



*White Paper*

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## **Business Advantages of IP Telephony**

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# Business Advantages of IP Telephony

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## What is IP Telephony?

IP Telephony principally satisfies a simple need: Enabling the use of open standard LAN and distributed data networks for the transport of voice, replacing the use of traditional (and proprietary) telephone networks and equipment for that purpose. With IP Telephony, voice conversations are converted into packets of data and then transmitted over data networks much in the same manner as e-mails or instant messages. Using standard Internet Protocol (IP) data networks and methods to transport all forms of information media - voice, data and video is more efficient and opens the door for the creation of new value-added cross-media features and applications.

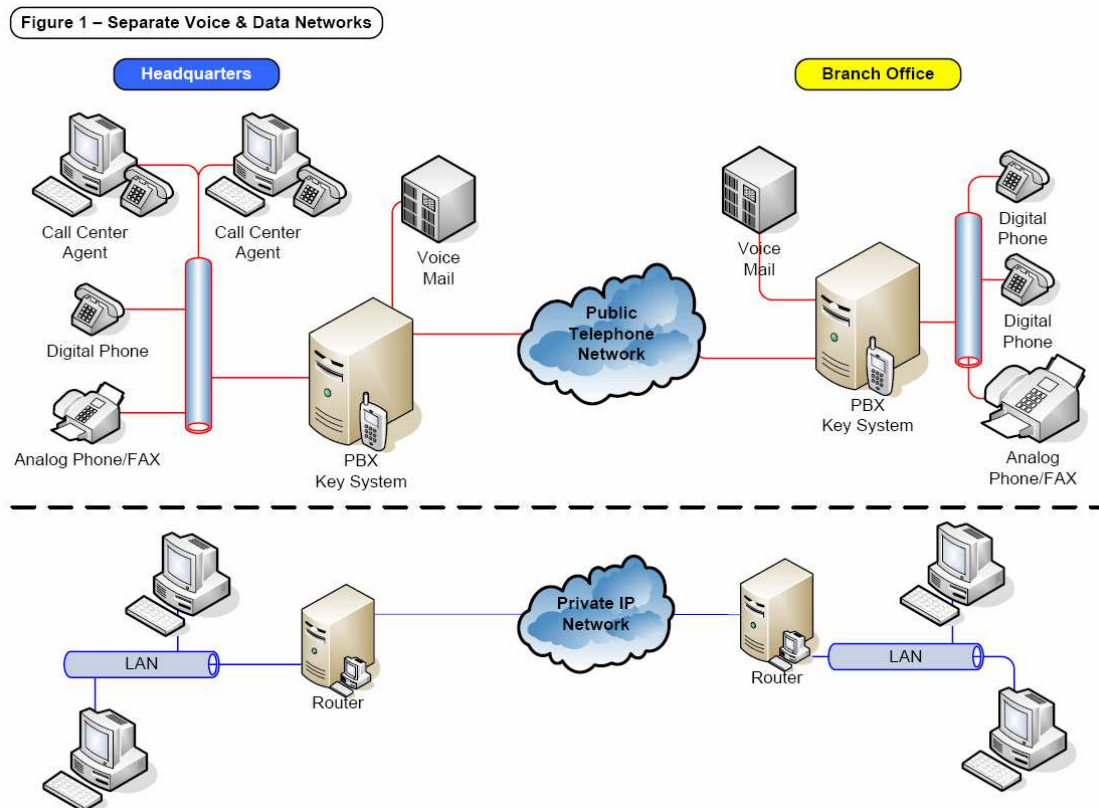
The hyping of IP Telephony first began with the technology boom of the late 1990's. Its promise, however, took time to realize as technological hurdles, namely voice quality, network reliability and feature availability, took time to resolve. With these hurdles now overcome, IP Telephony has come of age and has proven capable of delivering cost savings and productivity increases for businesses of all sizes. In fact, the adoption of IP Telephony is gaining momentum, with primary business drivers being:

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- Lower voice networking costs
  - Lower equipment administration costs
  - Centralized network control and management
  - Increased communications capabilities and productivity for remote and mobile employees
  - Increased customer satisfaction through the use of distributed call center applications
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This paper will explore these and other business drivers along with the solutions being created by eOn Communications that can help businesses realize the advantages that are created with the use of IP Telephony.

## Separate Voice and Data Networks and Devices

Many organizations still maintain a network architecture that was designed with the use of separate voice and data networks. Up until just a few years ago, this was considered best practices, as the delivery of voice applications largely was constrained by traditional communications equipment and network offerings: PBXs, and key systems and telecommunications carrier services.



The above diagram reflects a typical separated network topology deployed to provide data and voice connectivity between headquarters or regional business offices and remote branches and employees. Data connection needs were enabled by point-to-point circuits, frame relay and in more recent years by Internet connections. Private voice tie-lines were used to interconnect stand-alone PBXs and key systems. This design, although state of the art for many years resulted in a number of inefficiencies:

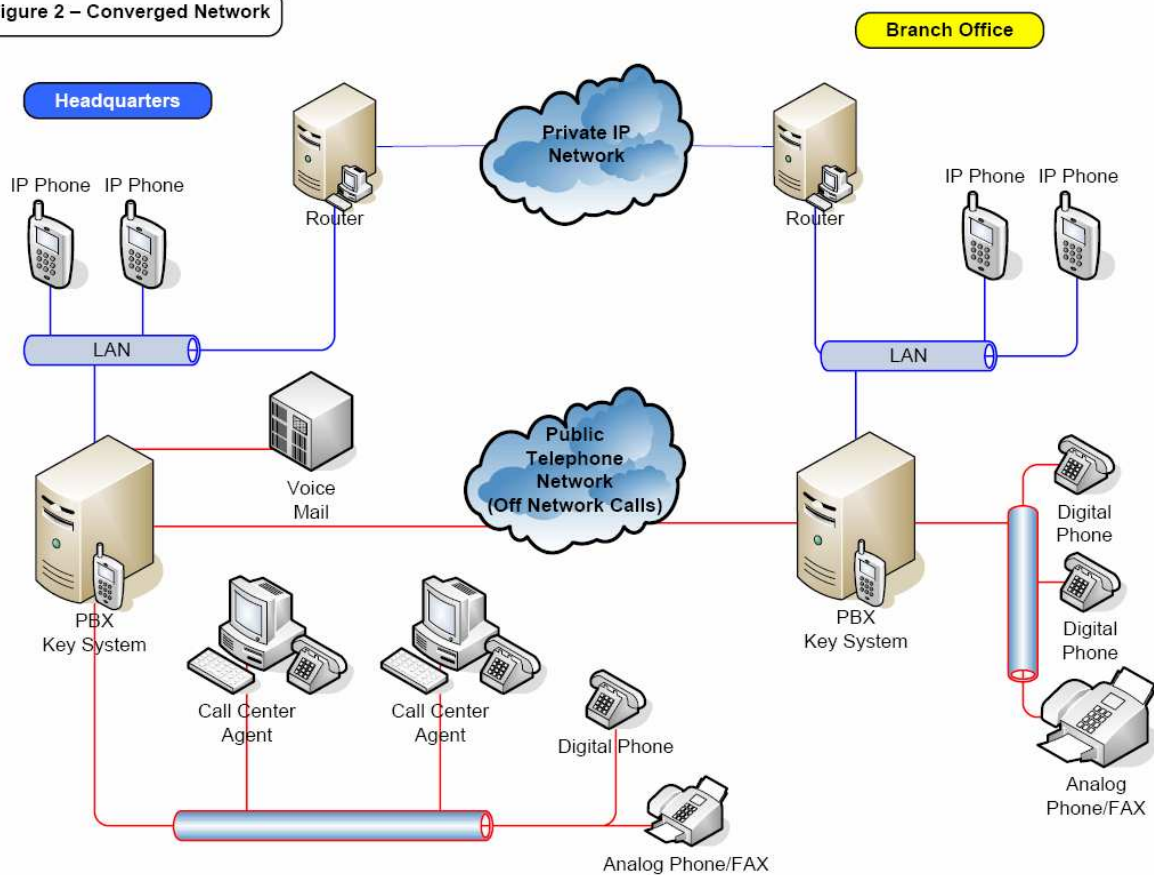
- Inefficient use of communications network bandwidth
- Higher equipment costs as each site requires dedicated voice systems
- Higher equipment management costs since each site must be managed separately

- Worker productivity and collaboration is limited due to feature dissimilarity and segregation imposed by separate and often different voice systems

## Converged Networks, Devices and Applications with IP Telephony

The wide adoption of IP networks and the emergence of IP Telephony have led to the convergence of what were once disparate applications (data, voice and video) onto a single network. This has eliminated many of the inefficiencies of legacy networking models.

Figure 2 – Converged Network



## Features and Benefits of IP Telephony

Cost savings continues to be the most important driver in adopting IP Telephony in enterprises of all sizes, and achieving it is necessary to justify the new technology. But IP Telephony is about much more than just replacing legacy telecommunications equipment and services, it can enable a multitude

of features and applications that generate significant productivity gains. Here is a closer look at the business advantages that can be realized with IP Telephony.

## Lower Telecom Costs

Initial IP Telephony migrations were easily justified by the cost savings generated by avoiding expensive long distance phone services that linked geographically dispersed business locations. In response, traditional telecommunications carriers over time have continued to lower prices of such services, reducing this specific cost advantage of network convergence. This does not impact, however, the cost advantage produced by better utilization of available network bandwidth enabled by convergence. Since dedicated bandwidth is no longer needed for voice conversations, businesses can transmit more voice, data and video per unit of available bandwidth with IP Telephony. The combination of lower transport costs and less bandwidth requirements can produce telecom cost savings from 20 - 40%.

## Simplified Communications Management

The day-to-day provisioning, operations and management expenses for traditional PBX systems can add up quickly. The simple need of activating a phone or moving an extension can cost anywhere from \$100 to \$250 per event when involving service technicians from the PBX manufacturer. With IP Telephony this is no longer an issue. Common adds, moves and changes, can be administered with simple web based tools. In addition, since each IP Telephone contains a unique identifier, all a user needs to do to relocate a phone is to simply unplug it from the data network, place it at its new location (within the original office or any facility with access to the corporate data network) and plug it back in. Service to the user is instantly restored with all features and profiles previously assigned in tact - with no involvement required from the system administrator.

## Access to Centralized Applications

For distributed enterprises IP Telephony can provide remote and mobile access to advanced communications applications, including call management, messaging and call center. These and other applications can now be transparently distributed over IP networks, eliminating the need for stand-alone PBX's or key systems for small remote office locations, and can extend significant benefits to remote and mobile teleworkers:

- Uniformed dial plans that provide enterprise-wide extension dialing and consolidated user directory
- Enterprise-wide in-house voice conferencing
- Uniformed access to voice mail and unified messaging
- Enhanced communications with upgraded call feature set extended to remote and mobile workers
- Call center interactions can be centrally managed and observed yet be extended to agents located at branch offices or working at home
- Traveling employees can access their messages, participate in conference calls and collaborate with team members as if they never left the office
- Centralized administration enables the management of multiple sites as a single system

## Future Applications

IP Telephony has emerged as the dominant architecture for future voice communications. As the line between voice and data applications continues to blur, new innovative features and services will continue to emerge that will drive measurable business value. While initial IP Telephony systems were deployed based upon cost savings, the major benefits of the technology going forward will be realized with the tight integration of voice within enterprise data applications. Consider the following example:

Today when an employee schedules a meeting using popular calendaring software, the meeting manager can opt to include remote participants. They can also select the type of communications media - voice, video or web that is required. At the time of the meeting, each participant, local, remote and mobile, is contacted and all required media connections are automatically established. In person participants can experience the meeting as usual, remote office employees are automatically placed into the pre-specified audio and web conferencing bridges as needed and if a participant is traveling, audio and web conferencing access is established via wireless IP connected laptops running soft phone clients. With IP Telephony the communications media can be flexibly invoked to meet the

individual needs of the participants at the time the meeting occurs, instead of everyone having to conform to the limitations of the available media.

Features such as the one described above that share directories, contact media preferences and dynamic user presence status over time will become commonplace. IP Telephony will foster the creation of advanced yet simple applications that will drive user productivity and decrease the viscosity of information delivery between members of the enterprise and with the enterprise and its customers.

## **eOn Communications: Delivering the Business Values of IP Telephony**

Although IP Telephony can reduce complexity and cost by converging data and voice onto a single network, making the transition from traditional voice communications equipment cannot be taken for granted. To maintain the high level of reliability and quality that voice applications require with no compromise in features or flexibility requires the experience of a proven communications solutions provider. eOn Communications for over 25 years has built extensive experience in the design, development and delivery of mission critical enterprise communications systems. It provides a full range of products, services and support offerings necessary to ensure successful adoption and use of IP Telephony.

### **eOn Enterprise IP Telephony Solution**

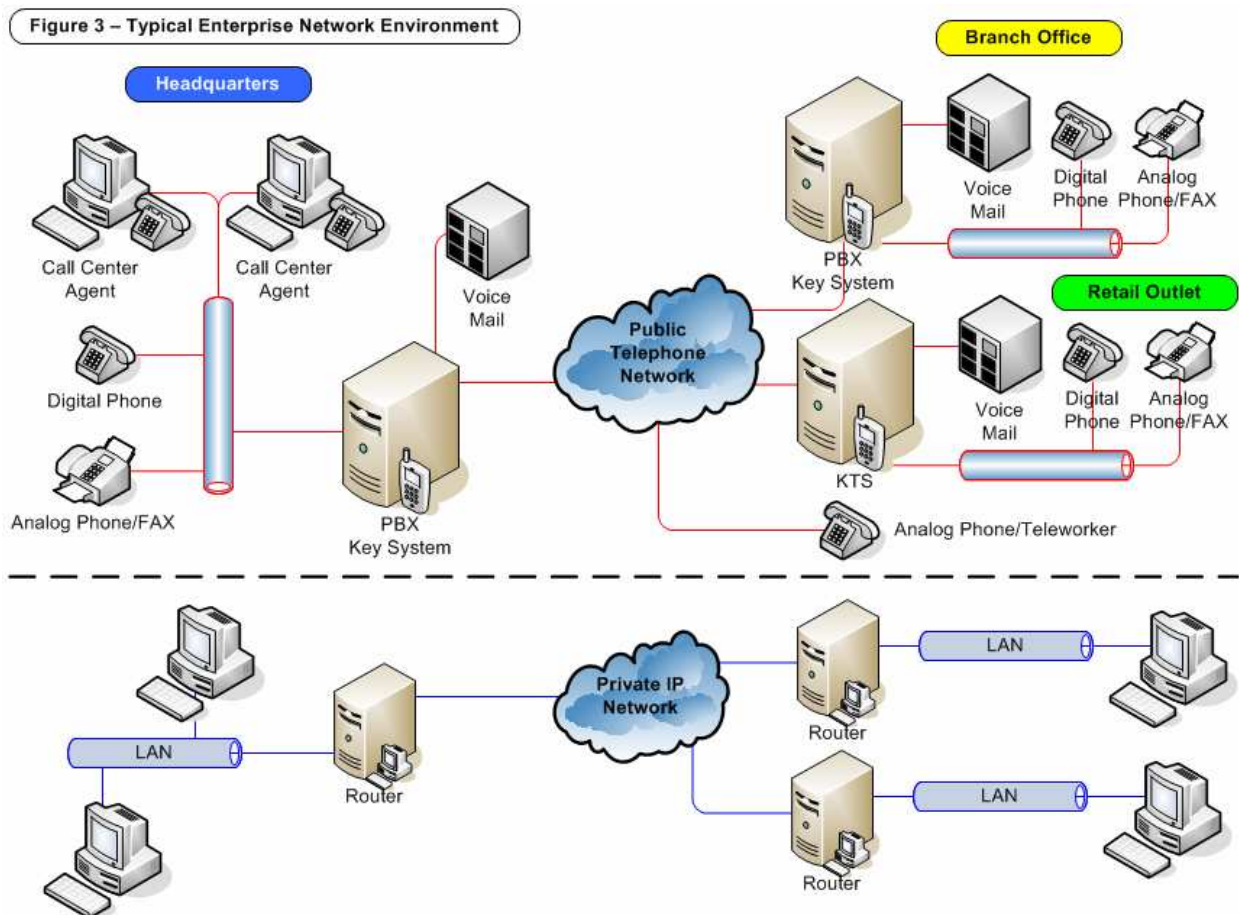
eOn's **Millennium Converged Communications Platform** is an IP-Telephony solution that addresses the needs of mid-to-large size enterprises. It is designed to deliver the advantages of IP by its ability to provide the seamless unification of voice and data onto a single network. The following advantages are delivered:

- Only one network to maintain
- One type of infrastructure cabling is needed (no more twisted pair)
- Consolidates traffic onto existing data circuits, avoiding long distance rates and maximizing bandwidth utilization

- Provides a common management system for all points of a distributed enterprise
- Provides common feature set for all enterprise members
- Provides remote and mobile employees with access to centralized applications such as voice mail, in-house conferencing, call center and directory services

Consider the following distributed office location environment:

The figure below illustrates a typical enterprise network environment that has evolved over time. This case depicts a vehicle rental business that has acquired smaller competitors as well as expanded locations by opening up new branch locations:

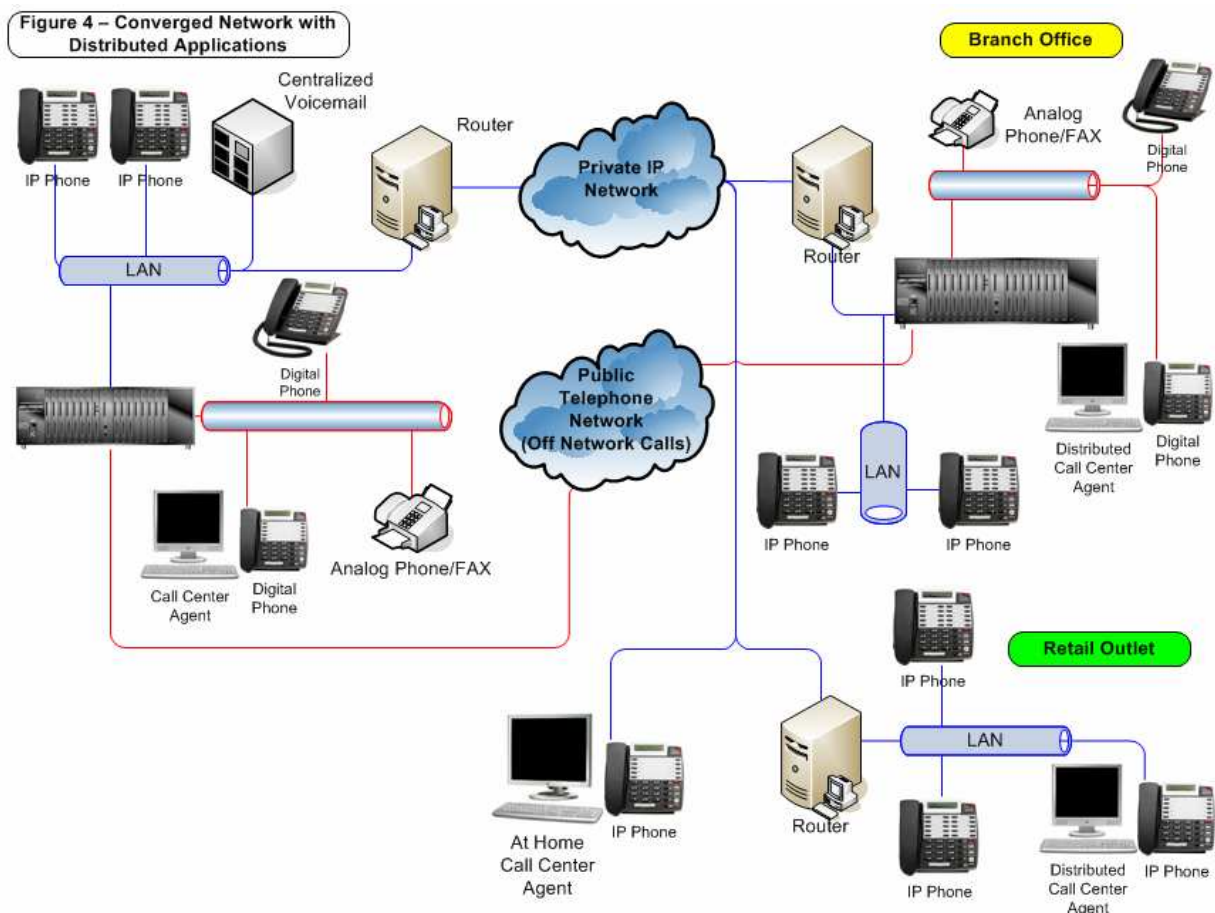


Some of the challenges associated with such an environment include:

- Different communications products (key systems, PBX and centrix services) are used throughout the network

- Intra-office communications are subjected to telco long distance charges
- Separate networks are used for voice and data communications, wasting bandwidth and increasing transport costs
- Little commonality between messaging, telephony and phone features across locations impeding user productivity, collaboration between locations and timeliness of information delivery
- Management of disparate systems increases IT staff involvement and travel expenses

An IP Telephony solution from eOn Communications can eliminate these inefficiencies and deliver substantial business advantage:



Benefits realized include:

- Disparate communications systems are consolidated into one easy to manage platform, reducing operating expenses

- A number of communications systems and devices can be completely eliminated, reducing cost and management complexity
- Common feature set and user operation, increases productivity and teamwork while minimizing training costs
- With IP connectivity, productivity enhancing applications such as voice mail and unified messaging can be centrally deployed anywhere in the network and at the same time be made accessible from anywhere there is an IP connection, reducing equipment expense and at the same time increasing the productivity and collaboration of remote and mobile employees
- Easily accessible enterprise-wide user directories keep distributed teams in close contact
- Any employee, local, remote or mobile, can be made a member of a call center group, making the entire enterprise eligible to receive and respond to customer calls, increasing both customer as well as employee satisfaction
- All enterprise members have access to in-house audio conferencing facilities, increasing employee collaboration and cost savings as compared with outsourced services
- Mobile employees can be as effective on the road as they are in the office since they have access to the same advanced feature set regardless of location

## eOn Communications IP Telephony Solutions

In today's Internet driven world, organizations are constantly seeking better ways to help them effectively compete and succeed. The right choice of communications technologies can help businesses, educators and government agencies alike in improving performance and delivering significant and measurable return on investment. Whether the need is to improve revenues, operating efficiencies, productivity or customer satisfaction, selection of the appropriate communications platform is vital to success.

eOn Communications' Millennium Converged Communications Platform is a reliable and scalable system, offering advanced telephony and communications applications over traditional networks, IP networks or a combination of both. Benefiting from over 20 years of continuous product development and experience from more than 10,000 enterprise system deployments, the Millennium is equipped with the features needed to boost productivity and streamline communications. Because the Millennium is a converged system, offering Voice over IP (VoIP), digital and analog options,

organizations have the ability to choose the most appropriate solutions today and to migrate to others as needs dictate.

## **Key Features:**

**Broad Portfolio of Telephony Features** - hundreds of time proven features allow users to process calls with great efficiency and flexibility.

**Multimedia Messaging** - allows users to flexible use any combination of voice, fax and email from a single mailbox.

**Call Center Applications** - sophisticated conditional routing features allow the efficient distribution of calls to the most appropriate resource.

**Desktop Solutions** - a selection of traditional and VoIP telephones meet the diverse needs of users throughout the enterprise.

**Feature Rich Networking Options** - extend centralized applications such as Messaging and Call Center to remote offices and teleworkers alike over traditional or IP networks.

**Simplified Management** - allows easy installation and quick administration of system features and components from any network access point across the organization.

**Easy Expansion** - cost effectively add system resources and features and expansion needs and business conditions dictate.

**Smooth Migration** - cost effectively blend traditional and IP communications and confidently migrate to network convergence with no compromise in features and with original investments protected.

## **Conclusion**

The business case for migration to IP Telephony and converged networks is getting stronger. Initial concerns about the reliability, voice quality and security have abated as underlying enabling technologies have matured. More and more organizations are benefiting from the initial networking cost benefits and are gaining competitive advantage through improved productivity and organization collaboration. Now is the time to examine how eOn Communications can help impact your bottom line with advanced IP Telephony solutions. For more information call 800.955.5321 or visit [www.eoncommunications.com](http://www.eoncommunications.com).