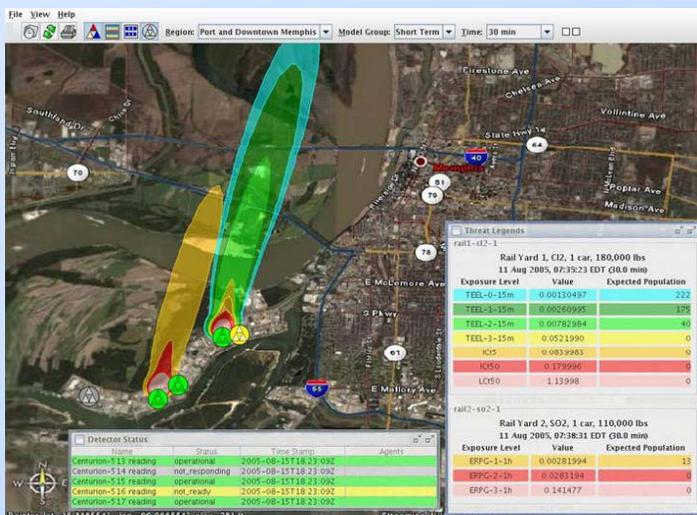


Threat Detection and Analysis System

Data Systems Sciences & Engineering Group

Computational Sciences & Engineering Division



- **Problem Statement:**

- Provide real-time assessment of chemical releases and their potential effects on exposed population using current weather conditions

- **Technical Approach:**

- Integrated system of sensors, communications, software agents, database, air dispersion modeling, and visualization tools
- Continuous air monitoring and predictive contaminant dispersion modeling to allow immediate, and informed, event response by 911 dispatcher.
- Clarion and visual sensor alerts, common operational picture, situational awareness with status of deployed sensors and detectors
- Rapidly adaptation to new locations

- **Benefit:**

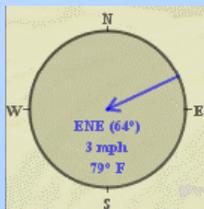
- Mission-oriented tool for emergency management and response
- Local, real-time system with global access

- **Technology Readiness Level 9**

rail1-cl2-2

Rail Yard 1, Cl2, 2 cars, 360,000 lbs
09 Jun 2006, 14:57:31 EDT (30.0 min)

Exposure Level	Value	Expected Population
TEEL-0-15m	0.00130497	5,548
TEEL-1-15m	0.00260995	3,444
TEEL-2-15m	0.00782984	613
TEEL-3-15m	0.0521990	0
ICt5	0.0839983	0
ICt50	0.179996	0
LCt50	1.13998	0



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