

Customer Case Study: MIT's Research Laboratory of Electronics (RLE) Standardizes on USO II & DataGate™

Massachusetts Institute of Technology is reknowned as one of the worlds' leading engineering universities emphasizing education and research as they apply to the practical world. MIT is independent, coeducational, and privately endowed. Located on 153.8 acres spanning more than a mile along the Charles River Basin in Cambridge, it is organized into five schools with twenty-one academic departments, as well as many interdepartmental programs, laboratories and centers whose work extends beyond usual departmental functions.

All academic and administrative departments, laboratories, and work centers at the University are connected by a central infrastructure (core network) managed by the Information Systems (IS) group. Most large Departments, Laboratories and Centers (DLC's) have their own local network. David Foss, Manager, Computer Systems, oversees a network spanning five buildings and three DLC's: The Research Laboratory of Electronics (RLE); The Department of Electrical Engineering and Computer Science (EECS) and The MIT Microsystems Technology Laboratory (MTL). The research laboratories and large academic departments, such as EECS are always on the cutting edge of technology, pushing the limits of both software and hardware. Doing so requires the most progressive cabling products to provide the highest performance computing and networking environment demanded by their students, researchers and staff.

In the late fall of 1998, Dave managed an installation of over 1500 cable drops during an ongoing project targeted at recabling much of his current infrastructure. This was a follow up by a recabling effort performed the previous spring that included the installation of IDC Patch Panels, USO II wall plates and Belden Data Twist 350™ Cable. In both instances, Dave was impressed with the superior performance of the USO II Category 5e DataGate™ Modules. He made specific mention of the marked difference in electrical performance of the DataGate Cat 5e in relation to several other modules he had tested. He said he was given many samples by virtually every vendor and found none provided as large a headroom @ 155 MHz when tested using a Wavetek™ (Dual NEXT) analyzer. He felt this provided some extra "forgiveness" during the installation phase that was comforting to have and the extra headroom would provide a larger margin of safety for future technologies such as the recently announced 1000TX standard.



Dave Foss, Manager of the computer systems at MIT



The research laboratory of electronics, one of five user groups at MIT



**PREMISE
NETWORKS**
A Division of Molex

Dave has complete freedom in choosing his cabling infrastructure and when asked why he chose Molex Premise Networks' USO II wall plates with DataGate jacks over other manufacturers' offerings, Dave provided a whole list of considerations. For one, he mentioned the fact that the DataGate shuttered modules were particularly good for clean room environments where their sleek, clean look and closed shutter were preferred over competitor's products. The shutter prevents dirt, dust and other contaminants from entering the module. "But," he added, "there are additional benefits beyond clean-room usage. Molex Premise Networks' DataGate jack modules are also much more resilient. Did you know that when a 4-wire (RJ21) is inserted into an 8-wire jack the pins do not displace? The shutter actually combs the pins in place each time it is opened and closed. Plus, this wiping motion also keeps the contacts clean. And, if a plug is poorly inserted the DataGate shutter springs out and ejects the plug. With other jacks, an improperly inserted plug can be seated in the jack, but loss of signal can occur. Using USO II DataGate modules could save hours of time fault-isolating a wall outlet where a plug is not inserted correctly."

Dave admired the functional aesthetics of USO II and DataGate as well. "Designing the shutter so it doesn't protrude beyond the face of the jack was a clever idea. The addition of a clear label holder was also a great improvement over the previous USO faceplates." He also commented on the stock labels (such as Brady's™ PTL-40-412 labels) which fit perfectly in the label holder and made it easy to label wall outlets. He also likes the Molex Premise Networks' Snapz™ icons, which can be inserted beside the jacks and are not hidden by plugs and wires. Dave thought the pad-printed icons were better for visibility versus molded-in designs that cannot be recognized beyond a couple of feet. The Snapz icons are lettered A through H or with communication images (PC, phone, etc.) for even more versatility.

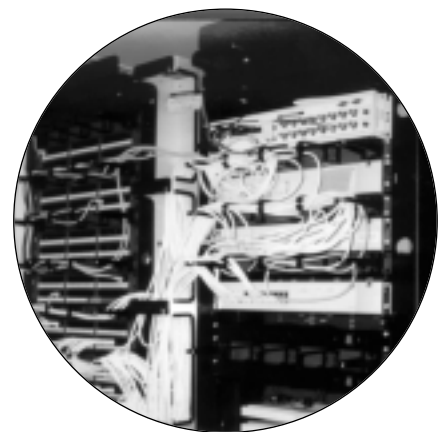
When asked whether a system warranty was an important consideration for him in choosing a structured cabling manufacturer Dave replied, "It is absolutely paramount. A structured cabling system is an investment and I wouldn't purchase network cabling products without a warranty." The Molex Premise Networks' 20 Year System Warranty, coupled with Belden's 20-Year warranty was necessary and a fundamental element in his decision to specify and install Molex Premise Networks' products in his subnet at MIT. "And," he added, "20 years is more than ample since most companies upgrade, renovate, or relocate every five to seven years. In reality, very few structured cabling systems live beyond a few years." Lastly, he has been extremely happy with the local support and assistance he has obtained from the Molex team supporting his account. "Even though our installation is not massive in scope, the local Molex representatives have been very helpful and responsive. They listen to our needs and make a concerted effort to feed our ideas back to the engineering staff at Molex. It is an impressive operation with dedicated people who make a great line of products."



Classrooms such as these house up to 40 computers



6 port USO II in use



One of the many telco closets visited



**PREMISE
NETWORKS**
A Division of Molex