Volition™
Network Solutions

As a major research and development location for United States Air Force Operations, the Wright-Patterson Air Force Base is relying on fiber-to-the-desk deployment to take its network into the next century.

The Materials and Manufacturing Directorate of the U.S. Air Force Research Laboratory is a major Research & Development arm of Air Force operations. From nuts and bolts to stealth paint, Air Force manufacturing programs and materials production are supervised by the Directorate, which is headquartered at Wright-Patterson Air Force Base, Ohio.

The Directorate's data network consists of roughly 1,300 network nodes distributed among five buildings at the Wright-Patterson complex. Network users conduct materials research with an array of graphics-intensive applications that routinely generate very large files — many over 100-Megabytes — which are shared across the network.

As part of a network upgrade, over 200 miles of optical fiber cabling are being deployed among the five buildings. "We decided to skip twisted pair wire and go directly to fiber," said senior network manager Bryan Foster. The decision to go with fiber over copper was due primarily to its unlimited bandwidth capability and resistance to radio frequency and electromagnetic interference.

Foster said his group originally planned on a limited fiber installation across the backbone. But when they learned about the Volition Network Solution from 3M, they elected to completely recable with fiber to the desktop. "Fiber cabling just made sense as we looked ahead," said Foster. "Then there's cost. By the time you factor the money that you have to add to copper in order to deal with its distance limitations and shielding requirements, Volition costs the same."

Installation started with a backbone upgrade to one building. The other four buildings quickly followed, totaling nearly 13,000 feet of 24-strand Volition multimode fiber cable.

Wright-Patterson Air Force Base

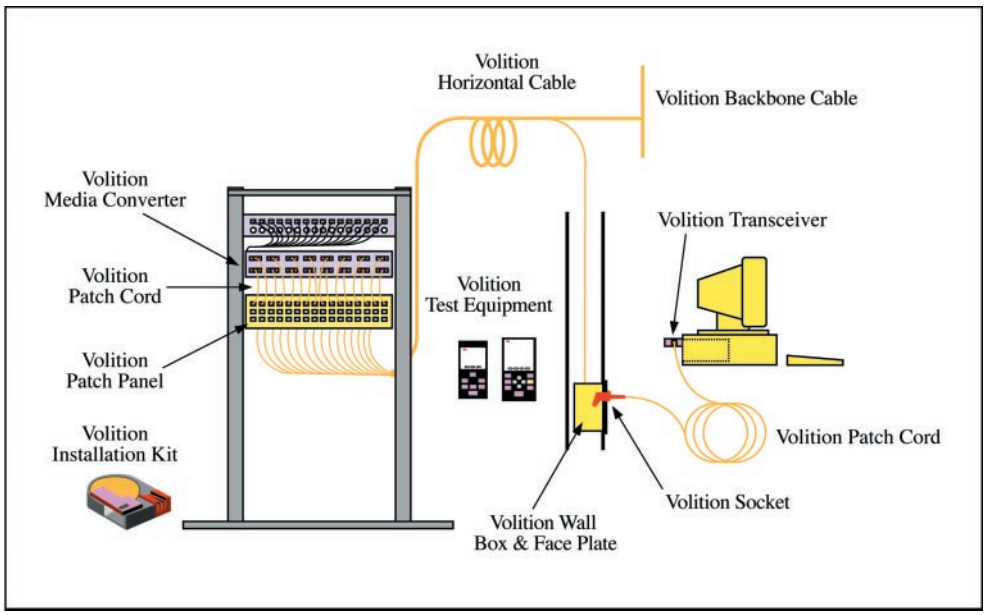
The Volition system has won strong approval from the communications group that handled the installation. "The terminations are fast and easy and the cabling itself is about half as bulky as other stuff we've used," said Sylvester S. "Bud" Lucas, the group's manager. "The fact that it takes up half the space is a major feature; it makes the installation much easier to work with."

How the U.S. Air Force Research Laboratory is advancing its capabilities with an advancement in bandwidth.

Make the Most of Your Network.

Volition™
Network
Solutions

Volition™ Network Solution



The Volition Network Solution from 3M is a breakthrough in fiber optic cabling — an affordable end-to-end fiber-to-the-desk system that enables military and government facilities to realize their true potential today, tomorrow, and for years to come.

The Volition Network Solution:

- Delivers a secure fiber-to-the-desk network at a cost competitive with copper;
- Removes the bandwidth limitations of your current cabling system today, and for years to come;
- Eliminates network security and data corruption concerns;
- Enables fast, dependable connections in the most punishing environments;
- Allows users to access the most bandwidth-hungry applications;
- Offers you a new freedom to move your technological capabilities far ahead of competing organizations;
- Addresses network funding issues — since funding may not last, you need to invest in technology that will.

Setting a New Standard

The heart of the Volition system, the unique VF-45™ connector, is rapidly becoming the standard in fiber-to-the-desk networking. The economical plug and socket design contains no ferrules, and can be installed in under two minutes. At four times the strength of copper, the Volition system can be installed quickly and easily without having to extensively remodel buildings. Longer cable runs permit collapsed backbone architecture and network design flexibility, reducing telecommunications closets. With a 3 to 1 signal attenuation advantage over copper, the system moves data over longer distances throughout buildings and across campuses.

If you are ready to unleash the power of your network, you're ready for the Volition system. For more information, call 800-695-0447 or visit our website at www.3M.com/volition.

Important Notice

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