

JUICE 2009

Joint User Interoperability Communications Exercise

iDirect Government Technologies Excels During Military Exercise with Next-Generation Capabilities

Satellite communications is a critical technology for modern military operations. For units deployed around the world, it provides a high-speed communications backbone. It connects soldiers to each other and to central operations. And it enables them to stay united with friends and family back home.

Recent advances in satellite technology are bringing even greater advantages to militaries. Soldiers can deploy a wireless broadband network on a moving ground vehicle, deep water fleet, military aircraft or even a UAV. Satellite equipment is now engineered to withstand harsher environments, and portable systems can fit inside a soldier's rucksack, ready to be activated at a moment's notice.

This past June, soldiers, marines, sailors and airmen gathered at the annual Joint Users Interoperability Communications Exercise (JUICE), held in Fort Monmouth, New Jersey and across military locations around the world.

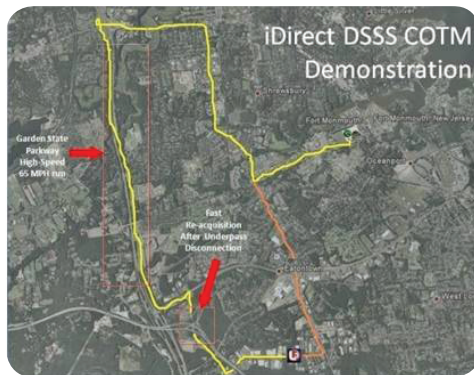
The goal was to push the limits of the satellite industry's latest technology.

iDirect Government Technologies (iGT) was on-site to demonstrate



JUICE 2009 — Joint User Interoperability Communications Exercise

the capabilities of several critical satellite capabilities. Over a stretch of 19 days,



the iDirect platform was put to the test, successfully proving how it can meet multiple core and emerging military requirements.

Clocking higher speeds with Communications On The Move

Currently, one of the biggest trends in military communications is mobility. Constant connectivity between field personnel and central command is a priority as they share data and respond to ever changing conditions. Even unmanned aerial vehicles are using satellite technology for reconnaissance and two-way data communications.

One of the key exercises at JUICE involved a 15-mile route designed to test-drive Communications on the Move (COTM) systems. In this scenario, a designated iGT COTM vehicle maintained a live video teleconference with Fort Monmouth

and a Joint Task Force Forward Operating Base. Using an L-3 Datron Ku-band antenna system, the iDirect network sustained connectivity for 35 minutes, passing under overpasses and through heavily wooded areas in the Fort Monmouth vicinity, at speeds of up to 65 miles per hour.

With the iGT COTM solution, a vehicle in the field becomes broadband enabled, capable of supporting Internet, voice, data and video services. iDirect's ruggedized satellite routers fit in the rear of a vehicle. A low-profile antenna installs on top, and inside the cabin, users benefit from wireless connectivity on laptop computers and Voice-over-IP phones.

Testing new standards in portability

While COTM represents a significant advancement for satellite communications, the size of the equipment has limited it to larger vehicle applications.

To address this, iGT recently introduced a new iConnex e850mp satellite router board that's half the size of current product standards. It packs iDirect's full suite of mobility and advanced platform features into a compact, lightweight board.

At JUICE, a ground task force integrated iDirect's e850mp satellite router board into a portable L-3 Panther terminal to support mobile X-band connectivity. This compact unit can fit into a soldier's rucksack and uses a very light bi-directional antenna for voice, video and data connectivity. The unit was configured with multiple hubs, allowing troops to accomplish

simulated objectives while on the move.

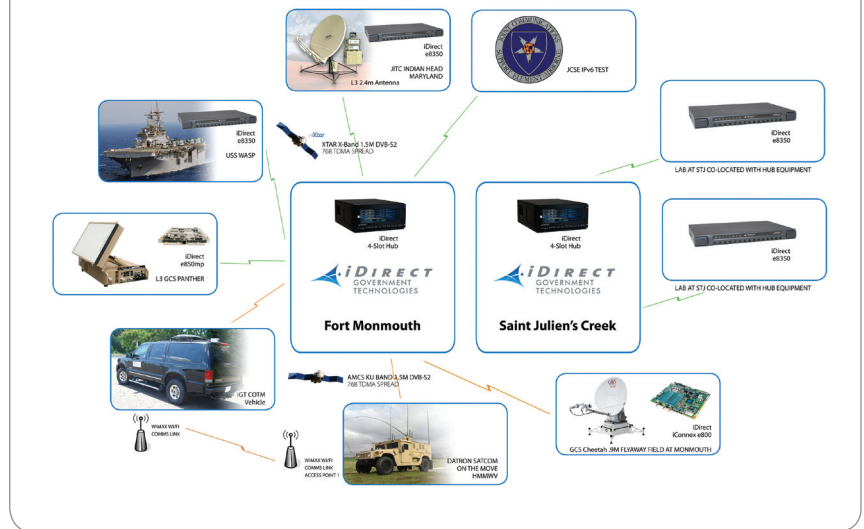
This new standard in portable technology delivers several critical advantages. Soldiers can receive battlefield imagery that identifies potential threats, transmit situational video back to base, receive command and control information, or even transmit x-rays and imagery of a wounded soldier back to doctors who can interpret the injury and advise proper treatment.

Ensuring network uptime and security

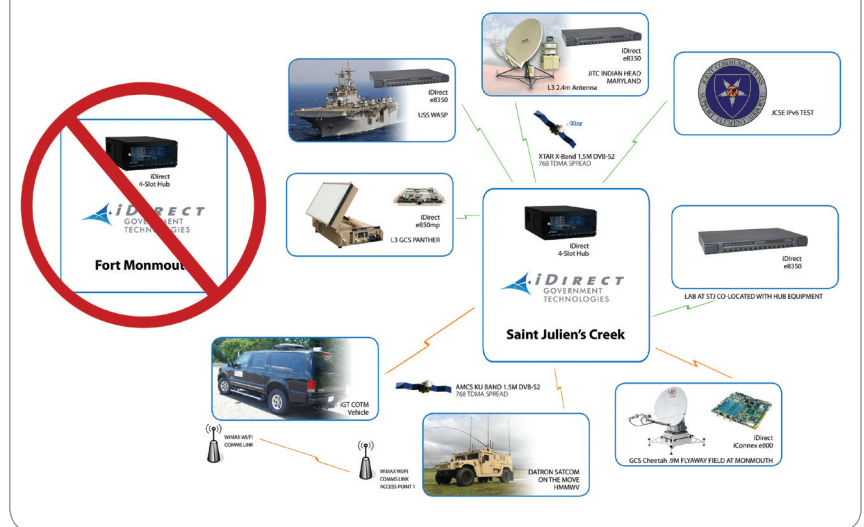
Since today's military relies heavily on satellite communications, preserving network continuity is essential to keeping operations running smoothly. The iDirect Network Management System (NMS) can automatically identify network issues and quickly resolve them before they impact users.

To test the platform's continuity of operations capabilities, military personnel configured the iDirect network in an end-to-end Transmission Security (TRANSEC) compliant mode. During TRANSEC

iDirect Network Connectivity Before Catastrophic Failure



iDirect Network Connectivity After Catastrophic Failure



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operation, JUICE simulated a hurricane disaster which rendered the Fort Monmouth network infrastructure unusable.

The network outage was detected by the iDirect NMS operating from an iDirect iConnex e800 board integrated into an L-3 Cheetah. The iDirect system performed a seamless switchover to an alternate teleport, located at Saint Julien's Creek in Norfolk, Va. The remote site seamlessly reinitiated video, voice, and data operations, without any human interaction and while remaining fully TRANSEC compliant.

Navy reaches higher data rates

The U.S. Navy conducted over-the-air testing with iDirect's Evolution DVB-S2 platform as a potential replacement for its legacy system. In this high-profile exercise, an Evolution network was configured and run on the USS Wasp in Portsmouth, Va.

The Evolution platform successfully integrated into the Naval communications infrastructure. And after several days of high-volume network activity, the Navy reported significant improvement in bandwidth efficiency and throughput especially under adverse weather conditions.

A platform for every military application

Today, soldiers across the globe are turning to high-speed satellite broadband for voice, video and data connectivity in the field. Military organizations depend on the iDirect platform for reliable satellite-based IP communications to fulfill their objectives, whether that's on the ground, in the air, or at sea.

"This year's JUICE event provided an opportunity to evaluate some of the latest advancements in military communications technology available for today's warfighter. These advancements are critical milestones in improving the safety, mobility and awareness of soldiers in the field. Our successful test results affirm our commitment to supporting the military's need for reliable, real-time voice, video and data applications in the most demanding situations where there is no room for error."

John Ratigan

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