



# NETWORKWORLD

## Is fixed-mobile convergence worth the bother? *FMC has supporters, but cost and complexities are a concern*

By John Cox  
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Whether fixed-mobile convergence is for you in the near-term depends in part on how you define it, but for most, there's no rush.

While a fair number of companies are testing FMC products, few are making large-scale purchases and many aren't expected to for several years at least. On top of that, mobile carriers generally are reluctant to do anything that drains revenue from cellular minutes, so don't look for them to push FMC down your throat.

To step back, it's hard to find agreement on what the term FMC even means, or on how it relates to the even more confusing term of "unified communications". Here, we're talking about FMC in two senses.

Diagram of fixed mobile convergence

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The first recognizes that many enterprise users have both a wireline desk phone and a wireless cell phone, and makes the cell phone, in effect, an extension of the corporate PBX. The second sense focuses on allowing calls to shift between enterprise wireless LANs and cellular networks: the cell phone becomes useable reliably within the enterprise, adopts some PBX features, and offloads some cell minutes to the WLAN.

The vendor white papers on why these are wonderful steps in the evolution of Mobile Man could fill the Library of Congress. One phone number! One voice mail system! Faster response time! Lower cellular bills! Improved productivity! Yada yada yada.

And you will find plenty of IT professionals who believe passionately in FMC for precisely those reasons, especially as more phones become available with both cellular and Wi-Fi interfaces. "I don't see FMC yet in large enterprise deployments, but it's getting there," says David Bucciero, director of technical services at Dartmouth College, Hanover, N.H. The college just launched a Wi-Fi/cellular test project.

"Users are saying 'here's my primary device: figure out how to make it work with everything else,'" says Jack Gold, principal at J. Gold Associates, a research and consulting firm. But these users tend to be highly mobile workers for whom frequent contact with customers or managers almost defines their job.

"Making your cell phone an extension of the PBX is easy to do," says Craig Mathias, principal for Farpoint Group, a mobile consulting firm. "And it makes an awful lot of sense. For one thing, it gives [cell phone users] access to the enterprise dialing directory."

Research in Motion has started doing just that, leveraging its acquisition of Ascendent Systems' server application to link the BlackBerry Enterprise Server and BlackBerry smartphones with corporate PBXs. Users get one number that rings simultaneously on their desk phone, a business line at home, or on their BlackBerry. It's done without any other infrastructure changes.

Wi-Fi/cellular convergence, to let your cell phone call over a WLAN or cellular network, is more complicated: you need a phone that has both cellular and Wi-Fi radios, and a WLAN optimized for voice traffic, not data traffic. A number of vendors, including Agito, DiVitas and Siemens, are offering behind-the-firewall appliances coupled with a smartphone client that enables a seamless handoff between the networks as needed. (Compare Enterprise WLAN products.)

There are early adopters of these products, as well as carrier-based alternatives, such as one from T-Mobile, using the Unlicensed Mobile Access (UMA) standard from the Third Generation Partnership Project. UMA shifts the control functions from an enterprise appliance to a controller in the carrier's network.

But FMC, however defined, comes at a cost, says Paul DeBeasi, senior analyst for wireless and mobility at Burton Group, an IT research firm. "FMC is going to cost money and make the wireless network much more complicated," he says. "You have to become, in effect, a carrier. And you have to engineer your WLAN for a new metric: call capacity."

One complication is the use of personal cell phones for business, says Rob Enderle, principal analyst with Enderle Group, a technology advisory firm. "To scale this up [to the enterprise], you have to create a 'PBX in the sky' and surround it with policies that allow the employee to use the handset for personal and business tasks while automatically and reliably separating the charges accordingly."

Undermining some interest in FMC solutions is the deployment of in-building wireless antenna systems or even femtocells, such as Sprint's Airave service. Both essentially boost the reach and quality of cellular signals throughout a building or a campus. Florida Hospital opted for the in-building wireless system from **MobileAccess** mainly to improve cellular coverage and performance for physicians, patients and visitors. There was little demand or need for anything more, says Todd Frantz, the hospital's associate CTO. "People don't want their personal cell phone tied into the [corporate] PBX," he says.

For still others, the hype over FMC is just a distraction. "There are simply way too many other, higher priority projects in our queue right now, and there isn't enough of an ROI to bump that priority," says Sam Lamonica, CIO for Rudolph and Sletten, a general contractor in Redwood City, Calif.