The 2nd Workshop on Internet Economics (WIE'11)

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Overview

- Why this workshop?
  - And why Now?
- Scope and relevant issues/problems
- What we want this workshop to be
      (and what we don't want it to be)
- Objectives
- Process
- Participants

Why this workshop

- The economics of Internet interconnections are more complex and more critical than ever before

- Despite its real-world importance, this area is still mostly "unknown territory" in academic research
  - Mostly due to the lack of public data and transparency

Objectives of this workshop

- Primary objective: create a *research agenda* for the economics of Internet interconnections
  - And probably publish it at CCR
  - If you are interested to co-author that, plz let us know
- Foster collaboration and bi-directional information transfer between research and industry
- Community-building

What we *don't* want this workshop to be

- An academic conference
  - Nothing wrong with academic conferences, but..
- A NANOG-like meeting
  - Nothing wrong with NANOG, but..
- A battle-zone between academics and industry folks
  - We have different objectives, different language, different methods, but we are interested in the same issues

Relevant issues/problems

- Peering strategies
  - How to decide strategically who to peer with?
  - And what happens when everyone peers strategically?
- Paid peering
  - Who should be charging whom?
  - And how much?
  - Is paid peering helping to resolve peering disputes, or does it create more disputes?

Relevant issues/problems

- The role of IXPs in the peering ecosystem
  - What if every city had an IXP and every major Content provider (or CDN) was present at every IXP?
- Multi-lateral peering agreements
  - Versus bilateral peering
- The role of CDNs and their economics
  - Different CDNs peer differently
    - What is the best CDN deployment/peering model?
  - How should ISPs charge (or not charge) CDNs?

Relevant issues/problems

- Tier-1 disputes
  - "I should also be a Tier-1 network"
  - "You should not be Tier-1 anymore"
  - How can we design an economic/peering framework to avoid such disputes (without ending up in "FCC territory" & regulation)
- Disputes between Content Providers and Access ISPs
  - Is paid-peering necessary? Is it fair?

Relevant issues/problems

- The role of content (and video in particular)
  - It seems that people are willing to pay for high-quality video-based entertainment
  - How should this added revenue be "routed" in the Internet ecosystem?
  - Video traffic increases significantly the capacity demand on the e2e path
    - Who should be paying for these capacity increases?

Relevant issues/problems

- Economic viability of transit providers
  - If transit providers make no money, who is going to operate/expand those expensive wide-area backbone networks?
  - What is the role of transit providers in a world dominated by IXPs, CDNs and few large CPs?
  - New transit pricing mechanisms?
    - More fair for the customer, more viable for the provider

Relevant issues/problems

- Economic viability of access ISPs
  - Can they be profitable with flat-rate pricing?
  - What will happen when users switch to the Internet for all their video/TV needs?
  - Is usage-based pricing a practical solution? Is it a necessary solution?
  - What is the proper way to do tiered-pricing?

Relevant issues/problems

- Looking at the "big picture", what is good/bad for the overall Internet?
- Is it necessary that what is good for the Internet users is bad for someone else (e.g., transit providers)?
- Are there economic mechanisms that can ensure the Internet's "social welfare"?
  - Improving the welfare of all involved players (TPs, ISPs, CDNs, CPs, IXPs, users)?

Process

- We have few mature research presentations but we also have several discussion sessions as well as work-in-progress presentations
- Every presentation has 3-4 respondents
  - A respondent should engage the presenter to a discussion after the talk
  - Of course everyone can participate in the discussion
  - But plz, avoid asking open-ended questions during the presentation

Participants (.edu)

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