3Com® NBX® 100
Communications System

Proven
Performance
and
Advanced
Capabilities

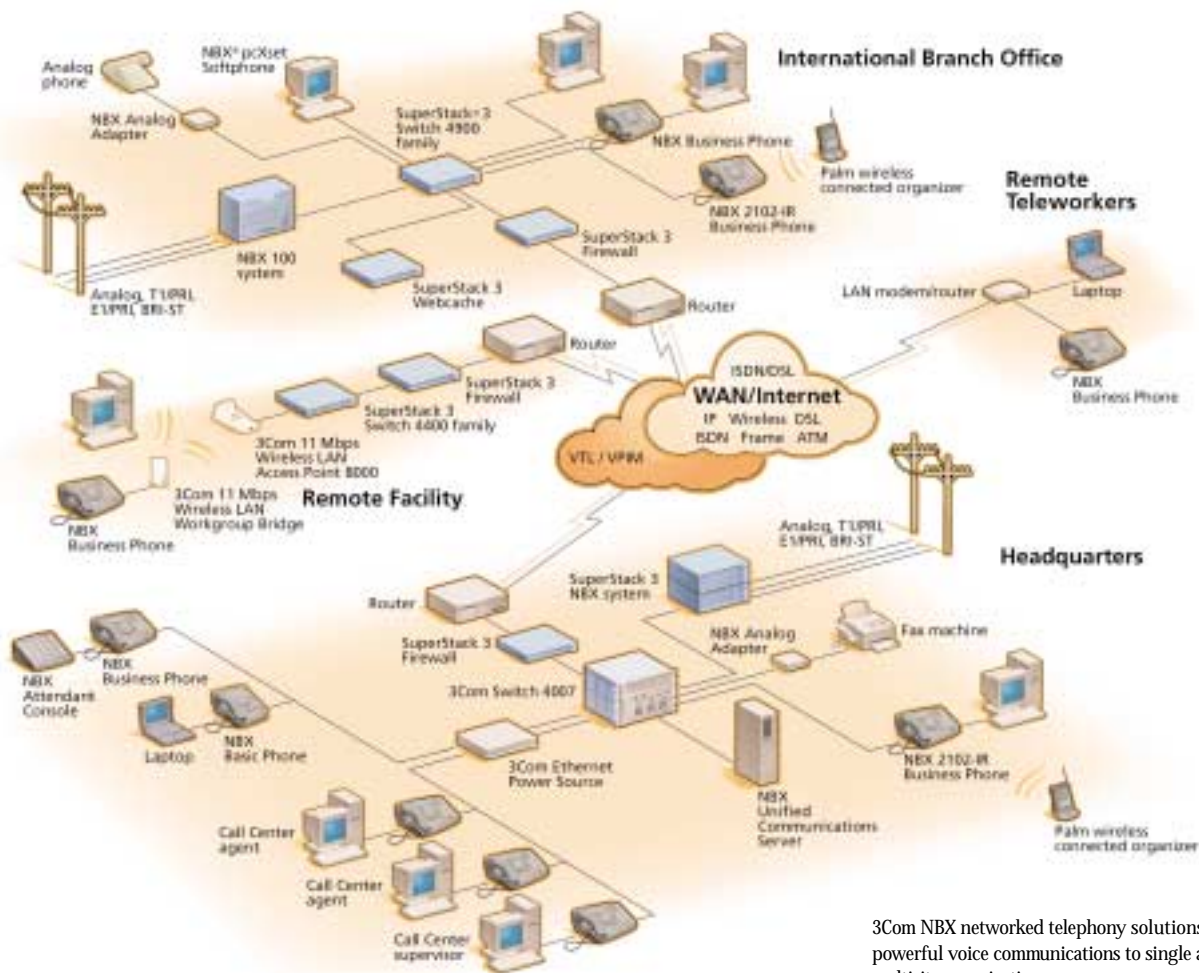## 3Com Networked Telephony: Profit from Experience

Thirty years ago, researcher Robert Metcalfe had a vision that there was a more cost-effective method of connecting computers so that people could better share information and be more productive. His pioneering work revolutionized computer networking—creating both Ethernet technology and the multi-billion dollar world-leading network company, 3Com Corporation.

Six years ago, our goal was to develop a dedicated set of telephony products that would operate reliably across data networks. This innovative solution is called Networked Telephony. 3Com NBX networked telephony solutions were designed from their inception to harness the power, flexibility, and the value of a data network without sacrificing the reliability and familiarity of a traditional telephone system.

Today, 3Com provides customers with one of the most cost-effective ways to use Ethernet networks to improve office telephone communications. NBX solutions eliminate the need for separate data and voice cabling plans and greatly reduce installation, operation, and management costs.

Award-winning 3Com networked telephony solutions support a wide spectrum of business configurations. Whether required for the smaller single office or larger virtual campus, these systems offer enhanced capabilities and sophisticated applications that cost less and do more than traditional telephone systems.

> " 3Com gave us the networking power to achieve all of our communications objectives while saving us significant phone implementation and management costs"
>
> *John Russ,*
> *CEO, Community FirstBank,*
> *Charleston, SC, USA*

3Com NBX networked telephony solutions deliver powerful voice communications to single and multisite organizations.

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> " Our experience proves that organizations with the most demanding communication needs can rely on an IP infrastructure . . . IP has come of age as an industrial strength network infrastructure."
>
> *Gillian Clark,*
> *IT, Halifax Cetelem Credit Ltd,*
> *United Kingdom*

3Com® NBX® 100 Communications System

The 3Com NBX 100 Communications System, the first commercially available IP PBX product, introduced the world to the value of networked telephony in 1998. Since that time, thousands of businesses have discovered that it is a better way to handle voice communications. Now with fourth-generation software, it delivers powerful call processing, a full set of built-in applications, and an ever-expanding suite of optional applications; all designed to provide better value and solid investment assurance.

Reliability You Can Count On

What makes networked telephony solutions so compelling is 3Com's ability to harness the power and flexibility of a data network without sacrificing reliability.

Reliability is achieved by isolating the telephone system functionality from everyday issues associated with desktop PCs and servers. Telephones share the data network with PCs and servers, but don't use the PCs or servers for voice traffic. It's like operating two cars on the same highway—even if the PC stalls, the voice traffic can pass by unimpeded.

The foundation of the NBX 100 platform rests on 3Com high-availability hardware, as well as on a real-time operating system that is so reliable it is used in heart pacemakers. The latest digital signal processor (DSP) technology powers phones and other components in the NBX system, assuring that every device is capable of maximum performance.

By using a superior architecture, 3Com has leveraged decades of networking experience to assure a networked telephony solution that stays out of the breakdown lane.

Easy to Install, Use, and Manage

3Com understands that most phone systems seem like a mystery to everyday users and often to the staff assigned to administer them. The result is often ineffective use that limits productivity.

An incredibly intuitive administrative portal, 3Com NBX NetSet™, lets individual users and administrators fully customize the NBX 100 solution to meet their individual requirements. This password-protected, browser-based utility features pull-down menu choices tailored to each facet of the system. Organizations of all sizes will find time-saving tools that simplify creation of departmental profiles for managing telephone users. Adding or changing capabilities is fast and easy.

NBX NetSet offers control over frequently used capabilities, such as adding speed dials or creating off-site notification options for voicemail messages.

3Com voice communications technology completely eliminates the high costs and high anxiety normally associated with moving an office telephone. Anyone who has ever had to wait days for an expensive service call merely to get a telephone moved will truly appreciate the self-locating capabilities of NBX phones. Simply unplug a phone from one location and plug it into another network jack. The user's extension number, voice mail, and personal settings move with the phone. It's that simple.

> "In today's dynamic environment, our customers are looking to reduce costs and focus on their business. With 3Com's market-leading product we have found the best way to meet our customers' needs."
>
> *Linda Frank,*
> *Vice President of Emerging Markets,*
> *Cincinnati Bell,*
> *Cincinnati, Ohio, USA*

Choices for Today, Flexibility for the Future

Open Architecture

It starts with a foundation of IEEE 802.3 Ethernet that lets users plug NBX phones into millions of Ethernet ports around the world. The system grows by adding industry-standard switches and routers, expanding in size and capabilities as demands arise. Organizations choose the type of connectivity best for them, from wired or wireless LANs to multisite WANs.

NBX solutions use a diverse set of standards-based interfaces to assure easy integration of new applications. As business objectives change, NBX networked telephony provides application flexibility, including:

· IMAP4 enables users to view and listen to voice mail with standard e-mail clients (e.g., Microsoft Outlook, Eudora).

· TAPI for built-in computer telephony integration (CTI) lets users dial numbers and manage active calls from a computer screen.

· TAPI/WAV supports seamless connections to call center and unified messaging applications.

· H.323 is used for connecting multiple sites or third-party devices.

3Com actively supports a host of third-party developers that write software applications to enhance the capabilities of an NBX platform. 3Com NBX Solution Providers offer numerous out-of-the-box solutions as well as those for custom business requirements.

Upgradeable Software

Business needs inevitably change, so the 3Com NBX 100 system is software upgradeable, making it easily expandable and flexible. New functionality, even documentation, can be offered minutes after it becomes available and can be dispersed automatically to every system device and every user. If business needs dictate additional capabilities, they can be added simply with software licenses.

Traditional PBX products require customers to pay extra for capacity that may never be needed or for capabilities only available on the largest platforms. The NBX 100 solution is a pay-as-you-grow platform that is economical for twenty users and powerful enough for hundreds of users per site.

Better Solutions for More Than One Location

Many organizations are challenged by the need for communication between staff and resources that are spread across multiple locations. These requirements can be as basic as connecting offices across the street, or as sophisticated as linking multiple campuses across the world. 3Com offers affordable and scalable solutions to help dispersed offices communicate seamlessly.

NBX networked telephony solutions let businesses dramatically reduce intra-company long-distance phone charges, while improving customer service. By leveraging a data network that today may only move e-mail and files, users can affordably call between sites, transfer callers to another location, and send voicemail messages to one or more users located in multiple offices. These capabilities yield faster, easier, more effective communications and customer service.

VoIP and Toll By-pass Applications

· Connect offices with NBX Virtual Tie Line licenses. Provide low-cost, high-quality voice over IP (VoIP) using a WAN, VPN, or the Internet.

· Calls can "hop on" the company WAN and "hop off" at the location that offers the least expensive long-distance option.

· Additional multisite connectivity options include traditional Analog, T1/PRI/QSIG, or NBX ConneXtions H.323 Gateway software.

Multisite Voice Mail Exchange

· Businesses with multiple sites and multiple voice messaging systems can compose and distribute voice mails to co-workers at other sites.
· The NBX telephony system can also communicate directly with other third-party VPIM-compliant messaging systems

Users and customers will find the sophistication of 3Com's multisite solutions to be completely transparent. With support for uniform dialing plans, these solutions make reaching another office as simple as calling a co-worker across the aisle. Improved communications help increase employee and customer satisfaction.

Better Solutions for Remote Staff and Telecommuters

For years remote workers have enjoyed seamless access to their corporate e-mail, but access to the corporate phone system was nearly impossible. 3Com networked telephony solutions have practically made the term "remote" worker a thing of the past.

A broadband connection, router, and a 3Com NBX phone allow off-site workers to make and receive calls as if they were in the office. Customers and co-workers can reach formerly "remote" workers with ease. Telecommuters who are away from their desk can count on NBX voice mail to professionally answer calls as if they were in the main office, eliminating unreliable home answering machines.

Voice Messaging Features

A powerful voice messaging system built into the NBX 100 ensures that important communications are never missed. Listen over the phone or use a PC with either a browser or a standard IMAP4-compatible e-mail client (such as Microsoft Outlook) to listen to and manage voicemail messages. Voice mails are saved as .WAV file attachments in the e-mail client and can be detached, shared, and stored indefinitely. Messages can be saved to record transactions or important information—the perfect solution for law offices and financial or customer service organizations.
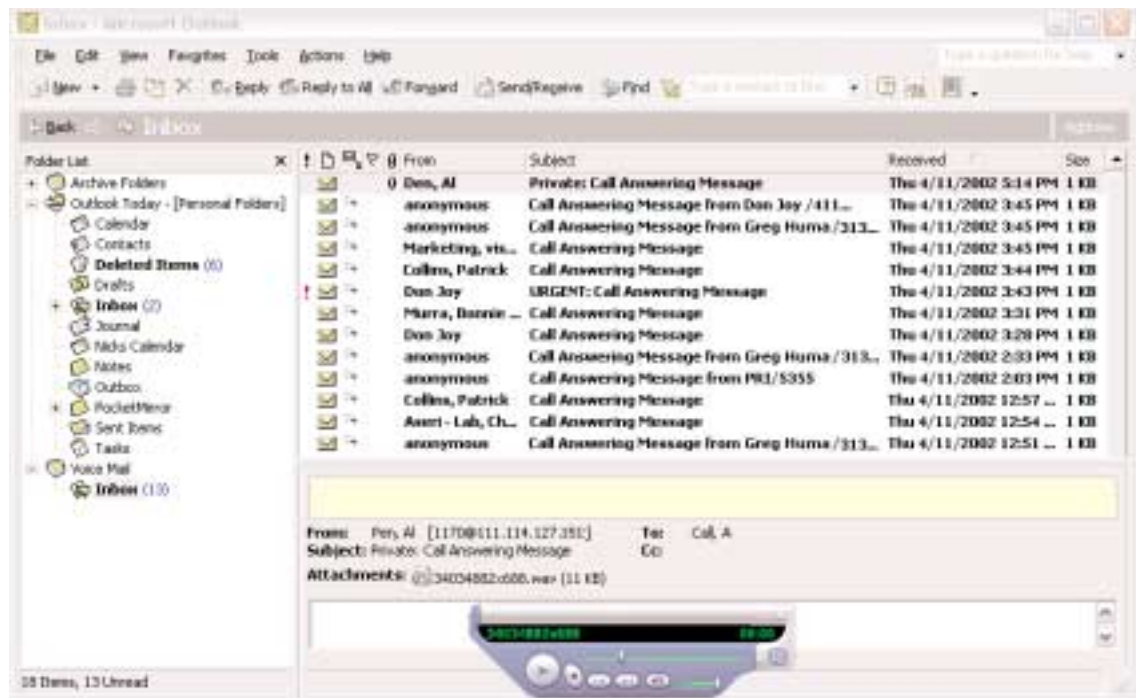
Voice mail can be viewed and managed from PC monitors with standard IMAP4-compatible clients.

Dozens of built-in voice messaging options include:

· **System capacity**
Base system supports four automated attendant (AA) ports and 30 minutes of voicemail (VM) storage, scalable up to 12 ports and 80 hours.

· **Automated attendant services**
Multiple, multilevel AA provides callers with information and messaging directions when phones are unattended, allowing them to dial by name, number, or department; supports up to 20 menu layers and as many as 150 phantom and 200 station voice mailboxes.

· **Off-site notification**
Notifies users of new or urgent messages via pager, phone, cell phone, or SMTP e-mail client; provides cascading notification for up to five external numbers.

Desktop Phones and Software

3Com understands that every organization may have unique requirements. That's why the family of NBX phones provides powerful access to a full range of networked telephony services and built-in computer telephony integration (CTI) capabilities.[1] All phones have LCD displays that access the company directory as well as personal call logs for dialed, received, and missed calls. Software links and licenses extend system capabilities to include third-party applications.

3Com NBX Business Phones
3Com phones operate dynamically as Layer 2 (Ethernet) or Layer 3 (IP) devices that users can self-locate—plug into any LAN port without losing custom-programmed features and calling privileges. They include a variety of models, from full-featured 10/100 Ethernet units with extensive customizable features and wireless infrared ports to exceptionally affordable basic phones.

3Com NBX Attendant Console
The NBX 1105 Attendant Console can monitor staff availability and manage calls easily for an entire organization from a central location.

Shown above from left to right: NBX Business Phone, Attendant Console, and Basic Phone

[1]More detailed information on the full range of NBX desktop phones and software can be found in the 3Com NBX Worktops brochure available for download at www.3com.com.

NBX pcXset PC Client Software

An ideal connectivity solution for travelers and telecommuters, this software places the equivalent of an NBX business phone, a "softphone", onto the screen of a Windows laptop or PC. Users can place and receive calls using a keyboard, mouse, and USB headset. They will enjoy the full benefits of NBX functionality, even voice messaging and CTI.

Controlling the Cost of Phone Services

Controlling unauthorized long-distance telephone calls is easy with the comprehensive dial plan of the NBX 100 Communications System. It can automatically allow, disallow, and route calls based on parameters such as time of day, day of week, user class of service, exchange number, and area and country codes. Outbound calls are automatically routed in the most cost-effective way.
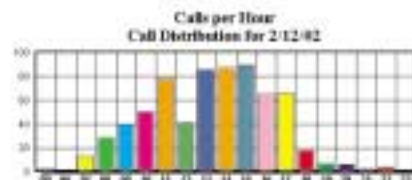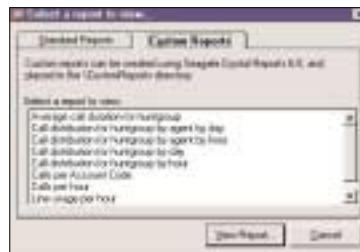
With NBX Call Detail Reporting, organizations can track and control costs and productivity.

NBX Call Detail Reporting

NBX systems include a complete call detail reporting (CDR) package to further monitor and control business operations. Organizations can track phone usage by internal account numbers, to accurately charge clients for phone consultations.

" Conservatively, we expect the system to pay for itself in a year, possibly less."

Joe Polard,
Vice President and Assistant General Manager,
Accounts Recovery Corporation,
Victoria, British Columbia, Canada

Immediate Access to a World of Information

3Com NBX Unified Communications (NBX UC), fully supported by the NBX 100 solution, eliminates the issues faced by executives, sales personnel, and mobile workers who need more timely access to information. Using a wide choice of portable devices such as wireless phones, pagers, Blackberry devices, or wireless PDAs, NBX UC sends, receives, or manages voice mail, e-mail, and faxes. The application can even read and reply to e-mail messages over the phone. Automatic syncronization assures efficient information sharing among devices. Because NBX UC is VPIM-compliant, it also can move messages seamlessly to any number of additional NBX sites.

The power and simplicity of this NBX communications tool improves the responsiveness of staff to both internal and external customers—yielding a rapid return on investment.

Responding to Unique Business Requirements

The built-in functionality of a 3Com NBX solution is impressive, yet there are always organizations that need even more capabilities. 3Com offers solutions for further customization, created both from within 3Com and by some of the best third-party application developers in the world.

If an organization requires world-class conference room phones, powerful call centers, the ability to record and monitor calls, or even voice-activated dialing services, 3Com NBX Solution Providers can meet its needs. 3Com's support for standard Application Protocol Interfaces (APIs) makes the NBX platform compelling to developers, ensuring that users can easily reap the benefits of innovations from an array of third parties. Solutions are rigorously tested to assure complete integration and superior performance.

3Com NBX 100 Communications System, Business Phone, and Attendant Console.

Robust Hardware

3Com NBX 100 Communications Systems deliver the following performance levels to support business activities:

· **System Capacity**
Scalable to support up to 200 devices per location (including up to 100 PSTN lines)

· **Telephone Network Connectivity**
Loop start analog lines with caller ID capability; T1, T1/PRI, E1/PRI, and QSIG; ISDN BRI-ST

· **Traditional Telephones**
Analog Terminal Cards for multiple traditional (2500) phones or G3 fax machines; Analog Terminal Adapter for a single phone or fax machine

Need More Information?

The 3Com NBX 100 Communications System is available from NBX Voice Authorized Partners in over 61 countries with voicemail prompts and end-user documentation in 11 languages.

For product information, including downloadable data sheets, visit www.3com.com.