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SPECIAL BULLETIN

5th Fixed Broadband Speed Report

The FCC recently released the [fifth annual report on fixed broadband speeds](#), which provides a look at, based on a sample of ISP customers from 13 of the largest providers across the country, advertised and actual speeds, latency, packet loss, and certain consumer behavior. The report contains findings in four major areas: (1) growth in advertised broadband speeds, (2) actual speeds compared to advertised speeds, (3) consumer migration to higher speed tiers, and (4) latency and packet loss.

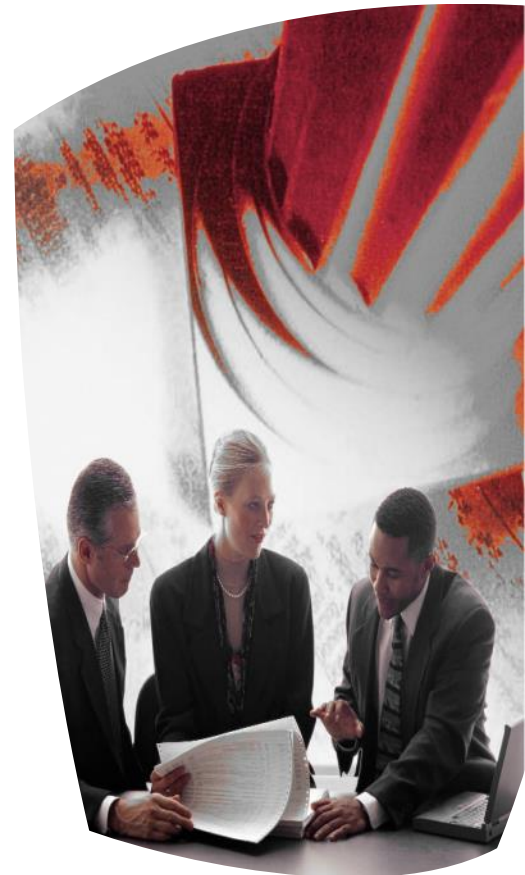
The thirteen ISPs participating in the sample were: AT&T, Cablevision, CenturyLink, Charter, Comcast, Cox, Frontier, Hughes (satellite), Mediacom, Time Warner, Verizon, Viasat (satellite), and Windstream. From these ISPs, samples were taken throughout 2014 from 5,583 “measurement clients” to arrive at the charts and other data presented in the report. Other organizations, including USTelecom, participated in the process as well. Sample measurements were made during peak hours (7pm to 11pm) and were made between the customer and one of the measurement servers located in 9 cities across the country. The report claims that the sampled ISPs serve over 80% of residential broadband users in the United States.

Advertised speeds. DSL-based speeds, not unexpectedly, do not fare well in the report’s conclusions. While overall fixed broadband speeds have significantly increased as compared to the fourth report, “maximum advertised download speeds...tested among the most popular tiers offered by ISPs using DSL technology as remained largely unchanged since 2011. There is a growing disparity in most download speeds tested between many DSL-based broadband services and most cable-based broadband services.” Maximum advertised speeds, averaged across all participating ISPs, increased from 37.2 mbps to 72 mbps from September 2013 to September 2014, although most DSL providers report offering maximum download rates of 12 mbps or less.

Actual Speeds. According to the report, actual speeds experienced by most ISPs’ customers are close to or exceed advertised speeds. Again, DSL providers (at least those sampled) are singled out for advertising speeds in excess of actual speeds—for example, a substantial number of AT&T’s sampled customers experienced actual speeds that were 80% - 95% of those advertised, while customers of cable, fiber, and satellite services typically experience actual download speeds that exceeded 95% of advertised speeds.

Latency and Packet Loss. Not surprisingly, the report finds that latency largely depends on the technology being tested, with satellite services showing latency ranging from 603 ms to 659 ms, and other technologies showing latencies ranging from 14 ms to 52 ms. Latency is important for, among other things, real time services such as VoIP, video calling and gaming. Packet loss measures the percent of packets sent by the source but not received by the destination, and could reveal itself in perceived lack of quality of certain applications. Overall, DSL showed the highest packet loss (ranging from 0.1% to 0.8%).

Web Browsing Performance. The final metric addressed by the report is web browsing



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Questions? Comments?

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performance. The test used accesses 9 popular websites that included text and images, but no streaming video. Of course, web site performance (measured in seconds) depended on the download speed of the customer’s service, and ranged from 7-8 seconds to around 1 second.

Conclusion

The stated purpose of the Measuring Broadband Reports is to provide consumers with transparency relating to broadband performance, and to ensure accountability of the largest ISPs. What the report does not provide is any indication of broadband performance of smaller ISPs, and whether the technologies deployed by those ISPs serving the other 20% of residential customers (e.g., DSL) perform at the generally lower rates depicted in the report for Frontier, Windstream, CenturyLink, and AT&T. Finally, although this report does not include performance experienced by customers of smaller ISPs, it should be noted that, eventually, all ETCs will have to comply with the following rule:

47 CFR 54.313(a): Any recipient of high-cost support shall provide the following ...:

- (11) *The results of network performance tests pursuant to the methodology and in the format determined by the Wireline Competition Bureau, Wireless Telecommunications Bureau, and Office of Engineering and Technology.*

While the FCC has yet to release the “methodology and format” for the performance tests for purposes of 54.313 (Form 481) reporting, performance reporting is expected to be required in the near future, perhaps as soon as the 2017 Form 481 submissions.

Please let us know if you have any questions.

Chart 1: Maximum advertised download speed among the most popular service tiers

