Dock Burke, Texas A&M Regents Fellow and Senior Research Economist for the Texas Transportation Institute is Director of the SWUTC. In his career at the Institute, he has served as the Principal Investigator or staff member of 66 research projects, authored or co-authored 105 research reports and papers, and has made over 75 presentations on a wide variety of transportation related issues since joining TTI in 1969.

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About the Center
Established in 1988, the Southwest Region University Transportation Center is comprised of a consortium of five universities within Region 6. One of the original 10 regional UTCs, SWUTC has competed for the Region 6 UTC with each reauthorization cycle.

Lead University - Texas A&M University
The Texas A&M Transportation Institute is headquarters for the SWUTC and is the largest transportation research entity in the U.S. with 50 million in research annually. The research program at TTI is extensive and includes transportation systems and operations, policy and planning, economics, materials, structures, safety, and human factors.

Texas Southern University
Texas Southern University, an HBCU, and its Center for Transportation Training and Research present a premier transportation program in planning, research, and implementation. A blend of TSU’s airway science expertise and its strength in urban transportation planning and maritime transportation management and security creates new avenues for bringing multi-modal solutions into the classroom, laboratory, and implementation phases of existing and new transportation challenges for the 21st Century.

University of Texas at Austin
The transportation programs at UT-Austin and its Center for Transportation Research feature well-equipped facilities, top-notch research and teaching faculties, and high-quality students. A wide range of expertise in science, engineering, and policy gives the SWUTC a rich skill mix needed for developing viable solutions to complex issues involving transportation systems behavior, international goods movements, and harmonized modal transport networks for improved performance.

Louisiana State University
The Civil and Environmental Engineering faculty at LSU have expertise in transportation planning, operations, human factors, safety and materials engineering, including nationally recognized experts in the field of evacuation science and emergency transportation planning. These focused areas of research address the need to develop and maintain the ability of transportation systems to economically, efficiently, and safely respond to changing conditions and priorities.

University of New Orleans
UNO professional researchers and faculty are based in its Department of Planning and Urban Studies. The faculty at UNO have broad-based experience in maritime, intermodal transportation and land use planning in addition to evacuation planning analysis. This combined with UNO’s work in transit oriented development adds strengths to the SWUTC priority of enhanced megaregion planning for transportation in Region 6.

Sustainable Transportation Solutions to Enhance Economic Prosperity and the Quality of Life
Our Vision is to become... an Internationally recognized center for excellence providing knowledge, diverse leaders, and innovative solutions for the transportation challenges of the 21st Century.

Education and Workforce Development

SWUTC Graduate Programs
Transportation Scholars at TAMU; Advanced Institute at the UT-Austin; Graduate Transportation Studies at TSU

Each UTC has the objective to advance scholarly development of transportation graduate students enrolled at the respective universities and prepare them to be the Nation's future professional leaders in the transportation sector. Full and partial fellowships are available. To date, SWUTC has sponsored 491 graduate students. Greater than 97% of graduating students are known to have taken employment in the transportation sector.

Transportation Certificate at UNO
Graduate students can specialize in transportation planning as an approved concentration within UNO's well-respected Masters of Urban and Regional Planning Program and earn a Transportation Certificate. UNO with SWUTC funding also provides support for selected students for the GIS Certification Program.

SWUTC Undergraduate Programs
Undergraduate Fellows Program at TAMU & UT-Austin
This summer program provides undergraduate students from varied disciplinary backgrounds with a unique insight into transportation engineering. It also provides students with a research/work experience that will help them get a head start on their careers. The ultimate goal is to recruit them into the transportation graduate programs at the consortium universities.

K-12 Recruitment Programs
SWUTC has developed many successful programs to provide K-12 students with hands on experience and insight into what transportation, engineering, and technology careers have to offer from role models currently working in the field of transportation. To date, our programs have impacted the lives of over 10,000 students. Current programs offered include: On the Move at UNO, Rural Summer Transportation Institute - Sustainable Energy Concepts at TAMU Kingsville and Transportation Security Institute: Recruiting Next Generation Professionals at TSU.

Research

Over the past five years, the Urban Mobility Report (UMR), the most widely quoted and authoritative source of information about traffic congestion in the United States, and its possible solutions, has been transformed with UTC funding. The UMR now includes the congestion impacts of transit and freight, and a greater understanding of congestion's economic impacts. Through SWUTC support, the UMR now includes two new ways to describe the effects of traffic congestion programs. Unpredictable travel time is given its own measure in the new report, and the environmental effects are addressed with an estimate of the carbon dioxide emitted in congested conditions.

The report is widely quoted in the media and in legislative and policy discussions through the U.S. Within the first week of the 2012 report release, coverage totaled 264 TV broadcast clips (6,736,712 audience circulation), 1,386 print/online/radio articles (25,200,400 audience circulation) and 800,000 additional Facebook users and Twitter followers.

Collaborative Research Efforts Focused on Region 6 Megaregion

Megaregions are defined as areas reflecting common factors such as interlocking economic systems, shared natural resources and ecosystems, and common transportation systems. One recognized megaregion is the Gulf Coast, containing Texas, Louisiana, Alabama, Mississippi and the Florida Panhandle. SWUTC researchers at each of the consortium member universities are collaborating by jointly examining the critical issues facing our "local" megaregion transportation system including trade lanes and oil exploration, the Intercoastal Waterway and Mississippi river trade, Panama Canal expansion, the preparation, evacuation and recovery from natural and man-made disasters (Katrina, Rita and oil spills), strategic oil, gas and chemical sectors of national significance and infrastructure needs.

Ultimately this work will be highlighted in the SWUTC Megaregion Symposium to be held in 2014. Bringing together students, scholars and practitioners, including universities, government, the private sector, and non-governmental organizations, to discuss urban issues impacting passenger and freight mobility in the megaregions of Region 6.

Groundbreaking Traditional Research

SWUTC's study of driver reaction time while driving and texting was the first of its kind to place subjects in an actual vehicle over a closed course to create an environment similar to real-world driving conditions. This study produced intriguing results, determining that a driver's reaction time is doubled when distracted by reading or sending a text message. In fact, the study results emphasized that texting impairment is even greater than many experts previously believed, and demonstrated how texting drivers are 11 times more likely to miss roadway cues such as flashing lights, signage, or brake lights and are therefore less able to react to sudden roadway hazards. A YouTube video based on study results can be viewed at http://swutc.tamu.edu/category/video-stories/

A follow-up study of the effectiveness of voice-to-text programs at reducing incidences of distracted driving is scheduled for release April 23, 2013 to coincide with National Distracted Driving Awareness Month. Results from this study suggest that voice-to-text applications offer no safety advantage over manual texting.

Technology Transfer

Current information, delivered to the right people is the desired outcome for SWUTC's technology transfer program. Both educational and research program activities pursue vital aspects of technology transfer. Educationally, student/professor relationships are the primary means of technology transfer through the knowledge exchanged between professor and students in classroom and research endeavors. In the research program, technology transfer outcomes are typically associated with the delivery of research products (papers, lectures, presentations, reports, video/media) from individual research projects to potential and interested users and colleagues. Since the inception of SWUTC in 1988, research has generated:

- 508 Research Technical Reports
- 999 Presentations
- 385 Refereed Papers

Technical reports generated by SWUTC research projects may be downloaded at http://swutc.tamu.edu/publications.htm

In addition to the traditional academic means of technology transfer, SWUTC has an impressive record of implementation of research results and products, and the ability to transfer knowledge to a wider audience. Just a few examples of past SWUTC workshops and conferences to promote professional development include:

- Household Travel Survey Symposium
- Transportation Statistics and Microsimulation Workshop
- Freight Performance Measures Workshop
- 3D Traffic Simulator - GIS Extended Learning & VISSIM Introduction Training Workshop
- Workshop to Assess Innovative Solutions to Transportation Needs in the Colonias
- Transit Oriented Development Workshop
- Bio-Fuels for Texas Workshop
- Texas Megaregion Workshop
- Public Transit Workshops on Regional Mobility Development Issues
- North American Corridors Workshop
- Real-Time Performance Measures Workshop