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The events in early March 2015 shook the U.S. television industry. Speaking at an Apple conference in San Francisco, Richard Plepler, chairman and CEO of Home Box Office (HBO), a premium cable channel with close to 30 million subscribers, rang in a new era. U.S. households, he announced, would be able to access HBO's popular shows and dramas on Apple devices without paying for a cable subscription. The new standalone streaming service, HBO Now, was priced at \$14.99 per month. Plepler beamed onstage while remarking:

This is a transformative moment for HBO. This is not about short-term revenues; it is about a strategic move for our future and about building flexibility and optionality into our distribution. This is the right move at the right time with the right partner.¹

"It's a wake-up call to the industry," commented media analyst Rich Greenfield. "HBO is taking its future into its own hands."² The "wake-up call" was not lost on Brian Roberts, chairman and chief executive of the Comcast Corporation, America's largest cable and Internet service provider. Comcast had built a profitable business bundling television content and delivering it via cable networks to more than 20 million households. Sitting in his office in Comcast Center, Philadelphia's tallest skyscraper, Roberts wondered what to make of the event in faraway San Francisco. Did he just witness a serious blow to Comcast's business model? How should the company respond to HBO's partnership with Apple?

The U.S. Television Industry

In 2013, the U.S. broadcast and cable television industry generated revenues of \$173 billion.³ TV subscriptions contributed \$104 billion; advertising was responsible for the rest.⁴ Industry growth was a modest 6% per year. Consumers who used an HDTV antenna had free access to more than 50 national broadcasting networks such as ABC, Fox, and PBS. But most households purchased TV subscriptions from cable operators (Comcast, Time Warner) or satellite companies (DirecTV, Dish Network). Consumers also had access to television content through the Internet. Netflix, Amazon Instant Video, and Hulu were among the most popular video streaming services.

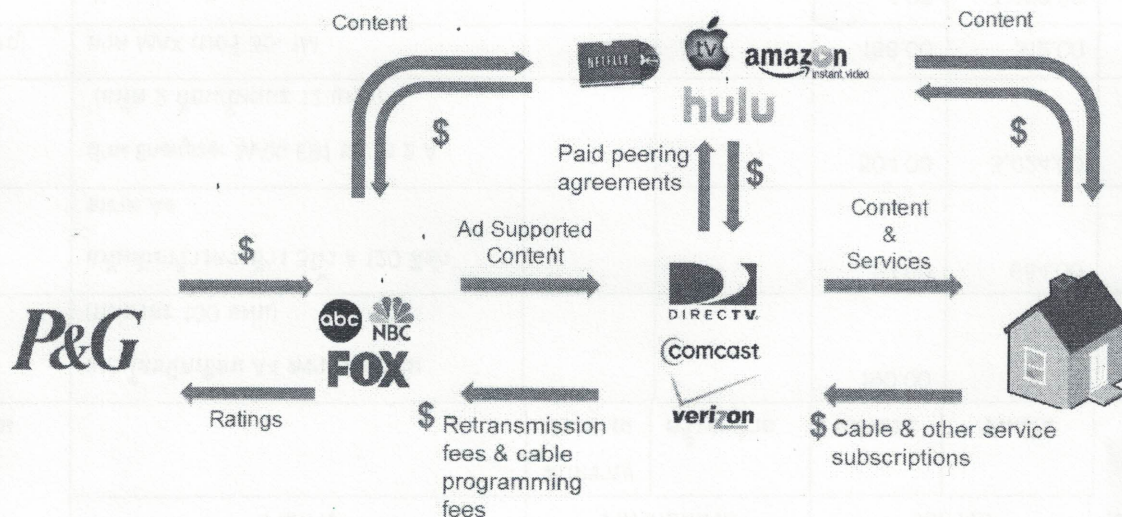
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Over time, the U.S. television industry had developed a complicated value chain (see **Figure 1**). Studios and production companies (20th Century Fox, Disney), the creators of original television content, sold the rights to their shows to networks and streaming services. Broadcast networks included companies such as ABC (owned by the Walt Disney Company), CBS, NBC (owned by Comcast), and Fox.⁵ These networks made money from advertising as well as programming and retransmission fees from cable operators and satellite companies. In 2014, the advertising cost per thousand impressions (CPM) was \$43 for TV networks during primetime (compared to the CPM of \$24 for online video).⁶ The retransmission fees, which allowed the distribution of shows over cable and satellite, had grown fivefold in the 2009–2014 time period, reaching more than \$3 billion. Those fees were expected to double by 2018.⁷

Cable networks included premium networks such as HBO, which charged households monthly subscription fees, and non-premium networks such as TBS, USA, and TNT. The non-premium networks generated about half of their revenues from advertising and the other half from the fees paid by cable and satellite companies.

Figure 1 TV Industry Value Chain, 2013



Source: Casewriters.

On average, networks obtained a monthly fee of \$1.32 per subscriber, although some networks were able to negotiate far higher fees (see **Exhibit 1**). For example, Comcast paid HBO one of the largest programming fees, at roughly \$7.77 per subscriber in 2014.⁸ ESPN received the largest fee of any regular cable channel, at nearly \$6.⁹ Less popular channels received lower fees from the cable providers.

An Industry in Flux

The market for Pay TV was fairly concentrated. Four firms—Comcast, DirecTV, Time Warner Cable, and Dish—accounted for almost two-thirds of industry revenue. The number of Pay TV subscriptions declined from a high of 104.7 million in 2009 to 101.7 million in 2014 (see **Exhibit 2**).¹⁰ Despite this drop, most Pay TV providers managed to achieve modest rates of revenue growth (see **Exhibit 3**).

By contrast, Internet-based video streaming services such as Netflix were adding subscribers at rates of over 20% per year. Roughly 4 in 10 households subscribed to such a service. Netflix enjoyed the highest penetration (32% of all households), followed by Amazon Instant Video (19%) and Hulu Plus (9%).¹¹ In 2014, Netflix had 31.7 million U.S. subscribers, who typically paid a fee of \$7.99 per month.¹² The company's library held licensed movies and television, as well as original programming like *House of Cards* (which won three Emmy Awards in 2013). On Netflix, roughly 30% of viewed content was movies and 70% was TV.¹³ Amazon offered its 30 million Amazon Prime subscribers^a access to its entire video-on-demand library.¹⁴ In 2013, the company allowed subscribers to rate a series of original television pilots to select which shows would be produced into full-length series. The first cohort included *Alpha House* (a political comedy), *Betas* (a Silicon Valley-based sitcom), and two children's shows.¹⁵ Hulu, a joint venture of Comcast, Fox, and ABC, offered TV episodes the day after they aired live, as well as movies and original programming.¹⁶ Hulu, supported by ads, was free to viewers. Hulu Plus, a service with 6 million subscribers, offered a broader library for a monthly fee of \$7.99.¹⁷

Consumers relied on smart TVs, media-streaming players (Apple TV, Google's Chromecast, Amazon's Fire TV), and game consoles to stream television shows and movies directly to their TV sets. These devices had a high penetration among 18- to 34-year-olds.¹⁸ While TV sets remained dominant, other screens were gaining in popularity (see **Exhibits 4a** and **4b**).

Viewing television content online was popular for a host of reasons, including convenience, the lack of commercials, the lower price compared to cable, and the increasingly popular practice of binge watching (see **Exhibits 5a** and **5b**). Younger viewers in particular flocked online, and some of them decided to cut the cord and cancel their cable subscriptions. By 2014, industry analysts estimated that 10 million U.S. households were without cable.¹⁹ Almost half of those without cable subscribed to a streaming service. Not everyone was concerned, however. Todd Juenger, analyst at Sanford Bernstein, explained:

Cord-cutting, in large numbers, isn't likely to happen. It's one of those ideas that sounds great in the abstract but crumbles when faced with the reality. . . . Simply put, for existing Pay TV subscribers, the content is too limited (relative to the cost savings); and for cord-nevers, the price is too high (relative to the appeal of the content). [Streaming] services seem poised to garner few subscribers, which is more good news than bad. We believe it's better for the Pay TV ecosystem to remain in the status quo than to add millions of [streaming] subscribers at the cost of blowing the whole system apart.²⁰

His colleague Craig Moffett disagreed:

Pay TV is unmistakably declining and the rate of penetration decline is accelerating. The very fact that there have recently been more new households being minted each year than there have been new Pay TV households is proof positive that cord cutting is real.²¹

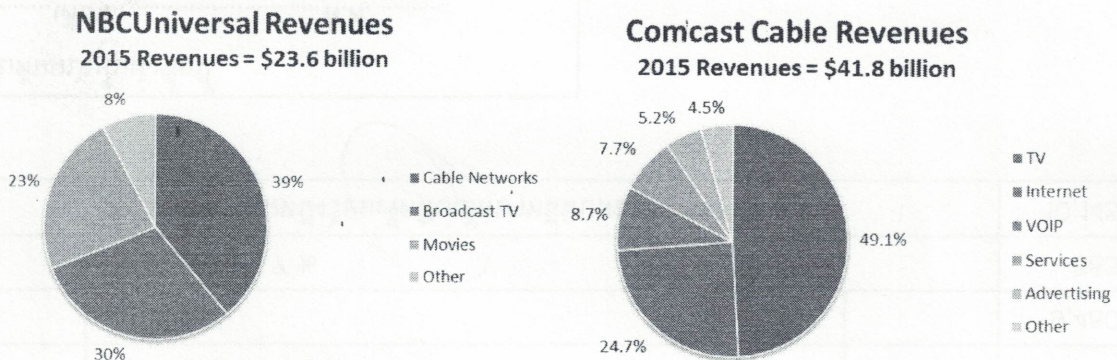
While the importance of cord-cutting was a matter of debate, the data clearly showed that compared with older demographic groups, younger demographic groups tended to watch fewer hours of traditional broadcast and cable television (see **Exhibit 6**).

^a An annual subscription to Amazon Prime cost \$99 and, in addition to streaming video, included free two-day shipping for many items sold on Amazon.com, access to an ebook library, and many other services.

Comcast Company Background²²

In 2015, Comcast was the largest cable and Internet provider in the U.S., with revenues of over \$64.7 billion and 136,000 employees (see **Exhibit 7** for selected financial data).²³ Comcast's portfolio of businesses included cable television, Internet services, Voice over Internet Protocol (VoIP), and content production.

Figure 2 Comcast Cable Communications and NBCUniversal: Sources of Revenue, 2013



Source: Adapted from Comcast Corporation, 2013 Annual Report (Philadelphia: Comcast Corporation, 2014).

Cable Television

Comcast's cable packages ranged from limited basic service (20–40 channels) to a full digital subscription (300+ channels). The company also offered targeted packages such as sports and foreign-language programming. Many subscription plans included the On Demand service, which enabled viewers to watch over 50,000 programs, including TV shows, older movies (for free), and newer films (for a fee of around \$6).²⁴ Households that subscribed to HBO, Showtime, and Cinemax could access premium channel content via On Demand.²⁵ Comcast also sold a DVR service for subscribers who wished to record and store shows on their set-top box for later viewing. In 2013, 12.4 million Comcast TV subscribers had at least one "advanced" HDTV or DVR service.

Comcast's largest expenses for delivering cable services were the cost of programming and infrastructure. Programming costs amounted to over \$9 billion, or roughly 44% of cable revenues.²⁶ In 2006–2014, programming cost grew at an annual rate of 9.3%, while subscription revenues grew at a rate of 4.9%. Some price hikes were even more dramatic. For instance, in 2014 NBC asked Dish to pay 20% more for its NBCU sports channels. A Dish spokesperson believed it to be a blunt attempt to leverage programming content to anticompetitive ends.²⁷ Comcast also incurred expenses for hardware sold to subscribers, such as set-top boxes and network equipment, as well as infrastructure investments made to improve the quality and reliability of its services.

In 2013, Comcast launched the new X1 platform, which housed On Demand content, DVR recordings, and some online content. Unlike previous Comcast On Demand platforms, X1 was organized around search rather than linear viewing, and it provided personalized recommendations.^b Although X1 was initially available only to Comcast customers who had the triple-play bundle (cable TV, VoIP and Internet), by October 2014 5 million Comcast TV subscribers were using the X1 set-top

^b Video describing the X1 platform features: <https://www.youtube.com/watch?v=7j4mcl7kaDE>.

boxes.²⁸ Among those households, the rate of video-on-demand purchases was 20% higher and voluntary churn had decreased by roughly 20%.²⁹ In 2014, two other large cable companies, Cox and Charter, were in talks to license the X1 system.³⁰

Internet Services

In 2014, 38% of homes and businesses located in Comcast service areas purchased its Internet service (see **Exhibit 8**). Consumers typically differentiated Internet service providers (ISPs) along a few criteria, including price and download speed, measured in megabits per second (Mbps).³¹ Comcast competed with other cable providers, satellite companies, and telecommunications companies (AT&T and Verizon) in the \$223 billion market for Internet service. There were also new entrants like Google, whose Google Fiber offered speeds 100 times faster than the fastest commonly available broadband service.³² In 2012, Kansas City, Kansas, became the first city to adopt Google Fiber.³³ David Cohen, Comcast's executive vice president, said:

Google will force us to up our game, and we'll be a better competitor because of Google's presence. Being in two small Comcast communities, they're hardly a major competitor to Comcast today. But the point is: Google's coming.³⁴

While a good number of ISPs existed, many Americans had little choice when selecting high-speed service. Federal Communications Commission (FCC) Chairman Tom Wheeler said:

At 25 Mbps, there is simply no competitive choice for most Americans. Stop and let that sink in. Three-quarters of American homes have no competitive choice for the essential infrastructure for 21st century economics and democracy. Included in that is almost 20 percent who have no service at all.³⁵

The question of competition in the market for high-speed service was particularly relevant because Comcast had announced, in early 2013, its intention to acquire Time Warner Cable for \$45 billion.³⁶ The highly contentious deal awaited approval from the FCC and the U.S. Department of Justice (DOJ).³⁷ With Time Warner Cable, Comcast would add nearly 30 million subscribers,³⁸ and the combined entity would serve 47% of U.S. high-speed Internet subscribers, 55% of double-play households, and 49% of triple-play subscribers (cable, Internet, and voice services).³⁹ Those who supported the acquisition argued that consumer choice would not be harmed since Comcast and Time Warner operated largely in separate markets.⁴⁰ Many consumer advocacy groups, however, were concerned about the level of industry concentration, which had resulted in cable subscription fees increasing at a compound annual growth rate of over 6%.⁴¹ Cohen said: "We're certainly not promising that customer bills are going to go down or even that they're going to increase less rapidly."⁴²

Bundling

Comcast sold two types of bundles: television content and services. Content bundles typically included the big broadcast networks, basic cable channels, and a selection of premium cable channels. Bundling decisions could be highly controversial, as the high-profile legal dispute between the Tennis Channel and Comcast illustrated. Comcast elected not to include the Tennis Channel in its basic cable package, which reached nearly all TV subscribers. Instead, it placed the channel in a premium-priced sports bundle, which reduced the Tennis Channel's advertising revenue.⁴³

Comcast service bundles typically included television, Internet service, wireless voice, and sometimes even home security and automation services (see **Exhibit 9**). In 2014, 68% of Comcast's customers purchased bundled services, and 36% purchased the triple-play bundle.⁴⁴ The company also

experimented with new bundles. For example, beginning in October 2013, it offered a bundle that included Internet service and an HBO subscription to new customers in select markets for \$40 to \$50.⁴⁵

Net Neutrality

Net neutrality required ISPs to treat all content and customers in a similar fashion.⁴⁶ Following this principle, most ISPs offered Internet access free of download limits and usage-based pricing.⁴⁷ However, in 2008, Comcast began charging users with very high data consumption an additional fee. In 2010, the FCC adopted a weak version of net neutrality that allowed ISPs to limit speeds for “network management” purposes and to explore usage-based pricing.⁴⁸

AT&T became the first large ISP to charge fees for data usage beyond a specified limit. Subscribers had to exceed the cap three times in order to be charged, and AT&T expected only 2% of its customers to hit the cap.⁴⁹ Meanwhile, Google made a deal with Verizon in 2010 to ensure that its traffic was prioritized.⁵⁰ In 2014, Netflix agreed to pay Comcast for faster and more reliable delivery via a “paid peering” deal.^c Before the agreement, observers had noted that the delivery speed of Netflix content had decreased by 25% on Comcast’s network.⁵¹

In November 2014, President Barack Obama entered the debate, suggesting that net neutrality would be best supported if the FCC regulated broadband service as a utility.⁵² Internet companies such as Google and Amazon encouraged the FCC to follow the president. ISPs, by contrast, claimed that utility-type regulation would slow investment in Internet infrastructure and reduce Internet speeds over time.⁵³ In February 2015, the FCC decided to regulate the Internet as a utility. However, the commission promised a light touch:

This includes no unbundling of last-mile facilities, no tariffing, no rate regulation, and no cost accounting rules, which results in a carefully tailored application of only those provisions found to directly further the public interest in an open Internet and more, better, and open broadband.⁵⁴

The adopted regulation provided the FCC with the authority to prevent blocking content and paid prioritization.⁵⁵

HBO and CBS – Opening the Floodgates

HBO was a premium cable network with roughly 41 million U.S. subscribers, annual revenues of \$4.9 billion, and profits of \$1.7 billion.^d The company had grown at an annual rate of 6% in the last five years.⁵⁶ HBO was known for its high-quality original content: shows such as *Game of Thrones*, *True Detective*, *The Wire*, and *The Sopranos*. HBO won many awards, including 19 Emmys in 2014 alone, making it the winner of the most Emmys for the 13th year in a row.⁵⁷ *Game of Thrones* was the most pirated show in 2014.⁵⁸

^c *Paid peering* referred to a direct data connection between two firms (e.g., Netflix and Comcast), rather than having content delivered to the ISP via a distributor. Paid peering differed from *paid prioritization*, in which data was moved through the same pipes more quickly, which was generally considered a violation of the tenets of net neutrality.

^d The company operated two networks, HBO (30 million subscribers) and Cinemax (11 million subscribers). The \$4.9 billion figure for revenues represents the company’s revenue from all sources, including HBO and Cinemax in the U.S., international subscription fees, licensing to other networks, and worldwide sales of DVDs and digital downloads.

Cable providers such as Comcast sold HBO as an add-on channel. Penetration of HBO among cable subscribers varied widely across cable companies, ranging from 14% to 42%.⁵⁹ Consumers typically paid Comcast \$15 per month to subscribe to HBO, from which HBO obtained \$7.77 per subscriber. As consumers started using multiple screens to watch their favorite shows, HBO introduced HBO Go, a streaming service that was available to cable subscribers at no extra cost. HBO Go was part of TV Everywhere, a service that granted cable customers authenticated access to cable content through the Internet. TV Everywhere was meant to meet consumer demand for time-shifted viewing on multiple devices. At the same time, it protected the subscription and advertising revenues of the cable companies. Although many subscribers shared their HBO Go streaming passwords with non-subscribers, Plepler thought such sharing had “no impact on the business” and was, in many ways, a “terrific marketing vehicle for the next generation of viewers.”⁶⁰ Between 2013 and 2014, usage of HBO Go increased by 40%. Consumers in the 18-to-24 age bracket named HBO Go their favorite premium streaming service.⁶¹

While HBO Go was available only to cable subscribers, the company launched the standalone HBO Nordic in Scandinavian markets in 2012. By 2014, HBO Nordic had hundreds of thousands of subscribers and was generating substantial revenue.⁶² Plepler said, “We see a big opportunity for a standalone HBO product around the world.”⁶³

HBO launched HBO Now in partnership with Apple in March 2015. HBO Now did not require a cable subscription. The company estimated that there were 10 to 15 million cable TV households that could be persuaded to try HBO.⁶⁴ “We’ve been far too reliant on our operators to market HBO,” said Plepler. When asked to comment on the cannibalization risk, Plepler said: “I don’t think it’s going to be cannibalizing. I think we’re going to grow added broadband-only subs.”

HBO’s move appeared to open the floodgates. The day following the HBO announcement, CBS introduced CBS All-Access, a standalone product that did not require a cable subscription. CBS distributed the two most popular shows of the 2013–2014 TV season: *The Big Bang Theory* (23.1 million viewers) and *NCIS* (22.4 million viewers).⁶⁵ It made over \$7 billion in advertising revenues in 2014, most of which came from TV ads.⁶⁶ For a monthly fee of \$5.99, CBS All-Access offered streaming access to 15 current CBS shows; live streams from 14 CBS-operated stations; and a library including past seasons of 8 current shows, as well as 5,000 episodes of older shows (like *Cheers*, *Star Trek*, and *Twin Peaks*).⁶⁷ The president and chief executive of CBS, Les Moonves, said:

We are a content company first and foremost. Our job is to make that content available to anybody at any place and time and get paid for it.⁶⁸

Viewers watching CBS All-Access would be captured by the Nielsen TV ratings^e as if they were watching the local CBS affiliate.⁶⁹

HBO Now and CBS All-Access added to consumers’ opportunities to bypass traditional cable (see **Figure 3**). Already in September 2014, AT&T had announced a \$40-per-month TV bundle, which included subscriptions to HBO Go, Amazon Prime Instant Video, and an assortment of basic cable channels.⁷⁰ Sony planned to launch its own Internet television network bundle in late 2015. PlayStation Vue would include cable channels from Viacom, Discovery Communications, and CBS.⁷¹ Dish Network rolled out Sling TV, a service with content from the Walt Disney Company (including ESPN), A&E, and Scripps. Charlie Ergen, chief executive of Dish, said:

^e Nielsen TV ratings were used to calculate the audience size for each show and were used to price advertising.

Our vision is to try to get incremental customers who aren't pay-TV customers today. I'd like to get them at a young age – those kids who probably didn't pay for TV in college, except for Netflix. We'd like to get them started on pay-TV. We'd like to get them started on ESPN. My concern is that we're missing a whole generation of consumers.⁷²

Figure 3 Internet Streaming Bundles

HBO	PlayStation Vue	Apple TV	sling	amazon	hulu PLUS	NETFLIX	CBS	at&t
\$14.99/ month	\$49.99/ month	\$30-\$40/ month	\$20/ month	\$8.25/ month	\$7.99/ month	\$7.99/ month	\$5.99/ month	\$40/ month
One channel	60 channels	25 channels including three live broadcast networks	20 channels	Content from many channels (incl. HBO), movies and original content. (bundled with other benefits)	Content from five channels, movies and original content	Content from many channels, movies and original content	One channel	Five channels (incl. HBO), Amazon Prime (bundled with basic internet service)

Source: Casewriters.

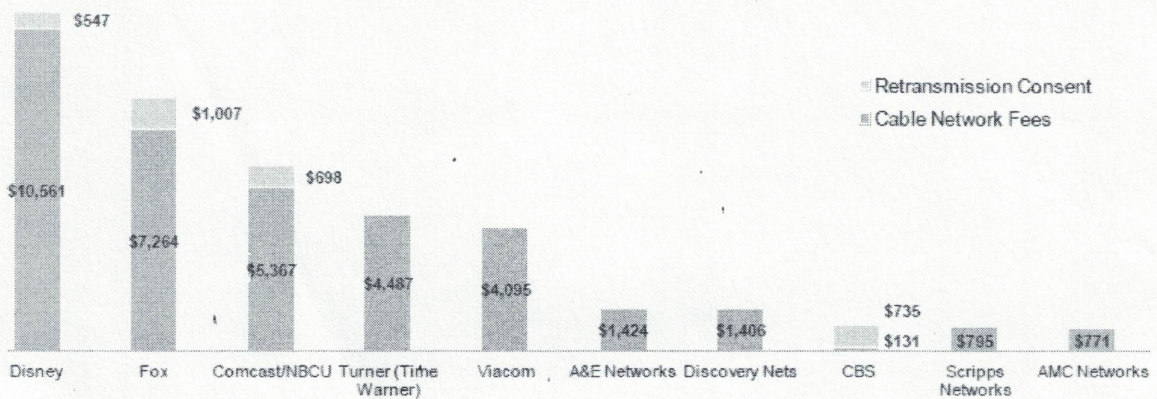
Looking Ahead

As Brian Roberts considered Comcast's response to the HBO and CBS announcements, he kept in mind the comments by Stephen Burke, chief executive and president of NBCU:

I was surprised [at CBS] because they've been such a defender of retransmission consent in the traditional ecosystem and been so successful in the broadcast business. And HBO, because I think it is going to be such a challenge for them to not cannibalize what is already a really, really good business. . . . I don't think distributing directly to consumers via the Internet is an easy thing to do.⁷³

Roberts thought about the myriad of options. Was it time to distribute NBC content directly to consumers? Was it wise to join the Apple partnership? What would happen to the Comcast bundles that included HBO?

Exhibit 1 Revenue from Retransmission and Programming Fees, 2014 (\$ million)^a

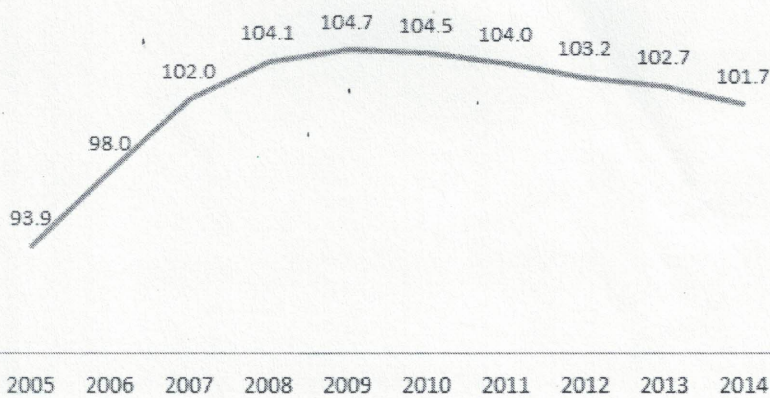


Source: Michael Morris and Curry Baker, "Does Comcast Hold the Video Killer App in Its X1 Platform?" Guggenheim, October 24, 2014, accessed via Thomson ONE, January 2015.

Notes: (a) The term *retransmission consent*, or *retransmission fees*, refers to the fees paid to broadcast networks by Pay TV providers to carry their content.

The term *cable network fees* refers to the fees paid to cable networks by Pay TV providers to carry their content.

Exhibit 2 Cable and Satellite Subscriptions, 2005-2014 (millions)



Source: Adapted from Sarah Kahn, "Cable Providers in the U.S.," December 2014, via IBISWorld, accessed January 2015.

Exhibit 3 Pay-TV Industry Key Players, 2013

	Revenues (\$ billion)	Growth, 2012-2013	Operating Income (\$ billion)	Subscriptions (million)
Total Industry ^a	\$173	6.1%	--	103
Comcast	\$41.8	5.6%	\$10.8	21.7
Time Warner Cable	\$22.1	3.4%	\$4.6	15.0
Cox ^b	\$9.72	1.3%	\$1.75	Unknown
Dish	\$19.7	21.5%	\$1.94	14.1
DirectTV	\$24.7	6.2%	\$4.44	20.2
Netflix ^c	\$2.75	26.0%	\$0.623	31.7

Source: Compiled from IBIS cable + satellite; Netflix JP Morgan. Marketing broadcast and cable TV.

(a) Figure excludes Internet streaming companies such as Netflix.

(b) Cox was a private company. All Cox figures are analyst estimates.

(c) Netflix figures refer only to its domestic streaming business.

Exhibit 4a "On Which Screens Have You Watched TV Series Within the Past Month?"

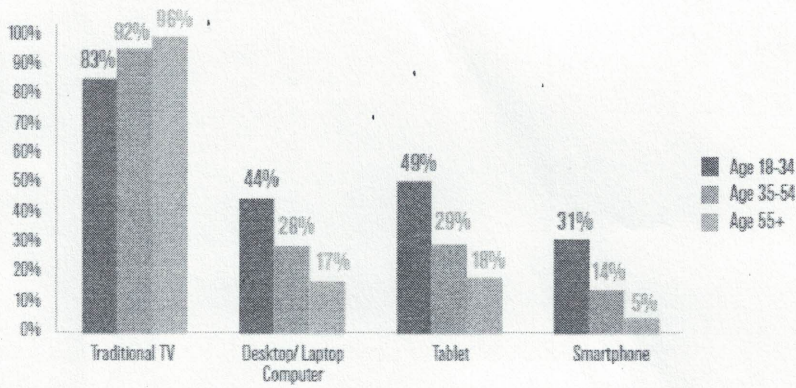
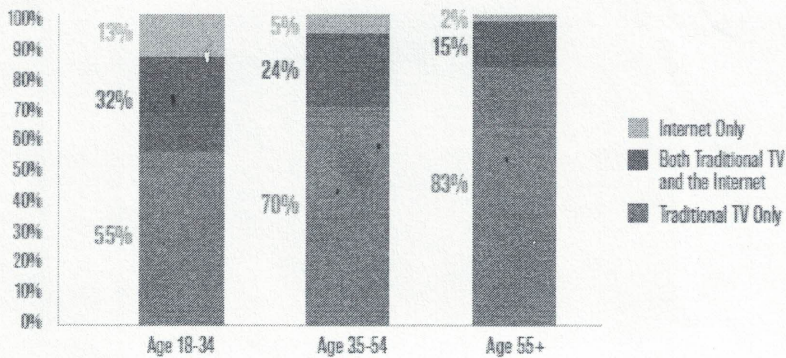


Exhibit 4b "How Do You Typically Watch TV Series?"



Source: "The U.S. Total Video Report," ComScore, October 14, 2014.

Exhibit 5a Drivers of Online TV Viewing: "What are the main reasons why you watch original TV on the internet?"

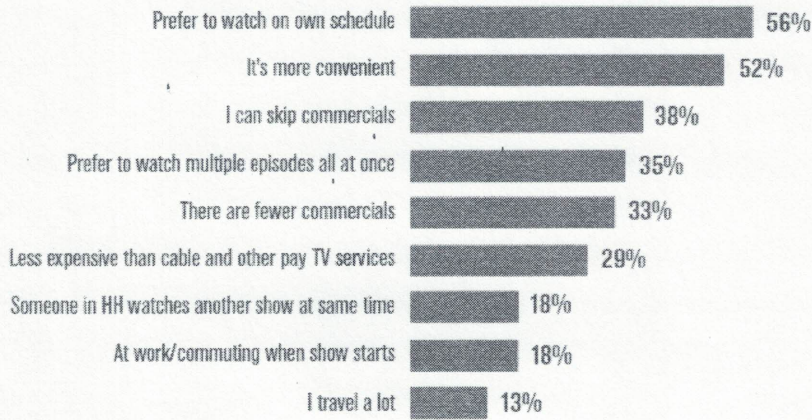
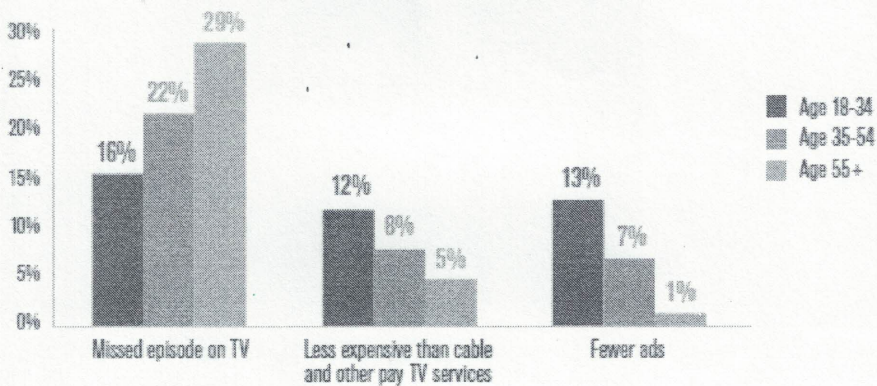
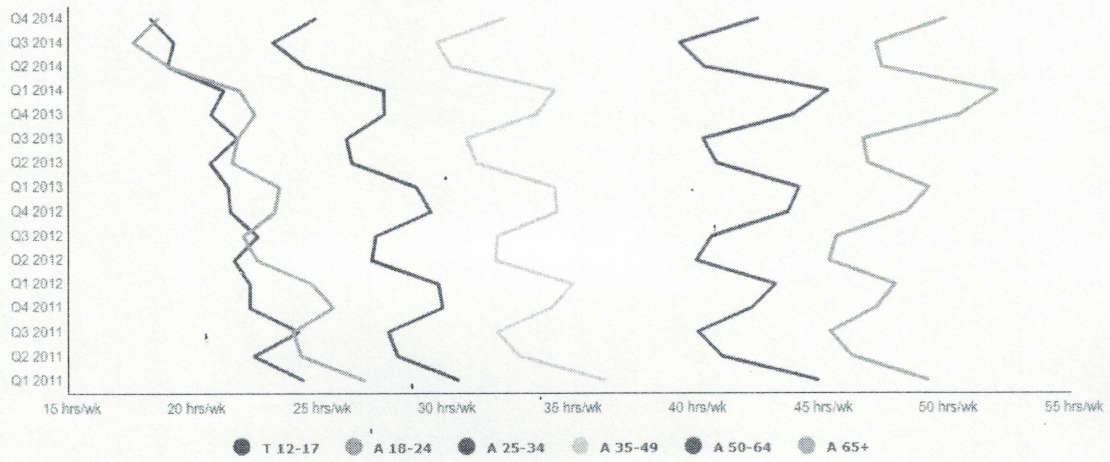


Exhibit 5b Drivers of Online TV Viewing: "What is the top reason why you like to watch original TV on the Internet?"



Source: "The U.S. Total Video Report," ComScore, October 14, 2014.

Exhibit 6 Traditional TV Viewing, by Age and Weekly Time, 2011-2014



Source: Nielsen, "Are Young People Watching Less Television?" <http://www.marketingcharts.com/television/are-young-people-watching-less-tv-24817/>, accessed April 2015.

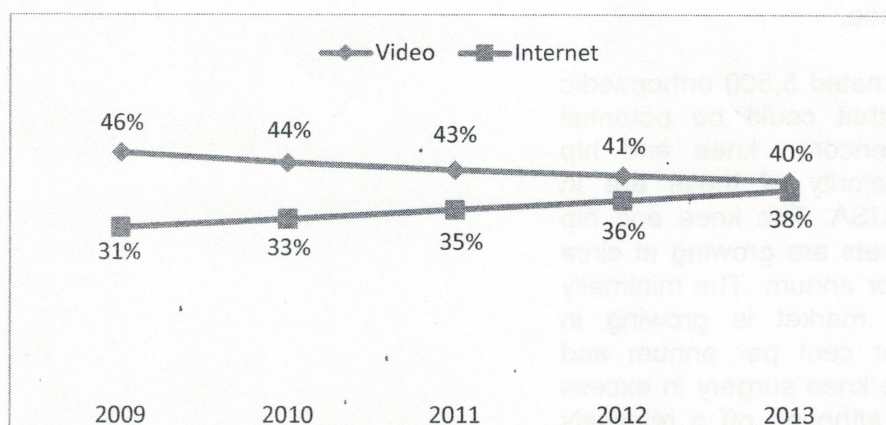
Exhibit 7 Selected Comcast Financial Data, 2013

	Revenue (\$ billion)	Revenue Growth	Subscribers (million)
Cable TV	\$20.5	2.9%	21.7
Internet	\$10.3	8.3%	20.7
VOIP	\$3.7	2.8%	10.7
Cable Channels	\$9.2	5.4%	N/A
Broadcast Networks	\$7.1	(13.2%)	N/A
Movies	\$5.5	5.7%	N/A

Source: Adapted from Comcast Corporation, 2013 Annual Report (Philadelphia: Comcast Corporation, 2014).

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Exhibit 8 Comcast Cable TV and High Speed Internet Penetration,^a 2013

Source: Comcast Annual Report.

^a Penetration refers to the proportion of households that subscribe to either Comcast TV or Internet services out of the total number of residences and business passed by Comcast's operations.

Exhibit 9 Summary of Service Bundles Offered by Comcast,^a 2014

	TV Channels	Internet Speed (mbps)	Voice Service	Premium Channels ^b	Promotion Monthly Price ^c	Regular Monthly Price
Cable TV Only						
Limited Basic Cable TV	10	N/A	No	No	\$7	\$7
Starter Cable TV	140+	N/A	No	No	\$50	\$68
Premier Cable TV	260+	N/A	No	Yes	\$70	\$126
Internet Only						
Performance Internet	N/A	25	No	No	\$30	\$67
Blast Internet	N/A	105	No	No	\$60	\$77
Internet & Cable Bundle						
Blast Plus	45+	105	No	Yes	\$65	\$75
Starter/Performance Internet	140+	25	No		\$80	\$122
Premier/Performance Internet	260+	25	No	No	\$110	\$180
Internet, Cable & Voice Bundle						
Starter TV, Internet & Voice	140+	25	Yes		\$80	\$142
HD Premier TV, Internet & Voice	260+	105	Yes	Yes	\$160	\$210

Source: Casewriter, compiled from Comcast website.

^a Prices provided refers to the pricing available to new customers in Cambridge, MA; varies by geography.

^b Premium channels referred to HBO, Starz, Cinemax, and Showtime. Blast Plus included only HBO. HD Premier included a sports package in addition to the aforementioned channels.

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