



## **Air-Blown fiber optics for the campus network provide financial and logistical benefits**

December 18, 2009 - Spotlights

Since the 1990s, optical fiber has been the preferred method for interconnecting data networks in the corporate or university campus setting. Installing long-length horizontal stretches of fiber optics through a conduit system involves planning, permits, and coordination with municipalities, utility companies, and public safety agencies. To avoid the expense of additional trench digging due to future increases in demand for bandwidth, cable plans frequently call for additional stretches of unused or "dark fiber," which can be "lit" when it is needed.

### **Predicting the Future**

Future-proofing the network by installing additional fiber optics may be a solution. But it is difficult to predict exact bandwidth requirements years out, especially during a time when more voice, data, and video applications are rapidly being added to the IP network. There are two major financial risks associated with running additional stretches of fiber optics to insure against future requirements. Installing too much fiber will result in wasted dollars for a product that will never be used, and installing too few fibers will lead to expensive retrenching and installation costs.

Air-Blown fiber technology such as FutureFLEX by Sumitomo, offers the ability to properly scale a campus fiber optic infrastructure immediately, while preserving a pathway for future changes and upgrades. By providing a "fiber on demand" technology, network moves, adds, or changes can be made at a fraction of the labor cost of trenching and pulling traditional fiber optic cable.

### **How Air-Blown Fiber Works**

Instead of traditional innerduct, conduit, and pull boxes, Air-Blown fiber runs through a "tube cable." The tube cable contains up to 19 individually numbered tube cells, inside an outer jacket. The tube cables come in different versions, designed to meet specific environmental requirements.

True to its name, bundles of Air-Blown fiber are blown through the tubes with compressed air or nitrogen rather than being pulled. At speeds of 100 to 150 feet per minute, 3,000 feet of fiber can be blown through a tube by two installers in 20 to 30 minutes. Using conventional methods, it would take 4 installers a full 8 hour day to pull the same 3,000 feet of fiber optic cable through a conduit or innerduct. This translates to significant savings in labor costs and minimal business disruptions when changes or additions to the campus fiber infrastructure are needed.<sup>1</sup>

### **A Sustainable Pathway to Network Expansion**

Unlike conventional fiber optic cable, fiber bundles can be blown out of their tubes without being damaged. These fibers can be reused within a network, providing for a renewable and sustainable network infrastructure. Because construction work is not needed to add to or reconfigure the fiber network, disruptions to the workplace due to environmental hazards and debris are eliminated.<sup>1</sup>

Air-Blown fiber applications are not limited to horizontal campus type environments. Tube cables are also designed for general purpose, plenum, and riser environments. These designs allow those with

vertical infrastructure requirements such as high-rise office buildings, hotels, and hospitals to capitalize on the financial and logistical benefits of Air-Blown fiber.

#### 1. Sumitomo Electric Lightwave

Michael Hoernecke is executive vice president of BBH Solutions Inc., New York, N.Y.

New York Real Estate Journal - 17 Accord Park Drive #207, Norwell MA 02061 - (781) 878-4540