

# An Overview Of Fiber To The Home And Home Developers

By Scott P. Frederick ■ *Corning Optical Fiber*

Today's broadband networks are straining to keep up with the ever-increasing demand for bandwidth by increasingly Internet-savvy consumers. Even today's most basic consumer bandwidth uses — such as e-mail and peer-to-peer file sharing — are guzzling more bandwidth than most current-generation broadband networks can comfortably provide. And bandwidth demand is not shrinking, but continuing to grow — at about a 60 to 80 percent compound annual growth rate. In response, broadband networks are proliferating throughout the United States and around the world. But it has become obvious that a long-term network solution capable of ensuring the delivery of multiple services will require the nearly unlimited bandwidth of optical fiber.

In the US, fiber to the home (FTTH) and the services it provides reach the final user by several methods. FTTH networks are being installed by local and regional service providers, municipalities, and rural local exchange carriers. But a growing segment of the FTTH market is installations by home developers, who are installing these networks to deliver voice, video, and



total FTTH market. Today, at least 128 home developments in the United States have FTTH installed, reports the FTTH Council, and the number is growing.

One of the most active regions of

development specifically because of the amenities afforded by FTTH. Over 80 percent of the residents have wired their houses for full home automation in anticipation of future applications that are enabled by optical fiber. Residents in Southern Walk at Broadlands stated they moved from a neighboring non-FTTH development because they wanted access to fiber amenities while remaining in the same community. Further supporting the growing importance of home amenities for the home developer is a survey by the National Association of Home Builders, which ranked home amenities third, behind price and location, as the key decision factors in future home purchase decisions.

Installing a FTTH network is of interest to the home developer as

***“...a growing segment of the FTTH market is installations by home developers, who are installing these networks to deliver voice, video, and high speed-data services for a variety of reasons.”***

high speed-data services for a variety of reasons. Let's take a look at the trends and drivers of FTTH deployment for home developers.

The home developer segment represents approximately 54 percent of the

the US for FTTH is Loudoun County, Virginia, the site of four FTTH developments. Surveys of residents in Landsdowne, on the Potomac in Loudoun County, reveal that 50 percent of the home buyers built in the

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well because of the increase in property value it brings to the home owner. Residents in Terrabrook, also a Loudon County development, mentioned a key factor in their decision to purchase a home with FTTH services was the future resale value of having such a home. One survey of the FTTH market states, “The average homeowner sees FTTH being worth an additional \$4,000-\$7,000 per home.”

For the home developer, this value to the homeowner translates into faster sales. The developer may also benefit from speedier approvals by city planners, thanks to greater pull from homeowners anticipating increased resale values.

Another key factor driving developers to install fiber is the increasingly widespread expectation of a broadband connection to enable teleworking or telecommuting from home. Approximately 54 percent of companies worldwide allow remote or at-home connection to the office — a number projected to grow to 80 percent by 2005. In the US, 13 percent of companies currently fund (or help fund) an Internet connection and that is expected to double over the next 2 years. AT&T reports savings of over \$150 million a year due to the ability of managers to regularly work from home.

Homebuyer demand for fiber to the home is not the only influence on the developer. An FTTH network offers the home developer many options for

generating income beyond the initial property sale. Such options include sharing network revenue with — or leasing network access to — the various service providers. Baseline service offerings of voice, video, and data can average \$135 per customer, with typical revenues exceeding that by upwards of \$250. The additional income above the baseline comes from various premium services that are enabled with an FTTH solution, such as video on demand, home security, and home automation services.

FTTH is the logical choice for new housing developments. Here the single biggest barrier to FTTH deployment, construction costs, is essentially eliminated by being rolled into the construction already being done for other service infrastructure. In a new development, the cost to deploy optical fiber is at parity with a copper network. And with optical fiber’s advantages — the ability to provide all services over one medium, lower operating and maintenance expenses, and unlimited upgradeability — the choice to deploy optical fiber is obvious.

Competing methods of delivering broadband services to the home are limited in the total bandwidth that can be provided. More and more applications require the ability to send equal or symmetric amounts of data both to and from the user. More homes are being networked with multiple devices — including more than one home

computer, smart appliances, and home security. DSL, cable modem, the various wireless technologies such as satellite, Wi-Fi, and Free Space Optics all fall short on bandwidth. FTTH is the only solution that can meet both the current and future data demands of the wired home network.

One area of home development that is steadily growing is Traditional Neighborhood Developments or TNDs, often called New Urbanist communities. Some 375 TNDs were built or under way in 2001, a number that has grown to 648 today, reports New Urban News. TNDs look toward building neighborhood-scale communities where all the necessities for daily life are within easy walking distance from home. These communities include in one area mixed-use buildings for small businesses, shops, town homes and single family units. Residents in these developments may have a business on the ground floor and live on the floor above. The higher density of a TND means that providing broadband services between residences, businesses, and the public sector is more cost-effective for the network provider. Additionally, the capabilities of a broadband connection within the development allow these communities to attract more residents as well as businesses.

Today nearly 40 percent of new homes being built have a high-speed Internet connection. Demand is growing for greater bandwidth capabilities. This rising demand for amenities that are enabled by high-speed network access, coupled with the benefits to the home developer mentioned above, will continue to influence the number of home development FTTH installations now and into the future. ■

### **About the Author**

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### **Typical Service Fee Example**

	Monthly Fee
Baseline service:	
Telephone, Cable TV, broadband	\$ 135.00
3 Pay per view movies	\$ 12.00
Digital Cable plus HBO	\$ 30.00
Higher Speed Internet plus 5 Mb addl. webspace	\$ 40.00
Home security monitoring	\$ 25.00
Total	\$ 242.00