

The Future of Online Video: An Economic Perspective

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Overview I: Online Video's Future - Overview

- ❑ **Part 1 - Recent development of online video entertainment**
 - **Major types of players & content aggregation patterns**

- ❑ **Part 2 - The future of online video entertainment:**

Many technological/economic advantages....

but 4 main obstacles:

- **competition with MVPDs**
- **availability of high quality content**
- **development of successful business models**
- **effects of ISP pricing**

- ❑ **Brief summary and policy discussion**



Overview II: Main Points about Online Video's Future

- ❑ Online video growth not a natural result of offline to online viewer migration—there are significant obstacles.**
- ❑ MVPDs have significant economic advantages over online competitors.**
- ❑ ISP pricing incentives and relaxed net neutrality regulation may increase effective consumer prices for online video.**
- ❑ The importance of monitoring MVPD and ISP size and behavior**



The Economics of Online TV: Some Prior Research

- **Earlier works**
Owen (1999); Bakos & Brynjolfson, (1999); Shapiro & Varian (1999); Kahin & Varian, eds (2000); Noam, Groebel & Gerbarg, eds., (2004); Yoo (2006); Noam, ed. (2008); Wildman (2008)

- **More recent studies**
Donders & Evens (2011); Frieden (2013); Evens (2013); Brenner & Maxwell (2013); Simon (2012); Nooren, Leurdijk, & van Eijk (2012); Baccarne, Evens & Shuurman (2013)

- **Reports**
FCC Annual Assessments on the Market [...] of Video Programming (1994-2013); New America Foundation (2013, 2014); FCC: The Comcast-NBCU Order (2011)



Online Video Matures: Media Use

- The avg. US adult watches 34 hours of traditional TV per week and 6 hours of time-shifted TV, but only about 1 hour of online video.**
- The top 10% of US adults account for 86% of online video streaming, watching on average 2 hrs., 34 min. per week.**
- Netflix and YouTube together accounted for 45% of total peak North American fixed Internet traffic in 2013.**



The Prevalence of Online Video Aggregation

- ❑ **The suppliers of a large amount of content via one website or app, typically from multiple creators or content owners**

- ❑ **Aggregators appear to dominate online video distribution**

- ❑ **Economic advantages of aggregation:**
 - **one-stop shopping/viewing**
 - **low marginal capacity costs**
 - **enables economies of scale**



Main Online Video Business Models

Ad based

- Amateur content (YouTube)
- Professional content (Hulu, CBS)

Direct Payment:

- Rental Services & Electronic Sell-Through (iTunes)
- Subscription streaming services (Netflix)

Authentication of Offline MVPD subscription:

- “TV Everywhere” MVPDs (Comcast Xfinity)
- Verification-based TV network portals (HBO-Go)



Part 2: The Future of Online Video

- **Many economic advantages....**
 - **Low delivery costs**
 - **Unlimited content capacity**
 - **Targeted advertising potential**
 - **Direct payment systems**
 - **Device functionality and interactivity**

- **But..... 4 main obstacles**
 - 1) **Competition from MVPDs**
 - 2) **Availability of high quality content**
 - 3) **Development of successful business models**
 - 4) **Effects of ISP pricing**



Part 2: The Future of Online Video

□ The 4 main obstacles

1. **Competition with MVPDs**
2. **Availability of high quality content**
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Competition from MVPDs

- ❑ **Very efficient delivery systems for large-scale aggregations of programming, especially live events.**
 - **IP conversions, with very fast download/upload speed (*e.g.*, Google Fiber)**

- ❑ **Within-home tech advances similar to online functionality**
 - **DVRs, on-demand, home wi-fi rebroadcast; set top box carriage of Netflix, other services**

- ❑ **Both advertisers and consumers benefit from bundling**

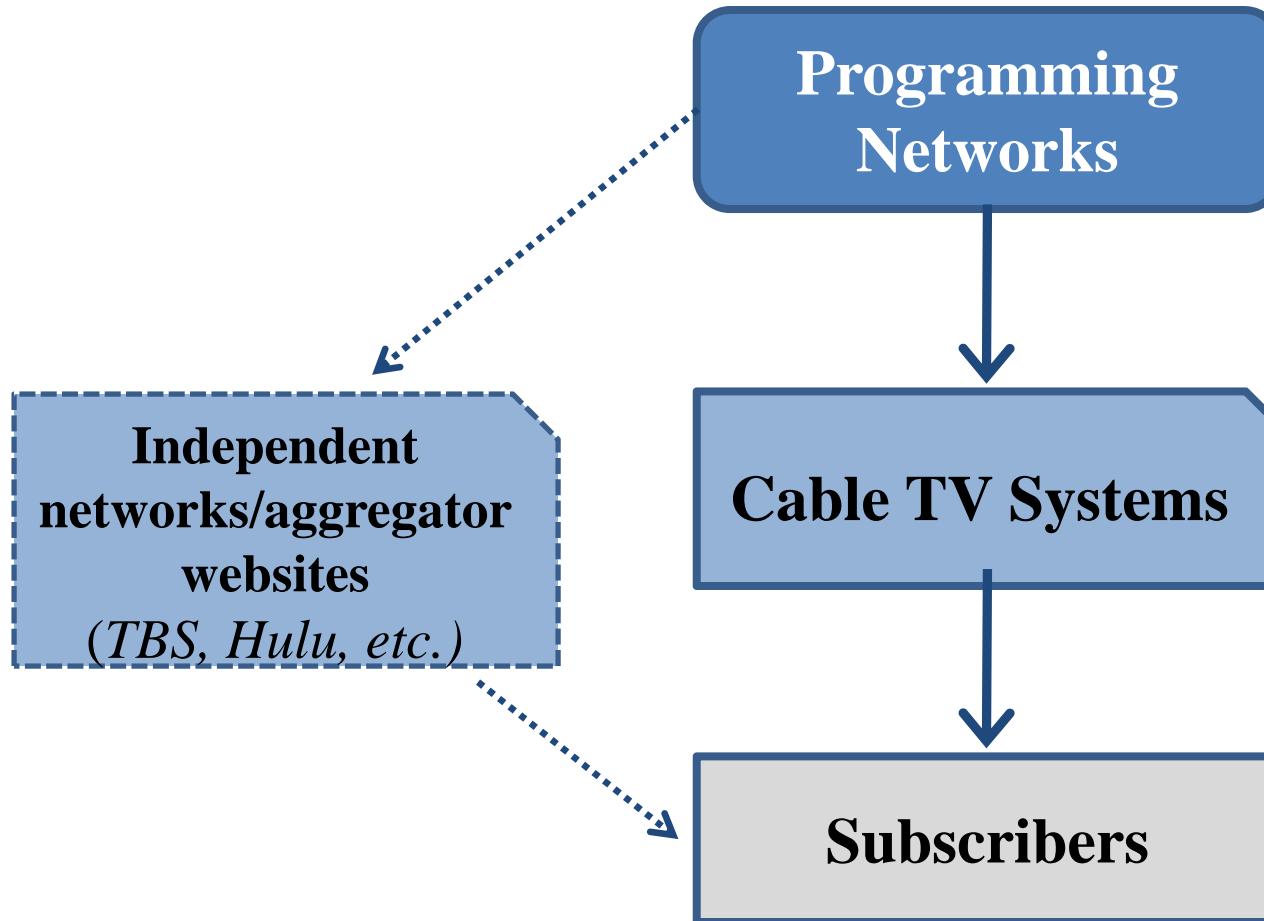


The potential for large-scale online content aggregation to compete with MVPDs

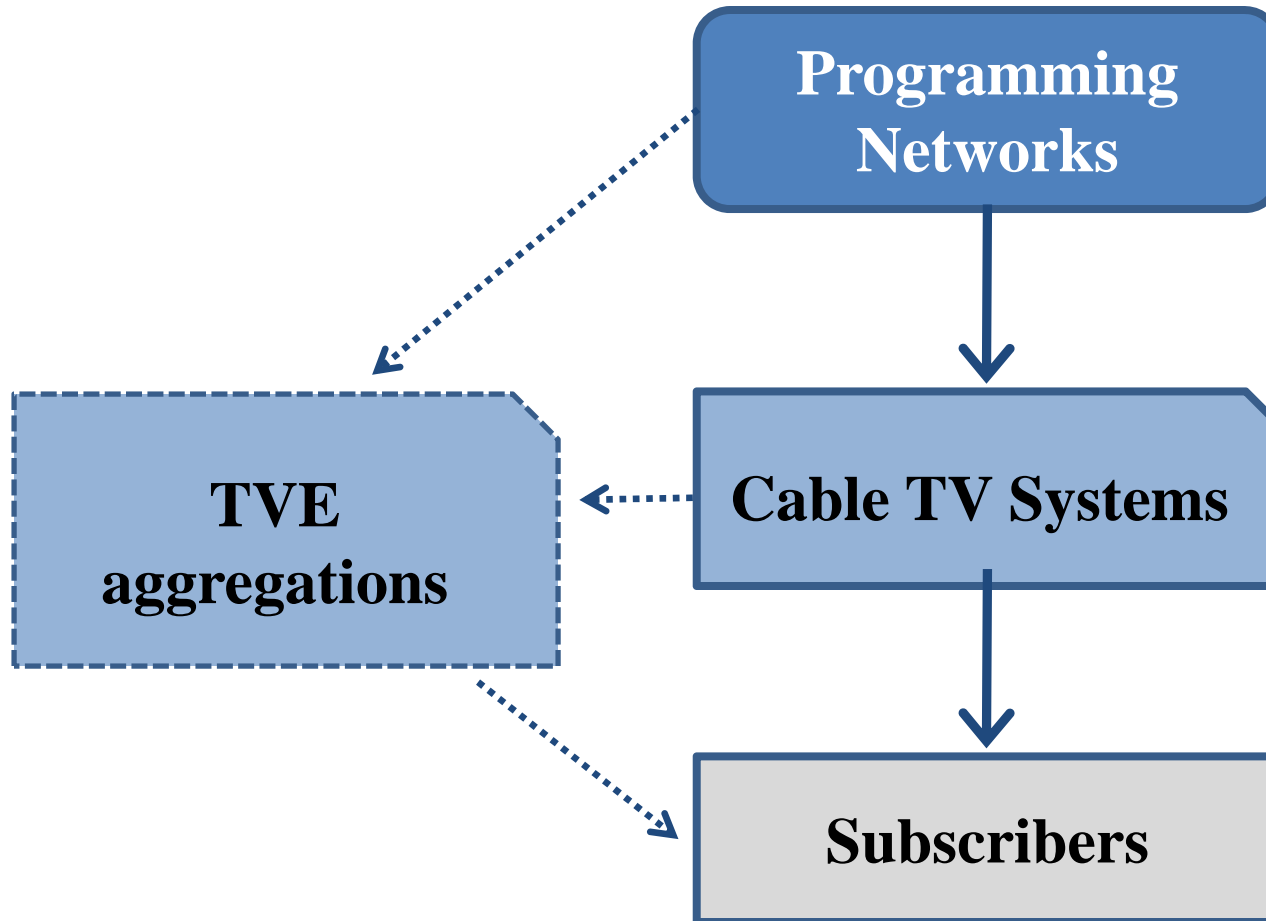
- ❑ Could comparable assemblies of broadcast/cable network programming, plus online services (eg, Netflix, Hulu, etc.) be marketed as competing online packages?**

- ❑ Possibly yes, but MVPDs have an apparent advantage in large scale aggregation via “TV Everywhere” (TVE) or similar services**

Potential Cable TV Disaggregation



TV Everywhere Business Model



Prevalence of MVPD Subscription Authentication

- ❑ Major broadcast networks do not require authentication.**

- ❑ Most major basic and premium cable networks offer programming online, but only with authentication.**
 - 2013 Screen Digest survey of 73 cable networks that all require some type of authentication**

- ❑ Most of the larger MVPDs centralize TVE services.**



Cable network incentives for 'Free-with-Authentication' requirements

- ❑ Individual networks have plausible economic incentives to require authentication on their own if:

**gains in online advertising
+ direct payment revenues without authentication**

are less than

**gains in offline advertising
+ per sub fees with authentication**

- ❑ Pro-authentication factors include:
 - **offline rev per sub > online rev per sub**
 - **higher total value to MVPD from carrying the network**

- ❑ **Examples: HBO-Go; TBS**



MVPD incentives to offer TVE

- MVPDs have an advantage over independent online aggregators due to value of TVE as a price discrimination device to prevent offline disconnections.
 - The result can be restricted entry of competing online aggregators (Waterman, Sherman, and Ji, *Telecommunications Policy*, 2013)
 - *Intuition*: If an MVPD has a price-cost margin of $\$100 - \$70 = \$30$, it pays to subsidize ‘free’ online TVE by up to \$30 per sub to prevent the marginal (online-using) subscriber from ‘cutting the cord.’
- MVPDs also have a potentially anti-competitive incentive to preserve their offline business and advantage their own entry into online video (e.g., Singer, 2010).

Part 2: The Future of Online Video

□ The 4 main obstacles

1. Competition with MVPDs
2. **Availability of high quality content**
3. Development of successful business models
4. Effects of ISP pricing



Prevailing online windows as price discrimination devices

- ❑ **Online movie VOD simultaneous with MVPD VOD**
 - **VOD appeals to highest value viewers**

- ❑ **Ad supported broadcast/cable programs delayed by 1 day or more**
 - **appears to reflect lower online revenues per viewer hour.**

- ❑ **Subscription window (eg, Netflix) occurs months later, generally comparable to HBO/other premium cable networks.**
 - **Bundled services cannot extract value from higher specific demands.**

- ❑ **Prospects for earlier online windows depend on:**
 - ❑ **Continuing offline to online viewer migration**
 - ❑ **Higher online revenues per viewer, especially advertising**

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Development of Successful Business Models

- ❑ Successful models essential for growth and development of early windows and high quality original programming**
- ❑ To date, revenues per viewer apparently lower for online exhibition, justifying offline/online delays (windows)**
- ❑ Uncertain prospects for advertising model improvements**



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The Effects of ISP Pricing

- ❑ **Recent industry transition toward soft caps (*e.g.*, *Comcast*)**
- ❑ **Soft caps as ISP price discrimination**
 - **Heavy video users tend to have higher willingness to pay**
- ❑ **Payments to ISPs by content suppliers; the potential role of network neutrality**
- ❑ **Results: higher effective consumer prices for online video services**



Summary and Tentative Conclusions I

- ❑ Online video has important technological/economic advantages ...but there are obstacles to online video growth.**
- ❑ MVPDs have significant advantages as competitors to online, and also as large scale aggregators of online content.**
- ❑ ISP pricing strategies and relaxed network neutrality rules may increase effective consumer prices for online video.**



Summary and Tentative Conclusions II

- **The FCC's goal of robust online video entry and competition with MVPDs requires**
 - **active monitoring of MVPD and ISP behavior, especially those with high national market shares.**
 - **control of national market shares of MVPDs and ISPs via the merger review process.**



The Future of Online Video

Thank you.....

Please check out our workshop paper for a more in-depth analysis and exploration.

