

## Video Over Fiber is Booming While Waiting for an Even Bigger Boom

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From hospital operating rooms to movie theatres to traffic control centres, high-quality video has become ubiquitous, and in a growing number of exacting applications, fibre-optic lines are emerging as the distribution vehicle of choice.

IP networks and opportunities to distribute content over Cat-5 and other simple, cheap wiring have gotten a lot of attention in recent years. Nevertheless, more and more users—and the designers and integrators who serve them—are deciding these days that fibre's advantages simply can't be denied.

And even as business surges in corporate, industrial, government, and educational markets, industry players watch with anticipation for the much larger boom that could follow if the slow-developing Fibre-to-the-Home (FTTH) buildout gathers steam this year, as many expect.

**Verizon** has announced a plan to spend \$20 billion US on stringing fibre past as many as six million more customers' homes during 2006. French telecom **Alcatel**, pursuing its acquisition of **Lucent**, is an aggressive participant in FTTH. Telecoms increasingly see new fibre capacity as a key to the so-called "triple play," the chance to deliver voice, data, and video to consumers through a single connection.

For fiber advocates, the future may hold growth similar to that experienced by the projection and display markets when LCDs, plasmas, and rear-projection TV went mainstream—a sudden jump from thousands of unit sales per year to tens of millions.

But few in the fiber business are just waiting. In fact, according to Fred Scott, vice president of Broadcast and Pro AV Fibre Products at **GE**, while plenty of other market segments are booming in the here-and-now, FTTH is just testing the waters.

As an example, Scott cites surveillance. "There's an overwhelming need now to start to watch what's going on all over the place: on subway platforms, in bus terminals," he says. "All of these monitoring devices in many cases are being run back to a central zone over a fibre-optic feed."

Military users are also committing to fiber networks in a big way, according to Scott. "There are a number of facilities that have pulled all of their control rooms together over fiber," he says. "The number one reason is that no one can monitor or tap into signal content. Government, research, and others are using fibre to provide isolation across an entire area or from one equipment rack to another."



TECHNOLOGY DISTRIBUTORS

Don Hosmer, national sales manager at **Broaddata**, also cites security as a powerful attraction of fiber. “You can’t look at the data on the fiber without physically tapping the cable,” he comments.

Quality issues, though, are often equally important, and account for the boom in another area Hosmer cites for major growth: medical imaging. “Everything is moving dramatically to high definition,” Hosmer says, noting such video applications as endoscopy, operating room video, and telemedicine.

“[In these uses], you have to retain colour accuracy, and if you’re compressing the video you can have a problem doing that,” says Hosmer, adding that video data travels uncompressed over fiber.

One basic user decision about any network is whether to hardwire network components to each other or link them through a strategy that relies on the Internet. For direct connection of sites, rooms, and systems, the wiring choice often comes down to coaxial cable or fiber. Many organizations have a great deal of other electronic activity going on, all of which can interfere with signals on coax or twisted-pair networks, but not on fiber.

“Fibre provides a solution for a lot of facilities that have issues if you try to implement any type of copper solution,” says Scott. “Power grids, dimmer boards, lighting, all could affect a copper plant, but if you have done it over fiber, there’s no problem.”

As fibre makes its way into more and more business settings, the technology may also have an unappreciated ace in the hole. Hosmer recalls, “Back in the dot-com era, the telecom people pulled lots and lots of fibre.” This “dark” fibre was left behind when many of its owners went bust, he adds, but today, “It’s all still out there, ready to be lit up.”