

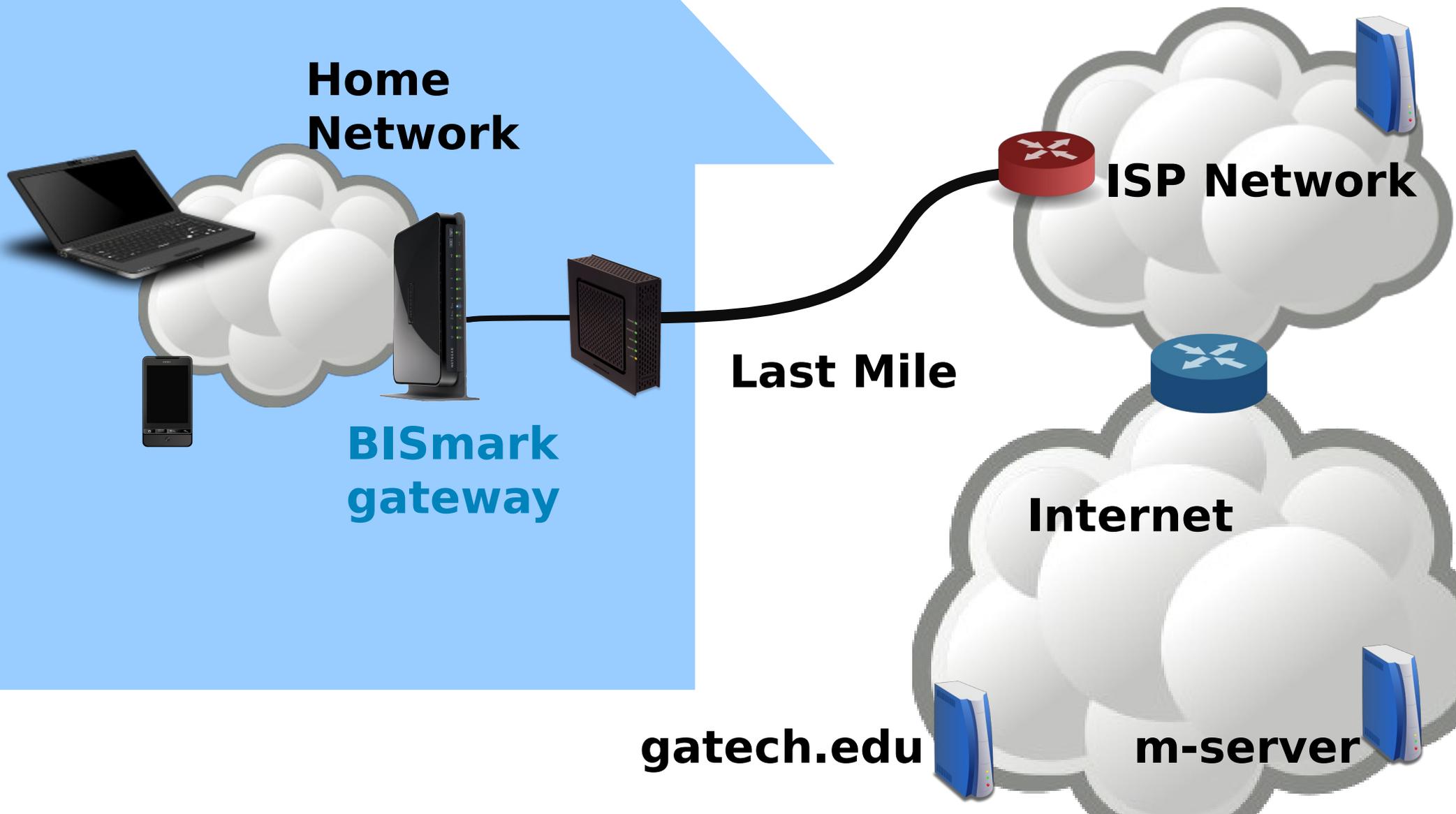


BISmark
projectbismark.net

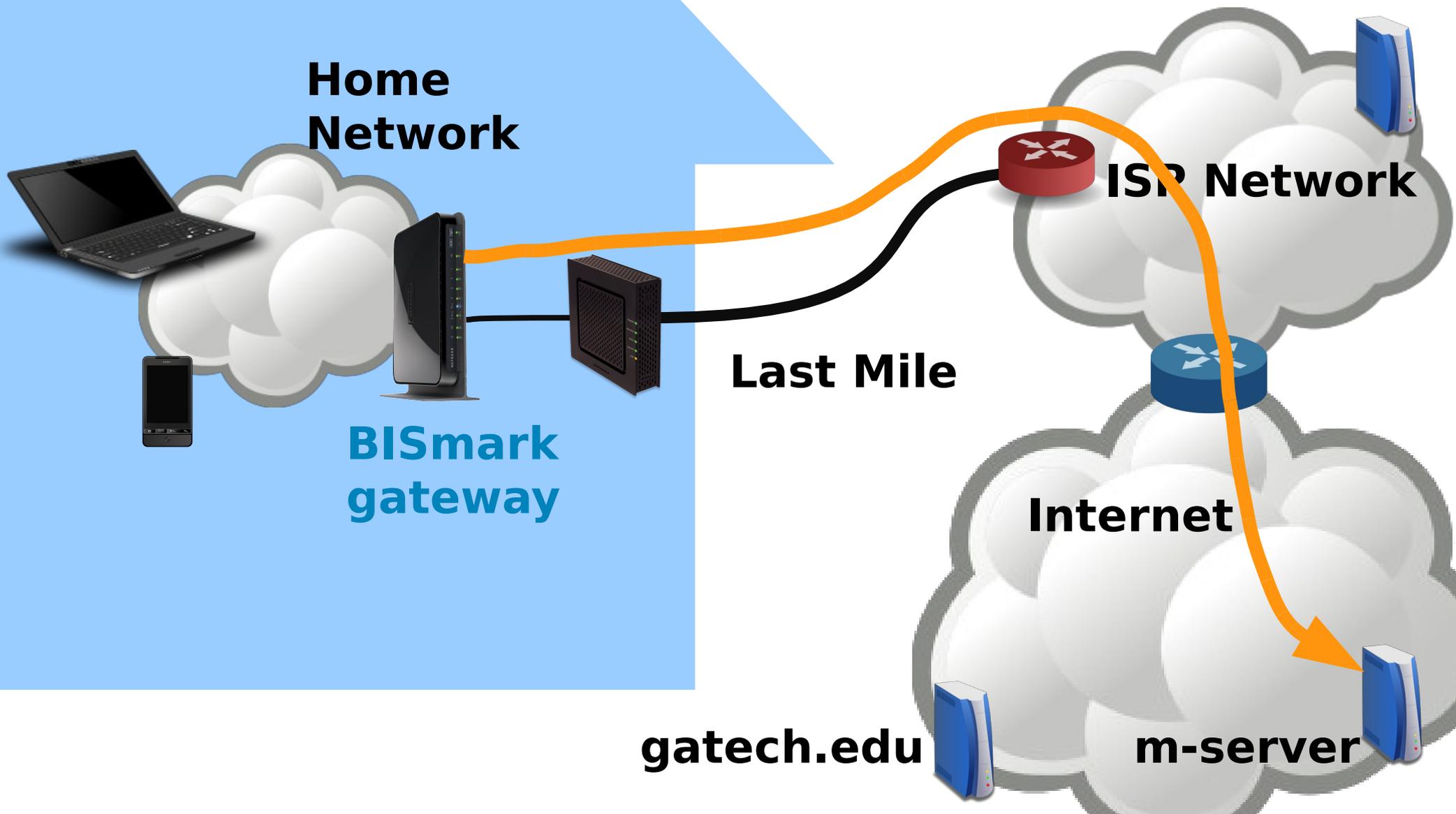
Srikanth Sundaresan

srikanth@gatech.edu

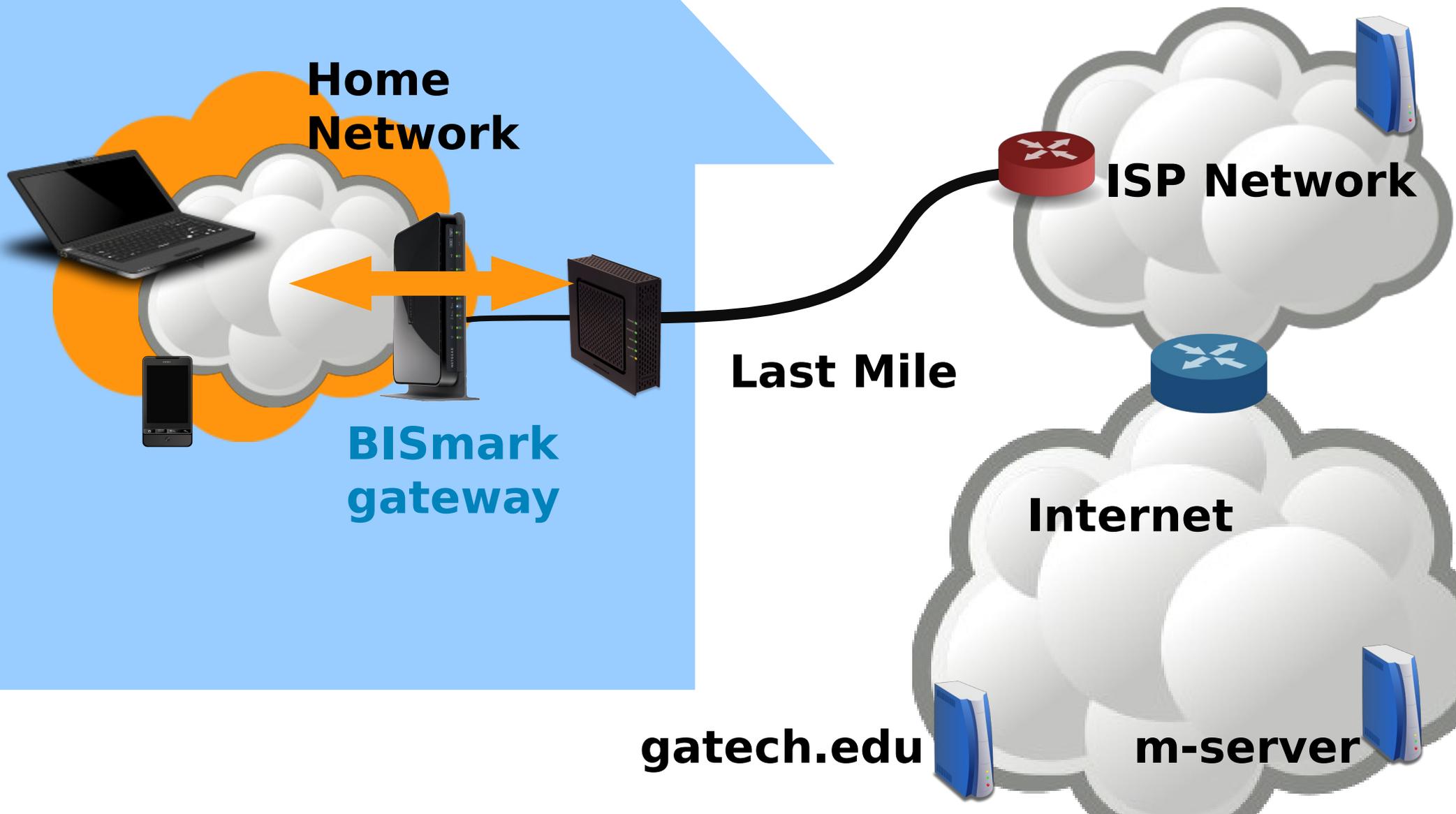
What is BISmark?



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What is BISmark?

- A platform for home network & broadband research
 - Longitudinal measurements from the gateway
 - Deeper understanding home networks
- Open development approach
 - Open source & free software
 - Understand/repeat/reuse/fork
 - <http://wiki.projectbismark.net> for github links

Current platform

- Router: Netgear WNDR3700/3800
 - 64/128 MB RAM, 16 MB flash
 - Openwrt image with BISmark packages
 - netperf, shaperprobe, iperf, D-ITG, pings, traceroutes, nslookup, \$YOUR_FAVORITE_TOOL
 - Exploring other hardware options
- Measurement Servers
 - Mlab servers: global footprint
- Control server
 - Device configuration, measurement coordination, data collection, remote access





BISmark Gateway

ISP	AT&T
Location	Atlanta, USA
Service Type	DSL
Service Plan	DSL
Download Rate	3000 kbps
Upload Rate	385 kbps
First Measurement	July 08, 2011
Last Measurement	January 29, 2013

[Edit Device Details](#) [Link to this page](#) [Compare my Performance](#)

[Download Throughput](#) [Upload Throughput](#) [Round Trip Latency](#) [Last Mile Latency](#) [Shape Rate](#) [Show All](#)

— Multi-threaded TCP — Single-threaded TCP

Zoom [1d](#) [1w](#) [1m](#) [3m](#) [6m](#) [All](#)

From: To:



Deployment status

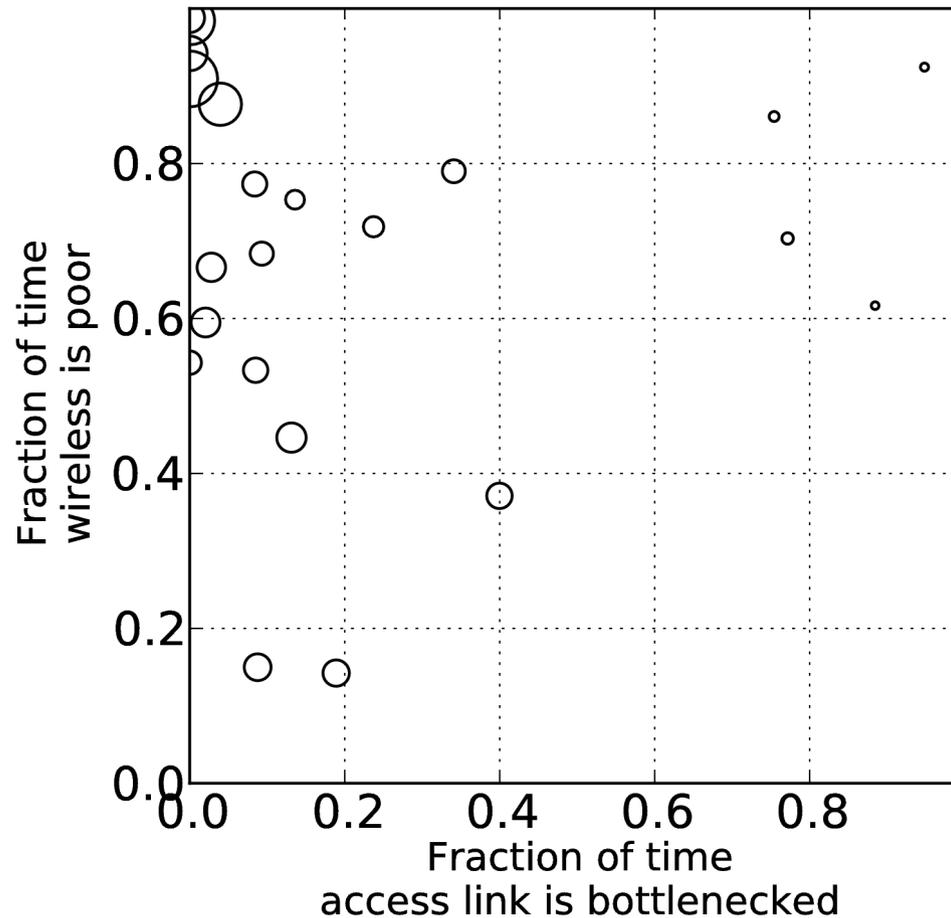


300+ deployed, 130+ active
6 continents, 25+ countries

Research using BISmark

- Wireless in the home
- Censorship Analysis (Tor and University of Napoli)
- Latency analysis for correlating pathologies
- Routing Analysis with traceroutes
- Internet sharing and usage in deprived areas (University of Cambridge)
- CDN performance from the edge (Level3)
- Ipv6 firewalls (TWC)
- 4G measurements (T-Mobile)
- Passive Measurements for security (Comcast)

Wireless Performance in homes (sneak peek)



The wireless is a potential bottleneck if your access link is much greater than about 10-15 Mbps

Seeking collaborators

- Custom experiments
 - Package and run custom tools, script existing tools
 - we're open to many ideas (within reason)
 - What do you want to do with BISmark?
- Co-host a regional/focused deployment
 - Leverage our platform
 - Manage users, experiments
- Active data analysis
- Host a BISmark device in your home



Thanks to

- Steve Woodrow
- Sam Crawford
- Mlab and Google
- University of Napoli
- other developers and volunteers

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