



# Overbuilders Have to Connect

By Steven S. Ross ■ *Editor-in-Chief*

**D**o you really have enough backhaul bandwidth? The question is haunting cable companies and smaller telcos, and the smartest property owners and developers as well. That may seem a bit odd. The backhaul is fiber, isn't it?

It is fiber, but as Christopher Mitchell of Institute for Local Self-Reliance points out in this issue, it is shared by many users. Just as roads would clog if everybody tried to drive at once, backhaul networks are "oversubscribed." If everyone – all at once – uses all the bandwidth they think they are paying for, there would be a digital traffic jam. It's already happening.

Builders of GPON or GePON fiber-to-the-home networks usually allow a generous margin – that is, their networks are oversubscribed, but not nearly as much as are DSL (fiber to the node) or DOCSIS systems, on average.

## CES TECHNOLOGIES DEMAND BANDWIDTH

Oversubscription is about to take another big hit. As Sandy Teger and David Waks of System Dynamics point out in this month's Consumer Electronics Show coverage, TiVo users will soon be able to watch content on Really Simple Syndication ("RSS") feeds. These feeds can be part of a viewer's "season pass" and will appear in the user's Now Playing List alongside recorded TV shows.

Also this month, Kurt Scherf, principal analyst at Parks Associates, notes that Samsung demonstrated its InfoLink RSS service with applications from USA Today that include access to customized news, weather, and other information.

Many computer users are quite familiar with RSS – it is, among other things, used to "personalize" browser

home pages. But when the feeds are video, and seen on a regular TV, RSS traffic grows enormously. Potentially, RSS is an easy route for users to find their way among millions of possible "TV networks" ready and waiting for more bandwidth globally.

Don't like RSS? Scherf notes that even before the CES, Netflix and LG Electronics announced cooperation on a set-top box for consumers to stream video and other content directly to an HDTV. Apple and VUDU are planning their own set-tops, too. Microsoft's Xbox LIVE Marketplace already offers more than 3,500 hours of premium content, including high-definition video, from 35 studios and networks. That's 10 hours a day for a year.

One out of every six Xbox users already pay to download the high-quality video available at the LIVE Marketplace, making it the most successful CE and content marriage to date. Disney (ABC) and MGM are about to add their content to Xbox as well.

Don't like set-tops, either? Scherf says Panasonic's VIERA HDTVs will leverage Tru2Way (formerly OCAP) technology to access interactive digital cable video services, including video-on-demand and interactive program guides, without one. The company also introduced a Tru2Way set-top box and portable DVR anyway, and some VIERA TVs connect directly to Picasa Web Albums and YouTube video from Google.

## NEEDED: FIBER QOS

It's all data – and it has to be streamed without a hitch or a hiccup, on demand. Little wonder, then, that First Mile this month notes that cable companies are looking to data distribution as the key to future profitability.

And little wonder that many smaller telcos – Tier 2 and Tier 3 LECs – are addressing the problem by overbuilding their own existing networks, just like Verizon. We carry news of those projects every month in our Deployments section. Just as we were going to press, we heard that Ontario & Trumansburg Telephone Companies are deploying multiple Occam Broadband Loop Carrier (BLC) 6000 components to upgrade service in the Finger Lakes area of New York State, to expand its geographic reach to surrounding areas as a CLEC, and to get ready for introducing FTTH in the near future.

And it is little wonder that states are trying to come up with strategies to unlock the bandwidth of intercity fiber with local on-ramps so that all the local networks have the backhaul they need (see strategies outlined by Mitchell, and by states as diverse as Alabama and California, in this issue). And we're carrying more and more news about 10 Gbps fiber and multiple wavelengths on a single fiber to up the bandwidth. Without such technologies, even point-to-point "active Ethernet" networks that give each user a dedicated fiber (no first mile oversubscription!) may be oversubscribed from the central office or local point of presence into the national grid.

Because of all this, and because the focus has shifted from greenfields, there will be renewed interest in backhaul, overbuilding and the role of public networks at this year's Broadband Summit in Dallas, April 28-30. Dedicate some of your personal bandwidth to the show.

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