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# Endogenizing Interconnection Measurement and Economics



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# Examine Interconnection Decisions Holistically

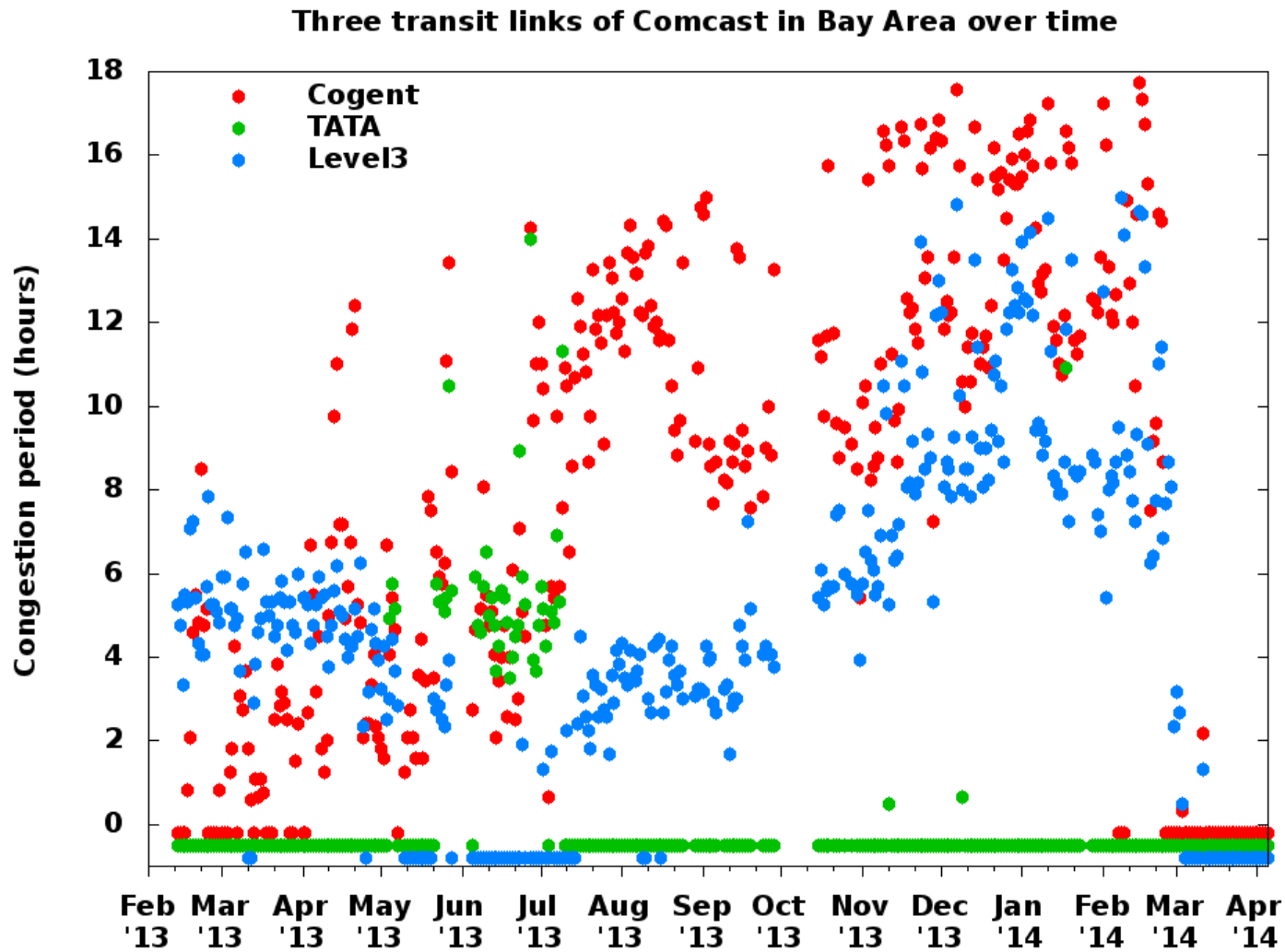
- Tend to frame an interconnection in isolation
- Does not capture the interconnection decision
  - Maintain existing transit relationship
  - Route through a different peering or transit partner
  - Obtain access through a third-party CDN
  - Create own server farm/data center
  - Deploy local storage (such as Netflix's Open Connect)

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# Examine Systemic Responses

- Important to examine congestion in particular ISPs
- Important to examine prioritization policies within ISPs (e.g., Cogent in February-March 2014)
- Missing focus: traffic generators' and ability to reroute along different paths
  - More complex topology (Faratin, Clark, Bauer, Lehr, Gilmore and Berger 2008; Yoo 2010; BITAG 2014)
  - More complex incentives (e.g., load balancing, cost minimization, ratio maintenance, QoS, opportunism)

# MIT Study on Comcast Congestion



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# Closing Thoughts

- Analysis needs to capture full range of technological and topological alternatives and incentives
- Zero-price interconnection is really barter/depends on symmetry
- Good-faith disagreements on price are a normal part of a well-functioning economic market
- Potential liability will affect negotiations