

## SUMMARY OF UW SYSTEM PRIORITIES FOR FISCAL YEAR 2006

### ACADEMIC ADVANCED DISTRIBUTED LEARNING CO-LABORATORY

- The concept of the Advanced Distributed Learning initiative is similar to the social change electrification brought about in the last century. For example, a toaster can be plugged into any outlet in America and it will work. By putting education and training into one format, with a harmonized set of guidelines, specifications and standards, the Co-Lab is ensuring that learning content that is created and delivered in California can also be used in Wisconsin – just like plugging in the toaster. This is cutting-edge technology and reflects the next generation of learning. Wisconsin is at the forefront of this national effort.

### STATE OF WISCONSIN INITIATIVE TO FAST-TRACK NURSE EDUCATORS ("SWIFT NURSE EDUCATORS")

- The State of Wisconsin Initiative to Fast-Track Nurse Educators proposal will reduce the greatest barrier to producing a sufficient and diverse nursing workforce by increasing the number of nurse educators. The SWIFT Nurse Educators is a public/private partnership between the Wisconsin Technical College system, eleven Wisconsin Workforce Development Boards, the Wisconsin Department of Workforce Development, private sector health care associations, providers, business and labor communities, and the University of Wisconsin System. The request for federal funds is matched more than dollar-for-dollar by the public and private sectors in Wisconsin.

### WISCONSIN SECURITY RESEARCH CONSORTIUM

- The Wisconsin Security Research Consortium proposal will lay the groundwork for more Wisconsin participation in our nation's continuing effort to secure our homeland and our citizens and interests around the world. The United States continues to embrace its stance against terrorism and strives to maintain peace abroad as well as at home. Homeland security remains of the utmost importance to our nation. Wisconsin has many unique and resourceful public and private institutions that can help the nation in the homeland security arena. It is important that Wisconsin is positioned to be a strong partner with the federal government in addressing current and future homeland security challenges and needs.

### BUILDING A DIGITAL INFRASTRUCTURE FOR COMMUNITY-BASED HEALTH CARE EDUCATION

- A group of interested people in Barron, Chippewa, Clark, Dunn, Eau Claire, Pepin, Pierce, Polk and St. Croix Counties have been meeting annually to develop a strategic, regional approach to economic development. Called "Synergy Conferences," – forums for communication, convergence, and cooperation – the first resulted in the development

of Community/Regional Act Plans. The second Synergy conference looked at the challenges facing the region and how regional partnerships can come together to shape the future. “Building a Digital Infrastructure for Community-based Health Care Education” was an initiative identified by the group to assist individuals, families and communities to improve the nutritional quality of their dietary choices and the overall health of the region’s citizens.

#### THE COLLABORATIVE LANGUAGE PROGRAM: EXPANSION, COMMUNITY AND COMMUNITY BUILDING

- Federal funding is being sought to expand the Collaborative Language Program. The Collaborative Language Program teaches less commonly taught languages throughout Wisconsin and provides critical language instruction on campuses that are otherwise unable to support these offerings. Since its inception, 12 UW campuses have participated in the language program and, this year, six campuses requested Arabic. Due to insufficient resources, this demand is not being met. With additional funding, the Collaborative Language Program will be able to expand in three areas – provide for additional courses in Arabic, use of technology to increase oral proficiency, and cultural understanding.

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REQUEST FOR FUNDS:

ACADEMIC ADVANCED DISTRIBUTED LEARNING CO-LABORATORY

**ORGANIZATION:** In November 1997, the Department of Defense and the White House Office of Science and Technology Policy, launched the Advanced Distributed Learning initiative to make various online training technologies work together. There are four Co-Labs operating internationally, and one, the Academic Advanced Distributed Co-Laboratory, is headquartered at the University of Wisconsin System. The Academic Advanced Distributed Co-Laboratory was established by a memorandum of agreement with the University of Wisconsin System, the Wisconsin Technical College System, and the United States Department of Defense. The Academic ADL Co-Lab tests standardized learning content to ensure it can be shared, integrated and used to expand the education and training needs of government, academic and industry. The Co-Lab is doing ground-breaking work in games for learning, learning delivered over mobile devices, as well as establishing digital libraries to store and share digital content.

**DESCRIPTION:** The concept of the Advanced Distributed Learning initiative is similar to the social change electrification brought about in the last century. For example, a toaster can be plugged into any outlet in America and it will work. By putting education and training into one format, with a harmonized set of guidelines, specifications and standards, the Co-Lab is ensuring that learning content that is created and delivered in California can also be used in Wisconsin—just like plugging in the toaster.

The Academic ADL initiative ensures web-based education and training conforms to the following “-ilities”:

- **Interoperability:** the ability to take instructional components developed in one system and use them in another system.
- **Accessibility:** the ability to locate and access instructional components from multiple locations and deliver them to other locations.
- **Reusability:** the ability to use instructional components in multiple applications, courses and contexts.
- **Durability:** the ability to withstand technology changes over time without costly redesign, reconfiguration or recoding.
- **Maintainability:** the ability to withstand content evolution and changes without costly redesign, reconfiguration or recoding.
- **Adaptability:** the ability to change to satisfy differing user needs

Examples of content developed by the Academic ADL Co-Lab include:

- The Academic ADL Co-lab was selected by the Department of Defense to create awareness training to combat Trafficking in Persons. Three versions were created for the classroom, online, and an Advanced Distributed Learning version. The materials will be used to train 500,000 individuals annually, including military personnel, DoD and other governmental civilians and civilian contractors;
- The Centers for Disease Control and the Academic ADL Co-Lab teamed up to develop an investigational pilot into creating a web-based game for public health

education. A game teaching prudent practice in disease investigation was produced. Through role-playing the part of a disease investigator, students can sleuth the disease and point of infection through interviews, in-game research, and laboratory findings. Feedback is delivered to the player through natural storyline progression.

- The Advanced Distributed Learning Co-Lab staff and UW-Madison School of Education faculty formed the Games and Professional Practice Simulations group to work together on games and learning. Graduate students assist with development of demonstration projects under the direction of faculty supervisors and in coordination with Academic ADL Co-Lab staff and get together for biweekly sharing sessions. The group assisted in facilitating the national “Games for Health” conference, the first-ever gathering of games developers, researchers, and healthcare experts who came together to discuss applications of games and game technologies to a variety of healthcare fields. The video game industry has experienced exceptional growth over the years, gaining a following of almost 90 million people between the ages of 15 and 35. As the commercial player base expands, researchers at the Co-Lab are implementing game-based technology that can be used in industrial and business settings.
- The Co-Lab is involved in a project with the Federation of American Scientists, and is creating a simulation that the Fire Department of New York will use to train fire chiefs. The program will produce 3D graphics of high-rise buildings and shopping malls to replicate what would happen in a fire. Once piloted, the simulation will be able to be used and adopted in other urban centers because the learning content will be developed in a standardized manner.
- The Co-Lab is in its third year of a three-year grant as the principal organization in “An Investigation of the Pedagogical and Economic Effectiveness of Sharable Content Objects, Using Standards, in Online Instruction.” Additionally the Co-Lab is working in a support role with the UW-Madison School of Nursing on their FIPSE grant entitled “The Nursing Education And Technology (NEAT) Project: Opening the Floodgates.” At the conclusion, there will be models to assist others with creating and using sharable content objects.

TIMETABLE: Ongoing.

CONTACT: Ed Meachen, UW System; 608.265.4622 or  
Judy Brown, Executive Director, Academic ADL Co-Lab; 608.263.9270

PAST FUNDING: In FY03, the Academic ADL Co-Lab received a federal appropriations of \$1 million. The funding has already provided critical infrastructure support. The Co-Lab is also the recipient of several public and private sector grants. It has successfully won federal competitive awards from FIPSE, NSF, Department of Commerce Technology Opportunities Program, Hewlett, Spencer and Sloan Foundations. However, even after receiving these awards, the Academic ADL Co-lab suffers from a budget gap between the awarded grants for specific projects and the “overhead,” or operational costs, of running the organization.

**COSTS:** The Co-Lab is seeking \$1.328 million in FY 06 for operational costs. Funding will stabilize the Co-lab going forward and provide a platform to generate additional funding. This has the advantage of returning some of our federal tax dollars to Wisconsin and ensuring that additional public-private dollars are brought into Wisconsin and the University System through competitive grants and contracts.

|                |                        |
|----------------|------------------------|
| Personnel      | \$1.138 million        |
| Infrastructure | \$ 190,000             |
| <b>TOTAL</b>   | <b>\$1.328 million</b> |

**SIGNIFICANCE:** Why are video games setting a new standard for learning? How can learning delivered over mobile devices such as cell phones be used by medical and safety personnel? How and why do modern video games reflect cutting-edge research on learning? What are the implications for the workplace and learning? How do we share education and training content that is developed for fire fighters in New York with fire fighters in Wisconsin, without recreating it? These questions are all being researched in Wisconsin at the Academic ADL Co-Lab. This is cutting-edge technology and reflects the next generation of learning. Wisconsin is at the forefront of this national effort.

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REQUEST FOR FUNDS:  
STATE OF WISCONSIN INITIATIVE TO FAST-TRACK NURSE EDUCATORS  
(“SWIFT NURSE EDUCATORS”)

ORGANIZATION: The *State of Wisconsin Initiative to Fast-Track Nurse Educators* (SWIFT Nurse Educators) proposal is a public/private partnership between the Wisconsin Technical College System, eleven Wisconsin Workforce Development Boards, the Wisconsin Department of Workforce Development, private sector health care associations, providers, business and labor communities, and the University of Wisconsin System. The lead agency is the University of Wisconsin-Milwaukee College of Nursing.

DESCRIPTION: In Wisconsin, as in states across the nation, both university and technical nursing programs currently have a long waiting list of qualified applicants who cannot gain admission. The SWIFT Nurse Educators proposal will reduce the greatest barrier to producing a sufficient and diverse nursing workforce by increasing the number of nurse educators. The model will:

**Goal 1: By 2007, increase by 70 the number of master’s-prepared nurses contractually committed to clinical educator positions in Wisconsin,** by encouraging Wisconsin employers to make significant investments like tuition and work release to prepare advanced nurses to teach nursing.

- Increase the number of second degree nursing students (non-nurses with other BS degrees) who progress through an accelerated curriculum to the master’s degree and teach nursing;
- Increase the number of advanced practice nurses in Wisconsin who are trained in teaching skills through a certificate in health professional education.

**Goal 2: Develop and implement modified graduate nursing curricula in all University of Wisconsin Schools and Colleges of Nursing that accelerate the preparation of master’s-prepared nurse clinicians or nurse clinical faculty from targeted groups of non-educators, including non-nurses, associate’s degree nurses, and master’s-degree nurses.**

- Review and revise nursing curricula in all UW System nursing schools to maximize the potential for accelerated progression through graduate curricula by increasing the use of targeted recruitment, flexible admissions and web-based teaching strategies;
- By 2007, enroll an additional 50 nurses with associate degrees into an accelerated RN-to-MS curriculum with a contractual obligation to teach in Wisconsin.

**Goal 3: Increase by 20 the number of underrepresented minority nurses enrolled in master’s programs who are contractually committed to teach nursing in Wisconsin.**

- Establish mechanisms to identify potential underrepresented minority candidates for graduate study and provide SWIFT Nurse Educators support for enrollment in these programs.

**Goal 4: Develop, implement and evaluate a multi-level, public/private partnership model for the recruitment and accelerated preparation of health professional educators that can be scaled nationally for nursing and/or transferred to other health professions.**

- Establish a statewide network of stakeholders committed to supporting long-term solutions to the nursing shortage with immediate emphasis on increasing the number of nurse educators throughout the state;
- Collect and analyze quantitative and qualitative data regarding statewide public/private partnerships to promote workforce stabilization.

**Goal 5: Promote replication and transferability to other states and other health professions to inform other similar efforts throughout the nation.**

- Develop and maintain an interactive web site that posts strategies developed, best practices, lessons learned, and materials developed through the SWIFT Nurse Educators project.

**Goal 6: Establish a system for the stabilization of the Wisconsin nursing workforce through consistent collection and analysis of nursing workforce data.**

- Consistently collect and analyze data in partnership with the regional Wisconsin Workforce Development Boards and the Wisconsin Nursing Redesign Consortium.

**TIMETABLE:** Projected activities will be carried out over two years.

**CONTACT:** Sally Lundeen, College of Nursing, UW-Milwaukee, 414.229.4189; and Tom Moore, Wisconsin Health Care Association; 608.257.0125.

**PAST FUNDING:** A similar proposal was submitted to the U.S. Department of Labor, Employment and Training Administration, because we were advised that unsolicited submissions could be considered. After it was submitted, DOL then decided to initiate a formal solicitation process. That first proposal was not funded, so it was scaled back and resubmitted. We hope DOL, when it announces its awards in February, will choose to fund the proposal. However, if it does not, we urge you to consider allocating ETA funding or other funding for this proposal.

**COSTS:** FY06 request of \$1,248,637 (matched by \$1,871,362 in public/private funds).

**SIGNIFICANCE:** All the partners involved in the SWIFT Nurse Educators proposal agree that there will not be enough nurses to meet the demands of Wisconsin residents in the future if additional resources are not allocated immediately to prepare more nursing faculty. This forecast is why they have come together to visualize, craft, sign onto and commit financial support to the proposal.



Where Local News  
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## No Easy Remedy for Nursing Instructor Shortage

Eau Claire  
Feb 1, 2005

Hospitals around the country are already dealing with a nursing shortage. Now, a new report says more nursing teachers are needed. Many of the teachers are about to retire and there are not enough new ones to replace them. It's a problem for UW-Eau Claire's nursing program. Right now, it has six open teaching positions it hasn't been able to fill. "Within the next three to five years, we will have nine faculty who will be ready to retire," says Dr. Elaine Wendt from UW-Eau Claire. "That added to our six vacancies is 15. That's half of our nursing faculty." Wendt says more funding is needed for teaching programs in order to help turn the trend around.

## **Shortage Of Hospital Workers Looms**

### **A Wisconsin Hospital Association Report Says That State Hospitals Are Having A Harder Time Finding Qualified Employees And That The Problem Is Going To Get Worse As Older Workers Retire And There Aren't Enough Trained Replacements.**

**Wisconsin State Journal :: LOCAL/WISCONSIN :: B1**

**Tuesday, February 1, 2005  
Beth Williams Wisconsin State Journal**

It's getting harder to keep Wisconsin hospitals staffed with qualified workers, from nurses to lab technicians, a report said Monday.

For patients, that could mean delays in receiving care, and for taxpayers, it could mean higher costs as the state is forced to boost education spending to train workers rapidly, officials said.

"A vacant position means preventive care has to be put off," said Judy Warmuth of the Wisconsin Hospital Association.

On Monday, the association released its first annual report on the state's hospital work force.

The report found staffing problems are only going to get worse as aging workers retire and younger people face long waiting lists for training to do those jobs.

And Wisconsin as a whole is getting older, meaning fewer health-care workers may have to care for more patients, officials said.

"We are not experiencing just another cyclical shortage in the health-care work force," said Joan Beglinger, vice president of patient care services at St. Mary's Hospital in Madison. "There's a perfect storm brewing."

The state Department of Workforce Development estimates that about 2,430 nursing jobs are created each year but fewer than 1,800 registered nurses join the work force. And nurses are getting older, with an average age of nearly 45, the report said.

Demand is growing even faster in some specialties. Demand for medical assistants, medical records clerks, physician assistants and home health aides is expected to rise more than 50 percent by 2012, the department estimates.

And people are interested in those careers.

"Health-care jobs are the kinds of jobs where a health-care worker can make a fair wage where they would be able to support themselves and their families," said Roberta Gassman, workforce development secretary.

But there's a problem. There aren't enough teachers and college budgets aren't big enough to handle all the students who want training.

"In the tech colleges, we have waiting lists for all the health-care careers approaching 6,000," said Eric Borgerding of the Wisconsin Hospital Association.

The problem isn't much better at four-year universities. At UW-Madison, the nursing school had to turn away 172 qualified applicants this fall, said Katharyn May, the school's dean.

The nursing school has increased its class sizes, started teaching in La Crosse and hopes to begin training for master's degrees online this fall, May said.

Rural hospitals rely almost exclusively on the technical colleges to provide their nurses, said Troy Marx, head of human resources for Upland Hills Health in Dodgeville. Of Upland's 90 nurses, only about 20 earned bachelor's degrees at four-year colleges, he said.

Pharmacists and some other specialists require four-year degrees. And smaller hospitals have an extremely difficult time luring them away from the city hospitals where they train, Marx said.

"You have to throw a lot of money at them to get them to come," he said.

Hospitals are also trying to capture new graduates through mentoring programs, tuition reimbursement and even by hiring students before graduation.

Tamera McConaughy, 22, was hired to transport patients around St. Mary's Hospital while she was attending Madison Area Technical College studying to become a radiology technician.

"I had never worked in the medical field so it was all new to me," she said. "Basically, a great way to get your foot in the door."

She had waited a year a half to be admitted to MATC's program but she didn't have to wait for a job.

"I was hired as a regular tech right before I finished school," McConaughy said.

Contact reporter Beth Williams at [bwilliams@madison.com](mailto:bwilliams@madison.com) or 252-6125.

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REQUEST FOR FUNDS:  
WISCONSIN SECURITY RESEARCH CONSORTIUM

ORGANIZATION: With the goal of maintaining peace and security abroad as well as at home, the United States continues to embrace its stance against terrorism and strives to maintain peace abroad as well as at home. Homeland security remains of the utmost importance to our nation. Consequently, there exists an urgent need to utilize the nation's intellectual capital to improve upon and protect the country's infrastructure and security. Each region of our nation must play a role in the fight against terrorism. Located in America's heartland, the state of Wisconsin is home to both academic and research powerhouses. These world-renowned institutions, including the University of Wisconsin-Madison, the University of Wisconsin-Milwaukee, the Medical College of Wisconsin, and the Marshfield Clinic hold the structural and intellectual ability to aid in America's war on terror. From the unparalleled research of central Wisconsin's UW-Madison and the Marshfield Clinic to the strategic location within the economic and industrial heart of the state of UW-Milwaukee and the Medical College of Wisconsin, these Wisconsin institutions possess an extensive and extraordinary array of resources to support the need for increased national security.

Not only does Wisconsin possess the capability to support such an effort, but also accepts the challenge and responsibility to do so. The Wisconsin Technology Council (Tech Council) was formed by the Wisconsin State Legislature. It is an independent, non-profit, non-partisan group that serves as the science and technology policy advisor to the Governor and the Legislature. The Tech Council's efforts are directed toward fostering technology-related opportunities for businesses located in Wisconsin. The Tech Council is the administrative headquarters of the Wisconsin Security Research Consortium (WSRC), which has recently created a Memorandum of Agreement to provide for the statewide academic and intellectual support of the cause to eradicate terrorism and enhance homeland security. Wisconsin must now move to catalog its technological assets to determine how those core competencies might best serve the nation.

DESCRIPTION: The United States Congress now finds itself in the next stage in the evolution of homeland security, and the 50 states, research institutions, and technology-based private industry all have significant roles to play. Billions of dollars of federal funding is being made available to assist the four main parts of effective preparedness to national threats. These four areas are:

1. **Prevention:** Biometrics, vaccines, intelligent systems, composites, food and water safety, vector-borne diseases, explosion detection and cargo screening systems are examples.
2. **Detection:** Bio and radiation sensors and training.
3. **Reaction:** Emergency medical service equipment, mass data storage, communications and computer modeling.
4. **Recovery:** Bio-remediation and decontamination.

The WSRC and its partner companies have core competencies in most of these areas.

In fact, Wisconsin has a number of research centers of excellence that are well-prepared to become national leaders in homeland security research and development. Here are a few examples:

- Bordered by the Mississippi River and Lake Michigan, Wisconsin plays a critical role in the preservation of our nation's water supply. The University of Wisconsin-La Crosse River Studies Center and the University of Wisconsin Milwaukee Great Lakes Aquatic Technology and Environmental Research (WATER) Institute's Center for Water Security are well-positioned to address critical water security issues.
- Health and biomedical research facilities such as the Marshfield Clinic, UW Medical School, the Medical College of Wisconsin, and other integrated health research facilities are well-positioned to provide innovative solutions in the areas of biometrics, vaccines, food and water safety and vector-borne diseases. The Marshfield Clinic, for example, was the first to isolate monkeypox. Two Wisconsin companies were the first to develop tests for the SARS virus.
- Medical equipment providers and companies with information technology and large-scale data storage capabilities are strongly represented in Wisconsin. GE Healthcare (formerly GE Medical Systems), with about 7,000 employees in Wisconsin, is a world leader in imaging and related technologies.
- The state has a long history related to the development and use of composite technologies. Wisconsin is home to the Great Lakes Composite Consortium, and its engineering schools are leaders in composite research. Nanotechnology research is also growing in importance, with the UW-Madison recently attracting \$20 million in federal funding and hosting two regionally prominent nanotechnology conferences.
- The Menasha Corp., to cite one Wisconsin corporation, created a Radio Frequency Identification lab in December 2002. This technology can enhance security for products, such as food and pharmaceuticals, by preventing potential acts of terrorism such as product tampering and sabotage. By implementing small wireless "tags" in packages, pallets or containers, products can be tracked through the supply chain. This is one of at least a dozen Wisconsin companies engaged in RFID research.
- Wisconsin's Chippewa Valley has recently become attractive to biometrics companies because of our mass data storage capabilities. Biometrics systems, such as fingerprinting, require rapid data retrieval and cross-matching within different databases.

To enable Wisconsin to take an accounting of its resources in the context of current federal efforts to enhance homeland security, the Tech Council requests that \$500,000 be made available to it immediately so that it may conduct a three-month study that will thoroughly catalogue Wisconsin's research, development and private industry assets in the key areas of homeland security spending. This comprehensive analysis of the strengths of high-technology Wisconsin businesses and capabilities of our academic institutions and research centers will enable the federal government to determine how these capabilities and new technologies fit with the priorities of the Department of Homeland Security.

The WSRC was formed to act as Wisconsin's center for creative collaboration and technology innovation. The WSRC will focus on identifying the state's intellectual capital, including areas of research excellence arising from academic and industrial laboratories in Wisconsin and determining how the state can build on this development technology against the backdrop of global technological demand and evolution. It would employ an interdisciplinary strategy and personnel to foster and promote Wisconsin's technological revolution. The WSRC would exist to serve all types of research institutions and businesses, and would (1) be a receptacle for federal R&D grants, primarily related to homeland security, and (2) a facilitator for such R&D grants to academic or other research institutions and private businesses.

The proposal would:

- Build upon what is known about Wisconsin's research, development, and private industry assets in the key areas of homeland security spending, by creating a mechanism to enhance company awareness of, and action on, federal opportunities;
- Assess Wisconsin's core competencies in technologies related to homeland security, from both a research institution and private company perspective;
- Develop a process for leading companies through the procedure of applying for federal grants and seeking federal contracts;
- Partner with the UW-Madison Office of Corporate Relations to establish a one-stop call system to facilitate questions from businesses in search of UW System expertise;
- Organize a team of research, development, and tech transfer experts within Wisconsin to systematically identify federal opportunities and to advise members of the congressional delegation; and
- Designate the independent, non-profit Wisconsin Technology Council to serve as a "catch point" for federal R&D dollars in homeland security research areas.

TIMETABLE: Ongoing.

CONTACT: Tom Still, President, Wisconsin Technology Council; 608-442-7557 or Kris Andrews, Assistant Vice President for Federal Relations, UW System; 608-263-3362.

PAST FUNDING: The Wisconsin Technology Council is a 501(c)(3) organization, formed by the State of Wisconsin to act as Wisconsin's center for creative collaboration and technology innovation. WTC has received no federal funding in the past.

COSTS: The Wisconsin Technology Council requests \$500,000 in federal monies as seed funding to be used to study and catalogue Wisconsin's research, development and private industry assets in the key areas of homeland security. It also seeks to provide some limited funding that will result in a cooperative mechanism to serve as a link between the public and private sector and as a "catch point" for federal R&D dollars in homeland security research areas.

Summary of Anticipated Expenses

|   |                  |
|---|------------------|
| Project Director (FT)   | \$122,000        |
| Assistant (FT)  | \$51,000         |
| Clerical Support ( FT)  | \$38,000         |
| Survey  | \$150,000        |
| Expenses (out-of-state travel, printing and postage, in-state travel) | \$28,000         |
| Outreach/website and database development                             | \$72,000         |
| Research legal Structure of creating IIR                              | \$20,000         |
| Miscellaneous Expenses  | \$19,000         |
| <b>TOTAL</b>  | <b>\$500,000</b> |

SIGNIFICANCE: Wisconsin has many unique and resourceful public and private institutions that can help the nation in the homeland security arena. It is important that Wisconsin is positioned to be a strong partner with the federal government in addressing current and future homeland security challenges and needs. This proposal will lay the groundwork for more Wisconsin participation in our nation’s continuing effort to secure our homeland and our citizens and interests around the world.

# **Wisconsin Security Research Consortium**

## **Memorandum of Agreement**

**Whereas**, the United States of America is engaged in a War on Terror.

**Whereas**, homeland security is of utmost importance to our nation.

**Whereas**, regional resources in the form of intellectual capital must be utilized to protect our country and its citizens.

**Whereas**, Wisconsin, located in America's heartland, is home to academic and research powerhouses, including the University of Wisconsin-Madison, the University of Wisconsin-Milwaukee, the Medical College of Wisconsin and the Marshfield Clinic.

**Whereas**, each institution offers an extensive and impressive array of resources, including world-renowned research to promote homeland security and strategic alliances with industry.

**Whereas**, the Wisconsin Technology Council, an independent, non-profit, non-partisan group formed by the Wisconsin State Legislature to serve as the science and technology policy advisor to the Governor and Legislature, works to foster technology-related opportunities for Wisconsin businesses.

**Whereas**, the Wisconsin Technology Council is uniquely positioned to focus on identifying the state's intellectual capital, including areas of research excellence arising from academic and industrial laboratories in Wisconsin, and determining how the state can build on this development technology against the backdrop of global technological demand and evolution.

**Whereas**, the nation is now concerned with methods of effective preparedness to national security threats; these methods include prevention (biometrics, vaccines, intelligent systems, composites, food and water safety, vector-borne diseases, explosion detection, cargo screening, etc.), detection (bio and radiation sensors and training, etc.), reaction (emergency medical service equipment, mass data storage, communications, computer modeling, etc.) and recovery (bio-remediation and decontamination, etc.).

**Whereas**, the WSRC and partner companies possess core competencies in the majority of these methods and are well-prepared to become national leaders in homeland security research and development.

**Whereas**, bordered by the Mississippi River, Lake Superior and Lake Michigan, Wisconsin plays a critical role in the preservation of our nation's water supply. The UW-Milwaukee Great Lakes Wisconsin Aquatic Technology and Environmental Research (WATER) Institute's Center for Water Security is well-positioned to address critical water security issues.

**Whereas**, health and biomedical research facilities such as the Marshfield Clinic, UW Medical School, the Medical College of Wisconsin, and other integrated health research facilities are well-positioned to provide innovative solutions in the areas of biometrics, vaccines, food and water safety and vector-borne diseases. The Marshfield Clinic, for example, was the first to isolate monkeypox. Two Wisconsin companies were the first to develop tests for the SARS virus.

**Whereas**, medical equipment providers and companies with information technology and large-scale data storage capabilities are strongly represented in Wisconsin. GE Medical Systems, with about 7,000 employees in Wisconsin, is a world leader in imaging and related technologies. Both UW-Madison and UW-Milwaukee are pioneering institutions in numerous engineering fields.

**Whereas**, the state has a long history relating to the development and use of composite technologies. Wisconsin is home to the Great Lakes Composite Consortium as well as UW-Milwaukee's Center for Composites and Laboratories for Solidification and Tribology. Nanotechnology research is also growing in importance.

**Whereas**, private corporations in Wisconsin are engaged in research that can enhance homeland security. One example is the Menasha Corp., which created a Radio Frequency Identification lab in December 2002. This technology can enhance security for products, such as food and pharmaceuticals, by preventing potential acts of terrorism such as product tampering and sabotage. By implanting small wireless "tags" in packages, pallets or containers, products can be tracked throughout the supply chain.

**Whereas**, it is in the national interest to ensure that Wisconsin public institutions and its private companies are part of the federal effort to keep the nation secure.

**Therefore be it resolved**, the Wisconsin Security Research Consortium is established to act as Wisconsin's center for creative collaboration and technology innovation.

**Be it further resolved**, the Wisconsin Technology Council be the administrative headquarters for the Wisconsin Security Research Consortium

**Be it further resolved**, this Memorandum of Understanding shall take effect immediately.

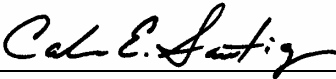
Agreed this date, February 1, 2005

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Kevin Reilly  
President  
University of Wisconsin System


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John D. Wiley  
Chancellor  
University of Wisconsin—Madison

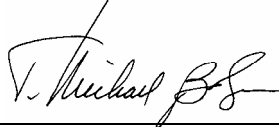
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Carlos Santiago  
Chancellor  
University of Wisconsin—Milwaukee


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Tom Still  
President  
Wisconsin Technology Council

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T. Michael Bolger, J.D.  
President  
Medical College of Wisconsin

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Frederic P. Wesbrook, M.D.  
President  
Marshfield Clinic

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UW-EAU CLAIRE, UW-RIVER FALLS, UW-STOUT  
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REQUEST FOR FUNDS:

USING BROADBAND AND OTHER SYSTEMS TO ADDRESS  
COMMUNITY-BASED HEALTH CARE EDUCATION NEEDS

ORGANIZATION: The Greater Chippewa and St. Croix Valley Regional PK-16 Consortium was established in 2002 using base budget dollars from UW System. The Consortium includes: UW-Barron County, UW-Eau Claire, UW-River Falls, UW-Stout, Chippewa Valley Technical College, Wisconsin Indianhead Technical College, Cooperative Education Service Agency 10, Cooperative Service Agency 11, Momentum Chippewa Valley, West Central Wisconsin Regional Planning Commission, and West Central Wisconsin Workforce Development Board. Administrated through University of Wisconsin-Stout, this regional organization blends the resources of the full spectrum of educational service providers and aligns existing planning groups into a structure for supporting workforce planning and economic development initiatives. Consortium projects leverage the institutional strengths of participating entities and align resources to meet the needs of regional businesses. The consortium provides seamless access to knowledge dissemination, technical support, and research services for employees and employers in the nine counties of the region.

DESCRIPTION: A Consortium project known as “Synergy: Positioning for Economic Growth” provides an ongoing process for the region to examine critical workforce and economic development needs. At the Synergy planning event in September, 2004, the need to leverage the region’s broadband infrastructure to provide public educational offerings aimed at addressing the region’s health care needs (specifically the issue of changing personal behaviors related to increasing obesity, and consequently the insurance costs of employers) was identified as a target for project development in 2005-2006. This project will collaboratively address this need and include the region’s higher education system, its primary health care providers (including Mayo-affiliated Luther-Midelfort and Marshfield Clinics), and local public health departments to improve the health of the region’s citizens, positively affecting the cost of health care insurance for employers. Over the one-year demonstration period, this project will:

- Develop a training curriculum and public awareness program designed to motivate and sustain healthier behaviors to reduce obesity in our communities
- Recruit and involve employers in motivating employees to participate in obesity reduction programs
- Establish a web-based system that documents practice and effects on employment, earnings, health, satisfaction, and the need for public subsidy of obesity programming
- Establish a system to track changes in employment, benefits reliance, and economic participation over a multi-year period
- Formulate public policy recommendations related to health behaviors and obesity

- Disseminate reports that describe practices and provide obesity and public health policy recommendations for Congressional purposes

TIMELINE: The Consortium (through its fiscal entity, UW-Stout) requests funding for Fiscal Year 2006 and plans to implement a program using the following tentative timeline:

|                   |   |
|-------------------|---|
| October           | Engage partners (Consortium members, health care entities, public health departments, and broadband providers)    |
| November-December | Develop curriculum public awareness offerings   |
| December-January  | Continue offering development and market series   |
| January-September | Provide awareness and intervention offerings  |
| July-August       | Evaluate initial offerings  |
| July-September    | Track project   |
| July-August       | Document and disseminate demonstration practices  |
| September         | Present recommendations to agencies and the Congress on impacts and savings achieved for communities and the U.S. |

CONTACT: Christopher Smith, Executive Director, Stout Solutions. 715.232.2488

PAST FUNDING: None received for this priority area

|        |   |                   |
|--------|---|-------------------|
| COSTS: | Total Costs in FY 2006:                                 | <u>\$ 480,000</u> |
|        | UW Personnel Committed to Project (3 @ 50,000)          | 150,000           |
|        | Subcontracts:   |                   |
|        | Collaborating Community Entities (5 @25,000)            | 125,000           |
|        | Infrastructure Entities (5 @5,000)                      | 25,000            |
|        | Curriculum development and distance learning            | 85,000            |
|        | Practice and Policy Reporting and Dissemination         | 35,000            |
|        | Website development and maintenance                     | 25,000            |
|        | Other (supplies, travel, data collection)               | 10,000            |
|        | Anticipated Funds from Other Sources in FY 2006:        | <u>\$ 30,000</u>  |
|        | Consortium In-Kind Supplement:                          | 15,000            |
|        | Sale of Products and Services (e.g., training programs) | 15,000            |
|        | <u>Federal Funding Requested in FY 2006:</u>            | <u>\$ 450,000</u> |

SIGNIFICANCE: According to the July 5, 2003, issue of the *Milwaukee Journal Sentinel*, the percent of obese Wisconsinites nearly doubled in the decade ending in 2001, from 12.7% of adults to 21.9%, 1% more than the national average. Further, obesity is expected to kill about 6,000 people in Wisconsin every year. The fiscal impact is also high, an estimated \$2.3 billion, in Wisconsin alone, and these costs are passed on to businesses, individuals, and taxpayers alike. Wisconsin's obesity problems are largely a result of the behaviors individuals have chosen to engage in, but individuals can also choose to be a part of the solution. This project is designed to arm businesses and individuals with the necessary knowledge, tools, and strategies to change behaviors, reduce obesity, improve health and quality of life, and ultimately save health care dollars. Even a 1 percent decrease in the percentage of obese Wisconsinites will have a large impact on the region's health care bill.

CONTACTS WITH

CONGRESS: Congressmen Kind and Obey, and Senators Kohl and Feingold will be contacted regarding this project.

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REQUEST FOR FUNDS:  
THE CLP: EXPANSION, COMMUNICATION AND COMMUNITY BUILDING

ORGANIZATION: In 1999, the University of Wisconsin System Collaborative Language Program (CLP) developed a hybrid approach of videoconferencing and web-based course management systems to teach strategically important languages. Numerous media sources have recently reported that United States intelligence and defense agencies are critically short of Arabic speakers. CLP can help overcome this shortage by offering Arabic instruction on a greater number of UW campuses otherwise unable to support these offerings. Using our learning model, UW faculty teach in a traditional classroom that has been modified for interactive two-way videoconferencing (ITV). This allows the language course to be broadcast to remote classrooms. Because ITV is used, students in all classrooms interact in real-time with each other and the instructor. Native-speaking facilitators also aid students in the remote classrooms. The use of facilitators helps ensure the success of our program on receiving campuses. Additionally, the web-based course management system increases student written communication between campuses and with outside experts.

The CLP began by developing a pedagogically sound instructional model combining best practices in language learning with technologies to teach languages. Through our *same time, different place* model that requires face-to-face interaction, our students maintain the same oral proficiency of those learning languages in traditional classrooms. After consultation with us, Syracuse and Cornell Universities chose to adopt our successful learning model. Further, using this model to offer Arabic in Wisconsin meets both national security needs and increased student demand on many UW campuses. With our learning model, students will acquire language and cultural knowledge required in the global economy, and needed to fill government posts.

DESCRIPTION: The CLP advisory committees consist of Deans and language faculty from all 13 UW comprehensives and three representatives from the two-year colleges. This widespread representation from our 26 campuses allows extensive marketing of courses throughout the state. Since its inception, 12 UW campuses have participated in our language program. This year six campuses requested Arabic; unfortunately, the CLP cannot meet the demand, due to insufficient resources.

To date, CLP has relied on grant funding from the UW System and its campuses to provide more diverse language learning opportunities to students throughout the state. Our courses meet the needs of students of Business, International Studies, International Agriculture and a number of other degree programs. There is now a larger demand, and more urgent need in the interest of national security, for extensive programming in Arabic. Federal funding will allow for this needed expansion in three areas:

1. **Hire two additional Arabic instructors to build a comprehensive four-semester program in Arabic on a total of six UW campuses.** There is now an even more urgent call in the area of Arabic studies for national security interests and for building stronger economic ties with the Middle East. Expanding Arabic offerings in CLP will reach a greater number of Wisconsin students than traditionally-taught courses.
2. **Implement Voice-over-Internet Protocol (VoIP) desktop technology for additional small group and pair work.** Because of the complexity of Arabic,

students require much more time to attain an intermediate level of oral proficiency than with other languages. By increasing student oral practice opportunities beyond the classroom, oral proficiency increases. This technology also allows outside experts to participate with students thus better preparing them for culturally appropriate use of Arabic in the workplace and overseas.

3. **Work with experts in the field to provide varied cultural programming.** This programming will include such events as guest lectures, arts demonstrations and media events. Events will be broadcast to several UW campuses and open to the public. All participants will gain a better understanding of the target culture, which is essential to knowing how to appropriately communicate in a global society.

TIMELINE:

| Phase          | Time Frame              | Activity   |
|----------------|-------------------------|--|
| Planning       | Fall '06–<br>Winter '07 | Arabic instructor hired, technology installations, experts contacted for cultural event planning |
| Implementation | Spring '07–<br>Fall '07 | Additional Arabic courses, students use VoIP technology, cultural events broadcast               |
| Outcomes       | Spring–<br>Summer '07   | Enrollment data, surveys & proficiency data compared to national averages & other courses        |

CONTACT: Michael Zimmerman, 920.424.1220; Linda Freed, 920.424.1415

PAST FUNDING: To date this program has been funded by the UW System and internal granting programs.

|        |   |                          |
|--------|---|--------------------------|
| COSTS: | <b>Total Costs in FY 2006:</b>                      | <b><u>\$135,636</u></b>  |
|        | Arabic Instructors (6 courses):                     | \$37,356                 |
|        | 6 Receive site facilitators:                        | 13,530                   |
|        | Instructors/facilitators Travel & Training          | 2,250                    |
|        | Additional videoconferencing equipment:             | 41,500                   |
|        | Voice over IP Software & Support:                   | 35,000                   |
|        | Cultural Programming:                               | 6,000                    |
|        | <b>Funds from Other Sources in FY 2006:</b>         | <b><u>\$104,000+</u></b> |
|        | UW-System:  | \$100,000                |
|        | Voice over IP Software & Support:                   | 4,000                    |
|        | Campus Contributions:                               | Varies                   |
|        | <b><u>Federal Funding Requested in FY 2006:</u></b> | <b><u>\$163,750</u></b>  |

SIGNIFICANCE: Due to the shortage of Arabic speakers in our country, government agencies face a much tougher challenge in the reconstruction of Iraq. With funding, the CLP will address these concerns. It is not enough to just speak another language—one must also have an understanding of culture in order to effectively communicate. Using our model to offer courses in Arabic, coupled with technologies and cultural programming, learner access to and competency in Arabic will substantially increase. These improvements will be demonstrated through increased offerings throughout Wisconsin and oral proficiency tests to measure how well students are able to communicate in a variety of situations. This collaborative, system-wide effort meets the needs of federal government agencies, business leaders working in the Middle East and other nations where Arabic is spoken, and numerous Wisconsin corporations.

CONTACTS WITH  
CONGRESS: None.