

Windows Phones and Unified Communications:

How Windows Phones Combine Email,
Messaging, Voice, and Presence in a Secure,
Collaborative Environment

By

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Abstract

Increasingly, teams consist of geographically and departmentally dispersed people who work asynchronously. This means team members can be doing their work any time, any place. A key enabler to this modern, collaborative way of working is a unified communications strategy which brings people together in real time so they can quickly turn raw business information into actionable business intelligence and uninterrupted business process. A cornerstone to any unified communications strategy is the smart phone.

This paper explains why unified communications is essential and why Windows® Phones are ideally suited to serve as the “mobile connection” in a unified communication environment.

Introduction: 21st Century Workflow

The way we work is changing rapidly.

New communication tools that go way beyond voice and email, such as web-based information repositories, social networking, and Twitter, are redefining workflow within the traditional business organization. The globalization of work groups and the ability to search, locate, and contact people instantly regardless of their location, are changing the tempo of business. Consider these examples:

- Distributed work group activity can continue asynchronously around the clock. For instance, a technical documentation team can post a shared draft document and fully expect an offshore tech review team to post comments and corrections by the beginning of the next business day.
- A traveling regional manager seeking approval for a policy change uses instant messaging, text messages, email, and access to a corporate social network to drive the approval process through all stakeholders while waiting for a connecting flight. A decision cycle that normally takes days is completed in minutes.
- An executive is attending a professional conference which is happening in the midst of a critical contract negotiation. Between conference sessions, she checks email on her phone and discovers a contract for her review that requires immediate action. From her phone, she links to the document, reviews it, applies her electronic signature, and notifies the customer that the document is signed.

Some people in today’s workforce can recall a workplace before there was email. At the same time, young people joining the workforce today take social networking and phone-based texting, voice, and web browsing for granted. In fact, they expect to use these tools in the workplace.

Behind all these trends is a change in the way we communicate and big changes in the capabilities of the portable communications devices we carry around with us every day. Competitive forces and the need to be more efficient in the way we work are driving these changes.

In recent years, mid-size companies and enterprises have included “mobile workers” in their IT planning. The reality today, however, is that we are all becoming mobile workers.

With all the lines of communication available today, and with all the communication devices and “work places” available to mobile workers, how can an organization manage communications and both effectively, and securely, disseminate the business information workers need to do their jobs?

That is the essential challenge that a unified communications (UC) strategy must address. But what exactly is unified communications? Let’s take a look.

Collaboration, Unified Communications, and Business Acceleration

The examples cited earlier of new communications tools accelerating business processes and work flow all have a common thread. In each case, these tools enable more effective collaboration toward a common business objective.

We all collaborate in our daily work lives. Indeed, for most of us, work is not possible without collaboration. There is growing evidence that more effective collaboration has a direct impact on business performance. Consider these points:

- A joint study by MIT and NYU has shown that employees with a large number of colleague connections generate \$83,000 more revenue per year than employees with average numbers of colleague connections.
- Gallup surveys have shown that highly engaged employees have stronger colleague and customer relationships.
- Gallup studies also show that highly engaged employees are healthier; they have more ideas and are more productive; and they are less likely to leave the company.
- According to research by Towers Perrin, public companies with high employee engagement scores have much higher growth in earnings per share than companies with low levels of employee engagement.

One of the keys to more effective collaboration and stronger employee engagement is better real-time communications. As workers become more mobile, it is more important than ever that they maintain good communications, and this is what UC is all about.

UC is a communications infrastructure that brings together email, instant messaging, voice over internet, voice mail, calendaring, social networking, and conferencing into a single, UC environment accessible to PCs or other networked devices.

A UC platform allows you to do all of these things:

- Quickly see and monitor your different communications tools, and initiate a communication by clicking on or pointing to something.
- See the availability status (or “presence”) of others in your network and how best to reach them.
- Access your communications environment from multiple devices, such as your desktop PC, a notebook computer, or a smart phone.

What Qualifies as a Unified Communications Environment?

Although some communications environments give you access to different tools, not all are equally unified. A truly UC environment provides a common platform to handle all your communication needs, provides you with an indication of “presence” among others in your network, and provides interoperability with other networks. Let’s take a closer look at these capabilities.

Unifying on a Common Communications Platform

A common communications server, such as the Microsoft® Office Communications Server, provides a simple way to integrate the functions of different communications tools such as instant messaging, voice-over-internet, voice mail, calendaring, email, and web conferencing.

In this environment, you can direct voice mail to go into your email, initiate voice, email, or text messaging communications from within applications, attach voice messages to calendar entries and files, and manage how others in your network see your availability.

The Concept of Presence

Presence is knowing in real time who is in your communication network and how best to reach them.

The ability for everyone in a UC environment to see each others' availability status is a powerful tool for more effective communications and collaboration. Your availability status can be any kind of message such as *away* or *busy*, *on a call*, or *in a meeting*, *available*, or a more specific message about how best to reach you.

With Microsoft Office Communications Server you can have presence information tied to calendar activity so that people know where you are and when you will be there, if they need to reach you. You can also control who sees what kinds of presence information. Some colleagues may need to know more about how to reach you or your meeting schedule than others.

Network Interoperability

Not all businesses standardized on the same communications networks. For instance, if your business uses Windows and Microsoft Office, it's entirely possible that some of your colleagues, customers, or partners use other communication networks like Google Talk or AOL instant messenger. A UC environment can link people on a wide variety of common networks.

Microsoft Office Communications Server, for instance, can share presence information and instant messaging with people who use AOL instant messenger, Google Talk, or Cisco Jabber.

The Emergence of Smarter Smart Phones

Ever since 2004 when sales of high-end mobile phones surpassed sales of laptops, smart phones have become the standard tool mobile workers use to check their email. However, in recent years, several developments have altered the way smart phones are being used in business, which include:

- Larger format, higher resolution touch-screens make it practical to do more than read and respond to text-based emails.
- Higher speed 3G phone networks and built-in wireless capability make it possible to process much larger quantities of data through a mobile phone.

Rapid Growth in Sales of Smart Phones

According to a recent Gartner report, "Dataquest Insight: PC Vendors' Move into the Smartphone Market is Not Challenge Free," smart phones currently account for 14% of all mobile handset sales. By 2012, smart phone sales will represent 37% of handset sales.

The Gartner study projects that smart phone sales in 2009 will end up growing 29% over 2008, and in 2009 smart phone unit sales will exceed sales of notebook computers.

- The major mobile phone OS manufacturers (Apple with the iPhone, Microsoft's Windows Phones, and Google's Android) all have strategies to encourage 3rd party development of phone-based applications. These strategies include providing software developer kits to developers, and providing a store through which developers can sell their applications to end users.

Not only are the latest high-end phones more robust and better suited for use in a variety of work scenarios, they have also become suitable platforms for running portable business applications, making them powerful collaboration tools in a UC environment.

The newest Windows Phones, for instance, come with a mobile version of Microsoft Office Mobile that includes Excel (spreadsheet software), Word, PowerPoint, Outlook email, contact management, calendaring, Internet Explorer, and instant messaging. In addition, you can run more specialized business applications such as customer relationship management software and proprietary applications developed for particular business processes.

Windows Phones: The Ideal Mobile Connection

Windows Phones are conceived, designed, and developed on the principle that all Windows devices should cleanly and seamlessly integrate to provide effective communications and support task-oriented business processes.

This means that if your business is already standardized on Windows systems, Windows Phones come with a complete stack of Office and messaging applications that fully integrate with your other client and server systems. If you have or are implementing a UC environment, all messaging capabilities and presence information extends to the mobile phone, and all your personal real-time presence information will be known to those colleagues with whom you share that information. You will be able to engage with teams and work groups just as effectively as if you were sitting at your desk, whether it is through phone conversations, voice and text messaging, email, accessing corporate data, or interfacing with a corporate social network through the phone's web browser.

By deploying Windows Phones with Microsoft Exchange Server and Microsoft Office Communications Server, you will effectively have the mobile component of a UC environment "out of the box", one that preserves user proficiency by extending tools with which people are already competent and comfortable. This mobile solution will support all the key features of UC:

- Easily provide users a single identity with user-managed presence information



- Present a single inbox
- Provide a unified user experience across voice, conferencing, instant messaging, and email
- Be simple, intuitive, and to a large extent, familiar
- Have compelling, immediate adoption benefits for users, which deliver tangible improvements in terms of accelerating business processes.

Beyond these end-user benefits, there is another aspect of Windows Phones that makes them well suited to serve as the “mobile cornerstone” of a UC environment. It is an unfortunate reality that mobile phones used for business purposes are often the least managed and administered devices in the business communications infrastructure. The Windows system provides a rich set of management tools that make it possible to administer and secure Windows Phones like you would manage any other devices in your communications network. Let’s see why this is important to your UC strategy.

Managing and Securing Windows Phones

Most of the risk management tools for ensuring enterprise UC security and availability have to come from tools and features that are an inherent part of the chosen UC products. Using Windows Mobile devices to extend your corporate communications infrastructure is an attractive, low risk path to fully auditable, high availability UC operations. Here’s why:

- Windows Mobile Management tools integrate with Microsoft communication facilities, including Exchange Server and Microsoft Office Communications Server, lowering cost of administration and adoption.
- Standardizing on Windows Mobile devices allows you to build a UC solution that leverages a foundation of existing IT Staff knowledge.
- The use of a common set of tools for remote device management, including tools for provisioning phones with applications, performing updates, and auditing, promotes secure, high availability UC system function.
- Windows Mobile provides powerful management tools to synchronize applications and data on all of the devices in a global enterprise automatically or on demand, making it easier to mitigate unanticipated disruptions.
- Windows Mobile offers rich, mature developer tools that allow you to build proprietary applications of line-of-business extensions designed for your UC environment. Windows Mobile also enjoys one of the largest, most experienced developer pools of any mobile device.

As mobile workers increasingly set aside their laptop computers in favor of faster, more portable smart phones when they are out of the office, and as those phones are able to provide access to more and more business critical information, there is also an increasing need for device security. Let’s take a closer look at why mobile device security is so important.

Minimizing Risk of Unauthorized Access or Data Loss

Losing a mobile device equipped to receive email, probe enterprise information repositories, and store sensitive business intelligence information isn’t just an inconvenience or replacement expense issue. It also presents the potential for complete breach of every protection painstakingly and laboriously set up around business process integrity. Thieves know this. No matter how impregnable your network

defenses, the loss, theft, or compromise of a key employee's mobile device could have devastating ramifications.

That is why Windows Phones, which are designed to support security practices typically used to ensure the safety of a corporate communications network, can play a key role in protecting the integrity of a UC environment. Consider these Windows Phone security features:

- The Windows Mobile operating system uniquely provides fully integrated remote administration and security policy enforcement tools for mobile devices employed in your environment. Your IT professionals can manage mobile devices with the same degree of fine control, immediacy, and precision as they use in managing and defending the rest of your global business IT infrastructure.
- Windows Mobile remote administration tools automate security updates, application deployments, and distribution of alert messages using a coordinated, self-documenting process. You'll always know what happened, when, how, and who was responsible.
- IT staff can transparently administer mobile phones without any intervention by the user, at a time least likely to interfere with a business process.
- Windows Mobile administrators can interrogate a device at any time, determine what software and data are on the device, read and manipulate files, and deliver or retrieve information. It's just like an extension of the enterprise network.
- Windows Mobile remote device lockdown allows administrators to remotely disable phones instantaneously when a device is reported lost. This is a great feature for two reasons: First, if a phone is discovered missing and then shortly after is found, neither the user nor the administrator has to go through a lengthy process to get the phone up and running when it finally resurfaces. In that scenario, the administrator would simply unlock the phone. A second advantage of this security feature is that if users know they won't be significantly inconvenienced (or embarrassed) by what might be a temporary misplacement of a mobile device, they are far more likely to report the missing device. This reduces the opportunity time for thieves, if the device actually was stolen.
- Windows Mobile remote device wipe is the insurance policy every executive contemplating the mandate of an enterprise UC strategy wants to have in their top drawer. If you know for sure that a device is lost or stolen, an administrator can remotely clean every scrap of data, software, and contact information from the phone the first time it connects to a network. The information on the device can't be recovered or even inventoried after a wipe.
- Windows Phones have full support for most forms of two-factor authentication. Two-factor authentication is a type of very secure personal identification employed to permit or deny access to systems or facilities. The idea is that someone has to have two ways to identify themselves before they are accepted as legitimate users. Usually, this means they must have something (like a voice print or USB token) and know something (like a password). Two-factor

Why Mobile Device Security is Important

In 2009, London's Metropolitan Police issued a report cautioning mobile phone users. "A mobile phone is stolen about *every three minutes* in the UK" said their warning, which went on to detail the riskiest times and places for phone users. Not surprisingly, people most likely to have their phones stolen are those who use them in public places like restaurants, airports, and hotel lobbies. These happen to be places most frequented by mobile workers.

authentication is a must if people will be accessing extremely sensitive enterprise data or assets from a mobile device. For these individuals, mobile devices are not simply susceptible to loss or casual theft; they may become actively sought targets of theft.

- Windows Mobile provides support for encryption of locally stored data. This is a robust and relatively impenetrable last line of defense, in the event a phone is stolen by someone sophisticated enough to know that it could be wiped or locked if they try to connect to a phone or internet network. Even if the thief never exposes the mobile device where it is susceptible to remote management tools, they can't get encrypted data off the device without beating the strongest legal civilian cryptography algorithm available.

Windows Phones give you the tools you need for absolutely precise, consistent, secure mobile device management.

Summary

As businesses increasingly recognize that more effective collaboration accelerates business processes, improves employee performance as well as customer and partner engagement, and drives better business results, they are looking more closely at high value collaboration tools.

These tools include information sharing systems, business social networks, new communications and messaging technologies, and virtual meeting and conferencing systems. However, the glue that connects people to all these tools is a unified communications environment. Unified communications enable you to consolidate all forms of business communication, including text-based email, voice, conferencing, and social networking, into a common interface and platform. Unified communications also provide everyone in the communication network with "presence" information so that people know in real time where, when, and how best to reach their contacts.

With a trend toward increasing mobility among workers and ever more powerful smart phones, mobile phones are becoming the portable communications device of choice, giving them a critical role in any unified communications strategy. Windows Phones, through their rich application suite, extensibility, full integration with Windows server and client systems, and powerful security features, makes them the optimum portable device for working within a unified communications environment.

To learn more about how you can unify and mobilize your corporate communications network, contact Microsoft and ask about Windows Phones and unified communications.