The Economic Future of Online Video

David Waterman with Ryland Sherman

Sixth Annual Conference on Internet Search and Innovation June 4, 2015





Video and the Internet

Downstream Video Traffic Share Sunday, April 12 - 9:30PM ET			
Netflix	33.5%		
YouTube	15.7%		
НВО GO	3.4%		
Amazon Instant Video	1.9%		
HBO NOW	0.7%		
Source: Sandvine			



Streaming In

Traditional TV companies are jumping into the streaming business pioneered by Netflix, selling subscriptions directly to consumers.

Sources: the companies; people familiar with NBCU's and HBO's plans THE WALL STREET JOURNAL.



\$3 a month

Service with original comedy series and shows from NBCU networks. Launch set for year end. PLUS

\$7.99

Current and past shows from major networks. Many current episodes appear within days of airing. sling

\$20

Live streaming of 15 networks, including ESPN, Cartoon Network and HGTV. No way to record shows. **CBS**

\$5.99

Includes live and on-demand programs from CBS and local stations, but no NFL games yet. NOGGIN

\$5.99

Will offer ad-free programming for pre-schoolers, but not current Nickelodeon or Nick Jr. shows. HBO

\$15

Will likely offer movies and popular series like 'Game of Thrones' and 'Girls.' Not yet released.

NBCUniversal Joins the Stream

Offline vs. Online video viewing

- ☐ Avg. weekly U.S. viewing per person:
 - o 35.3 hours of TV
 - o 68 minutes of online video
- □ 10% of US adults account for 87% of online video streaming, watching on average 2 hrs., 38 min./week.

Source: Nielsen, Q4/2014

Offline vs. Online Ad Revenue and Spending

Consumer Spending*	2014	growth
Multichannel TV Services (Cable, DBS, Telco)	\$112.8 bil.	+3%
Online Video (Subscription, sales/rental)	\$7.0 bil.	+30%

Advertising Revenue	2014	growth
Broadcast & Cable TV	\$77.5 bil.	+8%
Online Video	\$5.9 bil.	+48%

*projected

Source: SNL Kagan

USA Today, May 12, 2015

2B MONEY

Cord-cutting picks up steam in 1st quarter

Watchers are deserting pay TV at faster rate

Mike Snider USA TODAY

For the first time, cord-cutting accelerated during the first three months of a year, a sign that more consumers are dropping pay TV or sidestepping it altogether.

With the release on Monday of satellite TV company Dish Network's earnings results, all pay-TV providers' first-quarter reports are in. Combined, the industry lost 31,000 subscribers, estimates research firm MoffettNathanson in a report Monday.

"Cord-cutting has finally accelerated." the analysts wrote.

The losses may not sound like a lot, but traditionally the firstcuarter of the year is "a seasonal.



CUTTING THE CORD

"The decline attributable to incremental cord-cutting, and cord-nevering has unmistakably worsened."

MoffettNathanson

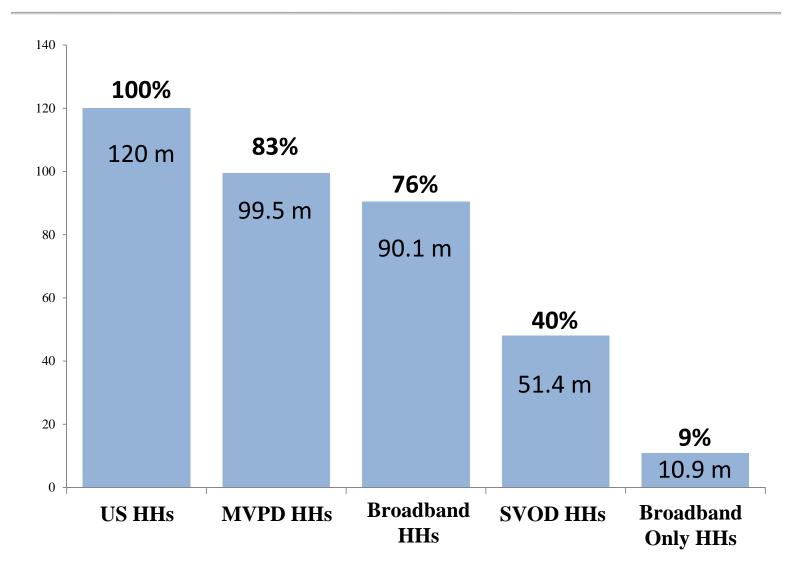
programming disputes with Turner and Fox, Evercore ISI analysts said. Competitor DirecTV added 60.000.

Overall, cable companies lost 86,000 combined — Time Warner Cable was the only to add subscribers, about 33,000 — while satellite lost 74,000, MoffettNathanson estimated. AT&T and Verizon, which deliver pay TV over fiber-optic networks, added about 50,000 and 90,000, respectively.

Another trend that suggests cord-cutting is increasing is that new homes rose higher than is traditional during the quarter. That makes the 0.5% year-over-year decline more dramatic, MoffettNathanson said, suggesting that "the decline attributable to incremental cord-cutting, and cord-nevering has unmistakably worsened."

Since these results have landed before the impact of new Net video services such as Sling TV, PlayStation Vue and HBO Go, "it is only going to get worse." Mof-

U.S. Household Access



^{*}in millions of US households;

Source: Nielsen, 2014 (author rounding)

Back to the Future of Online Video.....

□ Drivers

- Technology
- Viewer migration and demographics

□ Barriers

- o programming availability: authentication and time delays
- o successful business models, esp. advertising and aggregation
- o potential role of ISP pricing: data caps and interconnection



Back to the Future of Online Video.....

□ Drivers

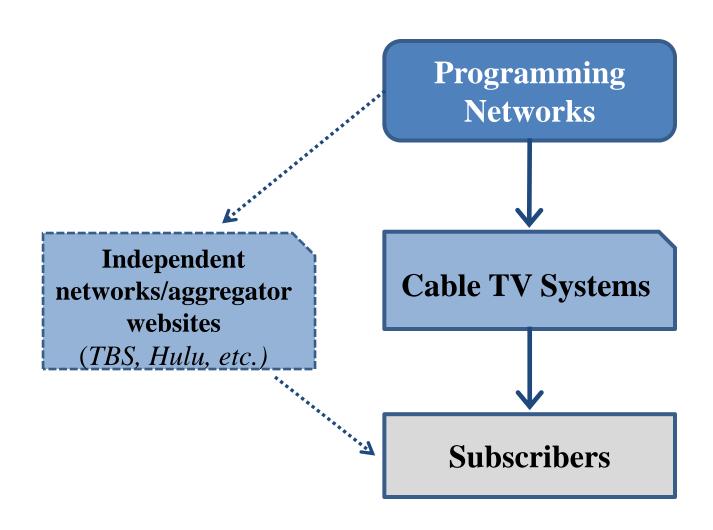
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Early model of cable TV unbundling







BONES THE WOMAN IN THE WHIRLPOOL

Aired May 28 2015 | Episode 20

Episode Details

Sign In with your TV Provider to Unlock this Episode

Don't wait to keep up with the shows you love.

To watch this episode simply Sign In with your TV Provider User ID and Password.

Sign In now for access to this episode and more, including all current season episodes of many shows!

SIGN IN TO UNLOCK THIS EPISODE

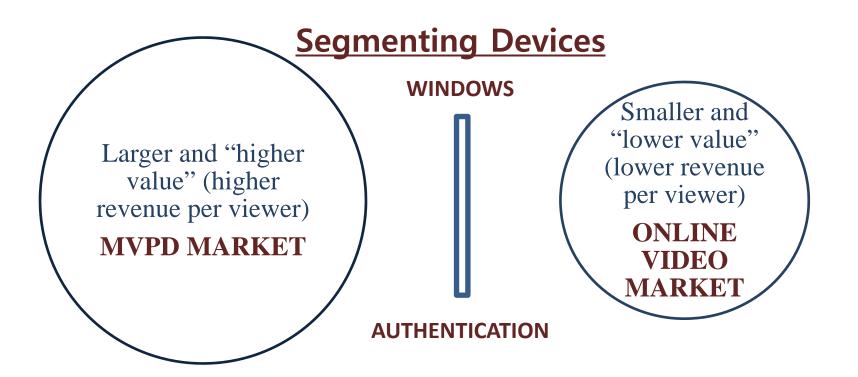
A Prevalence of Authentication, Longer Windows Without It (Our research from network websites – Sept. 2014)

Requiring authentication.....

- ☐ All 6 major premium networks
- ☐ 20 of 30 largest basic networks
 - o All 15 networks that live stream from their websites
 - Most other programs delayed by 1 day +
- ☐ 3 of 4 major broadcast networks
 - o Fox, NBC, & ABC --- for shows up to 8 days, then free access
 - CBS does not; most programming delayed 1 day +

Source: Sherman & Waterman, 2014

An Economic Model





Limitations of Online Advertising

Survey: Industry Definition Of Online Video Ad "View" Insufficient For Product Recognition

-- 75% of Consumers Need More Time to Identify Brand or Product, While Others Skip Ads --

and channed s

PERSONAL TECH BIZ TECH FUTURE TECH

Google Releases Study Indicating Only Half Of Online Video Ads Are Viewed By People

"....the chorus of media executives calling for better measurement" (WSJ. Feb. 24. 2015)

By Menchie Mendoza, Tech Times | May 11, 9:45 AM

"given the amount of money we were paying [for] high-impact ad units, for them not to be viewed was a massive issue when it came down to our

"Among the favorite tactics of ad fraudsters is to build bogus Web sites, flood them with traffic generated from computer programs known as bots, and then sell ads on these sites within ad exchanges. Most ad exchanges say they have made great efforts to inhibit the sale of such bogus ad inventory, but the practice persists." (WSJ, May. 22, 2015)

THE WALL STREET JOURNAL.

Subscribe Now Sign In

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ADVERTISING

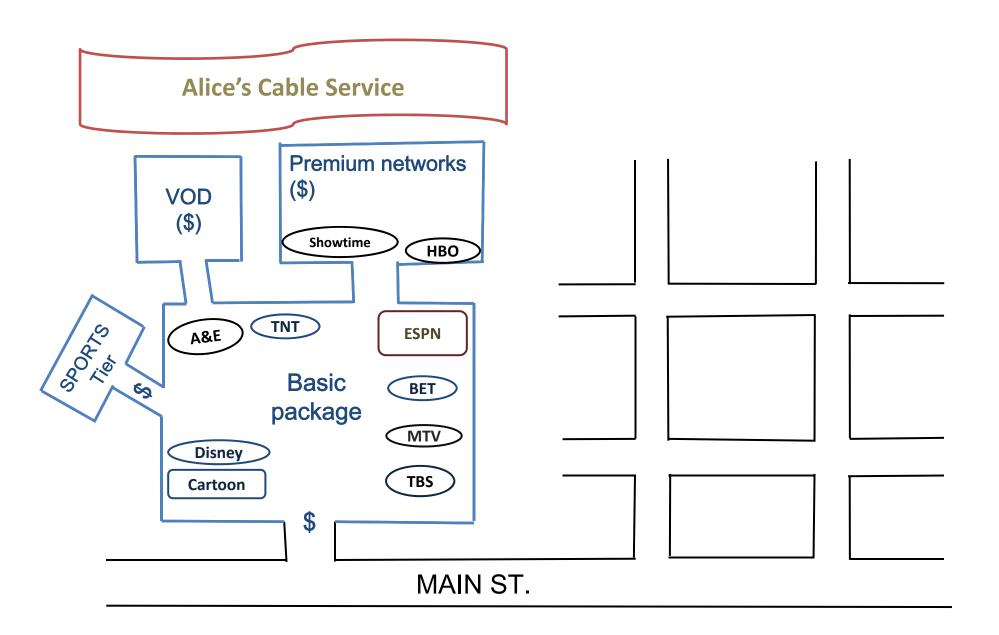
Politics Economy

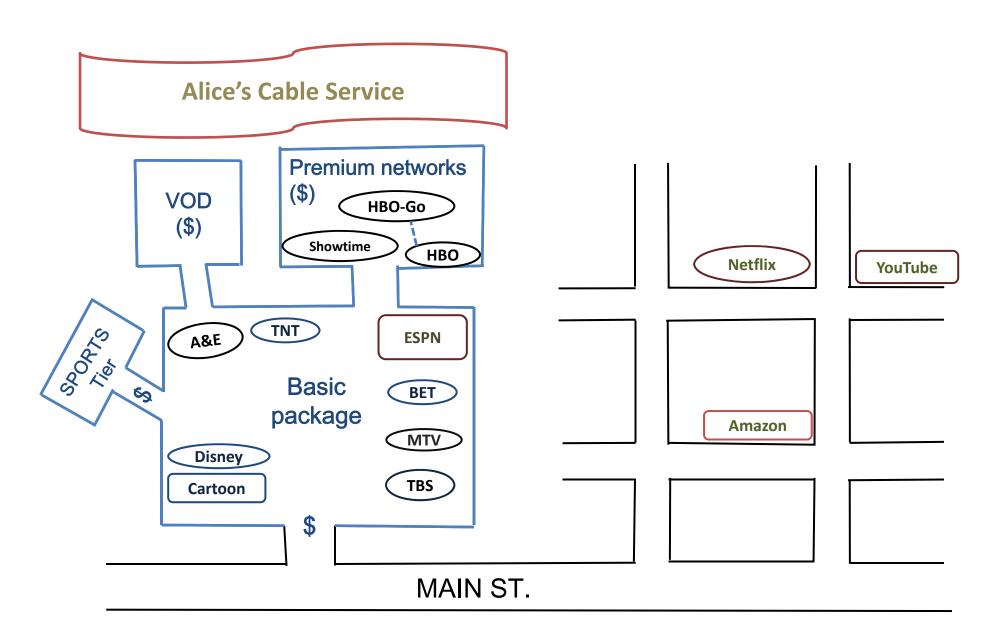
Business Tech Markets Opinion Arts

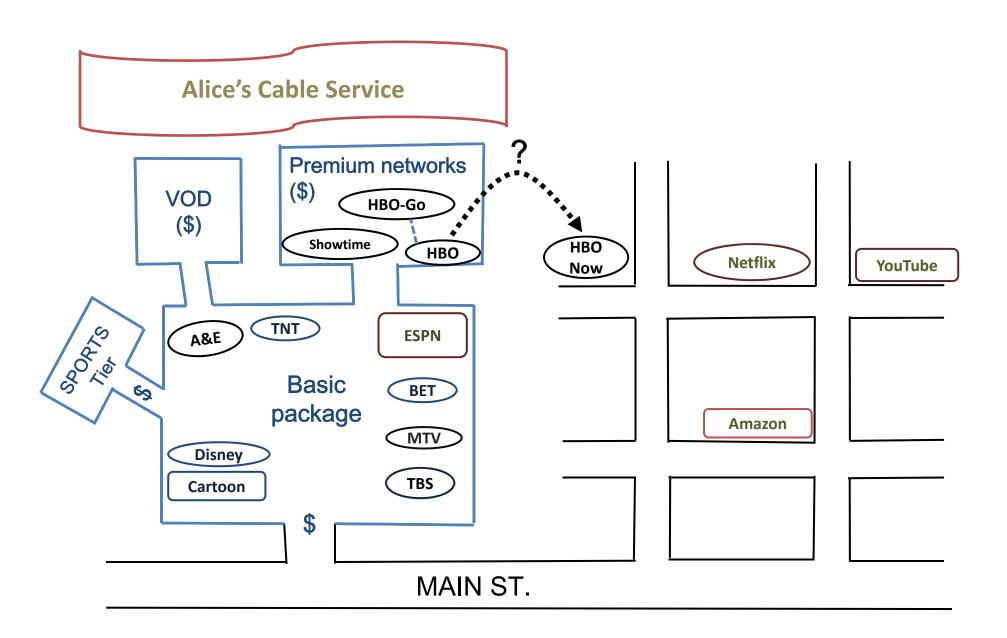
brand campaigns." (Marketing A 'Crisis' in Online Ads: One-Third of Traffic Is

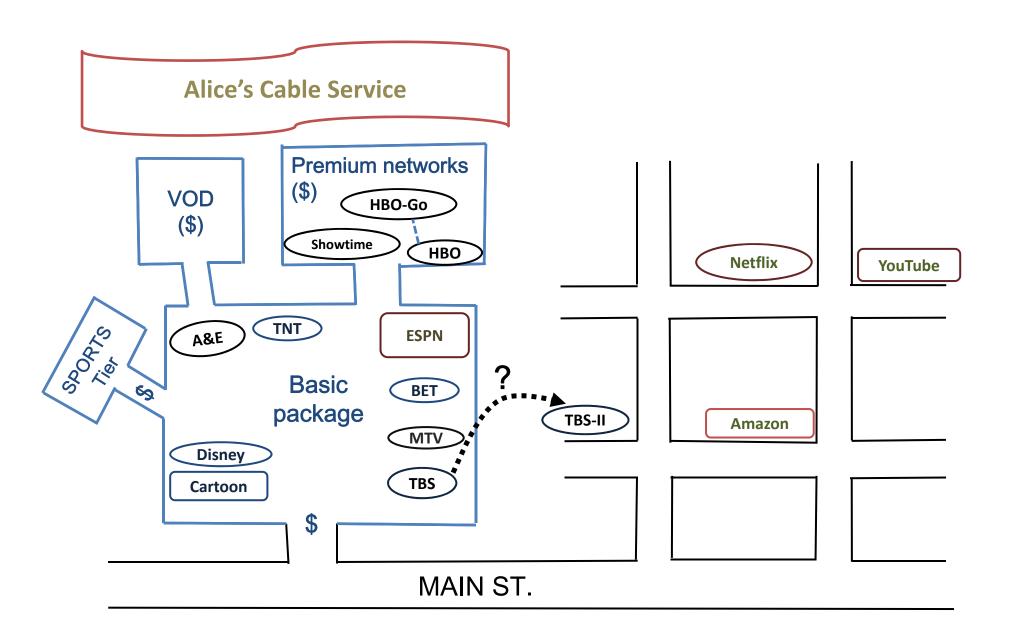
Magazine, June 2, 2015) Bogus

> As Digital Advertising Climbs Toward \$50 Billion This Year, Marketers Battle Fraudulent Visitors









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PINION

TODAY'S DEBATE TELEVISION

Our view

Change the cable menu from buffet to a la carte

Imagine going to a grocery store and being told that you had to buy a basket of preselected items. It includes some things you want, like milk and eggs, but also a brand of cereal you despise and two pounds of rib-eye steak, which is a problem because it's expensive and because you are a vegetarian.

Fortunately, that's not the way Americans buy groceries. But it is the way they buy television. They get a bundle of channels from their cable, satellite or DSL providers with no way of opting out of those they don't want.

Particularly for viewers who do not like sports, the cable bill can be an unappetizing affair. Through their providers, customers pay \$6.61 per month for ESPN, according to media data firm SNL Kagan. That's 10% of a typical monthly bill. Other sports cently announced that its highnetworks - including NFL Network, NBA TV, NBCSN, ESPN2 and Fox Sports 1 & 2 - add a few more dollars.

Thanks to technology and inflated costs, this pay-TV model is being undermined by various streaming services that allow viewers to watch their favorite shows without having to subscribe to scores of channels they never watch.

cord, the smarter providers are doing what smart companies do, resents long overdue progress. which is try to adapt. Verizon re-



speed Fios service would offer ala-carte plans. Subscribers would get a much-reduced bundle of channels and have the option to buy additional ones.

Fios blundered badly recently by dropping The Weather Channel - which can save lives during severe weather outbreaks such as the one on Monday - while keeping less essential offerings such as Jewelry Te evision and the Liqui-As more people cut the cable dation Channel. But its a-la-carte program, called Custom TV, rep-

ESPN has the most to lose be-

cause it costs four times as much as the second most expensive channel (TNT), and because it would be left out of the Verizon basic bundle. It responded by suing. Other channels could join the litigation later because they see the threat to their revenue streams if consumers actually get to buy what they want.

In a narrow, legal sense ESPN could have a case. It has contracts with all of its providers, and those contracts may require ESPN to be part of a basic bundle. But for the sake of free markets and consumer choice, it's impossible not to hope that Verizon prevails. ESPN's suit essentially tells Verizon it has to continue forcing people to pay for something that they might or might not like.

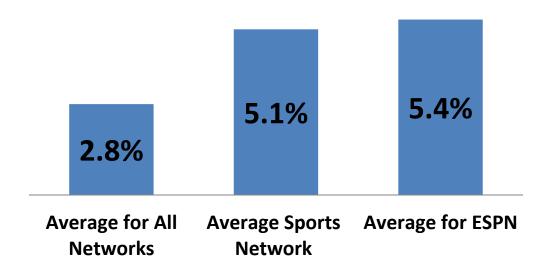
The richest of the channels have continuously hiked their fees in ways that ensure cable rates rise much faster than inflation. Kevin Martin, the Federal Communications Commission chairman during the Bush administration, saw the direction television was heading and proposed rules requiring providers to offer a-la-carte pricing. The idea died, in part because it seemed heavy-handed of government to tell an industry how to run its business.

Now the providers themselves recognize that they need to change. Let's hope they will be allowed to.

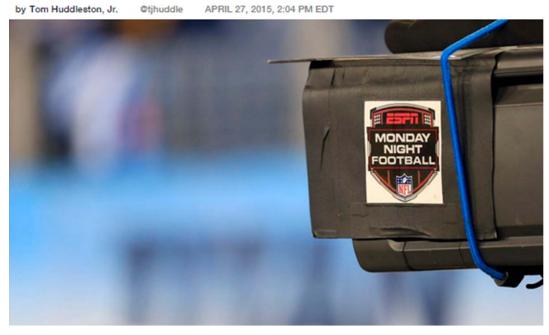
The Glue of Aggregation

- ☐ Benefits to TV networks, MVPDs, and consumers
- ☐ Evidence: the basic cable bundle's long term survival of sports stress





ESPN takes Verizon bundle battle to court, alleging breach of contract



The Disney division is suing Verizon over the pricing structure of its new customizable pay-TV bundle.

The battle over Verizon's new customizable pay-TV bundle escalated Monday morning when sports network ESPN sued the massive telecom for an alleged breach of contract.

ESPN, a division of The Walt Disney Company (DIS • 0.71%), filed a lawsuit in New York's Supreme Court in which the network is seeking an injunction against Verizon's new FiOS Custom TV service as well as damages.

"ESPN is at the forefront of embracing innovative ways to deliver high-quality content and value to consumers on multiple platforms, but that must be done in compliance with our agreements," the network told *Fortune*. We simply ask that Verizon abide by the terms of our contracts."

ESPN spoke out last week after Verizon (VZ - -0.29%) unveiled the cheaper, slimmed-down FiOS bundle. The network said in a statement that the new service, which prices ESPN and ESPN 2 separately from the bundle's core package of channels, "would not be authorized by our existing agreements [with Verizon]." In the lawsuit, ESPN asked the state court to stop Verizon from "unfairly depriving" the network of "the benefits of its bargain."

Selected Network-based OTT Services

Service provider	Launch Date	Price/ Month	Primary Content
HBO-Now	April 2015	\$15	HBO content (exclusively through Apple and Cablevision for 3+ months)
Sling	Feb. 2015	\$20 + \$5/extra	Live ESPN, TNT, TBS, CNN, Disney; Premium options include: Sports, Kids, World, Lifestyle, Hollywood packages
Sony Vue	March 2015 In limited markets	\$50-\$70	45+ live broadcast & cable networks, including CBS, Fox, NBC, USA, TNT; Sports & Lifestyle packages available
Apple TV	rumored	\$25-\$35	25 channels, including broadcast & cable like ESPN, Disney, Fox, CBS, Viacom, but not NBCUniversal

Source: SNL Kagan, March 2015

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Data Caps

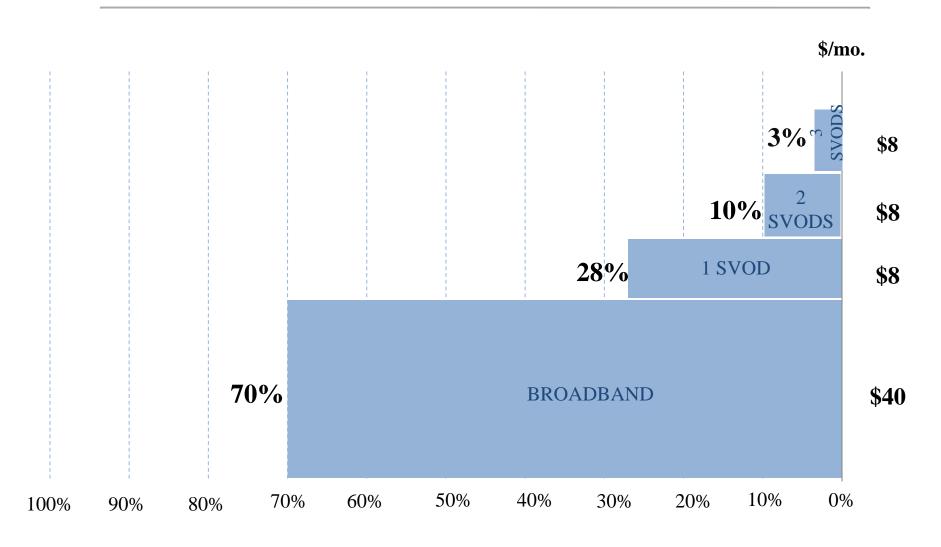
- ☐ Widely used by mobile wireless ISPs
- ☐ A trend toward "soft caps" in wireline
 - o Comcast experiments with 300 GB/mo, then pay more
 - \circ 4 hrs. of HD video/day \rightarrow 422 GB/mo. (FCC, 2012)



Some possible ISP motives for data caps

- **☐** Price discrimination
- ☐ Drive business to a wireline ISP's MVPD branch
- **□** Degrade over-the-top video

Rent Seeking Opportunities for ISPs



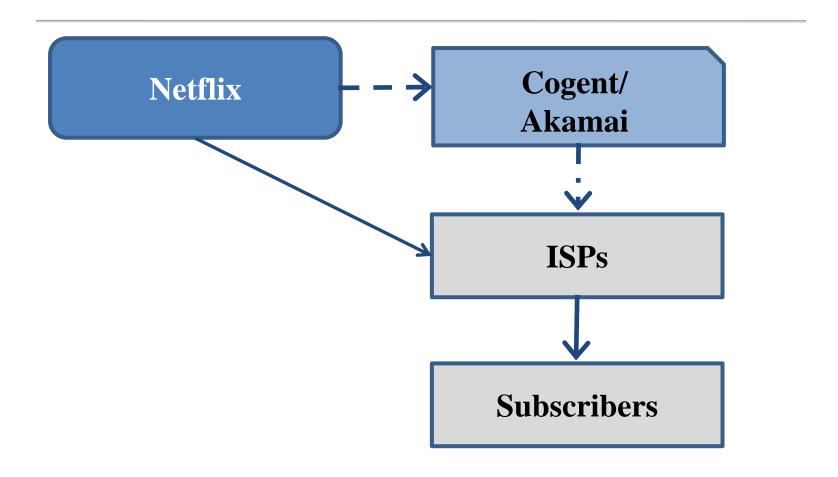


Interconnection charges

☐ 2014 contracts between Netflix and four largest ISPs (Comcast, TWC, AT&T, Verizon)

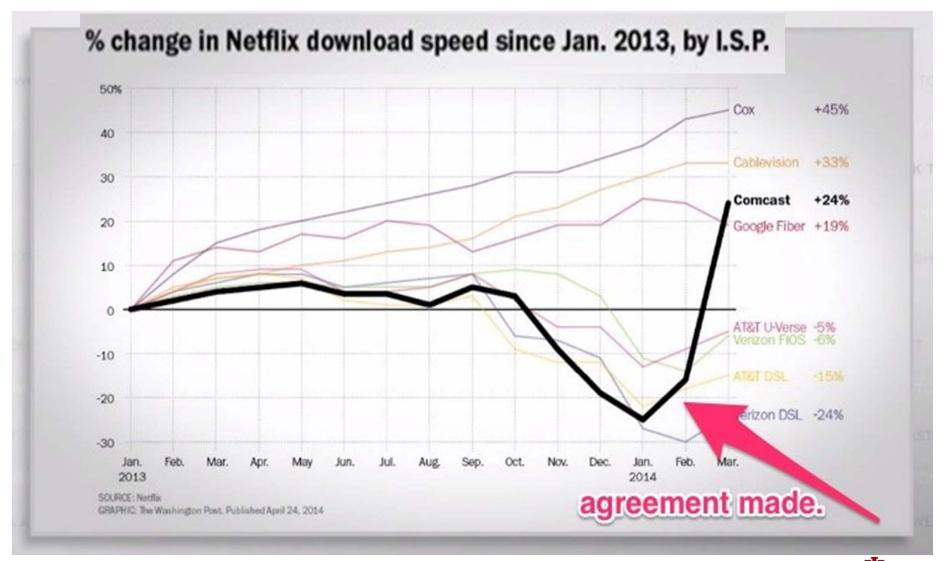


Interconnection of Netflix with ISPs





Infamous Netflix Interconnection dispute





My Vision of the Future

1) Technology and demographic driven growth of online video

Progress of online advertising? e.g.: Goldfarb (2013), Chen & Stallaert (2014); Lambrecht & Tucker (2013); Tucker (2012)

- 2) Large scale online aggregation
- 3) ISPs will find a way to extract online video rents...and vertically integrate into online content
- 4) Don't count out the MVPDs, especially cable



End