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ISSUE 11: Aerial Common Sensor

Aerial Common Sensor: Knowledge at the point of decision and key to Objective Force success.

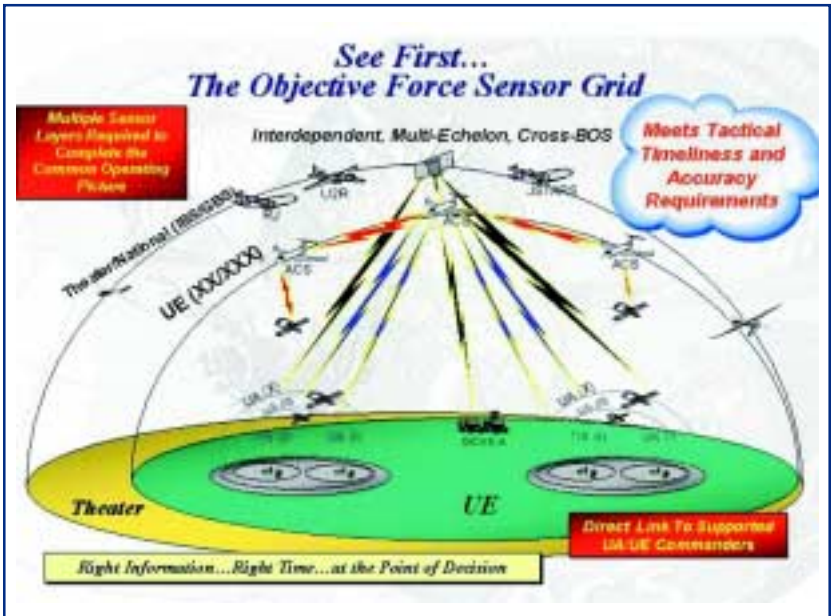
The Objective Force is the Army's future. Responsive and tailored units of action (UA) and units of employment (UE) will deploy to support the full spectrum of military operations from peace to major regional conflicts, counterterrorism and homeland security. Army Objective Force elements will depend on the advanced technologies of command, control, communications, computers, intelligence, surveillance and reconnaissance (C^4ISR) to detect, identify and track potential threats.

With real-time certainty, combatant commanders at *multiple levels* must know where combatants, noncombatants and enemy forces are at all times. They must accurately interpret enemy threats and operate within the opposing force decision cycle. The knowledge required prior to the conduct of successful operations mandates unabated access to time-sensitive information. Aerial Common Sensor (ACS) is a critical component of this process.

What is ACS?

ACS is the Army Objective Force's manned airborne reconnaissance, intelligence, surveillance and target acquisition (RISTA) system. With an additional capability to accommodate a command and control (C^2) element, the ACS multisensor suite will ensure decisive ground engagements by operating as a tactical overwatch for the Objective Force. ACS comprises five subsystems, including:

- **Airborne platforms–**Capable of extended range for global response and operations at high altitude for survivability and maximum sensor ranges, these platforms have the endurance to provide persistent surveillance of the target area.
- **Sensor Suite–**ACS sensors incorporate a mission-tailorable multisource suite of sensors that include signals intelligence (SIGINT), imagery intelligence (IMINT), measurement and signatures intelligence (MASINT) and moving target indicator (MTI). ACS will be the only Department of Defense real-time multisensor intelligence precision targeting system.



KEY

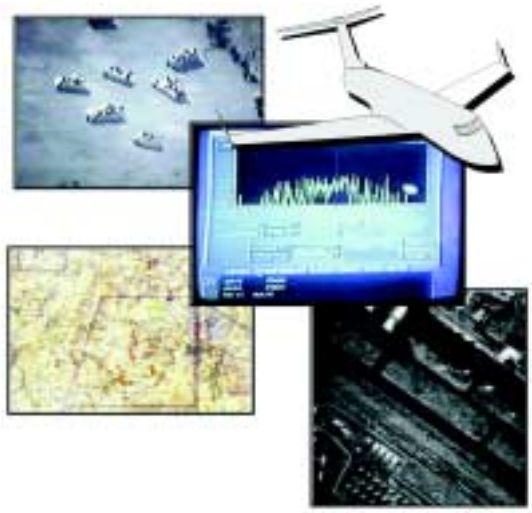
BOS=Battlefield Operating System; **UA**=Unit of Action; **UE**=Unit of Employment; **ACS**=Aerial Common Sensor; **U2R**=U2 Reconnaissance Aircraft; **JSTARS**=Joint Surveillance and Target Attack Radar System; **RJ**=RC-135 Rivet Joint Surveillance Aircraft; **IBS/GBS**=Integrated Broadcast Services/Global Broadcast Service; **DCGS-A**=Distributed Common Ground Station-Army

This is the eleventh in a series of discussion papers on key issues relevant to the U.S. Army's transformation to the Objective Force.

more . . .

Aerial Common Sensor (continued)

The IMINT suite includes Synthetic Aperture Radar (SAR)/Ground Moving Target Indicator (GMTI) radar and an electronic optics (EO)/infrared (IR) sensor. Provisions for interoperability with other sensor systems such as unmanned aerial vehicles (UAVs) and joint airborne and ground intelligence platforms, are a part of the ACS sensor suite.



- **Processing, exploitation and dissemination capabilities–**ACS operators provide an "on-board" capability in the absence of a ground station.
- **Airborne communications equipment and data links–**nteroperability and global reachback mark ACS as a "fight-on-the-fly" system.
- **Ground-processing element–**The ground-processing element of ACS will be the Distributed Common Ground Station-Army (DCGS-A), the Army's terrestrial system designed to operate as a key node on the digitized battlefield.

ACS Capabilities

- Satisfy the commander's priority information requirements (PIRs) at all levels.
- Cross-cue sensors and conduct multisensor correlation while interacting with national systems.
- Fulfill the critical needs gap for Army, joint and coalition warfighters with a multi-intelligence collection platform capable of SIGINT, IMINT, MASINT and MTI collection and interoperability.
- Extend the range and accuracies of precision fires through highly accurate, real-time location.
- Present the user with timely and accurate enemy detection, threat identification, target tracking, signals exploitation and precision geolocation of highly mobile and moving targets.
- Provide critical predeployment and deployment support to U.S.-based early-entry forces and forward-deployed forces.

Aerial Common Sensor will:

- Provide improved commander's awareness of the activities within the UA and UE battlespace, including ISR and targeting;
- Build on the multi-intelligence capabilities of Guardrail Common Sensor (GRCS) and Airborne Reconnaissance Low (ARL);
- Ensure informed, decisive action and precision engagement to successfully accomplish any mission, at any time, in any place!

Aerial Common Sensor: The only system, existing or planned, to meet the Army's requirement for timely multi-intelligence precision geolocation.