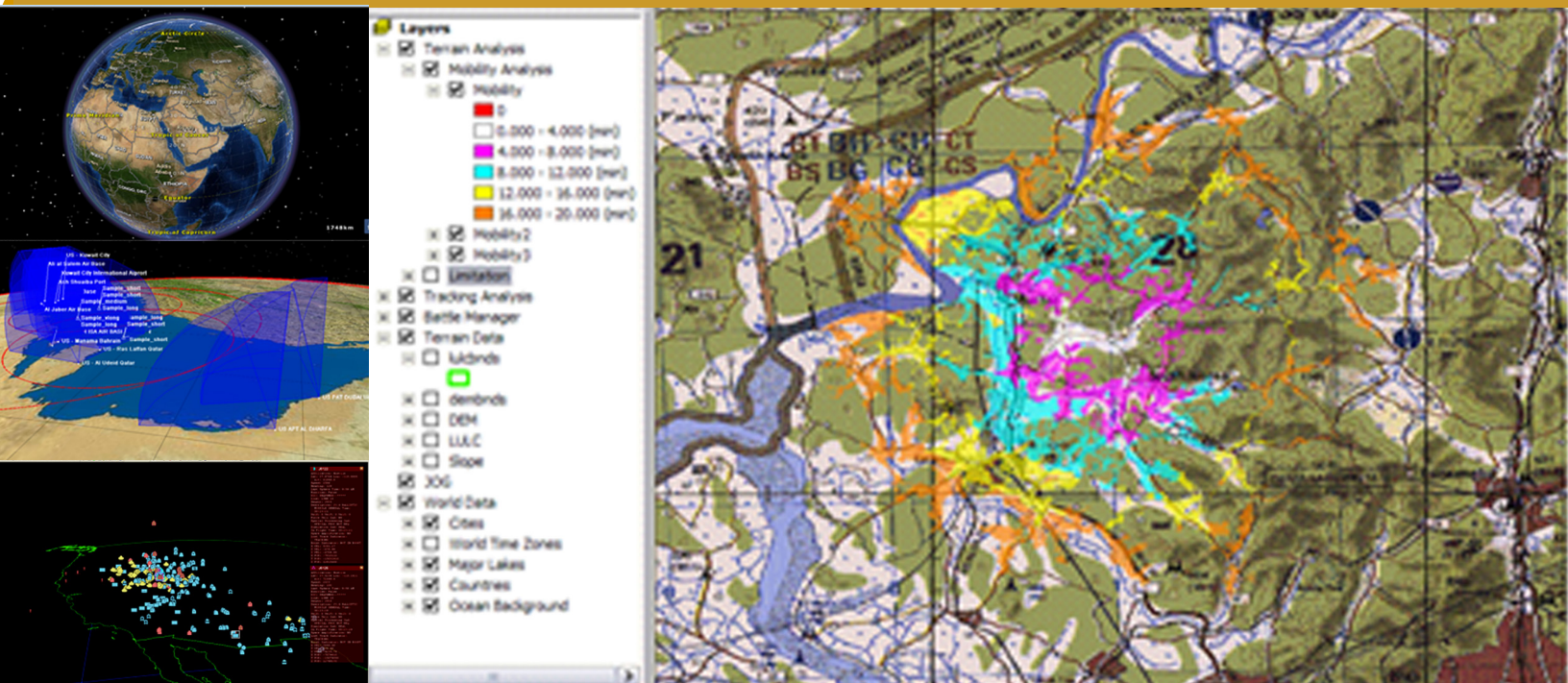# AIR AND MISSILE DEFENSE EXPLORER (AMD EXPLORER)

Provides authorized users an integrated planning, analysis, and situational awareness environment for the conduct of integrated air and missile defense

AMD Explorer provides an integrated collection of services supporting analysis, planning, situational awareness, and battle tracking functions. AMD Explorer combines traditional tactical data sources and systems with emerging service-based technologies in a service-oriented architecture. Instead of being tied to traditional distribution mechanisms, AMD Explorer, using modern "net-centric" techniques, allows for near real-time distribution of information throughout not only an analyst's own command, but to joint/coalition partners, subordinate units, and unanticipated users. AMD Explorer is a Prototyping Platform for a variety of web-based tools that have resulted in multiple transitions and operational employments. Currently providing 24 hours a day, seven days a week Department of Defense and Department of Homeland Security interoperability, and is operational at 612th Air Operations Center for multi-domain information sharing. AMD Explorer provides contingency capability for operational forces; tools that enable commander's guidance in shared products and actions within the staffs with a greater focus on future operations; and bridges the gap until a program of record with needed capabilities is available.

Helps the Warfighter Manage the Complex Fight

• Integrates multiple tools and services to enable joint situational awareness and air and missile defense planning

• Helps the warfighter manage the intelligence preparation of the battlespace in a collaborative, nearly realtime environment

• Provides the warfighter near real-time access to warning information, analysis and intelligence products in a "cloud" environment

• Provides a decentralized framework for passing time-critical information throughout combatant commands and joint/coalition partners

AMD Explorer

The software system supports the Army Air and Missile Defense Commands and the Air and Missile Defense Detachment in their overall support mission to the Joint Force Air Component commander/Area Air Defense commander worldwide, including the North American Aerospace Defense Command – Northern Command air sovereignty and homeland defense operations.

The AMD Explorer program leverages the functionality of the Advanced Warfare Environment, or AWarE, to provide multiple planning and analysis capabilities through a service-oriented architecture.
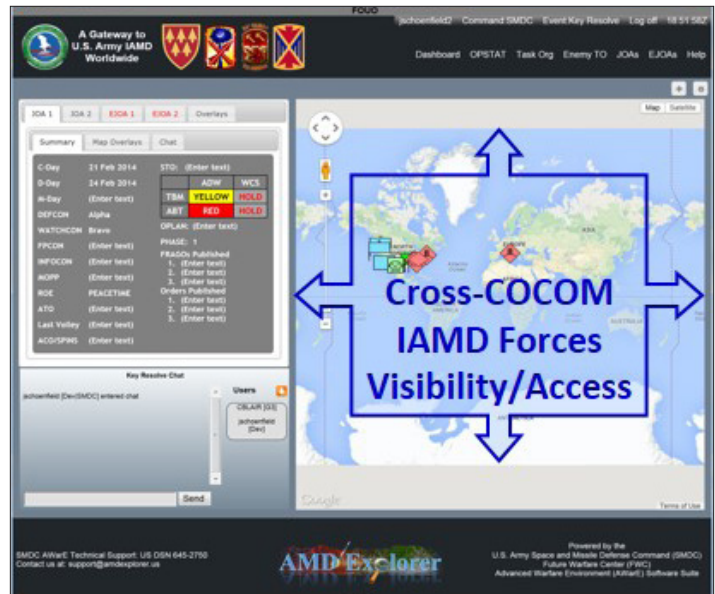
AWarE is an open architecture development/prototyping software program developed and owned by the U.S. Army Space and Missile Defense Command Future Warfare Center. By leveraging AWarE, the FWC has been able to rapidly answer the request by all of the AAMDCs to provide a distributed solution to analyze the threat and then develop, visually display and disseminate predictive intelligence products in support of the air and missile defense mission that can be rapidly collaborated among the staffs at every level of command.

The overall goal of AMD Explorer is to combine traditional tactical data sources and systems with emerging service-based technologies in a service-oriented architecture. AMD Explorer allows existing AWarE and Tactical Geographic Environment operators to conduct traditional intelligence preparation of the battlespace and analysis functions using standard desktop applications. The user is now given the option to "publish" his or her products and analysis using net-centric enterprise services-compliant web services.

In addition to TIGER/AWarE users, AMD Explorer provides the framework to integrate multiple disparate tools and systems by providing a common repository for standardized AMD planning and analysis products within the current operational framework. By enabling the distribution of the data through a publish and subscribe environment, the data and products are now available to a much wider community. Instead of being tied to traditional distribution mechanisms, AMD Explorer allows for near real-time distribution of information throughout not only an analyst's own command, but to joint/coalition partners, subordinate units and unanticipated users.

AMD Explorer provides an integrated collection of services to support analysis, planning, situational awareness and battle tracking functions. Among these are:

• Analysis services include: asset placement optimization, radial line of site, mobility modeling, terrain limitation, Critical Asset List/Defended Asset List - viewer/editor, missile impact correlation and analysis, Ballistic Missile Operating Area – missile launch correlation and analysis.

• Situational awareness and interoperability services include: Link-16, Interactive Broadcast System-Interactive/Simplex, Over-the-Horizon-Gold, Distributed Interactive Simulation, Distributed Common Ground Station and DCGS Integration Backbone, dynamic missile volley tracking, Command and Control Battle Management Communications planner, Common Integrated Air and Missile Defense XML Schema and Keyhole Markup Language.

• Data services include: Light Detection and Ranging and Interferometric Synthetic Aperture Radar elevation models, National Geospatial Agency and United States Geological Survey maps and imagery (Controlled Image Base, Compressed Arc Digitized Rastor Graphics, etc.), Homeland Security Infrastructure Program data for the Continental United States and NGA data for overseas.

AMD Explorer leverages Technology Readiness Level 8+ capabilities used by all AAMDCs and is an accredited system, with both Army Certificate of Networthiness and Air Force Evaluated/Approved Product List certification. It is a government-owned system available for use to all warfighter combatant commands on both classified and unclassified networks.