Discussion: Broadband User Discrimination and the Net Neutrality Debate

Hong Guo, Subhajyoti Bandyopadhyay and Hsing K. Cheng

Discussant: Robin S. Lee

April 16, 2010

Net Institute
Model Setting:

- Broadband service providers can utilize different pricing regimes:
  - Fixed Fee, Uniform Pricing
  - Fixed Fee, Discriminatory Pricing
  - Two-Part Tariff (2PT), Discriminatory Pricing

- BSP can also degrade traffic:
  - Prioritize all traffic for either “high” or “low” users
Model Setting:

- Broadband service providers can utilize different pricing regimes:
  - Fixed Fee, Uniform Pricing
  - Fixed Fee, Discriminatory Pricing
  - Two-Part Tariff (2PT), Discriminatory Pricing

- BSP can also degrade traffic:
  - Prioritize all traffic for either “high” or “low” users

Questions:

- What are optimal BSP strategies with and w/o imposing “Net Neutrality”?
- Under which circumstances does the BSP and Social Planner objectives diverge?
BSP would only prefer either:
- 2PT without changing priority of packet delivery
- Uniform Fixed Fee Pricing w/ priority degradation for high type users

Social planner:
- Always prefers degrading service of high-type users
  - "NNN might be the preferred outcome when it comes to charging consumers for preferential delivery of their requested packets"
General Comments

- Doesn’t take as given that BSP’s would want to violate “Net Neutrality” Rules

- Assumes all packets for “high” valuation users are degraded:
  - NN typically has assumed prioritization takes place on content end, and is content specific (not user specific).
  - Implementation?
  - Is this a violation of NN?
Assumptions, Caveats, Possible Extensions

On consumer choice and utilization:
- Only high or low type both in consumption and value
- Potential for heterogeneity, uncertainty in content consumed?
- Market Expansion?

On content ("supply") response to traffic degradation:
- Stifled provision of "high bandwidth" content
  ...(and myriad other dynamic effects)...
  Other potential BSP Instruments:
  Bandwidth caps? (Prioritize traffic without violating NN?)
  (How can BSP treat H types differently than L types under NNN1, but not discriminate under NN2)?
On consumer choice and utilization:
- Only high or low type both in consumption and value
- Potential for heterogeneity, uncertainty in content consumed?
- Market Expansion?

On content ("supply") response to traffic degradation:
- Stifled provision of "high bandwidth" content
- ...(and myriad other dynamic effects)...

R. S. Lee (NYU Stern)
Discussion: Broadband User Discrimination at
April 16, 2010
Assumptions, Caveats, Possible Extensions

- On consumer choice and utilization:
  - Only high or low type both in consumption and value
  - Potential for heterogeneity, uncertainty in content consumed?
  - Market Expansion?

- On content ("supply") response to traffic degradation:
  - Stifled provision of "high bandwidth" content
  - ...(and myriad other dynamic effects)...

- Other potential BSP Instruments:
  - Bandwidth caps? (Prioritize traffic without violating NN?)
  - (How can BSP treat H types differently than L types under NNN1, but not discriminate under NN2)?
Final Remarks

- Contribution to existing literature on internet pricing regimes and further highlights the enormous complexity of the Net Neutrality debate

- Looks at “demand-side" traffic shaping as opposed to content or “supply-side"

- Main takeaways could be more nuanced: motivate BSP instruments, highlight the potential dynamic impacts on both broadband adoption and content provision.