IBM

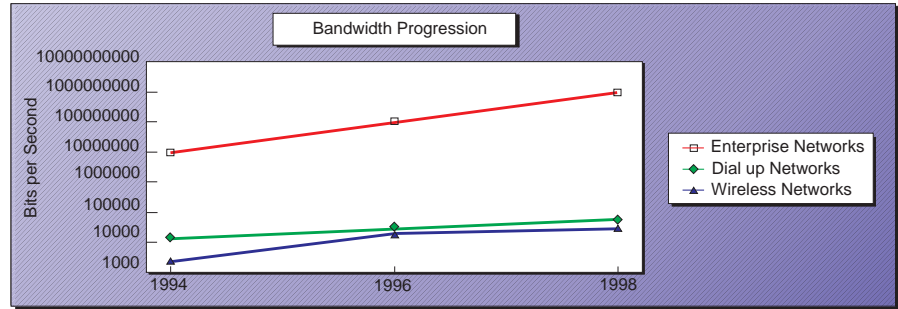# *Expanding the enterprise information network to mobile workers*

Extend the reach of your business

The business environment has never been more dynamic than today. Increased competition, changing technology, and growing service demands are forcing corporations to respond more quickly than ever to remain competitive.

In a highly competitive and fast-paced world, one thing is clear. The advantage belongs to those who have the best information–wherever they are. There's no better place to gather or use that information than in a customer's location. There's no better time than now to provide the answer to a customer's question, confirm inventory, or place an order.

The number of workers operating in a mobile environment is increasing rapidly. By the year 2001, the Gartner Group estimates that nearly one out of every four workers will be mobile or in a remote location.

These mobile professionals take the office with them and expect to be as productive on the road as in the office.

Bandwidth Progression

Bits per Second		
10000000000		
1000000000		
100000000		
10000000		
1000000		
100000		
10000		
1000		

-□- Enterprise Networks
-◆- Dial up Networks
-▲- Wireless Networks

Increasing the Bandwidth Gap causes the LAN to rise 10x every 2 years. Mobile rises 2x within that same period.

Because employees work outside of the office, they need network computing applications that move easily with them. Experience shows this is generally not the case. The workers who directly interface with customers do not have access to the critical information systems they need. IBM® eNetwork™ Software is designed to address this problem, allowing corporations to extend enterprise information and applications to their mobile workers.

Mobile network resources

Traditional network applications have links that are high bandwidth, are low latency, and add little or no variable cost. Today, there is a substantial performance and pricing gap between enterprise and mobile networks. As a result, when these applications are shifted to a mobile environment, they are often inefficient, yield poor performance, and are difficult to support.

Many users assume mobile network speeds will catch up with LAN speeds soon. In fact, the opposite is happening. Dial access and wireless connection speeds double every two years, while enterprise network speed grows tenfold over the same interval. Applications developed to take advantage of exponentially increasing LAN speeds have an increasingly difficult time in the mobile environment.

Mobile connection availability and characteristics

In a mobile environment, disconnected operations are frequently the rule, not the exception.

Certain mobile professionals, such as field sales personnel, are intermittently connected and use their mobile computers as stand-alone devices as a part of each day. These mobile professionals take the office with them and expect to be as productive on the road as in the office. Network applications not explicitly enabled for mobile operations do not operate well in this type of environment. Synchronization of local laptop computers and central office databases on a network is critical to these workers.

Other mobile workers, such as field service technicians and public safety officers, require instant use of wireless connections. They perform real-time database queries to respond quickly to events. These wide area mobile networks generally have lower bandwidth, higher latency, and higher cost than their LAN counterparts. If disconnected, these workers expect an application to continue right where it left off as soon as a connection is reestablished.

Supporting mobile users

While in some workgroups, a local workstation expert is informally recognized, this resource is generally not available to the mobile worker. Additionally, it's taken longer for automation tools to reach the field when compared with the office.

The ability to deploy and manage mobile computer software and troubleshoot problems is critical. Today's systems management tools assume continuously connected, powered-up workstations to complete software distribution electronically.

IBM eNetwork Software mobile and wireless solutions

IBM eNetwork Mobile Equalizer complements existing IBM eNetwork Wireless software. These offerings are designed specifically to extend the reach of your enterprise information to mobile workers. And it increases the timeliness and availability of information for every-one with minimal investment.
The software consists of:

eNetwork Mobile Equalizer
Uses IBM's proven store and forward messaging to make it easier to build,

manage, and use mobile applications, while providing mobile workers critical features such as:

- Assured delivery–Data always gets through.

- Message selectivity–Only selected messages are sent or received during a session.

- Disconnected support–Offline work is resynchronized when connections are available.

- Manageability–Tivoli® TME10™ and other systems management software enable electronic software distribution and upgrades to laptop users.

eNetwork Wireless Gateway
Provides secure authenticated and encrypted communication and extends Internet Protocol (IP) connectivity across wireless packet data, cellular, and wireline networks, enabling applications written to the TCP/IP sockets interface to run unchanged in the wireless environment.

eNetwork Web Express
Enables wireless access to enterprise intranet and Internet applications,

using a Web browser through patented compression techniques that reduce data transmissions by up to 95 percent.

eNetwork Emulator Express
Includes IBM eNetwork Personal Communications entry emulator and also works with leading IBM and third-party emulators to enable enterprises to leverage its host applications and data by extending access to the wireless environment—without any changes to the applications.
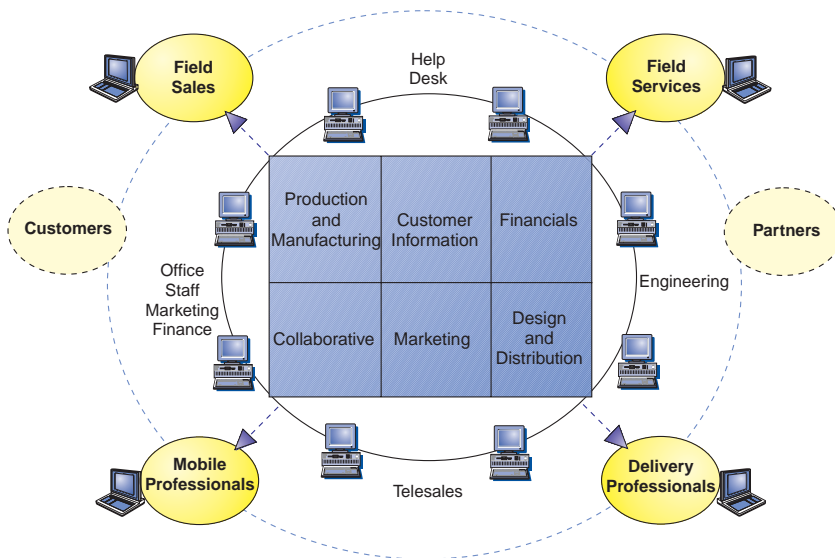
eNetwork Software benefits

A discounted upgrade to full-featured IBM Personal Communications emulator allows mobile users to achieve the benefits of running existing emulation applications with graphical user interfaces. This simplifies data entry and can be designed to represent existing forms and processes that mobile workers are used to.

eNetwork Communications Server further extends the benefits of mobile products to enterprises with TCP/IP environments. TCP/IP mobile clients can be assigned to specific sets of 3270 SNA applications without changes to the clients. This mapping is done and managed at the communication server so that all mobile clients can be easily configured, set up, and managed, yet the administrator retains the ability to provide each client with unique application access.

Security

Security comes first, and the eNetwork Wireless Gateway provides complete IP authentication and encryption from the mobile client to the server. In an SNA environment, the eNetwork Communications Server extends this security from server to host, providing a complete security solution for the wireless environment.

Expanding the Enterprise Information Network to mobile workers.

eNetwork Software mobile solutions protect your existing technology investments by allowing you to easily and cost-effectively extend your current applications to a mobile workforce. Built with enterprise-class dependability in mind, eNetwork software is designed to keep your organization running in the office or on the road.

Advantages

By optimizing and extending enterprise applications and data for mobile workers, organizations are better positioned to reduce cost, increase service, and become more competitive.

The mobile advantages include:

The right information at the right time
A connected mobile workforce with the right information at the right time translates into competitive advantage. With eNetwork Mobile Equalizer and eNetwork Wireless software, a sales professional might receive alerts from the company intranet as soon as a sales lead is logged. From the customer site, that same salesperson can convert that prospective customer into a real customer by checking inventory real-time and placing an order.

The buck stops here
eNetwork Mobile Equalizer and eNet-work Wireless software reduce your cost of operations by enabling electronic software distribution to mobile workers whose laptop computers are frequently disconnected. This solution equalizes the cost of ownership for mobile comput-ers and desktop computers. Gartner Group has identified the ownership costs to be: $11 000 (U.S.) per year for mobile computer users and $7 000 (U.S.) per year for desktop computer users.

Faster, effective communication
Increased access to information allows workers to do their jobs better. Users work with data locally to maximize their time. Evidence from field automation projects indicates that worker productiv-ity gains of 10 to 20 percent and one- to two-year payback are not uncommon. A service technician can offer special promotions and place orders for additional sales while on site performing a customer service request.

Reduced cost of mobile networking
Wireless and dial-up access telecommunication charges are significant. eNetwork Mobile Equalizer and eNetwork Wireless software technologies can reduce the amount of data transmitted by applications across networks by up to 95 percent, saving time and money. The communication over any network allows users and administrators to maximize the cost and benefit trade-off, based on available network resources.

Minimum investment, maximum return
eNetwork Software mobile solutions reduce development and operations costs, while improving the productivity and performance of your mobile applications and workers. Designed to extend your existing information technol-ogy (IT) investment, eNetwork Software mobile solutions allow you to extend your existing applications and data to a mobile workforce with little or no modifi-cation.

eNetwork Mobile Equalizer and eNet-work Wireless software provide organizations with the ability to achieve the mobile advantage where it matters most, in front of the customer.

For more information

For the latest mobile news, solutions, trials, or code, visit our Web site at:

www.software.ibm.com/enetwork/mobile/

Send e-mail to: mobile@us.ibm.com or call + 1 914 766 8799 for an eNetwork Software mobile sales representative.

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