EtherTalk: Ethernet-Microwave Link

This article last reviewed: 1 December 1987

It is possible to expand an AppleTalk LAN (using Kinetics FastPath or Apple EtherTalk interfaces) onto Ethernet and from there onto a microwave transmission system. Getting the signals to a microwave system requires some hardware: a multiplexer on each end of the microwave transmit and receive stations, connected down to the Ethernet and back onto AppleTalk with an Ethernet interface.

Another (less expensive) solution is laser technology: infrared laser systems or LED (light emitting diode) systems that can be used for short-haul communication. LED systems operate up to 2 or 3 miles, while laser systems can manage up to 40 miles. This system would work in a similar fashion to the microwave transmission system.

The physical characteristics of microwave and laser communication systems can be limiting. Based on AC technology, microwave transmitters are, in principle, AC generators with a radio frequency spectrum in the 2,000-23,000 megahertz (2-23 GHz) range. Much of this range is reserved for international and special interest communications, and leaves only sections of the possible spectrum for private use. These sections are the 2, 6, 12, 18, 19, and 23 GHz bandwidths, more than enough for most digital communication needs.

Here are some vendors of microwave components and turnkey systems (for a more complete list, contact Datapro Research Corporation):

  AT&T Network Systems
  Avantek
  Digital Microwave Corporation
  Ericsson Radio Systems
  Fujitsu America, Inc.
  Harris Farinon
  International Microwave Corporation

Keywords: <None>

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Tech Info Library Article Number: 1622