



## Persistent Systems brings FMV to Android devices

### Key Points

- A new capability will extend Wave Relay's mobile ad hoc MANET to Android devices
- Wave Relay will enable transmission of video from UAVs to handheld devices

### Eric Schechter

Persistent Systems will begin offering a new computer board-embedded cable that will extend the company's Wave Relay mobile ad hoc network (MANET) from Generation 4 Man-Portable Unit radios to Android devices, which have recently begun proliferating the battlefield.

By pulling these mobile devices into a MANET, the Wave Relay cable will help boost the situational awareness of dismounted troops as more of them gain secure and reliable access to video feeds from unmanned aerial vehicles (UAVs) and ground systems, Herbert Rubens, CEO of Persistent Systems, told *IHS Jane's*.

Currently, those without an L-3 Remotely Operated Video Enhanced Receiver (ROVER) cannot see video from a UAV. "But with our system, they bring the video down over ROVER and then they can redistribute the video into the network via IP multi-cast and watch the video over the Android display," Rubens said.

Designed for communications in areas with limited or no infrastructure, a MANET is a self-forming and self-repairing web of radios similar to a wireless mesh network. However, MANET is more dynamic because the nodes (Wave Relay can scale upwards of 1,000 radios) using the network are the same ones running it.

Rubens acknowledges that some companies have been using Wi-Fi to link radios to mobile devices, but he argued that approach has serious drawbacks. "There are information assurance problems," he said. "There are spectrum problems. You are wasting spectrum just trying to get from the phone to the radio."

In addition, the tether, which fastens to a special connector that sticks out of the ruggedised, water-proofed radio case, allows the user to power their Android from the radio battery and not have the mobile device run out after 45 minutes of video viewing.

All in all, it is an argument echoed by Persistent Systems' US Coast Guard (USCG) customer, which employs the Wave Relay MANET as part its own Tactical Routing of Information over a Deployable Extensible Network system.

"Most of our operations are in austere environments," Lieutenant Ryan Kowalske, lead for offshore operations and innovative projects at the First Coast Guard District in Boston, Massachusetts, said. "We don't have cellular connectivity. We do have satellite capability, but that tends to be expensive and cumbersome, for that matter, when it comes down to the individual boarding team member."

Equipment carried by USCG cutters, aircraft, and boarding officers all form the coastguard MANET, and the tether - which is currently undergoing testing - extends the capability of that network. With it, individual coastguard officers can relay video to other elements of the network without risking interception over Wi-Fi.

Again, there is the power drain issue. "We're going to be putting a lot of strain on our mobile devices and the batteries that are in them





would not be conducive to the type of operations we'll be running," Kowalske explained.

Persistent Systems is not only the company to have recently developed a radio-to-Android tether. Last year, PAR Government Systems Corporation, based in Rome, New York, introduced GvTether, a cable that can link up with ROVER, the Harris PRC-152C, and even the Wave Relay radio.

"It is currently being used by the US Army and US Air Force, and is being evaluated by the US Navy," Wesley Cordova, director of business development for ISR products at PAR Government, noted.

Rubens is also looking to expand his customer base. Besides following a number of defence programmes, Persistent Systems is eyeing the US Customs and Border Patrol. "How do you get a video feed to a guy who is riding a quad [all-terrain vehicle] along the border," he said.

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