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Apple IIGS/Macintosh Versus PC-LAN Baseband Network

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TOPIC ---

I just finished a competitive bid against IBM in a local school district. We
were using AppleShare and Farallon PhoneNET cabling with existing in-plant
wiring; IBM was bidding PC-LAN Baseband and Novell.

What can you tell me about PC-LAN Baseband, especially regarding its
competitive position against Apple products?

DISCUSSION --

IBM has two different networking schemes that are referred to as PC-LAN:
Baseband and Broadband. They pitch Baseband for K-12 labs. Using the PC
Network Adapter-II in the XT bus machines, like the original PC and PS/2-25/30,
and the PC Network Adapter II/A for the MicroChannel machines, it is a 2Mbps
CSMA/CD protocol run over unshielded, twisted-pair telephone wiring. The
network uses the IEEE 802.2 LLC standard like AT&T StarLAN. A typical
configuration is cabled in daisy-chain fashion using RJ-11 telephone jacks and
telephone cabling with up to eight stations within a maximum 200-foot chain
compared to a 4000-foot network limit with PhoneNET.

NetBIOS support is not provided directly on the card; it is via two software
products, the PC Network Protocol Driver and the LAN Support Program. This
network does not support 8022 LLC protocol or APPC/PC. This takes away from
available, application memory. In addition, because Novell is the chosen
server architecture, Windows is rumored to have difficulty--giving the Apple
IIGS and Macintosh a further edge. As of March, 1990, IBM has not tried to
demonstrate Windows on this configuration, lending support to this rumor.

The PC-LAN Baseband network can be enlarged using the IBM 5173 PC Network
Baseband Extender, which has 10 ports. The network can be extended to 10 arms
of eight workstations each, and the length of the daisy-chain arm is extended
to 400 feet using the Extender. This means that the radius of a PC-LAN

Baseband network cannot exceed 400 feet, giving a significant advantage to LocalTalk and PhoneNET networks. The maximum network is 80 stations, unless a router is used to bridge multiple networks together or to jump to another topology, such as Ethernet or Token Ring.

Apple's advantage against IBM as being Apple's Strategic Network Direction--AppleTalk over twisted-pair with higher-speed backbones versus a network direction on IBM's part that was not strategic (Novell and PC-LAN Baseband as opposed to Token Ring and LAN Manager). Both the Macintosh and Apple IIGS to give a Finder interface and graphic applications have the Finder interface, whereas IBM can show only Microsoft Works as evidence of their graphics interface. Further, Apple has a strategic graphics interface and contrasted the offering from IBM, which was not robust enough to run a Windows environment. Finally, the 8086 technology is not strategic for IBM and that Windows and OS/2 are really geared for the 80286 and above technology. This leaves schools wondering about the long-term viability of PS/2-25s.

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