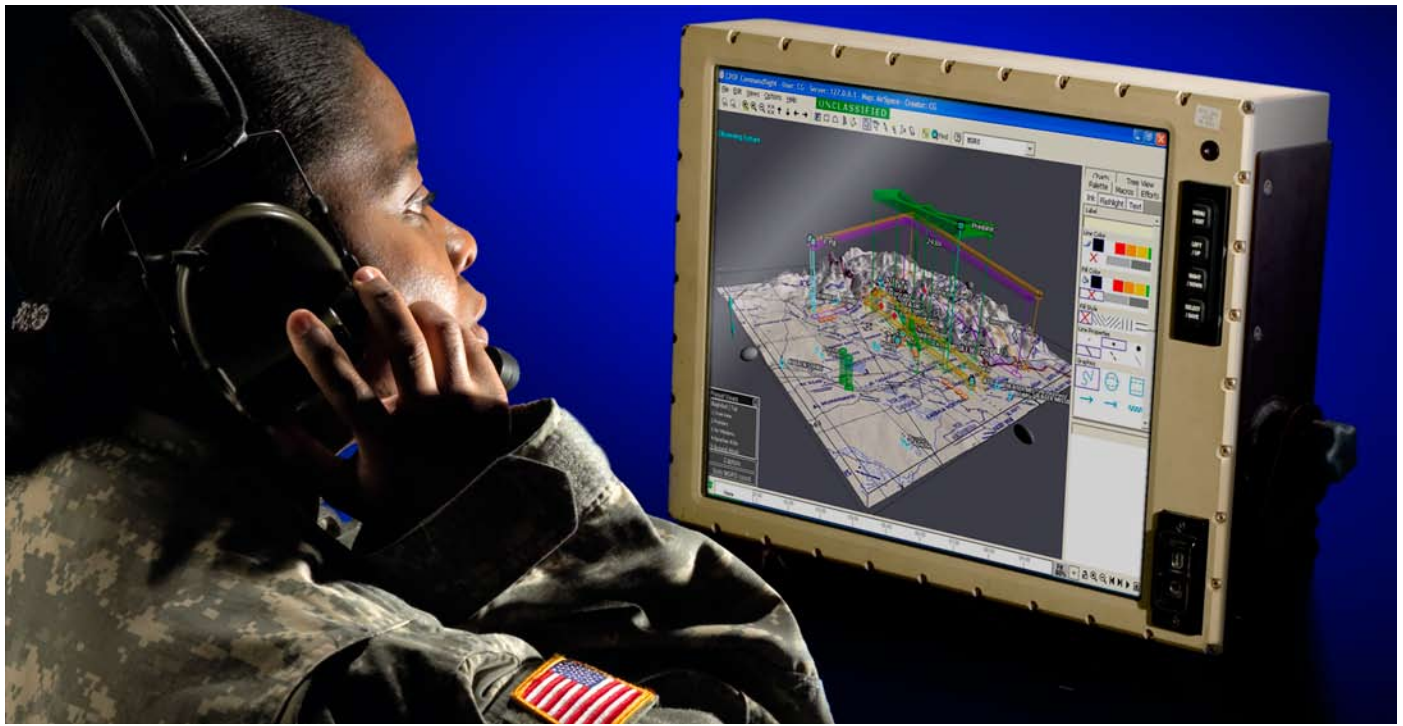


Commanding the Skies of the Future

Tactical Airspace Integration System (TAIS) AN/TSQ-221



TAIS revolutionizes the management of airspace

Unparalleled capability for airspace management and Air Traffic Services

Interoperable with Joint, Interagency and Multinational (JIM) airspace agencies

Continually evolving to provide future operational capabilities

The Tactical Airspace Integration System is the U.S. Army's materiel solution for the integration and synchronization of Airspace Command and Control (AC2) and enroute Air Traffic Services (ATS) within the Army Battle Command System (ABCS). TAIS revolutionizes the management of airspace and conduct of air traffic services. It also provides interoperability with Joint, Interagency, and Multinational (JIM) airspace agencies to effectively bridge the gap between technology and military doctrine for current and future forces.

The TAIS system will undergo several dynamic changes over the course of the next few years, including significant software and hardware evolution, improving Army and JIM interfaces, and enhancing future operational capabilities.

This continual evolution of TAIS is synchronized with other Army Battle Command Systems to provide a path toward full net-centricity and leverage the power of the Global Information Grid. The prolific partnership between General Dynamics and the U.S. Army will continue to produce an unparalleled capability for airspace management and Air Traffic Services well into the future.

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Software Enhancements

A bold, cutting edge evolution of TAIS software will occur while maintaining the familiar “look and feel” of the current TAIS user interface. The intent is to provide substantive improvements to TAIS while minimizing extensive additional training. Planned software enhancements include:

- Migration to a COTS-based Windows® Vista platform that will be the common standard across Army Battle Command Systems beginning in FY 2009. (FY 2007- 2008)
- Incorporation of a combined 2-D/3-D visualization interface, and advanced Geographic Information System (GIS) analysis and administrative capabilities from the Commercial/Joint Mapping Tool Kit (C/JMTK). (FY 2007-2008)
- Migration to a Service Oriented Architecture (SOA). (FY 2008 – 2011)

The second phase in the evolution of TAIS will include migration to a SOA and enhancement of TAIS’ web-based Airspace Control Means Request (ACMR) capability with an intuitive and powerful graphical map interface. The new TAIS Web ACMR will provide all users who have a need to request airspace from TAIS with a rich, familiar “Google™ Earthlike” interface from any web browser.

Additional planned enhancements include:

- Reduced size-weight-power form-factor for deployed and garrison operations
- Incorporation of emerging capabilities from Joint Aviation, Missiles, and Unmanned Systems (JAMUS) experiments that will evolve current procedural airspace management to more dynamic capabilities for timeliness of airspace clearance and integration of fires
- Improved automated processes for time-sensitive applications such as airspace clearance of precision munitions and Joint Improvised Explosive Device Defeat (JIEDD) procedures

In conjunction with these software and operating system changes, General Dynamics plans to develop a Command Post of the Future (CPOF) collaborative capability for TAIS. This will allow unprecedented real-time, deep collaboration and visualization of airspace in two and three dimensions and sharing of common information with all other TAIS users, in all echelons, across the spectrum of operations from peace through war.

Hardware Enhancements

TAIS hardware will also be upgraded to keep pace with the Army’s Battle Command migration plan. General Dynamics will mitigate end of life impacts by upgrading TAIS components to a common baseline.

These updates include:

- Exchanging Air Defense System Integrator (ADSI) Version 11 and 12 models with Version 14
- Conversion of AN/VRC 83 radios to AN/VRC 103 and AN/PRC 117 VHF/UHF radios

Service Oriented Architecture (SOA)

The TAIS Service Oriented Architecture (SOA) follows the Army’s Battle Command migration plan to provide services on demand to the warfighter. It incorporates distributed computing techniques to consolidate costly server equipment while providing access through rich, thin clients that can be run on standardized hardware. This SOA will allow TAIS users to become untethered from a TAIS-specific box and allow TAIS operations from any hardware platform. It will also facilitate rich cross-platform interoperability with other systems such as the Army’s Future Combat System (FCS) and the Joint Theater Battle Management Core System (TBMCS). Using this SOA, TAIS services will include:

- Airspace Mission Rehearsal Service
- ACM Search Service
- Airspace Control Means Request (ACMR) Service
- Airspace Mission Rehearsal Service
- Airspace Control Means (ACM) Time Visualization Service
- ACM Search Service
- Joint Fires Area (JFA) Service
- Airspace Control Order (ACO) Merge and Difference Service
- ACO Visualization Service
- Air Control Point (ACP) Service
- Air Tasking Order (ATO) Service
- Flight Following Service
- Flight Information and Advisory Service
- Air Route Planning Service
- Combat Search and Rescue (CSAR) Service
- Air Route Planning Service
- Unmanned Aircraft Systems (UAS) Service
- Aviation Support Request Service
- Airspace Risk Assessment Service
- Deconfliction Services
- Conflict Resolution Service
- Airspace Collaboration Service
- Training Service
- TAIS Unique Services including Built-In Test (BIT) and diagnostics

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