

November 1, 2011

Navy completes UAS Common Control System demo

NAVAL AIR SYSTEMS COMMAND, PATUXENT RIVER, Md. –The Navy completed a demonstration for its unmanned aircraft Common Control System (CCS) Oct. 26 at Naval Air Warfare Center Weapons Division in China Lake, Calif.

Led by the Program Executive Office for Unmanned Aviation and Strike Weapons (PEO(U&W)), CCS is a software-only solution with instantiations for fixed, mobile and dismounted hardware configurations. It is intended to address common requirements for current and future unmanned aircraft systems.

During the demonstration, operators used the CCS to control a simulated unmanned aircraft system (UAS) and associated sensors tasked by Special Operations Forces. The UAS identified and tracked a hostile moving target and sent images of the target to an air controller. The UAS data created a precise coordinate so that a Net-Enabled Weapon (NEW) could strike. The UAS and NEW controller were then used together to perform a battle damage assessment.

The Navy's CCS, managed by Strike Planning and Execution Systems program office (PMA-281), used a sample of services developed under the Office of Secretary of Defense's UAS Control Segment architecture for this demonstration. Multiple vendors developed these sample services and the user interface, which were successfully integrated to provide modular capabilities within one software system.

Some of the services used were Blue Force Tracker, Cursor on Target, Sensor Product Archive, Sensor Command and Control, Vehicle Flight Status, Video Stream Catalog, and a Meteorological and Oceanographic weather service. Government-developed Standardization Agreement (STANAG) 4586 service and electro-optical/infrared sensor model services, as well as an independently developed industry presentation layer, were also used in the demonstration.

"The demonstration verified that service-oriented techniques can help create a set of reusable, independently developed, software services for control of unmanned systems," said Mike Paul, the Navy's CCS program manager. "The flexibility of the CCS framework and the government led integration efforts allows the system to efficiently address similar requirements for unmanned vehicles, yet meet the unique requirements of each vehicle in a highly efficient manner."

According to Paul, CCS is a unique acquisition approach that maximizes competition and shortens timelines to deliver capabilities.

The Navy's CCS is currently being developed for the Unmanned Carrier-Launched Airborne Surveillance System and

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Medium Range Maritime Unmanned Air System and will be available for use with other unmanned vehicles, including air, surface and subsurface, in the future.

“The CCS approach leverages off of the investments and capabilities that exist today to smartly embrace a modular, scalable open architecture for unmanned systems,” said Rear Adm. Bill Shannon, PEO (U&W) program executive officer.