CTS 2009 DEMO SESSIONS

DEMO II

COMPOSE Framework for Decision Support and Collaborative Data Analysis Applications

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ABSTRACT
The Coherent Multi-Dimensional Perception Of Situation and Environment (COMPOSE) framework is built upon several open standards and provides the capability to develop sophisticated tools that provide at-a-glance understanding. With COMPOSE, data visualization and analysis capabilities can be easily developed and rapidly connected to a wide array of data sources providing a number of capabilities including but not limited to: monitoring and tracking items of interest such as wildlife migrations, road congestion or traffic patterns; monitoring and assessing the impact of weather on critical infrastructure; first responders coordinating and monitoring activities for emergencies; timely, mission-critical decision support for commercial and military entities. COMPOSE includes simplified configuration interfaces that enables easy integration with Sensor Web Enabled (SWE) databases, map servers utilizing Web Feature Service (WFS), Web Map Service (WMS), Web Capabilities Service (WCS), Java Messaging System (JMS) as well as a host of other web-based data feeds. Utilizing XML, Eclipse, Simple Widget Toolkit (SWT), OpenGL and NASA World Wind, COMPOSE provides end users a means for efficiently assembling and configuring their own data views and perspectives, while providing a rich visualization framework for third party developers to add capabilities and features. TDKC is currently using the COMPOSE framework to develop a series of tools to support trusted layered sensing applications for the Air Force Research Laboratory (AFRL). In this demo session several of the key COMPOSE features and capabilities will be demonstrated as part of the ongoing AFRL research.

PRESENTER
Dr. Jeff Walrath, Senior Engineer, The Design Knowledge Company, Fairborn, Ohio, USA.

PRESENTER BIOGRAPHY
With over 13 years of experience, Dr. Jeff Walrath researches and develops innovative computing technologies supporting the defense industry. Dr. Walrath enjoys a career working for The Design Knowledge Company (TDKC) located in Fairborn, Ohio. TDKC provides advanced research and
development support for a variety of government and commercial clients. At TDKC, Dr. Walrath investigates and applies new and emerging hardware systems and software technologies in the development of solutions and tools supporting TDKC clients. Dr. Walrath received a Ph.D. in computer engineering from the University of Cincinnati with research focused on design automation technologies for VLSI and reconfigurable computing. Dr. Walrath will be presenting research details from an ongoing Air Force Research Laboratory (AFRL) project called XCAT. XCAT deals with the development of decision support, argumentation and visualization tools to support trusted layered sensor webs.