

News

Military Style Mesh for the Masses

By [Eric Griffith](#), August 17, 2004

It might be the most secure wireless mesh equipment to date.



[3e Technologies International](#) (3eTI) of Rockville, Md., has announced plans to sell its 3e-527 mesh access point. The unit has already been in testing with the military -- it was part of the Navy Wireless Networks Summit II in San Diego, sponsored by the Naval Network Warfare Command and PEO Ships Smartship Program Office. By the end of the third quarter, it should be available to government agencies, commercial use by the end of the year.

The 3e-527 is a dual-radio unit, which utilizes 5GHz 802.11a on one radio to create a self-configuring backhaul mesh.

"You can do a comparison in convergence time," says Patrick Foy, 3eTi's senior software engineer, describing the time it takes for a unit to auto-configure due to changes in the mesh network's layout. "Our time is 30 seconds." Only one or two root-node units need to connect back to the main network or the Internet to provide connectivity to the rest of the network's clients.

The other radio uses 2.4GHz 802.11b for the client connection to the network. 3eTI director of marketing Marty Gilroy says they can easily turn on the 802.11g for clients if customers demand it.

What's key here for the unit in comparison to other 802.11-mesh products is distance (they claim to have managed a 7Mbps connection as far as 16 miles with line of sight) and security. The box supports full 802.11i, and is up for certification with the Wi-Fi Alliance's version of the same, called WPA2. It also is FIPS 140-2 certified, as required by many federal agencies, and uses cryptographic modules to deliver the encryption needed by the likes of the Department of Defense. All encryption is done at Layer 2.

Each box is ruggedized to survive outdoor environments, and includes a full 8-port wired switch, plus a ninth encrypted Ethernet port which Gilroy says was requested by the military.

The company hopes their product will be the ultimate in plug-and-play instant networks for emergencies and more.

"This product is meant to be deployed in the field," says John Fossaceca, the company's director of engineering, "where there's no system administrator -- say, a battlefield, or disasters like in Florida right now [caused by Hurricane Charley]."