that result in losses of personally identifiable or credit card information of users of our services can be significant in terms of fines and reputational impact and necessitate changes to our business operations that may be disruptive to us. Additionally, we could incur significant costs in order to upgrade our cybersecurity systems and remediate damages. Consequently, our financial performance and results of operations could be adversely affected.

Regulations related to “conflict minerals” may force us to incur additional expenses, may make our supply chain more complex and may result in damage to our reputation with customers.

Under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, or the Dodd-Frank Act, the SEC adopted new requirements for companies that use certain minerals and metals, known as conflict minerals, in their products, whether or not these products are manufactured by third-parties. These requirements will require companies to perform due diligence, disclose and report whether or not such minerals originate from the Democratic Republic of Congo and adjoining countries. These new requirements could adversely affect the sourcing, availability, and pricing of minerals used in the manufacture of our products and the numerous components that go into our products. For instance, a number of our key components in our products are supplied from a single source, and finding alternatives components that would be conflict mineral free in some cases could be expensive and cause delays in our ability to manufacture our products and meet customer demand. In addition, we have and will incur additional costs to comply with the disclosure requirements, including costs related to determining the source of any of the relevant minerals and metals used in our products. Since our supply chain is complex, we may not be able to sufficiently verify the origins for these minerals and metals used in our products through our due diligence procedures, which may harm our reputation. In such event, we may also face difficulties in satisfying customers who require that all of the components of our products are certified as conflict mineral free.

We face significant risks to our business when we engage in the outsourcing of engineering work, including outsourcing of software work oversees, which, if not properly managed, could result in the loss of valuable intellectual property, increased costs due to inefficient and poor work product, and subject us to export control restrictions which could impede or prevent us from working with partners internationally, which could harm our business, including our financial results, reputation, and brand.

We have from time-to-time outsourced engineering work related to the design, development, and manufacturing of our products, typically to save money and gain access to additional engineering resources. We have worked, and expect to in the future work, with companies located in jurisdictions outside of the United States, including, but not limited to, Romania, India, Ukraine, the United Kingdom, and Mexico. We have limited experience in the outsourcing of engineering, manufacturing, and other work to third-parties located internationally that operate under different laws and regulations than those in the United States. If we are unable to properly manage and oversee the outsourcing of this engineering, manufacturing and other work related to our products, we could suffer the loss of valuable intellectual property, or the loss of the ability to claim such intellectual property, including patents, trademarks, trade secrets, and copyrights. We could also be subjected to increased regulatory and other scrutiny related to export control restrictions which could impede or prevent us from working with international partners. Additionally, instead of saving money, we could in fact incur significant additional costs as a result of inefficient or delayed engineering services or poor work product. As a result our business would be harmed, including our financial results, reputation, and brand.

Product defects, system failures, or interruptions to the TiVo service may have a negative impact on our revenues, damage our reputation and decrease our ability to attract new customers as well as remain in contractual compliance with our existing MSO customers.

Our ability to provide uninterrupted service and high quality customer support depends on the efficient and uninterrupted operation of our computer and communications systems. Our computer hardware and other operating systems for the TiVo service are vulnerable to damage or interruption from earthquakes, floods, fires, power loss, telecommunication failures, and similar events. They are also subject to break-ins, sabotage, intentional acts of vandalism, and similar misconduct. Our ability to provide uninterrupted service may also be

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impacted by internal system errors, bugs, and software deployment issues which may cause us to not meet our obligations to MSO customers. These types of interruptions in the TiVo service may reduce our revenues and profits, including possibly resulting in termination of existing MSO customer contracts. We currently house the server hardware that delivers the TiVo service at only one location; however, in the event that location became unavailable, we do have a backup facility capable of delivering the TiVo service. Our business also will be harmed if consumers or our MSO customers believe our service is unreliable. In addition to placing increased burdens on our engineering staff, service outages create a high volume of customer questions and complaints that must be responded to by our customer support personnel. Any frequent or persistent system failures could irreparably damage our reputation and brand and possibly trigger requests for refunds on subscription fees and hardware purchases and possible consumer litigation.

We have detected in the past and may continue to detect software and manufacturing errors in our products in the future. These problems can affect system uptime and result in significant warranty and repair problems, which could cause customer service and customer relations problems. Correcting errors in our software or fixing defects in our products requires significant time and resources, which could delay product releases and affect market acceptance of the TiVo service. Any delivery by us of products or upgrades with undetected material product defects or software errors could harm our credibility and market acceptance of the DVRs and the TiVo service. In addition, defective products could cause a risk of injury that may subject us to litigation or cause us to have to undertake a product recall. For example, we previously became aware of occasions where a part came loose from the remote control device that comes with the DVRs that enable the TiVo service, including occurrences where a young child gagged on or ingested a part of the remote control device. While we are unaware of any injuries resulting from the use of our products, we may be subject to products liability litigation in the future. Additionally, if we are required to repair or replace any of our products, we could incur significant costs, which would harm our business, including our financial condition and results of operations.

If we are unable to create or maintain multiple revenue streams, we may not be able to cover our expenses and this could cause our revenues to decrease and net losses to increase.

Our long-term success will depend on securing additional revenue from such areas as:

- licensing;
- advertising;
- hardware sales
- data analytics, such as audience research data; and
- electronic commerce.

In order to derive substantial revenues from these activities, we will need to attract and retain a large and growing base of subscriptions to the TiVo service. We also will need to work closely with television advertisers, cable, satellite, and telecommunications network operators, electronic commerce companies, and consumer electronics manufacturers to develop products and services in these areas. We may not be able to work effectively with these parties to develop products that generate revenues that are sufficient to justify their costs. We also may be unable to work with, or to continue working with, these parties to distribute video and collect and distribute data or other information to provide these product or services. In addition, we are currently obligated to share a portion of these revenues with several of our strategic partners in exchange for access to certain technologies or services, such as certain cable operator VOD catalogs. Any inability to attract and retain a large and growing group of subscriptions or inability to attract new strategic partners or maintain and extend our relationships with our current strategic partners would seriously harm our ability to support new services and develop new revenue streams.

If we are unable to introduce new products or services, or if our new products and services are unsuccessful, our subscription base and revenues may suffer.

To attract and retain subscriptions and generate revenues, we must continue to maintain and add to our functionality and content and introduce products and services which embody new technologies and, in some instances, new industry standards. This challenge will require hardware and software improvements, as well as maintaining and adding new collaborations with programmers, advertisers, network operators, hardware manufacturers, and other strategic partners. These activities require significant time and resources and may require us to develop and promote new ways of generating revenue with established companies in the television industry. These companies include television advertisers, cable and satellite network operators, electronic commerce companies, and consumer electronics manufacturers. In each of these examples, a small number of large companies dominate a major portion of the market and may be reluctant to work with us to develop new products and services for digital video recorders as well as maintain our current functionality. If we are unable to maintain and further develop and improve the TiVo service or maintain and expand our operations in a cost-effective or timely manner, our ability to attract and retain customers and generate revenue will suffer.

We must manage product transitions successfully in order to remain competitive.

The introduction of a new product or product line is a complex task, involving significant expenditures in research and development, training, promotion and sales channel development, and management of existing product inventories to reduce the cost associated with returns and slow moving inventory. As new products are introduced, we intend to monitor closely the inventory of products to be replaced, and to phase out their manufacture in a controlled manner. However, we cannot assure you that we will be able to execute product transitions in this manner or that product transitions will be executed without harming our operating results. Failure to develop products with required features and performance levels on a cost-effective basis or any delay in bringing a new product to market could significantly reduce our revenues and margins and harm our competitive position.

We may not receive significant revenue from our current research and development efforts for several years, if at all.

Developing TiVo products and integrating acquired technology into existing platforms is expensive, and these investments often require substantial time to generate returns. Our strategy involves significant investments in research and development and related product opportunities. We believe that we must continue to dedicate a significant amount of resources to our research and development efforts to maintain and improve our competitive position. However, we cannot ensure that we will receive significant, if any, revenue from these investments.

If we fail to manage the growth and complexity of our activities, it could disrupt our business and impair our ability to generate revenues.

The growth in our subscription base and increasing complexity of our sources of other revenue have placed, and will continue to place, a significant strain on our management, operational and financial resources, and systems. Specific risks we face as our business expands include:

Any inability of our systems to accommodate future subscription growth, or any inability of our TiVo.com website to handle customer traffic, may cause service interruptions or delay our introduction of new services and limit our ability to sell the TiVo service and TiVo-enabled DVRs. We internally developed many of the systems we use to provide the TiVo service and perform other processing functions. The ability of these systems to scale as we add new subscriptions is unproven. We must continually improve these systems to accommodate subscription growth and to add features and functionality to the TiVo service. Our inability to add software and hardware or to upgrade our technology, systems or network infrastructure could adversely affect our business, cause service interruptions or delay the introduction of new services. Our inability to manage customer traffic and sales volume through our TiVo.com website could limit our ability to sell the TiVo service and TiVo-enabled DVRs in the future. If our website were to become unavailable for a significant amount of time, our ability to provide certain features of the TiVo service and our ability to service customers and sell the TiVo service and TiVo-enabled DVRs would be harmed.

We need to provide acceptable customer support, particularly with respect to installation of DVRs and CableCARDs™, and any inability to do so would harm our brand and ability to retain current subscriptions and generate new subscriptions. Our ability to increase sales, retain current and future subscriptions and strengthen our brand will depend in part upon the quality of our customer support operations, including our ability to assist customers with installation and CableCARD™-related issues. Some customers require significant support when installing the DVR and required CableCARDs™ for our HD DVRs and becoming acquainted with the features and functionality of the TiVo service. We have limited experience with widespread deployment of our products, services, and CableCARD™ installation requirements to a diverse customer base, and we may not have adequate personnel to provide the levels of support that our customers require. In addition, we have entered into agreements with third-parties to provide this support and will rely on them for a substantial portion of our customer support functions. Furthermore, the installation of a CableCARD™ for TiVo customers may be performed by third-party cable operators and TiVo would then be dependent on such parties to timely service new subscribers to enable their receipt of digital and premium cable content. Our failure to provide adequate customer support for the TiVo service, DVRs, and a CableCARD™ will damage our reputation in the DVR and consumer electronics marketplace and strain our relationships with customers and consumer electronics manufacturers. This could prevent us from gaining new or retaining existing subscriptions and could cause harm to our reputation and brand.

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We need to improve our operational and financial systems to support our growth in the future, increasingly complex business arrangements, and rules governing revenue and expense recognition and any inability to do so will adversely affect our billing and reporting.

We have increasingly complex business arrangements, and the rules which govern revenue and expense recognition in our business are increasingly complex as well. To manage the expected growth of our operations and increasing complexity, we will need to improve our operational and financial systems, procedures and controls and continue to increase systems automation to reduce reliance on manual operations. Any inability to do so will affect our billing and reporting. Our current and planned systems, procedures and controls may not be adequate to support our complex arrangements and upcoming rules governing revenue and expense recognition for our future operations and expected growth. Delays or problems associated with our operational and financial systems and controls could adversely affect our relationships with our customers; cause harm to our reputation and brand; and result in errors in our financial and other reporting.

The nature of our business requires the application of complex revenue and expense recognition rules and the current legislative and regulatory environment affecting U.S. Generally Accepted Accounting Principles ("GAAP") is uncertain and volatile, and significant changes in current principles could affect our financial statements going forward.

The accounting rules and regulations that we must comply with are complex. Recent actions and public comments from the Securities Exchange Commission and the Financial Accounting Standards Board (the "FASB") have focused on the integrity of financial reporting generally. In addition, many companies' accounting policies are being subject to heightened scrutiny by regulators and the public. Further, the accounting rules and regulations are continually changing in ways that could materially impact our financial statements. For example, in May 2014, the FASB issued a new accounting guidance on revenue recognition, Accounting Standards Update ("ASU") No. 2014-09, Revenue from Contracts with Customers (Topic 606), that becomes effective for us in the first quarter of fiscal year 2019. The standard permits the use of either the retrospective or cumulative effect transition method. We have not yet selected a transition method and continue to evaluate the impact that this guidance will have on our financial condition and results of operations. Regardless of the transition method, the application of this new guidance may result in exclusion of certain future licensing revenues from the statement of operations after the adoption date, which, despite no change in associated cash flows, could have a material adverse effect on our net income.

We have limited experience and face significant competition in providing service and operations internationally that are subject to different competitors, laws, regulations, and requirements than those in the United States and our inability to compete or comply with such laws, regulations, and requirements could harm our business, including our reputation and brand.

We have provided and expect to continue to provide the TiVo service in jurisdictions outside of the United States, such as the United Kingdom, Spain, Sweden, Mexico, Canada, Australia, and New Zealand. In 2015, we also acquired a Polish company Cubiware Sp. Z.o.o. which provides products and services globally including to customers in Africa, Middle East, Asia, Europe and Latin America. However, we have limited experience in international operations. There are risks inherent in doing business internationally, including privacy and other regulations that vary from country to country, exposure to conditions in the global financial markets, including the potential for further turmoil, economic volatility or global economic slowdown, currency exchange rate fluctuations and inflationary pressures, the requirements of local laws and customs relating to the distribution of content and the display and sale of advertising, import or export restrictions and changes in trade regulations, difficulties in developing, staffing and managing foreign operations, issues related to occupational safety and adherence to diverse local labor laws and regulations, and potentially adverse tax developments. In addition, we face significant competition and technological challenges in competing with other consumer electronics manufacturers in these jurisdictions and in complying with international laws and technological standards such the various digital over-the-air standards like DVB-T. If we are unable to properly manage our international operations or comply with international laws, regulations, and requirements, we could suffer damage to our reputation, brand, revenues and results of operations, and as a result our business would be harmed. We have partnered, and expect to continue to partner, with local broadcasters, cable television operators, and satellite providers to provide the TiVo service internationally and to sell Cubiware and

Digitalsmiths products and services. Transactions with international partners may never materialize or may not result in significant revenue for us and may result in significant costs.

Privacy concerns and laws, evolving regulation of television viewing behavior as well as cloud computing, cross-border data transfer restrictions and other domestic or foreign regulations may limit the use and adoption of our services and adversely affect our business.

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Regulation related to the provision of services similar to what TiVo provides through the Internet is increasing, as federal, state and foreign governments continue to adopt new laws and regulations addressing data privacy and the collection, processing, storage and use of personal information, including television viewing data. In some cases, foreign data privacy laws and regulations, such as the European Union’s Data Protection Directive, and the country-specific laws and regulations that implement that directive, also govern the processing of personal information. Further, laws are increasingly aimed at the use of personal information for marketing purposes, such as the European Union’s e-Privacy Directive, and the country-specific regulations that implement that directive. Such laws and regulations are subject to new and differing interpretations and may be inconsistent among jurisdictions. These and other requirements could reduce demand for our services or restrict our ability to store and process data or, in some cases, impact our ability to offer our services in certain locations or our customers' ability to deploy our solutions globally. For example, the European Court of Justice recently invalidated the U.S.-EU Safe Harbor framework that had been in place since 2000, which allowed companies to meet certain European legal requirements for the transfer of personal data from the European Economic Area to the United States. While other adequate legal mechanisms to lawfully transfer such data remain, and negotiations to replace the U.S.-EU Safe Harbor framework with a new agreement between U.S. and EU regulators are ongoing, the invalidation of the U.S.-EU Safe Harbor framework may result in different European data protection regulators applying differing standards for the transfer of personal data, which could result in increased regulation, cost of compliance and limitations on data transfer for TiVo and its customers. The costs of compliance with and other burdens imposed by laws, regulations and standards may limit the use and adoption of our services, reduce overall demand for our services, lead to significant fines, penalties or liabilities for noncompliance, or slow the pace at which we sign new operator customers outside the U.S., any of which could harm our business.

Entertainment companies, networks, or video distributors may claim that our advertising products or features may unintentionally violate copyright or trademark laws or otherwise unfairly compete with them, which could result in the blocking, stripping or failure to carry out our advertising products or features or force us to incur significant costs in defending such actions and affect our ability to generate advertising revenues.

Entertainment companies, networks, or video distributors may claim that our advertising products or features may unintentionally violate copyright or trademark laws, or otherwise unfairly compete with them, by being placed within, adjacent to, or on top of, existing video programming or advertising. Entertainment companies or video distributors may seek injunctions to prevent us from offering these products or features, seek damages and/or take other measures, such as blocking, stripping or refusing carriage to prevent us from selling or distributing our advertising products. If we were unable to sell or distribute our advertising products or features on our DVRs, we may suffer reduced revenues as a result.

We use open source software in our products, which could expose us to intellectual property infringement claims, require us to provide indemnification to third-parties, and delay or prevent development of certain products or features, any of which could harm our business.

TiVo's products include open source software. From time to time, we may face claims seeking to enforce the terms of an applicable open source license. Such claims could result in litigation, require us to seek licenses from third-parties in order to keep offering our software, require us to re-engineer our software, require us to release proprietary source code, require us to provide indemnification or otherwise subject us to liability to a customer or supplier, or require us to discontinue the sale of a product in the event re-engineering cannot be accomplished in a timely manner, any of which could adversely affect our business.

If we release software that includes open source software licensed under version 3 of the GNU General Public License ("GPLv3"), even if it was software provided to us by a supplier, we may be required to provide end users with the ability to install modified software on their TiVo product, which could adversely affect our business.

If GPLv3 is widely adopted among the open source community, we may be unable to use future open source enhancements or components in our software, which could adversely affect our business.

DVRs could be the subject of future regulation relating to copyright law or evolving industry standards and practices that could adversely impact our business.

In the future, copyright statutes or case law could be changed to adversely impact our business by restricting the ability of consumers to temporally or spatially shift copyrighted materials for their own personal use. Our business would be harmed as a result. In addition, we are aware that some media companies may attempt to form organizations to develop standards and practices in the DVR industry. These organizations or individual media companies may attempt to require companies in the digital video recorder industry to obtain copyright or other licenses. Lawsuits or other actions taken by these types of organizations or companies could make it more difficult

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for us to introduce new services, delay widespread consumer acceptance of our products and services, restrict our use of some television content, increase our costs, and adversely affect our business.

We have acquired and may acquire other companies and businesses and may not realize the expected benefits of these acquisitions.

We have acquired and expect to acquire other companies and businesses in the future. In February 2014, we acquired Digitalsmiths and in May 2015 we acquired Cubiware Sp. Z.o.o. Our future revenue growth and expansion of our business may rely on our successful integration of this and other acquisitions. We may incur significant costs in connection with our potential transactions, including acquisitions that are not consummated. Potential and completed acquisitions involve a number of risks. If any of the following acquisition-related risks occur, our business, operating results or financial condition could be seriously harmed:

- The failure to realize anticipated benefits such as cost savings and revenue enhancements;
- The failure to integrate and manage acquired products and businesses effectively;
- The failure to retain key employees of the acquired company or business;
- Difficulties in combining previously separate companies or businesses into a single unit;
- The substantial diversion of management's attention from day-to-day business when evaluating and negotiating these transactions and integrating an acquired company or business;
- The discovery, after completion of the acquisition, of unanticipated liabilities assumed from the acquired company, business or assets, such that we cannot realize the anticipated value of the acquisition;
- Difficulties related to integrating the products of an acquired company or business in, for example, distribution, engineering, licensing models, or customer support areas;
- Unanticipated costs; or
- The failure to understand and compete effectively in markets where we have limited experience.

Future acquisitions may involve the issuances of stock as full or partial payment of the purchase price for the acquired company or business, grants of restricted stock, restricted stock units, or stock options to employees of the acquired companies or businesses (which may be dilutive to existing stockholders), expenditure of substantial cash resources or the incurrence of a material amount of debt. These arrangements may impact our liquidity, financial position, and results of operations.

Compliance with federal securities laws and regulations is costly.

The federal securities laws and regulations, including the corporate governance and other requirements of the Sarbanes-Oxley Act of 2002 and subsequent laws impose complex and continually changing regulatory requirements on our operations and reporting. These requirements impose comprehensive reporting and disclosure requirements, set stricter independence and financial expertise standards for audit committee members, and impose civil and criminal penalties for companies, their chief executive officers, chief financial officers, and directors for securities law violations. These requirements have increased and will continue to increase our legal compliance costs, increase the difficulty and expense in obtaining director and officer liability insurance, and make it harder for us to attract and retain qualified members of our Board of Directors and/or qualified executive officers. Such developments could harm our results of operations and divert management's attention from business operations.

The investment of our cash, cash equivalents and investments in money market funds and marketable debt securities are subject to risks which may cause losses and affect the liquidity of these investments.

Our investments include various money market funds and marketable debt securities, such as corporate debt securities, U.S. Treasury securities, bank certificates of deposit and commercial paper. Weakened financial markets have at times adversely impacted the general credit, liquidity, market prices and interest rates for these and other types of debt securities. Additionally, changes in monetary policy by the Federal Open Market Committee and concerns about the rising U.S. government debt level may cause a decrease in the purchasing power of the U.S. dollar and adversely affect our investment portfolio. Furthermore, if there is a default or downgrade of U.S. government or agency debt securities, our investment portfolio may be adversely impacted, requiring impairment charges that could adversely affect our liquidity, financial position, results of operations, or cash flows. The financial market and monetary risks associated with our investment portfolio may have a material adverse effect on our financial condition, liquidity, results of operations, or cash flows.

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Our business could be adversely impacted if we have deficiencies in our disclosure controls and procedures or internal control over financial reporting.

The design and effectiveness of our disclosure controls and procedures and internal control over financial reporting may not prevent all errors, misstatements or misrepresentations. While management continues to review the effectiveness of our disclosure controls and procedures and internal control over financial reporting, we cannot assure you that our disclosure controls and procedures and internal control over financial reporting will be effective in accomplishing all control objectives all of the time. For instance, recognizing the significant increase in our investments of cash as a result of our recent patent litigation settlements, we have instituted controls to monitor compliance with the Investment Company Act of 1940 (the “1940 Act”). If we fail to maintain compliance with the 1940 Act in the future such as by failing to continue to qualify for the research and development exemption under the 1940 Act, such noncompliance could have a significant adverse impact on our business. Deficiencies, particularly a material weakness in internal control over financial reporting, which may occur in the future could result in misstatements of our results of operations, restatements of our financial statements, a decline in our stock price, the delisting of our common stock from the Nasdaq Global Market, or otherwise materially adversely affect our business, reputation, results of operation, financial condition or liquidity.

We advertise, market, and sell our services directly to consumers; many of these activities are highly regulated by constantly evolving state and federal laws and regulations and violations of these laws and regulations could harm our business.

We engage in various advertising, marketing, and other promotional activities, such as offering gift subscriptions to consumers, which are subject to state and federal laws and regulations. A constantly evolving network of state and federal laws is increasingly regulating these promotional activities. Additionally, we enter into subscription service contracts directly with consumers which govern both our provision of and the consumers' payment for the TiVo service. For example, consumers who activate new monthly subscriptions to the TiVo service may be required to commit to pay for the TiVo service for a minimum of one year or be subject to an early termination fee if they terminate prior to the expiration of their commitment period. If the terms of our subscription service contracts with consumers, such as our imposition of an early termination fee, or our previously offered rebate or gift subscription programs were to violate state or federal laws or regulations, we could be subject to suit, penalties, and/or negative publicity in which case our business would be harmed.

We and the third-party vendors we work with will need to remain compliant with the Payment Card Industry requirements for security and protection of customer credit card information and an inability to do so by us or our third-party vendors will adversely affect our business.

As a merchant who processes credit card payments from its customers, we are required to comply with the payment card industry requirements imposed on us for the protection and security of our customers' credit card information. If we are unable to successfully remain compliant with the payment card industry requirements imposed on us as a credit card merchant, our business would be harmed because we could be prevented in the future from transacting customer subscription payments by means of a credit card.

We need to safeguard the security and privacy of our subscribers' confidential data and remain in compliance with laws that govern such data, and any inability to do so may harm our reputation and brand and expose us to legal action.

Uncertainty in the marketplace regarding the use of data from our subscribers could reduce demand for the TiVo service and result in increased expenses. Consumers may be concerned about the use of viewing information gathered by the TiVo service and the DVR. Currently, we gather anonymous information about our customers' viewing choices while using the TiVo service, unless a customer affirmatively consents to the collection of personally identifiable viewing information. This anonymous viewing information does not identify the individual customer. Privacy concerns, however, could create uncertainty in the marketplace for digital video recording and for our products and services. Changes in our privacy policy could reduce demand for the TiVo service, increase the cost of doing business as a result of privacy related litigation costs or increased service delivery costs, or otherwise harm our reputation and business.

The DVR collects and stores viewer preferences and other data that many of our customers consider confidential. If our technological security measures are compromised, our customers may curtail or stop use of our products and services. The TiVo service and TiVo products such as DVRs may contain the private information of our customers, and security breaches could expose us to a risk of loss of this information, which could result in potential liability and litigation. Like all services that connect with the Internet, our service, including our website, is vulnerable to break-ins, attacks, attempts to overload our servers with denial-of-service or other attacks and similar disruptions from unauthorized use of our computer systems, any of which could lead to interruptions, delays, or shutdowns of our service, causing loss of critical data or the unauthorized disclosure or use of personally identifiable or other confidential information. If we experience compromises to our security that result in service and website performance or availability problems, the complete shutdown of our service or website, or the loss or unauthorized disclosure of confidential information, our customers may lose trust and confidence in us, and decrease or discontinue their use of our service. Further, outside parties may attempt to fraudulently induce employees to disclose sensitive information in order to gain access to our information or our customers' information. It is also possible that one of our employees who has access to our information or our customer's information as part of his or her employment or who could attempt to gain unauthorized access to our information or our customer's information and use it in violation of our internal policies and procedures. Because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently, often are not recognized until launched against a target, we may be unable to proactively address these techniques or to implement adequate preventative measures from either external or internal threats. We may be required to make significant expenditures to protect against security breaches or to remedy problems caused by any breaches. Additionally, the laws governing such data are constantly changing and evolving and we must comply with these laws or our business, including our reputation, brand and financial results will be harmed. Failure to protect our information and our customer's information from external or internal threats could negatively impact our ability to attract new customers, cause existing customers to cancel their subscriptions, cause commercial partners to cease doing business with us, subject us to third-party lawsuits, regulatory fines or other actions or liabilities, thereby harming our business and operating results.

Legislation, laws or regulations relating to environmental issues, employment matters, and unclaimed property may adversely impact our business in the future.

It is possible that future proposed environmental regulations on consumer electronic devices, such as DVRs and set-top boxes, may regulate and increase the production, manufacture, use, and disposal costs incurred by us and our customers. For example, the Energy Independence and Security Act of 2007 directs the Department of Energy to prescribe labeling or other disclosure requirements for the energy use of standalone digital video recorder boxes. This and future energy regulations could potentially make it more costly for us to design, manufacture, and sell our DVRs to our customers thus harming the growth of our business.

Additionally, as our business grows and we expand our employed and contracted work force, employment laws and regulations will have an increasing impact on our ability to manage and grow our work-force. Regulations and laws relating to the status of contractors, classification and related benefits for exempt and non-exempt employees all may adversely impact our business if we are unable to properly manage and comply with federal, state, and local laws.

Furthermore, as part of our regular business activities now, and in the past, we engage in the issuance of gift subscriptions and the marketing of rebate offers related to the sale of our products and services. It is possible that money received by us for the sale of gift subscriptions or related to our past rebate offers could be subject to state and federal escheat, or unclaimed property, laws in the future. If this were the case, our business could be adversely impacted.

If we fail to comply with the laws and regulations relating to the collection of sales tax and payment of income taxes in the various states in which we do business, we could be exposed to unexpected costs, expenses, penalties, and fees as a result of our noncompliance in which case our business could be harmed.

As our business grows and expands, we have started to do business in an increasing number of states nationally. By engaging in business activities in these states, we become subject to their various laws and regulations, including requirements to collect sales tax from our sales within those states and the payment of income taxes on revenue generated from activities in those states. The laws and regulations governing the collection of sales tax and payment of income taxes are numerous, complex, and vary among states. If we fail to comply with these laws and regulations requiring the collection of sales tax and payment of income taxes in one or more states where we do business, we could be subject to significant costs, expenses, penalties, and fees in which case our business would be harmed.

We are subject to the Foreign Corrupt Practices Act (“FCPA”) and similar laws in other jurisdictions, and our failure to comply with such laws and regulations thereunder could result in penalties which could harm our reputation, business, and financial condition.

We are subject to the FCPA, which generally prohibits companies and their intermediaries from making improper payments to foreign officials for the purpose of obtaining or keeping business. The FCPA also requires companies to maintain adequate record-keeping and internal accounting practices to accurately reflect the

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transactions of the company. Under the FCPA, U.S. companies may be held liable for actions taken by their strategic or local partners or representatives. The FCPA and similar laws in other countries can impose civil and criminal penalties for violations.

If we do not properly implement practices and controls with respect to compliance with the FCPA and similar laws, or if we fail to enforce those practices and controls properly, we may be subject to regulatory sanctions, including administrative costs related to governmental and internal investigations, civil and criminal penalties, injunctions and restrictions on our business activities, all of which could harm our reputation, business and financial condition.

Our Certificate of Incorporation, Bylaws and Delaware law could discourage a third-party from acquiring us and consequently decrease the market value of our common stock.

In the future, we could become the subject of an unsolicited attempted takeover of our Company. Although an unsolicited takeover could be in the best interests of our stockholders, certain provisions of Delaware law and our organizational documents could be impediments to such a takeover. We are subject to the provisions of Section 203 of the Delaware General Corporation Law, an anti-takeover law. In general, the statute prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. Our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws also require that any action required or permitted to be taken by our stockholders must be effected at a duly called annual or special meeting of the stockholders and may not be effected by a consent in writing. In addition, special meetings of our stockholders may be called only by a majority of the total number of authorized directors, the chairman of the board, our chief executive officer or the holders of 50% or more of our common stock. Our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws also provide that directors may be removed only for cause by a vote of a majority of the stockholders and that vacancies on the Board of Directors created either by resignation, death, disqualification, removal or by an increase in the size of the Board of Directors may be filled by a majority of the directors in office, although less than a quorum. Our Amended and Restated Certificate of Incorporation also provides for a classified Board of Directors and specifies that the authorized number of directors may be changed only by resolution of the Board of Directors. These provisions of Delaware law, our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws could make it more difficult for us to be acquired by another company, even if our acquisition is in the best interests of our stockholders. Any delay or prevention of a change of control or change in management could cause the market price of our common stock to decline.

Seasonal trends may cause our quarterly operating results to fluctuate and our inability to forecast these trends may adversely affect the market price of our common stock.

Consumer electronic product sales have traditionally been much higher during the holiday shopping season than during other times of the year. Although predicting consumer demand for our products is very difficult, we have experienced that sales of DVRs and new subscriptions to the TiVo service have been higher during the holiday shopping season when compared to other times of the year. If we are unable to accurately forecast and respond to consumer demand for our products, our reputation and brand will suffer and the market price of our common stock would likely fall.

We expect that a portion of our future revenues will come from targeted commercials and other forms of interactive television advertising enabled by the TiVo service. Expenditures by advertisers tend to be seasonal and cyclical, reflecting overall economic conditions as well as budgeting and buying patterns. A decline in the economic prospects of advertisers or the economy in general could alter current or prospective advertisers' spending priorities or increase the time it takes to close a sale with our advertisers, which could cause our revenues from advertisements to decline significantly in any given period.

The large number of shares available for future sale could adversely affect the market price for our stock.

Sales of a substantial number of shares of our common stock in the public market or the perception that such sales might occur could adversely affect the market price of our common stock. Several of our stockholders own a substantial number of our shares.

As of January 31, 2016, options to purchase a total of 4,546,811 shares and 5,167,216 unvested restricted stock awards and restricted stock units were outstanding under our option and equity incentive plans, and there were 6,332,232 shares available for future grants. We have filed registration statements with respect to the shares of common stock issuable under our option and equity incentive plans. In addition, there were potentially

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14,267,047 shares to be issued upon conversion of our outstanding convertible senior notes maturing in 2016 ("4.0% Notes due 2016"). There were potentially 12,904,679 shares to be issued upon conversion of our outstanding convertible senior notes maturing in 2021 ("2.0% Notes due 2021"). There were potentially 12,904,679 shares to be issued upon conversion of common stock warrants which were issued in conjunction with the 2.0% Notes due 2021. Future sales of the shares of the common stock, or the registration for sale of such common stock, or the issuance of common stock to satisfy our current or future cash payment obligations, to fund litigation expenses, or to acquire technology, property, or other businesses, could cause immediate dilution and adversely affect the market price of our common stock. The sale or issuance of such stock, as well as the existence of outstanding options and shares of common stock reserved for issuance under our option and equity incentive plans, also may adversely affect the terms upon which we are able to obtain additional capital through the sale of equity securities.

Increased leverage as a result of our convertible senior notes offering may harm our financial condition and results of operations.

In September 2014, we issued convertible senior notes with the aggregate principal amount of $230.0 million. Face value of our total convertible debt as of January 31, 2016 was approximately $362.5 million. The indentures governing the convertible senior notes do not restrict our ability to incur additional indebtedness.

Our level of indebtedness could have important consequences to you, because:

- it could affect our ability to satisfy our obligations under the notes;
- a substantial portion of our cash flows from operations will have to be dedicated to interest and principal payments and may not be available for operations, working capital, capital expenditures, expansion, acquisitions or general corporate or other purposes;
- it may impair our ability to obtain additional financing in the future;
- it may limit our flexibility in planning for, or reacting to, changes in our business and industry; and
- it may make us more vulnerable to downturns in our business, our industry or the economy in general.

Our operations may not generate sufficient cash to enable us to service our debt. If we fail to make a payment on the notes, we could be in default on the notes, and this default could cause us to be in default on our other outstanding indebtedness. Conversely, a default on our other outstanding indebtedness may cause a default under the notes.

The hedge transactions and warrant transactions entered into in connection with the 2.0% Notes due 2021 may affect the value of the 2.0% Notes due 2021 and our common stock.

In connection with the offering of the 2.0% Notes due 2021, we entered into privately-negotiated convertible note hedge transactions with certain counterparties ("Options Counterparties") to reduce the potential dilution with respect to our common stock upon conversion of the 2.0% Notes due 2021. The convertible note hedges cover, subject to anti-dilution adjustments substantially similar to those applicable to the 2.0% Notes due 2021, the number of shares of common stock underlying the 2.0% Notes due 2021. We also entered into separate, privately-negotiated warrant transactions with the certain counterparties whereby we sold to independent third parties warrants with the Option Counterparties relating to the same number of shares of our common stock, subject to customary anti-dilution adjustments.

The effect, if any, of these activities, including the direction or magnitude, on the market price of our common stock will depend on a variety of factors, including market conditions, and cannot be ascertained at this time. Any of these activities could, however, adversely affect the market price of our common stock and the trading price of the 2.0% Notes due 2021.

In addition, the Option Counterparties are financial institutions, and we will be subject to the risk that one or more of the Option Counterparties might default under the convertible note hedges. Our exposure to the credit risk of the Option Counterparties will not be secured by any collateral. If any of the Option Counterparties becomes subject to insolvency proceedings, we will become an unsecured creditor in those proceedings with a claim equal to our exposure at the time under the convertible note hedges with such option counterparty. Our exposure will depend on many factors but, generally, the increase in our exposure will be correlated to the increase in the market price and in the volatility of our common stock.

Our business could be adversely impacted in the event of a natural disaster.

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Our corporate headquarters is located in San Jose, California which is where the overwhelming majority of our employees work. Our primary servers are located nearby in San Jose, California. San Jose lies near the San Andreas Fault, among other known and unknown faults, a major source of earthquake activity in California. In the event of an earthquake or similar natural disaster, our ability to continue operations could be adversely affected in which case our business would be harmed.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None

ITEM 2. PROPERTIES

Our corporate headquarters, which houses our administrative, sales and marketing, customer service, and product development activities, is located in San Jose, California, under a lease that expires on January 31, 2017. Our corporate headquarters includes two buildings totaling 127,124 square feet of office space and an additional 37,145 square feet of office space as part of another building. We have a total of 164,269 square feet of office space in San Jose. We believe that our corporate facilities will be adequate to meet our office space needs for the next year as we currently utilize approximately 93% of our total office space. Our current facilities lease obligations are subject to periodic increases and we believe that our existing facilities are well maintained and in good operating condition. We also have operating leases for engineering, sales and administrative office space in New York City, New York; Denver, Colorado; Durham, North Carolina; and Warsaw, Poland.

ITEM 3. LEGAL PROCEEDINGS

From time to time, the Company is involved in numerous lawsuits as well as subject to various legal proceedings, claims, threats of litigation, and investigations in the ordinary course of business, including claims of alleged infringement of third-party patents and other intellectual property rights, commercial, employment, and other matters. The Company assesses potential liabilities in connection with each lawsuit and threatened lawsuits and accrues an estimated loss for these loss contingencies if both of the following conditions are met: information available prior to issuance of the financial statements indicates that it is probable that a liability has been incurred at the date of the financial statements and the amount of loss can be reasonably estimated. While certain matters to which the Company is a party specify the damages claimed, such claims may not represent reasonably possible losses. Given the inherent uncertainties of the litigation, the ultimate outcome of these matters cannot be predicted at this time, nor with respect to the first two matters listed below, can the amount of possible loss or range of loss, if any, be reasonably estimated.

On September 8, 2015, the Company filed a complaint against Samsung Electronics Co., LTD, Samsung Electronics America, Inc., and Samsung Telecommunications America, LLC. (“Samsung”) in the United States District Court for the Eastern District of Texas. The complaint asserts U.S. Patent No. 6,233,389, titled “Multimedia Time Warping System,” U.S. Patent No. 6,792,195, titled “Method And Apparatus Implementing Random Access And Time-Based Functions On A Continuous Stream Of Formatted Digital Data,” U.S. Patent No. 7,558,472, titled “Multimedia Signal Processing System,” and U.S. Patent No. 8,457,476, titled “Multimedia Signal Processing System.” The complaint claims that Samsung infringes the Company’s patents by making and selling Samsung DVRs and mobile devices, and related software, that fall within the scope of one or more claims of the Company’s patents. The Company’s complaint also claims that Samsung’s infringement is willful, and seeks, among other things, an unspecified amount in damages as well as an injunction. On November 17, 2015, Samsung filed an answer denying the Company’s allegations. On February 11, 2016, Samsung amended its answer to assert U.S. Patent No. 5,978,043, titled “TV Graphical User Interface That Provides Customized Lists Of Programming,” U.S. Patent No. 6,181,333, titled “Television Graphical User Interface Having Channel And Program Sorting Capabilities,” U.S. Patent No. 7,231,592, titled “Method And Apparatus For A Home Network Auto-Tree Builder,” and U.S. Patent No. 8,233,090, titled “Method Of Linkage-Viewing TV Broadcasting Program Between Mobile Communication Apparatus And Digital TV, And Mobile Communication Apparatus And Digital TV Thereof” against the Company. In its amended answer, Samsung counterclaims that the Company infringes Samsung’s patents by making and selling TiVo DVRs, and related software, that fall within the scope of one or more claims of Samsung’s patents. Samsung’s complaint claims that the Company’s infringement is willful, and seeks, among other things, damages in an unspecified amount. On February 22, 2016, the Court issued a scheduling order, setting jury selection for March 6, 2017. The Company expects to incur material expenses in connection with this matter.

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On November 24, 2015, Dolby Laboratories Licensing Corporation & Dolby International AB (“Dolby”) formally notified TiVo that TiVo was in material breach of certain provisions in license agreements with Dolby and that TiVo had 30 days to cure the breaches or Dolby would terminate those license agreements. Dolby alleged that TiVo owes Dolby approximately $1.7 million in connection with TiVo’s alleged failure to properly report and pay royalties for sales of certain TiVo hardware and software products, including accrued interest. Dolby further alleged that TiVo owed Dolby approximately $8.7 million in connection with certain third-party hardware products that run TiVo software. TiVo notified Dolby that it does not agree with the results of its audit nor with its assertions that TiVo’s activities in connection with third-party hardware products in any way breach any of TiVo’s license agreements with Dolby. In late December 2015, in the interest of avoiding termination of those license agreements, TiVo tendered the $1.7 million sum, subject to a reservation of rights. On February 18, 2016, Dolby served a further notice of material breach in which Dolby asserted TiVo continues to be in material breach of the same provisions of Dolby's license agreements with TiVo that Dolby previously notified TiVo in November 2015. TiVo intends to defend against these assertions vigorously; however, TiVo may incur material legal expenses and higher royalty costs if this contractual dispute results in litigation and in the event there is an adverse outcome, TiVo’s business could be harmed. No loss is considered probable at this time and TiVo estimates that the range of possible loss could be between $0 and $8.7 million (plus accrued interest) at this time.

On June 15, 2011, TNS Media Research, LLC (d/b/a Kantar Media Audiences, or Kantar) brought a claim for declaratory judgment against TRA Global Inc. (which was acquired by TiVo in July 2012) in the United States District Court for the Southern District of New York alleging non-infringement of United States Patent No. 7,729,940 entitled “Analyzing Return on Investment of Advertising Campaigns by Matching Multiple Data Sources” (the “940 Patent”) and its affiliate Cavendish Square Holding B.V. brought a claim for breach of contract of a Voting Agreement. On June 6, 2012 TiVo Research filed an amended answer and counterclaims alleging affirmative defenses and counterclaims alleging infringement by Kantar of the 940 Patent as well as United States Patent No. 8,000,993 entitled “Using Consumer Purchase Behavior For Television Targeting” (the “993 Patent”) and United States Patent No. 8,112,301 with the same title at the 993 Patent. TiVo Research also asserted counterclaims for aiding and abetting breach of fiduciary duty, misappropriation of trade secrets, and breach of contract. TiVo Research is seeking damages and injunctive relief, as well as other remedies. The defendants deny TiVo Research’s allegations. With respect to the claims alleging patent infringement by Kantar, on February 22, 2016, the District Court entered an order granting Kantar's motion for summary judgment of invalidity under Section 101 as to each of TiVo Research's asserted patent claims. Trial on TiVo Research’s non-patent claims remains scheduled for May 23, 2016.

ITEM 4. MINE SAFETY DISCLOSURES

None

PART II.

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASE OF EQUITY SECURITIES

Market Information for Common Equity

Our common stock has traded on the Nasdaq Global Market under the symbol “TIVO” since September 30, 1999. Prior to that time, there was no public trading market for our common stock.

The following table sets forth, for the periods indicated, the high and low sales prices of our common stock as reported by the Nasdaq Global Market, on any trading day during the respective period:

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Fiscal Year 2016	High	Low
Fourth Quarter ended January 31, 2016	$9.87	$7.48
Third Quarter ended October 31, 2015	$10.05	$8.35
Second Quarter ended July 31, 2015	$11.29	$9.72
First Quarter ended April 30, 2015	$11.92	$10.35
Fiscal Year 2015	High	Low
Fourth Quarter ended January 31, 2015	$13.30	$10.27
Third Quarter ended October 31, 2014	$14.29	$11.56
Second Quarter ended July 31, 2014	$13.95	$11.47
First Quarter ended April 30, 2014	$13.80	$11.31

Holders of Record

As of March 11, 2016, we had 986 stockholders of record. The closing price of our common stock on March 11, 2016 was $7.77 per share.

Dividend Policy

We paid no cash dividends during the fiscal years ended January 31, 2016 and 2015 and we have no current plans to pay a cash dividend in the future although we will continue to evaluate our dividend policy going forward.

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities

We have reacquired shares of stock from employees, upon the vesting of restricted stock that was granted under our Amended & Restated 1999 Employee Incentive Plan and our Amended & Restated 2008 Equity Incentive Award Plan. These shares were surrendered by the employees, and reacquired by us to satisfy the employees' minimum statutory tax withholding which is required on restricted stock once they become vested and are shown in the following table:

Period	(a) Total Number of Shares Purchased		(b) Average Price Paid per share	(c) Total Number of Share Purchased as Part of Publicly Announced Plans or Programs (4)	(d) Maximum Number (or Approximate Dollar Value) of Shares that May Yet be Purchased Under the Plans or Programs (4)
November 1, through November 30, 2015	27,135	(1)	$ 8.99	—	$243,875,183
December 1, through December 31, 2015	21,518	(2)	$ 8.64	—	$243,875,183
January 1, through January 31, 2016	4,368	(3)	$ 8.30	—	$243,875,183

(1) During the month of November 2015 TiVo acquired 27,135 shares at a weighted average price of $8.99 from employees upon the vesting of restricted stock.

(2) During the month of December 2014 TiVo acquired 21,518 shares at a weighted average price of $8.64 from employees upon the vesting of restricted stock.

(3) During the month of January 2015 TiVo acquired 4,368 shares at a weighted average price of $8.30 from employees upon the vesting of restricted stock.

TiVo will continue to reacquire shares of stock from employees as their restricted stock grants vest.

Share Repurchases. During the three past fiscal years ending January 31, 2016, we have purchased a total of 37,923,940 shares of our common stock for an aggregate purchase price of $466.6 million. On September 5, 2014, our board of directors authorized the current discretionary share repurchase program that allows for total new repurchases of $550 million. This plan will expire on January 31, 2017. Under the current discretionary share repurchase program and as of January 31, 2016, we had purchased 21,538,339 shares of common stock at a weighted average price of

12.36 per share for an aggregate purchase price of $266.1 million. Shares repurchased

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are included in issued common shares, but are excluded from outstanding common shares. Additionally, in September 2015, the Company repurchased 4.0% Notes due 2016 with a face value of $40.0 million on the open market. This transaction was made using funds approved under the current discretionary share repurchase program. Any future repurchase or repayment of 4.0% Notes due 2016 will be made using the funds approved under the current discretionary share repurchase program. The remaining authorized amount for stock repurchases under this program was $243.9 million.

Stock Performance Graph

The following table and graph compares the cumulative total stockholder returns for our common stock, the NASDAQ Composite index and the Research Data Group ("RDG") Technology Composite index over the last five fiscal years. The graph and table assume an investment of $100 in TiVo and in each index on January 31, 2011, and that dividends, if any were reinvested. The graph and table depict the change in value of TiVo in relation to the indices as of January 31st of each subsequent year (and not for any interim or other period). The stock performance shown on the graph and table below is not necessarily indicative of future price performance.

* $100 invested on 1/31/2011 in stock or index, including reinvestment of dividends. Fiscal year ending January 31.

	January 31,					
	2011	2012	2013	2014	2015	2016
TiVo Inc.	100.00	107.29	137.95	128.13	108.17	82.52
NASDAQ Composite	100.00	105.66	119.44	159.71	181.15	180.76
RDG Technology Composite	100.00	104.27	113.41	143.92	164.26	163.83

ITEM 6. SELECTED FINANCIAL DATA

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The following selected financial data as of and for the fiscal years ended January 31, 2016, 2015, 2014, 2013, and 2012, respectively are presented below. These historical results are not necessarily indicative of the results of operations to be expected for any future period.

The data set forth below (in thousands, except share and per share data) should be read in conjunction with Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and the consolidated financial statements included in Item 8. Financial Statements and Supplementary Data.

	Fiscal Year Ended January 31,				
	2016	2015	2014	2013	2012
	(in thousands, except per share data and share amounts)				
Consolidated Statements of Operations Data:					
Revenues					
Service and software revenues	$175,178	$150,007	$138,835	$133,725	$131,341
Technology revenues	220,894	202,353	165,630	101,592	58,945
Hardware revenues	93,540	99,119	101,788	68,591	47,893
Net revenues	489,612	451,479	406,253	303,908	238,179
Cost and Expenses					
Cost of service and software revenues	65,536	59,607	49,042	40,107	35,865
Cost of technology revenues	33,426	22,690	25,673	23,175	23,056
Cost of hardware revenues	97,587	95,505	96,633	78,183	59,439
Research and development	107,760	102,209	106,917	115,103	110,367
Sales and marketing	46,705	42,053	39,003	30,353	26,388
Sales and marketing, subscription acquisition costs	11,629	8,906	12,521	8,660	7,392
General and administrative	59,787	59,482	77,311	87,075	96,502
Litigation proceeds	—	—	(108,102)	(78,441)	(230,160)
Transition and restructuring	12,820	—	—	—	—
Income (loss) from operations	54,362	61,027	107,255	(307)	109,330
Interest income	4,168	4,147	4,727	3,951	5,672
Interest expense and other income (expense)	(20,512)	(11,961)	(8,077)	(7,872)	(12,034)
Income (loss) before income taxes	38,018	53,213	103,905	(4,228)	102,968
Benefit from (provision for) income taxes	(16,321)	(22,381)	167,911	(1,036)	(807)
Net income (loss)	$21,697	$30,832	$271,816	$(5,264)	$102,161
Net income (loss) per common share					
Basic	$0.23	$0.29	$2.29	$(0.04)	$0.88
Diluted	$0.23	$0.28	$1.99	$(0.04)	$0.80
Income (loss) for purposes of computing net income (loss) per share:					
Basic	$21,697	$30,832	$271,816	$(5,264)	$102,161
Diluted	$21,697	$35,837	$276,825	$(5,264)	$109,140
Weighted average common and common equivalent shares:					
Basic	92,763,835	106,799,817	118,445,466	119,411,727	116,592,943
Diluted	95,873,814	126,779,467	138,801,463	119,411,727	136,255,424

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	As of January 31,				
	2016	2015	2014	2013	2012
Consolidated Balance Sheets Data:					
Cash and cash equivalents	159,392	178,217	253,713	157,104	169,555
Short-term investments	486,677	564,744	748,759	470,136	449,244
Total assets	1,093,877	1,177,521	1,301,791	763,653	719,810
Long-term portion of deferred revenues	179,133	255,816	331,534	71,823	81,336
Convertible senior notes	318,862	352,562	172,500	172,500	172,500
Total stockholders' equity	344,919	309,313	549,085	340,764	313,027

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

You should read the following discussion and analysis in conjunction with the consolidated financial statements and the accompanying notes included in this annual report and the section entitled “Risk Factors” in Item 1A, as well as other cautionary statements and risks described elsewhere in this report before deciding to purchase, sell or hold our common stock.

Company Overview

We are a global leader in next-generation video technology and innovative cloud-based software-as-a-service solutions. The TiVo experience provides an all-in-one approach for navigating the ‘content chaos’ by seamlessly combining live, recorded, VOD, and over-the-top (e.g. Netflix, Amazon, Hulu Plus, Vudu, and YouTube, among others) television into one intuitive user interface with simple universal search, discovery, viewing, and recording, creating the ultimate viewing experience on televisions, tablets, smartphones, and other devices. As of January 31, 2016, there were over 6.8 million subscriptions to the TiVo service through our TiVo-Owned and Pay-TV Operator businesses.

The footprint of our over 70 Pay-TV Operator customers deploying our traditional TiVo as well as Cubiware and Digitalsmiths products and services now reaches 90 million homes across more than 25 countries. We generate service revenues, hardware revenues (in some instances), and technology revenues, by providing the traditional TiVo service through agreements with leading satellite and cable television service providers and broadcasters. Through our subsidiary, Cubiware Sp. Z.o.o. ("Cubiware"), which we acquired in May 2015, we offer a compelling, cost effective solution for Pay-TV Operators in developing and emerging markets around the world. Through our subsidiary Digitalsmiths Corporation, we provide one of the Pay-TV industry's most broadly adopted cloud-based search and recommendation services.

In our TiVo-Owned business, we generate revenue through both recurring and upfront service fees through sale of TiVo service subscriptions to consumers and through the sale of TiVo devices by third-party retailers and through our on-line store at TiVo.com. We are focused on developing next-generation products beyond our current offerings that will bolster our position in an evolving consumer video landscape.

Through our subsidiary TiVo Research and Analytics, Inc., we also generate revenues through the sale of cross-platform audience research data by providing innovative data analytics solutions for the television industry.

We have also engaged in significant intellectual property litigation with certain television service and technology providers in the United States to protect our technology from infringement. To date, we have received cash and future technology revenue payment commitments of approximately $1.6 billion from intellectual property litigation.

We are focused on enhancing long term shareholder value, and will continue to evaluate opportunities to grow our business organically and/or through acquisitions. On September 5, 2014, our board of directors authorized the current discretionary share repurchase program that allows for total new repurchases of $550.0 million. This plan will expire on January 31, 2017. Under the current discretionary share repurchase program and as of January 31, 2016, we had purchased 21,538,339 shares of common stock at a weighted average price of $12.36 per share for an aggregate purchase price of $266.1 million. Shares repurchased are included in issued common shares, but are excluded from outstanding common shares. Additionally, in September 2015, we repurchased 4.0% Notes due

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2016 with a face value of $40.0 million on the open market. This transaction was made using funds approved under the current discretionary share repurchase program. Any future repurchase or repayment of 4.0% Notes due 2016 will be made using the funds approved under the current discretionary share repurchase program. The remaining authorized amount for stock repurchases under this program was $243.9 million as of January 31, 2016.

Executive Overview

Fiscal year 2017

In the fiscal year ending January 31, 2017, we plan to continue to be focused on our efforts to build leading next-generation video products, enter into new distribution agreements, engage in development work for existing distribution customers, and continue deployment activities for our existing distribution customers. Additionally, we have been and plan to continue to actively protect our intellectual property. We will continue to focus on the following priorities:

•We expect to further grow our Pay-TV subscription base during the fiscal year ending January 31, 2017 through our Pay-TV Operator relationships both in the U.S. and internationally. We expect this growth to come from both distribution with new operators as well as distribution of incremental products such as our non-DVR products that are intended to drive deeper relationships with current Pay-TV Operator customers.

•In addition to our traditional TiVo product we provide to our Pay-TV Operators, we expect to see revenue and volume growth from Digitalsmiths and Cubiware, which provide products and services to Pay-TV Operators as well. Digitalsmiths currently has business relationships with seven of the top ten U.S. Pay-TV Operators as well as various consumer electronics manufacturers and content providers. Cubiware sells its cost-effective video solutions in developing and emerging Pay-TV markets globally.

•At the same time, we plan to manage our traditional TiVo-Owned consumer business with an increased focus on profitability. This includes pricing the existing products in a way that optimizes for margin contribution, rather than growth in new subscriptions. Further, we plan to develop and launch a new class of consumer products beyond our current offering.

•We believe giving Pay-TV Operators a choice of hardware platforms is critical to attracting new Pay-TV Operator customers as well as driving increased penetration in our current Pay-TV Operator customer base to increase our Pay-TV Operator service revenues in the long term. As a result, we expect hardware revenues from these Pay-TV Operators and the associated margins to substantially decline in the future as our U.S. Pay-TV Operator customers transition to third-party hardware from Arris and others which can support our TiVo service. Although we lose hardware margin in the short-term from decreased hardware sales, we believe we gain additional customers in our Pay-TV Operator business that may not otherwise be willing to license the TiVo service.

•We believe that our investment in research and development is critical to remaining competitive and being a leader in next-generation video solutions. However, while we expect our annual research and development spending in fiscal year 2017 to continue to be significant, we expect it to be at lower levels than the fiscal year ended January 31, 2016 as we implement a number of targeted cost saving measures and organizational enhancements. In fiscal year 2017, we expect to continue to launch and pursue new product developments including enhanced cloud-based services such as network DVR, a more personalized user experience, expanded mobile applications, new consumer offerings, data analytics, and a variety of back-office enhancements to increase our operational capacity to handle more operator deployments.

•We expect to continue our development efforts under our existing Pay-TV deployment arrangements. As part of these arrangements, we anticipate receiving some payments upfront and a portion over time that is a recoupment of costs to develop or implement. As such, to the extent that our development costs exceed upfront development or implementation fees from such arrangements, but the recovery of such development costs through future service fees from these Pay-TV Operators is reasonably assured, we will defer such development costs and start expensing them in our Statement of Operations later upon deployment with the Pay-TV Operator.

Key Business Metrics

Management periodically reviews certain key business metrics in order to evaluate our operations, allocate resources, and drive financial performance in our business. Management monitors these metrics together and not individually as it does not make business decisions based upon any single metric.

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Subscriptions. Management reviews the number of subscriptions and households, and believes they may be useful to investors, in order to evaluate our relative position in the marketplace and to forecast future potential service revenues. Below is a table that details the change in our subscription base during the twelve months ended January 31, 2016, 2015, and 2014, respectively. The TiVo-Owned Subscriptions lines refer to subscriptions sold directly or indirectly by TiVo to end-users who have TiVo-enabled devices (such as a DVR or TiVo Mini) and for which TiVo incurs acquisition costs. The MSO Subscriptions lines refer to subscriptions sold to end-users by MSOs such as Cogeco, Com Hem, Mediacom, Vodafone Spain ("ONO"), RCN, Suddenlink, and Virgin, among others, and for which TiVo expects to incur little or no acquisition costs. Additionally, we provide a breakdown of the average monthly subscriptions for the quarter, the total MSO households and the MSO average households for the quarter, the number of fully amortized active product lifetime subscriptions, and percent of TiVo-Owned Subscriptions for which end-users pay recurring fees as opposed to a one-time prepaid product lifetime fee.

	Fiscal Year Ended January 31,		
(Subscriptions in thousands)	2016	2015	2014
TiVo-Owned Subscription Gross Additions:	188	154	126
Subscription Net Additions/(Losses):			
TiVo-Owned	27	(22)	(63)
MSOs	1,305	1,285	1,123
Total Subscription Net Additions/(Losses)	1,332	1,263	1,060
Cumulative Subscriptions:			
TiVo-Owned	971	944	966
MSOs	5,833	4,528	3,243
Total Cumulative Subscriptions	6,804	5,472	4,209
Average Subscriptions:			
TiVo-Owned Average Subscriptions	949	943	987
MSO Average Subscriptions	5,147	3,888	2,656
Total Average Subscriptions:	6,096	4,831	3,643
Total MSO Households	4,837	3,889	2,912
MSO Average Households	4,330	3,403	2,436
Fully Amortized Active Lifetime Subscriptions	153	149	165
% of TiVo-Owned Cumulative subscriptions paying recurring fees	43%	46%	50%

We define a “subscription” as a contract referencing a TiVo-enabled device such as a DVR or a non-DVR device such as a TiVo Mini for which (i) an end-user has paid or committed to pay for the TiVo service and (ii) service is not canceled. Each TiVo-Owned Subscription represents a single TiVo-enabled device (as defined above) and therefore one or more TiVo-Owned Subscriptions may be present in a single household. MSO Subscriptions are a count of the number of devices that connect to the TiVo service and one or more devices may be present in a single MSO Household. TiVo-Owned Subscriptions currently pay for the TiVo service on a recurring payment plan (such as a monthly or annual payment plan) or on a one-time basis for the life of TiVo-enabled device (referred to as product lifetime subscriptions here and sold commercially as All-in subscriptions). Beginning in October 2014, each TiVo Mini device sale includes a product lifetime subscription for that TiVo Mini device, which have much lower average revenues than DVRs. Sales of the TiVo Mini device began in March 2013. TiVo Mini represented 16% and 9% of cumulative TiVo-Owned Subscriptions as of January 31, 2016 and 2015, respectively. Increasing sales of TiVo Minis have helped slow declines, and in some quarters, led to increases in our cumulative TiVo-Owned Subscriptions as well as increased the number of subscriptions (devices) per TiVo-Owned household. This trend has resulted in a slower rate of decline in the total number of TiVo-Owned households. The 22% increase in gross additions of TiVo-Owned Subscriptions in fiscal year 2016 as compared to fiscal year 2015 led to a net addition of TiVo-Owned Subscriptions, which was driven primarily on changes in our whole-home pricing related to the bundling of product lifetime subscriptions with each TiVo Mini device sold, sales of our TiVo OTA ("over-the-air") product, and the launch of our latest innovation the TiVo BOLT™ product. Subscriptions do not include soft-clients (i.e. mobile applications or web portal) or TiVo Stream users. We count product lifetime subscriptions in our subscription base until both of the following conditions are met: (i) the period we use to recognize product lifetime subscription revenues ends; and (ii) the related TiVo-enabled device has not made contact with the TiVo service within the prior six month period. Product lifetime subscriptions past this period which have not called into the TiVo service for six months are not counted in this total.

We define a "household" as one or more devices associated with the same contract or customer number. We currently do not report TiVo-Owned households as we currently receive incremental revenue for each new TiVo-Owned Subscription in the TiVo-Owned business whereas, in some cases, our MSO customers pay us on a per household basis. MSO Subscriptions are a count of the number of devices that connect to the TiVo service and one or more devices may be present in a single MSO Household.

We calculate average subscriptions for the period by adding the average subscriptions for each month and dividing by the number of months in the period. We calculate the average subscriptions for each month by adding the beginning and ending subscriptions for the month and dividing by two. We calculate Average MSO Households for the period by adding the average households for each month and dividing by the number of months in the period. We calculate the average households for each month by adding the beginning and ending households for the month and dividing by two. We are not aware of any uniform standards for defining subscriptions or households and caution that our presentation may not be consistent with that of other companies. Additionally, the fees that our MSOs pay us are typically based upon a specific contractual definition of a subscriber, subscription, household or a TiVo-enabled device which may not be consistent with how we define a subscription or household for our reporting purposes nor be representative of how such fees are calculated and paid to us by our MSOs. Our MSO Subscription and MSO Household data is dependent in part on reporting from our third-party MSO partners.

TiVo-Owned subscriptions increased by 27,000 subscriptions during the fiscal year ended January 31, 2016, as compared to a decrease of 22,000 in the same prior year period. The improvement in net TiVo-Owned subscriptions of 49,000 subscriptions was largely related to 22% growth in gross subscription additions versus fiscal year 2015. The TiVo-Owned installed subscription base increased to 971,000 as of January 31, 2016 as compared to 944,000 as of January 31, 2015. We believe the year over year improvement in total TiVo-Owned subscriptions was primarily due to our whole home pricing strategy with respect to the sales of TiVo Mini as well as the launch of the TiVo BOLT combined with a lower churn rate.

For the fiscal year ended January 31, 2016 our MSO installed subscription base increased by 1.3 million subscriptions to approximately 5.8 million subscriptions. The increase in cumulative MSO Subscriptions of approximately 1.3 million subscriptions from January 31, 2015 was due to subscription growth from a variety of partners including Cogeco, Com Hem, Mediacom, ONO, RCN, Suddenlink, Virgin, and others. This subscription growth is well balanced among both international and domestic MSO partners. We expect continued growth in our MSO installed subscription base through continued growth from existing distribution and as additional MSO distribution deals launch.

TiVo-Owned subscriptions declined by 22,000 subscriptions during the fiscal year ended January 31, 2015, as compared to a decrease of 63,000 in the same prior year period. This improvement was driven by increased TiVo-Owned subscriptions gross additions combined with decreased churn rate as a greater portion of our TiVo-Owned subscription base has transitioned to our newer hardware models which have lower churn rate. TiVo-Owned installed subscription base was approximately 0.9 million subscriptions as of January 31, 2015, which was relatively flat as compared to the same prior year period.

For the fiscal year ended January 31, 2015 our MSO installed subscription base increased by 1.3 million subscriptions to approximately 4.5 million subscriptions. This increase in subscriptions was due to subscription growth from a variety of partners including Virgin, RCN, Suddenlink, ONO, Grande, GCI, Midcontinent, Com Hem, CableONE, and others. This subscription growth is largely related to international MSO subscriptions.

TiVo-Owned Churn Rate per Month. Management reviews this metric, and believes it may be useful to investors, in order to evaluate our ability to retain existing TiVo-Owned Subscriptions (including both monthly and product lifetime subscriptions) by providing services that are competitive in the market. Management believes factors such as service enhancements, service commitments, higher customer satisfaction, and improved customer support may improve this metric. Conversely, management believes factors such as increased competition, lack of competitive service features such as high definition television recording capabilities in our older model DVRs or access to certain digital television channels or MSO Video On Demand services, as well as increased price sensitivity, CableCARD™ installation issues, and CableCARD™ technology limitations, may cause our TiVo-Owned Churn Rate per month to increase.

We define the TiVo-Owned Churn Rate per month as the total TiVo-Owned Subscription cancellations in the period divided by the Average TiVo-Owned Subscriptions for the period (including both monthly and product lifetime subscriptions), which then is divided by the number of months in the period. We calculate Average TiVo-Owned Subscriptions for the period by adding the average TiVo-Owned Subscriptions for each month and dividing by the number of months in the period. We calculate the average TiVo-Owned Subscriptions for each month by adding the beginning and ending subscriptions for the month and dividing by two. We are not aware of any uniform

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standards for calculating churn and caution that our presentation may not be consistent with that of other companies.
The following table presents our TiVo-Owned Churn Rate per month information:

	Fiscal Year Ended January 31,		
	2016	2015	2014
	(In thousands, except percentages)		
TiVo-Owned subscription cancellations	(161)	(176)	(189)
Average TiVo-Owned subscriptions	949	943	987
Annual Churn Rate	(17.0)%	(18.7)%	(19.1)%
Number of Months	12	12	12
TiVo-Owned Churn Rate per month	(1.4)%	(1.6)%	(1.6)%

TiVo-Owned Churn Rate per month decreased to (1.4)% for the fiscal year ended January 31, 2016 as compared to prior years rates of (1.6)%. The decrease in churn for the fiscal year 2016 was largely due to standard-definition boxes becoming a smaller portion of our subscription base as well as a decrease in the total number of cancellations.
Included in our TiVo-Owned Churn Rate per month are those product lifetime subscriptions that have both reached the end of the revenue recognition period and whose DVRs have not contacted the TiVo service within the prior six months. Conversely, we do not count as churn product lifetime subscriptions that have not reached the end of the revenue recognition period, regardless of whether such subscriptions continue to contact the TiVo service.
Subscription Acquisition Cost or SAC. Management reviews this metric, and believes it may be useful to investors, in order to evaluate trends in the efficiency of our marketing programs and subscription acquisition strategies. We define SAC as our total TiVo-Owned acquisition costs for a given period divided by TiVo-Owned Subscription gross additions for the same period. We define total acquisition costs as sales and marketing, subscription acquisition costs less net TiVo-Owned related hardware revenues (defined as TiVo-Owned related gross hardware revenues less revenue share and market development funds paid to retailers) plus TiVo-Owned related cost of hardware revenues. The sales and marketing, subscription acquisition costs line item includes advertising expenses and promotion-related expenses directly related to subscription acquisition activities, but does not include expenses related to advertising sales. We do not include third-parties' subscription gross additions, such as MSOs' gross additions with TiVo subscriptions, in our calculation of SAC because we typically incur limited or no acquisition costs for these new subscriptions, and so we also do not include MSOs' sales and marketing, subscription acquisition costs, hardware revenues, or cost of hardware revenues in our calculation of TiVo-Owned SAC. We are not aware of any uniform standards for calculating total acquisition costs or SAC and caution that our presentation may not be consistent with that of other companies.

	Fiscal Year Ended January 31,		
Subscription Acquisition Costs	2016	2015	2014
	(In thousands, except SAC)		
Sales and marketing, subscription acquisition costs	$11,629	$8,906	$12,521
Hardware revenues	(93,540)	(99,119)	(101,788)
Less: MSOs related hardware revenues	72,266	75,594	74,498
Cost of hardware revenues	97,587	95,505	96,633
Less: MSOs related cost of hardware revenues	(59,047)	(58,214)	(56,643)
Total Acquisition Costs	$28,895	$22,672	$25,221
TiVo-Owned Subscription Gross Additions	188	154	126
Subscription Acquisition Costs (SAC)	$154	$147	$200

As a result of the seasonal nature of our subscription growth in the past, total acquisition costs have varied significantly during the year. Management primarily reviews the SAC metric on an annual basis due to the timing difference between our recognition of promotional program expense and the subsequent addition of the related subscriptions. For example, we have historically experienced increased TiVo-Owned subscription gross additions during the fourth quarter; however, sales and marketing, subscription acquisition activities occur throughout the year.

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During the twelve months ended January 31, 2016, our total acquisition costs were $28.9 million, which was a $6.2 million increase as compared to the same prior year period. This increase was primarily due to increased sales and marketing, subscription acquisition costs of $2.7 million. The increase in sales and marketing, subscription acquisition costs was the result of significant advertising activities in the current year period which included the initial launch of BOLT that was not present in the prior period. Also contributing to the increased total acquisition costs was an increase in cost of hardware revenues as a result of a change in sales mix, wherein a larger portion of our hardware sales was of DVR units which have higher costs. SAC increased by $7 for the twelve months ended January 31, 2016 as compared to the same prior year period as a result of the increase in total acquisition costs as compared to the same prior year period.

During the twelve months ended January 31, 2015, our total acquisition costs were $22.7 million, which was a $2.6 million decrease as compared to the same prior year period. This decrease was primarily due to decreased sales and marketing, subscription acquisition costs of $3.6 million. The decrease in sales and marketing subscription acquisition costs was the result of significant promotions in the fiscal year ended January 31, 2014 which included the initial launch of Roamio that was not present in the fiscal year ended January 31, 2015. Partially offsetting the decreased sales and marketing, subscription acquisition costs was a decrease in the hardware gross margins which is a result of changes in the pricing of our TiVo Mini product and the introduction of our TiVo Roamio OTA product. SAC decreased by $53 for the twelve months ended January 31, 2015 as compared to the same prior year period as a result of the increase in subscription gross additions and the decrease in sales and marketing, subscription acquisition costs as compared to the same prior year period.

TiVo-Owned Average Revenue Per Subscription or ARPU. Management reviews this metric, and believes it may be useful to investors, in order to evaluate the potential of our subscription base to generate service revenues. Investors should not use ARPU as a substitute for measures of financial performance calculated in accordance with GAAP. Management believes it is useful to consider this metric excluding the costs associated with rebates, revenue share, and other payments to channel because of the discretionary and varying nature of these expenses and because management believes these expenses, which are included in hardware revenues, net, are more appropriately monitored as part of SAC. We are not aware of any uniform standards for calculating ARPU and caution that our presentation may not be consistent with that of other companies.

We calculate TiVo-Owned service revenues by subtracting MSOs'-related service revenues and Media services and other service and software revenues (include Advertising, Research, Cubiware revenues, and Digitalsmiths revenues), from our total reported net Service and Software revenues. The table below provides a more detailed breakdown of our Service and Software revenues, and reconciles to our total Service and Software revenues in our Statement of Operations as reported (or previously reported):

	Fiscal Year Ended January 31,		
Service and Software Revenues	2016	2015	2014
	(In thousands)		
TiVo-Owned-related service revenues	$82,568	$88,249	$94,837
MSOs'-related service revenues	66,129	44,516	33,066
Media services and other service and software revenues	26,481	17,242	10,932
Total Service and Software Revenues	$175,178	$150,007	$138,835

We calculate ARPU per month for TiVo-Owned Subscriptions by taking total reported net TiVo-Owned service revenues and dividing the result by the number of months in the period. We then divide the resulting average service revenue by Average TiVo-Owned Subscriptions for the period, calculated as described above for churn rate. The following table shows this calculation:

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TiVo-Owned Average Revenue per Subscription	Fiscal Year Ended January 31, 2016	2015	2014
	(In thousands, except ARPU)		
TiVo-Owned-related service revenues	$82,568	$88,249	$94,837
Average TiVo-Owned revenues per month	6,881	7,354	7,903
Average TiVo-Owned Subscriptions per month	949	943	987
TiVo-Owned ARPU per month	$7.25	$7.80	$8.01

The decrease in TiVo-Owned ARPU per month for the fiscal year ended January 31, 2016 as compared to the same prior year periods, was due primarily to TiVo Mini, which have much lower average revenues than DVRs, growing to 16% of our TiVo-Owned subscription base versus 9% in fiscal year 2015. We expect to continue to see further decreases in the future in TiVo-Owned ARPU to the extent the number of TiVo-Owned subscriptions that are from non-DVR devices, such as TiVo Mini which have lower service fees than for DVRs, remains at current levels or increases.

Critical Accounting Policies and Estimates

In preparing our consolidated financial statements, we make assumptions, judgments and estimates that can have a significant impact on our revenue, operating income (loss) and net income (loss), as well as on the value of certain assets and liabilities on our consolidated balance sheets. We base our assumptions, judgments and estimates on historical experience and various other factors that we believe to be reasonable under the circumstances. Actual results could differ materially from these estimates under different assumptions or conditions. At least quarterly, we evaluate our assumptions, judgments and estimates and make changes accordingly. Historically, our assumptions, judgments and estimates relative to our critical accounting estimates have not differed materially from actual results. Management believes the Company’s critical accounting policies and estimates are those related to revenue recognition, the recognition period for product lifetime subscription revenues, deployment arrangements cost estimates, the valuation of inventory, estimates used in accounting for acquisitions such as the valuation of intangible assets, goodwill and contingent purchase consideration, and the valuation of deferred tax assets. Management considers these policies critical because they are both important to the portrayal of the Company’s financial condition and operating results, and they require management to make judgments and estimates about inherently uncertain matters. The Company’s senior management has reviewed these critical accounting policies and related disclosures with the Audit Committee of the Company’s Board of Directors.

Revenue Recognition

We generate service revenues from fees for providing the TiVo service to consumers and operators and through the sale of advertising and audience research measurement services. We also generate revenues from standalone sales of licenses of Cubiware software, which are mostly one-time sales. We also generate technology revenues from licensing technology (Refer to Note 18. "Settlements" of Notes to Consolidated Financial Statements included in Part II, Item 8. of this report) and by providing engineering professional services. In addition, we generate hardware revenues from the sale of hardware products that enable the TiVo service. A substantial part of our revenues are derived from multiple element arrangements.

We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable, collectability is probable, and there are no post-delivery obligations. Service revenue is generally recognized as the services are performed which generally is ratably over the term of the service period.

Multiple Element Arrangements

Our multiple deliverable revenue arrangements primarily consist of bundled sales of TiVo-enabled DVR and non-DVR STBs and TiVo service to consumers; arrangements with multiple system operators and broadcasters ("MSOs") which generally include delivery of software customization and set up services, training, post contract support ("PCS"), TiVo-enabled DVRs and non-DVR STBs and TiVo service; and bundled sales of advertising and audience research measurement services.

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We allocate revenue to each element in a multiple-element arrangement based upon their relative selling price. We determine the selling price for each deliverable using VSOE of selling price or TPE of selling price, if it exists. If neither vendor specific object evidence ("VSOE") nor third-party evidence ("TPE") of selling price exists for a deliverable, we use our best estimated selling price ("BESP") for that deliverable. Any discounts offered by TiVo are allocated to each of the deliverables based upon their relative selling price. Revenue allocated to each element, limited to the amount not contingent on future performance, is then recognized when the basic revenue recognition criteria are met for the respective element.

Consistent with our methodology under previous accounting guidance, if available, we determine VSOE of fair value for each element based on historical standalone sales to third-parties or from the stated renewal rate for the elements contained in the initial contractual arrangement. We currently estimate selling prices for our PCS, training, TiVo-enabled DVRs and non-DVR STBs for MSOs, and consumer TiVo service based on VSOE of selling price.

In some instances, we may not be able to obtain VSOE of selling price for all deliverables in an arrangement with multiple elements. This may be due to TiVo infrequently selling each element separately or not pricing products within a narrow range. When VSOE cannot be established, we attempt to estimate the selling price of each element based on TPE. TPE would consist of competitor prices for similar deliverables when sold separately. Generally, our offerings contain significant differentiation such that the comparable pricing of products with similar functionality or services cannot be obtained. Furthermore, we sell TiVo-enabled DVRs and non-DVR STBs to consumers whereas our competitors usually lease them to their customers. Therefore, TiVo is typically not able to obtain TPE of selling price.

When we are unable to establish a selling price using VSOE or TPE, which is generally the case for sales of TiVo-enabled DVRs and non-DVR STBs to consumers and advertising and audience research measurement services, we use our BESP in determining the allocation of arrangement consideration. The objective of BESP is to determine the price at which we would transact a sale if the product or service were sold on a standalone basis. BESP is generally used for offerings that are not typically sold on a standalone basis or for new or highly customized offerings. We establish pricing for our products and services by considering multiple factors including, but not limited to, geographies, market conditions, competitive landscape, internal costs, gross margin objectives, and industry pricing practices. When determining BESP for a deliverable that is generally not sold separately, these factors are also considered.

TiVo-enabled DVRs and non-DVR units and TiVo service

TiVo sells the DVR and non-DVR STBs and service directly to end-users through bundled sales programs through the TiVo website. Under these bundled programs, the customer receives a DVR or non-DVR-STBs and commits to a minimum subscription period of one to three years or product lifetime and has the option to either pay a monthly fee over the subscription term (monthly program) or to prepay the subscription fee in advance (prepaid program). After the initial committed subscription term, the customers have various pricing options at which they can renew the subscription.

The VSOE of selling price for the subscription services is established based on standalone sales of the service and varies by service period. We are not able to obtain VSOE for the DVR or non-DVR STBs element due to infrequent sales of standalone DVR or non-DVR STBs to consumers. The BESP of the DVR or non-DVR STBs is established based on the price that we would sell the DVR or non-DVR STBs without any service commitment from the customer. Under these bundled programs, revenue is allocated between hardware revenue for the DVR or non-DVR STBs and service revenue for the subscription using on a relative basis, with the hardware revenue recognized upon delivery, up to an amount not contingent on future service delivery, and the subscription revenue recognized over the term of the service.

Subscription revenues from product lifetime subscriptions are recognized ratably over our estimate of the useful life of a TiVo-enabled DVR or non-DVR STBs associated with the subscription. The estimates of expected lives are dependent on assumptions with regard to future churn of product lifetime subscriptions. We continuously monitor the useful life of a TiVo-enabled DVR or non-DVR STBs and the impact of the differences between actual churn and forecasted churn rates. If subsequent actual experience is not in line with our current assumptions, including higher churn of product lifetime subscriptions due to the incompatibility of its standard definition TiVo units with high definition programming and increased competition, we may revise the estimated life which could result in the recognition of revenues from this source over a longer or shorter period. We recognize product lifetime subscription revenues over a product lifetime of 66 months.

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End users have the right to cancel their subscription within 30 days of subscription activation for a full refund. We establish allowances for expected subscription cancellations.

Arrangements with MSOs

We have two different types of arrangements with MSOs under technology deployment and engineering services agreements. Our arrangements with MSOs typically include software customization and set up services, limited training, PCS, TiVo-enabled DVRs, non-DVR STBs, and TiVo service.

In instances where TiVo hosts the TiVo service, we recognize revenue under the general revenue recognition guidance. We determine whether evidence of an arrangement exists, delivery has occurred, the fee is fixed or determinable, and collection is probable. Revenue recognition is deferred until such time as all of the criteria are met. Elements in such arrangements usually include DVRs, non-DVR STBs, TiVo service hosting, associated maintenance and support and training. Non-refundable payments received for customization and set up services are deferred and recognized as revenue ratably over the longer of the contractual or customer relationship period. The related cost of such services is capitalized to the extent it is deemed recoverable and amortized to cost of revenues over the longer of the contractual or customer relationship period. We have established VSOE of selling prices for training, DVRs, non-DVR STBs, and maintenance and support, based on the price charged in standalone sales of the element or stated renewal rates in the agreement. The BESP of TiVo service is determined considering the size of the MSO and expected volume of deployment, market conditions, competitive landscape, internal costs, and gross margin objectives. Total arrangement consideration is allocated among individual elements on a relative basis and revenue for each element is recognized when the basic revenue recognition criteria are met for the respective elements.

In arrangements where TiVo does not host the TiVo service and which include engineering services that are essential to the functionality of the licensed technology or involve significant customization or modification of the software, we recognize revenue under industry specific software revenue recognition guidance. Under this guidance, such arrangements are accounted for using the percentage-of-completion method or a completed-contract method. The percentage-of-completion method is used if we believe we are able to make reasonably dependable estimates of the extent of progress toward completion and the arrangement as a whole is reasonably expected to be profitable. We measure progress toward completion using an input method based on the ratio of costs incurred, principally labor, to date to total estimated costs of the project. These estimates are assessed continually during the term of the contract, and revisions are reflected when the changed conditions become known.

In some cases, it may not be possible to separate the various elements within the arrangement due to a lack of VSOE of selling prices for undelivered elements in the contract or because of the lack of reasonably dependable estimates of total costs or development costs exceed development revenues but the Company is reasonably assured that no loss will be incurred under the arrangement. Accordingly, the Company applies the following:

•Where no VSOE exists for undeliverable elements, the revenue is recognized on a zero margin up to the amount billable until the Company has established VSOE for undelivered elements or the Company has delivered all elements.

•Where there is a lack of reasonably dependable estimates, the revenue is recognized on a zero margin up to the amount billable until the Company has resolved the estimation uncertainty, after which the Company will recognize margin under the percentage of completion method.

•If the Company cannot be reasonably assured that no loss will be incurred under the arrangement, the Company will account for the arrangement under the completed contract method, which results in a full deferral of the revenue and costs until the project is complete. Provisions for losses are recorded when estimates indicate that a loss will be incurred on the contract.

Where development costs exceed billable development revenues provided that the Company is reasonably assured that no loss will be incurred under the arrangement, the Company recognizes revenues and costs based on a zero profit model, which results in the recognition of equal amounts of revenues and costs, until the engineering professional services are complete. Development costs incurred in excess of revenues recognized are deferred up to the amount deemed recoverable. Thereafter, as the Company recognizes revenue from the MSO arrangement for services, an equal amount of deferred development costs are recognized until all deferred development costs are recovered. Afterwards, any additional MSO service revenue is recognized as service revenue.

Advertising and Audience Research Measurement Services

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Advertising and audience research measurement service revenue is recognized as the service is provided. Advertising services are usually sold in packages customized for each campaign which generally lasts for up to three months. Because of the significant customization of offerings, we have historically not been able to obtain VSOE of selling prices for each element in the package. Accordingly, we would combine all elements in the package as a single unit and recognize revenue ratably over the campaign period. As a result of the updated guidance on multiple element revenue arrangements, we can now estimate BESP for each element in the package and separate them into individual units of accounting. Nonetheless, the new units of accounting have very similar revenue earning patterns and timing and the amounts of revenue recorded in each period are not significantly impacted by the new guidance.

Hardware Revenues

Hardware revenues represent revenues from standalone hardware sales and amounts allocated to hardware elements in multiple element arrangements. Revenues are recognized upon product shipment to the customers or receipt of the products by the customer, depending on the shipping terms, provided that all fees are fixed or determinable, evidence of an arrangement exists, and collectability is reasonably assured. End users have the right to return their product within 30 days of the purchase. We established allowances for expected product and service returns and these allowances are recorded as a direct reduction of revenues and accounts receivable.

Certain payments to retailers and distributors such as market development funds and revenue share are recorded as a reduction of hardware revenues rather than as a sales and marketing expense. Our policy for revenue share payments is to reduce revenue when these payments are incurred and fixed or determinable. Our policy for market development funds is to reduce revenue at the later of the date at which the related hardware revenue is recognized or the date at which the market development program is offered.

Software Revenues

Software revenues represent revenues from standalone sales of licenses of software and amounts allocated to software elements in multiple element arrangements. These sales are to operators or resellers which utilize Cubiware software in set-top boxes produced by the operator, reseller, or a third party. Revenues are recognized upon production of the set-top box in which the software is utilized, provided that all fees are fixed or determinable, evidence of an arrangement exists, and collectability is reasonably assured.

Recognition Period for Product Lifetime Subscription Revenues

We perform a quarterly quantitative and qualitative analysis of the expected life of a product lifetime subscription which incorporates historical and future churn rates. We recognize product lifetime subscription revenues over a product lifetime of 66 months. The estimate of the expected life is dependent on assumptions with regard to future churn of the product lifetime subscriptions. As of January 31, 2016 and 2015, 153,000 and 149,000 product lifetime subscriptions have exceeded the period we use to recognize product lifetime subscription revenues and had made contact with the TiVo service within the prior six month period. This represents approximately 28% and 30% of our active lifetime subscriptions for the fiscal years ended January 31, 2016 and 2015, respectively. We will continue to monitor the useful life of a TiVo-enabled DVR and the impact of the differences between actual churn and forecasted churn rates. If subsequent actual experience is not in line with our current assumptions, we may revise the estimated life which could result in the recognition of revenues from this source over a longer or shorter period.

Deployment Arrangements Cost Estimates

We enter into deployment agreements with MSOs, which typically include software customization and set up services, limited training, PCS, TiVo-enabled DVRs, non-DVR STBs, and TiVo service. We usually incur development cost for which we are in total or in part compensated through service fees received after a solution launch. When we are reasonably assured that these upfront development costs are recoverable, we defer such cost and recognize them after the launch of the solution. The assessment of recoverability is highly dependent on our estimates of engineering costs related to the project. We also recognize revenues for certain software engineering services that are essential to the functionality of the software or involve significant customization or modification using the percentage-of-completion method. We recognize revenue by measuring progress toward completion based on the ratio of costs incurred, principally labor, to total estimated costs of the project, an input method. For these projects we believe we are able to make reasonably dependable estimates based on historical experience and various other assumptions that we believe to be reasonable under the circumstances. These estimates include forecasting of costs and schedules, tracking progress of costs incurred to date, and projecting the remaining effort to complete the project. Costs included in project costs are labor, materials, and overhead related to the specific activities that are required for the project. Costs related to general infrastructure or uncommitted platform development are not included in the project cost estimates. These estimates are assessed continually during the term of the contract and revisions are reflected when the conditions become known. Using different cost estimates, or different methods of measuring progress to completion, engineering services revenues and expenses may produce materially different results or development costs may not be deemed recoverable. A favorable change in estimates in a period could result in additional profit, and an unfavorable change in estimates could result in a reduction of profit or the recording of a loss that would be borne solely by us including a write-off of development costs that were incurred in prior periods and previously deferred because they were previously deemed recoverable. See also the discussions Part I. Item lA. Risk Factors under the heading “Risks Related to Our Business - If we fail to properly estimate, manage, and perform the development and engineering services for our television service provider customers, we could incur additional unexpected expenses and losses which could reduce or even eliminate any profit from these deployment arrangements, in which case our business would be harmed.” As of January 31, 2016 and 2015 we had deferred costs of approximately $16.2 million and $20.1 million, respectively, related to development work, largely related to Com Hem, Charter Communications Operating, LLC ("Charter"), and Cogeco.

Valuation of Inventory

We value inventory at the lower of cost or market with cost determined on the first-in, first-out method. We base write-downs of inventories upon current facts and circumstances and determine net realizable value on an aggregate pool basis (DVR type and non-STBs). We perform a detailed assessment of excess and obsolete inventory and purchase commitments at each balance sheet date, which includes a review of, among other factors, demand requirements and market conditions. Based on this analysis, we record adjustments, when appropriate, to reflect inventory of finished products and materials on hand at lower of cost or market and to reserve for products or materials which are not forecasted to be used. We also record accruals for charges that represent management’s estimate of our exposure to the contract manufacturer for excess non-cancelable purchase commitments. Although we make every effort to ensure the accuracy of our forecasts of product demand and pricing assumptions, any significant unanticipated changes in demand, pricing, or technological developments would significantly impact the value of our inventory and our reported operating results. If we find that our estimates are too optimistic and determine that our inventory needs to be written down, we will be required to recognize such costs in our cost of revenue at the time of such determination. Conversely, if we find our estimates are too pessimistic and/or circumstances beyond our control change and we subsequently sell product that has previously been written down, our gross margin in the period of sale will be favorably impacted.

Business Combinations

We apply the acquisition method of accounting for business combinations, including our acquisition of Cubiware on May 22, 2015. Under this method of accounting, all assets acquired and liabilities assumed are recorded at their respective fair values at the date of the completion of the transaction. Determining the fair value of assets acquired and liabilities assumed requires our management’s judgment and often involves the use of significant estimates and assumptions, including assumptions with respect to future cash inflows and outflows, discount rates, intangibles and other asset lives, among other items. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price). Market participants are assumed to be buyers and sellers in the principal (most advantageous) market for the asset or liability. Additionally, fair value measurements for an asset assume the highest and best use of that asset by market participants. As a result, we may have been required to value the acquired assets at fair value measures that do not reflect our intended use of those assets. Use of different estimates and judgments could yield different results. Any excess of the purchase price over the fair value of the net assets acquired is recognized as goodwill. Although we believe the assumptions and estimates we have made are reasonable and appropriate, they are based in part on historical experience and information that may be obtained from the management of the acquired company and are inherently uncertain. Unanticipated events and circumstances may occur that may affect the accuracy or validity of such assumptions, estimates, or actual results. Upon the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to our consolidated statements of operations.

The fair value of contingent purchase consideration arising from the acquisition of Cubiware (Refer to Note 19. "Acquisitions" of Notes to Consolidated Financial Statements included in Part II, Item 8. of this report) is determined based on a probability-based approach that includes significant unobservable inputs which include projected revenues and EBITDA, percentage probability of occurrence, and a discount rate to calculate the present value of future cash earn-out payments. A significant change in these inputs could result in a significantly higher or lower fair value measurement. The fair value of contingent purchase consideration is calculated on a quarterly basis. Any change in the fair value is recorded to interest expense and other expense, net of that period.

Intangible Assets

Purchased intangibles are definite-lived intangible assets which are amortized on a straight-line basis over their estimated useful lives. Useful lives generally range from two to ten years. Purchased intangibles include intangible assets subject to amortization, such as developed technology, intellectual property rights, customer relationships, and trade names. We review long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. We measure recoverability of long-lived assets by comparing the carrying amount of the asset group to the future undiscounted net cash flows expected to be generated by those assets. If such assets are considered to not be recoverable, we recognize an impairment charge for the amount by which the carrying amounts of the assets exceeds the fair value of the assets. Fair value is estimated based on discounted future cash flows.

We recognized no non-cash impairment charges during the twelve months ended January 31, 2015.

TiVo recognized non-cash impairment charges of $4.8 million in the three and twelve months ended January 31, 2014 of which $4.5 million related to intangible assets acquired as part of the TiVo Research acquisition. The lower than expected profitability indicated that the carrying value of these assets exceeded their estimated fair values as determined by future discounted cash flow projections. When projecting the stream of future cash flows associated with TiVo Research for purposes of determining long-lived asset recoverability, management makes assumptions, incorporating market conditions, sales growth rates, gross profit, and operating expenses.

Deferred Tax Assets

We make certain estimates in determining income tax expense for financial statement purposes. These estimates occur in the calculation of certain tax assets and liabilities, which arise from differences in the timing of recognition of revenue and expense for tax and financial statement purposes. From time-to-time, we evaluate the expected realization of our deferred tax assets and determine whether a valuation allowance needs to be established or released. In determining the need for and amount of our valuation allowance, we assess the likelihood that we will be able to recover our deferred tax assets using historical levels of income and estimates of future income. Our estimates of future income include our internal projections and various internal estimates and certain external sources which we believe to be reasonable, but that are unpredictable and inherently uncertain. We also consider the jurisdictional mix of income and loss, changes in tax regulations in the period the changes are enacted, and the type of deferred tax assets and liabilities. In assessing whether a valuation allowance needs to be established or released, we use judgment in considering the cumulative effect of negative and positive evidence and the weight given to the potential effect of the evidence. Recent historical income or loss and future projected operational results have the most influence on our determinations of whether a deferred tax valuation allowance is required or not.

Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncements

As of January 31, 2016, TiVo has adopted Accounting Standards Update ("ASU") 2015-17, Income Taxes: Balance Sheet Classification of Deferred Taxes. This standard requires companies to classify deferred income tax assets and liabilities as non-current in a statement of financial position. We have elected to early adopt this standard prospectively beginning with the deferred tax assets and liabilities reported on the consolidated balance sheet for the year ended January 31, 2016. No prior periods were adjusted.

Recently Issued But Not Yet Adopted Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update (“ASU”) No. 2014-09, Revenue from Contracts with Customers, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The ASU will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. In July 2015, the FASB approved a one year deferral to the effective date of ASU 2014-09 for all entities so that the new standard will be effective for TiVo on February 1, 2018. The standard permits the use of either the retrospective or cumulative effect transition method. We are evaluating the effect that ASU 2014-09 will have on our consolidated financial statements and related disclosures. We have not yet selected a transition method nor have we determined the effect of the standard on our ongoing financial reporting.

In April 2015, the FASB issued ASU No. 2015 03, Interest-Imputation of Interest, to simplify the presentation of debt issuance costs by requiring that debt issuance costs be presented in the balance sheet as a direct

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deduction from the carrying amount of debt liability, consistent with debt discounts. The new standard is effective for TiVo on February 1, 2016. While permitted, we have elected not to early adopt this ASU. Upon adoption, the new standard will result in a total decrease of prepaid expenses and other, current and long-term assets and a decrease in the carrying amount of our current and long-term convertible senior notes of approximately $4.1 million as of January 31, 2016 and $6.1 million as of January 31, 2015.

In July 2015, the FASB issued ASU 2015-11, Inventory-Simplifying the Measurement of Inventory, which, for entities that do not measure inventory using the last-in, first-out ("LIFO") or retail inventory method, changes the measurement principle for inventory from the lower of cost or market to lower of cost and net realizable value. The ASU also eliminates the requirement for these entities to consider replacement cost or net realizable value less an approximately normal profit margin when measuring inventory. This ASU is effective for TiVo on February 1, 2017. This ASU will be applied prospectively. We have not yet determined the effect of the standard on our ongoing financial reporting.

In February 2016, the FASB issued ASU 2016-6, Leases, which will require that lessees recognize most leases on-balance sheet. This will increase their reported assets and liabilities. Lessor accounting remains substantially similar to current U.S. GAAP. This ASU is effective for TiVo on February 1, 2019. This ASU will be applied prospectively. We have not yet determined the effect of the standard on our ongoing financial reporting.

Results of Operations

Net Revenues.

Our net revenues for the fiscal years ended January 31, 2016, 2015, and 2014 as a percentage of total net revenues were as follows:

	Fiscal Year Ended January 31,								
	2016			2015			2014		
	(In thousands, except percentages)								
Service and software revenues	$175,178	36	%	$150,007	33	%	$138,835	34	%
Technology revenues	$220,894	45	%	$202,353	45	%	$165,630	41	%
Hardware revenues	$93,540	19	%	$99,119	22	%	$101,788	25	%
Net revenues	$489,612	100	%	$451,479	100	%	$406,253	100	%
Change from same prior year period	8	%		11	%		34	%	

Service and Software Revenues. The increase in service and software revenues of $25.2 million for the fiscal year ended January 31, 2016, as compared to the same prior year period was related to an increase in MSO-related service revenues of $21.6 million due to an increased subscription base and recognition of ONO service revenues (which were previously deferred) which began during the three months ended January 31, 2015 as well as from an increase in Media service and other service and software revenues of $9.2 million for the fiscal year ended January 31, 2016, primarily driven by the Cubiware acquisition and, to a lesser extent, increased revenue from Digitalsmiths products and services. These increases were partially offset by decreases in TiVo-Owned subscription revenues of $5.7 million. This decrease in TiVo-Owned subscription revenues is primarily due to the lower ARPUs on our TiVo Mini product, partially offset by an increase in our subscription base.

The increase in service and software revenues of $11.2 million for the fiscal year ended January 31, 2015, as compared to the same prior year period was related to an increase in MSO-related service revenues of $11.5 million due a larger subscription base and also to full year of recognition of Virgin service revenues which began during the three months ended January 31, 2014 and to recognition of ONO service revenues which began during the three months ended January 31, 2015. This increase was combined with an increase in Media service and other revenues of $6.3 million largely related to the acquisition of Digitalsmiths. These increases were partially offset by decreases in TiVo-Owned subscription revenues of $6.6 million. This decrease in TiVo-Owned subscription revenues was primarily due to the decrease in our subscription base.

Technology Revenues. Technology revenues for the fiscal years ended January 31, 2016, and 2015 increased by $18.5 million and $36.7 million as compared to the same prior year periods primarily due to an increase in the number and scope of technology related projects for our MSO partners and to a lesser extent an increase in licensing revenue from Verizon and AT&T. In future periods we anticipate a decrease in licensing revenue as we expect decreases in additional revenue from our AT&T agreement beyond the minimum future revenues disclosed below.

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Revenue and cash under our licensing agreements with EchoStar, AT&T, Verizon, and Cisco and Google/Motorola Mobility through January 31, 2016 have been:

Fiscal Year Ending January 31,	Licensing Related Technology Revenues (in thousands)	Cash Received
2012	$35,275	$117,679
2013	77,340	86,855
2014	141,583	469,776
2015	179,271	93,209
2016	181,591	87,591
Total	$615,060	$855,110

Based on current GAAP, revenue and cash from the contractual minimums (i.e. the following amounts do not include any additional revenues from our AT&T or Verizon agreements) under all our licensing agreements with EchoStar, AT&T, Verizon, and Cisco and Google/Motorola Mobility are expected to be recognized (revenues) and received (cash) on an annual basis for the fiscal years as follows:

Fiscal Year Ending January 31,	Licensing Related Technology Revenues (in thousands)	Minimum Cash Due
2017	$173,129	$89,595
2018	174,411	83,579
2019	88,629	31,139
2020	1,855	—
2021	1,855	—
2022 - 2024	4,483	—
Total	$444,362	$204,313

Hardware Revenues. Hardware revenues, net of allowance for sales returns and net of revenue share and marketing development fund payments for the fiscal year ended January 31, 2016 decreased by $5.6 million as compared to the same prior year period. These decreases were driven by both decreased TiVo-Owned hardware sales and decreased MSO hardware sales. While we had an increase in TiVo-Owned units sold, this was offset by lower average prices causing an aggregate decrease in TiVo-Owned hardware revenue. Additionally, we saw a decrease in units sold to MSO operator partners as they transition to third-party hardware. We expect hardware revenue related to our MSO business to substantially decrease in the future as many of operator partners choose to deploy the TiVo service on third-party hardware.

Hardware revenues, net of allowance for sales returns and net of revenue share and marketing development fund payments for the fiscal year ended January 31, 2015 decreased by $2.7 million as compared to the same prior year period. The decrease in net hardware revenues was largely related to changes in sales mix. While we sold an increased number of units to our consumer and MSO customers, a larger portion of those units were lower priced non-DVR units as compared to the same prior year period.

Cost of service and software revenues.

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	Fiscal Year Ended January 31,		
	2016	2015	2014
	(In thousands, except percentages)		
Cost of service and software revenues	65,536	59,607	49,042
Change from same prior year period	10 %	22 %	22 %
Percentage of service and software revenues	37 %	40 %	35 %
Service and software gross margin	109,642	90,400	89,793
Service and software gross margin as a percentage of service and software revenues	63 %	60 %	65 %

Cost of service and software revenues consists primarily of telecommunication and network expenses, employee salaries, service center, credit card processing fees, and other expenses related to providing the TiVo service and amortization of acquired developed technology associated with our acquisitions. Cost of service and software revenues increased by $5.9 million during the fiscal year ended January 31, 2016, as compared to the same prior year period. The increases were driven by supporting our increased service and software revenues from MSO partners. Service and software gross margins increased by 3% to 63% as compared to the same prior year period which was driven by increased service and software revenues from MSO partners as compared to the related costs.

Cost of service and software revenues increased by $10.6 million during the fiscal year ended January 31, 2015, as compared to the same prior year period. The increase was due to amortization of intangibles from the acquisition of Digitalsmiths, which was $6.0 million for fiscal year ended January 31, 2015 as well as increases in costs for MSO partner support and maintenance contracts driven by increased service and software revenues.

Cost of technology revenues.

	Fiscal Year Ended January 31,		
	2016	2015	2014
	(In thousands, except percentages)		
Cost of technology revenues	33,426	22,690	25,673
Change from same prior year period	47 %	(12)%	11 %
Percentage of technology revenues	15 %	11 %	16 %
Technology gross margin	187,468	179,663	139,957
Technology gross margin as a percentage of technology revenues	85 %	89 %	84 %

Cost of technology revenues includes costs associated with our development work primarily for Com Hem, Virgin, ONO and our other international and domestic projects. Cost of technology revenues increased by $10.7 million during the fiscal year ended January 31, 2016 as compared to the same prior year period. This increase was related primarily to increased volume of development work for certain MSO partners, such as Virgin.

Cost of technology revenues decreased by $3.0 million during the fiscal year ended January 31, 2015 as compared to the same prior year period. This decrease was related primarily to the recovery of deferred development costs for Virgin recognized during the fiscal year ended January 31, 2014 and the decreased volume of development work for certain MSO partners.

Technology gross margin decreased by 4% and increased 5% for the fiscal years ended January 31, 2016 and January 31, 2015, respectively, as compared to the same prior year periods. Technology revenues consists of revenues from technology related projects for our MSO partners and licensing revenue. We earn close to a 100% gross margin on licensing revenue. As revenues from technology related projects increase as a percentage of total Technology revenues, our margin will usually decrease. During the fiscal years ended January 31, 2016, 2015, and 2014, revenues from technology related projects were 14%, 9%, and 14% of total Technology revenues.

In certain of our distribution deals, TiVo is not being paid in full for the upfront development costs. However, in exchange, TiVo is receiving guaranteed financial commitments over the duration of the distribution deal. If we are reasonably assured that these arrangements as a whole will be profitable (assuming successful completion of development), we do not expense the development costs that exceed cash payable for the development work as incurred but rather we defer those costs and recognize these costs later when we receive service fees. However, despite the deferral of these development costs, we do incur cash outflows associated with these development efforts resulting in potentially higher cash usage in the near term. As a result, a portion of service fees used to

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recover the initial development costs would be classified as technology revenues and timing of recognition of these costs and revenues may differ from when these costs are actually incurred.

In accordance with our revenue recognition policies, we have deferred costs of approximately $16.2 million related to development work, largely related to Com Hem, Charter, and Cogeco and these costs are recorded on our Consolidated Balance Sheets under deferred cost of technology revenues, current and deferred cost of technology revenues, long-term as of January 31, 2016. In instances where TiVo does not host the TiVo service, these costs (up to the amount billed) will be recognized when related revenues are recognized upon billing our customers, as specified in the agreement. In instances where TiVo hosts the TiVo service, starting upon deployment, these costs will be amortized to cost of revenues over the longer of the contractual or customer relationship period.

Cost of hardware revenues.

	Fiscal Year Ended January 31,		
	2016	2015	2014
	(In thousands, except percentages)		
Cost of hardware revenues	$97,587	$95,505	$96,633
Change from same prior year period	2 %	(1)%	24 %
Percentage of hardware revenues	104 %	96 %	95 %
Hardware gross margin	$(4,047)	$3,614	$5,155
Hardware gross margin as a percentage of hardware revenue	(4)%	4 %	5 %

Cost of hardware revenues include all product costs associated with the TiVo-enabled DVRs and non-DVRs we distribute and sell, including manufacturing-related overhead and personnel, warranty, certain licensing, order fulfillment, and freight costs. We sell this hardware primarily as a means to grow our service revenues and, as a result, generating positive gross margins from hardware sales that are linked with the sale of TiVo-Owned service is not the primary goal of the consumer business.

Cost of hardware revenues for the fiscal year ended January 31, 2016 increased by $2.1 million as compared to the same prior year period. The increase was largely due to a change in sales mix. While we sold fewer total units (TiVo-Owned and MSO combined) during the fiscal year ended January 31, 2016, a larger portion of those units were DVR units which have higher costs.

Hardware gross margins for the fiscal year ended January 31, 2016 decreased from 4% to (4)% as compared to the same prior year period largely due to the mix of units sold and decreasing prices to our consumer customers during the period as compared to the same prior year period.

Cost of hardware revenues for the fiscal year ended January 31, 2015 decreased by $1.1 million as compared to the same prior year period. The decrease is largely related to changes in sales mix. While we sold an increased number of units to our consumer and MSO customers as compared to the same prior year period, a larger portion of those units were non-DVR units which have lower costs.

Hardware gross margin for the fiscal year ended January 31, 2015 decreased by $1.5 million as compared to the same prior year period largely due to the mix of units sold and the channel in which they were sold during the period as compared to the same prior year periods. As our hardware sales to our MSO customers are likely to decline in future periods as our MSO customers continue to transition to third-party hardware such as the Pace DVR and non-DVR products, we expect our hardware gross margin to decrease.

Research and development expenses.

	Fiscal Year Ended January 31,		
	2016	2015	2014
	(In thousands, except percentages)		
Research and development expenses	$107,760	$102,209	$106,917
Change from same prior year period	5 %	(4)%	(7)%
Percentage of net revenues	22 %	23 %	26 %

Our research and development expenses consist primarily of employee salaries, related expenses, and consulting expenses related to our development of new technologies and products, such as whole home DVR

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technology and new features and functionality as well as investments in creating an integrated software code base across our product lines to increase the efficiency of our product development efforts in the future and in expanding those services and software acquired through TiVo Research, Digitalsmiths, and Cubiware. During the fiscal year ended January 31, 2016, research and development expenses increased by $5.6 million as compared to the same prior year period. The increase was largely related to increased headcount and headcount related costs which were driven by launch of our latest DVR BOLT, and continued investment in TiVo Research, Digitalsmiths, and the acquisition of Cubiware in efforts to create new products and capabilities.

During the fiscal year ended January 31, 2015, research and development expenses decreased by $4.7 million as compared to the same prior year period. These decreases were largely related to decreased headcount and headcount related costs as we have increased our efforts to improve our engineering efficiency and lower our research and development costs.

Sales and marketing expenses.

	Fiscal Year Ended January 31,		
	2016	2015	2014
	(In thousands, except percentages)		
Sales and marketing expenses	$46,705	$	