

*White Paper*

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# **The IP-Enabled Call Center**

*Improving Customer Interaction in the Multi-Media Contact Center*

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### Executive Summary

Customer Call Centers throughout the world are witnessing an unprecedented rate of change in the technologies they employ. Despite the rapid pace of technological change, companies must continuously evaluate emerging technologies and services that could increase agent productivity and improve customer loyalty and retention, while maintaining the operational efficiencies Call Centers have come to expect.

IP is playing a significant role in how Call Centers serve their customers today. Over the last few years as convergence of voice and data have become a reality, traditional Call Centers have begun to evolve into IP-enabled Contact Centers. Where Call Centers have been very voice-centric in the past, Contact Centers are able to manage other forms of media such as e-mail, Web chat, Web-based interaction, fax, and Internet Telephony. By their inherent nature, Call Centers that deploy these types of services are IP-enabled Multi-Media Contact Centers.

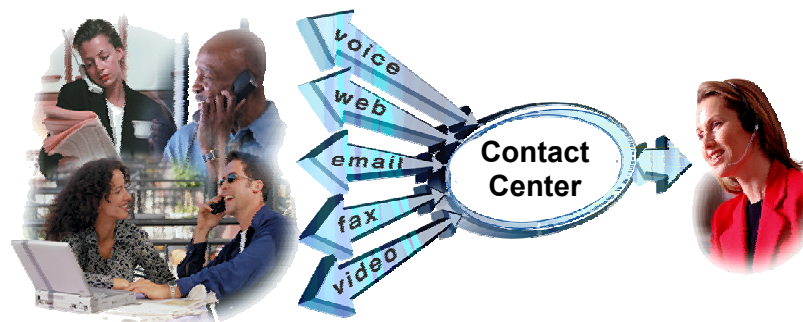
This paper will explore how the deployment of IP services, and the convergence of voice and data in the Call Center environment, can improve the quality of customer interactions while helping Call Centers meet their operational objectives.

## Introduction

Now more than ever, customers have more ways of contacting and interacting with a supplier or vendor and insist on conducting business anytime, from anywhere. Because of this newfound freedom, customer satisfaction and loyalty are largely determined by the customer's ability to access and receive the level of service that they demand. This demand for a consistent and personalized experience across all forms of interactions - voice, e-mail, and Web - puts customers in the driver's seat and at the forefront of a new era in Call Centers, The Customer Era.

Corporations are striving to differentiate themselves from the competition, and successful organizations are always evolving to better serve their customers. Improving Call Center operations is a daunting challenge as companies wrestle with disparate technologies, information integration and increasing labor costs which, if not managed successfully, can lead to operational inefficiencies, higher costs and customer dissatisfaction. For most corporations, the first and main contact point with the customer is the Call Center.

Call Centers have utilized traditional voice networks and circuit switching architecture, such as Automatic Call Distributors (ACD) to distribute calls to the appropriate Customer Service Representative (CSR) based on business rules established by the enterprise. Circuit-switched technology is known for its "five-nines" reliability (or 99.999% uptime), which is why it has remained primarily unchanged for more than a century. In a Call Center, the importance of a reliable voice connection can't be overstated. The ACD that is responsible for distributing the calls that come into a Call Center performs a key function in ensuring a positive experience for customers. Making sure calls reach the right CSR in a timely manner is imperative to basic customer service. If it fails, abandonment rates will increase, customers will have negative experiences, and agents will sit idle waiting for calls. The core routing, managing and reporting capabilities that have existed in the ACD must apply to all forms of media and interactions in the customer era.



## Internet Technology

History is filled with examples of major technological innovations that sparked commercial revolutions, such as the invention of the automobile, radio, telephone, television, airplane, microprocessor and computer. Yet, as impressive as these technological achievements are, none can match the impact of the Internet and the World Wide Web. According to a Morgan Stanley research report on Internet Retailing, it took 38 years for radio audiences and 13 years for television audiences to reach 50 million users. Yet, it took just 5 years for more than 50 million people to become Web users - reading, chatting, playing, searching, buying, selling, and "surfing" the Web. Never before has a technology been embraced so quickly by so many people.

Websites, browsers and search engines make the information on the Internet very accessible to the everyday PC user who has instant point-and-click access to a whole new virtual world. The ability to access all types of information at a single point gives communications power to the user. Information gathering is easy. Shopping is easy. Price comparisons are easy. Transactions are easy. In effect, browsers have put a human front-end on a complex technology. Access to this virtual world will drive requirements for even greater customer service levels.

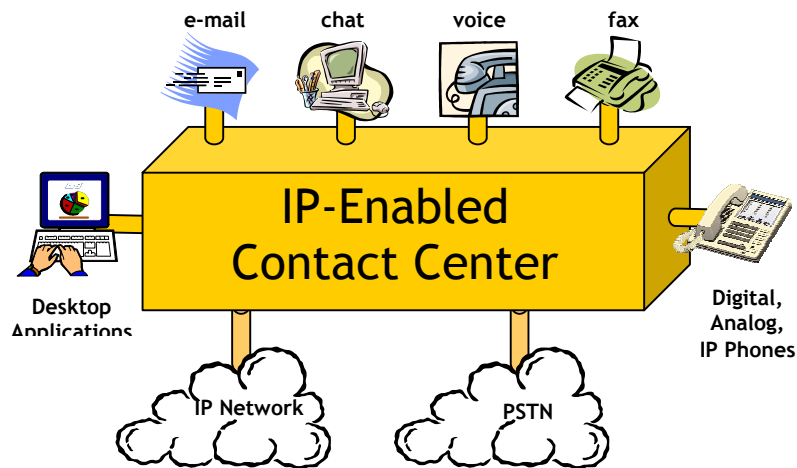
## The IP-Enabled Contact Center

The Internet has created an exciting new way to conduct business. To make it truly effective, web-based transactions must also be conducive to real-time, live interaction. Inevitably, there are times when customers and suppliers need to communicate real-time - to ask a question, resolve a problem, or inquire about alternatives. The traditional Call Center's voice-only capability has expanded to include alternative communication channels such as e-mail management and real-time Web Agents. Today, Call Center organizations are evolving into integrated Multi-media Contact Centers, utilizing solutions that allow them to seamlessly interact with customers regardless of the media.

IP technology has generated advanced communications solutions and applications to better manage customer interactions, including:

- Voice over data networks (VoIP)
- Deployment of IP devices (IP phones, PDA's, Computers)
- Multi-Media Applications (E-mail Management, text Chat, Web Collaboration, Unified Messaging)

These IP-based solutions represent practical applications focusing on typical Contact Center environments where convergence of voice and data benefits can be realized, such as the routing, managing and reporting of multi-media interactions over IP networks, multi-site networking and support for remote agents.



## Advantages Of The IP-Enabled Call Center

A Call Center can realize significant benefits when deploying IP capabilities.

### Voice Over Internet Protocol (VoIP)

One benefit can be routing your voice traffic over an IP network. A VoIP gateway converts Public Switched Telephone Network (PSTN) calls to IP packets, allowing them to be carried, along with e-mail and Web chat contacts, on a data network. The VoIP gateway capability can be used to significantly reduce networking costs in point-to-point applications. Because data networks are free from the distance restrictions of switch-based networks, Contact Center agents and managers can be located anywhere and work together as if they were in the same room, thus creating a virtual Contact Center. Since there are no distance-related tariffs for Internet communications, long-distance charges are either non-existent or reduced, depending on how the toll bypass solution is implemented.

Enterprises that have multiple locations can route calls over private or public data networks rather than having separate dedicated voice lines between the sites. Remote CSR's can also benefit from voice transmitted over data connections, by eliminating the need for a dedicated voice line and data connection back to the enterprise. By utilizing IP technology, corporations can create a virtual Contact Center by enabling remote agents or networking multiple sites together, resulting in significant cost-saving opportunities and more efficient use of staffing resources.

VoIP can also allow visitors to a company's Web site to place a telephone call through their own browser and multi-media PC, and actually speak to a live agent on a telephone while still connected to the Web. Consumers don't need to terminate their Internet connection, nor do they need a second telephone line. The telephone call is completed through their own PC to the company site using Internet Telephony. Consumers can have real-time, on-line conversations with service representatives to clarify any outstanding issues, and then continue with their web travels.

### **Multi-Media Applications**

The IP-enabled Call Center is an open environment that makes it easier for new channels of communication to be implemented. Convergence of voice and data is the foundation for allowing agents access to multiple forms of media and networking devices, including: Web-based transactions, IP telephones, Personal Digital Assistants (PDAs), e-mails, faxes, voice-mail and unified messaging applications. An IP-enabled solution can provide the ability to route interactions regardless of media type through a single routing engine to the most appropriate CSR. This allows customers requiring assistance to place a phone call, send an e-mail request, place an Internet call through their multi-media PC, or request a Web chat session through their own browser to conduct real-time or on-line conversations with service representatives as they choose. The IP-enabled Call Center allows them to do this anytime, anyplace and via any media.

### **Increase Agent Productivity**

Multi-media contact blending is one way to significantly improve agent productivity. In traditional Call Centers, individual agents can only handle one contact type, such as voice calls. Therefore, different pools of agents must be created to manage different forms of media and to cover peak demand times with each unique agent pool staffed to maximum capacity. In the IP-enabled Call Center, however, agents can effectively handle all types of contacts, coverage is more flexible, fewer agents can handle the same demand, and agent idle time is minimized. Productivity is also increased through the use of features such as remote agent support, skills-based routing, unified reporting, quality monitoring and dynamic supervisory control across all media.

## **Improved Customer Service**

Outstanding customer service is the primary goal of most companies. Attaining this goal is often the direct result of how effectively voice calls, e-mails and web-based communications are routed and managed within the Contact Center. By utilizing IP services, Contact Centers can match the best possible resource to meet every customer need consistently across all media types, thus providing a more "service friendly" and personal environment to conduct business. Increasing interaction and allowing for real-time contact from your customers right at the moment of heightened interest, will translate into enhanced customer satisfaction and revenue generating opportunities.

## **Challenges Of The IP-Enabled Call Center**

There are often risks associated with the business advantages that come with new technology. This is certainly the case with IP-enabling a Call Center.

### **Reliability Considerations**

The phrase "the network is down" is commonly associated with data networks, but it is almost never associated with voice networks. While IP allows Contact Centers to interact with customers via e-mail and the Web, customers still look to the phone as their preferred communications channel, meaning traditional circuit switching still plays a vital role in the success of Contact Centers. New communication channels are transforming the way Contact Centers interact with customers, but the vast majority of customer contacts still take place over the phone. According to Datamonitor, 72 percent of all customer contacts in 2003 will still come through voice over the traditional PSTN. Companies have a security blanket in the form of their proven voice networks. The reliability of IP telephony will have to be improved before companies are willing to move all of their voice traffic onto a data network.

### **Data over the Internet**

Pure Internet Interactions such as e-mail, Web chat, and calls that are truly routed over the open Internet are also subject to the Internet's inherent problems. These include service-hampering degradations in voice quality, end-to-end delays and lack of security. Accordingly, most providers of Internet Telephony services don't rely solely on the Internet, but on private networks and dedicated circuits. These private networks typically require the installation of IP-specific equipment such as hubs and routers. While this reduces variance of quality, it also has an associated cost and administration requirement.

## Interoperability & Standards

It can be said that if there are multiple standards then there really is no standard at all. This is certainly the case with the protocols that currently exist for controlling voice over IP. The lack of a single standard when it comes to deploying IP telephony will certainly impact interoperability initiatives. Without the cooperation of vendors to agree upon a universal standard, the adoption of IP-based telephony solutions could be affected.

### Voice over IP Standards

**H.323** is an umbrella standard that provides well-defined implementation guidelines that cover the entire call set-up, call control, and the media used in the interaction. H.323 describes how peer-to-peer voice and video traffic is managed over IP networks. The ITU (International Telecommunication Union) established H.323 as the first communications protocol for real-time multimedia communication over IP.

**Session Initiation Protocol (SIP)** is the Internet Engineering Task Force (IETF) approach to voice and video over IP. SIP is a text-based protocol that was designed to work hand in hand with other core Internet protocols such as HTTP. Many functions in a SIP-based network rely on complementary protocols, including IP. SIP entities include user agents that may operate as a client or server, depending on how the call is initiated or routed. SIP is less defined and more open than ITU standards such as H.323

**Media Gateway Control Protocol (MGCP)** assumes that IP devices (phones) are unintelligent instruments and the media server (for example ACD) provides the intelligence. MGCP works very well for IP telephones in a Call Center or general business environment.

**MEGACO or H.248** is the official international standard for decomposed gateway architectures. The ITU and IETF worked jointly to define this standard (derived from MGCP and adds support for video streaming). MEGACO governs communication between a media gateway controller and a media gateway.

## Adopt IP Services As Business Needs Dictate

Companies don't have to sacrifice their existing network architecture to become a "pure IP" Contact Center. IP should be viewed as a transport mechanism, not a business strategy. Investment in IP-based services for the Contact Centers should only occur when and where it is appropriate from a business standpoint. Call Centers can - and should - make a gradual migration to IP-enabled solutions as business needs dictate.

Different approaches to implementing IP in Call Centers enable vastly different capabilities and have significantly different impacts on budgets and existing infrastructure. The solution that you deploy should meet the expectations that Call Centers expect when it comes to increasing agent productivity, improving customer loyalty and retention, and lowering total cost of ownership thus providing a measurable return on investment. Proven voice services must be preserved and complimented with IP-enabled services - not replaced.

When considering the different IP services that are available today, it is important to choose a comprehensive and flexible solution that can seamlessly blend multiple media types. The solution must also support both circuit-switched and data networks, while allowing support for communication devices such as: digital, analog and IP phones, desktop applications, and PDAs. Finally, these solutions should be reliable and proven before introducing them into your most vital customer access point - the Call Center.

## Conclusion

Call Centers have seen much change over the years and now are evolving into Multi-Media IP-enabled Contact Centers. Advances in technology have driven many of these changes. Some were hindered due to costs, lack of agreement on standards, or a true lack of business benefit to the organization. No one really knows where technology will take us. This is why it is important for Contact Center managers to embrace solutions that are flexible, can adapt quickly to change, and can embrace new technology without sacrifice. The use of IP in Multi-Media Contact Centers will continue to evolve, although it does have a role in expanding their services today. Having the right applications deployed will allow Call Centers to better serve customers, regardless of the transport mechanism or media type.

If you're interested in learning about how you can meet the needs of your Contact Center today and into the future by implementing the eQueue™ Multi-Media Contact Center Solution, visit [www.eoncommunications.com](http://www.eoncommunications.com) or call 800-955-5321.

## eOn eQueue Multi-Media Contact Center Solution

- **Unified Routing for Customer Interaction Management:** Single queue for all media types - voice, e-mail and web communications - improves customer service and loyalty, increases agent productivity, and lowers total cost of ownership.
- **Comprehensive Applications including E-mail and Web Chat:** Applications include, e-mail, Web chat and Web collaboration with comprehensive knowledge database, integrated voice response, voicemail with unified messaging, fax messaging, quality assurance recording, complete telephony capability and a complete range of desktop devices and applications.
- **Modular and Scaleable:** The eQueue provides the flexibility to add, combine and customize important features and functions to meet the individual needs of a Contact Center today and well into the future. The eQueue is compatible with most third party systems, allowing companies the ability to integrate other applications. For Contact Centers with as few as 10 agents to those with over 1000 agents, the eQueue provides the functionality required.
- **Proven and Reliable Platform:** Bridging the gap from traditional Call Centers to new web-enabled Contact Centers by applying years of experience in designing robust solutions for the demanding requirements of multi-media Contact Centers.
- **Open Solution:** A completely open architecture, based on the Linux operating platform, ensures customers have more choices with consistent and personalized service delivery, as well as consolidated tracking and reporting of all customer contacts.

