

Sparking Innovation and Collaboration Since 1966.

**Building Fiber
in Michigan**

Dear Merit Members,

I think Merit found a good way to wrap up the decade! As you probably know Merit received two awards under the Broadband Technology Opportunities Program (BTOP) of the American Recovery and Reinvestment Act. Many of you were involved in giving us letters of support - thanks so much for your help. Both awards were really a community effort. A \$130 million dollar project is never insignificant, but we believe that because of the nature of our project, the impact on Michigan will be profound and lasting.

For the first time, every community anchor institution (school, college, university, library, health care, government and public safety) will have reasonably priced access to a statewide, high-speed network of peers. This is an exciting opportunity not only for those of you located in the service area, but also for those of you looking to be more effective through collaboration with your colleagues. In addition, Merit is working with seven commercial providers to make sure that your patrons, students and constituents will have improved access in their homes. Businesses will be served either directly or indirectly by these companies - leaving no sector of society out. The vision of equal access to information regardless of location is within our reach!

Extending Merit's owned-fiber network has been part of our strategy since 2004, so these awards have not changed Merit's strategy, but have accelerated it. Building 2,300 miles of fiber takes a lot of effort and attention, but it is not the only thing we are doing.

Merit has been working hard to build collaborations within communities around the state. The BTOP awards have accelerated these efforts. Many of you have hosted or facilitated these meetings, and we sincerely appreciate it. Merit members understand better than most the importance of collaboration.

We continue to strive to give you the best possible Member experience. Over the previous years, we invested in network and IT infrastructure, as well as engineers and their training. This year we have reorganized our 24/7 support. We created a new director-level team that includes the former NOC, the service desk and member support coordinators. These additional resources will make sure that every interaction with Merit meets your needs and leaves you satisfied. In addition, we have also changed our primary data center. This move gives us room to grow along with greater reliability.

You'll also note the addition of Merit Service Road Maps to the Member Portal. From this page you will be able to keep abreast of Merit's service offerings, both those delivered by Merit alone or with selected partners. We've introduced some very exciting service offerings this past year and will continue to provide you more value for your membership.

With your support, we have accomplished a great deal this year, but it is only the start. We have a lot to accomplish in 2011. When I wonder how we will get it all done, I think back to where we were at the start of 2010 and marvel at what the Merit staff has been able to accomplish with your support. My best wishes for you both personally and professionally in the coming year.



Don Welch, President/CEO for Merit Network



Pictured Above: Don Welch was named the Grant Thornton Leader & Innovator of the Year on April 22, 2010; Don speaking to the Presidents Council in March 2010; Don received an award from *Corp! Magazine* in December 2010.

**Merit Network, Inc.****Balance Sheet**

	June 30, 2010	June 30, 2009
Assets		
Cash and cash equivalents	\$ 4,875,028	\$ 5,239,445
Accounts receivable (Note 2)	1,563,136	713,361
Prepaid expenses and other:		
Prepaid expenses	557,152	332,989
Bond financing fees - Net of amortization of \$60,726 and \$50,605 at June 30, 2010 and 2009, respectively	91,082	101,203
Property and equipment - Net (Note 3)	9,250,493	8,886,916
Software licenses - Net (Note 4)	611,015	467,294
	<hr/>	<hr/>
Total assets	\$ 16,947,906	\$ 15,741,208
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Liabilities and Net Assets		
Liabilities		
Accounts payable	\$ 572,981	\$ 420,525
Accrued liabilities and other:		
Accrued wages and other liabilities	566,873	517,226
Deferred revenue	1,101,280	1,051,148
Debt (Note 5)	2,347,375	3,797,933
	<hr/>	<hr/>
Total liabilities	4,588,509	5,786,832
Net Assets - Unrestricted	12,359,397	9,954,376
	<hr/>	<hr/>
Total liabilities and net assets	\$ 16,947,906	\$ 15,741,208
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Member Update

Late 2009 and early 2010 were pivotal periods in Merit's recent history, setting in motion events that will lead to better connectivity for Merit Members and the state of Michigan in the years to come. When federal broadband stimulus programs were announced in 2009, Merit did not hesitate to pursue the grants, which would have substantial benefits for Michigan.

In August 2009, Merit's management and staff worked tirelessly preparing an application for round one of the Broadband Technology Opportunities Program (BTOP), which would provide broadband grants to selected applicants from funds provided through the American Recovery and Reinvestment Act (ARRA). Merit's REACH-3MC (Rural, Education, Anchor, Community and Healthcare - Michigan Middle Mile Collaborative) proposal would create a 1,017-mile open-access network in the Lower Peninsula, with Merit providing connectivity to anchor institutions and project sub-recipients providing connectivity to homes and businesses in rural and underserved communities in Michigan.

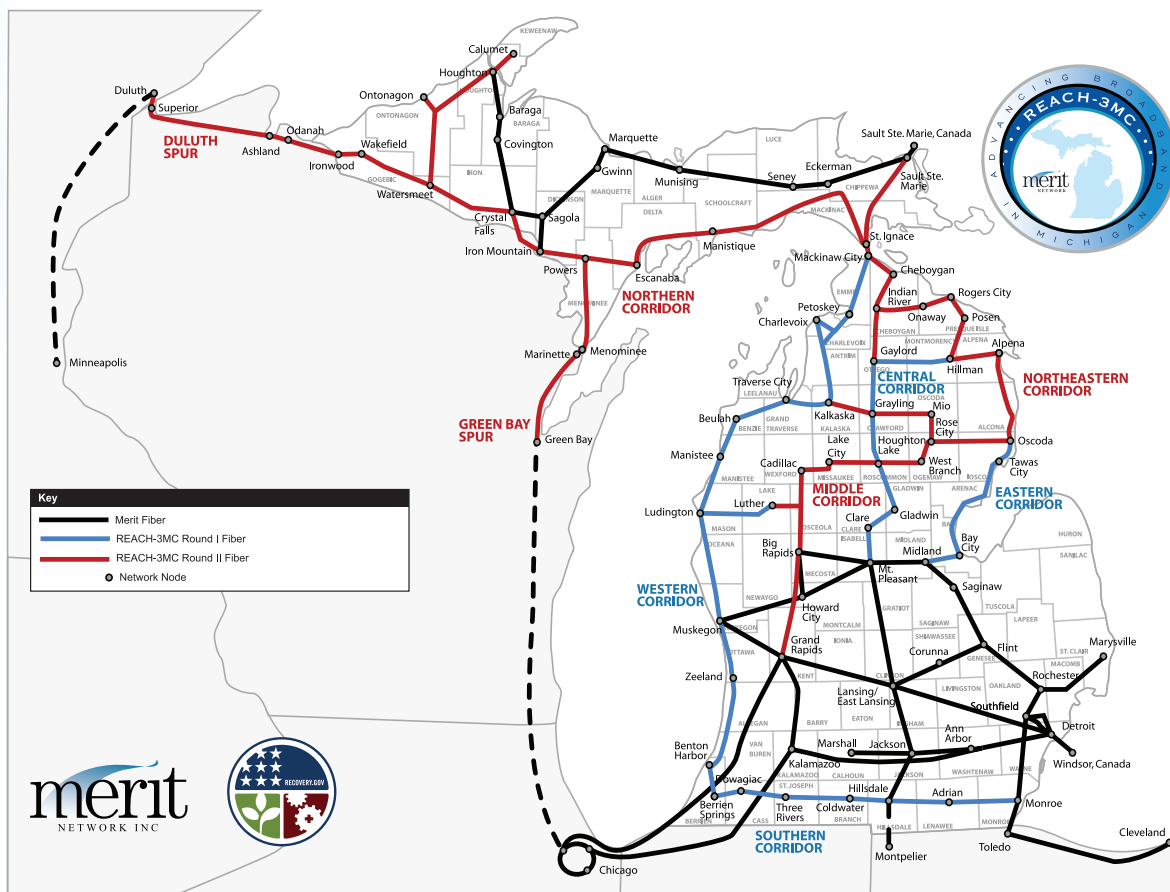
The next few months were filled with anxious anticipation and further work to provide clarification to the National Telecommunications and Information Administration (NTIA), who was administering the BTOP grants.

In January 2010, Merit received good news from the NTIA. REACH-3MC would receive \$33.3 million in federal stimulus funding, with Merit and its sub-recipients contributing additional funds. The project would build essential infrastructure and greatly improve connectivity in many parts of the state.

In March 2010, Merit's staff again worked many long hours to prepare a proposal for round two of the BTOP program. The second REACH-3MC project would build additional fiber-optic infrastructure in both the Northern Lower Peninsula and the Upper Peninsula of Michigan.

In August 2010, Merit announced that its REACH-3MC II project had been awarded \$69.6 million to build 1,270 miles of fiber. Participating in the announcement in Ann Arbor were: Governor Jennifer Granholm; Lawrence

REACH-3MC and Merit Fiber Infrastructure



Strickling, assistant secretary for communication and information at the NTIA; U.S. Representative John Dingell, 15th Congressional District of Michigan; and Roger Rehm (CMU) and Dr. Walter Milligan (MTU) from Merit's board of directors. REACH-3MC II will bring critical broadband infrastructure to the sunrise side of Michigan's Northern Lower Peninsula and a large portion of the Upper Peninsula.

Network engineering, environmental assessment and permitting were early priorities that needed to be completed prior to the start of construction. Merit has requested over 1,200 permits for REACH-3MC construction, and the permit approval process of townships and municipalities has proven to be one of the more challenging aspects of the broadband project.

To educate those located near the network routes about the REACH-3MC project, Merit held community meetings and invited individuals from anchor institutions, local government and other organizations to participate. Merit staff has driven over 4,000 miles in Michigan and Wisconsin while doing REACH-3MC community outreach.

In December 2010, Merit began the first phase of construction with 19 miles of fiber in the Manistee area. Outside plant construction for REACH-3MC will continue in spring 2011.

Updated information at: www.merit.edu/meritformichigan

Services for Members

Virtualization and "The Cloud" received added emphasis during 2010. In April 2010, Merit debuted its new MeritLicensing - VMware Program. The popular service provides substantial discounts on VMware products and has saved Merit Members thousands of dollars.

Desktop virtualization was the subject of a day-long summit in East Lansing in November 2010 that attracted individuals from across Michigan, and Merit's Services Team assisted Members who had questions regarding virtualization.

Merit's Cloud Services were featured at EDUCAUSE 2010 in Anaheim, California. Services staff provided attendees with details about Merit Business Continuity and Disaster Recovery, Merit Cloud Storage, MeritMail, Merit Network Monitoring, and Merit Professional Learning.

Merit's hosted email service, MeritMail, continues to be a highly-valued, campus-wide solution for large universities. Kansas State University and Western Michigan University switched to MeritMail, and Central Michigan University migrated to the latest version of MeritMail.

During the fall of 2010, the Service Road Maps were launched in the Merit Member Portal. The valuable resource enables Members to follow the progress of services in development, request participation in new service pilots and provide feedback.

Merit Support Center

In December 2010, Merit introduced the Merit Support Center (MSC), which expanded the Network Operations Center to offer a greater level of support. The MSC provides 24x7x365 assistance to Members with network connection issues and questions related to services, including MeritMail, MeritVoice, Merit RADb, Merit Colocation, and others. In addition, the Merit Support Center can assist with new service inquiries and provide E-Rate support.



The Desktop Virtualization Summit attracted attendees from across Michigan.



Merit's Leslie Williamson and Jim Moran with guests at EDUCAUSE 2010.

Research & Development

During 2010, Merit's Research and Development Team participated in several advanced networking and security projects that will benefit Merit Members and networks worldwide. Research projects focused on network-wide malicious traffic detection, IPv4 address sharing, regional botnet detection, un-used address space use measurement, and other issues.

Together with researchers from APNIC and the University of Michigan, a significant investigation of the 1.0.0.0/8 address block provided valuable insight regarding Internet pollution—junk traffic resulting from system misconfigurations, programming errors, and network experiments gone awry.

Merit researchers presented their findings about several research projects at MJTS meetings in East Lansing, NANOG49 in San Francisco, and the 10th ACM SIGCOMM Conference on Internet Measurement (IMC '10) in Melbourne, Australia.

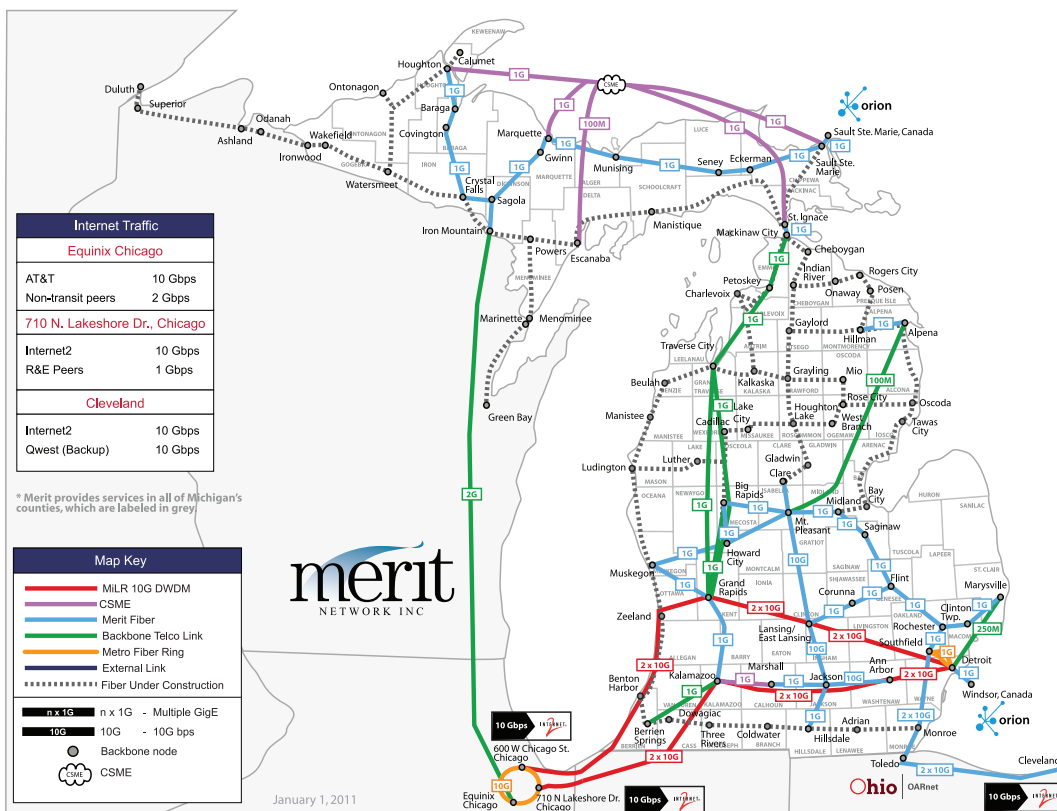
During 2010, powerful new tools were developed for Merit RADb, a service that contains one of the largest routing asset databases in the world. The new Web-based tools enable organizations that have an autonomous system number (ASN) to track routing changes and determine the health of their network assets. Suspicious botnet and spamming activities found on a Merit RADb Member's network produce an alert that notifies the organization's network administrators.

Internet2 Activity

In March 2010, Merit's link to the Internet2 Network in Chicago was increased from 10 gigabits-per-second (Gbps) to 20 gigabits-per-second. The upgrade provides even greater overhead for high-bandwidth research and distance-learning activities for Merit Members using the Internet2 Network.

In August 2010, Merit Network CEO and President Don Welch was named the vice chair of Internet2's External Relations Advisory Council.

Merit Network Backbone Map



Merit Community Supporter Program

In an effort to offer greater benefits and more learning opportunities to Merit Members, the Merit Community Supporter program was created in 2010. The program enables commercial organizations that share Merit's values to become part of the Merit Community and contribute funds that are used for initiatives that benefit Members.

ADVA Optical Networking, Cisco Systems and Data Strategy were the charter organizations for this program in 2010. The Merit Community Supporter Program helped reduce the cost of attending Merit Professional Learning events and provided scholarships to individuals from Member organizations who needed assistance to attend the events.



Merit Professional Learning

In 2010, Merit Professional Learning presented a wide range of classes and community events, continuing with its mission of providing professional development experiences to help Members maintain excellence in networking and information technology.

Several events were offered with different modes of distance learning. The fall MJTS meeting was offered at a second location in Gaylord, connected to the East Lansing location by videoconference. Merit hosted a Linux security class in which the instructor, Charles Antonelli, taught at a classroom in Ann Arbor while also connected to additional classrooms by videoconference. Merit also hosted a class on data center infrastructure management, taught entirely online and attracting attendees from institutions across the U.S., as well as two classes from the SANS institute that were available to nationwide audiences.

The 2010 Merit Member Conference was a major success, with attendance climbing to record heights. The conference agenda featured a strong lineup of presentations, covering topics such as lock-picking, the Google network break-in, credit card compliance, federal regulation of the Internet, new Merit services, and advanced research topics.

During 2010, Merit worked toward transitioning ownership and operation of the North American Network Operators' Group (NANOG) to NewNOG, an organization created by members of the NANOG community. Merit hosted successful NANOG meetings in Austin, San Francisco and Atlanta during the year, while working with NewNOG's leaders on a transition plan for the future.

Merit has planned several workshops, IT summits and courses for the coming year. For the current schedule and more information, visit: www.merit.edu/learning

Merit Awards Recognize Member Achievements

At the 2010 Merit Member Conference, the annual Merit Awards were given to honor individuals and organizations that have provided leadership in computer networking and have assisted the Merit community.

Award for Innovation in Networking & Information Technology
Dave Maki, Northern Michigan University (NMU)



Merit Joint Technical Staff (MJTS) Meeting in East Lansing in September 2010.



A course at Merit's offices in Ann Arbor, with a second instructional location connected via videoconference.

Award for Community Building**Ken Chinavare, Director of Technology, Clare-Gladwin RESD****Matthew McMahon, Coordinator of Technology Resources, Gratiot-Isabella RESD****Award for Meritorious Service****Dennis Buckmaster, St. Clair County RESA****Travis Bussler, Chippewa River District Library****Mike Zimmerman, Macomb Community College****New Members**

Merit extends a warm welcome to the following Members who have joined our community during the past year:

- Alcona Health Center
- Alpena County Library
- Brother Rice High School
- Clarkston Community Schools
- Clintondale Community Schools
- Detroit Public Schools
- Educational Networks of America (ENA)
- Eton Academy
- Grand Haven Charter Township
- Henry Ford Academy Center for Urban Education
- Holly Area Schools
- JSTOR
- Kalamazoo Public Library
- Kansas State University
- Kent County Government
- Lamar University
- Lansing Board of Water & Light
- Lansing Community College
- Lenawee ISD
- Mecosta County Medical Center
- Memorial Healthcare Center
- Michigan Public Health Institute
- Michigan Virtual University
- Midland County
- Monroe County Community College
- Newaygo County RESA
- Northpointe Behavioral Health
- Northwood University
- Plainwell Community Schools
- Siena Heights University
- St. Clair County Community College
- South Central Michigan Works
- Uptown Reinvestment

**Looking Ahead to 2011**

The upcoming year for Merit Network will be extremely busy and very productive. In spring 2011, the REACH-3MC project will resume the construction phase, with several crews working simultaneously to build fiber-optic infrastructure in areas of Michigan. To educate organizations, local governments and others about the project, Merit staff will continue to host community meetings in cities along the network routes.

Prior to the Merit Member Conference in May, Merit plans to introduce three new cloud-based services: Merit Cloud Storage, Merit VirtualDataCenters, and Merit VirtualDesktops. Merit also will launch a new desktop videoconferencing service, called Merit WebConnect. Other new services in development could become available later in 2011.

Pictured Above: Kalamazoo Public Library; Monroe County Community College; Northwood University.

City of Ann Arbor Honored for its Leadership in Technology

The City of Ann Arbor received attention and praise for its innovative use of technology. The city received awards from both the State of Michigan and e.Republic's Center for Digital Government and Digital Communities magazine.

Michigan Excellence in Technology Award

In October 2009, the City of Ann Arbor was recognized for its outstanding achievements in information technology by Michigan Governor Jennifer Granholm. This is the seventh year for the Michigan Excellence in Technology Award. The awards started in 2003 with the first Michigan Digital Government Summit. The Michigan Excellence in Technology Award is given in an effort to recognize outstanding achievement in state and local government technology across Michigan.

Top Digital Cities Recognition

The City of Ann Arbor was also recognized for the second straight year by e.Republic's Center for Digital Government and Digital Communities magazine. The city was recognized for its use of technology to create a seamless environment between local government and citizens. Ann Arbor moved up in the annual Digital Cities Survey rankings and was recognized as the No. 5 Best Digital City in the country in its population category (75,000 to 124,999). The City of Ann Arbor is the only city in Michigan to be honored this year.

IT Collaboration

Washtenaw County Support Services Infrastructure and Planning and the City of Ann Arbor Information and Technology Service Unit consolidated their data centers into one comprehensive data center. The result has been better support of the data center technology and operations for both organizations. The data center is hosted by the city and is connected by fiber to Merit's backbone network.

The City of Ann Arbor and Washtenaw County have a long history of collaboration in the area of information technology. The city is connected to the MeritFiber network and receives network and Internet access through a collaboration arrangement with Washtenaw County and Merit Network. Washtenaw County has been a Merit Member since September 1996.

Michigan E-Library Providing Tools for Today's Educators

The Michigan eLibrary (MeL) is a project made possible by grant funds from the U.S. Institute of Museum and Library Services (IMLS) and administered by the State of Michigan through the Library of Michigan. MeL puts a world of information at your fingertips and can be accessed from any computer via the Internet, 24/7. Information on issues such as starting a business, job search, medical research, homework help, and practice tests with instant scoring for ACT, SAT, GED and more can be found on the MeL web site.

One of the most significant resources in the Michigan eLibrary can be found at more.mel.org. MORE launched in 2008 and stands for Michigan Online Resources for Educators; it is a portal which provides educators with tens of thousands of quality educational web sites that are browseable, searchable and aligned to Michigan's Grade Level Content Expectations.

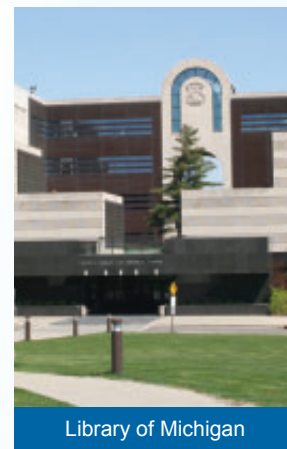
Another tool provided in the MORE portal is a Lesson Plan Builder, which allows teachers to create lesson plans tailored to a specific subject and grade level as well as save and share lessons and activities with other teachers statewide. My Resource Locker enables teachers to store their favorite resources including lesson plans, online interactives and multimedia files as well as utilize a shared folder accessible by selected colleagues. There is also a Collaboration Center in MORE where educators can discuss, share resources and work together on educational issues.

The MORE portal is the result of an initial exciting partnership between the Library of Michigan and the Michigan Department of Education. In 2008-2009, the portal welcomed the addition of resources from the Verizon Foundation's Thinkfinity.org.

The Library of Michigan, Merit Member since 1993, using Merit's Michigan Teacher Network (MTN) as the building block for the Michigan Online Resources for Educators (MORE). Beginning the project in 2007, the MORE portal continues to add exceptional educational resources from Thinkfinity.org, Gale Cengage Learning and others.



Ann Arbor City Hall



Library of Michigan

Macomb Community College: Teaching Students, Partnering with Universities

Since 1991, Macomb Community College (MCC) has partnered with four-year colleges and universities in Michigan to provide students with advanced degree programs through its University Center. A new network connection to Merit's backbone helps MCC offer students and university partners more opportunities.

Rather than go off to college, Macomb County residents can work towards a degree at Central Michigan University, Ferris State University, Madonna University, Michigan State University (MSU), Oakland University, Rochester College, University of Detroit Mercy, Walsh College, or Wayne State University (WSU) while staying home and attending classes at Macomb Community College's University Center. After a student has completed the required coursework at Macomb Community College, he or she can then transfer into the degree program at the partner university or college to finish the necessary classes. The program has been extremely successful, with more than 3,000 students working towards a bachelor's or master's degree.

The University Center features state-of-the-art technology, including high-definition telepresence facilities that enable students at the Center Campus in Clinton Township to interact with professors in East Lansing, Detroit, and other locations around the state. Macomb Community College provides the university partners with shared teaching classrooms and general Internet connectivity over its local network.

New this year, Macomb College began offering its partners the ability to have dedicated classrooms with dedicated connectivity to Merit's backbone network. In June 2009, Merit established a network access point (NAP) at Macomb Community College's Center Campus, directly connecting Macomb Community College to Merit's backbone via fiber-optic cable and enabling Merit-connected universities to have dedicated, high-capacity connections at the University Center.

MSU and Oakland University have greatly increased their reliance upon Merit network resources at the University Center over the past year, and it is critical they don't compete for bandwidth. Prior to the Merit NAP at Macomb, their network traffic was shared with Macomb and all other university partners over a single 50 Mb circuit. The Merit NAP permits them to independently attach to the Merit network at whatever capacity they deem appropriate for their programs and communication needs while simultaneously isolating their network traffic from others on the primary Macomb network. As the programs of other university partners require expanded use of Merit network resources, they, too, can directly connect to the Merit backbone to benefit from independent connectivity if they so require it.

Macomb Community College has been a Member of Merit Network since January 2000.

Northern Michigan University Expands Wireless Reach with WiMax

Northern Michigan University (NMU) received nationwide attention for its launch of mobile WiMAX on its Marquette campus and throughout the city and township. This is not the first time that NMU has received nationwide attention for its campus-wide technology program. NMU received much earned attention in 2000-01 for the launch of its laptop program, in which the university provided laptop computers for all full-time enrolled students.

Northern Michigan University was one of the first campuses to offer campus-wide WiFi to its students, and now it has established the first campus-wide WiMAX network in the United States that is also designed to cover the surrounding cities and townships'. The university said it needed a wireless broadband network that offered greater range than WiFi given the fact that the school is in a rural area and commuter students and staff may live several miles away from campus. The network is mobile and encrypted for use by university students and employees as well as some governmental entities. Northern Michigan University will continue to use its WiFi network for students living and working on campus, but the addition of the WiMAX network allows them to provide wireless service to students and staff who live off campus.

NMU's WiMAX network is linked to Merit Network's fiber-optic backbone network by two 1 gigabit-per-second (1 Gbps) connections. Northern Michigan University has been a Governing Member of Merit Network since January 1994 and hosts Merit's Marquette fiber-optic backbone node.

The WiMAX network will enable nearly one third of the schools more than 9,000 students to experience next generation service on the go, including the use of video chat sessions using their new WiMAX enabled Lenovo ThinkPad laptop computers the university provides, which are optimized for an excellent wireless computer experience. In addition, laptop and desktop WiMAX adapters will be made available for students who have computers that are not WiMAX-enabled. The WiMAX network will allow students to connect wirelessly on campus and off.

The network covers a 30-mile radius and includes some off-campus sites. Through NMU's Educational Broadband Service license, the University also provides high-speed wireless broadband access to local school and municipal offices — extending the benefits of WiMAX broadband to the entire community.



Macomb Community College's Library & Learning Center



Northern Michigan University's Seaborg Center

Saline District Library Gets a Tech Tune-Up

It won't take long for patrons of the Saline District Library to notice its latest addition. The Library still appears the same, but one look into the computer room will reveal wide eyes, smiles and astonishment on the faces of Internet users.

That's because the Library upgraded to a MeritFiber Internet connection. The fiber-optic connection is Ferrari-fast. Online content, in particular video, can be viewed as intended without interruptions.

Saline District Library was a pioneer for library Internet access in Washtenaw County, becoming one of the first to offer Internet access to its patrons over fifteen years ago. Since then the Library has consistently upgraded their Internet resources to meet the growing demand of their community.

"Our patrons are using the Internet differently today than they were even three years ago," said Saline District Library's Director, Leslee Niethammer. "We're very pleased to offer the speeds enabled by our new connection."

Saline District Library has more than quadrupled their bandwidth offerings in the last year. Just over a year ago, the Library was connected by a 1.5 Mbps (Megabits per second) line, referred to in the industry as a "T1." Frustrated by the slow speeds, they added a second T1 to increase their connectivity to 3 Mbps, but this still wasn't enough. The T1 lines are aging technology, and even the simplest Internet tasks ran slowly.

Since the MeritFiber upgrade, Library patrons are using the technology of the future and averaging upwards of 10 Mbps in bandwidth usage. And because the Library is connected by MeritFiber, it can accommodate almost any amount of future growth. In bandwidth terms, the sky is the limit.

Saline District Library is part of The Library Network (TLN), a public library cooperative serving 65 libraries in Southeast Michigan. TLN enables collaborative initiatives with other libraries that allow them to accomplish more. The Library also utilizes Michigan eLibrary's MeLCat service which opens up the State of Michigan's library collections to patrons of the Saline District Library. The new MeritFiber connection will bring more of the State's collection to patrons at faster speeds.

Saline District Library has been a Merit Member since 1994.

Muskegon Area Intermediate School District Implements MeritVoice Solution to Cut Costs Countywide

In Spring of 2009, the Technology Services team of Muskegon Area Intermediate School District (MAISD) began to consider a transition from their existing telephone system. They wanted to leverage the Shoreline Fiber Network, a joint project between MAISD, Muskegon County, and Muskegon Central Dispatch 9-1-1, that created infrastructure connecting every local school district in Muskegon County to the ISD.

At the time, Muskegon Area ISD and many other neighboring school districts, operated their individual phone systems using PRI (Primary Rate Interface) circuits. By nature a PRI system does not scale well. PRIs are provisioned using a one-size-fits all approach. A single PRI supports far more capacity than a small school district needs.

After examining many options, Tim Brown and Randy Lindquist ultimately decided on MeritVoice SIP Trunking service over a new MAISD PBX platform. MeritVoice SIP Trunking offered MAISD the scalability they desired. SIP (Session Initiated Protocol) Trunks can be "right sized" and accommodate growth better than PRIs. The MeritVoice service has helped cut telephone costs and improved flexibility with an array of phone features.

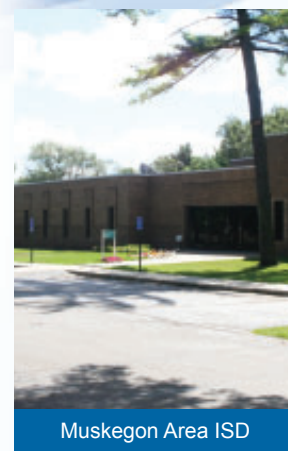
"The cost of Merit's SIP Trunking is significantly lower than PRI," said Brown. "It has proven to be half the price of our PRI. A school system like Muskegon Area ISD can save approximately \$10,000 annually in telco costs."

MAISD staff can now access their call history and voicemail via a web interface and organize and facilitate large teleconferences. There is a single directory that stores all the contact information for the district, which has been a boon to internal communication.

REMC4 and Muskegon Area ISD have been Merit Members since 1998.



Saline District Library



Muskegon Area ISD



Merit Infrastructure in Support of Business Continuity and Disaster Recovery

After Hurricane Katrina devastated the Louisiana coast in August of 2005, Tulane University's IT department found itself unprepared to recover from the disaster. Although the staff had readied its data center for the storm, little thought had been given to post-storm operations. Backup tapes prepared before the storm were recovered intact. However, no backup site had been prearranged to process the information, forcing Tulane to miss its first post-storm payroll. The problem may not have happened, however, if Tulane had been properly prepared to deal with the repercussions of the hurricane. In response to this need, Merit Network provides a wide range of possible business continuity and disaster recovery solutions for its Members, all of which can be customized to fit the specific needs of each organization.

One of these services, **Merit Cloud Storage**, is ideal for housing utility data or as a redundant solution for mission critical data. Through this service, an organization's information can be virtually stored on Merit's servers, protected by a host-based firewall that locks down content and allows access to only the Member organization. Before Hurricane Katrina, a law firm in New Orleans had stored its backup tapes at an off-site location, but that site was also in New Orleans and could not be accessed by the firm's IT staffers after the storm. Fortunately, the firm had prepared virtual backups in advance, which protected all of its data. Using a similar approach, Merit's Members can protect their data with Cloud Storage by storing their virtual, redundant data in Merit's trusted, remote location that can be accessed quickly and efficiently in the event of a disaster.

Merit also offers a **Web Contingency** service that can maintain an organization's web presence during adverse situations. With a minor routing change, web visitors are seamlessly redirected to a Merit-hosted backup web presence that is connected to redundant backbone sites so that a Member's end users can be kept abreast of developments and related details. The rerouting does not require any changes in IP addressing or DNS configurations, which can leave a website down without a contingency message for hours. With Merit Web Contingency, each organization is allotted one gigabyte of storage and full access to upload and maintain webpage files within that space.

While the Web Contingency service is highly effective for an emergency web presence, some Members have used **Merit Colocation Service** to fully replicate their web presence, critical data, and backup storage information using their own hardware in a Merit data center. Unlike Web Contingency, Merit Colocation allows users to seamlessly transition between a faulty network to an identical, functioning backup, with full management capabilities over the server and its applications. Colocation is a flexible, affordable way for an organization to expand its computing power without having to make expensive physical upgrades to its own data center facilities.

Universities and community colleges may find this service particularly appealing when preparing for registration, one of the busiest, most important periods of the year for these organizations. In the event that a natural disaster or power outage occurs at a university's primary location during registration time, Merit can quickly redirect all of its students to its collocated systems, through which they can continue registering without delay or disruption. This seamless transition keeps Members from having to spend essential resources on problems that can be easily avoided through these Merit services.

Merit's most economical and efficient solution for business continuity and disaster recovery is **Merit Virtual Data Centers (VDC)**. Instead of installing physical hardware into Merit's data center, organizations can install and manage their applications and data in a Merit virtual infrastructure. Merit secures the VDC framework to ensure privacy and maximize functionality, giving organizations full control over operating systems, applications, and data. Instead of having to wait for the transfer of critical data from physical hardware in the event of a natural disaster or power outage, VDC users may automatically transition between one virtual server to its active copy with no noticeable difference to its users.

Data center and IT damages from unexpected disasters often have lasting and costly consequences because people tend not to prioritize recovery services until after the fact. As IT budgets continue to tighten with an onslaught of both local and nation-wide budget cuts, organizations need to understand the risk undertaken when disaster recovery is not prioritized. Merit's business continuity and disaster recovery services provide its Members with the solutions they need to protect themselves against unpredictable emergencies, and should be considered by any organization in need of dependable, yet affordable recovery resources.

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Oakland University
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Pictured Above: Wayne State University, Grand Valley State University, University of Michigan, Lake Superior State University, and Ferris State University



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President, Merit Network, Inc.

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K12

Michael Richardson
Regional Educational Media
Center 1/Copper Country ISD

Dennis Buckmaster
Saint (St.) Clair County RESA

Matthew McMahon
Gratiot-Isabella RESD

Libraries

Sheryl Mase
The Library of Michigan

Angie Michelini
The Library Network

Travis Bussler
Chippewa River District Library

Alternate:
Victor Ibegbu
Detroit Public Library

Community Colleges

Amin Ladha
Washtenaw Community College

Alternate:
Robert Montgomery
Oakland Community College

Michael Zimmerman
Macomb Community College

Randy Schapel
Mott Community College

Randall Melton
Lake Michigan College

Private Colleges

Jeff Edwards
Spring Arbor University

Alternate:
Jeff Pestun
Hope College

Tim Chavis
Lawrence Technological University

David Zenz
Hillsdale College

Government, Not-for-Profit Agencies, Research, and For-Profit Businesses

Eric Macy
Hillsdale BPU

JC Morris
South Central Michigan Works!

Health Care

Josef Pelc
Northpointe Behavioral Healthcare
Services

Steve Mousseau
Alpena Regional Medical Center



2010 Timeline

JANUARY

On January 20, Merit Network announces the award of a \$33.3 million grant to build 1,017 miles of fiber-optic infrastructure. The grant was part of an American Recovery and Reinvestment Act (ARRA) program administered by the National Telecommunications and Information Administration (NTIA). The REACH-3MC (Rural, Education, Anchor, Community and Health care - Michigan Middle Mile Collaborative) fiber project will extend critical broadband service to rural and underserved communities.

MARCH

Merit's link to the Internet2 Network in Chicago is increased from 10 gigabits-per-second (Gbps) to 20 gigabits-per-second.

APRIL

On April 1, Merit signs an agreement with VMware Inc. to provide VMware licensing to public sector organizations throughout the state of Michigan.



Merit Network President/CEO Donald Welch is named the Grant Thornton Leader & Innovator of the Year on April 22.

MAY

Merit Member Conference establishes an attendance record, hosting over 225 professionals. Merit distributes its first annual Member Survey.

JUNE

Merit's Manish Karir and contributing researchers detail findings concerning junk traffic in the 1.0.0.0/8 address space at NANOG49.

Merit Community Supporter program debuts with ADVA Optical Networking, Cisco Systems, and Data Strategy offering their support.

Merit Network receives a Michigan Economic Bright Spots award from *Corp! Magazine*.

JULY

Merit begins REACH-3MC community meetings around Michigan to educate organizations about the fiber-optic network project.



AUGUST

Don Welch is named the vice chair of Internet2's External Relations Advisory Council.

On August 24, Merit announces the award of \$69.6 million in funding for the REACH-3MC II project, which will build 1,270 miles of fiber in Northern Michigan and the Upper Peninsula. Combined the two REACH-3MC projects will bring over \$100 million in funding to Michigan and build over 2,200 miles of fiber infrastructure. Joining Merit and Governor Jennifer Granholm in the announcement are: Lawrence Strickling, assistant secretary for communication and information at the NTIA; U.S. Representative John Dingell, 15th Congressional District of Michigan; and Roger Rehm (CMU) and Dr. Walter Milligan (MTU) from Merit's board of directors.



OCTOBER

Western Michigan University nearsources its email services to Merit, using MeritMail for faculty, staff and students.

Merit Network features Community Cloud and other services at EDU-CAUSE 2010 Conference.

DECEMBER

Capacity crowd enjoys Desktop Virtualization Summit in East Lansing on December 1.

Merit's network operations center transitions to Merit Support Center, offering 24x7x365 support for all services for the Merit community.

Merit Network and Manistee Intermediate School District hosted a groundbreaking ceremony commemorating the first phase of construction for Merit's REACH-3MC Broadband Stimulus Project on Dec. 21, 2010. The ceremony happened at Manistee ISD, the first community anchor institution connected by REACH-3MC. Speakers during the ceremony included: Scott Crosby, Superintendent, Manistee Intermediate School District and Wexford-Missaukee Intermediate School District; Gabe Schneider, Community Affairs Specialist for U.S. Senator Carl Levin; Brandon Fewins, Regional Representative for U.S. Senator Debbie Stabenow; Bob Stovall, Vice President of Network Engineering and Operations, Merit Network, Inc.; Peter Bertsch, President and CEO, Earthcom, Inc.; Tim Ervin, Chairman, Connect Manistee; and Cyndy Fuller, Executive Director, Manistee Alliance for Economic Success.



Merit is a member-focused provider of network and related services.

A trusted strategic partner to the education and non-profit community for over 40 years.

Pioneering high-speed networking in Michigan.



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