June 24, 2015

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street SW
Washington, DC 20554

***Via Electronic Filing***

**Re: Notice of Ex Parte Communications, MB Docket No. 14-90, Applications of AT&T Inc. and DIRECTV for Consent to Assign or Transfer Control of Licenses and Authorizations**

Dear Ms. Dortch:

On June 23, 2015, Joshua Stager of New America's Open Technology Institute ("OTI") spoke via telephone with the following Commission staff: Jamillia Ferris and Stephanie Weiner from the Office of General Counsel, Susan Singer and Brendan Holland from the Media Bureau, and Elizabeth Andrion, Robert Cannon, and Scott Jordan from the Office of Strategic Planning and Policy Analysis. During the teleconference, OTI discussed forthcoming data from Measurement Lab ("M-Lab")[1] that underscore the need to protect AT&T customers from interconnection abuse in the proposed DIRECTV transaction.

Today, M-Lab is releasing the first batch of results from the Internet Health Test, a network diagnostic tool that is publicly available at www.InternetHealthTest.org.[2] Since launching on May 19, 2015, the test has already produced an unprecedented amount of data: 2.5 million data points generated by more than 300,000 Internet users.[3] This data trove has given

[1] M-Lab is a consortium of research, industry, and public interest partners (including OTI) that is dedicated to providing an ecosystem for the open, verifiable measurement of global network performance. M-Lab researcher Collin Anderson describes this collaborative effort as "the largest open measurement effort on the planet."
[2] M-Lab developed the Internet Health Test with Battle for the Net, a public interest coalition, as a tool for consumers to test their broadband connections and to gather data on ISP activity in the wake of the Open Internet Order's adoption on Feb. 26, 2015.
[3] The datasets and methodology details are available at www.measurementlab.net.

M-Lab a deeper look into how last-mile providers ("access ISPs") connect to the Internet backbone via transit providers — and how that interconnection activity affects consumers. The dataset includes ISP pairs that were not previously studied in M-Lab's groundbreaking October 2014 report, which used similar diagnostic tools to analyze interconnection activity during several high-profile disputes.[4]

## I. KEY FINDINGS

The initial findings reveal that millions of Americans experienced persistent degradation of their Internet connections in the past month. The degradation was observed on a national scale at measurement sites in Atlanta, Chicago, Los Angeles, Miami, New York, Seattle, and Washington, D.C.[5] The congestion was particularly acute at interconnection points with transit providers GTT and Tata.[6]

AT&T was the Internet Health Test's worst performer. AT&T customers experienced the most consistent patterns of degradation of all the access ISPs that were studied.[7] Downstream connections routinely fell beneath 4 Mbps, well below the company's advertised speeds and the Commission's standard of 25 Mbps. M-Lab observed this congestion at every measurement site with a significant AT&T market presence. In Atlanta and Chicago, AT&T's peak-hour connections frequently plummeted to 0.1 Mbps — essentially unusable.

Notably, AT&T's congestion was largely observed on its interconnections with transit provider GTT.[8] AT&T did not display congestion over interconnections with Cogent and Level 3, and GTT did not display congestion over Comcast interconnections in the same region; this suggests the congestion was not caused by problems on AT&T's last-mile network or GTT's transit network. The symptoms and patterns of degradation are similar to those observed on AT&T and other access ISPs in last year's analysis: decreased download throughput, increased latency, and increased packet loss compared to the performance experienced by customers of different access ISPs in the same region. In nearly all cases, the worst degradation occurred

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[4] *See* "ISP Interconnection and its Impact on Consumer Internet Performance," Measurement Lab, October 28, 2014; *see also* "Beyond Frustrated: The Sweeping Consumer Harms as a Result of ISP Disputes," Open Technology Institute, November 2014.
[5] The majority of U.S. Internet traffic is exchanged in these cities, making them the biggest interconnection hubs in the country.
[6] *See* Appendix A.
[7] M-Lab studied the five largest access ISPs: Comcast, Time Warner Cable, Verizon, CenturyLink, and AT&T.
[8] This observation is consistent with M-Lab's March 2015 dataset that found similar congestion (see Appendix B). OTI submitted this data in an earlier filing in this proceeding. *See* Notice of Ex Parte Communications, OTI, Free Press, and Public Knowledge, MB Docket No. 14-90 (May 28, 2015).

during peak use hours. As M-Lab observed in its 2014 study, peak-hour degradation is an indicator of under-provisioned interconnection points whose shortcomings are only felt when traffic grows beyond a certain threshold.

## II. IMPLICATIONS FOR THE PROPOSED TRANSACTION

The results of the Internet Health Test demonstrate that many AT&T customers are not getting the broadband service they paid for. Interconnection congestion is widespread throughout the United States, even after the Commission adopted the Open Internet Order. M-Lab's research contradicts AT&T's recent assertions that the interconnection marketplace is "functioning" and "competitive."[9] Indeed, at the same time AT&T was making this assertion before the Commission, the Internet Health Test was observing interconnection pairs that appeared to be non-functional. This ongoing conduct is evidence of a market failure in what has historically been a healthy and competitive market for interconnection services. The fact that AT&T customers are suffering more than most underscores the need for close scrutiny of the proposed transaction.

Consistent with our earlier filings in this proceeding,[10] OTI reiterates the urgent importance of a condition that protects AT&T customers from further harm. Interconnection abuse is a clear threat to broadband deployment, online video competition, and the public interest. AT&T has already demonstrated its ability to degrade broadband access during negotiations with transit providers and edge services; the acquisition of a major video distribution business would substantially increase AT&T's incentive to engage in such conduct. OTI supports a robust and enforceable condition that requires AT&T to interconnect on reasonable and nondiscriminatory terms. Importantly, this condition must prohibit AT&T from leveraging its terminating access monopoly to extract charges that amount to nothing more than fees for access to its customers. By voluntarily committing to a ban on access fees, AT&T would demonstrate its commitment to the Open Internet and to the public interest. The Commission should also require that AT&T periodically disclose information about its interconnection practices to ensure compliance with the aforementioned condition.

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[9] Notice of Ex Parte Communications, AT&T and DIRECTV, MB Docket No. 14-90 (May 26, 2015).

[10] *See* Notice of Ex Parte Communications, OTI, Free Press, and Public Knowledge, MB Docket No. 14-90 (May 28, 2015); Notice of Ex Parte Communications, OTI, Free Press, and Public Knowledge, MB Docket No. 14-90 (May 20, 2015); Notice of Ex Parte Communications, Cogent, DISH, Free Press, OTI, and Public Knowledge, MB Docket No. 14-90 (May 12, 2015).

AT&T has argued that interconnection conditions are "inapposite" to this transaction because DIRECTV has no broadband assets.[11] However, this claim is flatly contradicted by AT&T's proposal to voluntarily accept other broadband-related conditions — namely its offer to abide by the 2010 Open Internet Order and to market a standalone broadband service to consumers.[12] As these voluntary commitments demonstrate, AT&T's broadband product is very much implicated by the proposed transaction. A voluntary commitment regarding the interconnections upon which that broadband product relies is an appropriate and necessary prerequisite for a finding that the proposed transaction benefits the public interest.

Pursuant to the Commission's rules, this notice is being filed in the above-referenced docket for inclusion in the public record.

Respectfully submitted,

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[11] Notice of Ex Parte Communications, AT&T and DIRECTV, MB Docket No. 14-90 (May 26, 2015).
[12] *See* Public Interest Statement of AT&T and DIRECTV, MB Docket No. 14-90 (June 11, 2014) *and* Testimony of Randall Stephenson, U.S. Senate Committee on the Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights, *The AT&T/DIRECTV Merger: The Impact on Competition and Consumers in the Video Market and Beyond*, June 24, 2014 ("We very much aspire to have a standalone broadband product …That is our primary product that we sell in the consumer home solution space today. So absolutely I will make you without equivocation of that commitment.").

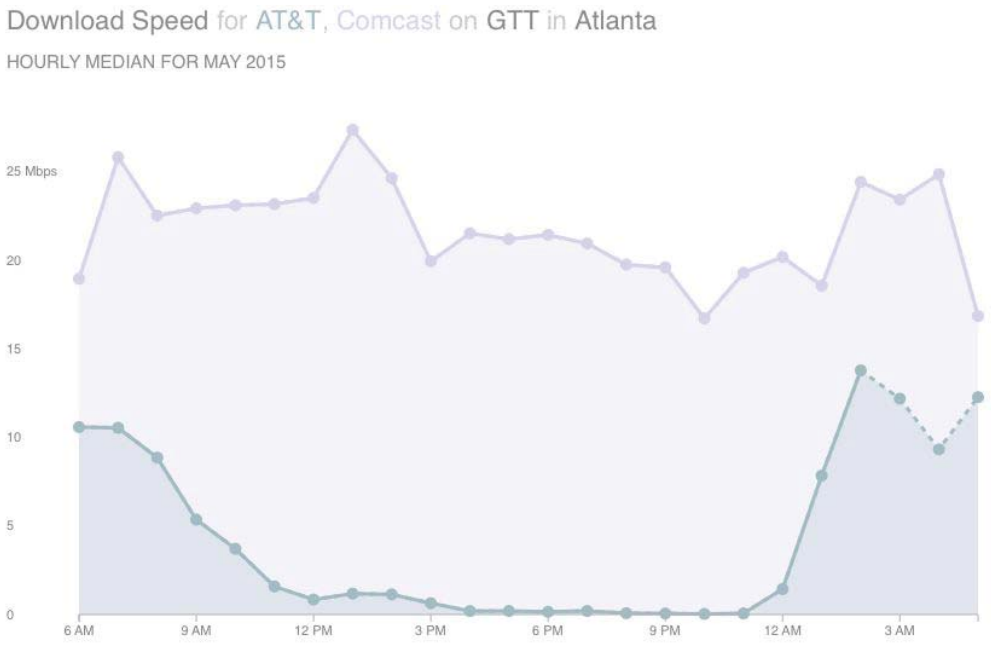
# APPENDIX A

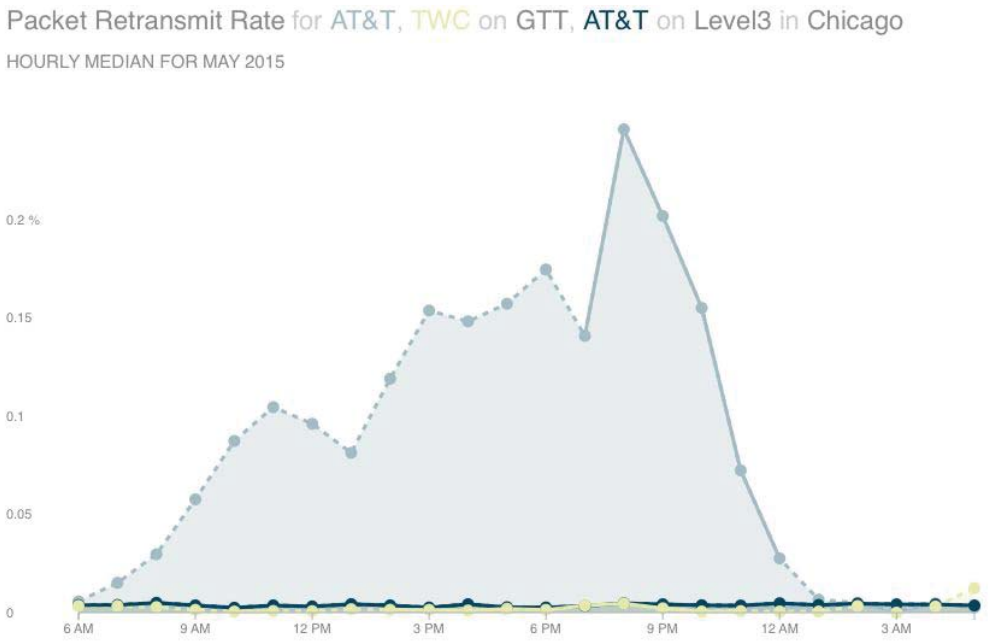
# Measurement Lab Data
# June 2015

# <u>AT&T Congestion Observed Over GTT Interconnections</u>

*May — June 2015*

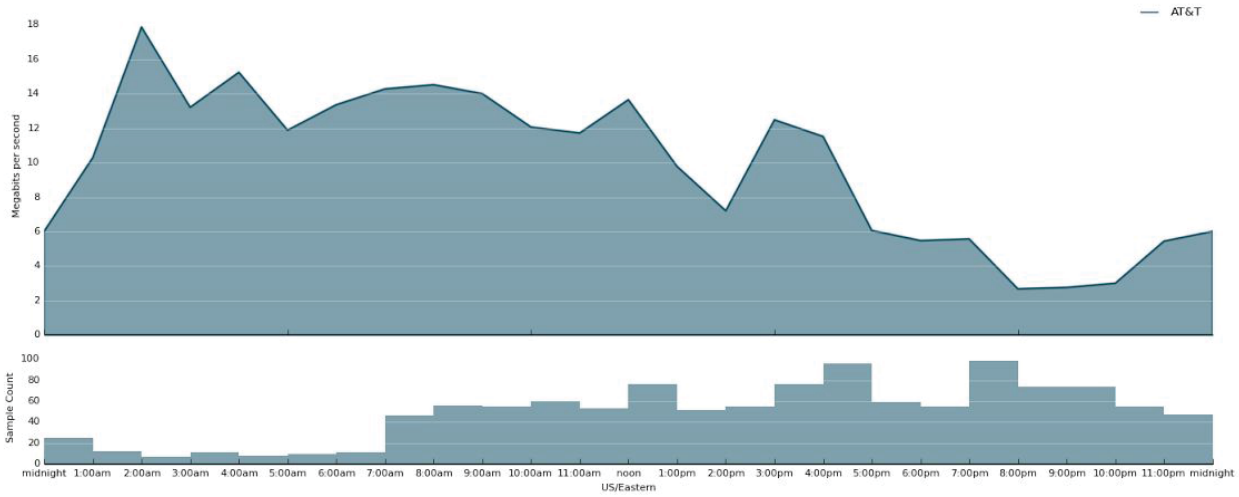
The following datasets show AT&T's performance over GTT interconnections since the launch of the Internet Health Test on May 19, 2015. Level 3 data in Chicago is also provided for comparison.



Median Download Throughput for AT&T on GTT in Miami (higher is better)

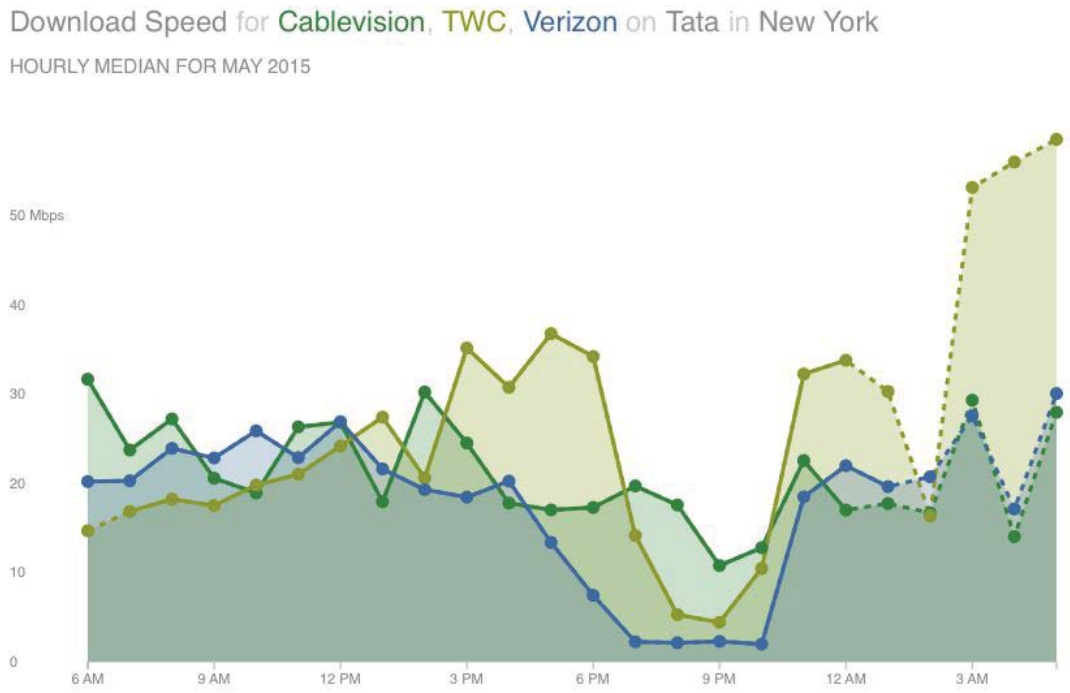
HOURLY MEDIAN FOR MAY 2015



## Congestion Observed Over Tata Interconnection

*May — June 2015*

The following dataset shows the performance of various ISPs over Tata interconnections in New York since the launch of the Internet Health Test on May 19, 2015. The test did not yield sufficient data on AT&T's performance in New York because AT&T lacks a significant presence in this market.



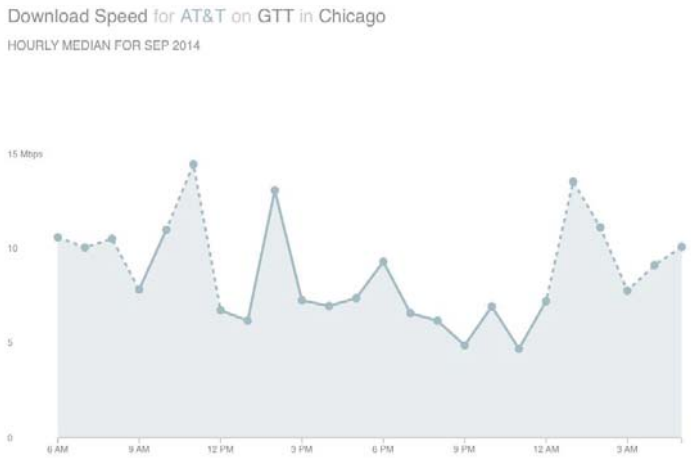
# APPENDIX B

# Measurement Lab Data
# March 2015

## **AT&T Download Speeds Over GTT**

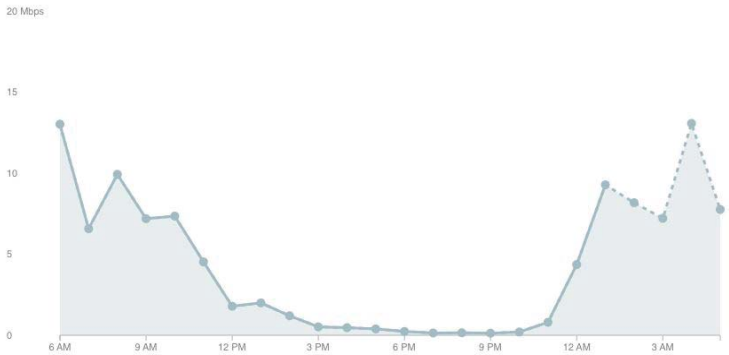
*Chicago, September 2014 — February 2015*

The following datasets show AT&T's performance over GTT interconnections from September 2014 to March 2015. AT&T customers began experiencing degraded speeds in November 2014:



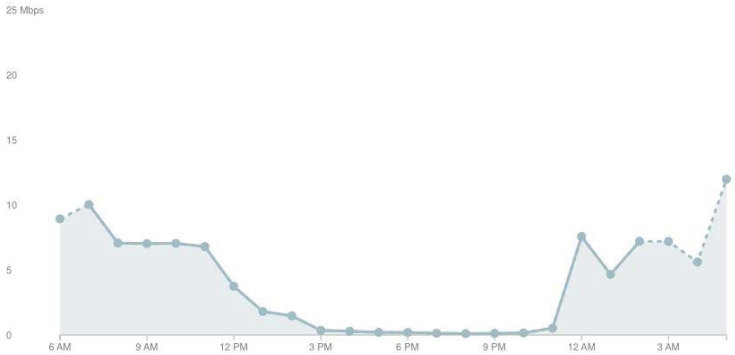
Download Speed for AT&T on GTT in Chicago

HOURLY MEDIAN FOR DEC 2014



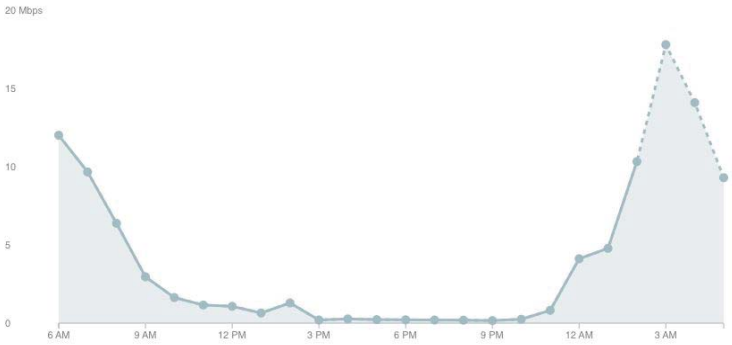

Download Speed for AT&T on GTT in Chicago

HOURLY MEDIAN FOR JAN 2015




Download Speed for AT&T on GTT in Chicago

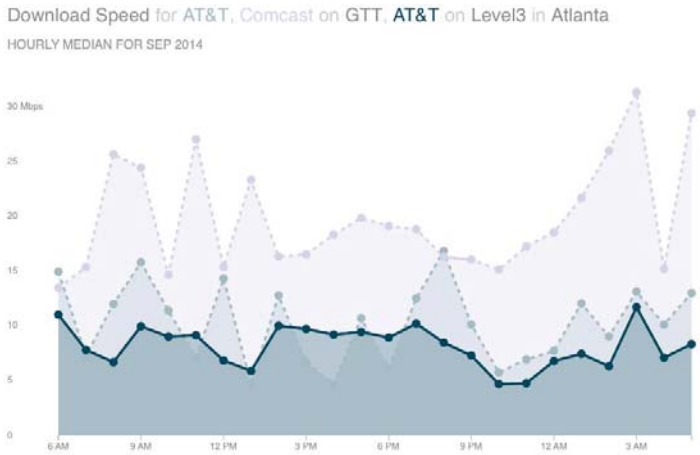
HOURLY MEDIAN FOR FEB 2015

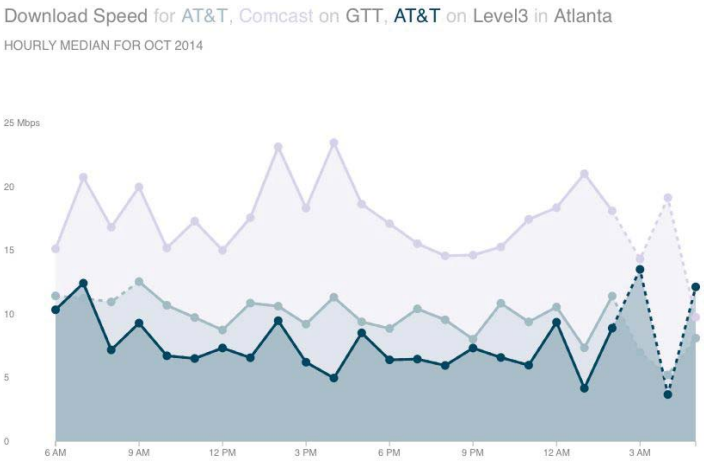


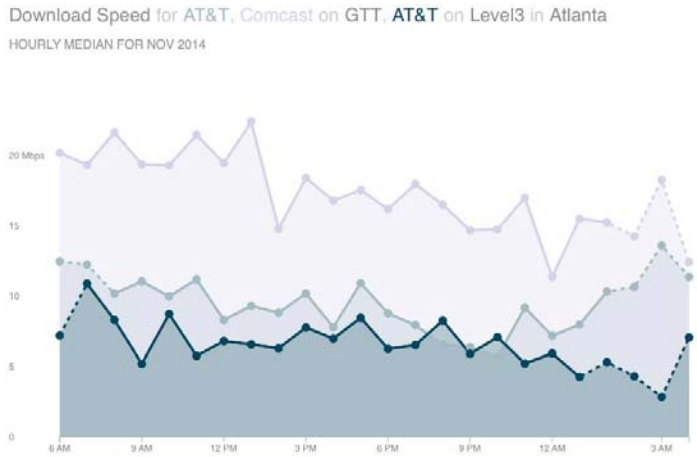
## <u>AT&T Download Speeds Over GTT and Level 3</u>

*Atlanta, September 2014 — February 2015*

The following datasets show AT&T's performance over GTT and Level 3 interconnections from September 2014 to February 2015. AT&T customers began experiencing degraded speeds over GTT in December 2014, but not over Level 3. Comcast customers in the same area did not experience degradation over GTT:

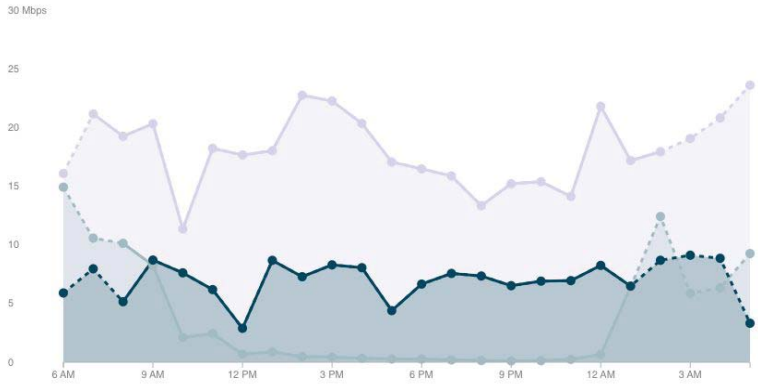


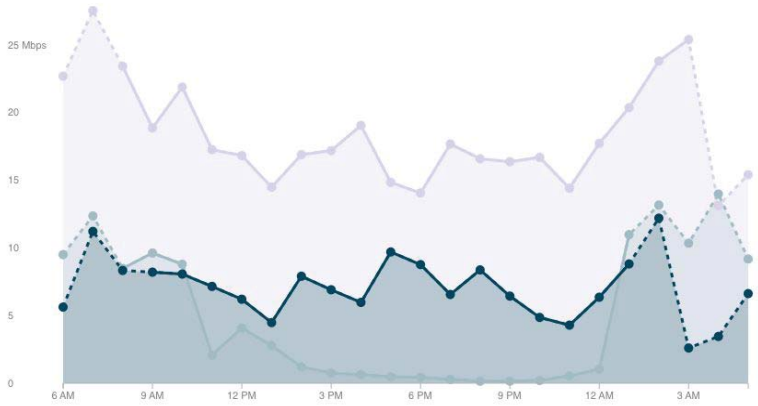
Download Speed for AT&T, Comcast on GTT, AT&T on Level3 in Atlanta

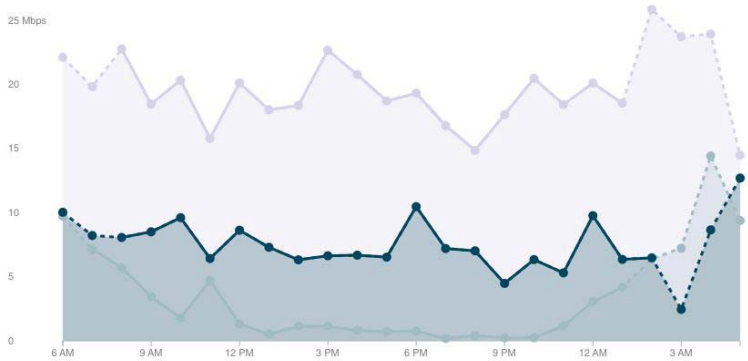
HOURLY MEDIAN FOR DEC 2014




Download Speed for AT&T, Comcast on GTT, AT&T on Level3 in Atlanta

HOURLY MEDIAN FOR JAN 2015




Download Speed for AT&T, Comcast on GTT, AT&T on Level3 in Atlanta

HOURLY MEDIAN FOR FEB 2015