

Here's a secret that can help you boost DOCSIS 3.1 upstream capacity

By: Venk Mutalik, Marcel Schemmann, Zoran Maricevic & John Ulm, ARRIS

You may have noticed that DOCSIS 3.1 is poised to provide significant capacity improvements for today's HFC-based broadband networks. But you may not have heard about the unique opportunity that arises in the upstream when DOCSIS 3.1 is deployed over a Hybrid PON (HPON) network.

If you're not already familiar with it, HPON is a fiber-based architecture that leverages active RFoG in the outside plant and complements the transition to N+0 fiber deep. And it can help service providers get even more out of the DOCSIS 3.1 upstream. By deploying the new specification in conjunction with HPON, service providers can enjoy OBI-free operation and enhanced SNR. This enables the upstream to operate at 204MHz with up to 4096-QAM modulation. That translates into nearly 2 Gbps of upstream capacity for service providers.

With this newly found capacity, service providers can extend their service lineups. For example, they can offer a new 1 Gbps upstream tier for subscribers who require broadband service that is closer to symmetrical than most offerings out there today. And that can help MSOs improve their service capabilities for residential and business "power users" and compete more effectively in the broadband market.

Of course, the primary driver for HPON is not simply the expansion of upstream capacity, but the evolutionary bridge it provides between HFC and FTTP. For service providers seeking to embark on this journey, HPON enables a seamless, phased migration that can help preserve existing plant and equipment investments, while migrating to FTTP when the time and opportunity is right. But that additional upstream capacity sure is a nice bonus.

WEB
www.arris.com

BLOG
www.arris everywhere.com