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Hewlett-Packard Provides One-Stop Shopping for Network Connections

By Christopher W. Buttine

As part of its AdvanceNET product line, Hewlett-Packard (HP) offers a single-vendor solution for connecting PCs, minis and mainframes, plus multivendor connectivity. This is a welcome surprise in an era when connectivity often seems to imply the need to deal with an endless parade of vendors.

The three major Hewlett-Packard AdvanceNET LAN products are StarLAN, ThickLAN and ThinLAN. These can be combined in a number of configurations, ranging from the relatively simple to the very complex, in order to create a custom solution for one's organization.

For office automation in small organizations or departments, the HP solution of choice is its StarLAN network, built around HP's Micro 3000 computer, a multiuser microcomputer compatible with the company's MPE operating system.

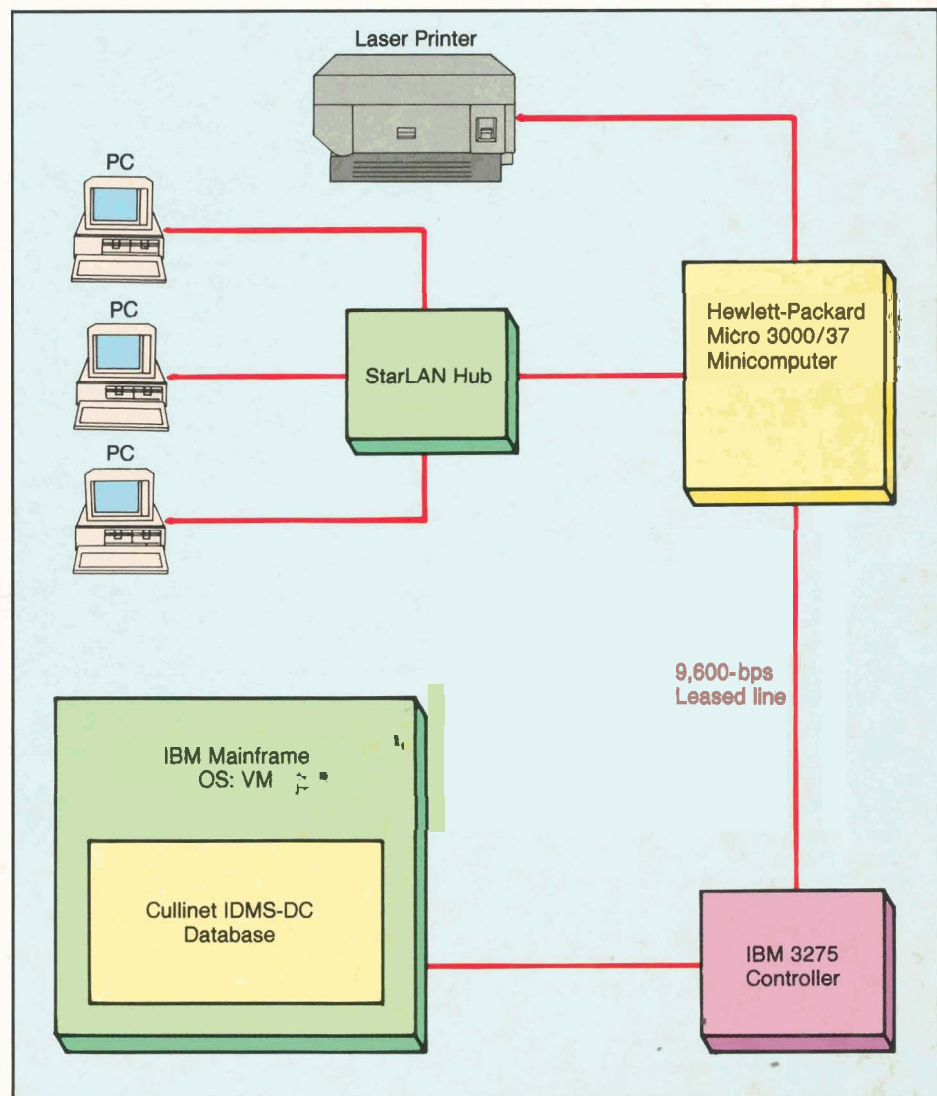
For more complex situations involving multiple computers from multiple manufacturers, a combination of ThickLAN, ThinLAN and StarLAN may be the ticket for a network solution.

Hewlett-Packard recognizes the need for professional assistance in designing a LAN. As part of its solution, the company provides network-design assistance and can perform a simulation of potential HP configurations to determine the best design for a client.

This review focuses on HP's StarLAN and LAN productivity products. StarLAN is one of the company's alternatives for departmental computing and smaller organizations. Any of the current HP 3000 computers, as well as HP's AT-compatible Vectra, can be used as a server.

We reviewed the StarLAN system at HP's Micro 3000 manufacturing plant in Roseville, Calif. As part of its AdvanceNET solution, Hewlett-Packard performs network setup for its customers.

StarLAN is the network Hewlett-Packard suggests for use with PCs, including its own Vectra, IBM PCs and almost any IBM



HP's StarLAN network can support many file servers, including HP's 3000 multiuser system or Vectra AT-compatible. It can be linked with minicomputers and hosts on other LANs.

clone. As part of its AdvanceNET services, HP will test the customer's IBM PC clones to ensure their compatibility with the StarLAN network. So far, according to company officials, it has not experienced any com-

patibility problems with any of the major IBM clones.

From a software-compatibility perspective, StarLAN uses Microsoft's MS Networks software, and thus promises com-

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patibility with NetBIOS-based network applications. As with any network, however, one should always test the software that is critical to one's organization to see if it functions properly on the network.

The hardware configuration used for our review consisted of an HP Micro 3000 with 4M bytes of memory and a 130M-byte disk drive, a system console terminal for the Micro 3000, a Vectra PC workstation (HP's IBM PC AT compatible), an HP LaserJet printer (connected to the server) and the StarLAN hardware.

The StarLAN hardware consists primarily of an interface card for the server (in this case the Micro 3000), interface cards for each PC and the StarLAN hub. The Micro 3000 was connected to the PC via the StarLAN hub. Up to 10 nodes can be connected to the hub. The nodes may be PCs, other hubs or bridges to other networks. While Hewlett-Packard recommends that a maximum of 50 PCs may be connected in one network, by combining networks, connectivity to thousands of PCs and other computers can be established. Unshielded twisted-pair cable was used to physically interconnect the server, hubs and PCs. (ThinLAN and ThickLAN networks use coaxial cable for the interconnections.)

Software Available

To complement its AdvanceNET products, HP provides a variety of software packages to increase the network's usability in the office environment. The two we spent time with during our review were HP's Access and AdvanceMail.

Access may be the information-retrieval product for which every user department has been waiting—from accounting to shipping. The package allows users to select and report information stored in corporate mainframes and minicomputers, as well as their micros, via a menu system.

There are some limitations to Access. The output must be in a table format, but since most reports are tabular, this only limits the user who wants to create a fancy custom report. For that, one must specify the output storage format (for example, Lotus 1-2-3) and then manipulate it with that package.

During the course of our review, we used Access to query and report against a copy of the manufacturing system used at the Roseville plant; the system was stored on the Micro 3000 acting as the network server in the form of an HP Image 3000 database (the database-management system used on the 3000 line of computers). All we needed to do for our query was identify the database files from which we wanted to select information (the selection and sort criteria), and

StarLAN

Hewlett-Packard's StarLAN network is a useful tool for linking a department or work group. It uses the StarLAN topology, transmits at 1M bits per second and promises lower-cost network connections. Its strength is its ability to link to Hewlett-Packard's other network offerings and to communicate with larger systems.

Hewlett-Packard StarLAN user link kit is priced at \$595; Hewlett-Packard Micro 3000, which includes a console, eight ports, 4M bytes of memory, a 130M-byte disk drive, an MPE operating system and a cartridge tape drive, sells for \$26,950; Information Access for Micro 3000 costs \$5,900; and Resource Sharing for Micro 3000 costs \$4,800.

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tell Access to run. Moments later it came back with the results. While Access was processing our request, it indicated on-screen how much progress it had made and the estimated time needed to complete the request.

When we reviewed Access, it had not been released for use in conjunction with IBM mainframe databases. However, HP plans to release it for use with Cullinet Software's IDMS database-management system. We did try out the prerelease version of Access for Cullinet's IDMS database and used HP's ThinLAN in the process to connect to one of the company's mainframes in Palo Alto, Calif.

Access functioned and looked just as it did when we accessed the Image 3000 database on the Micro 3000. Had it not been for the different security on the mainframe, we would not have known that we were accessing a mainframe database, as opposed to one on a minicomputer or a PC.

We also worked extensively with HP's electronic-mail system, called Advanced Mail. We used this package to connect from our demonstration LAN to the primary LAN at the Roseville plant. Connection was made through what HP calls its Serial Network. This is essentially a way to get in and out of the network via serial communications (e.g., for use with a modem).

With this product, users can call in on their PCs over the phone lines to access data on the network and act just like any

other network user, although their data-transfer rate will be much slower than that of a workstation physically connected to the network. After connecting to the primary LAN, we were able to send mail locally as well as to any HP site around the world. At one point, we decided to send a message to our HP consulting liaison in Palo Alto, Calif. Since we did not remember the correct spelling of her name, we queried the mailbox list and did a search on partial-name match and soundalike names. Once we had located her name, we were able to send her a message with just a few keystrokes. Additionally, we had the option to assign a priority to the message. The priority is not only used to indicate to the receiver how vital the sender thinks the message is, but also how soon the message will be delivered by the network to the receiver's mailbox.

To minimize internetwork message traffic among the many networks that the HP AdvanceNET mail system can connect, messages are put into the electronic equivalent of mail pouches. This reduces the number of trips the network needs to make to each post office (network) and the communications cost for remote networks. For example, if we sent a normal priority message on the HP internal network to the London office, it would be put into the evening mail pouch and sent with the other normal priority messages that evening in order to take advantage of cheaper phone charges. If the message was of high priority, on the other hand, it would be sent to the London office immediately.

Another feature of Advanced Mail is the ability to attach graphs, data files, spreadsheets and so on to the messages. Also, a simple-to-use text editor is included for composing messages, although users are free to use their favorite word processor for this task if desired.

This review has touched on just a few of Hewlett-Packard's AdvanceNET and productivity products. The strengths of HP's network offerings are their ability to link departmental products, such as StarLAN, to more robust solutions in order to achieve a degree of multivendor and multicomputer connectivity that many computer and network manufacturers are still striving to reach. In that light, the AdvanceNET line appears to be worthy of consideration for those planning to implement anything from a small departmental cluster to a strategic, corporatewide network. ■

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