Mesh Line Uses Multiple Radios

By: Carmen Nobel (/Authors/carmen-nobel) | February 07, 2005

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MeshDynamics MD-300 family of software and hardware uses multiple radios and channels to reduce network latency and congestion, which can be a problem with voice traffic, said officials at the Santa Clara, Calif., company.

Mesh networks dynamically route packets from node to node. Only one access point needs to be connected to the wired network, with the rest sharing a connection over the air.

If there is only one radio on a node, as is the case with many traditional mesh networks, the node cant send and receive data at the same time, which can slow down traffic.

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"The more established mesh companies have the older military style of mesh," said MeshDynamics CEO Bob Osann. "When traffic gets heavy, they tend to choke themselves."

MeshDynamics addresses this issue with a 3-Radio Structured Mesh architecture in which two 802.11a radios are dedicated to the backhaul path, and an 802.11b/g radio is dedicated to serving clients.

The system dynamically allocates channels to mitigate interference, Osann said. Pricing depends on the size of the deployment.

Analysts say the companys approach makes sense. "Mesh is hot right now—and will be for some time—and they really understand the issues," said Craig Mathias, an analyst at Farpoint Group, in Ashland, Mass. "The next step is to build a business out of it."

The Institute of Electrical and Electronics Engineers is working on a wireless mesh networking protocol, designated 802.11s. Government agencies have deployed mesh networks primarily for public safety communications; MeshDynamics has a system deployed at a U.S. Air Force base, which is evaluating the use of mesh for battlefield communications. But mesh vendors are targeting corporate users and municipalities for Internet services as well.

"The value proposition is that for roughly what people pay for normal broadband, you get it everywhere in the city," Osann said.

For starters, MeshDynamics has deployed a couple of beta trials of the MD-300 in Texas and Pennsylvania, and wireless ISP Softcom has imminent plans to use the system for a mesh network in Galt, Calif. Other customers will be announced in the second half of the year, Osann said. The company is also looking to partner with larger wireless hardware companies.

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