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Prepare Your Enterprise for the Mobile Revolution:
Boost the Bottom Line with Mobile UC

A Frost & Sullivan
White Paper

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INTRODUCTION

The world is becoming increasingly mobile, and businesses are feeling the impact. As more employees work in locations different from those of their colleagues, managers and direct reports, as well as customers and partners, they are struggling to stay connected in an always on, increasingly virtual workplace. Companies must respond by making it easy for people to stay in touch on any device and from any location—all while ensuring employees have access to the same corporate enterprise tools and communications experience regardless of whether they're working from a home office, airport, hotel, or formal business location.

Equally important is the effect that consumer trends are having on IT: In less than three years, the iPhone went mainstream in more than 80 percent of Fortune 500 companies; in less than two years, Android business users reached 3 million; and in less than a year, tablets have gone from newbie to necessity among technologists and mainstream buyers alike. Furthermore, more than 3.4 billion mobile apps were downloaded in 2009, a significant number of which were related to business productivity.

These trends are having a clear impact on IT managers, who must find a way to balance the needs of their end-users while keeping costs in check and security and controls tight. Employees will use mobile devices and consumer services like Skype regardless of whether companies support them or not. Today, almost all CIOs know that the number of mobile employees in their organization is growing, and that they're no longer limited to the road warriors of old. IT managers must implement an enterprise mobility solution in order to stay competitive in a world in which business gets done 24/7, from any location and on a growing number of devices.

Companies that look for ways to support their mobile workers on PCs, smart phones, desk phones and tablets will keep costs in check, boost user productivity, deliver a consistent user experience, and maintain a single, manageable corporate identity for all end-users. An integrated client can enable single-number reach and identity across all devices, unified voicemail, call hand-off, high-quality video, presence and chat, and integrated call logs and corporate directories. An integrated client also helps companies effectively manage communications technology, while letting employees work from anywhere.

This white paper will highlight the changes in the mobile workplace; outline the benefits of unified communications (UC) and Fixed-Mobile Convergence (FMC) for mobile workers; identify the key market trends and business challenges IT managers must pay attention to now and into the future; and offer best practices for choosing a solution that will deliver clear ROI.

SUPPORTING THE NEWLY MOBILE ENTERPRISE

One of the biggest changes in the business world today is the growing number of mobile workers. This is not because people are traveling more for business (indeed,

business travel decreased by more than 14 percent in 2009, according to the National Business Travel Association). It's because they are blending home life and work life in ways we've never seen before, thanks to applications and devices that allow them to stay connected, communicate and work from anywhere.

Consumerization of IT

Until now, the new generation of mobile workers has enabled its own mobility by using personal devices and services (primarily smart phones, feature phones and, lately, tablets, as well as Skype and GoogleTalk) to conduct business. But that needs to change; the practice can save companies money, but ignores the security and control risks associated with personal adoption.

That said, simply disallowing the use of consumer technology in the enterprise won't work. As employees increasingly use mobile phones and devices to communicate and collaborate with friends and family, they will expect to use the same technology for work—and if you don't give it to them, they'll get and use it on their own. The result: employees making calls to key clients and business partners from their personal phone numbers; skyrocketing cellular costs; no logging or other security and compliance capabilities; and a lack of integration with other enterprise applications and data stores.

To solve this problem, companies should provide workers with a complete set of enterprise-grade UC tools and look at ways to extend secure, reliable communications to their mobile employees who need it, while allowing those users to choose their preferred device. By deploying and managing enterprise applications for their mobile employees, companies ensure those workers stay as productive as possible, in a cost-effective manner, and while maintaining a single corporate identity.

Redefining "Mobile Workers"

In the past, companies only had to concern themselves with true road warriors—sales people, executives and service personnel—and outfit them with the tools they needed (typically a cell phone, and either a laptop or industry/job-specific device) to do their work from the road. But today's mobile employees are different; they may not travel routinely for work, but they are working routinely from home, on their commute, evenings and weekends, and so on.

Deciding on a mobile policy will be one of the biggest budget and support challenges for companies in the years to come, and it will involve business decisions as much as technology ones. Executives must assess the mobility needs of all their employees, determine what their device strategy will be, and provide the employees with the applications needed to stay productive, securely and cost-effectively.

Companies have three options for handling mobile workers:

1. Provide (i.e., buy) one standard device in each category (smart phone, tablet, soft phone) for a growing number of employees. This lets the business own the hardware and software, and maintain security and control over identity, applications and network traffic. It also gives the company control over access to the device and the data on it should the employee leave the organization or the device get lost or stolen. This may raise the budget, and it can limit employee choice, but it ensures employees have the tools they need to do their jobs from anywhere, while providing enterprise control.
2. Let employees choose their own device from a set of standard options, and provide business applications for communications and collaboration. This gives IT control over the business applications employees use on their handhelds, but at a lower cost; and it lets users toggle between “personal” and “business” identities. But it does raise support issues for IT, which may find itself troubleshooting hardware it doesn’t own.
3. Don’t purchase or support mobile devices for the majority of employees. This option carries all the security risks discussed but has the lowest cost to IT. It also forces employees to restrict when and how they work if they do not have access to the corporate applications from their personal device.

Extending the Benefits of Unified Communications

Unified communications applications deliver a complete set of voice, data and video capabilities in a single integrated experience. A UC application includes basic and advanced telephony features, including single-number reach, integration with the corporate directory, and unified messaging; presence and chat; audio, Web and video conferencing; and integration with e-mail, calendaring and collaboration applications. The goal is to make it easy for employees to find the right person at the right time, and then use the best form of communication to get information and make decisions in real time.

But as more employees go mobile, and work in locations that are different from those of their colleagues, managers and direct reports, they need access to UC tools from anywhere. For example, if they’re working from a home office or hotel room, they can leverage a PC-based application to get presence and contact information, then place or receive calls, chats and conferences right from their desktop—without incurring long-distance charges, and while maintaining a single corporate identity. If they’re working from a remote office site, they can use hot-

desking to access their personal profile and phone number from a cubicle anywhere on the corporate campus. And if they're working from the road, they can use a mobile client for single-number dial and reach, plus easy access to corporate directories and other critical business information. The goal is to give users a choice of clients that provide a consistent set of services and experience, regardless of the device they're on or the location from which they are working.

Frost & Sullivan research shows that giving mobile workers access to a full suite of enterprise communications is one of the best ways to keep them productive regardless of where they're working, when, or on what device. In a recent survey of 200 CXOs, 86 percent of companies that have deployed unified communications and collaboration (UC&C) technologies say the tools have improved innovation within the organization; of those companies that have deployed collaboration tools, 72 percent say that they have experienced better performance; and 77 percent of C-level executives believe UC&C technologies enhance employee mobility. Furthermore, 66 percent of C-level executives believe UC&C technologies allow for faster access to people and information, which is critical in this global, 24/7 business environment.

Enterprise Checklist: Is it Time to Give Employees Mobile UC?

- Your employees, partners and customers are located in more than one place.
- You want to drive better collaboration.
- You need to cut cellular and long-distance costs.
- You want to improve employee productivity.
- You're considering UC as part of a communications update.
- You must support employees who work outside normal business hours.
- Your employees are using consumer-grade services on their own.
- You want to maintain corporate security and regulatory compliance.

Multiple User Identities: Balancing Business and Personal

When employees use their mobile phones for business, it creates issues around their identity: at any given time, they may be placing calls for work or personal reasons. The company has an interest in separating these two personas. When the employee is placing or receiving business calls, he is representing the organization; his caller ID should display a corporate number, contacts should be able to reach him by dialing a single, consistent number, and all records around the call, such as call logs, should remain with the business. On the other hand, the employee also has an interest in keeping his personal calls personal.

Deploying enterprise-grade telephony features on a mobile device or PC ensures that when the employee uses his mobile device or computer for communications, a separation exists between his business identity and his personal one. Using the mobile client or soft phone allows him to place and receive calls as an employee, from a corporate number, using directory services, enterprise call controls and logging, and single-number reach. When he's operating as an individual user, he can simply use his cell phone or consumer VoIP service, such as Skype, as he normally would.

FIXED-MOBILE CONVERGENCE: BENEFITS AND TRENDS

As companies move to support their growing number of mobile workers, many are looking at ways to save money, as well as deliver advanced communications capabilities. Fixed-mobile convergence, or FMC, can go a long way toward achieving this goal. Frost & Sullivan defines an enterprise FMC solution as any feature, service or product that allows a mobile device to connect with the corporate PBX or WLAN to extend corporate telephony features and applications and deliver cost-related benefits through the integration of wired and wireless networks.

A FMC solution can deliver one or more of the following capabilities:

- Basic PBX mobility (or PBX-to-mobile extension)
- Session redirection (device handoff)
- Single-number reach
- Single voicemail access
- Manual or automatic session continuity (call handoff)
- Mobile UC features (e.g., mobile and corporate presence/IM, UM, conferencing, etc.)

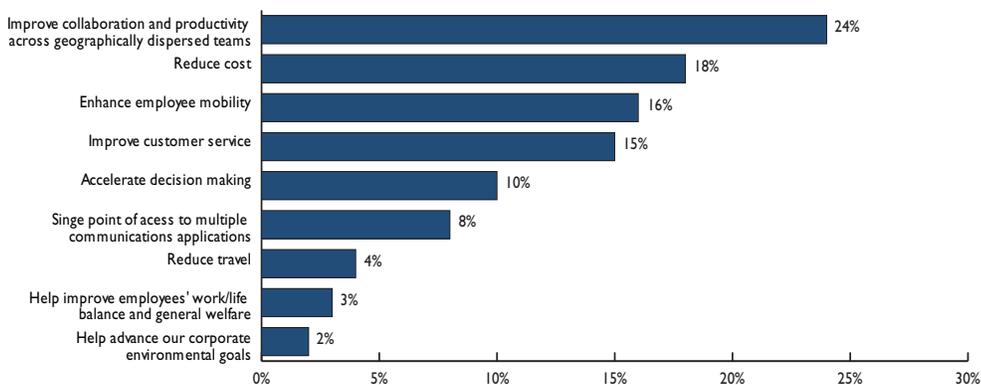
A basic FMC solution will deliver first-level PBX-to-mobile extension, including such capabilities as single-number reach, simultaneous ring, single voicemail, and call-control features (e.g., call forward, do not disturb, call hold/resume, etc.) to the mobile device. An advanced FMC solution will also deliver more advanced UC capabilities, such as mobile and corporate IM/presence, unified messaging, conferencing, and dual-mode voice call handoff (manual or automatic) between networks.

Frost & Sullivan estimates that in 2010, the overall worldwide enterprise FMC market reached 3.33 million FMC units shipped—a growth of 32.7 percent year-over-year. FMC offers significant cost savings to enterprises that deploy it, and as enterprises recognize those ROI benefits, Frost & Sullivan expects the compound annual growth rate of enterprise smart phone units shipped with a FMC solution to be around 53.0 percent between 2010 and 2014.

In a recent Frost & Sullivan survey of 200 C-level executives, half of the participants said that their organizations currently use mobile extensions, with usage higher in the healthcare, IT and financial industries. Businesses are using enterprise FMC solutions widely at all levels of their organizations, and 91 percent of users say FMC solutions are very (61 percent) or somewhat (30 percent) important to the organization.

Furthermore, 49 percent of participants identified mobile/cellular phones as one of the primary devices used for business communications, and 34 percent use soft phones as their primary endpoint. Improved collaboration and productivity across geographically dispersed teams, cost reduction, and employee mobility enhancement are cited as the top three most important benefits of using enterprise FMC solutions.

Figure 1: Top Perceived Benefits for Enterprise Mobility/FMC Solutions



The Benefits of FMC Solutions Include:

- Cost Savings through accessing the enterprise dial plan and transferring mobile calls to low-cost networks, the elimination of global roaming charges, and least-cost routing.
- Increased Productivity through increased availability and responsiveness.
- In-Building Coverage to address poor indoor cellular coverage.
- Leveraging Technology Investments such as WLAN infrastructure or a UC platform.
- Management and Control over mobile communications.

Future usage projections are strong: 92 percent of those organizations already using an enterprise FMC solution plan to use the technology more extensively or

maintain usage at the same level over the next 12 months, and 51 percent said that their budgets for enterprise FMC solutions have increased over the past 12 months. Among participants not yet using an enterprise FMC solution, 57 percent indicate plans to do so in the future.

KEY ISSUES TO CONSIDER

As companies deploy advanced mobile solutions, including FMC and UC applications, they must manage them as they would any other IT resource. But certain issues are likely to arise that are unique to mobile users, devices and applications—and IT and line-of-business managers should be prepared to handle them.

IT Support: Where to Draw the Line

When it comes to mobile users, many companies take a hybrid approach to technology deployments. Typically, organizations will allow employees to buy and use the mobile device of their choice—whether it's an iPhone, Android or BlackBerry, or even an iPad or other tablet—then reimburse them for certain charges (cell minutes while traveling, data access, etc.). But as companies install mobile enterprise applications on those user-owned devices, they must consider how, and to what extent, they will support the hardware that runs the software.

If an employee has a support issue with the mobile application, he or she will need, at the very least, telephone support. But if the application is encountering problems with the device itself—or if MIS can't resolve the issue without seeing the machine—that may require the employee to send his or her personal device to the organization for repair. The company must decide whether it wants to take on the cost of such support, as well as what guarantees and alternatives it will offer to the employee who is relinquishing his phone to the company for a day or more.

Policies and Procedures

If IT opts to deploy a UC client on an end-user device, it risks conflicts with other applications, or the operating system itself, which may interfere with performance of the enterprise application. IT cannot reasonably forbid employees from running apps of their choosing on the devices they purchase and pay for, but it can offer best-practice recommendations for running corporate applications effectively, and it can require employees to abide by certain rules and requirements before they download business applications to their device.

In some cases, employees will access enterprise applications without the express consent—or even knowledge—of IT, either by downloading a free version via an app store or by accessing a Web client via the Internet on the mobile device. Companies can discourage this kind of access, but it's unlikely they will prevent it; they are better off deploying an officially supported version of the software.

Payment and Budget

Historically, companies have purchased and issued mobile devices for only a small segment of their employee population. They have also issued desktop or notebook PCs to knowledge workers, who typically also get a desk phone and landline connection. But as the enterprise goes mobile, these budgetary arrangements need to change.

Today, some companies choose to give more of their employees a mobile device and/or a PC soft phone, but they may opt not to pay for a desk phone or landline service. Others will continue to expect most employees to use their personal mobile phone for business, but they will reimburse a certain type or level of charges, or give them access to a mobile UC client or FMC application, to boost productivity and keep connectivity costs in check.

Either way, in order to support the increasingly mobile workforce, businesses should be prepared to pay for mobile communications for more employees than they have in the past. With advanced FMC and mobile UC applications, those same organizations can keep those costs in check.

Avaya Mobility at a Glance

Avaya is one of the pioneers in fixed-mobile convergence, and it has recently announced a number of new capabilities within its mobile portfolio. Avaya mobility applications enable choice in device and application, a consistent user experience, and tight, secure integration to enterprise applications and information. This provides a clear ROI for IT and business managers.

Avaya's enterprise mobility portfolio is one of the broadest in the market, offering mobile extensions (Extension to Cellular for Avaya Aura[®] and Mobile Extension for Avaya CSI000); advanced FMC solutions (Avaya one-X[®] Mobile); dual-mode FMC with third-party vendors; advanced integrated presence across Avaya endpoints and soft clients—including Microsoft OCS—and mobile devices; and a wide variety of mobile clients.

Avaya lets customers obtain client software licenses via the Avaya UC All Inclusive bundles within its Avaya Aura Enterprise Edition packages (customers receive the UC bundle software as a free entitlement). Customers purchasing the Avaya Aura Standard Edition can purchase the UC client application suite for only \$60/user. Avaya has enhanced its offerings by adding support for a range of Apple devices and Mac OS, as well as Android, RIM/Blackberry, Symbian and Windows-based operating systems. Unified call logs, contact lists and voice messages are consistent across endpoints and soft clients. This means users can see the same communications history logs on their mobile device, their PC and their desk phone for all corporate communications.

On the back end, Avaya provides consolidated server-side UC applications, bringing management and administration onto a single, virtualized server, thereby reducing IT support requirements and operating costs for lower total cost of ownership.

Key mobility products include:

- Avaya one-X Mobile 6.1, a new release, expands its broad set of device compatibility by adding support for Android and a refreshed BlackBerry client that is optimized for touch. Both of these clients provide call-intercept to automatically route outbound calls through the PBX. The Blackberry interface also supports auto-answer of PBX call-back. The Avaya one-X Mobile client provides users with a single number/single identity for both inbound and outbound calls, even if they are using a personal device, and allows bi-directional call hand-off between desk phone/client and mobile client. Through integration with Avaya one-XClient Enablement Services, one-X Mobile users have access to a broad range of unified communications capabilities, including visual voicemail, aggregated presence, and synchronized call logs and contacts.
- Avaya one-X Mobile Lite provides a streamlined feature set through a graphical interface for accessing Avaya Extension to Cellular features. Designed for the Apple iPhone, this client offers a range of mobility features without requiring the deployment of a client server. Customers can easily upgrade from the Lite client to the full client at their own discretion.
- Avaya one-X Mobile SIP for iOS, a new addition to the portfolio, provides users access to their enterprise communications (SIP only) from all Apple iOS devices via a WLAN or cellular data network (3G/4G). It supports dial-plan integration, PSTN access, call persistence, call control, transfer call, conference call, message waiting indicator, voice over Wi-Fi, and corporate directory integration.
- Avaya one-X Communicator R6.1, the company's latest release, provides enhanced audio and UI. This rich unified communications client can be deployed on desktop or laptop computers in one of two ways: stand-alone or integrated with a client server. one-X Communicator provides access to voice calling, audio conferencing, corporate directory, intelligent presence, instant messaging, high-definition point-to-point video calling and video conferencing, and can allow organizations to integrate with other desktop productivity tools like Microsoft® Office Communicator. When one-X Communicator is integrated with Avaya

one-X Client Enablement Services, users have access to visual voicemail, conference bridge control, and synchronized call logs and contacts. Support for both H.323 and SIP end-points is available and, optionally, one-X Communicator can be deployed using a Citrix Xen App.

- Avaya one-X Communicator for Mac OS, another new addition to the portfolio, is designed specifically for Mac desktops and laptops operating in an Avaya Aura SIP-enabled environment. Flexible modes of operation enable the user to select a voice path via VoIP (using the computer for audio) or via an alternate voice path such as home phone or mobile phone. Regardless of mode selected, complete call control is achieved on the Mac.
- Avaya one-X Portal lets users access enterprise UC from anywhere—all they need is an Internet connection and a Web browser.
- Avaya Desktop Video Device with Avaya Flare® Experience offers a full-function soft client, including VoIP, video, IM, presence, and six-way conferencing on an Android desktop environment.

CONCLUSION

More and more, business is done from locations that don't meet the definition of a traditional office. A new breed of mobile employees is working from home and remote offices or on the road. They're working evenings and weekends. Often, they are using their personal mobile phone or tablet—or consumer services like Skype on their business PC—to enable communications and collaboration.

Companies must respond to this trend by making it easy for employees to reach one another, as well as business partners and customers, from anywhere, on any device, while ensuring that the employee has the same communications experience regardless of whether he's working from a home office, airport, hotel, client site, or remote office. Fixed-mobile convergence and mobile UC clients—deployed on smart phones, tablets and PCs—can help companies manage their increasingly mobile users while keeping costs low and productivity high. Most importantly, mobile UC clients enable the enterprise to maintain corporate security and personal identification privacy.



Silicon Valley

331 E. Evelyn Ave. Suite 100
 Mountain View, CA 94041
 Tel 650.475.4500
 Fax 650.475.1570

San Antonio

7550 West Interstate 10, Suite
 400,
 San Antonio, Texas 78229-5616
 Tel 210.348.1000
 Fax 210.348.1003

London

4, Grosvenor Gardens,
 London SW1W 0DH, UK
 Tel 44(0)20 7730 3438
 Fax 44(0)20 7730 3343

877.GoFrost • myfrost@frost.com
<http://www.frost.com>

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For information regarding permission, write:

Frost & Sullivan
 331 E. Evelyn Ave. Suite 100
 Mountain View, CA 94041

Auckland

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