



National 'intelligent intersection' demo features Minnesota researchers' Intersection Decision Support system

A team of University of Minnesota researchers traveled to Washington, D.C., to demonstrate their Intersection Decision Support system for rural intersections at the national Intelligent Vehicle Initiative (IVI) meeting June 24.

Led by Intelligent Transportation Systems (ITS) Institute director **Max Donath** and Intelligent Vehicles Lab manager **Craig Shankwitz**, the research team is developing a system to reduce crashes caused by driver error when entering a highway from a rural collector road. The Minnesota research is part of a three-state cooperative effort—the IVI Infrastructure Consortium—with California and Virginia. The consortium's goal is to create deployable Intersection Decision Support (IDS) systems to address specific intersection crash scenarios.

The Minnesota system employs a network of radar detectors, installed along the highway leading up to the intersection, that communicate with a central data processor using wireless networking technology. The central processing unit evaluates gaps between vehicles coming down the highway, and warns drivers on the collector road if there is not enough room to enter the highway safely.

In many situations, Donath says, giving drivers more information is a better solution than installing a conventional traffic signal. "When you look at the statistics for rural intersections, you see that conventional signals can increase the number of rear-end collisions." In addition, IDS systems will be less likely to disrupt the flow of traffic on the main highway.



Robert Hagar of NBC News interviews the ITS Institute's Craig Shankwitz.

Research teams from California and Virginia also demonstrated their experimental systems at the event. California's system is focused on preventing crashes involving vehicles turning left across oncoming traffic; Virginia demonstrated two related methods to reduce traffic-signal violations in straight-path crossing situations.

The ITS Institute and the Minnesota Department of Transportation (Mn/DOT) are currently pursuing partnerships with other state DOTs to develop strategies to reduce rural intersection crashes, including the deployment of IDS systems like the one they demonstrated in Washington. Institute director Donath says that cooperation will be the key to finding solutions that can work for many different state DOTs.

In addition to intersection decision support, researchers at the ITS Institute are working on several other projects related to the Intelligent Vehicle Initiative. These include in-vehicle guidance and vision-enhancement systems for specialty and transit vehicles, and systems to improve the situation awareness of drivers. **CTS**

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CTS Fall Luncheon:

Is congestion friend or foe?

The topic of the CTS Fall Luncheon presentation—"Is Traffic Congestion Friend or Foe?"—has garnered major media attention. The luncheon, to be held October 28, will feature Professor **Brian D. Taylor** of the University of California, Los Angeles.



Brian D. Taylor

(A registration form is enclosed.)

Taylor was cited in a July 31 Los Angeles *Times* article titled "Traffic at a Crawl? Some Are Saying That's Good News." In the piece, Taylor says that traffic jams offer evidence of economic and social vitality and that empty roads are a sign of failure.

The article also cites Professor **Martin Wachs** of UC-Berkeley, who will give the CTS Spring Luncheon presentation next May. Wachs says people seem to view the solutions to congestion—such as tolls and wider freeways—as less palatable than congestion itself.

This more positive view of congestion was also highlighted on CNBC, the national cable news network, on August 4. Taylor and **Robert Johns**, director of CTS, were interviewed for the segment. Johns discussed findings from the CTS Transportation and Regional Growth Study.

To register for the fall luncheon, call **Shirley Mueffelman** at 612-624-4754 or e-mail smueffel@cce.umn.edu. **CTS**

CTS establishes Scholars Program

CTS is establishing a new program to strengthen its relationships with University faculty and researchers. The CTS Faculty and Research Scholars Program will bring faculty and staff together to develop transportation research and education opportunities.

"The primary purpose of CTS is to strengthen the University's role in creating innovations in transportation," says **Robert Johns**, CTS director. CTS does this by working closely with faculty and sponsors to increase and make accessible the two main public resources that the University contributes: scientific knowledge and an educated labor pool. "CTS staff have skills in providing the initiative and linkages that help make success in this role possible," says Johns. "But our staff need more connection with faculty and researchers."

University faculty and research staff lead research and education efforts, and it is through their accomplishments that CTS increases its impact. "We have a wealth of transportation-related expertise in a broad set of disciplines. We need to work more closely with faculty and researchers in supporting initiatives that advance transportation research and education," he explains.

Under the CTS Faculty and Research Scholars Program, scholars will have joint

appointments at CTS as well as in their own departments. The program establishes an ongoing forum for faculty and researchers to meet with CTS staff to provide feedback, discuss interdisciplinary research opportunities, develop new education initiatives, and discuss ways to improve expertise in response to external demands. The program will also address how to provide support and guidance to new faculty.

"Faculty and Research Scholars will receive a range of benefits, such as CTS assistance in pursuing federal and other funding," says **Laurie McGinnis**, CTS associate director. Scholars will have a role in shaping and prioritizing new research directions and in enhancing CTS educational programs such as the graduate certificate in transportation studies. And in turn, "CTS will benefit from a stronger connection with faculty and increased contributions to the innovations needed in transportation," McGinnis says.

The scholars (see right) were selected because of the transportation focus in their research and education activities, their ongoing involvement with CTS, and their successful relationships with transportation research sponsors. Their two-year appointments may be renewed or rotated to other candidates. **CTS**

CTS Faculty and Research Scholars

Transportation Planning & Policy

John Adams, Geography
Gary Barnes, Humphrey Institute
Frank Douma, Humphrey Institute
Kevin Krizek, Humphrey Institute
Lee Munnich, Humphrey Institute
Lance Neckar, Landscape Architecture
Barbara Van Drasek, Geography
Mary Vogel, Landscape Architecture

Traffic Engineering & Management

Gary Davis, Civil Engineering
John Hourdakis, Civil Engineering
David Levinson, Civil Engineering
Panos Michalopoulos, Civil Engineering

Vehicle Design & Fuels

Max Donath, Mechanical Engineering/ITS Institute
David Kittelson, Mechanical Engineering
Craig Shankwitz, Mechanical Engineering

Economics & Management

Jerry Fruin, Applied Economics
Alfred Marcus, Strategic Management/Organization
Gerard McCullough, Applied Economics
Barry Ryan, Applied Economics

Pavement Engineering

Andrew Drescher, Civil Engineering
Lev Khazanovich, Civil Engineering

Mihai Marasteanu, Civil Engineering

Bridge Engineering

Catherine French, Civil Engineering
Jerry Hajjar, Mechanical Engineering
Carol Shield, Civil Engineering
Steve Olson, Civil Engineering

Human Factors

Nic Ward, Mechanical Engineering
Mike Manser, Mechanical Engineering
Kathleen Harder, Center for Sustainable Building Research
John Bloomfield, Center for Sustainable Building Research

Data Systems

Taek Kwon, Electrical and Computer Engineering, University of Minnesota Duluth
Osama Masoud, Computer Science and Engineering
Nikolaos Papanikolopoulos, Computer Science and Engineering
Shashi Shekhar, Computer Science and Engineering

Environmental Impacts

David Biesboer, Plant Biology
Bruce Wilson, Biosystems and Agricultural Engineering **CTS**

Congressional staff tour U of M labs

Staff of Minnesota's Congressional delegation learned about University transportation-related research and toured campus labs during a special visit on August 11. Several federal transportation programs provide funding for University research, and the staff heard progress reports and viewed demonstrations of the University's accomplishments.

The day started with a welcome by **John Engelen**, the University's federal relations director, and an overview of CTS by director **Robert Johns**. Johns and **Lee Munnich**, director of the Humphrey Institute's State and Local Policy Program, presented highlights of University transportation policy research. Also on the agenda were a technology research briefing by ITS Institute director **Max Donath**, and education and training news by **Cheri Marti**, director of the Minnesota Local Technical Assistance Program (LTAP). Both the ITS Institute and LTAP are federally funded.

The staffers were also given a technology tour with demos at the HumanFIRST driving simulator, by **Nic Ward**; the Intelligent Vehicles Lab TechnoBus, by **Craig Shankwitz**; and the ITS Institute Traffic Lab, by **Ted Morris**.

Following the University's portion of the agenda, Mn/DOT's **Durga Panda** presented



Ted Morris (third from right) gives highlights of ITS Lab activities to Congressional staffers.

an overview of ITS Minnesota, and **Jim Kranig** and **Bernie Arsenau** led a tour of Mn/DOT's Regional Traffic Management Center.

Congressional staff attending were:

- Sen. Norm Coleman's office: **Laurie Hettinger**, **Carl Kuhl**
- Sen. Mark Dayton's office: **Jim Gelbmann**
- Rep. James Oberstar's office: **Kate Troy**
- Rep. Martin Sabo's office: **Louis Moore**, **Sharon Wagener**
- Rep. Gil Gutknecht's office: **Meghan O'Neil**
- Rep. Mark Kennedy's office: **Tim Morrison**
- Rep. Betty McCollum's office: **Kelly Scanlan**
- Rep. Jim Ramstad's office: **Heather Renner** **CTS**

British rail expert to keynote logistics symposium

Businesses and communities face many challenges in integrating their transportation planning and infrastructure needs. The Seventh Annual Freight and Logistics Symposium will focus on these challenges and highlight innovative potential solutions, including national and international examples.

One such example will be presented by **Thomas Zunder** of the Advanced Railway Research Centre at the University of Sheffield, England, in the keynote presentation, "Freight Logistics in the European Union: The Interaction of Public and Private."

Other session topics include:

- Identification of freight clusters in Minnesota and the Twin Cities



• An update on federal initiatives and legislation, with an introduction by **Scott Johnson** of the Reauthorization Freight Professional Capacity Building Program of the Federal Highway Administration

In addition, a panel of local experts will discuss their approaches to integrating business, transportation, and land use and what it might take to incorporate some of these best practices from other areas.

The symposium will be held December 5 at the Four Points Sheraton Minneapolis Metrodome. The conference brochure is enclosed. For more information, contact **Shirley Mueffel**, 612-624-4754, smueffel@cce.umn.edu. **CTS**

Transportation student organization to convene

The newly formed Interdisciplinary Transportation Student Organization (ITSO) will hold its first meeting September 19 from 11:15 a.m. to noon in Room 25 of the Humphrey Center. This organization was created by University of Minnesota students who are pursuing degrees in transportation-related fields, with support from CTS. The group's main purpose is to connect with transportation professionals and learn about careers in transportation. Students interested in becoming involved in this organization are welcome to attend the September 19 meeting or contact **Brian Smallkoski** at umtranstudents@yahoo.com. **Linda Pelkofer** (lpelkofer@cts.umn.edu) is CTS staff liaison to the ITSO.

The next *CTS Report* will have more news about the new student association. **CTS**

Executive Committee thanks departing members

The CTS Executive Committee, chaired by **Richard Murphy**, thanked the following departing members for their years of dedicated support and service.

- **Carol Flynn**, former state senator, served on the committee from 1997 to 2003. During her time in the legislature, Flynn concentrated on developing solutions for transportation funding and policy.
- **Margo Imdieke Cross**, 2002-03, is resigning following changes in duties and responsibilities in her position with the

Minnesota State Council on Disability. She has been a valuable advisor on the community-based transportation research project (see page 4).

- **Ron Lifson**, 1997-2003, vice president and general manager of LDI Fibres, brought the business sector's perspective to the committee.
- **Wayne Murphy**, 2002-03, is retiring as executive director for the Highway-Heavy Division of the Associated General Contractors of Minnesota and thus from the

Executive Committee. He gave strategic direction that assisted CTS in responding to proposed legislative changes.

- **Roger Williams**, 2002-03, was the Metropolitan Council's ex-officio member. He was a visible supporter of the Transportation and Regional Growth Study.

Also at the meeting, committee members reviewed a report of CTS performance measures for fiscal year 2003 and approved the FY04 budget. **CTS**



Robert Johns, Richard Murphy, Carol Flynn



Margo Imdieke Cross



Richard Murphy, Ron Lifson



Wayne Murphy



Roger Williams

Toward Zero Deaths Program: Toolkit, Web site developed

“Six hundred deaths annually on Minnesota’s roadways is a tragic and unacceptable statistic.”

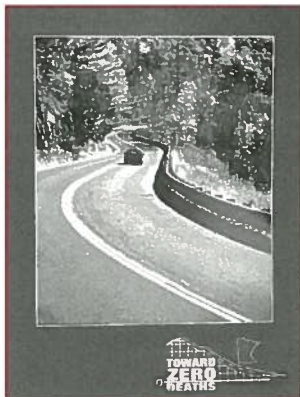
This line greets visitors of the new Web site of the Toward Zero Deaths (TZD) Program, a Minnesota interagency partnership led by the Department of Public Safety and the Department of Transportation, in cooperation with the State Patrol, the Federal Highway Administration, Minnesota county engineers, and CTS.

“Our goals are to raise awareness of traffic safety issues statewide, and to develop tools that can be used to reduce the number of deaths and injuries resulting from traffic accidents in Minnesota,” says **Gina Baas**, CTS communications manager.

The TZD Program Team is led by **Kathryn Swanson**, director of the Department of Public Safety’s Office of Traffic Safety, and Mn/DOT state traffic engineer **Bernard Arseneau**. The program team works in partnership with community and corridor groups to improve the traffic safety of designated areas. Toward Zero Deaths provides technical assistance, materials, and guidance to local groups committed to reducing crashes and the fatalities and severe injuries that result from them.

Statewide, the Toward Zero Deaths program is examining new technologies to help address safety concerns. These include finding short-term, lower cost alternatives to traditional engineering solutions, which can be too expensive or take too long to complete.

There have already been success stories. Safe Communities of Wright County is an example of a local corridor group that has



www.tzd.state.mn.us

successfully implemented specific programs to identify and address problems with traffic safety. The Highway 65/Highway 95 corridor coalition was the second area to join the Toward Zero Deaths program, and Minnesota Highway 52 is the most recent addition to the TZD project family.

The TZD Program Team is actively looking for more communities to participate in the program. The first step in getting involved with Toward Zero Deaths is to organize a local coalition. Coalition groups typically include public works professionals, local government officials, business or professional organizations, and individual residents who want to make a difference.

To share information about the program, the Toward Zero Deaths team recently developed a TZD toolkit. The toolkit is a package of information and tools to help coalitions organize effectively and begin to reduce traffic fatalities and injuries. Coalitions can customize the toolkit to address the specific problems they are facing.

The new Web site—www.tzd.state.mn.us—also contains information about how groups can organize to identify traffic safety problems in their communities and participate in finding solutions to those problems.

For more information, contact **Gina Baas** of CTS (baas001@cts.umn.edu), **Virginia Lockman** of DPS (Virginia.Lockman@state.mn.us), or **Sonia Pitt** of Mn/DOT (Sonia.Pitt@dot.state.mn.us). **CTS**

Reminder: Community-based transportation conference is October 1

It’s not too late to register for the “Second Conference on Community-Based Transportation: Designing a System for Minnesota,” to be held October 1 at the Earle Brown Center in St. Paul.

Topics will include national best practices for community-based transportation, opportunities for community-based transportation in Minnesota, and policies needed to move forward.

Conference sponsors are Hennepin County Community Works, CTS, and the Humphrey Institute’s State and Local Policy Program.

For a brochure or more information, contact **Shirley Mueffelman**, 612-624-4754, smueffel@cce.umn.edu. **CTS**

Upcoming events

To publicize your event, call CTS at 612-626-1077, fax 612-625-6381, or e-mail snopl001@tc.umn.edu. Visit the CTS Web site—www.cts.umn.edu—for more comprehensive event information.

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| Oct. 1 | Second Conference on Community-Based Transportation: Designing a System for Minnesota, Earle Brown Center, St. Paul. Contact Shirley Mueffelman , 612-624-4754, smueffel@cce.umn.edu . | Nov. 19–21 | Minnesota Public Works Association Annual Fall Conference, Brooklyn Center. Contact Ruth Martin , 612-624-3492, rmartin@cce.umn.edu . |
| Oct. 1–2 | Minnesota Fall Maintenance Expo, St. Cloud. Call Kathy Warren , 651-351-7432. | Dec. 5 | Freight and Logistics Symposium, Four Points Sheraton Minneapolis Hotel. Contact Shirley Mueffelman , 612-624-4754, smueffel@cce.umn.edu . |
| Oct. 22 | ITS Minnesota Fall Forum, Doubletree Hotel, Minneapolis. Call Shirley Mueffelman , 612-624-4754, smueffel@cce.umn.edu . | Jan. 20–23 | Minnesota County Engineers Association Annual Conference, Brainerd. Contact Shirley Mueffelman , 612-624-4754, smueffel@cce.umn.edu . |
| Oct. 24 | Fall Civil Engineering department open house, featuring a seminar titled “An Insider’s View of Light Rail.” Contact Teresa Washington , 612-624-3745, e-mail twashing@cce.umn.edu . | Feb. 4–6 | City Engineers Association of Minnesota Annual Conference, Brooklyn Center. Contact Ruth Martin , 612-624-3492, rmartin@cce.umn.edu . |
| Oct. 28 | CTS Fall Luncheon: “Traffic | May 4–5 | CTS Fifteenth Annual Transportation Research Conference, RiverCentre, St. Paul. Contact Shirley Mueffelman , 612-624-4754, smueffel@cce.umn.edu . CTS |



CAREERS IN TRANSPORTATION

Transportation Jobs and Internships

September 2003

APPLICANTS: If you are interested in these positions, please contact the person(s) listed.

EMPLOYERS: If you have job opportunities related to the field of transportation, CTS will help you publicize them. You can obtain a submission form from the CTS web site at www.cts.umn.edu/education/employfrm.pdf or by calling 612-625-6687. Please send your text by mail, fax, or e-mail; we must receive your text by the 25th of each month in order to list it in the next *CTS Report*. Send submissions to:

Careers in Transportation
Center for Transportation Studies
University of Minnesota
200 Transportation and Safety
Building
511 Washington Avenue S.E.
Minneapolis, MN 55455
Phone: 612-625-6687
Fax: 612-625-6381
E-mail: snopl001@cts.umn.edu

Students interested in civil engineering positions can check the Civil Engineering Department's site at: www.ce.umn.edu/empopp/coop.

Accuracy of ads is the responsibility of the employer. CTS reserves the right to edit ads for length and format. Unless otherwise notified, CTS will run announcements until the application deadlines expire. Ads without a deadline will be run for three consecutive issues, unless otherwise arranged.

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation. This publication is available in alternative formats upon request. Recycled paper with 20% postconsumer waste.

ENGINEERING & TECHNICAL

WSB & Associates, Inc.

Senior Design Engineer—Municipal Group

WSB & Associates, Inc., a civil engineering consulting firm, has an opening for a senior design engineer. Candidates must have a bachelor's degree in engineering from an accredited engineering school and at least six years of progressive experience in developing feasibility reports and construction plans for city-related projects, street reconstructions, state aid, sewer/water, and new developments, etc. Applicant must have excellent technical, communication, and organizational skills. PE registration required.

Position available in the Minneapolis office. Submit a cover letter and resume to: WSB & Associates, Inc. Attn: Human Resources, 4150 Olson Memorial Hwy., Suite 300, Minneapolis, MN 55422.

Project Manager—Municipal Group

Applicant must have a bachelor's degree in engineering from an accredited engineering school, a P.E. license, and a minimum of 10 years of experience managing municipal projects and clients. Excellent technical, communication, and organizational skills required.

Position available in the Minneapolis office. Submit a cover letter and resume to: WSB & Associates, Inc. Attn: Human Resources, 4150 Olson Memorial Hwy., Suite 300, Minneapolis, MN 55422.

CADD Technician—Water/Wastewater Group

Candidates should have a degree from a two-year accredited technical institution with an emphasis in CADD design (mechanical drafting) using 2-D AutoCADD software. A working knowledge of AutoCADD release 2002, Microsoft Word, Excel, and Windows Explorer is required. A working knowledge of Microstation software is a plus.

Position available in the Minneapolis office. Submit a cover letter and resume

to: WSB & Associates, Inc. Attn: Human Resources, 4150 Olson Memorial Hwy., Suite 300, Minneapolis, MN 55422.

INTERNSHIPS

American Red Cross of the St. Paul area

Transportation Services Evaluator Intern

The St. Paul area of the American Red Cross is looking for an intern to work with the director of transportation services to evaluate transportation service operations and develop strategies for cost-effective, efficient measures for this chapter's service.

Responsibilities include implementing a full evaluation of all program/services of the transportation services; reviewing business plans/budget; meeting with paid and volunteer staff; and reviewing the policy/procedural manual, etc.

The intern will review other transportation provider services; examine ways in which the St. Paul area Red Cross transportation services can collaborate/share limited resources; research cost-effective measures from other Red Cross transportation services and community transportation providers; and create a business plan encompassing results from the research and including suggestions for implementation.

Qualifications for this study include graduate study or equivalent experience in nonprofit, management/operations science, business, organizational strategy, planning, or related field. Applicant should have excellent verbal/writing skills, be detail oriented, and have a high level of self-direction. They must also be proficient in Microsoft Word and the Internet.

This position will end with the completion of the project and includes a flexible Monday–Friday, 8:30–5:00 p.m. schedule.

For more information, contact: Volunteer Resources at 651-291-4602,



e-mail internships@arcstp.org, or visit www.stpaulredcross.org.

City of Woodbury

Civil engineering Intern

The city of Woodbury is hiring a civil engineering intern to assist the assistant engineer in the planning, design, and administration of the Engineering Division activities and projects.

The intern will assist in establishing and maintaining a records-management system for the Engineering Division; assist in developing an engineering data and information base; assist in the general administrative duties of the Engineering Division including project monitoring and budget preparation; investigate and prepare responses to citizen requests and inquiries; perform field review and investigations for studies and projects; assist in the preparation of capital improvement and equipment plans and specifications; perform construction inspection for capital improvement; and perform other engineering and administrative-related work as assigned.

Candidates must be either a junior or senior civil engineering student; be able to communicate effectively orally and in writing, do drafting, and read and interpret construction plans; have experience using personal computers; and have a valid driver's license.

The work schedule is 20 hours per week now through December 31, 2003, and 40 hours per week during the summer months. It is anticipated that the position will be re-budgeted for a similar work schedule for 2004.

Salary is \$13 per hour. The position is open until filled. No fringe benefits.

Send resume to David R. Jessup, Woodbury Public Works Director, 8301 Valley Creek Road, Woodbury, MN 55125-3330. Phone 651-714-3593; fax 651-714-3501; e-mail djessup@ci.woodbury.mn.us.

able positions: transportation economists and analysts; transportation and community planners; policy analysts; operations research analysts; travel survey researchers; traffic engineers; mechanical engineers; and organizational development and design specialists. The John A. Volpe Transportation Internship is also available.

The positions are located in the Office of System and Economic Assessment at the US/DOT's Volpe Center in Cambridge, MA.

For more information on career opportunities at the Volpe Center visit www.volpe.dot.gov/career/index.html or contact Susan Jarrell, DTS-84, Office of Human Resources, RSPA/Volpe Center, Kendall Square, Cambridge, MA 02142, phone 617-494-2214; e-mail Jarrell@volpe.dot.gov.

MISCELLANEOUS

US/DOT's Volpe Center

Transportation-related positions

US/DOT's Volpe Center has a variety of opportunities for individuals at both junior and mid-levels in a wide range of transportation project applications.

The following are some of the avail-