SkyWeaver

Advanced Air Defense Command and Control System



The Evolving Aerial Domain

Today's airspace is more complex and saturated than ever. Defense forces face an unprecedented challenge in processing massive volumes of sensor and radar data accurately, while reducing environmental noise and maintaining operational efficiency and mission success becomes harder.

The Solution

SkyWeaver is an integrated, real-time, multi-level system that provides optimized defense and mission control. Trusted and battle-proven in the world's most saturated and complex threat environments.

The Components

Multi Sensor Tracking

SkyWeaver integrates data from multiple radars and sensors-including MMR, SIGINT, EW, EO, acoustic, and IFF - into a single, coherent air picture. Through advanced algorithms for registration, tracking, prediction, and classification, it ensures accurate, reliable detection across tactical and national domains, ensuring minimal false positives and high detection fidelity.

Unified Air and Ballistic Situational Picture

- Air Breathing Targets (ABT)

  Precise tracking and classification of air-breathing platforms, even in dense air traffic and electronic warfare environments.

- Tactical Ballistic Missiles (TBM)

  Optimized for both long-and short-range missiles and rockets, SkyWeaver enables early detection, trajectory prediction, and tracking of TBM and debris.

- Counter-UAV

  Tracking low-flying, low-RCS drones, providing effective tracking and classification in saturated, complex airspace.

Command & Control and Decision Support

SkyWeaver supports full-spectrum C2 functionality for defense operations, including:

- Threat Evaluation & Resource Allocation: Dynamic analysis of threat levels and corresponding allocation of interceptors and sensors.
- Battle Management: coordinated engagement decisions across multi-domain assets.
- Early Warning: Accurately predicts impact point and interception point, allowing timely alerts to protect both military and civilian targets.

Simulation and Training

SkyWeaver includes integrated simulation capabilities for operator training and scenario rehearsal. These tools enable mission planning under various threat environments.

Recording and Debriefing

SkyWeaver provides comprehensive recording of operational data, including sensor feeds, C2 decisions, and communication logs, support post-mission analysis, debriefing, and lessons-learned processes.





Layered Compatibility

SkyWeaver seamlessly integrates with multi-layer radar and defense systems, including advanced multi-function radars, mobile, short, and medium-range air defense systems, upper-tier missile defense radars, and fighter aircraft. It is fully compatible with Link 16, ensuring seamless communication and interoperability with allied defense networks for coordinated, joint operations.

TSG
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tsg@tsgitsystems.com | +972-3-548-3555 | www.tsgitsystems.com