

Corning Backs Installers on FTTH Deployments

Reaching out to developers with a great warranty and fast install times

By Steven S. Ross ■ *Editor-in-Chief*

We draw together top people from Corning and from its first Total Access Program partner, Team Fishel, for a conference call this August. On the table for discussion: How the program works, and how developers, homeowners, and others can benefit from fiber.

BP – Can you give me a good explanation of the Total Access Program, and what its advantages are for developers?

Dave Meis – Corning started it to add value to markets out there, and specifically for design, engineering, furnishing and installation companies looking to deploy fiber to the home and MDUs in the United States. The exclusive program targets non-RBOC and non-MSO companies out there that are looking to deploy fiber to the home.

This is still a relatively new technology. The deployment base has really only come up in the last three or four years and in particular the last 18 months. Customers are looking for a one-stop go-to for their design, engineering and implementation of the network itself. Corning has looked at how we can partner with companies that design and build fiber networks. It is a selective program that enables member companies such as Team Fishel to become certified through our extensive installation training course and then go out and offer a significantly extended warranty beyond what customers or end users would get going through other channels.

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the one year typical of what is out there today for outside plant components. Drop cable and cable assemblies carry a 3-year warranty. This offers a large level of comfort to an end customer. Additionally, they realize they have the backing of an industry leader as well as an installer who is trained and certified on Corning products.

BP – I understand Team Fishel is the first to partner. Are there others now?

Dave Meis – There are others actually. Zero dB, an EF&I company out of Washington State, has recently become a TAP member, as well as Zoomy Communications, a design and EF&I company based in Colorado. There are others targeted to be added. Corning will not rush out to sign up as many members as possible. We will target and select high-value partners.

BP – How does a developer actually contact you?

Dave Meis – If the developer is not aware of a Team Fishel or other TAP member out there, the best way is to contact us at www.corning.com/cablesystems, 1-800-743-2675 or 1-828-901-5000.

BP – What does Team Fishel think it's gained working with Corning?

Rick Keeler – Last week we had our first five-day certification program through Corning's installation course, for all of our fiber splicers and technicians as well as applications engineers. We got to familiarize ourselves with all of the Corning connectivity products and the different architectures. We also got a hands-on feel for the network and a level of comfort for the different solutions and why to offer one or the other in either a greenfield or an overbuild application.

BP – Can you explain the different solutions?

Rick Keeler – Well, Corning has its classic version, which is an unterminated fiber cable. Basically the technician installs all the connectivity devices, either through direct termination or fiber splicing. And then the advantage solution, one step closer toward the premier solution, which is completely pre-connectorized. This reduces the installation time to bring a new subscriber online for the broadband service provider.

BP – What have you learned that gives

you an edge? A lot of the developers would say “Hey they’re just screwing connectors together and they’ve got these termination boxes out at the curbs somewhere. Why is this an advantage to us?”

Rick Keeler – We are working on a greenfield cost model with Corning for developers. If there’s a lower upfront cost to the developers and they can sell the home for more, because it’s fiber-connected, then that increases the value proposition for them. I think what Corning has done from an engineering and technological development standpoint is take a lot of the headache out of it. You don’t have to have a trained splicer installing the drops now.

Replacing Fusion Splices

Dave Meis – We’ve learned over the last two years especially how to optimize networks, and fiber-to-the-home networks in particular, through deployment so all the splice-intensive, craft-intensive work is done up front. Adding subscribers is easy with all the pre-connectorized solutions, primarily in the drop segment so customers can be added very rapidly. There’s low risk to the network; they’re not going in the vicinity of bare fibers that are serving other customers, as you would typically do with a splice-only solution.

BP – I was surprised to learn last year that the preconnectorized splice has a signal loss comparable to a fusion splice.

Dave Meis – That’s what has enabled all this.

BP – Over on the Team Fishel side, how do you work on a construction site? Your beginning-to-end design and construction. At what point in the construction do you go in and do your fiber stuff?

Rick Keeler – Scott Wenzel and Phillip Clark are actually doing this as we speak in northern California. Maybe they can walk through the design and construction for a new home development.

Scott Wenzel – It really goes relatively smooth once the conduit pathway infrastructure is installed. At that point we go in and start pulling all the feeder and distribution fiber cable which goes down the street and passes in front of all the homes. Then we start pulling all the drop cables to each house into the ONT on the side of the house. Running the drop cable and installing the ONT on the side of the house takes all of 45 minutes per house.

BP – You don’t have to put a tent in front of it or anything like that?

Scott Wenzel – Exactly. The pre-terminated OptiFit Drop Cable Assembly comes in a box, and we place that either in conduit or direct bury it to the side of the house. The drop cable connects to the network access point and distribution fiber out in the handhole or manhole in the street. The other end connects in the ONT mounted on the side of the house.

BP – And you work ahead of time with the developer’s contractor about what they need to know to leave a conduit in the street?

Scott Wenzel – Yes, that’s all been pre-designed and proofed. As far as installation, the fibers are protected at all times.

BP – Someone at Corning authorized a 10-year warranty. How did they do that? If I were on the board of Corning and someone pulled that up to the board level, I would ask if we could afford to make the warranty. What’s our liability? How do you justify it?

Dave Meis – There are always the acts of God that we’ll never be able to control; the 800 pound tree branch that comes down and knocks something off a stand. And of course we can’t cover that. Insurance covers that. Those things aside, from a materials perspective the network will last. I think there’s very little risk and very long design service life.

Installation Courses

BP – This comes back to what you are

teaching in the installation courses. So can you talk a little bit more about that?

Scott Wenzel – It does have a lot to do with quality and proper installation techniques. We’re getting away from having to deal with splicing in the field and doing any kind of termination in the field. Obviously, with the Total Access Program we’re learning the proper installation techniques of how to install the complete Corning solution. The cases are built and sealed correctly. The cable entries are done right. And we test the whole system and go through the troubleshooting process. Maximizing the optical signal on the fiber itself is the biggest portion of insuring that the system is working per the design and specifications.

BP – Corning is actually holding classes at its location and you send people to its location? Or is it the other way around?

Dave Meis – We do it on site as well as at Corning Cable Systems in North Carolina. We went to Phoenix to certify the first class for Team Fishel. The URL for the course is at <http://www.corning-cablesystems.com/web/college/traser.nsf/ehtml/tsani500prm>.

Few MDU Examples Yet

BP – Do you have any contractors interested in doing this specifically for MDUs (multi-dwelling units)?

Dave Meis – The MDU space for fiber is relatively untapped.

BP – Is Team Fishel doing any?

Scott Wenzel – Not in any large quantities. We do have a contract with Alameda Power and Telecom in the Bay Area. Essentially it’s an HFC overbuild, but there are a couple areas around San Francisco that are under new construction. Alameda has actually started to deploy fiber to the home and we’re looking at it for MDUs.

BP – Corning and some others can take a design from something like AutoCAD for overhead fiber and turn out a multi-

connected hydra of a cable assembly at the factory that can go up on telephone poles. Do you see any market for that, not necessarily in greenfield but in over-build?

Dave Meis – It sounds like you’re referring to our premier solution, which can be totally customized. There’s an aerial solution and also a new below-grade solution.

BP – You can actually pull preconnectorized assemblies through a conduit?

Dave Meis – Yes you can, actually. We’ve got a solution that can be drawn through conduit less than two inches in diameter. There are protected connector points all along the fiber cable, so there are multiple network access points. You don’t really need any extra space around it. You’re not pulling a bigger, bulkier connector. Just pulling that into a handhold connector assembly effectively passes all the homes within reach of that particular terminal point. So when that first subscriber coming out of that task point calls in for service, the tech coming out there comes out with what looks like a multi-port terminal-type assembly that is stubbed on a very short cable stub. He or she connects into that multifiber connector and then connects the drop into the assigned port out of that terminal. It’s all very small, done with a plug-and-play methodology.

BP – Does the developer have to lay out the development with a CAD program, so you have a CAD drawing that your factory can work with?

Dave Meis – No. Our first-generation premier solution products really did require a very meticulous walkout approach with required accuracies within several inches. Today we use what we call “floating tap points” to give the developers and the engineers some flexibility. So while we still look for an accurate walkout, we just need to know how much slack is desired on the ends and the number of homes coming off each task point. So it’s really not a meticulous process.

BP – In the Northeast many of these developments are pretty tight so the lot size might be the same but the frontage will vary. So someone has to tell you that between points c and d it’s 50 feet and between points d and e it’s 100 feet.

Dave Meis – Exactly. And it’s that inaccuracy that’s taken up in the premier solution cable assembly itself. It can be taken up with a pre-connectorized drop so we can manage all that slack back behind the feeder and the ONT on the side of the house.

Cost and Deployment Speed

BP – This leads me to two questions. How fast does it take to deploy in a greenfield?

Scott Wenzel – We can go as fast as the builders build the homes. As long as the structure is up and ready for the ONT box to attach to the side of the house or wherever the distribution point is for that MDU, we’re following the developers as they build. While they’re building, we’re putting the feeder and distribution cable in the ground and connecting it to the headend or the network access point. As soon as the subscriber requests service, we’re there. We can have it done within two to three days. If it’s a 10 or 15 family unit, we can have all those house drops run and the closet wired up within about 2 days.

BP – Can you talk about what it would cost? The developers will sit down with me and say, “I’m putting in these 42 houses. What’s it going to cost me? And they don’t really want to know within \$200 or \$300 per house. But they need some number.

Dave Meis – Our systems engineering group knocks out these designs every day. Of course there are several variables to take into consideration. But in a greenfield situation all the optical components, connectors, cabinets, terminals, drops, fiber cables everything from OLT to ONT, for the materials alone it typically runs \$200 to \$250 per home passed.

Phillip Clark – When you roll in the labor on the Advantage level and the preconnectorized solutions, our developers are spending between \$1,200 and \$1,600 a door for a complete solution.

Dave Meis – Compared to deploying a copper-based network to the homes versus doing fiber, in greenfield, the cost is about the same. We’ve seen that echoed in most periodicals, conferences, presentations. That’s why we’re all here on this call.

BP – Do you find developers want inside-the-house solutions as well, or are they just popping an Ethernet port on the other side of the terminal and leaving it up to the homeowners to connect? Do you see developers coming to you and say “it’s going to cost me \$1,500 to get the fiber to the wall and it might cost me another 2, 3, 4 thousand to set up a distribution system in the house? Are developers going for that or are they saying “Mr. Homeowner, you do that”?

Scott Wenzel – In California, most residential home builders are putting in structured wiring. It’s in a very high percentage of the homes.

BP – In May we did a story on Loma Linda’s requirements.

Phillip Clark – A lot of cities have requirements. Some are official zoning codes and some are the “wink-wink nudge-nudge, we’d really prefer if your homes have this in them.” Most builders and developers have what used to be a competitive environment and now it’s a competitive requirement. You can’t sell unless you have structured wiring. You can’t put in three phones, and three coax connectors and be competitive. We’re seeing homes with eight data drops, eight to 10 phone locations, and then eight to 10 coax locations. So you’re seeing homes that truly have connectivity in every room.

BP – So you’re talking another \$2,000 or more. What’s your feeling about what the developers can sell houses with this stuff for? Are there any advantages on the speed to sell as well as higher or lower price? What do the developers get out of this after they’ve invested in fiber?

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Rick Keeler –The Fiber to the Home Council has published the Rander, Vanderslice & Associates study (Broadband Properties, June 2005). Home developers surveyed “believe an increase of \$4,000 to \$15,000 per home in value comes with fiber (average of \$7,400);” more than enough to pay for the initial installation.

In California, the housing market is changing weekly. So it's hard to know whether the fiber to the home right now is having that big of an impact on the home or is it purely some other amenity. But I think that the quick time to sell, the houses that have fiber to the home sell faster than homes that don't. I don't know how we can come up with actual historical data without talking to some of the major home developers.

Dave Meis – It's hard to isolate the contributing factor. What we are seeing as a vendor is that folks not just from California but from different parts of the country are beginning to market broadband and fiber as a true amenity as you would granite counter tops, ceramics, things of that nature. It's right up there in the top ten. Just like those other amenities, fiber is a true driver of market value and an increase to real estate values.

Another thing we find from developers is that there's also the insurance factor, especially out here in California. Where the homes keep going up, fiber might not be huge play today. But what if in six months something happens to the market and you now have a differentiator, a big advantage over the competitor who didn't plan for it.

Preparing for New Content

Phillip Clark – I think an advantage for the developers and for us as homeowners is the fact that what we're going to get from high-speed fiber to the home above and beyond any triple play has been advertised for so long. So if you look at the triple play as a base, a minimum of what you're going to get, it becomes almost expected in every home. Over the next few years, all those images of having access to telemedicine services, distance learning education and in-home enhancement programs for kids. All those wonderful applications that are just starting to get to the point that we can use them is really going to drive future FTTx deployments.

BP – When you deal with the people who might be running the fiber networks you build, are they talking about content?

Scott Wenzel – We've talked with people in Florida about this very issue. They are talking about content delivery and programming. In one particular case, there are two large developers that want to understand more about the content side so they can put more into their up-front sales pitch. So now they can say we say we have fiber to the home so let's

enhance that to say what this means to you, what content and services are immediately available.

BP – I think it's incredibly enabling. The business model for someone to run an IPTV channel is as few as 1,000 subscribers. Plus ads from Google. Plus you can do 15 minutes of new content a week and make it video on demand, and you may have a business. Not just the quilting channel or the flower channel. The gray flower quilt channel. And you'll see people pushing their passions to get the content out.

Because the barrier to entry is so low, I think it's going to happen much faster than corporate types have been lead to believe. The providers are just waiting for the medium to do it on.

Rick Keeler – In some cases the developer is actually getting a percentage of monthly subscriber fees, which just sweetens the deal. And not only are developers increasing the value of their communities, the homeowner also gains on the resale value. A good comparison would be with the automobile industry. If you're going to buy a new SUV today, you're going to want a sunroof and power windows. It's practically a requirement. Why would you not want fiber to the home? You'd want that on the front end, not after market. It's much more cost effective to get FTTH when you're installing a joint trench for all utilities; to have a 2-inch duct put into the joint trench with gas and water. **BBP**

About the Author

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