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Beyond JSTARS: Rethinking the Combined Airborne Battle Management and Ground Surveillance Mission

ARLINGTON, Va (September 6, 2016) — The Mitchell Institute for Aerospace Studies is pleased to release its latest Mitchell Institute Policy Paper, Beyond JSTARS: Rethinking the Combined Airborne Battle Management and Ground Surveillance Mission, by Lt Gen David A. Deptula, USAF (Ret.), with Marc V. Schanz and John M. Doyle.

The paper takes a look into the past, present, and future of command and control (C2), air battle management (ABM), and ground surveillance of moving targets, as performed by the E-8C Joint Surveillance Attack Radar System aircraft (JSTARS)—one of the USAF’s current top recapitalization priorities. The product of extensive interviews with USAF officials, current operators, and technical experts, the paper explores this vital and oft-misunderstood mission set, illuminates the challenges faced by a future JSTARS replacement, and lays out potential gains in capability from new and emerging technology—and how it could enhance future operations.

Since its first combat use in Operation Desert Storm, the E-8 JSTARS provided a key advantage to American military forces in nearly every conflict and contingency. However, in looking to the future, the plan to recapitalize the JSTARS fleet must be examined in the context of 21st century demands. As Deptula notes, the capabilities JSTARS provides are far greater than a single aircraft, but instead represents a large information node that provides knowledge as part of a globe-spanning C2 network. As threats and requirements evolve, new GMTI/ABM capabilities must adapt to harness the advantages afforded by an enterprise-driven approach.

“The E-8’s successor will not act alone,” Deptula writes. These systems “will have to leverage information sharing among multi-domain weapons systems and sensor platforms that can turn shooters into sensors and sensors into shooters.” Any JSTARS replacement will have to grapple with how it will leverage information sharing among other assets and aircraft, and move towards more distributed military operations.

The Mitchell Institute Policy Paper series presents in-depth papers and research which provides new proposals and thinking to respond to emerging security and aerospace power challenges in the 21st century. These papers aim to provide in-depth insights and perspectives informed by experienced authors, coupled with original supporting research.

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