Situational Awareness

Situational Awareness (SA) is a general perception of events monitored over time and the comprehension of their meaning and impact to the mission. SA applied to information technology (IT) correlates raw data, often from multiple sources, to create actionable information and provide it to the right personnel while its value is high. Technica engineers use their systems engineering knowledge and experience to integrate data sources into comprehensive SA support systems that utilize the Department of Defense (DoD) NetOps framework to provide Command and Control (C2) information in support of the mission.

OUR SITUATIONAL AWARENESS SERVICES

- Strategic Planning and Management
- Systems Operation and Maintenance
- Systems Engineering
- Systems Security
- Systems Implementation
- Program Management
- Command and Control (C2)
- Network Operations (NetOps)

Technica developed and maintained the Common Communications Vehicle (CCV) to support network fault management information sharing (supporting IT network performance management) across the Defense Information Systems Network (DISN) for the Defense Information Systems Agency (DISA). We used the Multi-Technology Operations Systems Interface (MTOSI) specification as the common connector allowing network devices from a wide range of vendors to "plug in" to the system, and Extensible Markup Language (XML) encoding to support information sharing using the common language of Web Services, as defined by the World Wide Web Consortium (W3C).

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Photo by Department of Defense

Network devices now identify and relate their real-time fault management status—such as link down, no power, or authentication failure—in support of IT network performance management. Real-time information sharing, gathering of metrics for trend analysis, and other activities relating to IT system availability and performance, such as monitoring of network server heartbeat and physical environmental conditions, are the heart of SA and facilitate true C2 over customer systems and networks. The Technica CCV directly supports every DoD, National Security, and Intelligence Community (IC) network that transits the Global Information Grid (GIG).

Innovation and Support

Technica is working with the latest technology concepts and advances, and our solutions leverage innovation to support the development of SA environments.

Three application software types are critical to second-generation SA prototyping:

1. The mashup engine to combine and display data streams in a visually-consumable dashboard (examples include JackBe)

2. The performance analysis application to analyze abnormal events or other triggering actions in the system or network (examples include Tivoli or NetIQ)

3. The analysis engine for real-time troubleshooting of any problems found (examples include Splunk or Nagios)

These three basic application types are at the core of SA today and represent, at a high level, the current state of design and engineering for assured information awareness.

What Sets Technica Apart

Our engineers and scientists combine long-term experience in network management with today's cutting-edge tools and techniques in order to meet the SA requirements of the DoD and IC. Technica integrates its systems architecture and engineering knowledge into a core capability that provides:

- **Real-world background** developing and deploying SA for warfighter communication networks with 100% uptime requirements
- **Hands-on experience** with advanced technology concepts and tools
- **Innovative, practical solutions** that represent the next generation of SA models

In order to achieve and maintain information superiority, our customers require a secure, dependable C2-oriented information management environment. Warfighter operations depend on the availability of mission-oriented voice, data, and video communications and DoD depends on Technica for SA solutions that support the mission.

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About Us

Technica provides professional services, products, and innovative technology solutions to the Federal Government. We specialize in network operations and infrastructure; cyber defense and security; government application integration; systems engineering and training; and product research, deployment planning, and support.

Company Information

- IT Solutions Since 1991
- CMMI Level 2, DEV and SVC v1.3
- Certified PMP Resources
- Certified ITIL v3 Expertise