

  
**WHITE PAPER**

# Unified Communications: increasing productivity, streamlining operations

A Datamonitor white paper requested by GN Netcom

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## INTRODUCTION

Businesses are under constant pressure to reduce costs and improve efficiency in an increasingly challenging market. Over recent years the proliferation of new communication media such as voice, email, web, instant messaging, SMS and video has changed the way businesses communicate internally and with their customers. There is now a need for a solution that can unify these disparate communication channels and devices and help simplify and streamline communications across all parts of enterprise operations.

Unified communications (UC) is an evolving concept borne out of the ongoing convergence of digital telephony with desktop applications such as instant messaging (IM) and email. Datamonitor defines UC as the ability to manage all communications; whether it is voice, email, presence, IM or conferencing, through one interface. UC involves the convergence of all related applications to enable a seamless communication process regardless of location or device. UC technologies include IM, email, integrated personal directory, IP softphone, click to call, presence indicators, unified messaging, web (audio and video) conferencing and mobile extension.

Unified communications aims to allow businesses to utilize different communication media efficiently. This white paper explores the benefits that unified communications deployments can offer for enterprises and contact centers. The key findings are as follows:

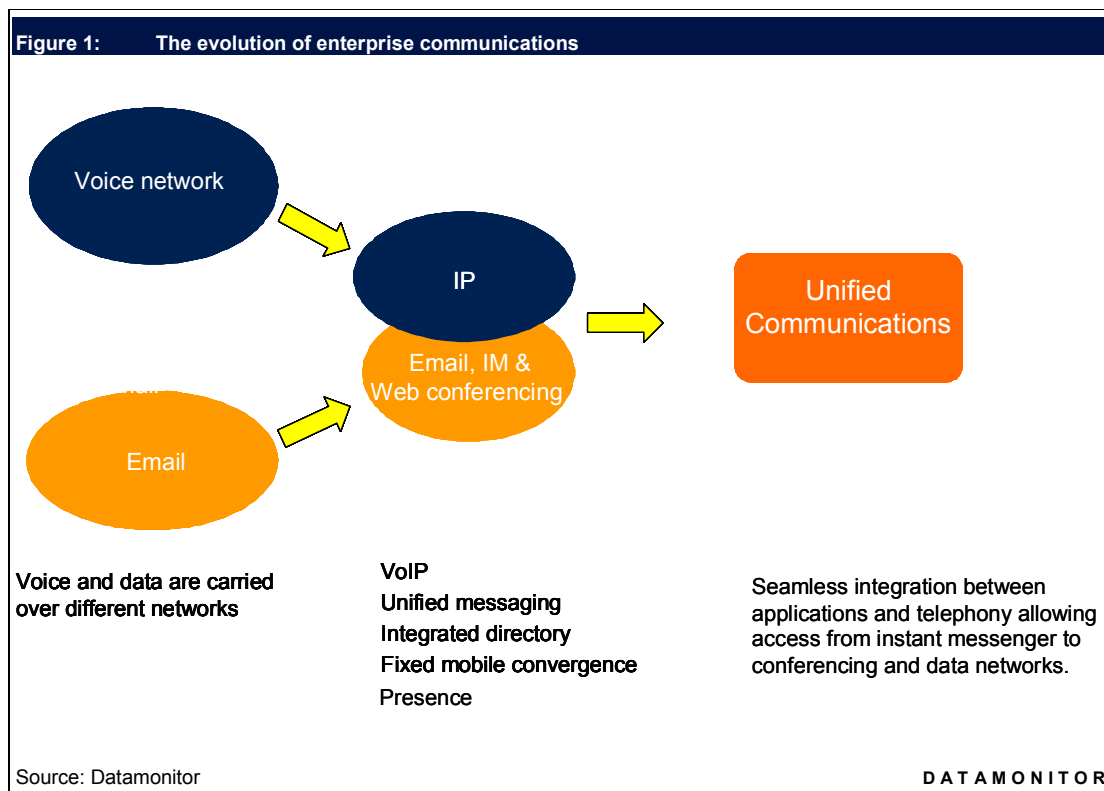
- UC is the next evolutionary chapter of communications: with deployments set to grow rapidly;
- enterprises are investing in UC to increase productivity;
- UC benefits all types of workers: deskbound, nomadic, road warriors, remote workers;
- UC is enriching the contact center experience;
- the migration path to UC varies by region.

**ANALYSIS**

***The next evolutionary step in enterprise communications***

Over the last decade there has been a transition from analog to digital communications which has increased the richness and convenience of communication. This has paved the way for UC. The convergence of voice and data whereby voice is digitalized into packets on a data network has caused a change to the underlying enterprise communications infrastructure as circuit-switched networks are replaced by IP telephony. Voice is now simply another form of traffic carried on enterprise data networks.

Following the shift to voice over internet protocol (VoIP), other advanced telephony features have emerged such as unified messaging, fixed mobile convergence, mobile extension and call rules. In terms of desktop applications a similar evolution has occurred with advanced communications solutions starting to emerge which integrate IM, email, softphones and audio conferencing. The market is currently characterized by the formation of partnerships and the integration of technologies, bringing together the advanced telephony solutions of traditional communication vendors with the integrated desktop applications of software vendors, to yield a unified communications environment.

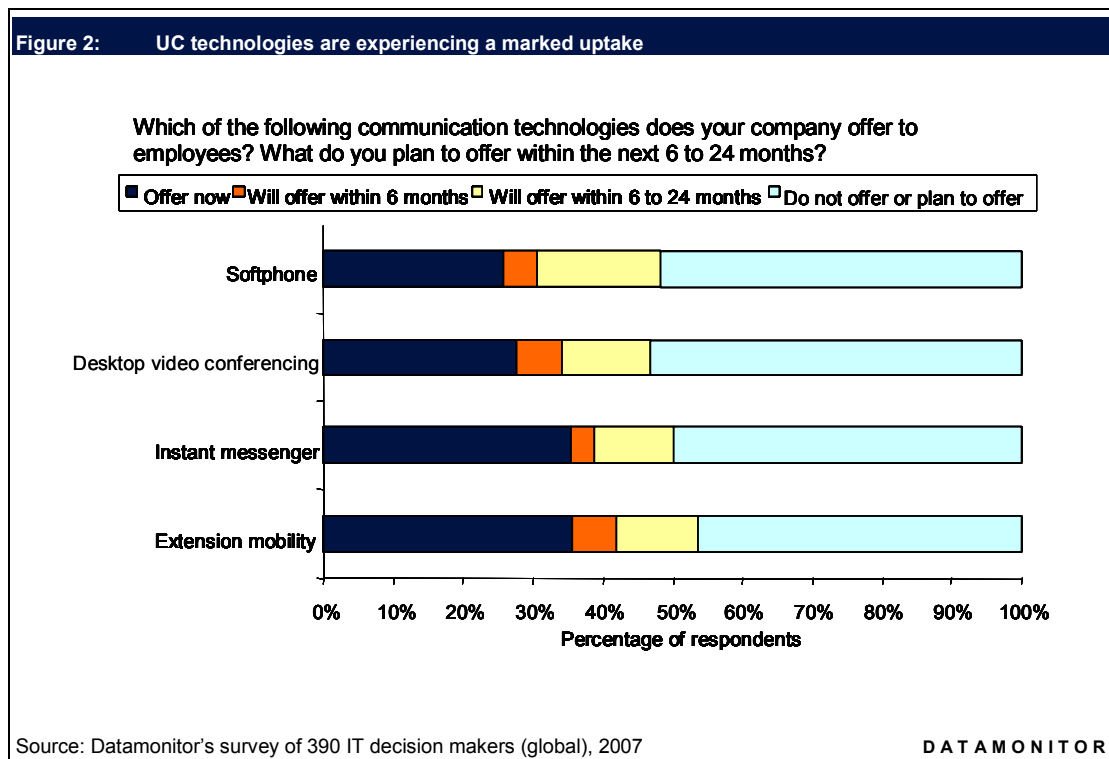


**Enterprises are investing in UC technologies to increase productivity**

The fundamental aim of unified communications is to increase productivity. Enterprises have been investing in individual communications solutions, such as instant messaging and conferencing, over the last decade to reduce human latency and to streamline their operations. As a result of globalization, enterprises have increasingly dispersed offices and employees. To avoid the diseconomies of scale associated with the breakdown of communication within a large organization, many enterprises are realizing that they have to invest in a unified communications solution in order to increase their efficiency and to manage their IT infrastructure.

**Increasing penetration of softphones is driving demand for headsets**

Figure 2 shows the increasing penetration of UC technologies and is fairly indicative of the state of the UC market. There is currently a strong growth in softphone adoption causing a marked uptake of accompanying headsets from providers such as GN Netcom. Employers are looking to equip their employees with the tools to utilize their investment effectively. Datamonitor expects that as more enterprises deploy a UC solution, demand for softphones could rise by 40% over the next five years as they become central to a UC experience. This could also result in a reduced need for desk phones as the potential cost savings from not maintaining desk phones becomes more appealing. However, Datamonitor expects that, at least in the short term, enterprises are going to maintain desk phones alongside softphones until their employees are fully comfortable with the new interface.



**Instant messaging combined with presence is a key component of a UC solution**

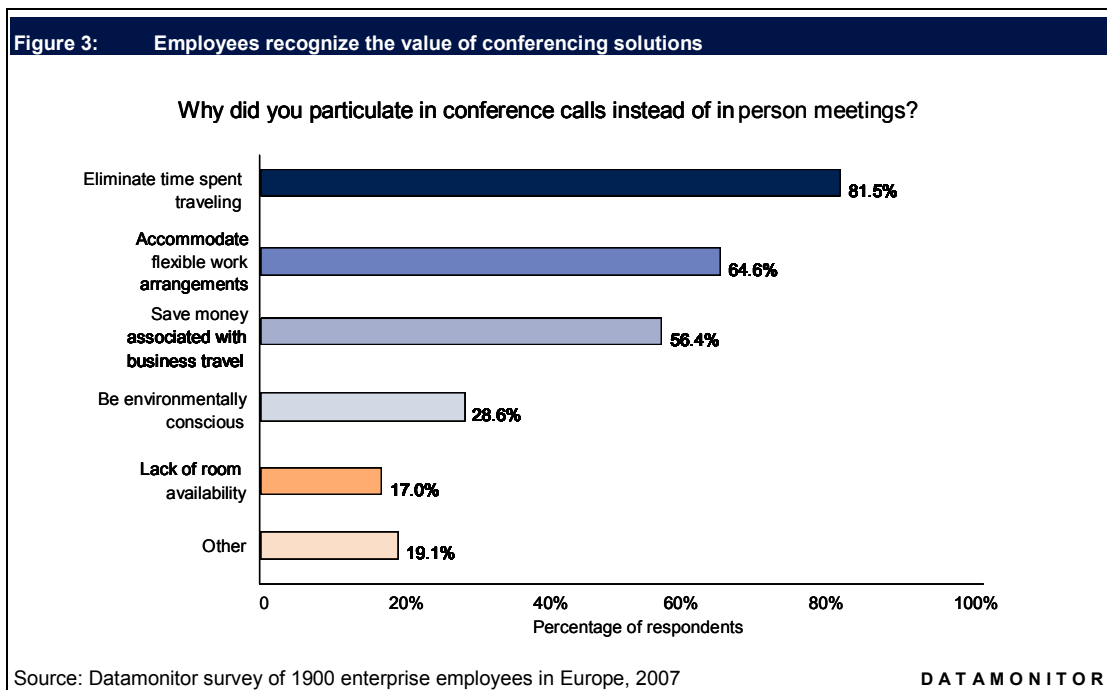
Instant messaging has a high level of penetration among enterprises and is seen as an important part of a UC solution. Rather than send an email, colleagues can use instant messenger to address ad-hoc queries immediately. The success of instant messenger is due to its integration with presence information. Presence is the enabler of real-time communication, ensuring that time is not wasted calling or emailing colleagues who are unreachable. Presence servers provide end-users with unified presence information gathered from various sources. Presence is considered to be the ‘dial tone’ of future communication.

**High quality conferencing solutions are being deployed by enterprises**

Video conferencing is attracting significant interest from end-users at different price points as vendors address issues over video and sound quality through headsets and higher bandwidth solutions. Vendors are stressing the environmental advantages of these conferencing solutions and other UC technologies by helping enterprises minimize their carbon footprint through reduced travel. However, the key message coming from vendors is the value of these solutions for improving productivity and efficiency.

**Virtual meetings can reduce an enterprise’s carbon footprint and increase cost savings**

Unified communications and collaboration technologies can help enterprises lower their costs in a worsening economic climate. In a recent Datamonitor survey, eliminating time spent travelling came out as the top reason for replacing face-to-face meetings with conferencing solutions. This indicates that employees recognise the amount of time that is wasted travelling to meetings when there are viable conferencing solutions which can almost replicate the face-to-face experience. Minimising costs and a desire to be environmentally conscious also emerged as strong reasons to invest in and use conferencing solutions.



**Interest in extension mobility is increasing as enterprises ensure accessibility to mobile workers**

Perhaps the most interesting application of UC is its ability to enable mobile workers to be as responsive while on the move as they are in the office. The increasing quality and popularity of smartphones and notebooks combined with faster 3G networks and advanced mobile headsets means that mobile workers have all the tools to maximize their productivity while on the move.

Extension mobility, which allows an employee to route calls to their mobile device, is increasing in interest among enterprises as they realize the benefits of UC for increasing the efficiency of their mobile workers. Enterprises have already started mobilizing their enterprise applications onto mobile devices to aid their sales and service field forces and 'road warriors', who are rarely at their desks. Now enterprises are turning their attention towards placing UC solutions onto mobile devices – functions such as IM, click to call and conferencing.

Datamonitor expects that in 2009 there will be more collaboration between UC vendors and enterprise mobility providers. UC has enormous potential for increasing the productivity of mobile workers. Enterprises need their sales and service teams at client sites developing relationships and serving their clients. However, some businesses are reluctant to allow their sales teams to visit clients due to a concern that they will be inaccessible once out of the office. By deploying a UC solution on a mobile device those concerns can be overcome as presence information will allow colleagues to know when mobile workers are available for a call, conference or IM conversation.

**UC benefits all types of workers: deskbound, nomadic, road warriors, remote workers**

The benefits of deploying communications technologies can be demonstrated for all types of workers. A UC solution brings together disparate technologies onto a single interface allowing deskbound, nomadic or remote workers to utilize fully the technologies which are available to them.

There are four traditional categories of workers that can benefit from UC deployments and technologies:

**Deskbound** workers rarely leave the office and spend the majority of their time working on their desktop or laptop computer. The key technologies these workers need are unified messaging, 'click to call' from the desktop, telephony control, and conference and collaboration features. These are the features integrated with presence applications, which allow employees to improve significantly their communication practices with the inevitable benefit of enhancing their productivity.

**Nomadic workers** tend to be away from their desks frequently, perhaps working in a campus environment, warehouse or simply roaming the corridors. The key features for these workers include:

- \* **mobile extension**, so that when a colleague calls their office extension the call is forwarded to the appropriate mobile or desk phone;
- \* **mobile switching**, this allows end-users to transfer a call from their desk phone onto their mobile without breaking the call or suffering any loss in quality;
- \* **one voicemail**, meaning that when calls are forwarded to a mobile device, if there is no answer from that device call manager software activates the desk phone voicemail, so that there is only one voicemail to check;

- \* **fixed mobile convergence (FMC)** is also important for these workers to keep their costs down and maintain good coverage. FMC enables a single device to operate over both voice and data networks or mobile and fixed corporate networks.

**Road warriors** are never or rarely at their desk so they need UC technologies on their mobile devices. Setting up call 'rules' is crucial for these workers as they can determine which calls are forwarded to which device. End-users can also set up caller identification and screen unimportant calls. Speech access can also be useful for these workers if they are driving to client sites. They can call a toll free number on their mobile headset and speak to an automated interactive agent who can read emails, voicemails and calendar engagements. It is also possible to ask the agent to dial someone from the corporate directory and set up a conference call or appointment.

**Remote workers** can have VPN access and softphones duplicating their office environment. As long as there is a network connection and a headset they can have access to all the features available to a deskbound employee in the office. The overriding concept is that wherever an employee may be, there are UC solutions that enable them to access all the different communications tools, allowing them to be as productive as possible. It is a two way system in that their personal productivity is increased and from their colleagues' perspectives, human latency is reduced due to their mobile or remote colleagues being accessible.

### ***Unified Communications is also enriching the contact center experience***

#### **The role of UC in the contact center**

In the contact center realm, UC is the term used to describe the virtualization of the contact center across the enterprise. To this end, callers are able to not only talk to agents but also subject matter experts or knowledge workers within the organization who are not physically located in the contact center. The net result is improved customer satisfaction and enhanced information sharing and dissemination. Traditionally the contact center operated as a separate silo from the rest of the enterprise but organizations are becoming more customer-centric and are focusing on improving customer service to remain competitive. As a result, it is important for agents and workers within an organization to collaborate internally to provide customers with exceptional levels of customer service. UC applications, such as instant messaging and conferencing, enable agents to quickly gather facts and domain knowledge from experts within their organization.

The key applications for UC in the contact center, similar to the enterprise, are presence and instant messaging. Specialist contact center applications are being developed to enable agents to access information relating to other employees' knowledge on particular subject areas and availability to assist with customer queries. Many of the major contact center vendors are offering applications that connect agents with different groups in the organization, other agents, supervisors and subject experts. They can communicate via IM, transfer calls or set up a conference and do not necessarily have to put customers on hold. Agents have previously been disconnected with other groups in the enterprise and UC is enabling them to extend their connectivity. Web and audio conferencing are also examples of UC technology that can play an important role in the contact center. They can be used to help contact center managers and bricks and mortar agents connect with virtual workers such as home-based agents and back-office workers.

### **Demand for UC is growing in the contact center market**

In order to utilize the contact center to its full potential and provide better levels of customer service, enterprises need to invest in skilled agents. This is often a challenge for contact centers as they are plagued with high agent turnover rates and limited labor pools. In order to address this challenge as well as dealing with fluctuating call volumes, the number of home-based agents is increasing. These 'virtual' agents need to be closely linked to the other agents, management staff, and increasingly other knowledge workers in the enterprise, to provide a seamless customer facing operation. Management of remote workers is also a challenge and UC can help create a better virtual workplace as communication is enhanced. Using web conferencing to pass on group information and discuss problems, in addition to instant messaging, can help managers communicate with remote agents. Tight management over when and how these applications are used may be necessary but they can help connect home-based agents with subject matter experts and allow them to find specialist knowledge through lists of workers with a particular skill set.

### **The benefits for using this technology in the contact center**

Although the market for UC is currently nascent, there are a number of business benefits that the technology brings to the contact center. These include:

- \* **improving information flow and communication between the contact center and back-office** – not only can UC help improve communications between departments, it is able to bridge the gap between the contact center and back office operations. Agents can obtain information from knowledge workers and transfer calls to them, and conference in those employees on calls with customers;
- \* **improved customer service** – if agents can find information from colleagues faster by using IM and presence, waiting time for customers can be reduced thereby improving first call resolution rates and customer service;
- \* **better connectivity to remote agents** – UC applications such as IM and web / video conferencing can be used by remote agents, to enhance communications with the organization. UC improves and expedites communication between home-based agents and management and can be used to provide the framework to run a successful virtualized or multi-site contact center;
- \* **streamlined operations** – enterprises have the ability to track to whom agents are sending messages and can analyze the types of information which are most needed. This information flow can be further facilitated when there is an understanding of which groups of people agents reach out to the most. Enterprises can then provide more training on particular information or make colleagues whose knowledge is in highest demand more accessible, thereby improving contact center efficiency;
- \* **cost savings** – by reducing time for agents to find specific information from colleagues, UC can be used to help make agents more efficient and answer more incoming calls. If customers' queries are answered immediately by conferencing in experts, and first call resolution is improved, cost savings can be achieved. Easier access to additional knowledge workers can also facilitate more successful up-sell / cross-sell opportunities.

***What to expect in the future in terms of UC applications in the contact center*****UC will help improve business processes**

UC can be used alongside intelligent routing to enable contact centers to become more efficient. Presence will become more sophisticated which will then enable greater levels of complex routing within the enterprise. Calls will be routed to agents depending on the types of queries agents can handle as well as their availability. Likewise in the enterprise, tools for agents to access lists of knowledge workers outside of the contact center will become more advanced to include scheduling and location. Datamonitor expects more automation within agent desktop solutions. For example, when agents select a customer query, such as a credit card application status, a list of available experts on credit checks or process status will become available for the agent to contact if they need further assistance.

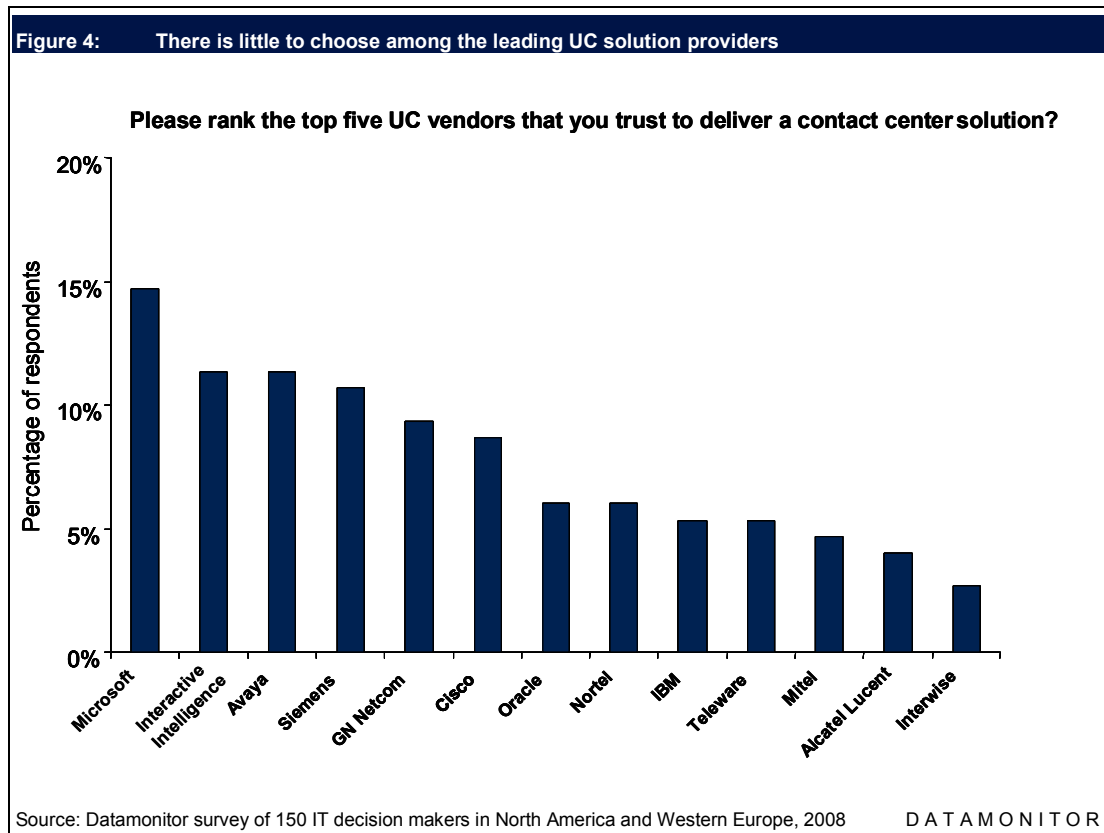
**Multimedia capabilities will be leveraged**

Customers are using different types of communication from SMS to email and web chat, to liaise with contact center agents. In the future there is expected to be a greater use of video. Over time, these different channels will become better integrated into the contact center and customers will have more choice in the way they can communicate with agents. Agents will be able to set presence indicators to not only show availability and work capabilities but also the way in which they can be contacted. Some agents may be set up to accept web chat whereas others will be phone- or video-based. This will be reflected throughout the enterprise with knowledge workers also having this option. Business rules will be used to indicate workers' locations and this will be reflected in the type of communications knowledge workers will accept.

**The migration path to UC will vary by region**

Enterprises in North America and Western Europe are likely to evolve towards a UC solution because investments have been made in different vendor solutions which need to be integrated and made interoperable. By comparison, emerging markets do not have sunken costs in legacy technology meaning that there is potential for a more streamlined and simpler migration path to UC in these markets.

Figure 4 shows the leading vendors trusted to deliver a UC solution for contact centers. It is clear that there is a diverse competitive landscape of software vendors, communication vendors and hardware vendors. In order to maximize the growth in the UC market it is crucial that these vendors ensure that their solutions are interoperable. Enterprises in the more mature markets of Western Europe and North America are going to be reluctant to invest in a UC solution if it makes their other investments redundant.



## SUMMARY

The UC market is characterized by partnerships between telephony, software and accompanying hardware vendors. For enterprises to evaluate the return on investment for a UC deployment they should consider the investments they have made in their telephony system and desktop applications. Many enterprises have already invested in mobile phones, softphones, and desk phones. If it is viewed as too costly to upgrade immediately to an integrated UC suite, then they should consider a relatively low-cost investment in accompanying hardware from multi-use headsets suppliers such as GN Netcom. It is important that enterprises choose a headset that provides good acoustics and integrates into UC software. An investment of this type would allow mobile phones, desk phones and softphones to be utilized properly and will also increase the job satisfaction of employees.

This paper has identified the following trends within the communications market.

- \* UC is crucial for unifying disparate communication media, maximizing enterprise efficiency and reducing human latency.
- \* Technologies such as instant messaging and conferencing can reduce the need for employees to travel, helping enterprises lower their costs and reduce their carbon footprint.
- \* Mobile workers can greatly benefit from a UC deployment as they gain the technology functionality normally associated with deskbound employees and are more accessible to their colleagues through the intelligent awareness of presence.
- \* Contact centers and enterprises are investing in UC to break down communication barriers and to facilitate knowledge and expertise sharing.
- \* With the growth of IP telephony, softphones and mobile VoIP there is a need for high quality multi-use headsets to maximize employee satisfaction.

## APPENDIX

### DEFINITIONS

- \* **Voice/data convergence** - Voice/data convergence is the integration of all traffic types, which may include voice, data and video, onto a single IP network. This covers a range of technologies including IP-PBX, IP-contact center, unified messaging and mobility.
- \* **Unified communications (UC)** - The ability to manage all communications, whether it is voice, email, fax or instant messaging, through one interface. UC is the convergence of all related applications to enable a seamless communication process and accessibility irrelevant of location or device. Technologies included are: integrated personal directory, IP 'softphone', click-to-call, presence indicators, unified messaging, web (video and audio) conferencing, and single number portability.
- \* **Mobility** - The ability to use technology to connect wirelessly to information and applications using wireless computing and communication devices such as mobile phones and Personal Digital Assistants (PDAs).
- \* **IP-PBX** – A private branch exchange that switches voice calls between users calling from IP telephones. Has the ability to switch calls between a VoIP (voice over Internet Protocol) user and a traditional telephone user, over a converged voice and data network.

- \* **Fixed Mobile Convergence (FMC)** - The ability to receive calls on a mobile device that would usually be received on a fixed-line phone in the office through convergence between mobile and PBX networks.
- \* **Unified Messaging** - Applications that allow a user to receive voice-mail, email, SMS and fax in the same place.
- \* **Web Conferencing** - Includes video and audio conferencing over IP networks.
- \* **Contact center** – Datamonitor defines a contact center by the following features:
  - \* an Automatic Call Distributor (ACD) or Private Branch Exchange (PBX) with equivalent functionality overlaid (or soft ACD);
  - \* 10 or more agent positions;
- \* **Agent positions** – The physical desks from which agents make and/or receive telephone calls to and/or from internal or external customers. This is taken to imply that the call in question involves communication between the agent and the customer.

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