AppleTalk: Troubleshooting Ghosting Problems (9/94)

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TOPIC ---

Printers and file servers on my LocalTalk network sometimes disappear from the list of available devices in the Chooser. I have verified that the devices are plugged in, turned on, and properly connected to the network. Why does this happen?

DISCUSSION --

The phenomenon you describe is called ghosting. There are several possible causes for ghosting.

The first is that the total length of your network cabling may be too long. The signal reaching your Macintosh from the ghosting devices is weak. Do not exceed the published maximum cable lengths. For LocalTalk cabling, the maximum is 1000 feet (If you are using PhoneNet cabling, check manufacturer specifications). For Ethernet Thin Coax, the maximum is 600 feet per segment. For Ethernet 10BaseT twisted-pair, the maximum is 328 feet per segment. If your cabling is too long, you should consult your network administrator or phone installer about possibly rerouting the cables. You might also want to consider the use of a star controller (if not already using one) to help boost the signal and shorten cable runs.

The second cause of ghosting can be reflections in the signal. Reflections are like electrical echos. They can cause serious communications problems. Small reflections are caused by changes in impedance (resistance) in the wire along its length. You can have changes in impedance when the network wire changes from one wire type to another or from one wire gauge to another. It can also happen when there are kinks in twisted-pair wire. Large reflections occur when a wire has not been properly terminated. This will almost always cause problems. Verify that your network cabling is in good condition, you have no loose network connectors, and that the network is properly terminated.

The third possible cause of ghosting is exceeding the maximum number of nodes (devices) on the network. For LocalTalk, the maximum number of nodes is 32. For Ethernet Thin Coax, the maximum is 30.

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