Southwest Public Safety Technology Center

Executive Director:
Dr. Steven Pei

Center Director:
G. Dilmore

Division Directors and Officers:
P. Bellamy, Dr. H. Le, Josten Ma, J. Peters

Participating Faculty
Dr. I. Kakadiaris, Computer Science
Dr. J. Day, Decision and Information Sciences
Drs. J. Chen, D. Jackson, N. Karayiannis, H. Le, S. Pei, J. Williams, Electrical & Computer Engineering
Drs. T. Assavapokee, T. Chen, G. Lim, H. Parsaei, Industrial Engineering
Drs. L. Penney, A. Witt, Psychology
Dr. S. Wang, Mechanical Engineering

The Southwest Public Safety Technology Center (SWTC) is a one-of-a-kind multi-disciplinary center designed to serve the work force of first responders and public safety officials. This includes everyone from law enforcement and fire services to emergency medical and emergency management personnel.

SWTC was created in 2005 with a grant from the National Institute of Justice. SWTC Director Pat Bellamy was appointed by the Harris County in 2006 to chair the Houston Ship Channel Security Council, which oversees the $34 million port security grant to Harris County. In 2007, SWTC became a member of the Department of Homeland Security (DHS); the Center for Maritime, Island and Port Security, which is led by the University of Hawaii in Honolulu, the DHS Center for Natural Disasters, Coastal Infrastructure, and Emergency Management, led by the University of North Carolina at Chapel Hill and Jackson State University.

Projects continued in 2008 included the "Characterization and Evaluation of Taser Safety," which works to
develop accurate electromagnetic modeling of the effects on human subject models and develop a figure of merit for taser safety evaluation. The study of "Situational Awareness Effectiveness in Command and Control Operations" lays a foundation of knowledge in the area of situation awareness using observational, interview and survey data collected from a multi-jurisdiction law enforcement and transportation management command and control center.

While all researchers aspire for their work to have real-world applications, the pressing safety and security issues require technological advances ready for use in a matter of months, not years.

"If what we develop is a technology that can not be commercialized and purchased off the shelf, our task is not completed," said Professor Steven Pei. "Our task is really RD&D?research, development and deployment."

RD&D is only part of SWTC's mission. Integrating state-of-the-art technology with education is key for this center said Gordon Dilmore 2008 director of SWTC.

"Educating the technology users and decision-makers in the public safety arena is also a primary objective of SWTC," said Dilmore. "Police chiefs and law enforcement executives may have a degree in criminal justice or related area in social sciences; however, very few have an advanced degree in natural sciences or engineering."

SWTC also offers basic technology skills trainings for the law enforcement workforce. Much of this training is offered in cooperation with the Sheriffs’ Association of Texas (SAT) in Austin.

"The partnering between UH and SAT makes SWTC uniquely positioned to serve the training and other technology needs of the public safety community in Texas," said Joe Peters of the Sheriffs’ Association of Texas and director of the SWTC Technology Assistance Division in Austin.

Because of its mission to train and assist the public safety workforce, the SWTC is geographically dispersed to effectively address rural and urban issues. The center, for instance, has established branch offices and testbeds in Houston, Austin, the Middle Rio Grande border region and in Del Rio. This arrangement allows the center to develop strategies and use its resources in a manner that will ensure the greatest impact.

© University of Houston Cullen College of Engineering, Department of Electrical and Computer Engineering