

Public Administrations Approach to IP-interconnection

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IP Interconnection Regulation

Should IP Interconnection be of concern to regulators? *YES*

- Internet is *new* PSTN : essential basic infrastructure
- BUT regulation by markets, *not* legacy telecom
- Internet a lot more complex
 - * multiservice platform, not a "silo" *nor* "narrow waist"
 - * not just transport, but storage, computing, trust, ...
 - * "cloud computing utility," "IoT," "next 6 Billion,"

Is there market-failure in IP Interconnect? *NOT Today (I think)*

- SMP? Falling prices, dynamic traffic patterns, lots of contract options
 - * Last-mile a special case, but is that legacy telecom issue?
- Other sorts of market failures? Coordination and Information
 - * Lemons, Privacy, QoE (end-to-end)...
 - * IPv6... federated identities... meta-data management....

IP Interconnection : data/monitoring challenge

Markets need information to work efficiently

- Informed choice by end-users and everyone else in value chain (app/content/service providers, including *next* Google, Facebook, eBay, Amazon, Clearwire, or End-user deployed network....
- Not everyone needs (wants) to know everything. Markets good at aggregating, disseminating information. As long as enough canaries, process can detect problems...
- Transparency in methods essential, and as much data as possible...

Regulators cannot be sole authoritative source of data, but

- Need credible threat of regulation for credible ex post enforcement
- Unique ability to *selectively* compel information and need to interpret
- Power to convene, coordinate, and mandate...

IP Interconnection questions

What is an ISP?

- What's an overlay network?
- What's a "telecom" v. "information" service?
- Is down-coding video for small screens non-neutral traffic treatment?
- Is Voice-over-Internet different from VoIP?
- Where is the edge of the Internet?
- Is Interconnection a horizontal or vertical relationship?

What would I like to measure?

- What is market share of IP backbone interconnection market?
- What are usage (traffic) related costs?
- What is value of a better QoE? What does "better" mean?
- What measurements need to be reported to help market work better?
- If 99% IP agreements "handshake" does that mean there is no contract?