

CSAIL: Metrics for ensuring QoE across the ecosystem

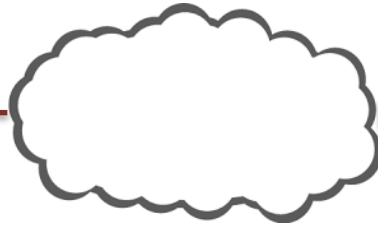
Steven Bauer

MIT

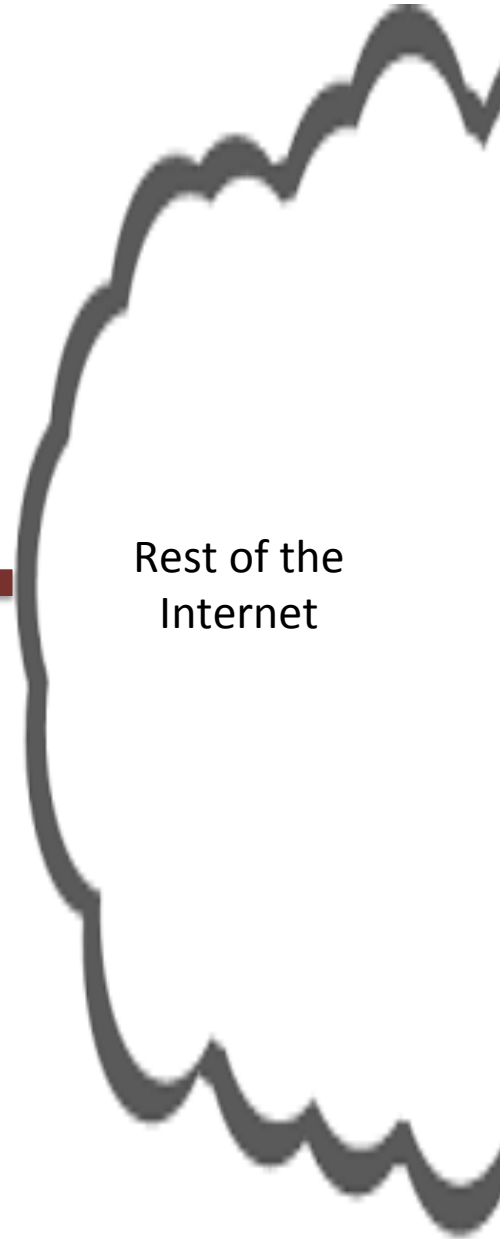
April 17, 2015

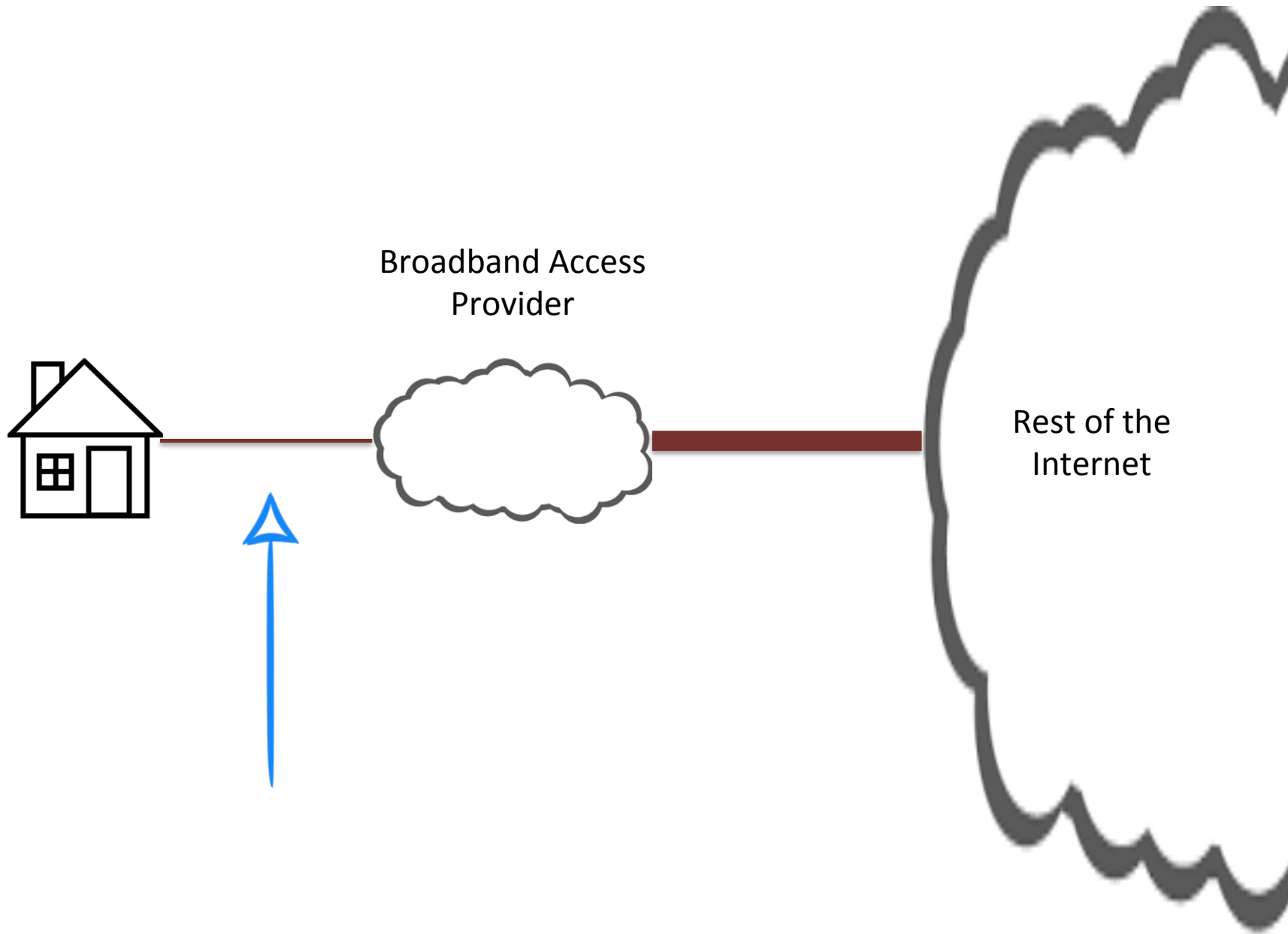


Broadband Access
Provider



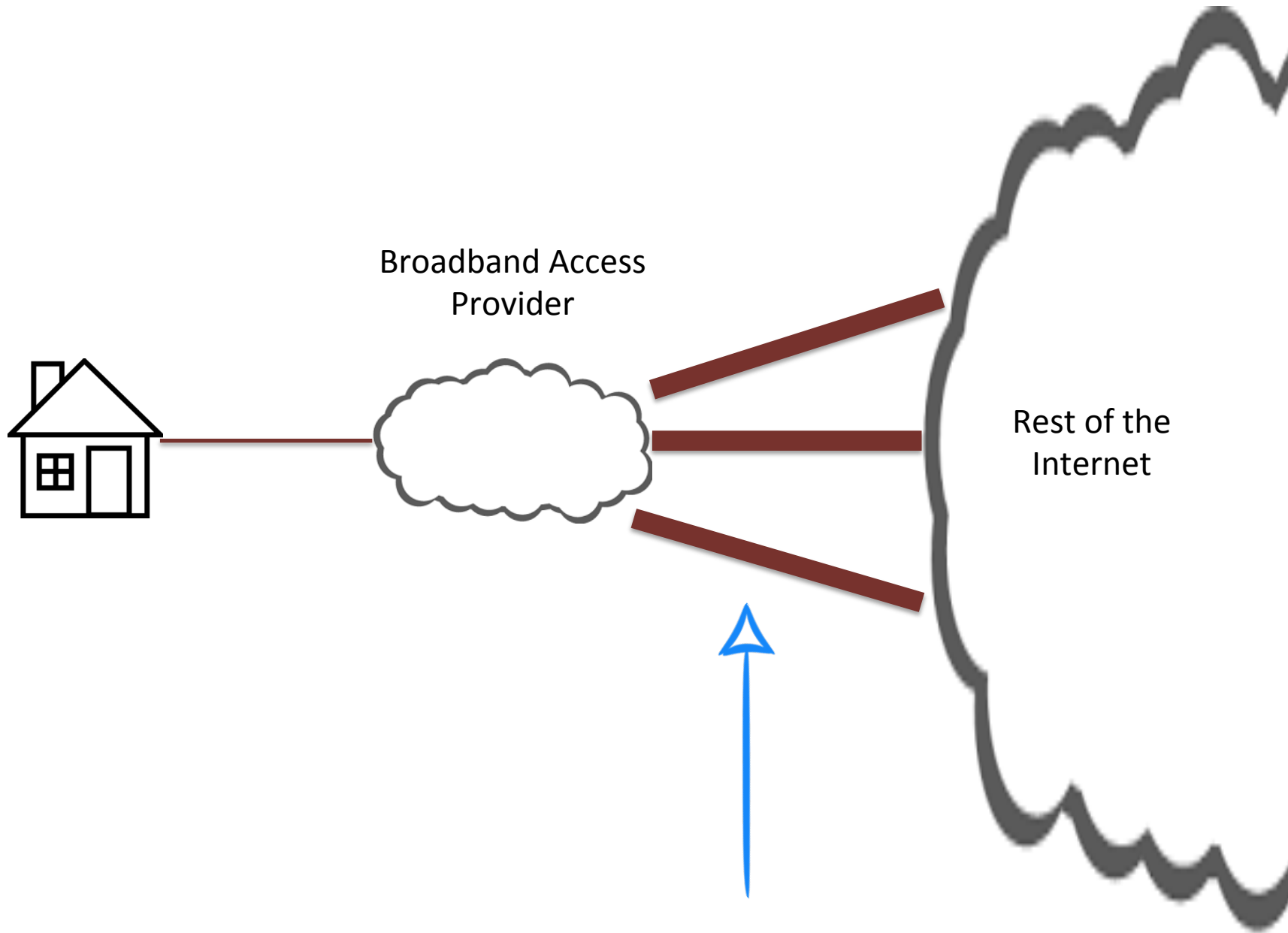
Rest of the
Internet





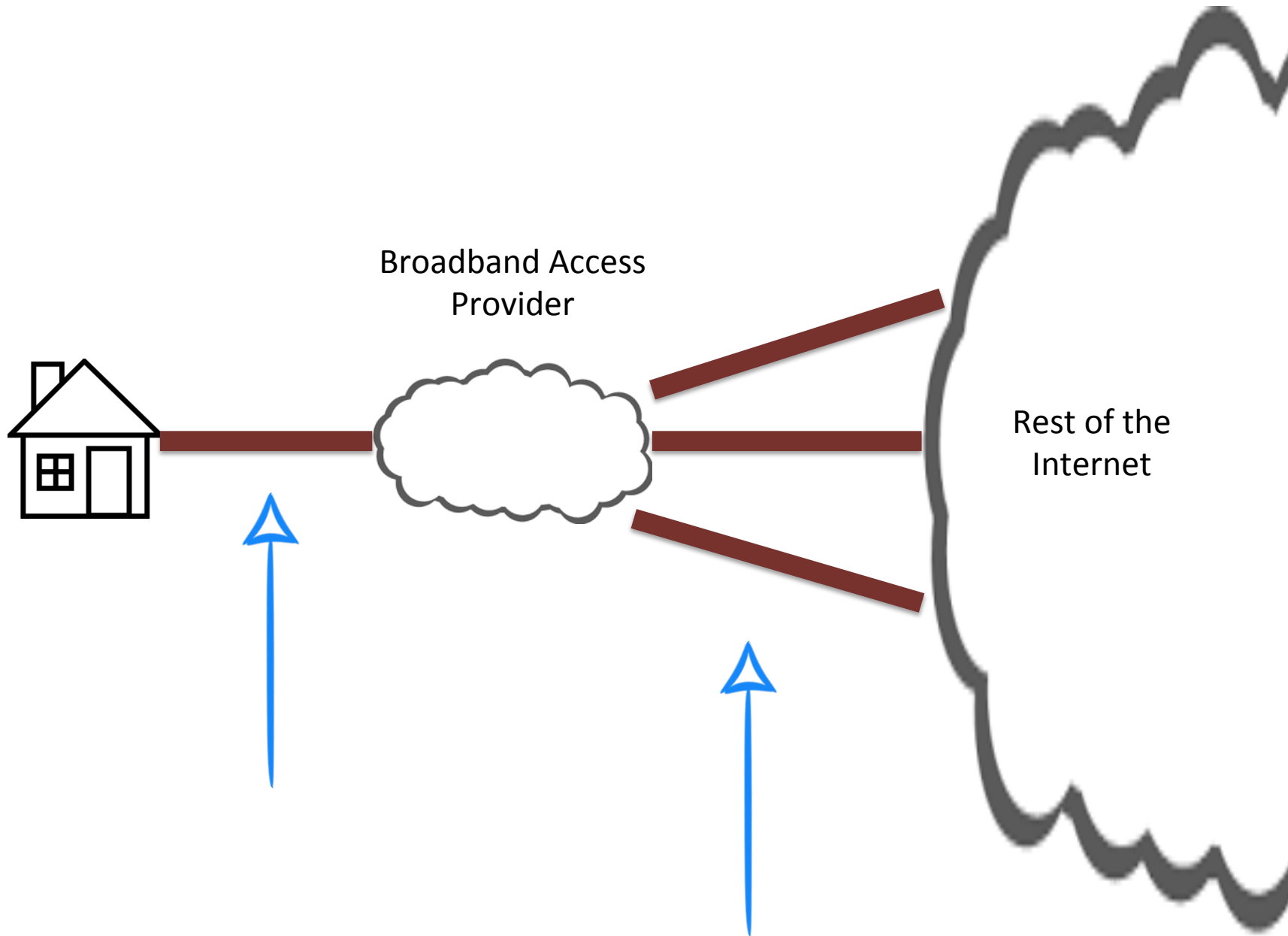
Broadband Access
Provider

Rest of the
Internet

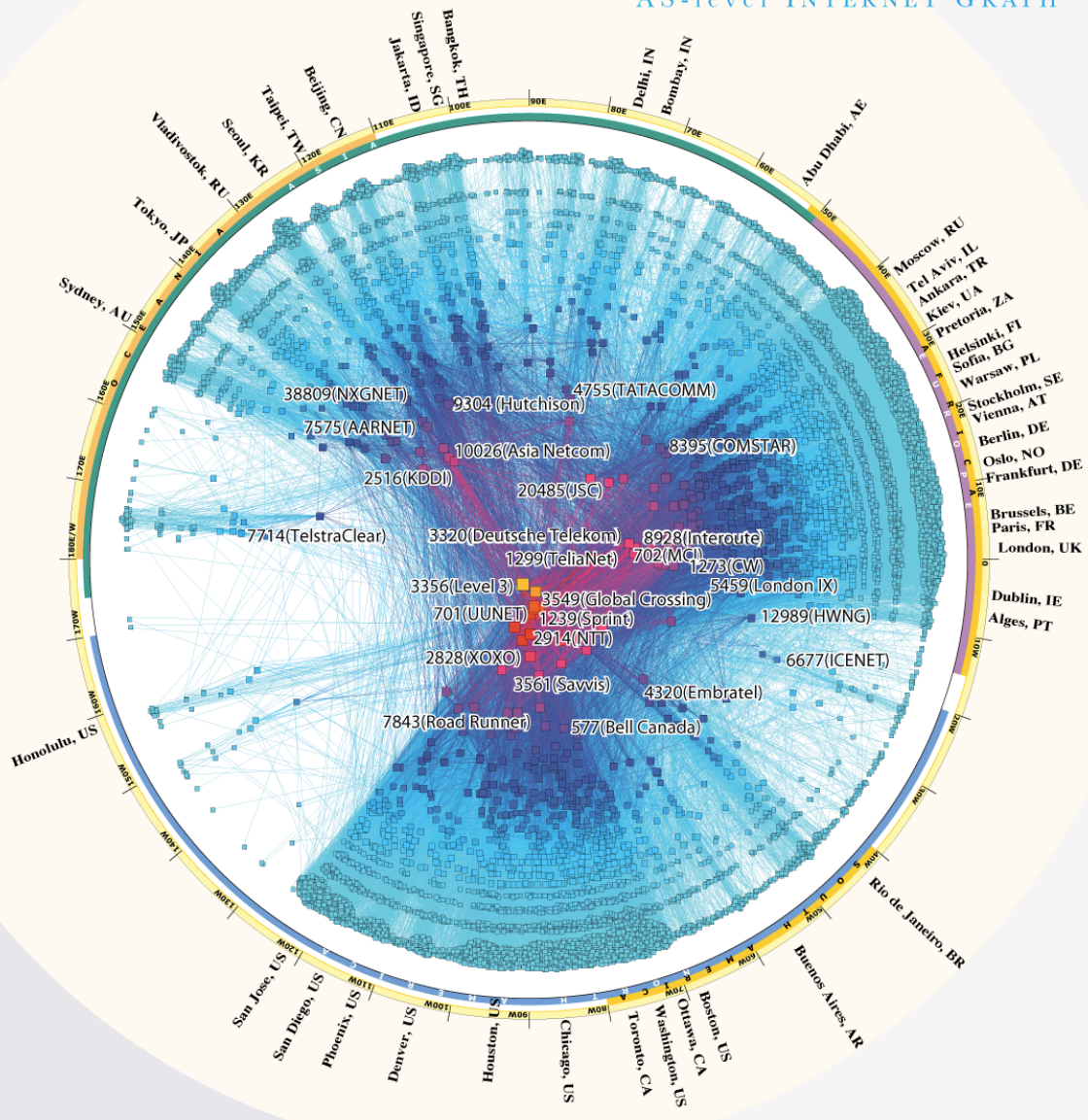


Broadband Access
Provider

Rest of the
Internet



AS-level INTERNET GRAPH



source: CAIDA.org

Interdomain congestion

- Developing methods to measure the location and extent of interdomain congestion
- Our goals
 - (1) a system to monitor interdomain links and their congestion state
 - (2) a near real-time “congestion heat map” of the Internet
 - (3) increasing transparency, empirical grounding of debate

Very high speed broadband (Gigabit / 100 Mbps)

1. What expectations should exist regarding how a broadband access provider offering high speed access links is interconnected with other networks?
2. How should the current norms and expectations that have developed regarding access network performance extend across the interconnection links of a very high speed broadband provider?
3. Do the expectations of performance on the access links themselves change with such high speed offerings?
4. Are existing measurement tools and systems capable of providing consumers and regulators with a clear understanding of how well such high speed broadband access networks are functioning and interconnected?
5. Are there dimensions of interconnection beyond capacity that are relevant to the customer experience and regulatory discussions?

FCC Measuring Broadband America

Project Objective

Create a working group whose purpose is to develop a common methodology for measuring video streaming performance to allow for a comparative measurement and analysis of available services.

Selected Services (beta)



- Services so far selected based on popularity
- Includes free and subscription platforms
- Working to establish collaborative relationships with service providers
- Intention to add more streaming services
- Requesting the participation of ISPs in a joint effort

Next Steps