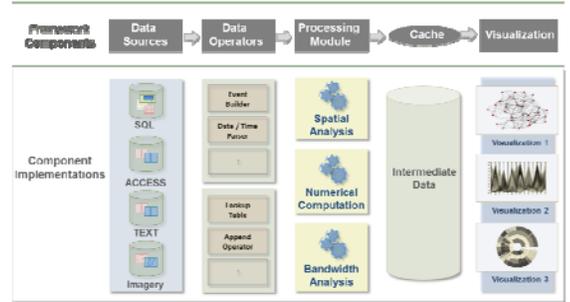


Interactive Visualization Framework for Operational Testing Data

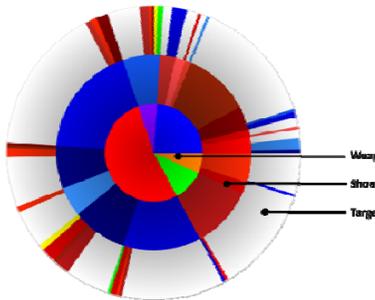
PROCESS-ORIENTED DATA VISUALIZATION

The Process-Oriented Data Visualization Framework (ProDV) provides users a high-level visual programming environment for creating custom visualization applications on a desktop or laptop computer. Custom and generic visualization techniques can be combined to create Coordinated Multiple Views (CMVs), which aid in visual analysis of large datasets.

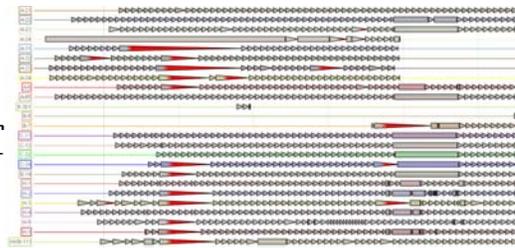


ProDV is designed to enable data analysts across domains to DETECT THE EXPECTED and DISCOVER THE UNEXPECTED using Visual Analytics techniques. This involves harnessing the power of human visual processing to quickly identify anomalous features hidden within massive volumes of data.

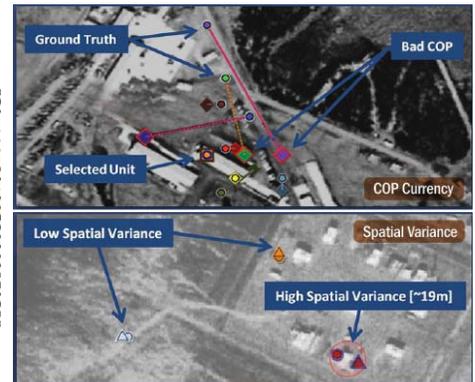
ProDV is being used by the U.S. Army Operational Test Command (USAOTC) in various domains in order to improve analysts' ability to understand and make inference from data collected during testing and evaluation of next-generation warfighting equipment.



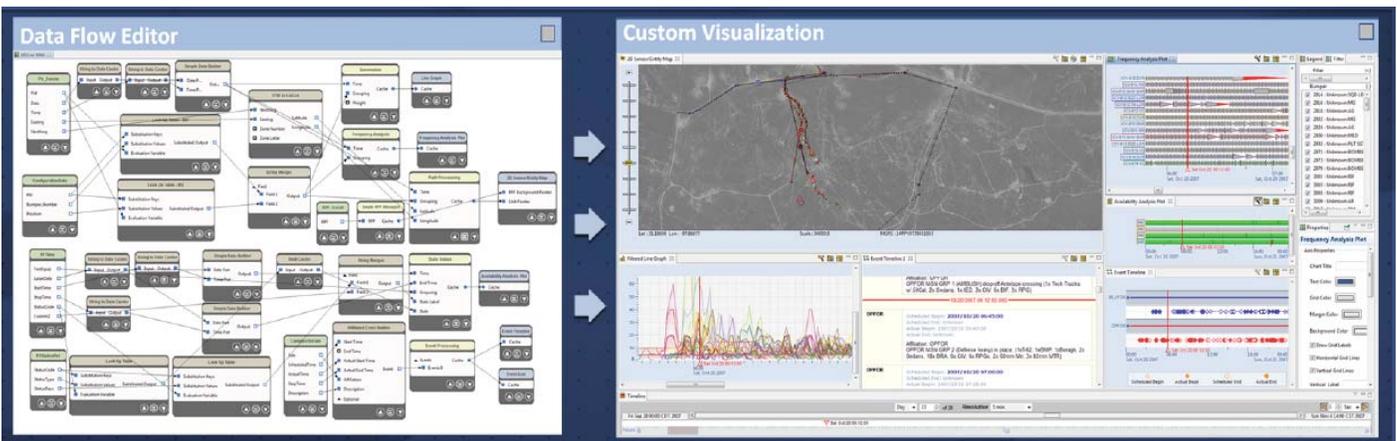
A radial chart used to summarize engagement results.



A custom visualization used to identify sensor failures.



Custom visualizations used to analyze SA system performance.



The data flow interface provides users a high-level visual programming environment for creating custom visualization applications using components of the software framework. This example shows a data flow that integrates test data from multiple sources to produce a collection of multiple visualizations linked to a common timeline in order to support advanced analysis of both spatial and network data.

TEXAS CENTER FOR APPLIED TECHNOLOGY

There are many problems that require the careful and proper integration of applied technologies to find solutions. The Texas Center for Applied Technology (TCAT) was created to focus on these specific problems and to develop effective and efficient solutions. TCAT's core competency is the innovative application of existing technologies and advanced research to solve complex real-world problems.

TCAT's primary objective is to apply and test technologies to address targeted problems and engage basic research as required. TCAT has employees in a variety of locations with the ability to perform research that cuts across multiple technologies, disciplines, and cultures. The Center's employees are knowledgeable regarding customers' requirements and are ready to respond effectively to provide the best value for the customers' needs including expertise in technology insertion, technology assessments, and test and evaluation.

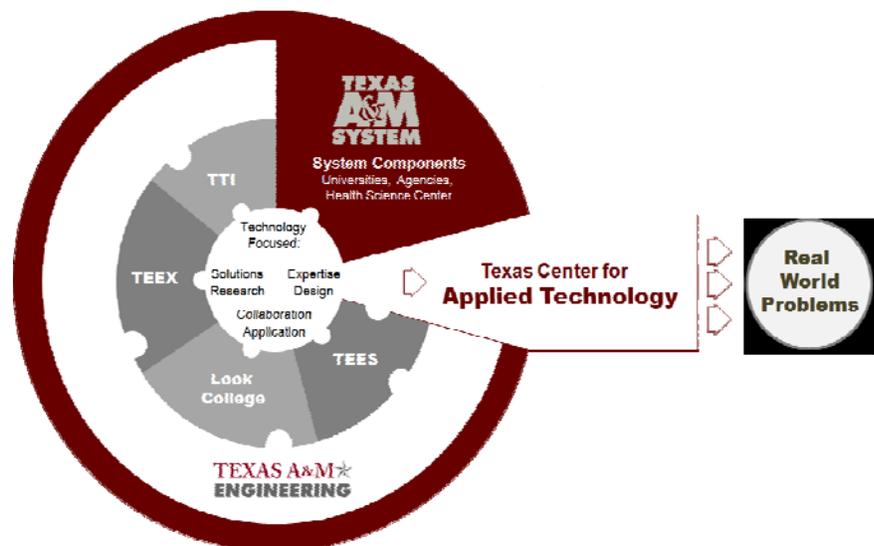
TCAT is part of the Texas A&M Engineering Experiment Station (TEES), a member of The Texas A&M University System. The A&M System is one of the largest and most comprehensive systems of higher education in the United States. Through a statewide network of eleven university campuses, seven state agencies, and a comprehensive health science center, the A&M System educates more than 120,000 students on its university campuses, conducts more than \$780 million in research, and reaches another 22 million people through service each year. TEES is an engineering research agency for the state of Texas and conducts over \$147 million in research annually. Because of the Center's position within the Texas A&M Engineering program, TCAT's expertise can easily be extended by rounding out its team with world class faculty researchers, as appropriate. TCAT is in an excellent position for collaboration not only with The Texas A&M University System components and their customers but with other universities, institutions, centers, and industry.

TCAT'S CORE COMPETENCIES

Energy Sustainability ★ Environmental Sustainability
Manufacturing & Systems Engineering ★ Information Technology ★ Modeling & Simulation
Technology Insertion ★ Test & Evaluation

TEXAS A&M ENGINEERING

Texas A&M Engineering consists of the Dwight Look College of Engineering, and three engineering agencies, including TEES: Texas A&M Transportation Institute (TTI) conducts research and professional education in all modes of transportation. The Texas A&M Engineering Extension Service (TEEX) works to develop a highly skilled and educated workforce and enhances public safety through training, continuing education, and technical assistance.



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