Researchers in remote facilities can access important information quickly.

At Union Carbide, the Ethernet Backbone Brings Sites Closer Together.

Union Carbide Corporation has more than 30,000 employees located in its Connecticut headquarters, its two major research centers in New Jersey and West Virginia, its two satellite facilities in New Jersey and two major plants in Texas. Engineers and managers in all five locations need to access information on Digital VAX minicomputers at the research sites and an IBM host in West Virginia.

Macintosh Solution

The company has linked the computing resources of all five facilities, using a network of 3,000 Apple Macintosh systems on AppleTalk and Ethernet networks. Many Macintosh personal computers can access the VAX minicomputers at either research facility for chemical research data, scientific research programs, or Digital's ALL-IN-1 office automation program; or files stored on AppleShare file servers in any location.

Every AppleTalk network is connected to the Ethernet backbone in each building through Ethernet bridges. The two VAX clusters and the AppleShare file servers in remote sites communicate with one another over dedicated T-1 phone lines.

With File Sharing, Five Sites Seem Like One

Because team members on a single project might work at different sites, it was critical that employees could access financial and engineering information regardless of location. Union Carbide found a solution in AppleShare file servers, which

workgroups now use extensively to exchange information with other workgroups at their site or at other sites. The file server capability has enabled engineers to save time waiting for document transport and to avoid costly duplication of efforts.

The New Jersey research facility has a VAX running Alisa Share as its AppleShare file server. According to Keith Sproul, an engineer in the Applied Math and Computer Services group, "We make great use of the Macintosh and the Alisa Share server. In addition to exchanging files, we use Alisa Print Services to access printing resources, such as a fast, high-resolution Digital laser printer."

"Another major advantage of linking the Alisa Share servers in different facilities is the convenience of printing at different locations. I've saved full-day trips by making revisions and printing them at destination instead of hand-delivering documents. People also like using the servers instead of faxing – you get better quality in almost the same time, and since the T-1 line is already in place, you don't have to pay extra for this service."

The VAX systems communicate with one another using DECnet. Because AppleTalk runs on top of DECnet, the VAX systems appear to Macintosh users as ordinary AppleShare file servers. "Users don't want to know -- or need to know – what type of file server they're using," says Sproul. "That's what's so great about the Macintosh – you can just choose a file server from a menu without knowing its location."

VAX And IBM VM/CMS Terminal Emulation

Union Carbide's engineers use their Macintosh systems with Mac 240 or Mac 241 from White Pine Software for Digital terminal emulation. They've recently begun using eXodus from White Pine Software for X Window and DECwindows™ terminal emulation.

The Accounting and Purchasing employees at Union Carbide use their Macintosh computers to access finance or accounting data on the IBM VM/CMS host in South Carolina. The VAX systems and the host are connected via another dedicated T-1 link, so users simply connect to the VAX through Ethernet, then log on to CMS.

Macintosh Network Open To All

Sproul is convinced of the advantages of the Macintosh for Union Carbide. "The Macintosh makes my job significantly easier. It's easy to learn, so I don't have the training concerns I'd have with other systems. And if people do have a valid reason for using a different machine, Macintosh connectivity tools mean they can still be part of the overall network."

"When people ask if they can put their computer on our network, I can say 'yes.' That's what I like about the Macintosh."