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Ethernet 10T/5 Workgroup Hub: Cascade Use & Other Items (11/94)

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TOPIC -----

I have the following questions about the Apple Ethernet 10T/5 Workgroup Hub:

- 1) Can the 10T/5 Workgroup Hub be used to cascade a network?
- 2) How can you tell if the 10T/5 Workgroup Hub is connected and active?
- 3) What is the maximum cable length?
- 4) How is the 10T/5 Workgroup Hub powered?

DISCUSSION -----

- 1) The Apple Ethernet 10T/5 Workgroup Hub is a 10Base-T Repeating Hub which adheres to all appropriate standards. This means there is a cascade limit of four hubs, and that no packet may traverse more than four repeating hubs between any two points on the network. If a network is set up with more than four hubs in a path it will still work, but it starts to degrade with packet collisions, runts, fragments, and so on. This degradation will be more apparent in the middle of the topology than at the ends. There is no indication on the Macintosh or Workgroup Hub that these conditions exist, other means must be used to detect it. These runts, collisions, fragments, and so on WILL be transmitted from hub to hub within a collision domain. It takes an intelligent hub (routing) to alleviate this.
- 2) The Ethernet 10T/5 Workgroup Hub does have a green LED associated with each port, but it works like the ones on our Ethernet transceivers. If the LED is on, it means there is an active (powered) link present, or in other words there is a connected device. The LED will blink off when it transmits data so it flashes with I/O.
- 3) The Ethernet 10T/5 Workgroup Hub specification allows for a 100 meter cable between each hub as a maximum.
- 4) The Ethernet 10T/5 Workgroup Hub must be powered. This normally comes from the computer plugged into the one AAUI connector. If this computer is off an optional external power supply is available that plugs into the wall and then into a dedicated plug on the hub. If the AAUI and the external power connector are connected, the hub will be powered from the external connector.

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