

HAWKEYE Support

Software tool supports complex electronic and mechanical systems.

Many of today's U.S. military aircraft entered service decades ago, and keeping them mission-ready can be a challenge.

HAWKEYE, a software tool aimed at supporting complex electronic and mechanical systems, was recently completed by four researchers at the Georgia Tech Research Institute's (GTRI) Sensors and Electromagnetic Applications Laboratory (SEAL) — Mark McCans, Molly Gary, Jeff Smart and Powers Garmon. HAWKEYE focuses on mitigating the effect of part obsolescence on system availability.

"HAWKEYE allows users to initiate and maintain their own system configuration, inventory and repair data," Smart says. "It lets them update databases as often as they want and construct different 'what-if' scenarios themselves."

HAWKEYE is generic, out-of-the-box software with a basic module called the HAWKEYE Loader-Controller. The Loader-

Controller is designed to manage a customer's parts list and to work with a library of modules, one of which is the HAWKEYE Diminishing Manufacturing Sources and Material Shortages (DMSMS) Model.

GTRI has traditionally provided custom software for those wanting a turnkey approach to technology insertion analysis. GTRI's custom software and research covers many factors, including obsolescence, reliability, operating costs and mission readiness. GTRI engineers extract and process logistics and maintenance data manually, then transfer their work to custom software that automates the analysis and modeling of data and helps program managers track their situation more clearly.

GTRI researchers got the idea for HAWKEYE from discussions with potential commercial customers at meetings and conferences. Using independent research and development funds, they decided to develop a generic approach to resolving logistics and supportability issues.

This move was founded on the perception that many contractors and others in the logistics and maintenance community are

reluctant to let outsiders view the information they gather. Moreover, contractors often prefer to do database upkeep themselves, unlike custom software clients, who typically contract with GTRI to refresh their databases on a quarterly basis.

HAWKEYE's developers say the generic design of the new software is meant to appeal to the U.S. military services, as well as to private contractors and the foreign military.

"With HAWKEYE, the customer has absolute control of his system bill of material, inventory information and repair actions, and his obsolescence status," Garmon explains.

HAWKEYE, which is licensed software that operates in Microsoft Windows, works with the Microsoft Access and SQL server databases. It also allows users to import Excel spreadsheets and text files, and create tables from scratch.

In addition to HAWKEYE software, GTRI will continue to offer turnkey custom technology insertion software and services.

— Rick Robinson

@ Read more at: gtresearchnews.gatech.edu/reshor/rh-w06/hawkeye.html.

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ABOVE, Top: Turboprop engine mechanic Staff Sgt. Carla West performs an inspection of a newly installed tailpipe assembly on an EC-130H Compass Call aircraft. **Bottom:** Air Force Senior Airman Brandon Benson uses a flashlight to inspect the interior of a C-130 barrel assembly for cracks during a routine check. HAWKEYE helps support complex electronic and mechanical systems.

BACKGROUND: U.S. Navy Petty Officer 3rd Class Kevin Bitter conducts a pre-flight walk around on an EA-6B Prowler during a training exercise at Nellis Air Force Base.



BY RICK ROBINSON