

HP AdvanceNet For Business Office Solution  
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Business office environment is typified by the diversified end users needs ranging from managers to office workers and expertise with frequent personnel moves and changes to accommodate growth, to enhance communication, cut costs, and increase productivity. As computing move from centralized to more and more distributed and increased use of personal productivity tools has made PC proliferation an epidemic. Distributed computing will also require more sophisticated application development environment, The increasing numbers of companies in a network makes network maintenance a more complex task.

The challenge to meet the networking needs of this dynamic environment is to provide a very flexible, transparent and convenient access network that allows easy sharing of information. This would mean close integration of PC's, terminals, and minis; resource sharing throughout the network; solvable networking solutions from the systems perspective, distributed application and data environment is needed to meet the demand of this environment. Multi-vendor communication and high availability of the network and system is also a necessity.



# Networking Environment

### Users:

- Wide range of needs & expertise
- Frequent adds, moves & changes



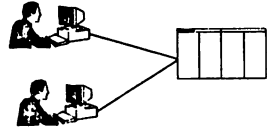
### Workgroup:

- Proliferation of PC's & personal productivity tools
- Use of terminals
- On-going growth



### Systems:

- Increasing network maintenance complexity
- Sophisticated application development and version control



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# Networking Needs

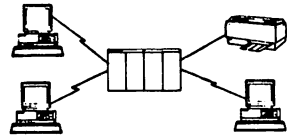
### Users:

- Ease of use
- Transparent, flexible access to information (systems)



### Workgroup:

- PC and terminal/mini integration
- Network-wide resource sharing
- Scalable networking solutions



### Systems:

- Multivendor communications
- High availability of network/system
- Distributed application services

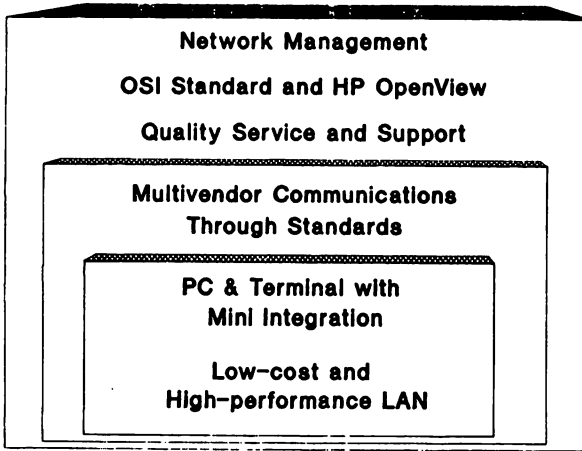


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The Hewlett-Packard AdvanceNet Business Office Network Solution is the solution to the business office networking needs. The low cost and high performance LAN with full PC/mini/terminal integration addresses the needs of frequent moves and changes and growth. It also offers networking services based in industry standards (OSI) and other de facto standards. This facilitate multi-vendor communication. It also offers centralized network management based on the emerging OSI standards and HP's openview.

## Business Office Network Strategy



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An individual end-user can access the HP 3000 application through a range of workstations connected either locally or remotely. The terminals or PC's are connected to the HP 3000 through the distributed terminal controller (DTC) for the new 900 series of HP 3000 companies and the Advanced Terminal Processor (ATP) for all other HP 3000. The HP AdvanceLink software provides terminal emulation and file transfer capability for the PC's. Remote PC's can also access the HP 3000 application software via the HP serial Network software.

All these provides the individual end user with a high degree of integration for the PC.

## HP AdvanceNet for the Business Office

### End User Solution - Individual

- A range of workstations
  - Terminal
  - Low-cost PC
  - 386 based
- Personal software
  - Word processing
  - Decision support
  - Graphics
  - Personal data base

#### Individual



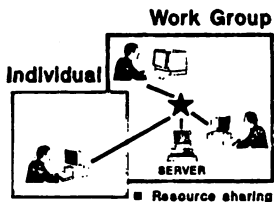
■ Personal computing

For groups of PC users, HP StarLan provides convenient connection. This is a twisted-pair wiring scheme with either 1 mbps or 10 mbps based on IEEE 802.3 standard. A workgroup PC LAN provides disc and file sharing, printer sharing, and spooling, as well as, plotter sharing and spooling on a PC server.

## HP AdvanceNet for the Business Office

### End User Solution - Workgroup

- HP STARLAN - the office network:
  - Uses the regular phone wiring
  - Eases installation, adds, moves and changes
  - 1 and 10 megabits
  - Standard-based IEEE 802.3
  - Basis for data/voice evolution
- Applications
  - Personal productivity
  - Workgroup intercommunication
  - Local disc sharing
  - Local printer sharing
- A range of PC servers from 286 to 386 based PCs



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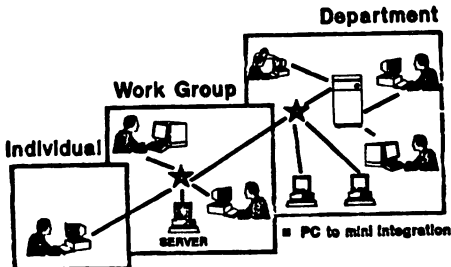
For a large department of end-users, this alternative provides the ability to connect an HP 3000 located either in the department or in the data center with terminals, printers, and personal computers. It enables this entire department to connect the site backbone to access additional information and resources located in the data center or other work groups and departments throughout the entire network.

The center of the department connectivity is the HP 3000. Work groups of PC's are connected to the HP 3000 using StarLan. PC users can access the resources of HP 3000 transparently, as if the HP 3000 printers and discs were local PC peripherals, by running Business System Plus or Resource Sharing software on the HP 3000 and StarLan user link software on the PC.

## HP AdvanceNet for the Business Office

### End User Solution - Department

- A scalable, cost effective PC to mini integration
- HP STARLAN - the office network:
  - Support HP 3000 mini computer
  - Support HP Personal Productivity Center
  - Distributed applications between PC's and minis
- Applications
  - File back-up and restore
  - Electronic mail services
  - Information access
  - Print Central
  - Resource sharing
  - Distributed applications



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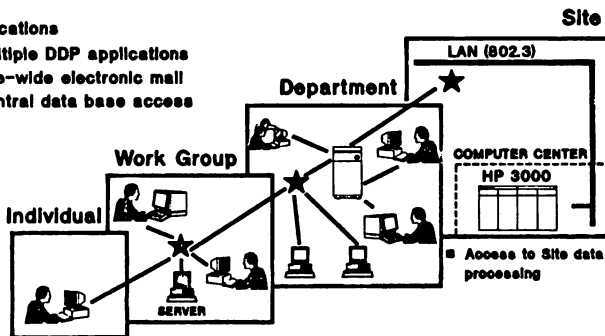
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The computer center solution consists of products that enable several HP 3000's residing in the computer center to be linked together and to pass data between applications or between users and applications. It offers Network Services for end users and programmers. It also provides capabilities for the system or network administration to manage and control the computer center resources. The computer center network is based on the industry standard IEEE 802.3 LAN, and the transport protocols are based on the industry standard TCP/IP Arpanet protocols. HP's commitment to industry networking standards provides the basis for multi-vendor communications within the computer center.

## HP AdvanceNet for the Business Office

### Computer Center Solution

- A scalable, cost effective PC to mini integration
- HP STARLAN - the office network:
  - Connect into the site LAN backbone
- Applications
  - Multiple DDP applications
  - Site-wide electronic mail
  - Central data base access





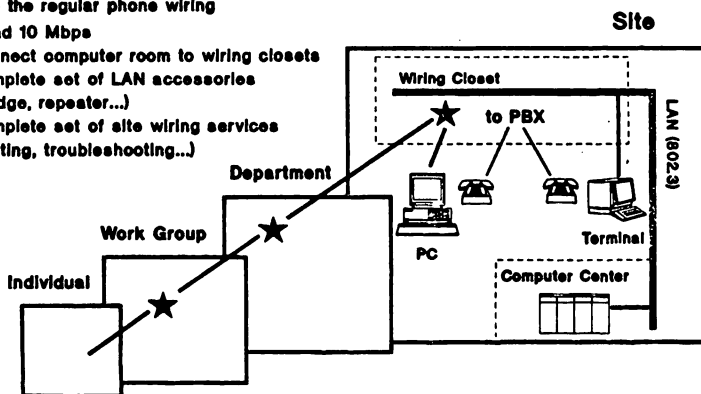
Unshielded twisted-pair cable is the logical choice for business office environments as it is requires for the telecommunication system and is often already in place. It offers a flexible economical alternative to coaxial cable. HP offers a wide range of links that are supported over unshielded twisted pair, e.g. low speed asynchronous links (ATP); 1 mbps StarLan and 10 mbps StarLan connections.

## HP AdvanceNet for the Business Office

### SiteWire Solution

#### ■ HP STARLAN - the office network:

- Use the regular phone wiring
- 1 and 10 Mbps
- Connect computer room to wiring closets
- Complete set of LAN accessories (bridge, repeater...)
- Complete set of site wiring services (testing, troubleshooting...)



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In the business office environment, there is often a need to share information with systems located in other remote data centers within the company such as corporate headquarters. These data exchange capabilities are needed for end users who access remote applications and data bases and for software processes running over multiple systems. There may also be a need or HP 3000 users to communicate with an IBM mainframe at corporate headquarters to update a data base or exchange electronic mail with corporate IBM users.

The company--wide Access Solution describes the way HP systems can interconnect with remote HP or IBM systems across the backbone network. The alternatives depend upon which type of backbone network is installed as the company-wide network.

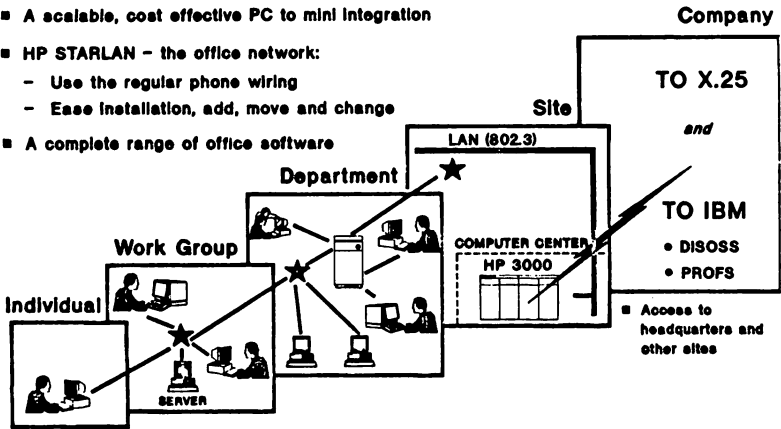
For access to either a public or private X.25 network, HP offers two types of communications. HP 3000 computers can communicate with remote HP data centers using either 1) direct X.25 system access or 2) X.25 system access through a LAN gateway. If it is necessary for HP computers to communicate with IBM systems, then the alternatives are 1) an HP 3000 X.25 to SNA Gateway or 2) SNA/X.25 Protocol Conversion.

If access to SNA is desired in order to communicate between HP and IBM computers, the options are 1)) an SNA gateway to IBM or 2) standalone SNA access from HP 3000 to IBM.

# HP AdvanceNet for the Business Office

## Company-wide Access Solution

- A scalable, cost effective PC to mini integration
- HP STARLAN - the office network:
  - Use the regular phone wiring
  - Ease installation, add, move and change
- A complete range of office software



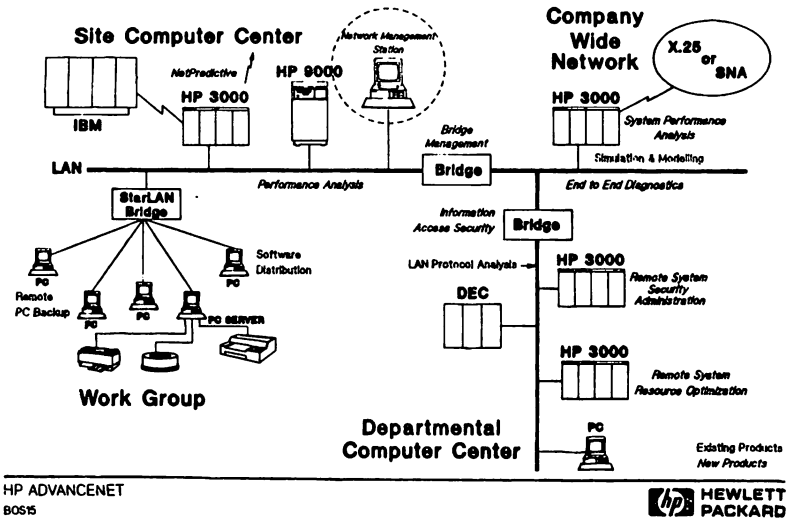
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The objective of Hewlett-Packard's Network Management is to provide network customers with the tools to create and manage data networks. Thus HP openview Network Management refers to a comprehensive family of network management tools and services. Many of the HP openview products are integrated under a common user interface, HP OpenView Windows. OpenView is mostly based on OSI standards, thus facilitating multi-vendor communication.

## HP OpenView for Managing HP LAN's





## HP OpenView LAN Management Tools

### HP OpenView LAN Bridge Manager

- Bridge Management, Info Access Security, Traffic Monitoring

### HP Business Systems Plus

- Remote PC Backup, Software Distribution

### HP OpenView Windows

### HP OpenView Status & Diagnostic Monitor

### HP OpenView Performance Monitor

### HP OpenView Network Command Interpreter

HP AdvanceNet offers a comprehensive range of network support and services including planning and design, implementation, maintenance, and education that can be tailored to customer's unique requirements.

In summary, HP AdvanceNet for the business office solution provides the answer to the networking needs and requirements fo a general business environment.

Business Office

## HP Multivendor Network Support

PLAN	IMPLEMENT	OPERATE
<i>Network Support</i>		
<b>Network Planning &amp; Design</b>	<b>Network Startup Network Prepare</b>	<b>NetAssure PPN Network Operation</b>
<i>Systems Support</i>		

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