



Mitel Networks Voice-over-IP Earns High Marks at Michigan Tech

CUSTOMER'S NEEDS

- Replace Centrex-based telephone service to approximately 3000 users across multiple-building campus
- Leverage existing data network infrastructure
- Integrate and provide feature transparency with existing PBX telephone system
- Support centralized management and advanced user applications

SOLUTION COMPONENTS

- Mitel Networks 3300 Integrated Communications Platform (ICP) network
- Mitel Networks 6500 Attendant
- Mitel Networks IP Appliances and Phones
- Mitel Networks SX-2000

RESULTS

- University leverages existing data infrastructure while replacing limited-feature Centrex service with high quality, feature-rich Voice-over-IP (VoIP)
- Integration and feature transparency with existing PBX telephone system protect investment, reduce maintenance costs and user training
- Support for advanced applications including speech-enabled attendant reduces staffing costs while enhancing services



You could consider Dr. James Cross' position more challenging than others in IT management. As Vice Provost, Information Technology at Michigan Technological University (MTU), Dr. Cross not only has to keep an eye on the leading edge, he has to keep MTU there too. "MTU is committed to serving students, faculty and staff with the latest in technology to enhance the learning experience and quality of research we produce," explains Dr. Cross. "As an IT department, we have to make it happen."

After upgrading its campus data network during the 1990s, Dr. Cross' team began considering alternatives to MTU's Centrex-based telephone service. In 1998, MTU equipped its student residences with a Mitel Networks™ SX-2000® PBX telephone system. But traditional voice technology wasn't where MTU saw things going. "When Mitel told us what they were doing in Voice-over-IP, we were very interested," recalls Dr. Cross. "We already had a high-speed IP infrastructure, so we agreed in early 2000 to become a pilot site for one of Mitel's Integrated Communications Platforms." After a successful pilot, MTU is now implementing a Mitel Networks 3300 ICP to provide voice and advanced applications over its existing network infrastructure – fully integrated with its existing Mitel SX-2000.



it's about **YOU**



ABOUT MICHIGAN TECHNOLOGICAL UNIVERSITY

- Located in Houghton, Michigan
- 6800 full-time students with undergraduate and post-graduate degree programs in science, engineering, arts, and humanities
- 80-building campus

“Five clustered Mitel Networks 3300 ICPs will provide Voice-over-IP service to approximately 3000 users on the MTU campus by the end of 2003.”

**Dr. James Cross, Vice Provost,
Information Technology Michigan
Technological University**

Proving the Case for VoIP

Despite its commitment to supporting the MTU campus in Houghton, Michigan with leading edge technology, the MTU IT department rarely rushes new solutions into implementation without first thoroughly evaluating them and demonstrating the merits of the investment in a complete business case. “We conducted a 12-month pilot of the 3300 ICP within a workgroup in the IT department,” says Dr. Cross. “We evaluated voice quality, feature transparency and integration with our existing SX-2000 platform and voice mail, ease of management and maintenance, and support for advanced applications.”

Having completed what it termed a “highly successful” pilot, the IT department presented its business case for rolling VoIP based services out to about 3000 users in buildings across campus. “Our business case focused in large measure on savings – a single, readily scalable network infrastructure for both voice and data, simplified and reduced management and maintenance, the fact that the 3300 ICP integrates with and lets us leverage our existing SX-2000 PBX,” reports Dr. Cross. “But as an IT team, we were equally excited by the new applications we could begin considering with a VoIP platform.”

Clustered 3300 ICPs to Serve up to 3000 Users

The university accepted Dr. Cross’ business case for Mitel Networks VoIP, and the IT department began rolling out the 3300 ICP solution in a staged process that will be completed by the end of 2003. “Our VoIP solution will eventually consist of five clustered 3300 ICP systems providing voice and network access to staff and faculty across campus,” explains Dr. Cross. “We’re using a variety Mitel Networks desktop products, including the Mitel Networks 5140 IP Appliance for IT and senior administrators, and the full range of Mitel Networks IP Phones depending on the user and location on campus.”

Advanced Applications on the Network and Under Development

With implementation of its 3300 ICP solution underway, MTU began considering some of the advanced, IP-based applications supported by the system. The first it implemented was the Mitel Networks 6500 Attendant. “External callers can now reach anyone on campus simply by saying their name, and the same applies for calls within the campus environment,” reports Dr. Cross. “Mitel Networks also provided us with a tool box that lets us build our own applications, the first of which will be a speech-enabled telephone subscription service for the university’s performing arts center.”

Dr. Cross says MTU is also investigating use of speech-enabled technology for access control to restricted areas on campus, such as chemical storage facilities. And as the implementation continues, MTU will be actively considering other applications supported by the 3300 ICP, including wireless ... all part of staying and keeping the university on the leading edge.

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PN 51002138, Rev. B