

I D C E X E C U T I V E B R I E F

New Ideas in Unified Communications Emphasize Mobility

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Introduction

By adding unified communications (UC) to their existing mix of mobility solutions, companies can fulfill the promise of making their employees fully productive from wherever they are. These existing solutions have had a impressive effect on mobile productivity, but can leave gaps in connectivity and productivity when:

- The employee lacks an Internet connection.
- The employee cannot run her notebook PC due to battery life or other issues.

UC helps companies close the loop by enabling employees to be productive not just wherever they have a wireless local-area network (WLAN)-connected PC, but wherever they have access to a telephone, connected PDA, or other relevant device. During the times that the user does have an Internet-connected PC, UC also improves the productivity of the WLAN-connected PC by letting the user manage different types of interaction from a PC interface.

It's important to keep in mind, however, that there are a dizzying array of services available under the umbrella of unified communications. Rather than pursuing a generalized UC strategy, companies should emphasize particular capabilities most needed by their employees.

Some of the most compelling applications center around mobile and remote workers. One emerging model that IDC sees is the use of UC in combination with notebook computers, WLANs, and IP telephony, creating a system that allows workers to be completely connected to all capabilities wherever they are within the WLAN coverage area — either within the company or connecting via commercial hotspots.

Understanding Unified Communications

Unified messaging (UM) refers to applications that unite email, fax, and voice messages in a single mailbox, accessible by a PC, browser, or telephone.

Unified communications (UC) applications represent a functional superset of unified messaging (UM) functionality. Actual definitions vary by vendor, but generally these applications differ from UM by providing more sophisticated inbox access (e.g., speech access), message management (e.g., reply to email with voicemail), and "personal productivity" options (e.g., personal voice assistants).

UC applications also increasingly interface with enterprise instant messaging (EIM) products, allowing users to send an instantaneous message to co-workers or customers known to be online or otherwise available. UC applications also offer advanced conferencing and contextual collaboration functions.

UC provides an umbrella category that refers to capabilities that allow users to access different types of communications and messaging using a variety of means, such as checking or delivering email via voice over a telephone line or reading or sending a fax via a Web connection

Specific capabilities that may be part of a UC system include:

- One number for receiving all different types of communications. This generally includes a single electronic mailbox for holding various types of messages.
- Follow me/find me to locate subscribers and forward calls. This enables employees to be reached through a single number, regardless of whether they are in the office, on a cell phone, or at home, and/or receive notification by pager.
- Call and fax management. This includes call and fax handling for answering, screening and forwarding incoming calls and faxes to other individuals, personal operators, or voicemail, as well as for saving faxes, forwarding to fax machines for printing, or viewing faxes on the Web.
- Outgoing calling such as automatic call return from a voicemail in-box, outbound call placement from a telephone or Web interface, conference calls initiation, long distance outbound calling, and voice dialing from an address book.
- User-defined communications (UDC). These are Web-based capabilities that allow telecom administrators to provide and change services, and end users to control the flow of their communications at the desktop level.

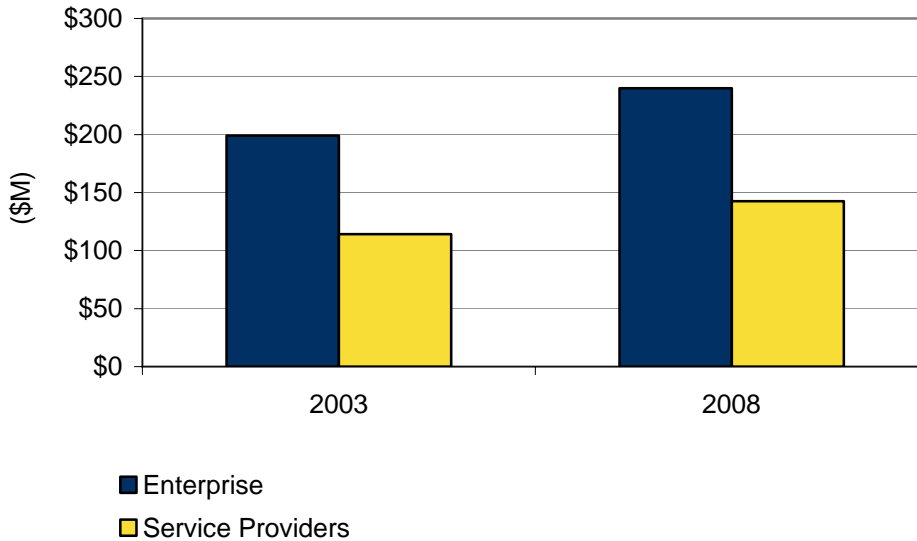
- Web interface that provides a single location for managing messages and communications of various types, as well as managing personal settings and information such as calendars and contact lists.

Widespread adoption of these solutions has been held back while other aspects of mobile computing have caught up. IDC sees significant growth for the unified messaging and communications market, with most companies adopting UM first and then building UC on top of it with increased real-time capabilities.

Companies can either build solutions in-house or rely on a service provider. Both types of solutions will see strong growth over the next several years, as seen in Figure 1.

Figure 1

Unified Messaging Product Revenue, North America, 2003 and 2008



Source: IDC, 2005

The Current State of Mobility in the Enterprise

Many companies have enabled increased mobility and productivity for their employees using:

- **WLANs.** Wireless LANs are growing in popularity because they can provide a highly flexible, low-cost networking option. They are especially common in new office construction, branch or foreign offices, and large workspaces such as factories, warehouses, and hospitals. Shipments of enterprise-oriented access products grew 49% in 2004. Shipments of WLAN access points will continue growing rapidly; IDC predicts a compound annual growth rate (CAGR) of 32.7% from 2003 to 2008.
- **Notebook PCs.** These are replacing desktops as the standard corporate PC, even for workers who spend little time on the road. Notebook shipments in the U.S. are projected to have a compound annual growth rate of 22% through 2008—the highest of any PC form factor. IDC estimates that 61% of notebooks shipped with an embedded WLAN solution in 2004. By 2008, this percentage will be nearly 100%.
- **VoIP.** Voice over Internet Protocol (VoIP) allows users to access voice communications over the Internet or other computer networks. Within corporations it can offer significant cost savings by allowing companies to avoid the long-distance charges that come with standard telephone calls. IDC projects that the worldwide market for IP PBX systems and the IP telephones used with them will grow to \$7.88 billion by 2008.

Synergies

WLANs, notebooks, and VoIP can form a powerful combination by allowing workers to essentially bring their entire work environment — PC and voice communications — with them wherever they go within the WLAN coverage area. Users can now receive incoming phone calls even if they are far from their desk, without incurring cell phone charges. They can also access complex conferencing and collaboration applications with them. Finally, this combination of capabilities can also aid business travelers by allowing them to reach these capabilities via a commercially available hotspot, of which there are a growing number in the United States and abroad.

Weaknesses

While this is a compelling model, it leaves two significant gaps:

1. **Assumes Internet Connectivity.** Unfortunately, even in an age of growing WLAN connectivity, both within office environments and through commercially available hotspot, an Internet connection will not always be available. Mobile workers will often find themselves in places where such connections are either not available, such as on planes or trains, or are prohibitively

expensive. To offer full connectivity, organizations must offer their mobile workers other ways to connect. Most will see the telephone, especially cell phones, as the alternative connection means of choice.

2. **Focused on the PC.** The PC has become the main tool of modern business because of its ability to take on an ever-growing range of functions. What started as a tool to replace the typewriter is now taking on rich media and communications functions that were once the domain of the television and telephone. Nevertheless, companies should not always assume that an employee's PC will be available. The main culprit is battery life; even though notebook batteries have been improving rapidly, many ultraportable models still offer only an hour or two of battery life. However, this will be an issue mostly when the user is somewhere where an Internet connection isn't available anyway, such as on an airplane. But it's also important to keep in mind that notebook PCs can be stolen or suffer serious system crashes. When these things happen, the employee will often be far from IT support. A fully connected worker should be prepared for such an event. This means being able to connect via a telephone, PDA, or other device.

Completing the Loop: UC and Mobility

While it has gotten a lot of attention, to a certain degree UC has been a solution without a problem. As long as users remained at their desks, even the most compelling of UC applications may not fit a pressing business need.

However, with the growing amount of mobility, UC has found that cause: plugging the holes in the notebook/WLAN/VoIP mix. UC can address the times when employees are not connected via WLANs or cannot use their notebooks.

One of the most noted uses is being able to check messages of all types from any telephone connection. However, there are many more advanced, user-directed features also available. For instance, employees can use a UC system to route important communications — be they phone calls, emails, or other formats — to a cell phone when they are not connected to the Internet. Users can direct the system to only route messages from certain users this way, or to search subject lines for important topics.

Users can also draw on a centralized communications infrastructure. Highly connected notebooks can allow users to manage all of their communications via a WLAN-connected notebook, but also to access and use these communications from regular telephones and other devices.

UC and Mobility: Goals to Remember

There are many strategies companies should keep in mind when exploring and implementing UC. Smart companies will:

- Approach UC as a concept, not a product. Choose the specific applications that are most relevant to your business and your employees. This mixture depends on how much your employees travel, what their needs for fast communications are, and how important it is for them to be available 24/7. Companies should study how their employees actually work and roll out the applications that will be most useful to them.
- Encourage employees to think of the telephone as a multimodel device. This means regarding the phone as a device capable of many tasks accomplished in many different ways, much the same way users already think of their PCs. Users should be able to use the phone to send and receive not just voicemails, but email, faxes, and real-time chat.
- Companies should explore useful, speech-driven applications. Such applications address when employees are most disconnected — that is, not on the Internet. The goal is to open up PC-based communications and data to voice users. These should be subject to high levels of user control, letting employees prioritize incoming contacts and set a "not available" mode.
- UC should be integrated with conferencing and collaboration. For instance, different people should be able to access the same conference using different means. Some people might be logged in via PC and VoIP, while others might be dialed in from a cell phone in an airport. This is especially true as many companies move the focus of their corporate communications from email to conferencing and collaboration functions.
- Ease of use and training are extremely important. The most technically beautiful application will only represent wasted time and money if employees don't use it. Companies need their employees to be able to use UC applications efficiently during times of high stress; in fact, this is largely the point of UC. Examples include getting communications from clients right before boarding an airplane, or dealing with pressing business problems in real time without the use of a PC. If employees aren't able to use these applications under duress, the applications aren't doing their jobs.
- Hosted UC can offer advantages. Advanced communications are not a core competency for most companies. Enabling UC can offer numerous technical hurdles as well. For these reasons, IDC expects hosted UC service to grow in popularity, especially for companies with fewer than 5,000 employees.

Conclusion

As knowledge workers become more mobile — and as companies spend more on technology to enable them — UC is becoming increasingly relevant. The need for 24/7 connectivity is becoming a given. UC helps ensure connectivity by dealing with the

shortcomings of the notebook/WLAN/VoIP combination that some companies are relying on.

That said, companies must assess their real needs before pursuing a UC strategy. UC capabilities should be oriented towards how people actually work, and address gaps in connectivity that actually affect their workers. This involves a census of your employees, how they travel, and what applications they use.

Companies should also keep in mind that employee work habits are a moving target. As employees increase their use of instant messaging and collaboration applications, these should be brought into the UC fold. The goal of UC is flexibility, and part of this demands that companies create a system that adapts to changing employee needs.

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