

# Microwave Package Doesn't Sacrifice Ethernet Speed

**DATA LINES** BY J.B. MILES

**B**ridging local area networks in federal agencies is nothing new. But bridging LANs at very low cost without sacrificing the 10-megabit/sec speed of Ethernet LANs is an unheard-of feat.

Enter Microwave Bypass Systems Inc. (MBS) of Braintree, Mass., which offers a microwave product it says can connect re-

mote LANs at low cost and maintain the 10-megabit/sec speed of Ethernet.

Now, I've no particular ax to grind, pro or con, about using microwave for short-haul data connectivity over rough or difficult terrain. Even with its obvious weaknesses in security and adverse weather conditions, microwave technology can be efficient and less-expensive under the

right conditions. But for bridging LANs at 10 megabits/sec? Unheard of.

Typically, most non-microwave LAN-to-LAN solutions involve interLAN bridges or gateways, devices that pass data traffic from one LAN to the other over public or private telephone lines.

The problem is they are too costly, too slow, or both. It's not that the bridging hardware itself is so expensive. But the installation costs for crossing a city street or river with dedicated data lines can be

prohibitive, not to mention the recurring monthly charges which, like death and taxes, will last forever.

As for speed, well, who wants to give up full Ethernet throughput for a costly dedicated 56-kilobit/sec connection, or a faster but still costly T1 circuit?

The president of MBS, David S. Theodore, said his product solves the LAN-to-LAN cost/speed conundrum because it was designed with the needs of Ethernet users in mind. The problem with most microwave manufacturers, he said, is that they are out of tune with LAN technology. Having dismissed Ethernet as a "special" application, they have focused mainly on T1 or 56-kilobit/sec channels for all data requirements.

Not so with MBS. The company focuses on extending the range of a typical LAN via a microwave bridge. This means that, by using an MBS turnkey microwave system, you ought to be able to link your cross-campus or cross-town Ethernet LANs at full speed as effectively as if you were using an Ethernet coaxial cable within a single building.

MBS has developed an Ethernet-to-microwave interface, the Etherwave Transceiver.

This is a LAN/microwave interface which, combined with MBS' LAN-Link 1000 Bridge, provides 10-megabit/sec throughput between multivendor Ethernet LANs for distances of up to five miles without a repeater (14 miles with a microwave repeater).

Basically, if you momentarily forget that you're transmitting via microwave, the Etherwave device acts like a standard Ethernet network transceiver. But because microwave radio is involved, the device connects to a LAN bridge and, by using it as a power source, converts digital signals to analog input for conversion at the other end.

Because the LAN-Link 1000 Bridge operates at the data link level it is protocol-independent. Therefore, it can handle most popular protocols, such as DECnet and TCP/IP, without external software and without losing Ethernet speed.

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