

Streaming Gaming Surpasses Netflix: Opportunities for Operators

By: Parthiban Kandappan

Netflix drove bandwidth usage. But wait until Google, Microsoft, Sony, and Amazon all launch their streaming gaming service.



Toss out those boxes and consoles—the future of gaming is here. Google’s announcement of its new gaming platform, service and game development house, Stadia, means that firing up your gaming station will become as simple as opening a Chrome browser on your laptop or smartphone or streaming games directly to your TV. Google unveiled its plans during its keynote at the 2019 Game Developers Conference in San Francisco, California, but skimmed over what this development actually means for network operators, and just how the real-time application will drive increases in bandwidth requirements.

We’re seeing a progression in streaming services across new markets in the wake of success created by Netflix, Hulu and other streaming services that have wildly dominated the way consumers now receive their movies and television. We no longer rush home to see our favorite show air or wait for reruns to catch up on binge-worthy shows. In 2018 alone, there were 33 million “cord cutters,” up a booming 22 percent in just one year from 27.1 million in 2017, and that’s in the [U.S. market alone](#). As Netflix is quickly approaching [160 million subscribers](#), bringing in yearly revenue in 2018 of \$4.49 billion, which seems like a lot until you compare it to the [\\$134 billion Google expects](#). All of this puts it into perspective just how much value the gaming industry holds.

Ask gamers how they feel about server lag

While many gamers are currently using consoles for mainstream gaming systems such as PS4 and Xbox, we see the shift to streaming as an exciting next step. Lost in all of the hype is the reality of latency issues when local hardware disappears. Any gamer will tell you that latency is detrimental to gaming—how do you battle an opponent if you aren’t in sync?

As game streaming and other low-latency, real-time applications gain popularity, it will be up to network operators to support the growth in bandwidth, which will reach an all-time high as these services hit the market. The low-latency demands that ensure online gaming is a successful experience for consumers will rest squarely on the shoulders of network operators, since none of the companies with plans to roll out “on-demand gaming” provide the last-mile connection to the customer.

So, could latency issues kill next-gen gaming? We’re all on the edge of our seats (or sofas in the game room) waiting to hear what network providers have to say. In the absence of hardware, Google and the other providers expected to follow suit will solely rely on their own cloud stability and the quality of the connections from Internet service providers and mobile operators to transport these gaming streams to customers.

Network operators have been busy preparing for 5G to come to fruition, but as we see, it is no longer solely 5G to consider as the major “bandwidth monster.” Google said Stadia comes from years of internal experimentation called Project Stream. With many edge nodes (7500 according to Google), they believe they can deliver performance to players over shorter distances. In its current form, Google says Stadia can stream 4K resolution video at 60 frames per second with only 25Mbps download speeds. Also on the horizon is 8K resolution. While this advancement will certainly help relieve some of Google’s latency issues, the problem for network operators is even

larger, as other companies compete with Google and launch ultra-low latency cloud services that require the same demands—if not more—than online gaming. Starting at the edge of the network, scaling up to support these massive streams will require a new architecture as demand increases. That means new costs as well.

Not surprisingly, on the heels of Google's news, [Apple has announced Arcade](#), its game subscription service. Arcade will give customers the freedom to try any game from a collection of titles that are all-you-can-play, uninterrupted by ads, ad tracking or additional purchases, and are shared on a platform that respects user privacy. With the Apple App Store being the world's most successful gaming platform with nearly 300,000 free and paid games, you can expect to see an influx of gamers using the Apple platform, as this application literally puts gaming at users' fingertips. Gamers who subscribe will have access to games on any of their Apple devices—think iPhone, Mac, and Apple TV—with the added bonus of access to more than 100 new games not available at launch that can't be accessed elsewhere else. However, similar to Google, Apple's service announcement didn't address cost or when we can expect to access titles such as Final Fantasy and SimCity.

While it is no secret that Wi-Fi speeds are getting better, everyone knows Wi-Fi still can't compare with the advantages of running a stable and physical connection. Separately, if you follow developments in the telecom industry at all, the lack of broadband in rural areas means those regions may face limitations when it comes to accessing the full potential of the next generation of gaming. The bottom line: direct and easy access to high-quality and high-demand games is a great thing for the gaming industry, assuming it all works—and works well.

In the U.S.A., figures 1 and 2 below demonstrate the disparity between states with the fastest and slowest internet speeds.

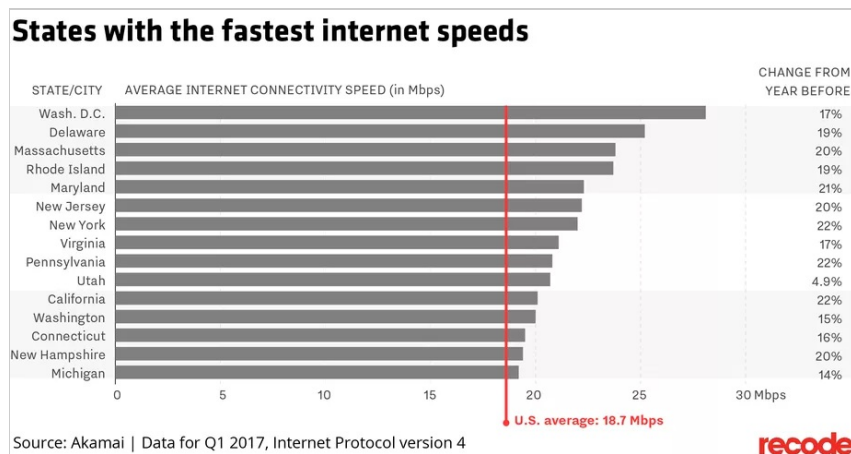
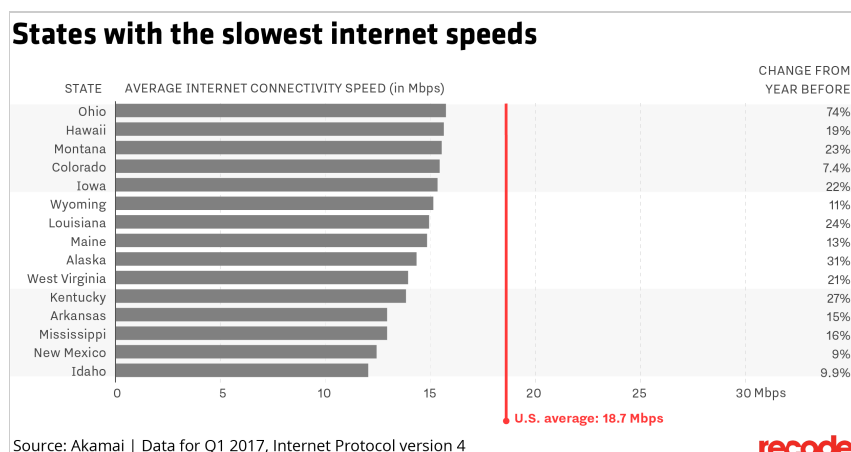


Figure 1 – States with the fastest internet speeds.
(Courtesy of recode)



Not for distribution or reproduction.

Figure 2 -States with the slowest internet speeds.
(Courtesy of recode)

As mentioned previously, [the gaming industry values at a booming \\$134.9 billion](#) (yes billion) in 2018, a number worth mentioning twice, and with revenue growth of more than 10 percent in 2018, we are not talking about a market making a small splash. No, it's making waves. Mobile gaming succeeded in bringing millions, if not a billion, new gamers to the industry, accounting for 47 percent of the entire industry's revenue, which equals \$63.2 billion. Like the advent of mobile gaming, eliminating the requirement to purchase a hardware gaming system to play video games opens significant possibility for the industry to see major increases in revenue for years to come.

The opportunity for operators

There is no doubt that, alongside Google, Apple, and others, gamers are hoping to see video game streaming become wildly successful. After all, imagine browsing through video games the way you do movies: the options are endless. And, while there are challenges, this new trend also presents a major business opportunity for operators.

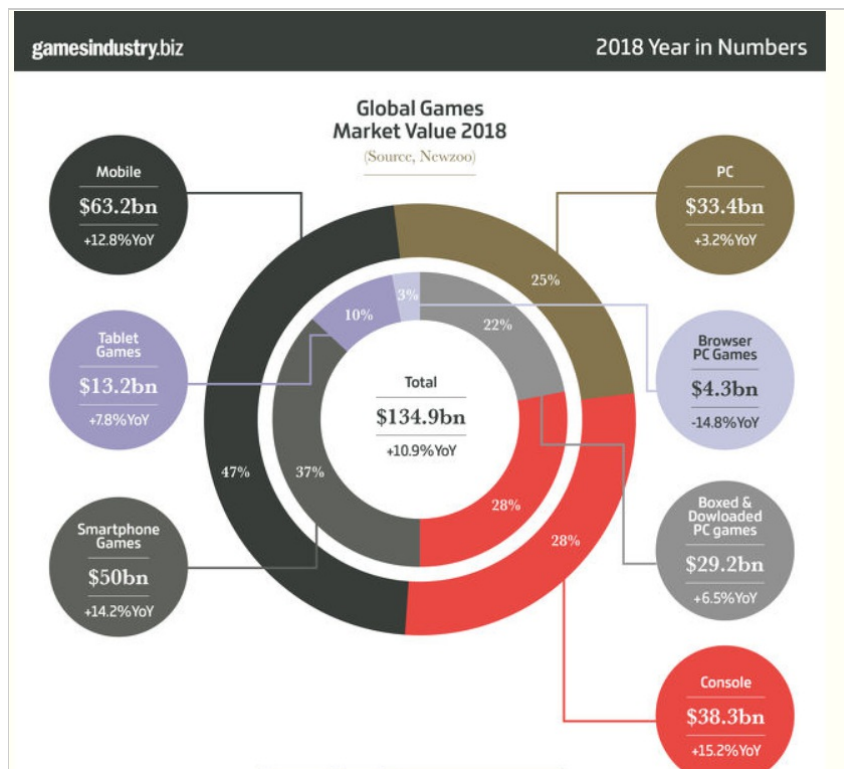


Figure 3 – Global Games Market Value 2018 Year in Numbers.
(Courtesy of Gamesindustry.biz)

Overall, network operators need to prepare to manage the massive amounts of traffic that is continuing to grow at an unprecedented rate, even if the majority of the traffic is expected to live at the edge. Staying ahead of the curve will be vital to support the applications of tomorrow. Equipping networks with tools and solutions to ease the burden of the shift in bandwidth requirements will be the difference in making or breaking the future of seamless and low-latency applications. There is no doubt we'll see more applications coming to market that will dramatically increase traffic on the network, whether Google and Apple succeed in their new ventures or not. It should be exciting to see how network providers use innovation to meet the demands of those next-gen applications, delivering the experience customers and gamers expect.