

Telairity Dives Deep into 4K Technology – Part 15

The fact that Internet broadband speeds are advertised as “up to” some number (for example, 25 or 50Mbps) is a bad start on knowing what Internet speeds really are. The number listed by a carrier typically is their best case scenario. But, in a world where the only sure thing often seems to be Murphy’s Law¹³, this “marketing” number is unlikely ever to be realized. Formerly, the rule of thumb was simply to divide the listed number by 2, in hopes of getting something like half the advertised rate.

However, the most recent annual report from the FCC (“Measuring Broadband America”, December, 2015) indicates broadband speeds are up significantly in the past few years. According to the FCC, broadband speeds nearly doubled from 2014 to 2015, with 90% of the customers of the top carriers receiving at least 95% of their advertised rate.

Akamai’s “State of the Internet” report for Q2 2016 is also upbeat, if more restrained. Over the past year, it reports peak connections speeds in the US have increased by about one-third, while average connection speeds are up better than one-quarter (28%).

The actual numbers reported by Akamai, though, are relatively modest: a current average peak speed of nearly 70Mbps, but an average actual speed of just over 15Mbps. This seems to indicate that, while broadband providers may aggressively promote their top tier of service, most people subscribe to a much lower tier. In practice, then, for the majority of users, at the current rate of improvement, a real speed of even 25Mbps is still at least two years distant.

But, even if we conservatively round down the Akamai numbers, and suppose an average actual broadband speed gain of about 25% a year for the foreseeable future, the result is still encouraging for broadband 4K UHD delivery. While the current average speed of 15Mbps does not quite reach the 18Mbps threshold we set for minimal 4K UHD delivery, in another year, with another 25% gain, it should be past that mark. And, by 2020, for most broadband users, 18Mbps should appear as nothing more than a steadily receding point in time’s rear-view mirror.

Moreover, since the current 15Mbps average must be composed of numbers that fall as much above that mark as below it, some broadband subscribers are clearly enjoying 4K UHD speeds right now. So, a minority audience is already in place for 4K UHD over broadband. This group will only grow larger year-by-year until, by 2020, it constitutes a substantial majority of viewers.

To be sure, there are many qualifications to this optimistic conclusion about the practicality of delivering 4K UHD over the Internet, both now and in the near future. We will examine those issues in the next part of this series.

[Telairity](#) has made a name for itself as the industry’s leading video processing solutions provider. Please write in to us at sales@telairity.com to learn more about our products and to collaborate with our team.

¹³Succinctly stated, Murphy’s Law is the principle that, “If anything can go wrong, it will”. Which is to say, in the real world, it is generally advisable to plan for the worst case scenario rather than the best case scenario.