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Rockwell Collins Successfully Demonstrates End-To-End System Validation with Test Flight of Production Common Range Integrated Instrumentation System Equipment

During the first week in September, Rockwell Collins completed Contractor Test and Evaluation flights at Eglin Air Force Base, Florida, for the Common Range Integrated Instrumentation System (CRIIS).



In cooperation with the CRIIS System Program Office (SPO), contractors and the University of Iowa Operator Performance Laboratory (OPL), 13 test flights were conducted using an L-29 from the University of Iowa OPL. Throughout the testing, the high reliability of the CRIIS equipment resulted in all test flights being performed as scheduled. Only a single test flight was scrubbed due to bad weather. All the flights were conducted using production form, fit, function airborne and ground equipment.

The CRIIS program fulfills critical Department of Defense (DoD) requirements to provide Time, Space, Position Information (TSPI) and additional platform test data, while employing a more robust, spectrally efficient data link, including Multiple Independent Levels of Security (MILS). The MILS encryption recently completed certification on the program, and is capable of simultaneously protecting four levels of Top Secret through Unclassified data flowing between aircraft and ground components.

These flight tests demonstrate the mature, production ready level that the CRIIS program has reached, said Tommy Dodson, vice president and general manager of Surface Solutions for Rockwell Collins. Tests were an end-to-end validation of the complete CRIIS system using production representative hardware and software. This testing validated that the next generation of secure, common test and training instrumentation is mature.

Rockwell Collins is the prime contractor and systems integrator for the next-generation military test range system that will replace the Advanced Range Data System (ARDS) currently in use at major U.S. military test ranges. CRIIS equipment will support a variety of platforms, including advanced fifth-generation aircraft, and implements the DoD's vision of common test and training infrastructure for improved operational realism.

The following key functions were demonstrated on these flights:

- End-to-end system validation with production representative hardware
- High confidence in ability to meet TSPI performance requirements
- Data link network ingress after takeoff
- Ground-to-air uplink of GPS correction messages and network services from multiple data link towers
- Air-to-ground downlink of TSPI messages
- High dynamic scenarios involving a total of 133 dynamic maneuvers representative of flight profiles fighter jets undertake during air combat training

In addition to the multi-level secure ground equipment, the CRIIS flight hardware is configurable in either a pod mounted package or internally mounted on aircraft. This gives CRIIS the flexibility to adapt to use by a wide range of aircraft from all over the world, and the ability to fully integrate those aircraft into complex training scenarios. Following the completion of CT&E, the CRIIS SPO will conduct Government Test and Evaluation (GT&E) later this year to support a planned final Production Readiness Review in the near future.

For more information, please visit www.rockwellcollins.com.