

Comments on Lehr, Sevcik &  
Weinberg.  
The Future of Internet Economics

By  
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June, 2012

# Thanks

- Thanks for the opportunity to talk.
  - Will try to be a little provocative. Take seriously the challenge to push the envelope a bit on understanding the *future of the Internet*.
  - Do not represent any party, firm, or interest group.

TECHNOLOGY  
POLICY  
INSTITUTE

# Game Plan

- What do the papers do?
  - Lehr, Bauer, Clark
  - Sevcik
  - Odlyzko, St. Arnaud, Stallman, Weinberg
- Strengths & Weaknesses (as a group)
- Comments
  - Where are the platforms & platform providers?
  - Where are the entrepreneurs?



# Game plan

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# Lehr, Bauer, Clark:

## What does this paper do?



- What role could a government sponsored measurement program (at the FCC) play in the transition from the old PSTN to the new Internet-centric network?
  - Embeds discussion in “big think” about long transition.
- Measurement facilitates policy formulation, traffic management, and market intelligence.
  - Special focus on quality of broadband to end users, in a setting w/considerable ambiguity. Not merely bandwidth, also reliability.
  - FCC in position to endorse and sponsor measurement activity.
  - Supports transparency from all market actors. Positive effects.
  - Key takeaway: one size does not fit all.
- Tiptoes around measuring interconnection & end-user pricing.

# Sevcik:

## What does this paper do?



- What pragmatic tool helps a hh manage its broadband traffic?
  - Embeds discussion in understanding of what would allow users to monitor own use, w/sensitivity to non-technical users.
- Taxonomy of data flows have three components – (roughly) content, ads, and background. (P.S. I wanted more...)
  - Background traffic is growing. Lots of unknowns.
  - Background and ad traffic not controlled by user. Why is the traffic relevant to a data cap at all? Big potential issue?
  - Key takeaway: Different types of uses (and users!) make use of different proportions of content, ads and background.
- Tiptoes around a vendor's interest to reveal true data? Would a vendor use standardized data yardstick if not compelled?

# Odlyzko, St. Arnaud, Stallman, Weinberg, What does this paper do?

- How do justifications for data caps and usage based pricing compare with what we know about network congestion?
  - Embeds discussion in comparison of recent announcements in wireline/wireless networks for UBP w/historical analysis.
- Monthly caps & tiered pricing as tools for revenue-enhancement; hard to see how it reduces congestion.
  - Capacity limits more binding in wireless, but same question.
  - Users prefer flat rates & pay for it if competitive mkts offer it.
  - Key takeaway: In wireline networks capacity limitations bind at a point in time, so data use at most times should not count.
- Tiptoes around question of whether tiered pricing plans w/o unlimited pricing options result from vendors incentive to segment users (what economists call exercising mkt power).

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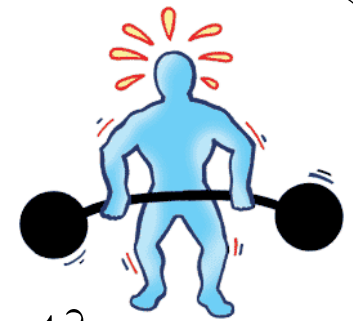


# Strengths (as a group)



- All well written. Thinking about 3 years out.
  - Reasonable analysis, engaging discussion.
  - Brings calm conversation to a heated topic.
  - Use of facts, when facts exist. Many cite statistics of NBP.
- Embeds discussion in reasonable notions of today's triumphs.
  - "Middle" of broadband is reasonably competitive. "High" end is focus.
  - High data use is skewed, growing. Today rare, tomorrow common?
  - Deep understanding of management practices at ISPs.
- Identifying many key questions about capacity. Many key takeaways.
  - At households the issues arise only b/w 7 and 10pm.
  - Users do not have information or control over all data flows.
  - Externalities in cable architectures except for 7-10pm? A red herring?
  - Role of data caps play beyond merely shaping capacity?

# Weaknesses (as a group)



- Defining transparency. What are we talking about?
  - Firms monitor users for billing. What is so difficult about sending daily email updates to users? If banks can do this, so can ISPs.
    - Are updates meaningful? Is this more than just a problem of notification? Even w/monitoring & ISP transparency, are problems solved?
- The features of data caps are endogenous.
  - When is a *monthly* cap meaning(less/ful)? Why isn't use out of 7-10pm free? Why count s/w updates from Adobe/MS/Apple?
- Are data caps & tiered pricing evidence of mkt power?
  - Anticompetitive concerns? Combined w/which vertical restraint?
  - If Comcast limits Netflix, but sells (w/use of an Xbox?) essentially the same service w/o counting against the cap, when is this classic *raising rivals costs*? At what point does it become a vertical restraint?

# Weakness (as a group)



- I am shocked, just shocked, to find so much concern about pricing on the Internet... but nobody uses the readily available facts.
  - Why didn't anyone look at CPI for Internet access? Prices have been flat or increased for five years.
    - Imposing a price cap over unlimited is like a price hike, as it takes away services. How much are users willing to pay to avoid a cap? Today? In tomorrow's market?
    - Aside: CPI not entirely fair to producers. A PPI would show quite a bit of progress. Survey of value/dollar show increase too. But we use CPI in this country, for better or worse.
  - Populist time bomb. Many users really care.
    - Illustration: I did a little academic study about quality-adjusted prices, and a little PR report brought down the Kellogg servers.

US CPI for Internet access

2007	73.2
2008	73.9
2009	76.5
2010	77.0
2011	76.3

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  - **Where are the entrepreneurs?**



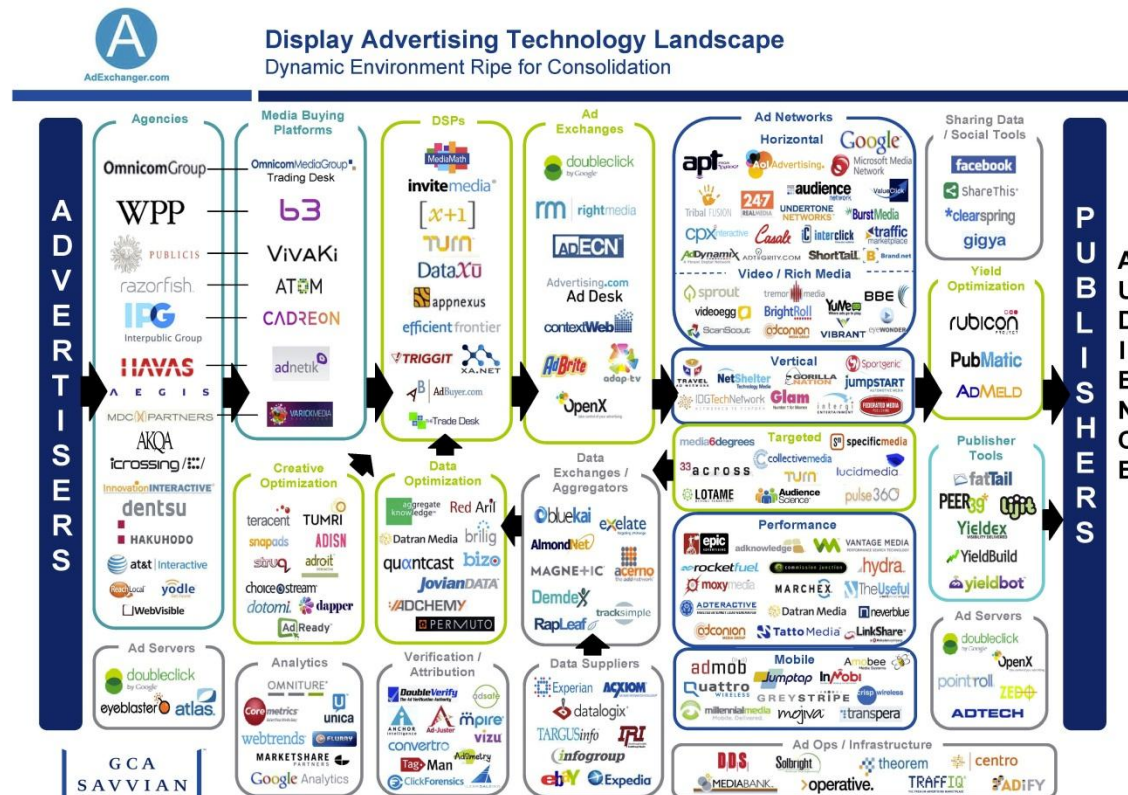
# Comment: Where are platforms and platform providers?

- Internet is no longer a network of networks. It is a network of platforms. (That transition happened awhile ago.)
  - Apple, Google, Facebook, Yahoo, Amazon, YouTube, Ebay, Microsoft, app providers, news providers, and millions of firms.
  - Analysis of user-carrier relationship should recognize that there is a user-platform relationship & carrier-platform relationship.
    - Only gets cursory treatment by all papers. Severe oversight.
- When both complements (e.g., carriers & app providers) innovate, then users are better off.
  - When network adoption expands, as in 2000s, then no issue.
  - When users/platforms/vendors start to have exclusive contracts & preferential treatment, starts to change internet.
    - Only hints of treatment by all papers.

# (Comment cont') Where are the platforms and platform providers?

- Analysis of all relationships should shape analysis of caps.
  - Netflix's complaints w/ Comcast or Apple's data-hungry design for the iPad are canaries in the coal mine.
    - What about the profitability of Hulu, YouTube or FaceBook features?
    - What happens in three years when there are hundreds of video apps?
    - Shapes policy: Vertical restraints missing from the conversation. Price to users for what services with what limitations, if any?
- Open questions.
  - Is lack of uniformity in caps and other pricing policy across US carriers good for US platform development?
  - What is relationship b/w tiered pricing & investment upgrades by carriers that benefit users and platform apps?
  - Bilateral negotiations b/w carriers & Apple, Microsoft, Google, Yahoo, or Facebook good/bad for US network?

# This is what the ad market looks like, just to give one example...



Please direct any inquiries or comments on the landscape to Terence Kawaja at [tkawaja@gcasavvian.com](mailto:tkawaja@gcasavvian.com) or (212) 999-7082

The relationship of carriers to users is shaped by the relationship of carriers to these players, and the relationship of these players to each other, and so on.

# Where are the entrepreneurs?

- No paper focuses on entrepreneurship. Serious deficiency.
  - US entrepreneurial is envy of every other country. Protecting nurturing environment for homegrown talent is policy priority.
- Why is there so much focus on *only* Netflix? What about scores of entrepreneurial firms creating something better?
  - Most entrepreneurial firms today are anticipating world in 3-5 years where high bandwidth not merely 5-10% of population. Open question: When it gets closer to 30-40%, will tiered pricing and data caps look as friendly to entrepreneurs?
  - Open question: If Comcast successfully limits user relationship with Netflix, why would any cautious VC fund a Netflix-wannabe? How can this possibility of “expropriation risk” be good for US growth?



# (Comment continued) Where are the entrepreneurs?

- If carriers cannot provide even rudimentary transparency for users, what will they do for entrepreneurs?
  - How is a college sophomore w/ the next Facebook supposed to find info? Three-to-five years from now?
- Traditional competitive analysis outmoded? Maybe not the only tool needed: How about analysis of vertical restraints?
  - Traditional model stresses horizontal competition as mechanism to generate options for users: users get mad, they leave for competitor, which disciplines firms to price low and to innovate.
  - Bilateral negotiation is basis for the new model: if entrepreneurs want to reach users, do they have a choice but to distribute through Verizon, AT&T, Comcast, etc? Do the carriers have a choice but to work with Google, Apple, etc? As a basis for policy?

# Summary



- Three very useful papers about pricing and caps.
  - Quite challenging to see how or why caps have direct relationship to the goal limiting capacity utilization.
    - Takeaway: Modifications seem warranted...at minimum.
  - Easy to see value to vendor from tiered pricing, but also to see some potential danger as step towards raising rivals cost.
- Analysis of carrier-user should not be analyzed in isolation. Add carrier-platform and user-platform relationships.
  - What are the effects on entrepreneurs?
  - Traditional competition policy based on “horizontal competition” not sole analytic framing. Bilateral negotiation between platforms/carriers as new basis for policy analysis.

# Thanks

- Thanks for listening.