

SATNEWS DAILY

U.S. to Test Internet via Satellite for Warfighting

BETHESDA, MD, April 12, 2007 - Satnews Daily - The U.S. government has embarked on an industry-government collaboration to demonstrate the viability of conducting U.S. military communications through an Internet router in space.

The Department of Defense's (DoD) "Internet Routing in Space (IRIS) Joint Capability Technology Demonstration Project" represents the next generation of space-based communications. IRIS will serve as a computer processor in the sky, merging communications being received on various frequency bands and transmitting them to multiple users based on data instructions embedded in the uplink. Intelsat General Corporation will manage IRIS, one of seven projects funded and announced in fiscal 2007 as a Joint Capability Technology Demonstration (JCTD) by the DoD.

"The IRIS architecture allows direct IP routing over satellite, eliminating the need for routing via a ground-based teleport, thereby dramatically increasing the efficiency and flexibility of the satellite communications link," said Don Brown, vice president of Hosted Payload Programs for Intelsat General. "IRIS is to the future of satellite-based communications what Arpanet was to the creation of the Internet in the 1960s."

Space Systems/Loral will manufacture the satellite scheduled to carry the IRIS payload. The satellite, IS-14, is set for launch in the first quarter of 2009. It will be placed in geostationary orbit at 45 degrees West longitude with coverage of Europe, Africa and the Americas. The payload will convert to commercial use once testing has been completed.

The IRIS payload will support network services for voice, video and data communications, enabling military units or allied forces to communicate with one another using Internet protocol and existing ground equipment.

The IRIS payload will interconnect one C-band and two Ku-band coverage areas. The IRIS architecture and design allow for flexible IP packet (layer 3) routing or multicast distribution that can be reconfigured on demand. With the on-board processor routing the up and down communications links, the IRIS payload is expected to enhance satellite performance and reduce signal degradation from atmospheric conditions.

The Defense Information Systems Agency (DISA) will have overall responsibility for coordinating use of the IRIS technology among the government user community and for developing means of leveraging the IRIS capability once the satellite is in space.

Intelsat General, a wholly owned subsidiary of Intelsat Ltd, is the first commercial satellite company to be awarded a JCTD program. The IRIS JCTD is a three-year program that allows DoD to collaborate with Intelsat General and its industry team to demonstrate and assess the utility of the IRIS capability.

Awarding a JCTD for the IRIS program had the strong support of the U.S. Strategic Command (USSTRATCOM), which sees the program as a path to more efficient communications between warfighters around the globe. USSTRATCOM is a joint military command whose responsibilities include space operations, missile defense, intelligence, reconnaissance and global command and control.

Global networking firm Cisco will provide commercial IP networking software for the on-board router.



US and Iraqi Army soldiers patrol in Iraq (US Army photo).

SEAKR Engineering, Inc. will manufacture the space-hardened router and integrate it into the IRIS payload. SEAKR is a provider of state-of-the-art electronic avionics for space and airborne applications. SEAKR space avionics include Cisco IP routers as well as software-defined radios, high-performance payload processors, modular command and data handling systems, and solid state recorders.

Concerto Advisors, a financial advisory firm, is organizing equity financing for a new company to provide the funds to design, build and operate the equipment used for the demonstration. Following the JCTD testing period, Concerto's affiliate will own the equipment, and Intelsat will operate the equipment on Concerto's behalf to provide services for government and commercial users.

"IRIS extends the Internet into space, integrating satellite systems and the ground infrastructure for warfighters, first responders and others who need seamless and instant communications," said Bill Shernit, president and CEO of Intelsat General. "IRIS will enable U.S. and allied military forces with diverse satellite equipment to seamlessly communicate over the Internet from the most remote regions of the world."

Intelsat General provides communications solutions to commercial, government, and military customers through fixed and mobile satellite systems and associated terrestrial communications services. Intelsat General is an indirect, wholly owned subsidiary of Intelsat, Ltd.

Concerto Advisors is a venture advisory firm currently working with US Strategic Command and industry partners to create a transformative paradigm for satellite communications and related services. Concerto Advisors is an Industry Management Team Member and the investment manager for the industry team for the IRIS.

In FY2006 a new business process was initiated which replaced the successful ACTD (Advanced Concepts Technology Demonstration) program, updating it to meet the transformational goal of the DoD to become capability vice threat-based in its focus. The program is referred to as the Joint Capability Technology Demonstration (JCTD) program.

JCTD includes many positive aspects of the ACTD program, but was revamped to meet the defense challenges of the 21st Century. The new process integrates the ACTD program with the new Joint Integration and Development System (JCIDS) developed by the Joint Chiefs of Staff (JCS).

The IRIS JCTD is a three-year program that allows the DoD to collaborate with Intelsat General and its industry team to demonstrate and assess the utility of the IRIS capability. IRIS is designed to support enhanced network services for voice, video and data communications over a common IP network. Additionally, the IRIS JCTD serves as an operational test bed to further examine Network Operations (NetOps), Concept of Operations (CONOP) and Tactics, Techniques and Procedures (TTPs), and how space-based routing and processing can serve the Joint Interagency Intergovernmental, and Multinational (JIIM) user community.