

Technology Service Corporation

ENTERPRISE GIS

Technology Service Corporation designs, develops and deploys complex, dynamic geographic information systems that operate within the larger C4ISR enterprises and architectures supporting military commands and federal agencies. These enterprise GIS solutions include all major components of the enterprise from the servers, databases, geospatial data ingest, editing and publishing components, and client viewers that range from workstation applications to web browsers. TSC focuses on the commercial GIS and database products used by the National Geospatial Intelligence Agency as implemented in the NGA Commercial Joint Mapping Toolkit (C/JMTK) and also as the off-the-shelf commercial versions of the software used by nearly every defense, intelligence and federal agency in the United States.

Capabilities Summary

C4ISR GIS System Analysis – End to end geospatial data processing and dissemination matched to the customer requirements and architectures.

CJMTK Expertise – Full range support, configuration and application of all commercial components (ESRI, Leica Geosystems, and Analytical Graphics).

GIS Software Customization – Spatial Data Engine and Internet Map Server implementation. ArcInfo and ERDAS Imagine data editing and publishing Geospatial algorithm implementation. Web enabled client customization and operations.

Database Implementation – MySQL through Oracle 10g implementation and tuning.

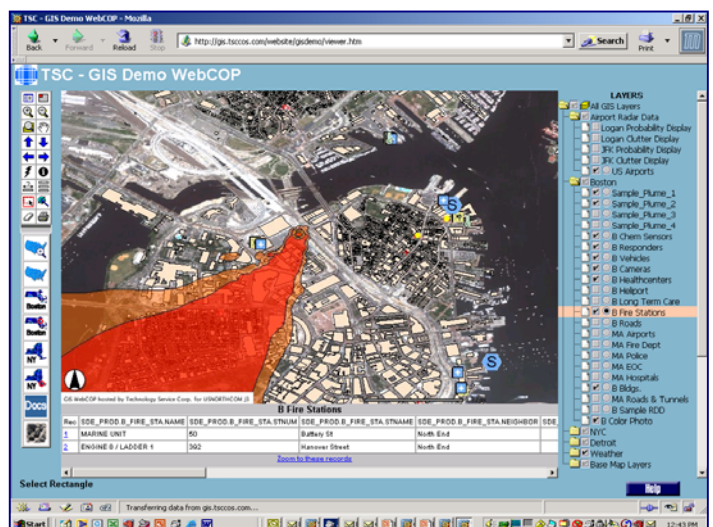
Dynamic Object Integration – Sensors, Robots, Video, Responders, Hazard Plumes, Vehicles, and GPS enabled phones/computers.

Java 2 Enterprise Edition (J2EE) and JBOSS – Open source and Open Geospatial Consortium compliant interfaces to accommodate Web Feature Services and Web Mapping Services.

The Enterprise GIS Team

TSC's GIS team includes experts in geographic applications and geospatial data, relational databases, systems engineering, and software engineering and development. This team provides the rapid, operationally focused support required by demanding customers with particular requirements. In addition to total system solutions, the team has unique expertise with the National Imagery Transmission Format (NITF), built by TSC and used in all CJMTK applications

This operationally focused team has deployed systems for exercises, demonstrations, and actual events in support of customers. Most recently, TSC's systems were used to support National Security Special Events for the 2004 political conventions and Joint Warrior Interoperability Demonstration, and 2005 Inauguration, State of the Union Address, and Super Bowl.



Chemical Plume in Web Client Viewer from the Joint Warrior Interoperability 2004 Demonstration

Applications

The solid geospatial underpinnings of the GIS team provides an immediate capability for TSC to support a wide variety of applications including:

- **Border and Port Security**
- **Sensor Netting**
- **Critical Infrastructure Protection**
- **Operations Centers Support**
- **Asset Tracking**
- **Chemical/Biological/Radiological/Nuclear Effects (CBRNE)**

These applications benefit from the common multi-user geospatial data infrastructure that provides:

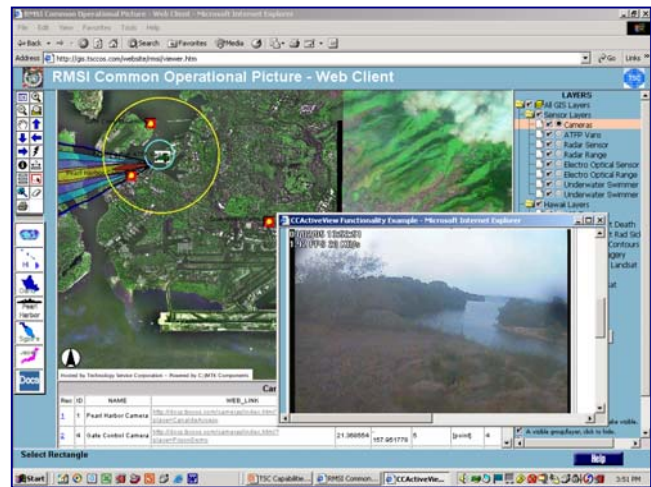
- **Situational Awareness**
- **Intelligence and Trend Analysis**
- **Geospatial Data Dissemination**
- **Distributed Web Based Input**

Smart Points™

TSC's development team pioneered the application of J2EE components to provide an object based construct for the integration of sensors, responders, robotic vehicles and other dynamic objects operating within an enterprise.

Called **Smart Points™**, these objects can be managed, assigned behaviors, and persisted in the system. These **Smart Points™** are also connected to and displayed in the CJMTK geospatial architecture and can be independently managed by their owners while staying viable objects within the system.

The value of this capability is that it allows the introduction of many heterogeneous objects and networks within one geospatial enterprise without interfering with or taking ownership of the components.



Video Integration from a Web enabled Common Operational Picture

Operations and Exercise Experience

- Chem/Bio Dispersion System – USAF Aerospace Fusion Center 1999-2001
- Integrated Technology Demonstrations 1 & 2 – Combating Terrorism Task Force/DTRA (Robotic Vehicles, Wireless Comm & Video, Plume Integration) 2001-Present
- CBRNE Sensor Simulation Integration – DTRA Tech Directorate 2003
- Joint Warrior Interoperability Demonstration 2004 – **Top Rated Trial** (Critical Infrastructure Protection Product Integration)
- Regional Maritime Security Initiative Demonstrations
- Anti-Terror/Force Protection/DRS Incorporated (Live Video via the Web, Remote Sensor Van) 2004
- National Security Special Event Support – RNC/DNC – NORTHCOM/FEMA
- National Security Special Event Support – Inauguration Jan 2005, State of the Union, Super Bowl XXXIX DTRA Ops Center
- Enterprise GIS/WebCOP – DTRA Ops Center & DTRA Test Bed Integrated Technology Demonstration 4 – DTRA/Dept of Energy Jul 05

CONTACT INFORMATION

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