Pipeline
Knowledge Is Power

How a Bundle of Fibers Could Change Everything:
A conversation with Joe Savage of the FTTH Council
by Tim Young

Everyone knows that the face of telecommunications is changing. The model that is emerging, much to the detriment of traditional telcos, is a growth of triple play in the cable sector and increasing adoption of digital voice by current cable subscribers, while telcos travel the much harder road of developing and marketing video options for their own triple play bundles. One constraint on the telcos has everything to do with bandwidth. Traditional telephone networks don't seem to cut it. There is a better way, and it could change everything. Unfortunately, it's not a quick fix.

Fiber-to-the-home (FTTH) is on its way and it's a real coax-killer. It's lightning fast, provides enough bandwidth for diverse revenue streams, reduces churn, and reduces OPEX. It has the ability to deliver as much bandwidth as most residential customers could need or want in the foreseeable future. The only problem is that it isn't coming fast enough. Pipeline sat down with Joe Savage, President of the FTTH Council to chat about FTTH and what it means to telcos and the rest of the world.

Pipeline: How is Fiber-to-the-home (FTTH) changing the face of telecommunications?

Joe Savage: The face of telecom is change regardless of access technology. FTTH allows those changes to be in incorporated much more easily and because its bandwidth capability can support continuous movement in terms of voice, data, and video services. By now everyone is aware that triple play is how companies are going to compete for subscribers. It's all about video services, quality voice, and high-speed reliable data connections. That's become the barrier to entry. Added to that list are all sorts of services like home security, mobile bundling, and other services. FTTH provides the big pipe that allows all of those services to reach subscribers. We put out a survey to FTTH subscribers and found that it is not only changing telecom, but is affecting how people live and work. More telecommuting. In some cases, FTTH subscribers prefer the voice and data quality in their homes to those in their offices. That cuts down on drive times and fossil fuel usage. Communities with FTTH in place tend to attract businesses like call centers that rely on the network because they have a strong, reliable network in place.

PL: Can FTTH save telcos?

JS: Yes. In fact, it can save cablecos and other companies as well. As Verizon and 340 other SPs in the US are demonstrating, once you have introduced FTTH, you deliver superior video, more reliable data services, and the ability to offer higher downstream and (more importantly) higher upstream capabilities to residential broadband subscribers and users of high-speed internet. Subscribers regularly comment that video quality is better. Video quality can continue to get better, but since it takes about 20 years to convert the whole nation over to a FTTH infrastructure, we'll probably go through two or three more generations of even more improved video services. That will require FTTH given the issues of bandwidth exhaustion in twisted pair and coaxial cable networks that are being described today. It's very comforting to have all that surplus bandwidth to throw at any kind of video quality or channel lineup requirements that come down the pipe.

PL: It amazes me that there are people who seem to suggest that there's such a thing as too much bandwidth. Why are there so many out there who are resistant to network growth and content with cautious increases in bandwidth?

JS: There's a big strategic answer to that, and then there are a lot of tactical things. When people start talking about how much bandwidth you need, what they're really talking about is how much bandwidth they can deliver. When folks start adding up channels, it some how always magically adds up to what's available. One of the hits against FTTH is that it takes a long time. It's an intensely human activity, because you've got crews out there stretching cables and plowing yards. A bucket truck is not going to go twice as fast every 18 months. Some of the SPs have said that they can't wait until they have the entire network deployed, and that they need to use a partway fiber solution. That's going to allow them to address more subscribers more quickly. That may or may not be the case, but that's why some people do that. If you talk to CTOs, pretty much everyone says they are going to have an all-fiber network sometime in the 21st century, whether it's 5 years, 10 years, 15 years or more away. I predict it's going to be sooner. That's why there are alternatives to FTTH. FTTH is the final product.

PL: So is that the main force behind resistance to FTTH?

JS: Resistance typically comes from investors. When the executives sit down and say "Okay. We're going to jack up capital expenditures by $3 billion a year to deploy FTTH in the hopes that our subscribers will pay us for delivering services we haven't previously delivered," investors don't think that's such a good idea. However, as Verizon has proven in the US, it is a good idea. There are other large-scale proofs. NTT has nearly 8 million FTTH subscribers in Japan. There are enough operators who are on the positive side with this investment that investor concerns are starting to relax. What you're left with is that within the telephone companies, this is quite a change. Everybody has their skill set finely honed to deliver high-quality voice service at low cost. Now they have to learn a lot of new things like how to be video content providers. How to negotiate a deal with ESPN or HBO. There are a lot of new things that have to be adopted within the telco environment, but people know they have to move forward one way or another.

PL: What are some other issues the FTTH Council is pushing?

JS: We have several issues that we are really behind at the moment. Of the ones I'll mention now, one is offense and one is defense. There is the issue of video franchise reform, which we are strongly in favor of. We have evidence that it accelerates FTTH deployments and it alleviates an obsolete, anti-competitive structure of regulation that has been around since CATV stood for 'community access' back in the 60s. We're making progress. 50% of the US population now lives in a state with franchise reform. Secondly, we are in favor of municipalities having the option to enter into broadband infrastructure based on their decisions rather than being restricted based on a state law that has questionable value for the citizens of the area. As I mentioned, Verizon is the largest provider of FTTH, but there are 340 other providers out there.

PL: Tell me about those SPs. What sorts of companies are those, generally?

JS: Guadalupe Valley Telephone Coop is one. Jackson Energy in Jackon, TN. Grant County Public Utility District in the state of Washington. SureWest Communications near Sacramento. I could go on and on. Those are examples of the kinds of communities that have deployed FTTH. Most of the resistance comes from incumbent carriers who don't want competition, but those communities that deploy FTTH do it when the incumbent SP declines to invest in the community. When the local service provider says "Sorry, you don't fit our business case profile", some communities don't take that as the last statement. The reason they don't is that they look around and see that every year the graduating high school class disappears. They know that broadband is becoming the number 2 or 3 factor in business relocation. We have evidence from a number of FTTH providers showing employment increases and sales increases in areas with FTTH reach. If the citizens want to expand the network and pay for it, they should be allowed to do so. There's too much at stake. I always chuckle at the idea of "level playing field." The common SP is focused on maximizing value for shareholders who tend to be further away, and the community folks are interested in maintaining quality of life in their

community. It's not the same field. It's not even the same game. If the community wants to spend their money, assuming the taxpayers have their say, they should be able to do that.

PL: What is the state of the network five years out?

JS: Let's say there are 150,000,000 households in the US. We currently pass between 8-9 million households. By 2012 we will probably pass 30-35 million. Verizon is passing 3 million a year and everybody else is passing 1 million. When I say pass, I mean there is fiber going down your back yard whether you are connected to it or not. Some providers are doubling their number of subscribers every year and estimate that they will continue to double every year for at least the next few years. Of those millions of homes that are passed, we estimate that 50-60% will become FTTH subscribers. That's around 15 million by 2012. That's around 10% of the homes in America. The limiting factor is how fast you can string the cable, hook up the house, and market to subscribers.

PL: What's a reasonable timeline before FTTH becomes truly pervasive?

JS: There's the more rapid deployment to the easy 50% of the households and then the harder 50%. The harder half are more widely dispersed and tend to have geographical barriers in place. It's tougher to put in fiber when you have to chew through rock. The easy 50% will be sometime between 2010 and 2015. We have a call to the nation for a broadband national policy that sets a goal of 100mb to every US household by 2015. That was put forward by Senator Rockefeller as a resolution to the Senate. If we can get everyone moving in the same direction there will be no reason to keep in place the barriers that have been limiting growth.

PL: Can you tell us about the 2007 FTTH Conference, coming up at the end of September?

JS: This will the sixth annual conference, and we're getting pretty good at it. The theme this year is "The Content Revolution." We're going to be demonstrating all sorts of innovative high-bandwidth applications that operate over FTTH, primarily around high-definition and super-definition video capabilities. We'll also be looking at various economic benefits of FTTH. We'll have about 160 exhibitors on the expo floor. We'll have a "Home Networking Zone" we're we'll go live at Gigabit speeds. That's where we'll have all of these live demonstrations that SPs can look at and adopt in their FTTH networks.

PL: How many attendees are expected?

JS: 2500. We're growing year over year, and attracting more developers and more independent telephone companies.

PL: What types of companies will be exhibiting?

JS: The exhibitors will be everything from plowing and trenching equipment to exotic wave-division multiplexers and other components and amplifiers. From high tech to down-to-earth. Tele-management. Tele-health. Home security. Those are

the sorts of things that sell well and we've got the bandwidth to put it over a fiber network.

PL: Sounds like a good time. We wish you the best of luck with the event and with all of the ventures of the FTTH council.

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