DETAIL OF PROJECT COSTS

PLEASE COMPLETE THE TABLE BELOW FOR THE DIFFERENT CATEGORIES OF EQUIPMENT THAT WILL BE REQUIRED FOR COMPLETING THE PROJECT. EACH CATEGORY SHOULD BE BROKEN DOWN TO THE APPROPRIATE LEVEL FOR IDENTIFYING UNIT COST

SERVICE AREA or COMMON NETWORK FACILITIES:		Eligibility (Yes/No)	Unit Cost	No. of Units	Total Cost	Support of Reasonableness
NETWORK & ACCESS EQUIPMENT						
Switching						
Routing						
Transport	DWDM filters (North ring)	Yes	58,493.00	1	58,493.00	competitive vendor quotes
	DWDM filters (South ring)	Yes	73,271.00	1	73,271.00	competitive vendor quotes
Access						
Other						
OUTSIDE PLANT						
Cables	Furnish/install 144ct FOC	Yes	4.54	170280	773,071.00	Contract price, comp bid
	Furnish/install 24ct FOC	Yes	4.50	54902	247,059.00	Contract price, comp bid
	(air) funish/install 144ct FOC	Yes	7.44	12144	90,351.00	Contract price, comp bid
Conduits	Furnish/install (bore) 3" HDPE	Yes	31.20	51480	1,606,176.00	Contract price, comp. bid
	Furnish/install (plow) 3" HPDE	Yes	20.92	13200	276,144.00	Contract price,comp bid
	Furn/Inst (bore) 2x11/4" HPDE	yes	31.20	54902	1,712,942.00	Contract price, comp bid
Ducts						
Poles						
Towers						
Repeaters						

DETAIL OF PROJECT COSTS

SERVICE AREA or COMMON NETWORK FACILITIES:		Eligibility (Yes/No)	Unit Cost	No. of Units	Total Cost	Support of Reasonableness
NETWORK & ACCESS EQUIPMENT						
Other						
BUILDINGS						
New Construction						
Pre-Fab Huts						
Improvements & Renovation						
Other						
CUSTOMER PREMISE EQUIPMENT						
Modems						
Set Top Boxes						
Inside Wiring						
Other						
BILLING SUPPORT AND OPERATIONS SUPPORT SYSTEMS						
Billing Support Systems						
Customer Care Systems						
Other Support						

DETAIL OF PROJECT COSTS

SERVICE AREA or COMMON NETWORK FACILITIES:		Eligibility (Yes/No)	Unit Cost	No. of Units	Total Cost	Support of Reasonableness
OPERATING EQUIPMENT						
Vehicles						
Office Equipment/ Furniture						
Other						
PROFESSIONAL SERVICES						
Engineering Design	Fiber/conduit engineer	Yes	150.00	1040	156,000.00	Contract rate; plan need
Project Management	Installation Project Mgnt	Yes	100.00	2704	270,400.00	Contract rate; plan need
Consulting						
Other						
TESTING						
Network Elements						
IT System Elements						
User Devices						
Test Generators						
Lab Furnishings						
Servers/ Computers						

DETAIL OF PROJECT COSTS

SERVICE AREA or COMMON NETWORK FACILITIES:		Eligibility (Yes/No)	Unit Cost	No. of Units	Total Cost	Support of Reasonableness
OTHER UPFRONT COSTS						
Site Preparation	Furnish/install relay rack	Yes	1,500.00	1	1,500.00	Proj need/contract price
	Furnish/install outdoor cab	Yes	3,500.00	1	3,500.00	Proj need/contract price
	Electrical/fiber install	Yes	5,000.00	1	5,000.00	Existing contract rates
Other	UW-Madison Indirect costs	Yes	1,370,963.00	1		26% UW-Madison indirect
						rate for compliance, IT
						systems use(install/engr)

THE UNIVERSITY of WISCONSIN MADISON

August 7, 2009

Broadband Technology Opportunities Program
National Telecommunications and Information Administration
U.S. Department of Commerce
HCHB, Room 4812
1401 Constitution Avenue
Washington, DC 20230

Dear Selection Committee:

The University of Wisconsin - Madison is a highly enthusiastic partner in the Madison Unified Fiber Network (MUFN) "Middle Mile" proposal seeking funding under NTIA's Broadband USA of the 2009 American Recovery and Reinvestment Act. This inter-agency and public-private sector collaborative project, to implement a high capacity, sustainable and shared access community area network, can be a model for cost-effective use of federal funding to create jobs, advance the effective use of broadband and serve the public.

We believe MUFN will provide many of the University of Wisconsin – Madison departmental units and research institutes that are located off campus in the greater Madison metropolitan area, access to a robust advanced broadband infrastructure. This would help our community by providing integrated, high bandwidth data access to ensure the high quality teaching, research and outreach that our institution is known for. Furthermore, with the related Madison Broadband Initiative (MBI), smaller UW off campus workgroups will have cost effective network access and community citizens will have greater access to the available resources at the University to further the "Wisconsin Idea" to extend the reaches of the university off campus to the borders of the state and beyond.

The greater Madison Unified Fiber Network (MUFN) will:

- **Advance Community Efforts** in healthcare, education and research through high speed access to innovative people and tools otherwise not available within the "walls" of any traditional community institution. Our community will be better equipped to interactively share information and collaborate with others beyond our community borders.
- **Create Local Jobs** by keeping support services within our community and generating jobs for designers, builders and operators of broadband networks, developers of software and other applications and creators of all kinds of content.
- **Reduce Costs** through local ownership of a high performance network where community shareholders can freely improve network performance and capacity according to demand and foster continued growth and long-term cost efficiencies.
- **Promote Community Collaboration** through cost and resource sharing, face to face and virtual communication, redundant-path infrastructure ensuring reliability, and integrated, innovative and accessible shared services freeing staff to continually focus on ways to improve service to citizens.

Office of Chief Information Officer
171 Bascom Hall University of Wisconsin-Madison 500 Lincoln Drive Madison, Wisconsin 53706
608/262-5381 Fax: 608/262-4679

As an **Anchor Institution**, we believe this innovative, collaborative project will be a highly effective investment of federal economic stimulus money and help the Madison metropolitan area be a model of collaboration, educational opportunity and economic growth. We look forward to participating in this shared effort with others to develop this robust, advanced broadband infrastructure.

Sincerely,

Ron Kraemer
CIO and Vice Provost for Information Technology

MATC Madison Area Technical College

August 05, 2009

Madison Area Technical College (MATC) provides top, hands-on training for more than 140 careers through our associate degree and professional certificate programs - including more than half of the top 50 fastest growing occupations identified by the Wisconsin Department of Workforce Development. As a leading partner in economic and workforce development in the region, we are an enthusiastic partner in the Wisconsin grant application (titled "MUFN") for broadband stimulus funding under the American Recovery and Reinvestment Act of 2009. MUFN (Madison Unified Fiber Network) is designed to establish a community area network (CAN) to meet the advanced broadband network needs of the greater Madison, Wisconsin region.

Through MUFN, we support broadband advancement and economic development by creating a sustainable regional fiber optic infrastructure that interconnects Anchor Institutions and extends advanced broadband infrastructure into our community.

We believe that MUFN will provide Madison Area Technical College with access to a robust advanced broadband infrastructure, helping us to meet the challenges of our new information economy.

The greater Madison Unified Fiber Network will:

Make available opportunities for partnerships with community agencies, governmental bodies, K-12 districts, post-secondary institutions, and business and industry via high speed connectivity

Increase outreach designed to foster economic and workforce development in the region

Allow partnering with private business and public institutions to bring timely and much needed training to dislocated workers through innovative programming solutions

Provide high end distance learning, bringing current industry practices and techniques to the region from experts across the globe

Prepare our students for jobs in the emerging high tech fields, such as health and biotech, by now being able to offer bandwidth intensive instruction such as 3D modeling and animation

Meet and extend the growing demands for alternative, flexible learning offerings that include online, web, distance learning, and accelerated classes for non-traditional students and the business community

As an Anchor Institution, we believe that this innovative opportunity will give the greater Madison, Wisconsin area a great head start on achieving the broad goals of economic stimulus and start positioning us for the future. We look forward to participating in collaborative efforts with other Anchor Institutions in the greater Madison area to develop a robust advanced broadband infrastructure. For more information on how we will interconnect our sites with other Anchor Institutions, please contact Tom Collins, Manager, Network Infrastructure (tmcollins@matcmadison.edu, 608-243-4580).

MATC Madison Area Technical College

Sincerely,

Igor Steinberg, Ph.D.
Director, Applications and Infrastructure
Technology Services
Madison Area Technical College
3550 Anderson Street
Madison, WI 53704

MADISON METROPOLITAN SCHOOL DISTRICT

545 West Dayton St. ● Madison, Wisconsin 53703-1995 ■ 608.663-1607 ▼ www.mmsd.org

Daniel A. Nerad, *Superintendent of Schools*

August 4, 2009

The Madison Metropolitan School District is a highly enthusiastic partner in the Madison Unified Fiber Network (MUFN) "Middle Mile" proposal seeking funding under NTIA's Broadband USA of the 2009 American Recovery and Reinvestment Act. This inter-agency and public-private sector collaborative project, to implement a high capacity, sustainable and shared access community area network, can be a model for cost-effective use of federal funding to create jobs, advance the effective use of broadband and serve the public.

We believe MUFN will provide the Madison Metropolitan School District, access to a robust advanced broadband infrastructure, helping us serve the children of our community by providing infrastructure necessary to access innovative, engaging, on-line, 21st Century instructional materials and the opportunity to interactively share with other children and teaching professionals around the country and world.

The greater Madison Unified Fiber Network (MUFN) will:

- **Advance Community Efforts** in healthcare, education and research through high speed access to innovative people and tools otherwise not available within the "walls" of any traditional community institution. Our community will be better equipped to interactively share information and collaborate with others beyond our community borders.
- **Create Local Jobs** by keeping support services within our community and generating jobs for designers, builders and operators of broadband networks, developers of software and other applications and creators of all kinds of content.
- **Reduce Costs** through local ownership of a high performance network where community shareholders can freely improve network performance and capacity according to demand and foster continued growth and long-term cost efficiencies.
- **Promote Community Collaboration** through cost and resource sharing, face to face and virtual communication, redundant-path infrastructure ensuring reliability, and integrated, innovative and accessible shared services freeing staff to continually focus on ways to improve service to citizens.

As an **Anchor Institution**, we believe this innovative, collaborative project will be a highly effective investment of federal economic stimulus money and help the Madison metropolitan area be a model of collaboration, educational opportunity and economic growth. We look forward to participating in this shared effort with others to develop this robust, advanced broadband infrastructure.

Sincerely,

Daniel Nerad

Dr. Daniel Nerad, Superintendent

cc: Kurt Kiefer: CIO

For information, please contact:
Mark Evans: Dir. Technical Services Division
608-576-4065; mhevans@madison.k12.wi.us

Monona Grove School District

"Building a Community of Leaders"

5301 Monona Drive • Monona, WI 53716-3199
Phone: 608-221-7660 • Fax: 608-221-7688
www.mononagrove.org

August 3, 2009

Monona Grove School District is an enthusiastic partner in the Wisconsin grant application (titled "MUFN") for broadband stimulus funding under the American Recovery and Reinvestment Act of 2009. MUFN (Madison Unified Fiber Network) is designed to establish a community area network (CAN) to meet the advanced broadband network needs of the greater Madison Wisconsin region.

Through MUFN, we support broadband advancement and economic development by creating a sustainable regional fiber optic infrastructure that interconnects Anchor Institutions and extends advanced broadband infrastructure into our community.

Because of the cost of commercial bandwidth, Monona Grove has been pinched for bandwidth for more than 5 years. This hampers our students at all levels, clogging their access to conventional web pages, to increasingly widespread interactive and collaborative web sites, and to educational video. Teachers are also hampered in their work and in their instruction, and are not able to use some of the Internet's richest resourses, such as streaming video, to support their teaching. With the proliferation of superb instructional video on the web, which brings students face to face with the best teachers and minds in the country, Monona Grove's schools will more and more acutely need the high-bandwidth connections to the Internet that it currently can't afford. MUFN can provide these connections to our schools, our teachers, and our students, affordably. MUFN will provide Monona Grove School District with access to a robust advanced broadband infrastructure, helping our students meet the challenges of our new information economy.

The greater Madison Area Fiber Network (MUFN) will:

Advance Community Efforts in healthcare, education, research, and municipalities through high speed access to innovative experiences, resources, and tools otherwise not available within the "walls" of a traditional community institution. The community will be better equipped to push information and research beyond the community borders, not stranding research or critical, perhaps life-saving data.

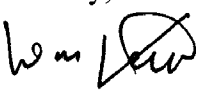
Create Local Jobs by keeping support services within the community and generating jobs for designers, builders and operators of broadband networks, developers of software and other applications and creators of content of all kinds.

Allow for Cost Savings through local ownership of a high performance network where community shareholders can freely improve network performance and capacity according to demand and foster continued growth and long-term cost efficiencies.

Promote Community Collaboration and Efficiency through cost and resource sharing, improved face to face and virtual communication, redundant infrastructure that ensures exchange of essential information and integrated, innovative and accessible services across departments freeing staff to focus on providing better service to citizens.

As an Anchor Institution, we believe that this innovative opportunity will give the greater Madison, Wisconsin area a great head start on achieving the broad goals of economic stimulus and start positioning us for the future. We look forward to participating in collaborative efforts with other Anchor Institutions in the greater Madison area to develop a robust advanced broadband infrastructure.

Sincerely,



Bill Herman
Technology Director
Monona Grove School District
(608) 238-6572
bill_herman@mononagrove.org

DANE COUNTY

Kathleen M. Falk
County Executive

August 6, 3009

Dane County is an enthusiastic partner in the Wisconsin grant application (titled "MUFN") for broadband stimulus funding under the American Recovery and Reinvestment Act of 2009. MUFN (Madison Unified Fiber Network) is designed to establish a community area network (CAN) to meet the advanced broadband network needs of the greater Madison Wisconsin region.

Through MUFN, we support broadband advancement and economic development by creating a sustainable regional fiber optic infrastructure that interconnects Anchor Institutions and extends advanced broadband infrastructure into our community.

We believe that MUFN will provide Dane County with access to a robust advanced broadband infrastructure, helping us to meet the challenges of our new information economy.

The greater Madison Area Fiber Network (MUFN) will:

Advance Community Efforts in healthcare, education, research, and municipalities through high speed access to innovative experiences, resources, and tools otherwise not available within the "walls" of a traditional community institution. The community will be better equipped to push information and research beyond the community borders, not stranding research or critical, perhaps life-saving data.

Create Local Jobs by keeping support services within the community and generating jobs for designers, builders and operators of broadband networks, developers of software and other applications and creators of content of all kinds.

Allow for Cost Savings through local ownership of a high performance network where community shareholders can freely improve network performance and capacity according to demand and foster continued growth and long-term cost efficiencies.

Promote Community Collaboration and Efficiency through cost and resource sharing, improved face to face and virtual communication, redundant infrastructure that ensures exchange of essential information and integrated, innovative and accessible services across departments freeing staff to focus on providing better service to citizens.

As an Anchor Institution, we believe that this innovative opportunity will give the greater Madison, Wisconsin area a great head start on achieving the broad goals of economic

stimulus and start positioning us for the future. We look forward to participating in collaborative efforts with other Anchor Institutions in the greater Madison area to develop a robust advanced broadband infrastructure.

If you have any technical question please contact Marvin Klang at Phone: 608-266-4392 or Email: klang@co.dane.wi.us.

Sincerely,

Kathleen Falk
Dane County Executive

Office of the Mayor

David J. Cieslewicz

Room 403
210 Martin Luther King, Jr. Boulevard
Madison, Wisconsin 53703-3345
PH 608 266 4611
FAX 608 267 8671
TTY/Textnet 866 704 2340
mayor@cityofmadison.com

August 5, 2009

The City of Madison is a highly enthusiastic partner in the Madison Unified Fiber Network (MUFN) "Middle Mile" proposal seeking funding under NTIA's Broadband USA of the 2009 American Recovery and Reinvestment Act. This multi-agency and public-private sector collaborative project, to provide high capacity, sustainable and shared access to broadband via fiber and WiFi, can be a model for cost-effective use of federal funding to create jobs, advance the effective use of broadband and serve the public.

The Madison Unified Fiber Network (MUFN) will:

- Advance Community Efforts in healthcare, education and research through high speed access to innovative people and tools otherwise not available within the "walls" of any traditional community institution. Our community will be better equipped to interactively share information and collaborate with others beyond our community borders.
- Create Local Jobs by keeping support services within our community and generating jobs for designers, builders and operators of broadband infrastructure and services, developers of software and creators of content of all kinds.
- Reduce Costs through local ownership of a high performance network where community shareholders can freely improve network performance and capacity according to demand and foster continued growth and long-term cost efficiencies.
- Promote Community Collaboration through cost and resource sharing, face to face and virtual communication, redundant-path infrastructure ensuring reliability, and integrated, innovative and accessible shared services freeing staff to continually focus on ways to improve service to citizens.

As an Anchor Institution, we believe this innovative, collaborative project will be a highly effective investment of federal economic stimulus money and help the Madison metropolitan area be a model of collaboration, educational opportunity and economic growth. We look forward to participating in this shared effort with others to develop this robust, advanced "middle mile" broadband infrastructure.

For additional information, please contact our Data Center Manager, Rich Beadles, at (608) 261-9649, or rbeadles@cityofmadison.com.

Sincerely,

David J. Cieslewicz
Mayor

DJC/cjp

Traffic Engineering and Parking Divisions

David C. Dryer, P.E., City Traffic Engineer and Parking Manager

Suite 100
215 Martin Luther King, Jr. Boulevard
P.O. Box 2986
Madison, Wisconsin 53701-2986
PH 608 266 4761
TTY/Textnet 866-704-2315
FAX 608 267 1158

Aug. 5, 2009

RE: MADISON UNIFIED FIBER NETWORK (MUFN) GRANT REQUEST

The City of Madison Traffic Engineering Division enthusiastically endorses the grant request being made for the MUFN. This grant will enable critical infrastructure communications needs to be met:

- Provide needed fiber optic cable for which local agencies do not have funds to install without this grant
- Together with the Madison Broadband Initiative (MBI) "Last Mile", enables vital Citywide communications for police, fire, and other public safety agencies.
- Provides linkages to schools, libraries, and other public and not-for-profit organizations.

The City of Madison will be the owner/maintainer of fiber installed in the public right-of-ways. Our agency has installed and maintained fiber for seven years, and is equipped to maintain fiber installed with this grant. Diligent maintenance will insure that the initial benefits received from installing this fiber will continue for many years to come.

If there are any questions about the involvement and responsibilities of Madison Traffic Engineering in this project, feel free to contact Dan Dettmann, ddettmann@cityofmadison.com, 608-266-6536.

Sincerely,

David C. Dryer, P.E.
City Traffic Engineer and Parking Manager

OFFICE OF THE CITY ADMINISTRATOR

CITY OF MIDDLETON
7426 HUBBARD AVENUE
MIDDLETON, WI 53562-3118

PH 608.827.1058 *FAX 608.827.1057*
E-MAIL: mdavis@ci.middleton.wi.us
WEB: www.CityofMiddleton.us

August 5, 2009

RE: Madison Unified Fiber Network (MUFN)
c/o Albert Krug

To Whom It May Concern:

The City of Middleton is very supportive of the proposal by the University of Wisconsin/Division of Information Technology regarding implementation of a regional fiber network serving the greater Madison community.

In Middleton we anticipate that the connections to both our Public Library and City Hall will yield benefits beyond our current comprehension. Nonetheless, we anticipate those benefits to include emergency management operations efficiency; interdepartmental and interagency communications; training of our employees; and more effective and efficient communication with the residents of our community.

We look forward to the advent of this new day in 21st century technology by which our community can continue to advance the quality of life and economic base of the region and all of the State of Wisconsin. The collaboration forged by the University of Wisconsin should reap such benefits for all concerned.

Sincerely,

Michael K. Davis
City Administrator

August, 4th, 2009

The City of Madison, WI is an enthusiastic partner in the Wisconsin grant application (titled "MUFN") for broadband stimulus funding under the American Recovery and Reinvestment Act of 2009. MUFN (Madison Unified Fiber Network) is designed to establish a community area network (CAN) to meet the advanced broadband network needs of the greater Madison Wisconsin region.
Through MUFN, we support broadband advancement and economic development by creating a sustainable regional fiber optic infrastructure that interconnects Anchor Institutions and extends advanced broadband infrastructure into our community.

We believe that MUFN will provide The City of Madison, WI with access to a robust advanced broadband infrastructure, helping us to meet the challenges of our new information economy.

The greater Madison Area Fiber Network (MUFN) will:

Advance Community Efforts in healthcare, education, research, and municipalities through high speed access to innovative experiences, resources, and tools otherwise not available within the "walls" of a traditional community institution. The community will be better equipped to push information and research beyond the community borders, not stranding research or critical, perhaps life-saving data.

Create Local Jobs by keeping support services within the community and generating jobs for designers, builders and operators of broadband networks, developers of software and other applications and creators of content of all kinds.

Allow for Cost Savings through local ownership of a high performance network where community shareholders can freely improve network performance and capacity according to demand and foster continued growth and long-term cost efficiencies.

Promote Community Collaboration and Efficiency through cost and resource sharing, improved face to face and virtual communication, redundant infrastructure that ensures exchange of essential information and integrated, innovative and accessible services across departments freeing staff to focus on providing better service to citizens.
As an Anchor Institution, we believe that this innovative opportunity will give the greater Madison, Wisconsin area a great head start on achieving the broad goals of economic stimulus and start positioning us for the future. We look forward to participating in collaborative efforts with other Anchor Institutions in the greater Madison area to develop a robust advanced broadband infrastructure.
Sincerely,

Steven Phipps
City of Madison Information Services Dept.
Madison, WI

WISCONSIN STATE
LABORATORY OF HYGIENE

465 Henry Mall
Madison, WI 53706-1578
Phone: (608) 262-1293
FAX: (608) 262-3257

University of Wisconsin

August 4, 2009

The Wisconsin State Laboratory of Hygiene is an enthusiastic partner in the Wisconsin grant application (titled "MUFN") for broadband stimulus funding under the American Recovery and Reinvestment Act of 2009. MUFN (Madison Unified Fiber Network) is designed to establish a community area network (CAN) to meet the advanced broadband network needs of the greater Madison Wisconsin region.

Through MUFN, we support broadband advancement and economic development by creating a sustainable regional fiber optic infrastructure that interconnects Anchor Institutions and extends advanced broadband infrastructure into our community.

We believe that MUFN will provide the Hygiene Lab with access to a robust advanced broadband infrastructure, helping us to meet the challenges of our new information economy.

The greater Madison Area Unified Fiber Network (MUFN) will:

Advance Community Efforts in healthcare, education, research, and municipalities through high speed access to innovative experiences, resources, and tools otherwise not available within the "walls" of a traditional community institution. The community will be better equipped to push information and research beyond the community borders, not stranding research or critical, perhaps life-saving data. As Wisconsin's public health laboratory, the increased resiliency and bandwidth of MUFN are very appealing as we contemplate the challenges of communicating with the county public health departments and physicians of Wisconsin regarding urgent national public health issues such as the novel A/H1N1 "swine origin" influenza. Currently our ability to support streaming media presentations for outreach is limited by our modest WAN bandwidth. In a crisis situation, the increased communication capacity MUFN could support for us might be crucial. Also, we currently do on-site training for laboratory technician students from the local Madison Area Technical College. The network improvements from MUFN might allow us to extend the lecture and demonstration portions of this training to the other technical colleges in Wisconsin, or even in other states, via distance learning initiatives we can't currently afford to contemplate.

Create Local Jobs by keeping support services within the community and generating jobs for designers, builders and operators of broadband networks, developers of software and other applications and creators of content of all kinds. In particular, the state of Wisconsin is planning a new building with additional joint laboratory space to be shared by the Hygiene Lab and the state Department of Agriculture, Trade, and Consumer Protection. We will need the additional network bandwidth and resilience of MUFN to support the increased workload and collaboration in areas such as food safety.

Allow for Cost Savings through local ownership of a high performance network where community shareholders can freely improve network performance and capacity according to demand and foster continued growth and long-term cost efficiencies. The Hygiene Lab projects that MUFN would initially offer us approximately 10 times our current wide area network bandwidth for about half what we currently pay, along with fewer and shorter maintenance outages. We need all three of those advantages. In addition, we have an obligation to provide laboratory support to Wisconsin's regional HAZMAT teams and other health agencies in the event of biological or chemical or nuclear industrial accidents or terrorism. We may

WISCONSIN STATE
LABORATORY OF HYGIENE

465 Henry Mall
Madison, WI 53706-1578
Phone: (608) 262-1293
FAX: (608) 262-3257

University of Wisconsin

someday need to replicate database traffic between our main server site and a future secondary site to improve out ability to provide these essential public health services, in spite of any local Madison infrastructure problems at one of our sites due to natural disasters such as tornados or flooding. The capability MUFN would provide to inexpensively add gigabits of bandwidth without increasing our ongoing network costs could be a decisive factor in allowing us to improve our continuity of operations in support of this public health mission.

Promote Community Collaboration and Efficiency through cost and resource sharing, improved face to face and virtual communication, redundant infrastructure that ensures exchange of essential information and integrated, innovative and accessible services across departments freeing staff to focus on providing better service to citizens. In particular, the improvement in video-conferencing bandwidth and performance that MUFN would provide might be the difference between our toxicologists having to travel to provide court testimony under subpoena, and their being able to testify remotely, without losing a days work in transit. This would help reduce laboratory backlogs for county coroners, among others. The increased network capacity from MUFN would also help support the recommendation of our continuity of operations committee to have enough network capacity for up to 1/3 of our staff to telecommute simultaneously. In a situation such as an influenza pandemic where a large number of staff might be quarantined at home, or if for some logistical reason a large number of our staff were temporarily working offsite in other laboratories, this increased flexibility would allow us to better support our public health mission.

As an Anchor Institution, we believe that this innovative opportunity will give the greater Madison, Wisconsin area a great head start on achieving the broad goals of economic stimulus and start positioning us for the future. We look forward to participating in collaborative efforts with other Anchor Institutions in the greater Madison area, particularly MATC and our parent UW-Madison, as we develop a more robust and advanced broadband infrastructure.

Sincerely,

James Leinweber
Information Systems Specialist
Wisconsin State Laboratory of Hygiene
2810 Walton Commons W, suite 200
Madison WI 5318

e-mail: jiml@slh.wisc.edu
phone: 608 221 6281
web: http://www.slh.wisc.edu

South Central Library System
Administration Office
5250 E. Terrace Drive, Suite A2 • Madison, WI 53718-8345
608/246-7970 • FAX 608/246-7958 • TDD 608/246-7974

August 5, 2009

The South Central Library System (SCLS) is an enthusiastic partner in the Wisconsin grant application (titled "MUFN") for broadband stimulus funding under the American Recovery and Reinvestment Act of 2009. MUFN (Madison Unified Fiber Network) is designed to establish a community area network (CAN) to meet the advanced broadband network needs of the greater Madison Wisconsin region.

SCLS provides a wide variety of services to its 52 member libraries. 41 libraries in 48 building currently participate in the system's wide area network (WAN). SCLS Headquarters acts as the head-end for all of the internet traffic going to and from these 52 buildings through the WAN. We also provide a centralized firewall and proxy server, which provides our libraries with significant savings.

Public library systems in Wisconsin are often recognized as a model of interagency cooperation and collaboration. By providing centralized services, facilitating the sharing of library materials, and developing partnerships with commercial and non-commercial entities for the benefit of our libraries, SCLS helps libraries continue to grow and provide the best possible service to the public while their budgets continue to shrink. Participating in the MUFN project is another opportunity for us to leverage the power of collaboration to benefit our libraries.

In November 2009, we will be relocating to an office building on the far east side of Madison to consolidate staff and save costs. Once we move, a Madison city fiber connection, our current means of connecting to the internet, will no longer be an option for us. The amount of bandwidth we will be able to get on our budget will be limited. We will be essentially maxed out on our bandwidth when we move into the new location, and additional bandwidth is going to be very expensive. We will need to make tough choices if we have to pay commercial rates for additional bandwidth.

Because mission-critical library functions must be the priority, our libraries' public access computing will suffer. The public computing services our libraries have been able to offer, which have been unfettered until this point, may have to be controlled. Patrons will have to wait longer to do what they need to do on the internet, whether looking for jobs, working on schoolwork, or checking email. In many communities, the library is only place in the community to get high-speed internet access. Cutting this speed because of our need for bandwidth will have broad impact on these communities.

MUFN would provide us with essentially unlimited bandwidth to our internet service provider without an increase in costs each time we have an increase in need for bandwidth. This cost stability will make it possible for us to plan for future growth. We would no longer need to renegotiate contracts with various vendors, saving staff time. And, most importantly, it would allow our libraries to continue to fill the vital role of the public access computing resource in their communities.

Sincerely,

Stef

Stef Morrill
Associate Director
608-245-5799
smorrill@scls.lib.wi.us

University of Wisconsin
SCHOOL OF MEDICINE AND PUBLIC HEALTH

August 7, 2009

The School of Medicine and Public Health (SMPH) at the University of Wisconsin is a highly supportive partner in the Madison Unified Fiber Network grant application which would establish a community area network to support broadband network requirements in the Madison, Wisconsin area.

The Internet increasingly plays a significant role in not only dissemination of health care information but also delivery of health care itself. The MUFN proposal represents a critical part of extending and improving Internet access to the greater Madison area. The benefits are many:

1. **Data Collection for Research**

   The SMPH has staff in several clinics and centers in and around the Madison area involved in teaching and research. Effective data communication among the locations is essential for both IT support at the remote locations and the exchange of significant amount of research data. For example, the Alzheimer's Disease Research Center and the Survey of the Health of Wisconsin projects, among others, continually collect subject data from fixed and mobile locations in the region ultimately sending it to servers on the UW campus.

2. **Access to Medical Records**

   The HITECH Act of 2009 strongly promotes Health Information Technology and creates incentives for the adoption of Electronic Health Records (EHRs). One of the obvious benefits of an EHR is to allow electronic access by a patient to their medical record. A secure, robust connection to the Internet would allow an EHR to be used to maximum advantage.

3. **Telemedicine**

   Much of the research in health care delivery today is focused on development of telemedicine, which involves the exchange of data and information between patient and health care provider often in real time. Improving the regional network infrastructure would facilitate this research and accelerate the deployment of telemedicine.

4. **Disaster Recovery and Business Continuity**

   An improved Internet infrastructure would not only facilitate standard disaster recovery techniques such as collocation but would be a key part of any future pandemic strategy that would require Medical School staff to work from off site.

As an Anchor Institution, the School of Medicine and Public Health looks forward to working collaboratively with the other Anchor Institutions within MUFN to form an advanced broadband infrastructure.

Sincerely,

Rick Konopacki
Network Manager/HIPAA Security Coordinator
School of Medicine and Public Health
250 WARF
608.263.3181
Konopacki@biostat.wisc.edu

UW Health

University of Wisconsin
Medical Foundation

August 7, 2009

UW Medical Foundation
7974 UW Health Court
Middleton, WI 53562
(608) 833-6090

The University of Wisconsin Medical Foundation (UWMF) is an enthusiastic partner in the Wisconsin grant application (titled "MUFN") for broadband stimulus funding under the American Recovery and Reinvestment Act of 2009. MUFN (Madison Unified Fiber Network) is designed to establish a community area network (CAN) to meet the advanced broadband network needs of the greater Madison Wisconsin region.

Through MUFN, we support broadband advancement and economic development by creating a sustainable regional fiber optic infrastructure that interconnects Anchor Institutions and extends advanced broadband infrastructure into our community.

We believe that MUFN will provide UWMF with access to a robust advanced broadband infrastructure, helping us to meet the challenges of our new information economy.

The greater Madison Area Fiber Network (MUFN) will:

Advance Community Efforts in healthcare, education, research, and municipalities through high speed access to innovative experiences, resources, and tools otherwise not available within the "walls" of a traditional community institution. The community will be better equipped to push information and research beyond the community borders, not stranding research or critical, perhaps life-saving data.

Create Local Jobs by keeping support services within the community and generating jobs for designers, builders and operators of broadband networks, developers of software and other applications and creators of content of all kinds.

Allow for Cost Savings through local ownership of a high performance network where community shareholders can freely improve network performance and capacity according to demand and foster continued growth and long-term cost efficiencies.

Promote Community Collaboration and Efficiency through cost and resource sharing, improved face to face and virtual communication, redundant infrastructure that ensures exchange of essential information and integrated, innovative and accessible services across departments freeing staff to focus on providing better service to citizens.

As an Anchor Institution, we believe that this innovative opportunity will give the greater Madison, Wisconsin area a great head start on achieving the broad goals of economic stimulus and start positioning us for the future. We look forward to participating in collaborative efforts

with other Anchor Institutions in the greater Madison area to develop a robust advanced broadband infrastructure.

Sincerely,

Shane Dammen
Technical Services Manager
shane.dammen@uwmf.wisc.edu

Gary Olson
Project and System Services Manager
gary.olson@uwmf.wisc.edu

MERITER Hospital

August 11, 2009

To Whom It May Concern:

Meriter Hospital is a new member of the MUFN (Madison Unified Fiber Network). We are very supportive of the Wisconsin grant application (titled "MUFN") for broadband stimulus funding under the American Recovery and Reinvestment Act of 2009.

Through MUFN, we have the opportunity to participate in creating and building a community based broadband infrastructure that promotes community cooperation and efficiency. This cooperation and efficiency gives the Greater Madison area a distinct advantage compared to other communities and is a testament to the commitment that MUFN has to our community. They truly are focused on providing the best possible service to the people and communities they serve.

Meriter Hospital is a not-for-profit, community hospital providing a wide-ranging scope of medical and surgical services. In support of these services Meriter has made a significant investment in our EMR, electronic medical imaging and will be deploying CPOE in the near future. We are currently expanding services in the Madison area and our partnership with MUFN has been a very important part of this expansion.

With the agreement for fiber services with MUFN we will be able to provide high speed network connectivity for our new remote datacenter which is a very important part of our vision for growth in our organization. With this agreement we have been able to save a significant amount of money that we are able to put back into facilities and patient care.

We look forward to working with MUFN in the future as we continue to expand. The collaboration that MUFN has fostered is truly amazing. They have brought Meriter, UW and the City of Madison together to accomplish what we all want which is to improve the life, health and safety of the people we serve.

Sincerely,

Ken Moss

Ken Moss

Meriter Hospital
Information Systems
Director of Technical Service

Meriter Hospital, Inc.
202 S. Park Street
Madison, WI 53715-1596
608.267.6000
Meriter.com

UW Health
University of Wisconsin
Hospital and Clinics

Hospital Administration
600 Highland Avenue
Madison, WI 53792

608.263.8000
608.263.9830 Fax

August 10, 2009

University of Wisconsin Hospital and Clinics Authority (UWHCA) is an enthusiastic partner in the Wisconsin grant application (titled "MUFN") for broadband stimulus funding under the American Recovery and Reinvestment Act of 2009. MUFN (Madison Unified Fiber Network) is designed to establish a community area network (CAN) to meet the advanced broadband network needs of the greater Madison Wisconsin region.

Through MUFN, we support broadband advancement and economic development by creating a sustainable regional fiber optic infrastructure that interconnects Anchor Institutions and extends advanced broadband infrastructure into our community.

We believe that MUFN will provide UWHCA with access to a robust advanced broadband infrastructure, helping us to meet the challenges of our new information economy.

The greater Madison Area Fiber Network (MUFN) will:

Advance Community Efforts in healthcare in providing high speed access to Electronic Medical Records, as well as allowing regional hospitals access to the wealth of information provided at UWHCA, as well as other partners in the MUFN project. The community will be better equipped to push information and research beyond the community borders, not stranding research or critical, perhaps life-saving data.

Allow for Cost Savings through local ownership of a high performance network where community shareholders can freely improve network performance and capacity according to demand and foster continued growth and long-term cost efficiencies, allowing us to provide more resilient access to Electronic Medical Records via less expensive means.

Promote Community Collaboration and Efficiency through cost and resource sharing improved face to face and virtual communication, redundant infrastructure that ensures exchange of essential information and integrated, innovative and accessible services across departments freeing staff to focus on providing better service to citizens.

As an Anchor Institution, we believe that this innovative opportunity will give the greater Madison, Wisconsin area a great head start on achieving the broad goals of economic stimulus and start positioning us for the future. We look forward to participating in collaborative efforts with other Anchor Institutions in the greater Madison area to develop a robust advanced broadband infrastructure.

Sincerely,

Mike Sauk
VP/CIO University of Wisconsin Hospitals and Clinics Authority
8007 Excelsior Drive
Madison, WI 53717

CCI Systems, Inc.
105 Kent Street
P.O. Box 190
Iron Mountain, MI 49801

Tel (906) 774-6621
Fax (906) 774-9120

ccisystems.com

August 7, 2009

RE: Madison Unified Fiber Network (MUFN)
Broadband stimulus grant proposal

Dear NTIA BTOP Administrator:

CCI Systems, Inc. is ready to work with and has a history of working with the Madison Unified Fiber Network (MUFN) Group.

CCI Systems has completed numerous projects on behalf of the University of Wisconsin system along with BoreasNet and the University Research Network. Within those projects CCI has completed the fielding, engineering, design and permitting. We have also completed a full turnkey installation that includes all materials and splicing of the fiber infrastructure. CCI systems also have an emergency fiber restoration program to help support and maintain the system.

The Madison Unified Fiber Network has both the capabilities of managing and maintaining a large fiber network. They have both the knowledge base and additional contacts within the Madison area to make this a very effective program.

If you have any questions or comments, please feel free to contact me at (906) 776-2660 or on my cell at 906-282-3693 or by email at mike.dellies@ccisystems.com.

Sincerely,

CCI Systems, Inc.

Mike Dellies

Mike Dellies
Account Executive

MD/ms

DANEnet

Serving Dane County Since 1995

517 N. Segoe Rd. #210
Madison, WI 53705
Phone: (608) 274-3107
Fax: (608) 274-9978
Email: ehowland@danenet.org
www.danenet.org

August 4, 2009

Al Krug, MUFN
University of Wisconsin – Madison,
1210 West Dayton St.
Madison, WI 53719.

Dear Mr. Krug and the BTOP Review Team,

DANEnet is an enthusiastic partner in the Wisconsin grant application (titled "MUFN") for broadband stimulus funding under the American Recovery and Reinvestment Act of 2009.

DANEnet is a nonprofit agency which provides technical support exclusively to not for profit agencies. In 2008 we provided support for over 80 nonprofit agencies in the greater Madison area. One of the functions that we provide for our nonprofit partners is arranging and providing technical support for Internet access. In doing that work we know that obtaining high bandwidth connections at a price that nonprofits can afford is difficult.

We believe that MUFN will provide DANEnet and our nonprofit partners with access to a robust advanced broadband infrastructure, helping us to meet the challenges of our new information economy.

The greater Madison Area Fiber Network (MUFN) will:

Advance Community Efforts promoting digital collaboration between healthcare, education, research, and municipalities through high speed interconnects.

Create Local Jobs by keeping support services within the community and generating jobs for designers, builders and operators of broadband networks, developers of software and other applications and creators of content of all kinds.

Allow for Cost Savings through local ownership of a high performance network where community shareholders can freely improve network performance and capacity according to demand and long-term cost efficiencies.

Promote Community Collaboration and Efficiency through cost and resource sharing, improved face to face and virtual communication, redundant infrastructure that ensures exchange of essential information and integrated, innovative and accessible services across departments freeing staff to focus on providing better service to citizens.

As an Anchor Institution, we believe that this innovative opportunity will give the nonprofits we work with a needed boost in efficiently bringing healthcare, job creation, and educational opportunities to the undeserved Madison area residents. We look forward to participating in collaborative efforts with other Anchor Institutions in the greater Madison area to develop a robust advanced broadband infrastructure.

Sincerely,

Eric Howland

Eric Howland, Executive Director,

DANEnet

UW Extension WISCONSIN GEOLOGICAL AND NATURAL HISTORY SURVEY

3817 Mineral Point Road
Madison, WI 53705-5100
Tel 608/262.1705
Fax 608/262.8086
www.uwex.edu/wgnhs/

James M. Robertson
Director and State Geologist

August 5, 2009

Re: Madison Unified Fiber Network (MUFN) broadband stimulus grant proposal

Dear Colleagues:

As the Outreach Manager of the Wisconsin Geological and Natural History Survey (WGNHS), I am excited about the practical benefits our organization will see from MUFN as it expands. The new capacities that will be afforded by the broadband stimulus grant will directly assist WGNHS in achieving its mission. That is, to support informed decision making about natural resources by government, industry, business, and individual citizens of Wisconsin.

WGNHS intends to provide high speed web access to its research to the community. Maps, records, and reports produced by the WGNHS provide basic data for resource, land-use, and environmental management by state and local government agencies. Real-time delivery of our data – often in very large and complex formats -- to our clients and the public is our goal. The expanded MUFN project is critical to reaching that goal.

MUFN would improve both our ability to collect and to distribute data. It will enhance the ability of our scientists and researchers to collect data and work in partnership with colleagues across the nation and internationally. This will decrease the funding necessary to carry these projects forward. It will also allow our staff to increase their participation in many exciting web based applications currently being developed collaboratively with researchers at other governmental and educational institutions.

The collaborative MUFN program will provide us with an affordable high speed internet connection. It will allow us to upgrade our service to the community with interactive maps in a geographic information system. This will advance our community collaborations by improving our virtual communications. We believe it will ultimately enhance our face-to-face communications, as well.

WGNHS has invested in its broadband infrastructure with a limited fiber optic connection. We see MUFN as a way to leverage our investment over the long term by increasing efficiencies and sharing resources. We trust MUFN will provide WGNHS with access to an advanced broadband infrastructure into the future that will help us meet the challenges of evolving information systems.

Sincerely,

Wisconsin Geological and Natural History Survey

M. Carol McCartney

M. Carol McCartney, PhD, PG
Outreach Manager
608.262.1705
Direct: 608.263.7393
Fax: 608.262.8086
mmccartney@wisc.edu

XIOCOM
WIRELESS

August 7, 2009

Broadband Technology Opportunities Program
National Telecommunications and Information Administration
U.S. Department of Commerce
HCHB, Room 4812
1401 Constitution Avenue
Washington, DC 20230

Dear Selection Committee:

XIOCOM Wireless, Inc D/B/A Mad City Broadband (MCB) is a highly enthusiastic partner in the Madison Unified Fiber Network (MUFN) "Middle Mile" proposal seeking funding under NTIA's Broadband USA of the 2009 American Recovery and Reinvestment Act. This inter-agency and public-private sector collaborative project, to provide high capacity, sustainable and shared access to broadband via fiber and WiFi, can be a model for cost-effective use of federal funding to create jobs, advance the effective use of broadband and serve the public.

We believe that the proven track record of MCB clearly demonstrates our ability to assist MFUN design, and build, a robust advanced broadband infrastructure, helping key MBI anchor institutions, Greater Madison's citizens, students, Small and Medium Businesses, and economically, and socially disadvantage population to connect to the affordable and high performance broadband services. MCB also intends to become one of the key service providers utilizing the MUFN advance broadband infrastructure to serve the commercial customers in Madison, WI.

The Madison Unified Fiber Network (MUFN) will:

- Advance Community Efforts in healthcare, education and public safety through the deployment of fiber and community-wide, high speed WiFi. Our community will be better equipped to interactively share information and collaborate with others throughout our community and beyond.

- Create Local Jobs and improve skill levels by keeping support services within our community and generating jobs for designers, builders and operators of broadband infrastructure and services, developers of software and creators of content of all kinds.

- Reduce Costs through local ownership of a high performance network where community shareholders can freely improve network performance and capacity according to demand and foster continued growth and long-term cost efficiencies.

3505 KOGER BOULEVARD, SUITE 400, DULUTH, GA 30096 PHONE 678-218-5600 FAX 678-218-5531 www.xiocom.com

ATLANTA AMSTERDAM CAPE TOWN

- Promote Community Collaboration through cost and resource sharing, face to face and virtual communication, redundant-path infrastructure ensuring reliability, and integrated, innovative and accessible shared services freeing staff to continually focus on ways to improve service to citizens.

- Further promote sociably responsible partnerships in the local communities with innovative technology providers' further leveraging Mad City Broadband network capabilities and partners.

As the network infrastructure builder, application integrator, and local service provider, we believe this innovative, collaborative project will be a highly effective investment of federal economic stimulus money and help the Madison metropolitan area be a model of collaboration, educational opportunity and economic growth. We look forward to participating in this shared effort with others to develop this robust, advanced "Middle Mile" broadband infrastructure.

Sincerely,

Troy Richardson
CEO

3505 KOGER BOULEVARD, SUITE 400, DULUTH, GA 30096 PHONE 678-218-5600 FAX 678-218-5531 www.xiocom.com

ATLANTA AMSTERDAM CAPE TOWN

THE UNIVERSITY of WISCONSIN MADISON

Legal Opinion

August 7, 2009

Administrator
Rural Utilities Service
U. S. Department of Agriculture
Washington, D. C. 20250-1500

Assistant Secretary
National Telecommunications and Information Administration
U.S. Department of Commerce
Washington, D.C. 20230

Re: University of Wisconsin – Madison application to the Broadband Technology Opportunities Program

To whom it may concern:

We are legal counsel for the University of Wisconsin-Madison, (the "Applicant"), which is the flagship institution of the University of Wisconsin System. In such capacity, we acted as counsel to the Applicant in connection with its ability to apply to the [Broadband Initiatives Program and/or the Broadband Technology Opportunities Program] and in the review of the grant agreement, as referenced in the Notice of Funds Availability.

We are of the opinion that:

(a) the Applicant is an institution of higher education under the Board of Regents of the University of Wisconsin System, which is a duly organized and existing legal entity under the laws of the State of Wisconsin.

(b) the Applicant has corporate power: (1) to execute and deliver the grant agreement; and (2) to perform all acts required to be done by it under said agreement.

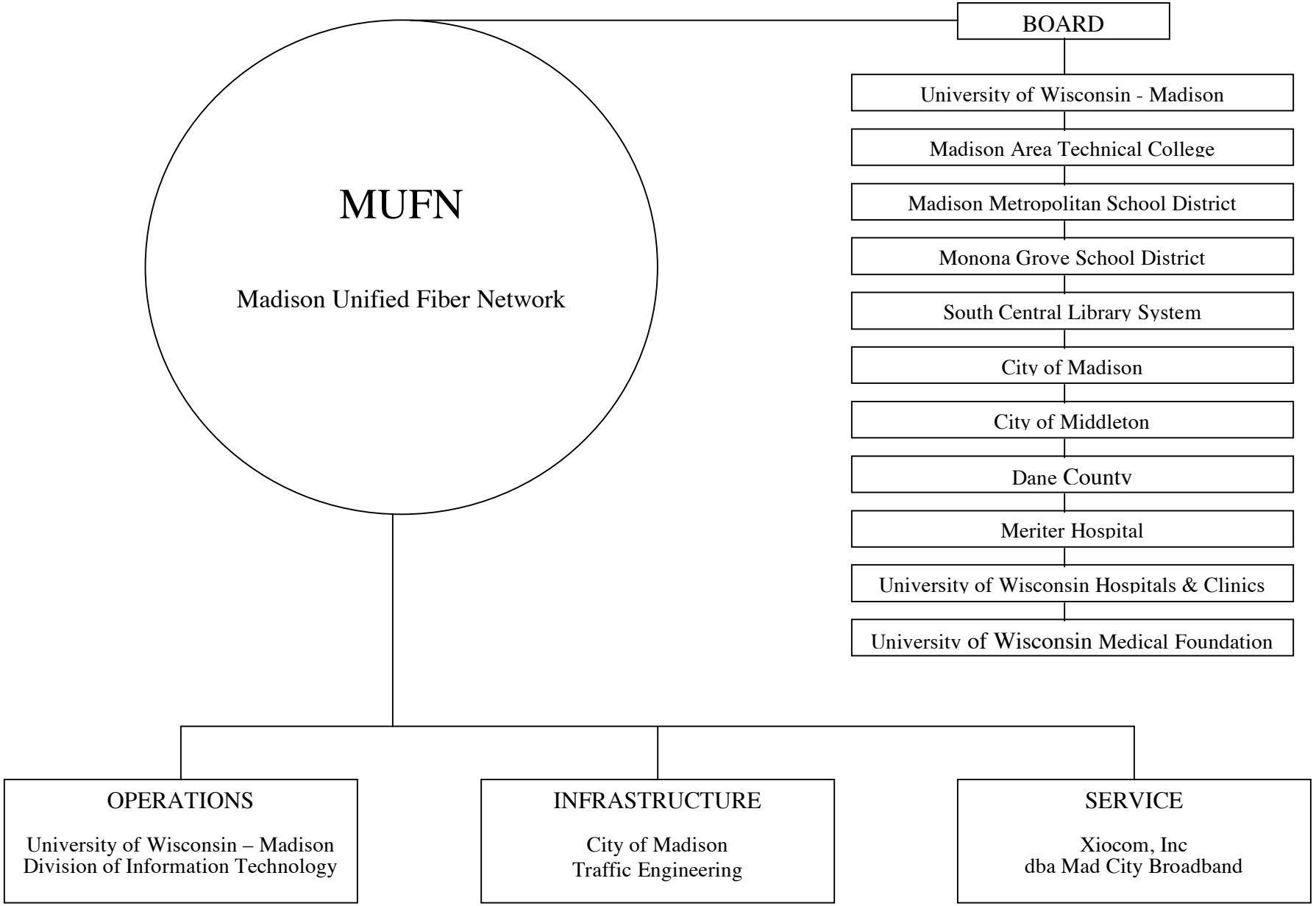
(c) no legal proceedings have been instituted or are pending against the Applicant, the outcome of which would adversely affect the Applicant's ability to perform the

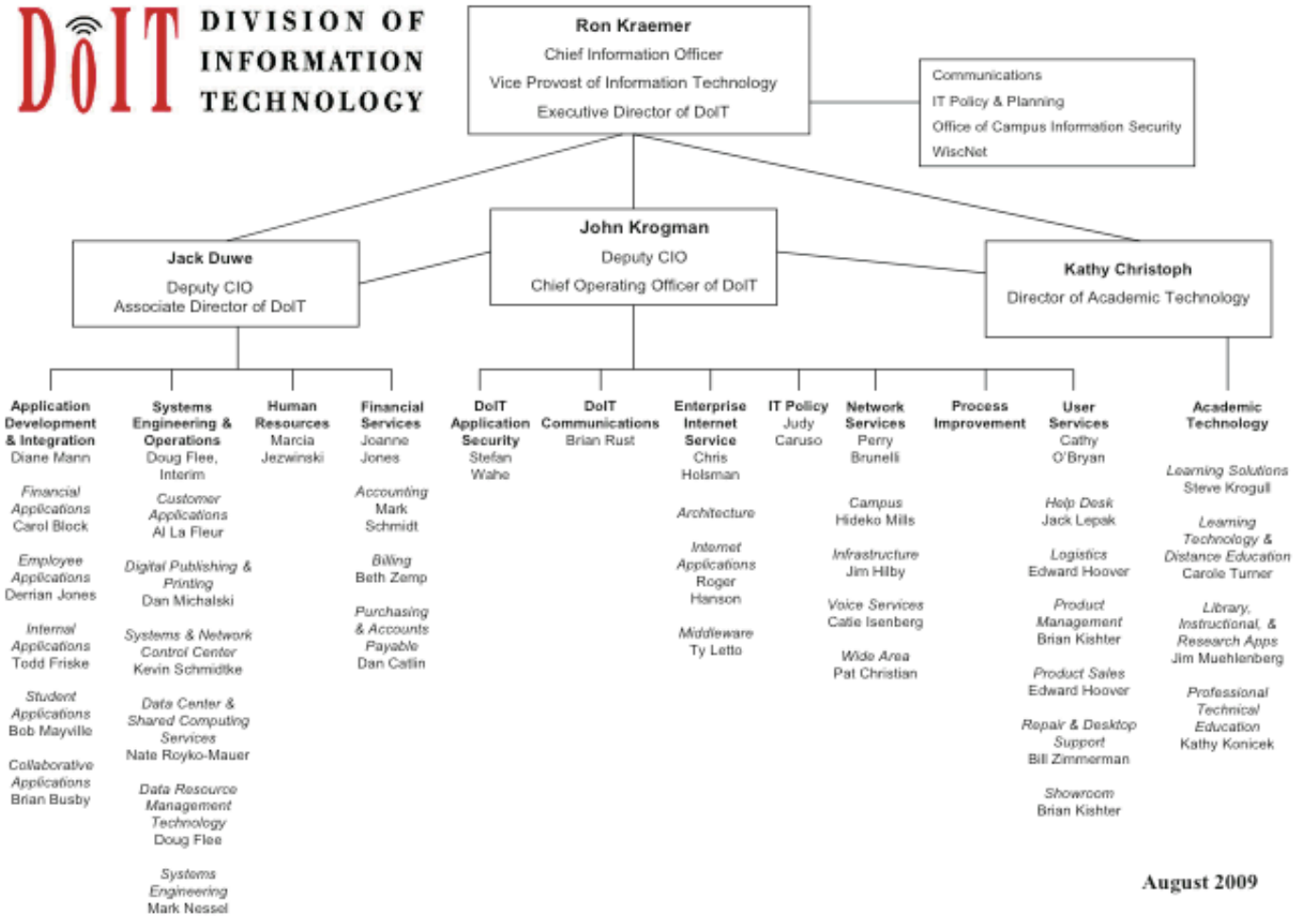
Office of Administrative Legal Services
361 Bascom Hall University of Wisconsin–Madison 500 Lincoln Drive Madison, Wisconsin 53706–1380
608/263–7400 Fax: 608/263–4725 www.wisc.edu/legal

duties under the grant agreement, and there are no judgments against the Applicant which would adversely affect the Applicant's ability to perform the duties under the grant agreement.

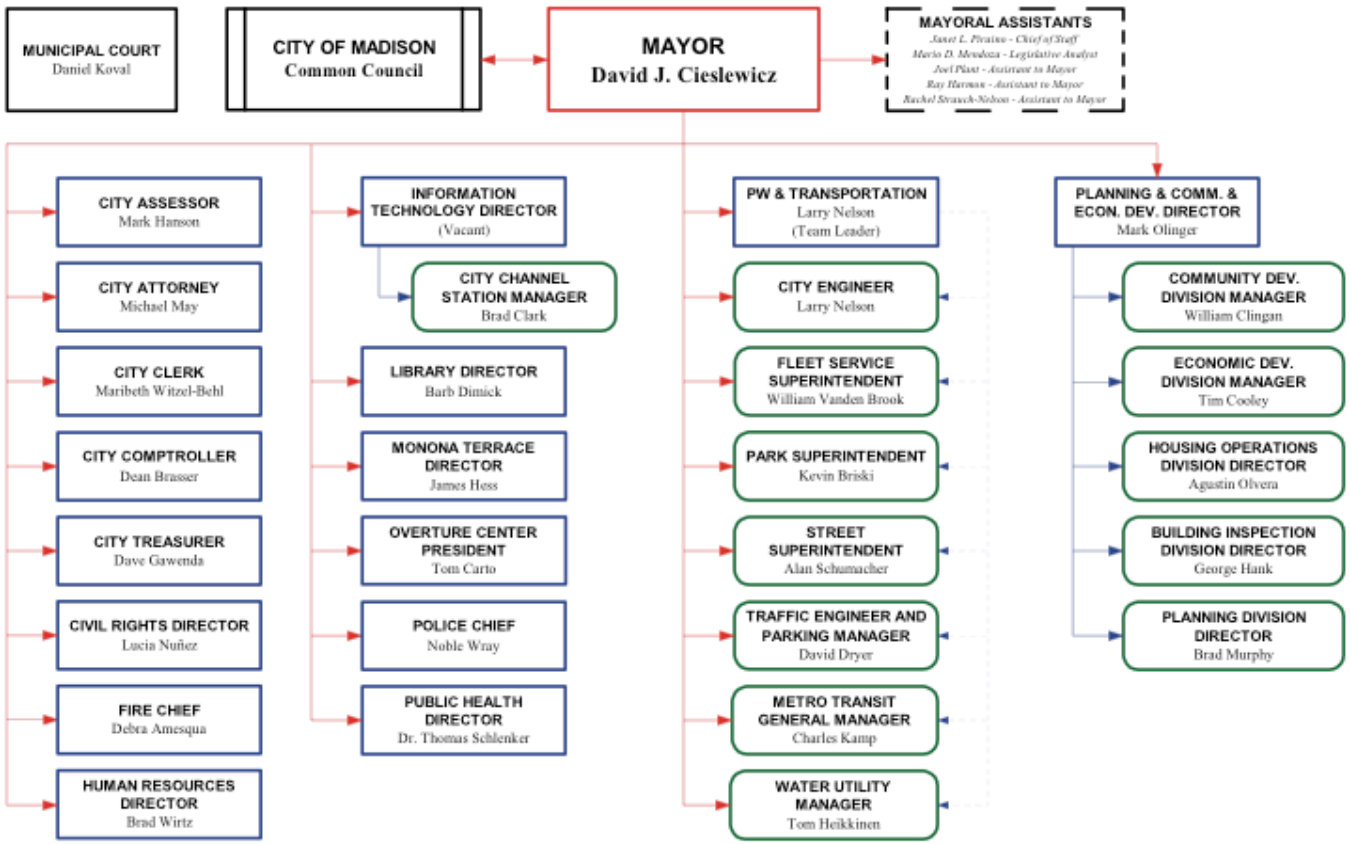
Sincerely,

Nancy K. Lynch
Senior University Legal Counsel
Administrative Legal Services
University of Wisconsin-Madison
361 Bascom Hall
500 Lincoln Drive
Madison, Wisconsin 53706
Email: nlynch@vc.wisc.edu
Tele: 608.263.7 00
Fax: 608.263. 725
http://legal.wisc.edu


MUFN
Madison Unified Fiber Network
BOARD
University of Wisconsin - Madison
Madison Area Technical College
Madison Metropolitan School District
Monona Grove School District
South Central Library System
City of Madison
City of Middleton
Dane County
Meriter Hospital
University of Wisconsin Hospitals & Clinics
University of Wisconsin Medical Foundation
OPERATIONS
University of Wisconsin – Madison
Division of Information Technology
INFRASTRUCTURE
City of Madison
Traffic Engineering
SERVICE
Xiocom, Inc
dba Mad City Broadband

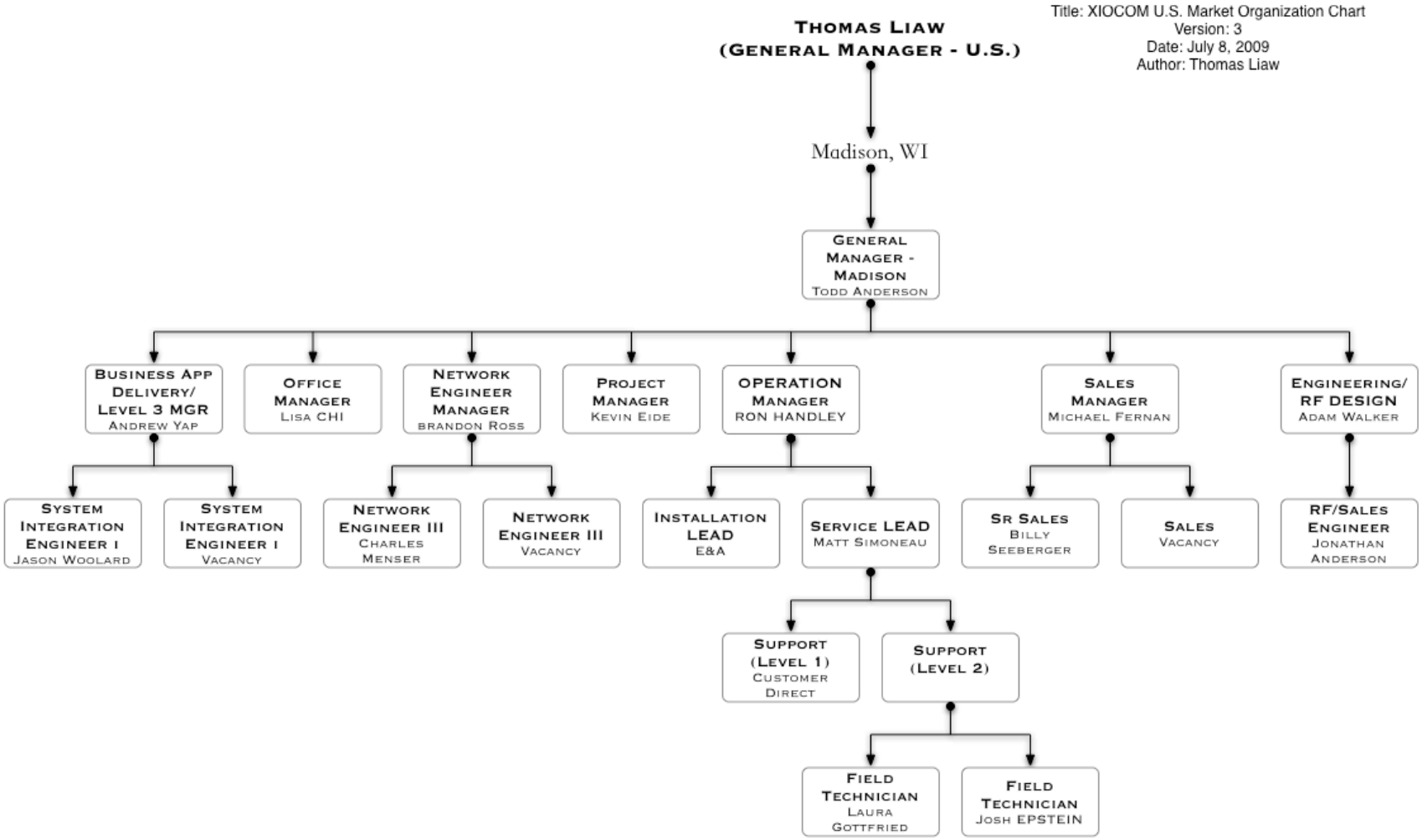

DoIT
DIVISION OF INFORMATION TECHNOLOGY
Ron Kraemer
Chief Information Officer
Vice Provost of Information Technology
Executive Director of DoIT
Communications
IT Policy & Planning
Office of Campus Information Security
WiscNet
Jack Duwe
Deputy CIO
Associate Director of DoIT
John Krogman
Deputy CIO
Chief Operating Officer of DoIT
Kathy Christoph
Director of Academic Technology
Application Development & Integration
Diane Mann
Financial Applications
Carol Block
Employee Applications
Derrian Jones
Internal Applications
Todd Friske
Student Applications
Bob Mayville
Collaborative Applications
Brian Busby
Systems Engineering & Operations
Doug Flee, Interim
Customer Applications
Al La Fleur
Digital Publishing & Printing
Dan Michalski
Systems & Network Control Center
Kevin Schmidtke
Data Center & Shared Computing Services
Nate Royko-Mauer
Data Resource Management Technology
Doug Flee
Systems Engineering
Mark Nessel
Human Resources
Marcia Jezwinski
Financial Services
Joanne Jones
Accounting
Mark Schmidt
Billing
Beth Zemp
Purchasing & Accounts Payable
Dan Catlin
DoIT Application Security
Stefan Wahe
DoIT Communications
Brian Rust
Enterprise Internet Service
Chris Holsman
Architecture
Internet Applications
Roger Hanson
Middleware
Ty Letto
IT Policy
Judy Caruso
Network Services
Perry Brunelli
Campus
Hideko Mills
Infrastructure
Jim Hilby
Voice Services
Catie Isenberg
Wide Area
Pat Christian
Process Improvement
User Services
Cathy O'Bryan
Help Desk
Jack Lepak
Logistics
Edward Hoover
Product Management
Brian Kishter
Product Sales
Edward Hoover
Repair & Desktop Support
Bill Zimmerman
Showroom
Brian Kishter
Academic Technology
Learning Solutions
Steve Krogull
Learning Technology & Distance Education
Carole Turner
Library, Instructional, & Research Apps
Jim Muehlenberg
Professional Technical Education
Kathy Konicek

August 2009


MUNICIPAL COURT
Daniel Koval
CITY OF MADISON
Common Council
MAYOR
David J. Cieslewicz
MAYORAL ASSISTANTS
Janet L. Piraino - Chief of Staff
Mario D. Mendoza - Legislative Analyst
Joel Plant - Assistant to Mayor
Ray Harmon - Assistant to Mayor
Rachel Strauch-Nelson - Assistant to Mayor
CITY ASSESSOR
Mark Hanson
CITY ATTORNEY
Michael May
CITY CLERK
Maribeth Witzel-Behl
CITY COMPTROLLER
Dean Brasser
CITY TREASURER
Dave Gawenda
CIVIL RIGHTS DIRECTOR
Lucia Nuñez
FIRE CHIEF
Debra Amesqua
HUMAN RESOURCES DIRECTOR
Brad Wirtz
INFORMATION TECHNOLOGY DIRECTOR
(Vacant)
CITY CHANNEL STATION MANAGER
Brad Clark
LIBRARY DIRECTOR
Barb Dimick
MONONA TERRACE DIRECTOR
James Hess
OVERTURE CENTER PRESIDENT
Tom Carto
POLICE CHIEF
Noble Wray
PUBLIC HEALTH DIRECTOR
Dr. Thomas Schlenker
PW & TRANSPORTATION
Larry Nelson
(Team Leader)
CITY ENGINEER
Larry Nelson
FLEET SERVICE SUPERINTENDENT
William Vanden Brook
PARK SUPERINTENDENT
Kevin Briski
STREET SUPERINTENDENT
Alan Schumacher
TRAFFIC ENGINEER AND PARKING MANAGER
David Dryer
METRO TRANSIT GENERAL MANAGER
Charles Kamp
WATER UTILITY MANAGER
Tom Heikkinen
PLANNING & COMM. & ECON. DEV. DIRECTOR
Mark Olinger
COMMUNITY DEV. DIVISION MANAGER
William Clingan
ECONOMIC DEV. DIVISION MANAGER
Tim Cooley
HOUSING OPERATIONS DIVISION DIRECTOR
Agustin Olvera
BUILDING INSPECTION DIVISION DIRECTOR
George Hank
PLANNING DIVISION DIRECTOR
Brad Murphy

06/2009

Title: XIOCOM U.S. Market Organization Chart
Version: 3
Date: July 8, 2009
Author: Thomas Liaw



OMB Number: 0660-0031
Expiration Date: 01/31/2010

Broadband Infrastructure Application Submission to RUS (BIP) and NTIA (BTOP)

Network Design and Implementation Plan Certification (to be complete for projects requesting more than $1 million in federal assistance)

U.S. Department of Agriculture and U.S. Department of Commerce BIP and BTOP Program

We the undersigned, certify that the proposed broadband system will work as described in the System Design and Network Diagram sections, and can deliver the proposed services outlined in the Service Offerings Section. Moreover, the system, as designed, can meet the proposed build-out timeframe based on the resources designated in Project Viability Section, and will be substantially complete in two years, and complete within three years.

8/12/09
(Date)

Cheryl E. Gest
(Authorized Representative's Signature)

Board of Regents of the University of Wisconsin System

Name: Cheryl E. Gest
Managing Officer, Pre-Award
Research & Sponsored Programs

Title:

8/14/09
(Date)

David Devereaux-Weber P.E.
(Certifying Engineer's Signature)

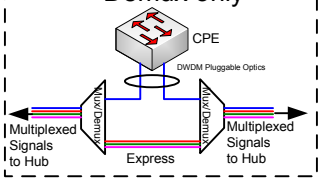
David Devereaux-Weber
Name:

Network Consultant
Title:

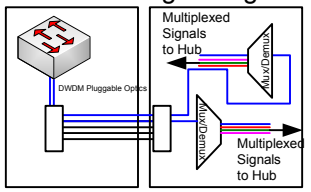
Professional Engineer
28619-006 Wisconsin
expires 7/31/2010

BTOP Q30: MUFN Response

Add/drop sites on ring with passive Mux/ Demux only

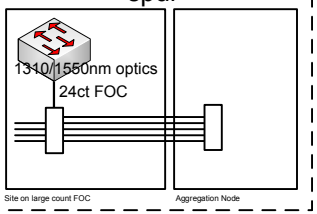


Sites on large count FOC connecting to ring



All end-users connect using DWDM Pluggable optics at 1 or 10 Gigabit speeds in both directions on ring where they are ring connected

Sites on large count FOC spur



All Fiber Optic Cables (FOC) referenced are SMF-28 Singlemode Fiber

Interconnection Point

Underserved Interconnection Point

Interconnection Point with Anchor Tenant

1202 Northport Dr

2km

24 ct FOC

3209 Dryden Dr

3km

24 ct FOC

5km

96 ct FOC

8 Channel DWDM Mux/ Demux in each direction ITU Channels 44-51

2701 International Ln

4km

2 ct FOC

8km

2 ct FOC

8 Channel DWDM Mux/ Demux in each direction ITU Channels 52-59

Internet via Wiscnet, AT&T, Charter Business Networks, KDL, TDS, CenturyTel.

7km

1301 E Washington Ave

North Ring

3550 Anderson St

4 Channel DWDM Mux/ Demux in each direction of the North ring ITU Channels 40-43

18km

2 ct FOC

1210 W Dayton St

MadIX Exchange

Aggregation Node

20 Channel DWDM Mux/ Demux in each direction for North and South rings ITU Channels 40-59

1105 Shorewood Blvd

.5km

2757 University Ave

.75km

96 ct FOC

5.5km

3310 University Ave

Fiber on this existing segment only available for not-for-profit entities (AUP restriction)

12 ct FOC

2km

610 N. Whitney Way

2.75km

96 ct FOC

8501 Excelsior Dr

6.75km

7818 Big Sky Dr.

.75

1.5km

144 ct FOC

.5km

690 S. High Point Rd

302 S. Gammon

421 Grand Canyon

2.75km

525 Science Dr

1437 Monroe St

.6km

144 ct FOC

5km

2.5km

502 Caromar Dr.

144 ct FOC

5.6km

210 Martin Luther King Jr. Blvd

288ct FOC

2.5km

200 N First St

1km

2222 E Washington Ave

1.5km

144 ct FOC

3030 Darbo Dr

1.5km

16km

3434 E. Washington Blvd.

1.5km

1.75km

3945 Lien Rd

144 ct FOC

6km

4011 Morgan Way

2km

5249 Terrace Dr

2 ct FOC

809 S Thompson Dr

4 Channel DWDM Mux/ Demux in each direction ITU Channels 44-47

4 Channel DWDM Mux/ Demux in each direction of the South ring ITU Channels 56-59

2 ct FOC

4.5km

Existing 144 ct FOC available for use

4km

2 ct FOC

1.8km

48 ct FOC

2.5m

144 ct FOC

750 S. Park St

1.1km

.4km

122 E. Olin Ave

900 John Nolen Dr.

144 ct FOC

1.1km

96 ct FOC

2.1km

48 ct FOC

2300 S. Park St

5km

222 W Washington Ave

MadIX Exchange

Aggregation Node

3km

401 Maple Ave

South Ring

2 ct FOC

12km

2km

144 ct FOC

3330 Atwood Ave

4 Channel DWDM Mux/ Demux in each direction ITU Channels 52-55

4 Channel DWDM Mux/ Demux in each direction ITU Channels 56-59

2601 Agriculture Dr

5km

702 Pflaum Rd

1km

1 Fen Oak

1km

1km

8km

5301 Monona Dr

4 Channel DWDM Mux/ Demux in each direction ITU Channels 48-51

Each location has a Cisco 6500 Layer 3 Switch
Ring is 10Gb Ethernet running Etherchannel for redundancy

Internet via 5Nines, Wiscnet, AT&T, MadCity Broadband, Boingo, Merrimac Communications, Choice One, TDS Metrocom, Paetec, US Signal

Commercial Price Tier

1. Calculated cost/strand per month for each service area (including in-kind conduit/fiber contributions on specific proposed funded service areas) over a 20yr planned life cycle

Table 1: Proposed Funded Service Area Costs (new builds only as detailed in question 45 response)

	University Ave	Mineral Point Rd	E. Washington Blvd	Northport	Monona	S. Park St
laterals	$ 280,000	$ 460,000	$ 440,000	$ 140,000	$ 300,000	$ 340,000
backbone	$ 283,047	$ 730,764	$ 485,511	$ 672,413	$ 573,035	$ -
site prep	$ 10,000					
DWDM HW				$ 58,493	$ 73,271	
engring/pm	$ 71,067	$ 71,067	$ 71,067	$ 71,067	$ 71,067	$ 71,067
Proj Cost	$ 644,114	$ 1,261,830	$ 996,578	$ 941,972	$ 1,017,373	$ 411,067
26% Indirect	$ 167,470	$ 328,076	$ 259,110	$ 244,913	$ 264,517	$ 106,877
Total cost	$ 811,583	$ 1,589,906	$ 1,255,688	$ 1,186,885	$ 1,281,889	$ 517,944

Table 2: Proposed Funded Service Area Existing/New Facilities

Service Area	New conduit (in mi)	Existing conduit (in mi)	New fiber (in mi)	Fiber cable size (# strands)
University Ave (Map ID #1)	1.5	5.75	1.5	96
Mineral Point Rd (Map ID #2)	2.5	10	12.5	144
East Washington Blvd (Map ID #3)	2.5	6.25	8.75	144
Northport Area (Map ID #4)	3.5	0.5	4	96
Monona Drive (Map ID #5)*	2.25	3.25	7.3	144
S. Park St. (Map ID #6)	0	16	0	mix (48/96/144ct FOC)
Totals	12.25	41.75	34.05	N/A

Table 3: Unit Costs for In-Kind Contribution and New Facility Builds

Installation Activity	Cost
Underground Fiber Furnish/Install ($/ft)	$ 4.54
Aerial fiber Furnish/Install ($/ft)	$ 7.44
Conduit (bore) furnish/install ($/ft)	$ 31.20
Conduit (trench) furnish/install ($/ft)	$ 20.92
Conduit (bore) + fiber furnish/install ($/ft)	$ 35.74
Conduit (trench) + fiber furnish/install ($/ft)	$ 25.46

Proposed Funded Service Area Cost Calculation: University Ave

`((((new build) + (in-kind)) / 96 strands fiber optic cable (FOC)) / 20 years) / 12 months
((($811,583) + (5.75mi * 5280ft/mi * $35.74)) / 20yrs) / 12 months = **$82.32/strand/mo**
(see Table 1, 2 and 3 for details)

Proposed Funded Service Area Cost Calculation: Mineral Point Rd.

((((new build) + (in-kind)) / 144 strands fiber optic cable (FOC)) / 20 years) / 12 months

((($1,589,906) + (10mi * 5280ft/mi * $31.20)) / 20yrs) / 12 months = **$93.68/strand/mo**
(see Table 1, 2 and 3 for details)

Proposed Funded Service Area Cost Calculation: E. Washington Blvd.
((((new build) + (in-kind)) / 144 strands fiber optic cable (FOC)) / 20 years) / 12 months
((($1,255,688) + (6.25mi * 5280ft/mi * $31.20)) / 20yrs) / 12 months = **$66.13/strand/mo**
(see Table 1, 2 and 3 for details)

Proposed Funded Service Area Cost Calculation: Monona Drive
((((new build) + (in-kind)) / 144 strands fiber optic cable (FOC)) / 20 years) / 12 months
((($1,281,889) + (3.25mi * 5280ft/mi * $31.20)) / 20yrs) / 12 months = **$52.59/strand/mo**
(see Table 1, 2 and 3 for details)

Proposed Funded Service Area Cost Calculation: S. Park St.
((((new build) + (in-kind)) / 85.6 strands fiber optic cable (FOC)) / 20 years) / 12 months
((($517,944) + (16mi * 5280ft/mi * $31.20)) / 20yrs) / 12 months = **$121.68/strand/mo**
(see Table 1, 2 and 3 for details)

2. Average costs per pair in each service area together

Service Area	Cost/Pair per Mo.	
Univ Ave	$	164.64
Mineral Pt	$	187.36
E. Wash	$	132.26
North	$	110.18
Monona	$	105.17
S. Park St	$	243.36
Average Cost	$	157.16 per pair per mo.

3. Added $200/mo for ongoing operations and maintenance (e.g. locates, extraordinary moves, restoration/repair service)
4. Added $260/mo for NOC service
5. Added 38% markup ($382.84) rounded up to $1000

Commercial price per pair: $1000/mo

Price Zones
MUFN proposes pricing using 3 price zones for ease of calculation and administration. Zone 1, called the central business district (CBD), is bound by a lake to the North (Lake Mendota), N. Breeze Terrace to the West, Blair St. to the East and Regent St. to the South. Zone 2 includes all service areas West of the CBD while Zone 3 includes all service areas East of the CBD.

Attachment C: Competitor Table – Middle Mile

	MUFN Service Area						
Service Area	**Last Mile Services Provider**	**Technology Platform**	**Service Tier**	**Point-to-Point**	**Minimum Peak Load Network Bandwidth Capacity**	**Pricing**	**Other Comments**
5 Proposed MUFN Service Areas (Competitive carrier pricing is valid for the greater Madison, Monona, Middleton, WI metro areas)	Charter Business Networks	Ethernet switch (Cisco 3750 or equivalent)	Entry	Any point in the MUFN service area to any other point in the MUFN service area	10 Mbps	$900/mo	P2P link, 60mo term
		Ethernet over DWDM Cisco (15454)	Highest	Any point in the MUFN service area to any other point in the MUFN service area	10000 Mbps	$17000/mo	10GE ring, 60mo term
		Ethernet over DWDM Cisco (15454)	Highest	Any point in the MUFN service area to any other point in the MUFN service area	10000 Mbps	$9500/mo	P2P link, 60mo term
		Ethernet switch (Cisco 3750 or equivalent)	Mid-tier	Any point in the MUFN service area to any other point in the MUFN service area	5000 Mbps	$22000/mo	Ring, 5Gb per side bonded, 60mo term
		Ethernet switch (Cisco 3750 or equivalent)	Mid-tier	Any point in the MUFN service area to any other point in the MUFN service area	100 Mbps	$1180/mo	P2P, 60mo term
	AT&T	Ethernet switch (Cisco 3550) or equivalent	Entry	Any point in the MUFN service area to any other point in the MUFN service area	10 Mbps	$500	Opt-E-MAN 60mo term, bronze QoS level; MAC limits
		Wave division multiplexing (DWDM)	Highest	Any point in the MUFN service area to any other point in the MUFN service area	10000 Mbps	$15500/mo	DecaMAN, ring topology, dual entrance, 60mo term
		Ethernet switch (Cisco 3550) or equivalent	Mid-tier	Any point in the MUFN service area to any other point in the MUFN service area	50 Mbps	$502.50/mo	Opt-E-MAN 60mo term, bronze QoS level, MAC limits
		Ethernet switch (Cisco 3550) or equivalent	Mid-tier	Any point in the MUFN service area to any other point in the MUFN service area	100 Mbps	$555/mo	Opt-E-MAN 60mo term, bronze QoS level, MAC limits
		Ethernet switch (Cisco 3550) or equivalent	Mid-tier	Any point in the MUFN service area to any other point in the MUFN service area	250 Mbps	$847.50/mo	Opt-E-MAN 60mo term, silver QoS level, MAC limits
		Ethernet switch (Cisco 3550) or equivalent	Mid-tier	Any point in the MUFN service area to any other point in the MUFN service area	1000 Mbps	$1027.50/mo	Opt-E-MAN 60mo term, bronze, QoS level, MAC limits
		Ethernet switch (Cisco 3550) or equivalent	Mid-tier	Any point in the MUFN service area to any other point in the MUFN service area	1000 Mbps	$1147.50	Opt-E-MAN 60mo term, silver QoS level, MAC limits
		~~Ethernet~~	~~Mid-tier~~	~~Any point in the~~	~~1000 Mbps~~	~~$2200~~	~~GigaMAN~~

Attachment C: Competitor Table – Middle Mile

		DWDM (Fujitsu Flashwave)		MUFN service area to any other point in the MUFN service area			
		SONET	Mid-tier	Any point in the MUFN service area to any other point in the MUFN service area	8000 Mbps	$29000/mo	Ring, 4GEs per side bonded, 60mo term, OC192 ring subdivided to 4xOC48
	CenturyTel	DWDM	Highest & Entry	Any point in the MUFN service area to any other point in the MUFN service area	10000 Mbps	$19000/mo	10GE ring
	TDS Metrocom	CWDM	Highest & Entry	Any point in the MUFN service area to any other point in the MUFN service area	1000 Mbps	$1400/mo	P2P GE, 60mo term

Attachment B: MUFN - Service Offerings for Middle Mile Project

Service Offering	Distance Band or Point to Point	Minimum Peak Load Network Bandwidth Capacity (Mbps)	Monthly/Yearly Pricing ($)	Other
Dark Fiber (commercial entity) (Point A to Point Z within (inside) any proposed funded service area)	Point to Point	1000 (Mbps)	$1000/mo	1yr term; no restrictions; 24x7 technical support and NOC
Dark Fiber (commercial entity) (Point A, Service Area 1 to Point Z, Service Area 2)	Point to Point	1000 (Mbps)	$1000/mo	1yr term; no restrictions; 24x7 technical support and NOC
Dark Fiber (commercial entity) (Point A, Service Area 3 or 6 to Point Z, Service Area 4 or 5)	Point to Point	1000 (Mbps)	$1000/mo	1yr term; assigned wavelength into/out of proposed funded service area 4; 24x7 technical support and NOC
Dark Fiber (commercial entity) (Point A, Service Area 1 or 2 to Point Z, Service area 3, 5 or 6)	Point to Point	1000 (Mbps)	$2000/mo	1yr term; assigned wavelength into/out of proposed funded service area 4; 24x7 technical support and NOC
DWDM wavelength (commercial entity) Service area 4 to 5 only	Point to Point	1000 (Mbps)	$1000/mo	1yr term; limited add/drop locations; MUFN assigns frequency & user provides optics; 24x7 technical support and NOC
DWDM wavelength (commercial entity) Service area 1 or 2 to 4	Point-to-Point	1000 (Mbps)	$1000/mo	1yr term; limited add/drop locations; MUFN assigns frequency & user provides optics; 24x7 technical support and NOC
DWDM wavelength (not-for-profit entity) Service area 4 or 5 only	Point to Point	1000 (Mbps)	$200/mo	1yr term; limited add/drop locations; MUFN assigns frequency & user provides optics; 24x7 technical support and NOC
Dark Fiber (not-for-profit entity) (Point A to Point Z within (inside) any proposed funded service area)	Point to Point	1000 (Mbps)	$200/mo	1yr term; no restrictions; 24x7 technical support and NOC
Dark Fiber (not-for-profit entity) (Point A, Service Area 1 to Point Z, Service Area 2)	Point to Point	1000 (Mbps)	$200/mo	1yr term; no restrictions; 24x7 technical support and NOC
Dark Fiber (not-for-profit entity) (Point A, Service Area 3 or 6 to Point Z, Service Area 4 or 5)	Point to Point	1000 (Mbps)	$200/mo	1yr term; assigned wavelength into/out of proposed funded service area 4; 24x7 technical support and NOC
Dark Fiber (not-for-profit entity) (Point A, Service Area 1 or 2 to Point Z, Service area 3, 5 or 6)	Point to Point	1000 (Mbps)	$200/mo	1yr term; assigned wavelength into/out of proposed funded service area 4; 24x7 technical support and NOC
DWDM wavelength (not-for-profit entity) Service area 1 or 2 to 4	Point-to-Point	1000 (Mbps)	$200/mo	1yr term; limited add/drop locations; MUFN assigns frequency & user provides optics; 24x7 technical support & NOC

Attachment B: MUFN - Service Offerings for Middle Mile Project

Make Available to Broadest Group of Users

The MUFN project has made great efforts to bring enhanced broadband to anchor institutions, public safety entities and critical community facilities in each of the 6 proposed funded service areas. We have identified and approached potential participants based on the geography of their facilities in relation to existing or proposed conduit and fiber and have plans to connect 100 locations.

Our approach to making broadband available to the largest number of users is to offer a simple, uniform product (dark fiber and wavelengths), with no use restrictions, that is scalable and reliable with appropriate 24x7 technical support, expedient provisioning and lightweight administrative overhead.

MUFN prices its service for commercial entities at commercially competitive rates (see fiber pricing costs in Attachment B in comparison with 10Gbps Ethernet or even AT&T GigaMAN gigabit Ethernet service offerings depicted in Attachment C. We also provide a substantial price reduction for all not-for-profit entities to encourage broadband adoption.

In addition to the product and pricing, MUFN plans to bring the network near more anchor institutions and public safety entities – particularly those in underserved areas. We will continue to leverage existing conduit and fiber resources from various not-for-profit entities as well as be opportunistic when road construction and other fiber builds occur such that we can cost-effectively place conduit or fiber for future use.

Finally, MUFN will continue to identify and approach not-for-profit entities and demonstrate the project's value as a means of promoting the opportunity.

Based on this approach, we have been rather successful. We believe our service offering will also be commercially interesting such that entities such as Mad City Broadband will utilize MUFN infrastructure in its network providing service to residential and commercial business entities.

Statements of Net Assets

University of Wisconsin System - MADISON

	June 30, 2008	June 30, 2007
ASSETS		
Current Assets:		
Cash and Cash Equivalents	$ 234,411,600.57	$ 314,392,958.96
Accounts Receivable, Net	179,583,539.51	160,072,776.83
Student Loans Receivable, Net	16,252,351.85	16,484,535.34
Capital Lease Receivable	2,046,991.29	2,254,381.62
Inventories	24,686,918.31	23,955,015.58
Prepaid Expenses	15,882,073.80	14,668,447.50
Deferred Charges	3,962,397.54	5,397,341.10
Total Current Assets	476,825,872.87	537,225,456.93
Noncurrent Assets		
Endowment Investments	318,472,798.02	339,299,065.48
Student Loans Receivable, Net	71,378,724.70	69,201,473.10
Capital Lease Receivable	7,670,604.61	9,717,595.90
Land	56,667,369.16	54,980,008.70
Improvements Other Than Buildings, Net	50,818,893.55	48,213,451.34
Construction in Progress	239,871,120.10	157,853,056.93
Buildings, Net	1,301,083,090.60	1,247,997,099.85
Equipment, Net	199,286,078.31	207,657,049.93
Library Holdings	503,756,135.48	492,759,128.82
Total Noncurrent Assets	2,749,004,814.53	2,627,677,930.05
TOTAL ASSETS	$ 3,225,830,687.40	$ 3,164,903,386.98
LIABILITIES		
Current Liabilities		
Accounts Payable and Accrued Liabilities	$ 179,602,180.68	$ 118,259,755.22
Notes and Bonds Payable	18,706,127.39	17,696,764.71
Capital Lease Obligations	3,114,959.07	2,618,475.61
Unearned Revenue	67,246,477.80	98,946,807.53
Compensated Absences	34,683,269.73	35,003,872.99
Deposits of Student Organizations	157,214.62	267,318.69
Total Current Liabilities	303,510,229.29	272,792,994.75
Noncurrent Liabilities		
Notes and Bonds Payable	391,199,309.69	402,789,561.59
Capital Lease Obligations	94,752,176.30	98,021,056.95
Compensated Absences	36,800,119.68	34,341,708.57
Total Noncurrent Liabilities	522,751,605.67	535,152,327.11
TOTAL LIABILITIES	$ 826,261,834.96	$ 807,945,321.86
NET ASSETS		
Invested in Capital Assets, net of Related Debt	$ 1,843,710,114.76	$ 1,688,333,936.71
Restricted for		
Nonexpendable	140,550,796.92	152,840,710.09
Expendable	158,868,322.66	190,004,088.87
Student Loans	103,676,773.97	102,215,103.25
Other	93,864,605.72	136,852,425.10
Unrestricted	58,898,238.41	86,711,801.10
TOTAL NET ASSETS	$ 2,399,568,852.44	$ 2,356,958,065.12

The accompanying notes to the financial statements are an integral part of these statements.

Statements of Revenues, Expenses and Changes in Net Assets

University of Wisconsin System - MADISON

	Year ended June 30, 2008	Year ended June 30, 2007
OPERATING REVENUES		
Student Tuition and Fees (net of Scholarship Allowances of $34,807,307 and $30,807,322, respectively)	$ 312,674,823.74	$ 293,734,727.46
Federal Grants and Contracts	467,086,431.45	488,669,728.89
State, Local and Private Grants and Contracts	173,935,367.33	168,395,758.04
Sales and Services of Educational Activities	163,169,563.18	146,892,755.01
Sales and Services of Auxiliary Enterprises (net of Scholarship Allowances of $4,923,008 and $4,514,038, respectively)	114,446,317.66	98,045,014.67
Sales and Services to UW Hospital Authority	45,864,626.34	45,930,606.68
Student Loan Interest Income and Fees	1,266,337.11	1,227,424.32
Other Operating Revenue	97,880,651.38	107,063,697.20
Total Operating Revenues	1,376,324,118.19	1,349,959,712.27
OPERATING EXPENSES		
Salary and Fringe Benefits	1,358,500,565.21	1,297,918,388.95
Scholarship and Fellowships	43,115,149.64	40,271,471.37
Supplies and Services	559,023,121.56	507,388,244.56
Other Operating Expenses	1,054,635.58	1,640,276.49
Depreciation	112,441,398.44	105,777,753.47
Total Operating Expenses	2,074,134,870.43	1,952,996,134.84
OPERATING INCOME (LOSS)	(697,810,752.24)	(603,036,422.57)
NON-OPERATING REVENUES AND EXPENSES		
State Appropriations	391,637,015.94	363,900,811.51
Gifts	258,463,827.20	222,048,883.47
Investment Income (net of Investment Expense)	1,107,636.76	56,821,690.28
Loss on Disposal of Capital Assets	(2,098,842.37)	(1,814,573.11)
Interest on Indebtedness	(19,187,024.02)	(17,306,453.45)
Transfer to State Agencies	(29,608,631.88)	(16,556,344.76)
Other	7,570,952.92	20,178,353.91
Income Before Capital and Endowment Additions/Deductions	(89,925,817.69)	24,235,945.28
Capital Appropriations	67,739,976.98	88,105,988.79
Capital Contributions	64,474,654.56	111,137,067.76
Additions to Permanent Endowment	167,153.74	2,638,003.29
INCREASE IN NET ASSETS	42,455,967.59	226,117,005.12
NET ASSETS		
Net Assets - beginning of period	2,356,958,065.12	2,131,856,719.18
Prior Period Adjustment	154,819.73	(1,015,659.18)
NET ASSETS - end of period	$ 2,399,568,852.44	$ 2,356,958,065.12

The accompanying notes to the financial statements are an integral part of these statements.

Statements of Cash Flows

University of Wisconsin System - MADISON

	Year ended June 30, 2008	Year ended June 30, 2007
Cash Flows from Operating Activities		
Student Tuition and Fees	$ 312,224,938.60	$ 292,842,856.06
Federal, State, Local and Private Grants & Contracts	603,059,930.33	659,710,804.30
Sales and Services of Educational Activities	160,695,079.14	146,022,750.11
Sales and Services of Auxiliary Enterprises	127,391,555.61	99,560,480.87
Sales and Services to UW Hospital Authority	47,601,848.16	47,829,372.80
Payments for Salaries and Fringe Benefits	(1,289,684,425.40)	(1,288,632,932.76)
Payments to Vendors and Suppliers	(557,148,684.85)	(525,897,747.06)
Payments for Scholarships and Fellowships	(43,115,149.64)	(40,271,471.37)
Student Loans Collected	10,324,913.50	14,441,654.38
Student Loan Interest and Fees Collected	1,266,337.11	1,227,424.32
Student Loans Issued	(12,665,495.99)	(18,688,696.53)
Other Revenue (Expense)	77,844,090.09	115,951,727.24
Net Cash Used in Operating Activities	(562,205,063.34)	(495,903,777.63)
Cash Flows from Investing Activities		
Interest and Dividends on Investments, Net	14,259,646.05	15,966,238.95
Proceeds from Sales and Maturities of Investments	172,738,719.38	170,178,129.82
Purchase of Investments	(165,102,536.45)	(187,180,603.71)
Net Cash Provided by Investing Activities	21,895,828.98	(1,036,234.94)
Cash Flows from Capital and Related Financing Activities		
Proceeds from Issuance of Capital Debt	7,133,272.89	117,160,640.21
Capital Appropriations	67,739,976.98	88,105,988.79
Gifts and Other Receipts	64,003,139.36	111,263,313.55
Purchase of Capital Assets	(263,587,952.63)	(279,600,032.50)
Principal Payments on Capital Debt and Leases	(55,681,118.44)	(56,676,322.51)
Interest Payments on Capital Debt and Leases	(45,935,179.16)	(41,696,476.05)
Net Cash Used in Capital and Related Financing Activities	(226,327,861.00)	(61,442,888.51)
Cash Flows from Noncapital Financing Activities		
State Appropriations	449,741,468.28	424,220,527.81
Gifts and Other Receipts	266,355,746.83	243,321,238.64
Transfer to State Agencies	(29,608,631.88)	(16,556,344.76)
Additions to Permanent Endowments	167,153.74	2,638,003.29
Student Direct Lending Receipts	-	-
Student Direct Lending Disbursements	-	-
Net Cash Provided by Noncapital Financing Activities	686,655,736.97	653,623,424.98
Net Increase in Cash and Cash Equivalents	(79,981,358.39)	95,240,523.90
Cash and Cash Equivalents - beginning of year	314,392,958.96	220,168,094.29
Prior Period Adjustment	-	(1,015,659.23)
Cash and Cash Equivalents - end of year	$ 234,411,600.57	$ 314,392,958.96

Reconciliation of Operating Income (Loss) to Net Cash Used in Operating Activities

Operating Income (Loss)	$ (697,810,752.24)	$ (603,036,422.57)
Adjustments to Reconcile Operating Income (Loss) to Net Cash Used in Operating Activities:		
Depreciation Expense	112,441,398.44	105,777,753.47
Changes in Assets and Liabilities:		
Receivables, net	(15,825,956.33)	26,381,459.00
Inventories	(731,902.73)	(2,330,861.58)
Prepaid Expense	(1,213,626.30)	(615,751.15)
Deferred Charges	1,322,715.75	(1,535,354.38)
Accounts Payable and Accrued Liabilities	69,175,581.95	(11,109,394.97)
Deferred Revenue	(31,700,329.73)	(15,802,521.23)
Compensated Absences	2,137,807.85	6,367,315.78
Net Cash Used in Operating Activities	$ (562,205,063.34)	$ (495,903,777.63)

Noncash Investing, Capital and Financing Activities

Capital Leases (Initial Year):		
Fair Market Value	$ 2,019,950.00	$ 78,848,685.00
Current Year Cash Payments	(37,568.05)	(40,428.76)
Gifts-In-Kind	3,432,024.00	3,968,651.00
Net Change in Unrealized Gains and Losses	(34,775,694.59)	26,625,071.77

The accompanying notes to the financial statements are an integral part of these statements.

Statements of Net Assets

University of Wisconsin System - MADISON

	June 30, 2007	June 30, 2006
ASSETS		
Current Assets:		
Cash and Cash Equivalents	$ 314,392,958.96	$ 220,168,094.29
Accounts Receivable, Net	160,072,776.83	192,760,066.91
Student Loans Receivable, Net	16,484,535.34	15,944,816.83
Capital Lease Receivable	2,254,381.62	2,788,381.04
Inventories	23,955,015.58	21,624,154.00
Prepaid Expenses	14,668,447.50	14,052,696.35
Deferred Charges	5,397,341.10	3,599,063.60
Total Current Assets	537,225,456.93	470,937,273.02
Noncurrent Assets		
Endowment Investments	339,299,065.48	282,285,332.33
Student Loans Receivable, Net	69,201,473.10	66,026,656.22
Capital Lease Receivable	9,717,595.90	11,972,255.46
Land	54,980,008.70	52,751,246.71
Improvements Other Than Buildings, Net	48,213,451.34	32,683,860.36
Construction in Progress	157,853,056.93	210,983,558.80
Buildings, Net	1,247,997,099.85	963,526,843.43
Equipment, Net	207,657,049.93	204,282,482.81
Library Holdings	492,759,128.82	482,279,523.82
Total Noncurrent Assets	2,627,677,930.05	2,306,791,759.94
TOTAL ASSETS	$ 3,164,903,386.98	$ 2,777,729,032.96
LIABILITIES		
Current Liabilities		
Accounts Payable and Accrued Liabilities	$ 118,259,755.22	$ 124,535,941.24
Notes and Bonds Payable	17,696,764.71	15,468,665.70
Capital Lease Obligations	2,618,475.61	2,402,366.62
Deferred Revenue	98,946,807.53	114,749,328.76
Compensated Absences	35,003,872.99	32,937,279.58
Deposits of Student Organizations	267,318.69	290,765.77
Total Current Liabilities	272,792,994.75	290,384,347.67
Noncurrent Liabilities		
Notes and Bonds Payable	402,789,561.59	303,156,090.45
Capital Lease Obligations	98,021,056.95	22,290,889.46
Compensated Absences	34,341,708.57	30,040,986.20
Total Noncurrent Liabilities	535,152,327.11	355,487,966.11
TOTAL LIABILITIES	$ 807,945,321.86	$ 645,872,313.78
NET ASSETS		
Invested in Capital Assets, net of Related Debt	$ 1,688,333,936.71	$ 1,639,908,974.26
Restricted for		
Nonexpendable	152,840,710.09	130,825,535.38
Expendable	190,004,088.87	168,723,598.07
Student Loans	102,215,103.25	99,687,332.49
Other	136,852,425.10	84,725,078.88
Unrestricted	86,711,801.10	7,986,200.10
TOTAL NET ASSETS	$ 2,356,958,065.12	$ 2,131,856,719.18

The accompanying notes to the financial statements are an integral part of these statements.

Statements of Revenues, Expenses and Changes in Net Assets

University of Wisconsin System - MADISON

	Year ended June 30, 2007	Year ended June 30, 2006
OPERATING REVENUES		
Student Tuition and Fees (net of Scholarship Allowances of $30,807,322 and $26,981,053, respectively)	$ 293,734,727.46	$ 273,069,125.63
Federal Grants and Contracts	488,669,728.89	518,471,004.04
State, Local and Private Grants and Contracts	168,395,758.04	175,348,870.50
Sales and Services of Educational Activities	146,892,755.01	122,483,311.77
Sales and Services of Auxiliary Enterprises (net of Scholarship Allowances of $4,514,038 and $4,078,199 respectively)	98,045,014.67	108,571,612.48
Sales and Services to UW Hospital Authority	45,930,606.68	49,718,925.45
Student Loan Interest Income and Fees	1,227,424.32	1,145,638.53
Other Operating Revenue	107,063,697.20	79,825,377.94
Total Operating Revenues	1,349,959,712.27	1,328,633,866.34
OPERATING EXPENSES		
Salary and Fringe Benefits	1,297,918,388.95	1,250,197,469.05
Scholarship and Fellowships	40,271,471.37	40,415,866.32
Supplies and Services	507,388,244.56	504,852,711.23
Other Operating Expenses	1,640,276.49	77,435.15
Depreciation	105,777,753.47	100,495,554.24
Total Operating Expenses	1,952,996,134.84	1,896,039,035.99
OPERATING INCOME (LOSS)	(603,036,422.57)	(567,405,169.65)
NON-OPERATING REVENUES AND EXPENSES		
State Appropriations	363,900,811.51	359,015,771.44
Gifts	222,048,883.47	197,064,879.23
Investment Income (net of Investment Expense)	56,821,690.28	41,157,280.87
Loss on Disposal of Capital Assets	(1,814,573.11)	(4,483,419.92)
Interest on Indebtedness	(17,306,453.45)	(14,011,932.02)
Transfer to DOA	(16,556,344.76)	(16,608,864.85)
Other	20,178,353.91	12,579,353.92
Income Before Capital and Endowment Additions/Deductions	24,235,945.28	7,307,899.02
Capital Contributions	199,243,056.55	87,060,928.43
Additions to Permanent Endowment	2,638,003.29	185,874.14
INCREASE IN NET ASSETS	226,117,005.12	94,554,701.59
NET ASSETS		
Net Assets - beginning of period	2,131,856,719.18	2,000,372,568.48
Prior Period Adjustment	(1,015,659.18)	36,929,449.11
NET ASSETS - end of period	$ 2,356,958,065.12	$ 2,131,856,719.18

The accompanying notes to the financial statements are an integral part of these statements.

Statements of Cash Flows

University of Wisconsin System - MADISON

	Year ended June 30, 2007	Year ended June 30, 2006
Cash Flows from Operating Activities		
Student Tuition and Fees	$ 292,842,856.06	$ 269,649,579.63
Federal, State, Local and Private Grants & Contracts	659,710,804.30	696,150,921.31
Sales and Services of Educational Activities	146,022,750.11	119,300,781.70
Sales and Services of Auxiliary Enterprises	99,560,480.87	105,801,309.55
Sales and Services to UW Hospital Authority	47,829,372.80	47,460,263.83
Payments for Salaries and Fringe Benefits	(1,288,632,932.76)	(1,301,448,691.77)
Payments to Vendors and Suppliers	(525,897,747.06)	(471,667,441.44)
Payments for Scholarships and Fellowships	(40,271,471.37)	(40,415,866.32)
Student Loans Collected	14,441,654.38	18,034,389.37
Student Loan Interest and Fees Collected	1,227,424.32	1,145,638.53
Student Loans Issued	(18,688,696.53)	(17,589,184.06)
Other Revenue (Expense)	115,951,727.24	97,307,370.49
Net Cash Used in Operating Activities	(495,903,777.63)	(476,270,929.18)
Cash Flows from Investing Activities		
Interest and Dividends on Investments, Net	15,966,238.95	9,945,284.18
Proceeds from Sales and Maturities of Investments	170,178,129.82	426,647,374.49
Purchase of Investments	(187,180,603.71)	(382,289,032.31)
Net Cash Provided by Investing Activities	(1,036,234.94)	54,303,626.36
Cash Flows from Capital and Related Financing Activities		
Proceeds from Issuance of Capital Debt	205,266,629.00	74,190,840.41
Gifts and Other Receipts	111,263,313.55	27,072,404.91
Purchase of Capital Assets	(279,600,032.50)	(243,758,423.29)
Principal Payments on Capital Debt and Leases	(56,676,322.51)	(50,232,393.39)
Interest Payments on Capital Debt and Leases	(41,696,476.05)	(33,815,533.53)
Net Cash Used in Capital and Related Financing Activities	(61,442,888.51)	(226,543,104.89)
Cash Flows from Noncapital Financing Activities		
State Appropriations	424,220,527.81	409,295,236.99
Gifts and Other Receipts	243,321,238.64	209,319,999.25
Transfer to DOA	(16,556,344.76)	(16,608,864.85)
Additions to Permanent Endowments	2,638,003.29	185,874.14
Student Direct Lending Receipts	-	-
Student Direct Lending Disbursements	-	-
Net Cash Provided by Noncapital Financing Activities	653,623,424.98	602,192,245.53
Net Increase in Cash and Cash Equivalents	95,240,523.90	(46,318,162.18)
Cash and Cash Equivalents - beginning of year	220,168,094.29	266,478,385.15
Prior Period Adjustment	(1,015,659.23)	7,871.32
Cash and Cash Equivalents - end of year	$ 314,392,958.96	$ 220,168,094.29

Reconciliation of Operating Income (Loss) to Net Cash Used in Operating Activities

Operating Income (Loss)	$ (603,036,422.57)	$ (567,405,169.65)
Adjustments to Reconcile Operating Income (Loss) to Net Cash Used in Operating Activities:		
Depreciation Expense	105,777,753.47	100,495,554.24
Changes in Assets and Liabilities:		
Receivables, net	26,381,459.00	(2,702,839.49)
Inventories	(2,330,861.58)	520,244.17
Prepaid Expense	(615,751.15)	(1,006,971.53)
Deferred Charges	(1,535,354.38)	2,393,724.13
Accounts Payable and Accrued Liabilities	(11,109,394.97)	(24,799,536.02)
Deferred Revenue	(15,802,521.23)	11,407,478.65
Compensated Absences	6,367,315.78	4,826,586.32
Net Cash Used in Operating Activities	$ (495,903,777.63)	$ (476,270,929.18)

Noncash Investing, Capital and Financing Activities

Capital Leases (Initial Year):		
Fair Market Value	$ 78,848,685.00	$ 4,678,015.70
Current Year Cash Payments	(40,428.76)	(28,768.86)
Gifts-In-Kind	3,968,651.00	874,545.00
Net Change in Unrealized Gains and Losses	26,625,071.77	(8,405,086.33)

The accompanying notes to the financial statements are an integral part of these statements.

Patrick L. Christian

1210 W. Dayton Street
Madison, WI 53706
(608) 265-9699
Patrick.Christian@doit.wisc.edu

EDUCATION

Master of Business Administration
University of Wisconsin - Madison
Major: Management; GPA: 3.9 / 4.0

Bachelor of Business Administration
University of Wisconsin - Oshkosh
Major: Management Information Systems; Minor: Computer Science; GPA: 3.2 / 4.0

EXPERIENCE

July 2008 to present

Assistant Director, Network Services
University of Wisconsin – Division of IT Madison, WI

- Direct operational, financial and personnel activities of WAN Services team
- Develop and manage contracts and service level agreements to provide network management services for long-haul and metropolitan transport and data networks services
- Perform short and long-range planning and customer outreach
- Responsible for creating and implementing procedures, operating and strategic planning

Oct. 2004 to June 2008

Project Manager/Information Technology Consultant
University of Wisconsin – Division of IT Madison, WI

- □ anaged design, procurement, implementation and operation of a $12 million, 1500 mile fiber-optic (DWDM) network in the upper Midwest (BOREAS-Net)
- Won contract for and managed operations integration of a State of North Dakota 750 mile DWDM network (NTN-ND)
- □ anaged design, procurement, implementation and operations integration of a $2 million, 325 mile fiber-optic (DWDM) network in Wisconsin (CORE-W)
- Project managed multiple, simultaneous network and information technology projects for UW-Madison, UW-System and WiscNet
- Organized collaborations with education, government and commercial entities to facilitate technology and information sharing
- Administered remote connectivity for off-campus departments
- Delivered presentations and represented UW at various conferences

Dec. 2005 to July 2008

CIC OmniPoP Technical Advisory Committee Chairperson
Committee on Institutional Cooperation (CIC) Chicago, IL

- Developed data network exchange business model and multi-year budgets
- Created network exchange governance model and operations framework
- Initiated strategic planning to develop mission, vision, shared values and multi-year organization roadmap
- Lead consortium and communicated with all Big10 Chief Information Officers
- Initiated consortium network interconnect opportunities such as the Big Ten (TV) Network, Internet2, ESNet and other education and research networks

May 1998 to Sept. 2004

Network Architect
WiscNet Madison, WI

- Designed, configured, deployed, and maintained a statewide network connecting Wisconsin K-20 education, library and government institutions
- Created new services and marketing plans for target markets
- Performed information technology management consulting for members
- Managed customer network connectivity and services installation projects
- Developed and trained operations support teams on business and technical system procedures and policies
- Participated in operations, marketing and finance strategic planning

Richard A. Beadles Office: (608) 261-9649 Cell: (608) 575-3571
City of Madison Data Center Manager [redacted]
210 Martin Luther King Jr. Blvd. Room 500 53703-3349 rbeadles@cityofmadison.com

Experience: City of Madison Information Technology Manager with 31 years of professional IT experience, including 20+ years in a supervisory and management capacity. Proven visionary experience in directing, developing and leading a broad range of city-wide IT initiatives and applications that include: comprehensive network security, disaster recovery, network change and management, policy and procedures development, and public safety operations. In-depth experience in producing and overseeing multi-million dollar operating and capital budgets. Extensive collaborative experience with local, state, regional and federal inter-governmental projects.

Examples of Relevant Expertise with projects of similar size, scope & complexity:

Network Security: As the City Chief Network Security Officer, authored and implemented the *City of Madison Network Policies and Procedures* that govern city-wide security protocols, email usage and internet and intranet; manage all activities related to the assessment, testing, documentation and resolution of network critical system vulnerabilities.

Network Change: As Chairperson of the Change Management Team, designed and implemented the City's *Planned Change Management* and *Problem Management program.*

Continuity of Operations (Disaster Recovery): Developed the Information Technology *Continuity of Operations Plan* and continue to lead the implementation and ongoing administration of this plan.

IT Planning: Charter member of the Information Technology Plan Team, whose mission is to " provide leadership and oversight to the IT Department's short-term and long-term plans".

Budget: As part of the IT Management Team, develop and administer the department's $4.5 million dollar operating budget and our $5.9 million dollar capital budget.

Network Management: Manage an extensive network that provides services to over 1600 City employees at 80 locations located throughout the City of Madison. Direct all operations for the City network infrastructure that includes voice, data, and storage using multiple forms of connectivity including wireless point-to-point, fiber-optic, wireless mesh, and leased circuits. Responsible for the cross functional management of the Help Desk Support team, the Network Communications Team, and the Network Administration Team.

Inter-governmental Projects: Collaborated with numerous government jurisdictions, i.e., Dane County IT, Madison Metropolitan School District, UW- Madison, WI Dept. of Justice (DOJ) to provide shared disaster recovery sites and shared fiber-optic network connections.

Public Safety: IT project Lead for the Madison Police Department for 20+ years. Served in an advisory capacity and helped to coordinate and implement numerous projects: Digital video cameras in all patrol vehicles, the Downtown Safety Initiative, which installed video surveillance cameras in the State St. area of downtown Madison. Participated in an interagency RFP project to develop the new multi-jurisdictional P25 compliant county-wide radio system.

Paul Nazario

[redacted]

Email: nazario@doit.wisc.edu
608.262.2595

Experience:

University of Wisconsin, Division of Information Technology, Madison, WI.
Network Engineer. September 2002 – Present

- Fiber transport engineer. Specify, manage and operate fiber optic networks for the University of Wisconsin. Design and manage installation of fiber optic networks to build metropolitan fiber transport networks. Operate and troubleshoot installed fiber optic networks using OTDR and other tools.

  Projects include:

  1. Assisted with installation of fiber optic ring network connection to off-campus Atmospheric and Space Sciences IceCube project. Configured and installed 10 Gigabit redundant routed Ethernet ring network. Completed 2004.
  2. Installation of fiber optic network connection to off-campus Applications Development and Multimedia technologies group. Network design is Gigabit Ethernet. Completed in 2007.
  3. Installation of fiber optic network connection to off-campus Continuing Medical Education department. Network design is Gigabit Ethernet. Completed in 2007.
  4. Installation of fiber optic network connection to the University of Wisconsin's Metro Innovation Center – a medical and high-tech business incubator. Network design is Gigabit Ethernet. Completed in 2008.
  5. 2009: Installation of redundant fiber optic ring network connecting community hospital and data center. Network supports 10 Gigabit Ethernet. To be completed in Fall 2009.

- Network Management Technologist. Installed, operate and maintain OpenView Network Node Manager for campus and wide area network consisting of 4,500 network switches and routers. Install, manage and maintain Optical Transport Network Management System that provisions and monitors 2,500-mile regional network in six states.

iNOC, Inc., Northbrook, IL
Founding Partner and Lead Engineer. December 1999 – March 2003

- Worked under contract with a national broadband telecommunications company to roll out broadband service to new customers and monitor network.
- Provide technical leadership to engineers and network management staff.
- Lead the research and development of network management software.

University of Wisconsin, Division of Information Technology, Madison, WI.
Network Engineer. November 1995 – December 2001

- Campus network architect. Assist management in the evolution of the UW campus network in order to meet the demanding challenges of an R1 research and education institution. Working with other senior engineers, research, design and upgrade the campus network and its peering relationships to provide world-class network services.
- Lead Cisco Router network engineer. Install, maintain and manage core campus and WAN routers. Work with other network engineers and vendors to design, upgrade, and maintain campus ATM network and departmental networks. Principle components include Cisco routers, Cisco Catalyst edge devices and Fore ATM switches.
- Network Level II support. Provide technical support to UW-Madison departments in diagnosing and fixing network problems. Have experience using network analyzers and other tools to debug physical and protocol level problems on Ethernet, ATM, LANE and ISDN networks running IP, IPX, AppleTalk and DECNet protocols. Provide high-end troubleshooting for junior engineers.
- Helped organize and coordinate UW-Madison backbone upgrade from FDDI network into ATM LANE network. Working with other network engineers, specified network hardware, hot-staged and installed high-speed ATM network during the summer of 1997.

Education

University of Kansas, Lawrence, KS. BS in Computer Science, 1988.

Albert G. Krug, Ph.D.
Senior Strategic Consultant
Network Services
Division of Information Technology
University of Wisconsin - Madison
1210 W. Dayton St., Madison, WI 53706
office: (608) 262-9502, cell: (608) 279-5526
agkrug@wisc.edu

Experience Summary: Over 25 years experience as information technology consultant in higher education including senior staff positions involving strategic planning, policy development and project management.

Examples of Relevant Expertise with projects of similar size, scope & complexity:

Building Automation Network Upgrade: Project manager for transitioning the campus Building Automation Network (BAN) to campus data network for over 100 buildings. BAN provides services to manage heating, ventilation and air conditioning control plus access control, video security and elevator monitoring. Significant savings to campus were from elimination of a separate fiber network and use of standard equipment managed centrally. November 2007 – August 2009

21st Century Network Upgrade: Serve as primary liaison between the Division of Information Technology and campus workgroups for transition of the supported network from building connections to office data jacks while standardizing network electronics. Work with users to identify network needs and negotiate network management relationship. Identify network management functions with users and advocate for their development in new network management toolset. Participate in policy development. Project scope included inter and intra-building fiber, data jacks, electronics, firewalls and local area network configuration. Assist with budget development. $16M, 200 buildings, 90K data ports, June 2002 – July 2006

Academic Computing Phase-Out: Work with over 2000 users of the academic computing Digital Equipment Vax to transition to alternate systems. Transitions for users of electronic mail and data archiving, especially legacy magnetic tape, were critical to preserving historical research data. September 1998-December 1999

Campus-Wide Email : Participate on project team to upgrade email services to the entire campus community including students from just serving faculty and staff. Work with team to determine functional requirements. Assist with planning for Help Desk and modem pool expansion. 1992-1993

Education:

University of Wisconsin - Madison, Doctor of Philosophy – Forest Biometrics
University of Wisconsin - Madison, Master of Science - Statistics
University of Connecticut - Storrs, Bachelor of Science – Mathematics
Universitaet Regensburg, Germany – Mathematics Independent Study

DANIEL C. DETTMANN, P.E.

City Of Madison Transportation
PO Box 2986
Madison, WI 53701-2986
608-266-6536
ddettmann@cityofmadison.com

Traffic Engineer with City Of Madison Traffic Engineering Division since 1973.

Registered Professional Engineer in Wisconsin Since 1979 (#E-18665)

Present Responsibilities

Head of the Traffic Signal and Street Lighting Unit (30 years)
Traffic Engineering Division has been responsible for City owned and maintained fiber optic cable in street right-of-ways for the past seven years.

Professional Associations

- Illuminating Engineering Society
  - Member since 1981
  - President, Badger Section, 1982-83
  - Acting Chairman, 1984 North Central Regional Conference of IES
- Institute of Transportation Engineers
  - Member for over 20 years
  - President, Wisconsin Section, 1990
  - Wisconsin Section Board of Direction, 1986-1991, including offices of Director, Secretary/Treasurer, and Vice-President
  - Legislative Review Committee for several years

Education

- University of Wisconsin-Madison, 1968-1974
  - BS-Civil and Environmental Engineering, 1972
  - MS-Civil and Environmental Engineering, 1974
  - Graduated with Honors
  - Member of Chi Epsilon (Civil Engineering) and Tau Beta Pi (Engineering) Honor Societies
  - Intercollegiate Baseball, 1968-1971
  - Focus was on Civil Engineering-Transportation and Business courses

DANIEL N. PARENTEAU parenteau@wisc.edu
[redacted]

OVERVIEW

- Over four years of professional experience as the primary support contact for a variety of optical networking technologies
- Over nine years of professional experience as the primary support contact for a variety of layer 2 and layer 3 networking technologies
- Excellent organizational, documentation, and troubleshooting skills
- Extensive experience in network support and documentation

EMPLOYMENT HISTORY

2005 – present *Systems Programmer* UW – Madison

- Deployment and troubleshooting of routing, switching and optical networking for campus and off campus connectivity.
- Participate in design and planning sessions for current and future Wiscnet backbone.
- One of the engineering team for BOREAS-Net, a 2000+ mile regional optical network using Infinera long haul DWDM gear.
- One of the engineering team for CoreW, a 300+ mile Wisconsin optical network using Cisco ONS long haul DWDM gear.
- Experience designing, planning and installing DC Power Systems, environmental alarms, Cisco 15454 ONS, Infinera DTN, passive CWDM and DWDM.
- Extensive experience installing, supporting and troubleshooting fiber optic cables, terminations and optics for both short and long haul applications.

2004 – 2005 *Network Services Specialist* UW – Madison NOC

- Network Operations Engineer responsible for monitoring and troubleshooting of campus and Wiscnet networks.
- One of the primary engineers for designing and maintaining network monitoring systems and incident management procedures.
- Primary NOC engineer for HP Openview Network Node Manager.
- Responsibilities included designing, installing and maintaining systems for LAN and WAN connectivity, e-mail, file servers and databases.

EDUCATION

1987 - 89 Milwaukee Institute of Art and Design
1989 - 93 UW-Milwaukee, Bachelor of Fine Arts

Mark H. Evans
Director: Technical Services Division
Madison Metropolitan School District
545 W. Dayton St., Madison, WI 53703
office: (608) 663-5430, cell: [redacted]
mhevans@madison.k12.wi.us

Experience Summary: Over 20 years experience designing, implementing and managing large enterprise technology projects for local and state government agencies and in K-12 and post-secondary education; manage budgets over $3 million per year

Examples of Relevant Expertise with projects of similar size, scope & complexity:

Virtual Server Deployment: led planning and implementation of virtual server host environment to improve management of over 170 servers, reduce energy consumption and reduce capital investment costs; project began in 2006 and will be complete by Nov. 2009; estimated savings in capital, energy and labor: over $100,000 per year

Storage Area Network: led planning and implementation of a primary and secondary Storage Area Network to increase network data and application reliability, improve data security and improve disaster recovery preparedness; project began in 2007 and was completed in July 2009; collaborated with IT staff in City of Madison and Dane County to share use of a secure disaster recovery site for NOC-2, saving Madison Metropolitan School District over $100,000 in initial construction costs and over $10,000 per year in facilities maintenance costs; total project estimated savings in capital, energy and labor: over $100,000 per year

Document Management System: led selection process and implementation of enterprise document management system to increase efficiency in storage, retrieval and security of student and administrative records, comply with FBI security audit requirements, reduce energy consumption and reduce costs of expendables, storage and document transportation; project began in summer 2007 and remains in staged implementation; estimated savings in storage, energy and labor: over $50,000 per year

Telecommunications Upgrade: collaborated with facilities and telecommunications staff to implement upgrades to enterprise digital voice and WAN data systems; project began in fall 2007 and completed in spring 2009; savings of $35,000 per year

eRate: have managed 9 years of federal eRate telecommunications records and forms' submission on behalf of 25,000 student school district; generating over $3 million in reimbursements and service discounts

Technology Strategic Planning: have led 5 technology strategic planning efforts on behalf of a state agency and a 25,000 student school district; included 2 Gartner TCO studies

Education:

Cornell University, Ithaca, New York: Bachelor of Science
Syracuse University, Syracuse, New York: Master of Science
State University of New York: ES&F, Syracuse, New York: Master of Science
University of Wisconsin, Madison, Wisconsin: Certified Public Manager®

BTOP: Q 37: MUFN: Management and Project Team Resumes and Summary

The Metropolitan Unified Fiber Network Management Team consists of individuals with extensive experience in building and operating enterprise and carrier-class communication systems. The team hails from the City of Madison (population 203,704), Madison Metropolitan School District (24,198 students) and the University of Wisconsin – Madison (UW) (42,030 students). The management team includes Patrick Christian, Richard Beadles, Paul Nazario and Albert Krug who along with Daniel Dettmann, Daniel Parenteau and Mark Evans constitute the project team.

Leadership is provided by Patrick Christian, Assistant Director of Wide Area Networking at the Division of Information Technology (DoIT) at UW-Madison, whose vision for a metropolitan data network and long standing collaborative relationships with anchor institutions formed the foundation for the MUFN effort. He brings over a decade of high level experience with state-wide (WiscNet, North Dakota) and regional (Boreas-Net, Core-W) optical and data networks along with a degree in computer science and a masters in business administration. He will be responsible for planning, high level design, administration, and financial oversight. Richard Beadles, City of Madison Information Technology manager for over 20 years, represents a key anchor institution with a significant number of connections as well as enabling collaboration with the city's traffic engineering department for collaboration regarding space in installed conduit. He also is principal investigator for the Madison Broadband Initiatiive (MBI), a complementary grant proposal. Paul Nazario, as chief network engineer, brings extensive experience as campus network architect including provisioning the network to university workgroups in the greater metropolitan region. He has additional experience with implementing monitoring systems for large scale (4,500 switches and routers) higher education campus networks and long haul (2,500 mile) fiber networks. Albert Krug has over 20 years experience as technical liaison to higher education users for technology services. As a member of the recent campus network upgrade project ($16M, 200 buildings, 90K data jacks) he coordinated assessment of user needs and negotiated shared management agreements. He has also been involved in planning and policy as senior staff at the Division of Information Technology.

The project team also includes members who provide expertise and leadership in specialized areas. Daniel Dettmann, City of Madison Traffic Engineering Division, brings over 30 years of engineering experience with traffic signaling and managed the migration of signaling to a fiber based network. He was instrumental in negotiating shared access to fiber infrastructure that is the basis a large part of MUFN infrastructure. Daniel Parenteau, an operational network engineer at DoIT with extensive experience with monitoring optical transit networks will participate in design, implementation and ongoing monitoring of MUFN. Mark Evans, as Director of Management Information Systems at the Madison Metropolitan School District (48 Schools plus administration buildings with over 25K students) represents another major MUFN anchor tenant as well as representing end users served by the complementing MBI proposal.

Beyond the project team, additional extensive technology resources are available from the respective organizations such as infrastructure engineering resources through the City of Madison and the network engineering and network operations center (7x24x365) at UW-Madison. Supplementing these resources are well developed relationships with contractors such as Cable Constructors Incorporated who provide fiber cable installations in the region.