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SIP and Wireless: Empowering the Mobile Workforce

Desk phone. Mobile Phone. Cell Phone. How many separate handsets do your mobile employees currently use? Think of the productivity gains if your corporate team only needed one phone per person—a phone that followed them wherever they went, and could send and receive calls over your internal system or a cellular network. Would that be a boost to your business?

Enter the combination of SIP and wireless communications. These two technologies, working in concert, can migrate your workforce to a much simpler and more efficient way of working. The key is using these technologies together for maximum effect. SIP stands for Session Initiated Protocol and it enables disparate phone systems to communicate with each other. If you deploy a traditional wireless network (802.11) with wireless handsets, your employees can move freely about the building, but that's it. With a SIP-enabled wireless infrastructure, a user can move throughout your corporate office—and far beyond.


There are two new SIP-related technologies coming out over the next year that enable this. The first is SIP handsets that have built in interoperability. This technology allows the phone to operate wirelessly over your corporate LAN when a user is in the building. But when the user leaves the building, they can still access your network through any public access point, such as the wireless network in a coffee shop. Once connected to the outside network, the phone can make and receive calls through the user's normal desk extension. This is a great way to cut down on cellular minutes and long distance charges.

The other new type of handset is a SIP-enabled "dual mode" phone. This is one mobile phone that can switch between cellular coverage and your internal wireless network automatically. This means that no matter where your employees go, they are connected. When a user is in the office, the handset detects your wireless network and calls are routed through your VPN. When the user is on the road, the handset switches over to cellular. This makes for the most cost effective use of your network and eliminates the need to pay for a separate landline PBX, wireless network and cell phone for your key team members. And the economies of scope are that much greater if you already plan to use a wireless network for your data traffic anyway.

The Challenges

This type of technology represents the latest in mobile communications. There are several factors you should consider to ensure that your system can support all that SIP and wireless have to offer. This includes:

Call Handoff—As a mobile user walks through your building, the handset will automatically transfer from one wireless access point (WAP) to another. A WAP is the



actual device transmitting the wireless signal to all receiving devices. You need enough WAPs to provide proper coverage within your corporate location. The wireless access point you select must also be capable of quick transfers between access points. If there is a significant lag, audio is lost and the call could be abandoned.

Feature set-Traditionally, SIP technology has provided a very limited set of calling features. But there are vendors now offering a SIP telephony infrastructure that will enable handsets to have every feature you have come to expect from a traditional landline network-such as inter-office paging, transfer, hold and more. Be sure to ask your SIP/wireless vendor what calling features they are prepared to offer.

WAP Bandwidth-Currently, most wireless access points can only handle 4-5 simultaneous calls at one time. Any more, and call quality begins to suffer. But there are new products coming into the market that can enable up to 20 simultaneous calls on one access point. Your vendor should be able to provide more information on this.

Security-There are always security concerns with voice/data information being sent over a wireless network. Encryption technology to secure your communications is available, but it can be expensive. It's best to perform a usage analysis to determine the type of information your employees are sharing over the phone, and whether secure wireless voice communications are in your best interest.

True "go anywhere" phones are coming. A SIP-enabled wireless phone maximizes your employee's calling options. And when combined with new unified communication technologies, an inbound caller can dial the normal office extension and reach an employee almost anywhere. Just do your research before deploying such a powerful technology.