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EtherTalk Speeds Up MultiUser AppleShare Application

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Here are the results of some tests performed on the EtherTalk card and the AppleTalk card. They suggest some speed advantages using the EtherTalk card in a multiuser AppleShare application.

Some Hints:

The EtherTalk boards come preset for thick-wire EtherNet. To change them to thin-wire it is necessary to move a jumper on the board. This procedure is well documented in the EtherTalk Interface Card manual.

It is also mandatory that the cable itself be terminated on both ends. Terminators must fit on the open end of the T-connection on each card. (The testing group took one from their FastPath for these explorations.)

Also, the EtherTalk software must be installed into the system via Installer, so that it shows up in the Control Panel as a Network icon on the left, which -- when selected -- allows you to choose the built-in port or the EtherTalk card. If you are connected to two networks, one AppleTalk and one EtherTalk, you can toggle back and forth with the Network icon in the Control Panel. This is not a gateway from one to the other, just a means of switching back and forth.

The Benchmarks:

As part of the test, some benchmarks were performed which are documented below. The numbers are representative of the differences, but will change according to configurations, number of users, and the application being run.

- For one benchmark, Excel was opened on the server from the workstation in both modes: EtherTalk and AppleTalk. The AppleTalk time was roughly 30 seconds; the EtherTalk time roughly 19 seconds -- approximately 37% faster.

- Another test was running HyperCard from the server itself. EtherTalk seemed

to be at least 95% as fast at showing all cards in the address stack as HyperCard would be from a local hard disk.

Finally, the most comprehensive benchmarks. Two sets of tests were run, called Configuration A and Configuration B.

Configuration A:

- These were done on a Macintosh Plus-based system with a 4MB Macintosh Plus as the AppleShare server, and a 2MB Macintosh Plus as the workstation. RAM cache on the server was automatically set by AppleShare v1.1 at 32k.

(NOTE: Larger RAM cache settings actually slowed down the response times!)

The workstation was operating from a single floppy containing Finder 6.0b2 and System 4.1. The application 4th Dimension (runtime version) was running off the file server, since there wasn't room for the application on the floppy containing System and Finder. 4th Dimension was running in multi-user mode with one user. The network was AppleTalk, both cable and protocol. The server used an Apple 40SC drive.

Configuration B:

- Tests were done on a Macintosh II based system with a 5mb Macintosh II as the workstation and a 1mb Macintosh II as the server. Both Macintoshes were connected using EtherTalk. The server disk was the same Apple 40SC as in Configuration A. Again, the tests were done with the workstation using a floppy-based System v4.1 and Finder v6.0b2. RAM cache settings were not recorded. 4th Dimension was running in multi-user mode with one user off the server volume.

The time tests involved two parts: timing the launch of the data base, then timing a series of typical operations. These operations typically involved reading and/or writing data, and the reading of screen layouts (mostly dialogs).

The Results:

TEST	CONF. A (seconds)	CONF. B (seconds)	% DIFFERENCE
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Launch	359	124	35%
Oper.1	12	5	42%
Oper.2	26	10	38%
Oper.3	15	6	40%
Oper.4	28	11	39%
Oper.5	18	6	33%

Oper.6

35

12

34%

It appears from these tests that the Macintosh II in combination with EtherTalk is two or three times faster than the Macintosh Plus with LocalTalk cabling.

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