

# MTC

# Asset

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## From the MTC Director

**A** main emphasis of the Midwest Transportation Consortium has been and continues to be to develop outstanding human capital for the transportation industry in our region.

A new generation of leaders will be needed in state departments of transportation (DOTs), local governments, regional organizations, and the private sector as we continue to move from the era of transportation system development to the era of transportation system management.

The MTC helps our member schools develop human capital in a number of ways including supporting student travel to conferences such as the Transportation Research

Board (TRB) Annual Meeting and paying for a portion of research assistantships that allow students to work on projects that involve important transportation issues.

This year, the MTC helped underwrite TRB travel for about 20 graduate and undergraduate students. We are also helping support over 30 graduate research assistantships—the most we have assisted during our four years of operation. This support is used to leverage other research dollars, which come mainly from the state DOTs in Iowa and Missouri.

The MTC also sponsors a fall student paper competition. Last year's competition in Ames was the best quality competition to date; it was a testimony to the high quality of students that the MTC member schools are able to attract.

One of the traditions of the MTC is a shared seminar held in the spring semester that is broadcasted via video-conference to four locations in

Iowa and Missouri. This year's seminar is (as usual) focused on transportation asset management issues. It also emphasizes new and emerging technologies. About 35 students are enrolled in the seminar and guests are also welcome to attend (see page 2 for more information). The mix of civil and construction engineering, urban planning, geography, and business students makes for interesting question and answer sessions.

The MTC has also allowed its member schools to develop new courses and new course materials for existing courses that emphasize asset management approaches to transportation, such as the course "Pavement Maintenance Management," (Civil Engineering 559) at Iowa State University. This new course focuses on asset management techniques for managing pavements, including systematic approaches to management through pavement life cycle, selection and scheduling of maintenance

treatments, analysis of network-wide pavement resource needs, and selection of strategies for specific pavement projects.

Iowa State University's transportation policy planning course (Community and Regional Planning 445/545) now includes a module on asset management principles and Government Accounting Standards Board (GASB 34). Lincoln University's public accounting courses now cover asset management principles and GASB 34 as well.

Educating the current crop of students is important. However,

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## MIZZOU scholars tour Turner-Fairbank Research Center

**E**leven MTC transportation scholars from the University of Missouri-Columbia (Mizzou) attended the 82nd Annual Transportation Research Board annual meeting held last January 12–16 in Washington, D.C.

In addition to the conference, MTC Associate Director Charles Nemmers escorted ten of the students on a tour of the FHWA's Turner Fairbank

Highway Research Center in nearby Northern Virginia (see picture). While the tour lasted only about three hours, the group saw years worth of research on display.

The students toured many laboratories in the research center including the traffic engineering simulation lab, which they found particularly interesting. The researchers in that lab place actual traffic flow information into various traffic analysis models. "It was one of many areas where we took a glance into the future and could see possibilities that we had never even dreamed about," says Nemmers. "It was an exciting time. We thank FHWA



**Joey Hartman, FHWA researcher (far right), escorts Mizzou students and Charles Nemmers (far left) through the Research Center.**

for their time in hosting the transportation scholars from Mizzou."

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the transportation industry clearly faces a shortage of human capital in the future as many current leaders are retiring or are expecting to retire. For this reason, the MTC is also now involved in a pilot project with the Iowa DOT, Des Moines Area Community College and several Central Iowa area high schools to attract new students to careers in transportation. What makes this program unique is that current students are doing much of the recruiting.

Recruiting focuses on both technical and professional career paths and includes both transportation planning and civil engineering.

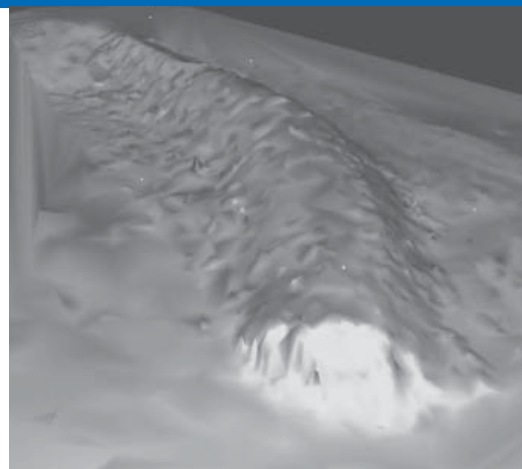
(See article in page 4 of *CTRE en route* for more information.)

## Laser scanning improves efficiency

**L**aser scanning is a terrestrial laser-imaging system that quickly creates a highly accurate 3-D image of an object for use in standard CAD software packages. Such a system may produce more accurate as-built drawings in less time

compared to standard approaches.

This project investigates the use of laser scanning to assist the Iowa Department of Transportation with several important design and construction activities. Pilot tests will be performed on various types of projects such as an intersection, a highway segment, and a bridge.



**A laser-scanned stockpile**

Comparisons will be made to determine cost savings and accuracy improvements using laser scanning compared to

conventional helicopter photogrammetry techniques. A final report will be completed soon and will be available online at [www.ctre.iastate.edu/mtc/](http://www.ctre.iastate.edu/mtc/).