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North Dakota legislature modifies UGPTI enabling law

The 2003 Legislature made some significant changes to the Transportation Institute's enabling legislation this session. The request for changes was made by the State Board of Higher Education and North Dakota State University at the recommendation of the Institute's Advisory Council. The two areas in which changes were made were the make-up of the Advisory Council, and in the Purpose-Powers and Duties.

The Advisory Council was broadened by adding several organizations, including the North Dakota Department of Transportation. This is extremely important to the future of the Institute because of the close relationship that has developed between the NDDOT and the Institute during the past 20 years. Another important addition was the North Dakota Association of General Contractors (AGC). Transportation construction is a major component of the AGC and an important industry to North Dakota. Another addition broadening the Council was a representative from the manufacturing sector. Transportation and logistics are critical to the success of this industrial sector, which now ranks with production agriculture in its importance to North Dakota's economy.

Representation on the Council was also strengthened in recognition of agriculture's continued importance to the state's economy. The North Dakota Department of Agriculture and the North Dakota Grain Growers were both added to the Council.

The purpose of the Institute was broadened by adding logistics as an area of research. Transportation is the glue that binds the logistics process together. What's more, even though logistics includes a wide variety of business activities such as warehousing, inventory control, procurement, production scheduling, etc., transportation is usually the single most major cost component in the entire process. The Institute has been conducting research in the area of logistics since its beginning in areas such as grain transportation and handling.

The action of the legislature formalizes work that continues to grow in importance and emphasis. These modifications in legislative language provide the environment for the Institute to evolve in the future – consistent with changes taking place in the state and world economy and society.

TRB and Ph.D. program exciting for students

Of the 9,000-plus from around the world who attended the 80th annual Transportation Research Board meeting in Washington, D.C., in January, five were especially intrigued by the information and opportunity to make contacts.

The five – Alan Dybing, Heather Gibb, Weijun Huang, Sang Moon and Napoleon Tiapo, are the premiere students in a new interdisciplinary doctoral degree in Transportation and Logistics at North Dakota State University. The students are funded through Mountain-Plains Consortium stipends.

They all have an agricultural economics background. This fits well with the degree program, which is a joint effort of the College of Agriculture, Business Administration, and Engineering and Architecture, and the Upper Great Plains Transportation Institute. The program has a 25-credit core curriculum, an area of concentration and a dissertation.

Students may enroll in one of three areas of concentration: Logistics and Supply Chain Systems, Transportation Economics and Regulation, or Transportation Infrastructure and Capacity Planning.

Dybing found the international aspect of the TRB conference rewarding. Visiting with people from Panama, Norway and Canada gave him a broader perspective on transportation issues. Tiapo, originally from Cameroon, echoes those thoughts, and with Gibb, the conference centered on how the Ph.D. program underscores their professional goals.

Transportation logistics expertise is needed everywhere in the world. They see the new Ph.D. program multiplying their opportunities exponentially. The multidisciplinary offerings at the TRB conference paralleled much of their program.

With Denver Tolliver as the lead for the Ph.D. program the students say they are in good hands. They cite his openness to suggestions and the opportunities he provides as reasons they stayed at NDSU. They all had job opportunities but wanted to be part of this inaugural venture. Their esteem for Tolliver was the clincher for most of them in deciding to pursue further education. The six of them are “designing the program” together, incorporating new ideas as needed. Together, they are building a core of camaraderie.

The core curriculum includes two courses in Transportation Systems and one course each in Logistics and Distribution Management, Intermodal Freight Transportation, Spatial Analysis of Transportation Systems (which includes a GIS-transportation lab), Quantitative Modeling, Probabilistic and Deterministic Methods, and Transportation and Logistics Research. The program also includes new courses in Economics of Transportation Systems, Transportation Corridor Planning, Public Transportation, Public Infrastructure Management and Facilities Location.

The program and the TRB conference are already paying off for three of the students. Dybing, Gibb and Weijun will present at the Canadian Transportation Research Forum in Ottawa based on contacts at the conference. Dybing’s paper is “Estimation of the Demand for Grain Transportation in North Dakota;” Gibb’s is “New Technology Adoption and the Implementation of E-Commerce in the Mid-Continent International Trade Corridor Region;” and Weijun’s is “Shuttle Train Adoption Strategy.” Sang will attend the conference.

(TRB cont. on page 3)

NATIONAL TRANSPORTATION WEEK

May 11-17, 2003

for more info: www.ntweek.org

Agriculture Transport Center working with USDA

The Agriculture Transport Center is again working with the Transportation and Marketing Program at USDA to define research project and outreach plans for the next year. The center is actively involved in several research projects, including the value of short line railroads to rural America and the differential impacts of rail rate deregulation.

The short line study is critical to local investment decisions in a time of continuing rationalization for the nation's rail system.

The rail deregulation study provides insight for those concerned with how rail rates have influenced the competitive position of captive shippers. Many studies have considered the overall effects of rate deregulation for industries or commodities, but this study looks specifically at regional variation in benefits derived from the competitive rail rate structure. The study will highlight the impact of intermodal and intramodal competition on captive shipper rates.

DOTSC's plan preparation guide Web site

The DOT Support Center (DOTSC) in cooperation with the North Dakota Department of Transportation (NDDOT) recently completed its Plan Preparation Guide Web site. The purpose of this Web site is to provide easy access and one-stop shopping for details and notes used when developing plans for particular construction projects. The overall goal of the site is to give NDDOT designers, consultants, construction personnel and others access to the most current information available and improve the consistency of plans.

Prior to the Web site, finding details and notes needed for new projects was time consuming, and the user still had to make sure what was found was the most current version. The site was developed to solve these problems.

(DOTSC cont. on page 4)

(TRB cont. from page 2)

Brief biographies of the 'core of camaraderie'

Alan Dybing earned a bachelor of science in agricultural education with a minor in agricultural economics and a master of science in agricultural economics with a transportation logistics emphasis, both from North Dakota State University.

Heather Gibb holds a bachelor of science in agricultural economics from the University of Manitoba, Canada, and a master of science in agribusiness and applied economics from North Dakota State University.

Weijun Huang has an engineering bachelor of grain machinery from Zhengzhou Grain University, China; master of business administration from Oklahoma City University and a master of science degree in agricultural economics with the logistics option from North Dakota State University.

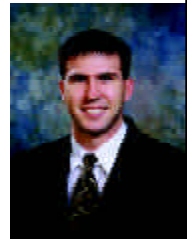
Sang Young Moon earned a bachelor of science in food and resource economics from Korea University, Seoul, South Korea, and a master of science in agribusiness and applied economics from North Dakota State University.

Napoleon Mbiziwo Tiapo earned an ingenieur agronome with a concentration in agricultural economics and extension from the University of Dschang, Cameroon, and a master of science degree in agribusiness and applied economics from North Dakota State University.



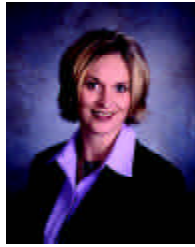
Shawn Birst with the Advanced Traffic Analysis Center (ATAC) is currently on active military duty.

Anticipated Return:
January 2004



VanWechel joins UGPTI Ag Transport Center

Tamara VanWechel, the newest member of the Upper Great Plains Transportation Institute's Agriculture Transport Center, has a background in natural resources management and economics. Pleased to be working in her home state, she sees the important and integral role of transportation in agriculture. She is an associate research fellow.



Having a positive influence on agriculture is a long-term goal. Growing up on a farm, she noted the vital link between agriculture and economics.

Her current research with the Agriculture Transport Center involves railroad deregulation, updating a short line railroad study, and looking at grain rates and waterways. She works closely with other members of the Agriculture Transport Center team.

VanWechel is also working on pocket guides for the United States Department of Agriculture's Transportation and Marketing Division. The pocket guide will have basic facts so lawmakers, USDA staff and others can quickly find information. She also does literature reviews and data evaluation. Yet another major project is the Containerized Grain survey for the USDA.

She holds a master of science degree from North Dakota State University in natural resources management with an agribusiness and applied economics emphasis. Her bachelor of science degree, also from NDSU, is in natural resources management. She also served as an intern for U.S. Senator Kent Conrad.

DOTSC's maintenance management program

Work was recently completed on DOTSC's Maintenance Management Program, a Mountain-Plains Consortium project done in conjunction with the North Dakota Department of Transportation (NDDOT). Research was designed to ease the data collection burden of the NDDOT's maintenance managers while increasing and improving pavement condition information.

The pilot project utilized handheld computer technology and global positioning system (GPS) data to capture pavement condition and location data. This data collection effort was designed to be assimilated into current roadway management operations.

DOTSC Director Dennis Jacobson hopes the NDDOT will continue the Maintenance Management Program with a second phase. The second phase would include centralizing the system in Bismarck, N.D., and providing additional software for statewide maintenance planning and programming. Additional geographic information system (GIS) programs could be written and GIS maps could be posted to a NDDOT Web site.

(DOTSC cont. from page 3)

The site allows individuals to provide comments on notes or details that they feel need to be improved. With the combination of user comments and a "behind the scenes" management program, the most current notes and details will be available 24 hours a day in one central location. The Web site address is www.ugpti.org/dotsc.

UGPTI/Texas Transportation Institute partnership successful

The Upper Great Plains Transportation Institute (UGPTI) and the Texas Transportation Institute (TTI) successfully competed for the recent American Short Line and Regional Railroad Association's (ASLRRA) short line data study project. The UGPTI/TTI partnership was formed to compete for the project and to combine the considerable short line railroad expertise at both Institutes.

Both Institutes are recognized experts at performing objective analyses of the short line industry.

Eighteen organizations competed for the project. The UGPTI/TTI team was one of four finalists interviewed in Washington, D.C., as part of the final selection process. The UGPTI/TTI team was selected by the ASLRRA to perform the short line analysis section of the project and to assist the Association of American Railroad's data collection section of the project.

The ASLRRA project will develop economic and operational analyses of the short line industry for consideration by public policy decision makers. John Bitzan and Doug Benson lead the UGPTI section of the project.

Kate Miner working on ITS architecture



Kate Miner calls Intelligent Transportation Systems an exciting area that can only grow in its ability to help people and goods move efficiently and safely. New to the Advanced Traffic Analysis Center at the Upper Great Plains Transportation Institute, her ITS work is a

logical progression in her transportation career. Miner is an associate research fellow.

She began with the Minnesota Department of Transportation as an undergraduate student, working in traffic studies and design. After

earning her bachelor of science degree in civil engineering from North Dakota State University, she was a field worker on an overpass project for Moore Engineering and worked on designs for small bridges, drainage ditches and culvert crossings. She then became a traffic engineer for the North Dakota Department of Transportation in the Fargo District. Because ATAC is a vital partner in many DOT projects, Miner continues broadening her transportation experience.

Miner works primarily on a project to put the architecture in place for ITS across the state of North Dakota. This will allow the NDDOT to plan and prepare for transportation needs.

One of Miner's goals is to see the small to medium size cities ATAC works with combat congestion problems before they develop. Through the innovative use of ITS, she believes traffic control is coming to the day when traffic can be managed so that potential stresses in the system can be caught and corrected.

ITS is a broad field, she says, and working with the NDDOT means focusing on what will be valuable to North Dakota's roadways, what is useful and cost effective.

Snowplows and sanding trucks are expensive to operate. Through ITS technology such as the Roadway Weather Information Systems, sensors in the road tell the DOT what conditions are. Then officials know what they need to do.

ITS use is expanding rapidly. Message boards on the Interstate system can be changed from the DOT office, alerting motorists to oncoming changes. Law enforcement will also be an eventual link to speeders on the roadways. Bridge decks can automatically be sprayed for ice, based on the data collected from sensors.

While Miner works on ITS, she expects to earn her masters degree in civil engineering with a transportation option at NDSU in 2004. She finds links between the classroom and ATAC, blending theory and real world issues.

Student Spotlight

Martimo Region VIII Student of the Year

Engineer in Training is the precise definition of Matthew Martimo's education and work as associate research fellow with the Advanced Traffic Analysis Center (ATAC). His enthusiasm and experience are also why Martimo is the 2002 Region VIII Student of the Year. He was among 32 awardees Jan. 13 during the Transportation Research Board 82nd Annual Meeting in Washington, D.C.

The Mountain-Plains Consortium nomination came from Martimo's research on trip generation rates. His question – "Where does the traffic go?" – led to specific analysis of school and university trip generation rates. Martimo collected primary data through traffic counts at schools, and short interviews with students and parents. His methodology will allow small and medium sized cities to better account for these trips without needing to process traditional survey data.

His work ties into the ATAC Travel Demand Modeling Support Program implemented by Martimo and Ayman Smadi, director of ATAC. Their goal is to develop a resource for transportation planning modeling suited for small to medium size urban areas.

He likes working in a field that is growing, likes the intellectual stimulation, and doing the investigations that will provide practical benefits to people and transportation.

Martimo also likes the big puzzle of high-end analysis. Combining GIS, traffic analysis



programs, simulation models and travel demand modeling software together to create practical solutions to problems, he leads the development of software enhancements to traffic simulation models. He recently accepted the responsibility of being the lead member of the ATAC team for teaching Synchro and VISSIM training courses.

His work has allowed him to become uniquely familiar with traffic operations and transportation planning. Integrating and linking engineering and long-range planning are challenges he embraces.

The Mountain-Plains Consortium supported Martimo's nomination as the University Transportation Center Program award winner. He was among Region VIII candidates from Colorado State University, North Dakota State University, University of Wyoming and Utah State University. This was the 12th Annual Outstanding Student of the Year Awards ceremony. For the past 11 years, the Department of Transportation has honored the most outstanding student from each UTC.

Martimo plans to continue at North Dakota State University, earning his master of science in civil engineering this summer. He holds a bachelor of science degree in civil engineering from NDSU and is registered as an Engineer in Training having passed his Fundamentals in Engineering exam.

Continuing at ATAC will allow him to earn his license as a professional engineer. He was president of the ITE student chapter and is a member of Golden Key National Honor Society. Martimo is active in local and regional transportation organizations.

Peterson part of building SURTC



When Del Peterson was growing up in rural Minnesota, he learned how important transportation is to a community and to community building. In a North Dakota State University graduate class he heard John Bitzan, advanced research

fellow with the Upper Great Plains Transportation Institute, talk about transportation projects. Peterson's interest was piqued.

Today Peterson is an associate research fellow with the Small Urban & Rural Transit Center with UGPTI. New to the fast-developing SURTC program, Peterson is learning to implement the Geographic Information System into practical situations.

Involved in the James River Transit Project, he is figuring out the where, when and how of changing from an on-call response system providing senior and handicapped transportation to a regular bus system. He will also be involved in the North Dakota Statewide Mobility Plan and the Transportation Services of North Dakota Coordination Study.

Among his research interests is a dilemma facing many rural states. With the outmigration of young people, the family support system that might have provided transportation to older or handicapped family members is gone. The need for public transportation systems to pick up where families can no longer provide services for medical, social and other needs is evident.

His background in transportation economics and policy provides some of his incentive to see projects move from idea to implementation, to see projects move toward mobility for people and products.

While his current niche with SURTC rests with GIS probabilities, Peterson looks forward to the many projects in the pipeline. SURTC's vital work for rural areas and small to medium size cities is right up his alley.

He earned his bachelor of arts degree in economics and management from the University of Minnesota-Morris and his master of science degree in agricultural and applied economics from North Dakota State University.

TEL8 board meeting in Fargo

The TEL8 Board of Directors recently held its annual meeting in Fargo. Representatives from TEL8 locations in North Dakota, South Dakota, Colorado, Montana, Wyoming and Utah met to consider and shape TEL8's future.

Major issues before the board include the consideration of a major technological reconfiguration of the system, a TEL8/NHI video-conference initiative and the future of the TEL8/WASHTO-X relationship.

2003 North Dakota Motor Carrier Directory available

The 2003 North Dakota Motor Carrier Directory is now available for \$10; or download off the publications page of the UGPTI Web site at www.ugpti.org.

TEL8 and NHI forge partnership

TEL8 and the National Highway Institute (NHI) both offer specialized training for transportation professionals. NHI has renewed its commitment to distance learning programs and looks to TEL8 for expertise. TEL8 will help NHI develop courses that work in videoconference format.

In a new commitment to partnership, TEL8 may serve as a pilot program for the NHI to develop more courses, some of which may lead to NHI instructor certification for videoconferencing.

An upcoming course through TEL8 will be "ITS Architecture for Deployment," which will address state needs to effectively apply transportation technology. The June course will be followed by two others.

TEL8's know-how will also help inform state departments of transportation, universities and other transportation professionals as NHI develops new courses or redesigns courses that can be taught through videoconferencing.

The TEL8 interactive communications network serves North Dakota, South Dakota, Montana, Utah and Wyoming transportation departments. Mountain-Plains Consortium universities also participate in TEL8.

NHI is a training arm of the Federal Highway Administration, providing leadership and resources for training and education.

Contact Julie Rodriguez at the Upper Great Plains Transportation Institute for further information. E-mail, julie.rodriguez@ndsu.nodak.edu or visit the www.tel8.org or www.ugpti.org Web sites.

TEL8's fast-paced growth

The rapid growth of TEL8's videoconference network continues with the inclusion of additional network sites and increased programming. During the past four years, the videoconference network has tripled in size. The number of sites in the system now total more than 30 including more than 20 network sites at Department of Transportation district sites in South Dakota, Utah and Wyoming. More network growth into the western United States will be considered later this year.

TEL8's programming has more than doubled during this rapid network expansion. Recent examples of innovative programming developed by the network include new Mountain-Plains Consortium short courses and the MPC-X, a university-based research dissemination seminar series.

Julie Rodriguez, TEL8 program director, also recently announced the formation of a preliminary TEL8/NHI initiative investigating the videoconference delivery of NHI courses to TEL8. Moreover, the TEL8 bridge activity doubled in support of the network.

The TEL8 network continues to support and facilitate the establishment of a new prototype programming network. The new programming network, WASHTO-X, includes many of the western United States and is modeled after TEL8 and its InfoX series of programming.

The TEL8 network is administered by UGPTI staff. In addition to Rodriguez, Doug Benson is executive director, Mary Marquart, administrative assistant, and Mitch Hoffart, telecommunications technician.