

Dear FCC commissioners,

In your Notice of Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion you requested comments to help you guide your analysis, I appreciate the FCC's request for input and hope you will use them to make informed decisions.

Evaluating Fixed and Mobile Services

The Commission proposed two methods for evaluating the deployment of advanced telecommunication capabilities, the first suggested to measure the deployment of either fixed or mobile advanced telecommunication capabilities, the second was to evaluate the deployment of both fixed *and* mobile advanced telecommunication capabilities. I believe that the Commission should focus on the deployment of both fixed and mobile services. If the Commission were to focus on whether some form of advanced telecommunications capability is being deployed then that would mean the two services are interchangeable and would need to share the same set of benchmarks. Since the Commission recognizes the differences in fixed and mobile services and is proposing different benchmarks then it only makes sense to follow the approach taken in the universal service context and focus on the deployment of both. I support the Commission's proposal to report demographic information for areas with neither fixed nor mobile advanced telecommunications capability; with fixed but not mobile advanced telecommunications capability; and with mobile but not fixed advanced telecommunications capability.

Benchmarks and Metrics

In 2010 the FCC released the National Broadband Plan, one of the goals was the affordable access to actual download speeds of at least 100 megabits per second and actual upload speeds of at least 50 megabits per second by 2020.¹ I believe that setting the benchmark for fixed advanced telecommunications at 100 Mbps down and 50Mbps up will allow the FCC to take steps to achieve that goal. For mobile services I believe that 10 Mbps/3 Mbps is

¹ National Broadband Plan (2010)

<https://transition.fcc.gov/national-broadband-plan/national-broadband-plan-executive-summary.pdf>

an appropriate benchmark, the 3 Mbps upload speed is based off the previous upload benchmark set for fixed services and it ensures that users are able to send high quality data.

The Commission has asked if there are any other benchmarks besides speed that should be used to determine advanced telecommunication capabilities, I have three benchmarks in mind that can be applied to both fixed and mobile services.

The first benchmark I would like to propose is based off the definition of advanced telecommunication capabilities and telecommunications as found in US code Title 47. **In order to determine if a service, fixed or mobile, provides advanced telecommunication capabilities it must enable users to originate and receive high-quality voice, data, graphics, and video of the user's choosing between or among points specified by the user, without change in the form or content of the information as sent and received using any technology.** I believe that this is a simple reasonable test that ensures that we are truly getting advanced telecommunication capabilities and not just fast speeds. The necessity of this benchmark stems from new more nuanced service plans are being introduced. For example Verizon's new unlimited plans restrict video to 720p on mobile devices and 1080p on tablets², ATT's plan limits video to 480p³, the FCC shouldn't consider these services when evaluating deployment of advanced telecommunication capabilities since they do not offer high-quality video using any technology. To gather this data the FCC can either look at the details of each plan or have providers self report that they meet this requirement.

The second benchmark I suggest is based off data caps. The internet has improved Americans' quality of life and has become crucial to growing our economy, the purpose of deploying advanced telecommunication capabilities is to ensure that everyone can enjoy these benefits, but the benefits are only realized when people actually use the internet. All forms of data caps whether they are used to charge overage fees like with Comcast⁴ or if they "soft caps" that are used to slow down user's speeds like with Verizon⁵ share the same purpose, to discourage users from using data.⁶ As such the Commission should set a benchmark that is

² <https://www.verizonwireless.com/support/new-verizon-plan-unlimited-faqs/>

³ <https://www.att.com/plans/unlimited-data-plans.html>

⁴ <https://www.xfinity.com/support/internet/data-usage-what-is-the-terabyte-data-usage-plan/>

⁵ <https://www.verizonwireless.com/plans/verizon-plan/>

⁶ See generally Marshini Chetty et al., 'You're Capped!' Understanding the Effects of Bandwidth Caps on Broadband Use in the Home, Microsoft Research and Georgia Inst. Tech (May 5, 2012), available at http://research.microsoft.com/pubs/162079/YourCapped_HomeBroadbandUseUnderCaps_CHI2012.pdf (finding consumer anxiety related to bandwidth caps was related to uncertainty about which applications consumed the most bandwidth and multiple users on a plan using up allotted data and caused users to limit their usage habits).

forward-looking in addressing those disincentives, starting with a 1 TB limit for fixed and a 50 GB limit for mobile, based off limits currently offered to customers.⁷

Finally the Commission should also track the price of these services. 47 U.S. Code § 1301 mentions both the deployment *and* adoption of broadband technology is vital to our Nation's growth. 47 U.S. Code § 1302 (a) mentions that the Commission can utilize price cap regulation to encourage the deployment to all Americans, and the Commission is required to gather the average per capita income in underserved areas. Give these facts it would be in the best interest of the Commission to track the cost of these services, as it will provide context on why some Americans may choose not to adopt advanced telecommunication capabilities available to them, and it will show what effect direct competition has on prices.

Updating Benchmarks

The Commission asked for comments to determine if there should be a relationship between the benchmark and what some fraction of subscribers are actually purchasing. This is a backwards facing approach with many problems. For starters if the benchmark is based on what is currently deployed how could the Commission find that deployment is not happening in a reasonable and timely manner, that is to say if you set the benchmark speed based on what 60% of Americans have access to then by definition at least 60% of Americans will always have access to those speeds. Additionally it doesn't make sense to base the speeds off of what consumers are purchasing because it fails to take into account the cost of those services, if consumers have the choice of service offering speeds of 15 or 25 Mbps and they largely choose the 15 Mbps service then the Commission should look into the reasons why consumers aren't adopting the faster service and take steps to encourage adoption.

I suggest the Commission keep a flexible approach for updating benchmarks, technology is a rapidly changing and new innovations demand new standards. Advanced telecommunications capabilities is defined in relative terms, "high-speed" and "high-quality" is based on the technology available, 25 Mbps isn't high-speed compared to 1 Gbps, 720p isn't high-quality compared to 4K resolution.

⁷ Comcast has a 1TB limit, and Tmobile has a 50GB limit
<https://dataplan.xfinity.com/faq/> <https://www.t-mobile.com/customer/mydatausage.html>

Actions to Accelerate Deployment

The Commission is taking several steps to accelerate deployment but the Commission needs to ensure the initiatives are working by setting goals. How much more deployment is expected to occur from these changes? Does the increase in deployment only benefit large incumbent services or does it allow for new competitors into the market? When does the Commission expect these benefits to be realized, within a year, in 5 years? If these actions fail to have the desired effect what will the Commission do differently? These are all questions that the Commission needs to be monitoring and making available to the public.

Thank you for taking these concerns into consideration.