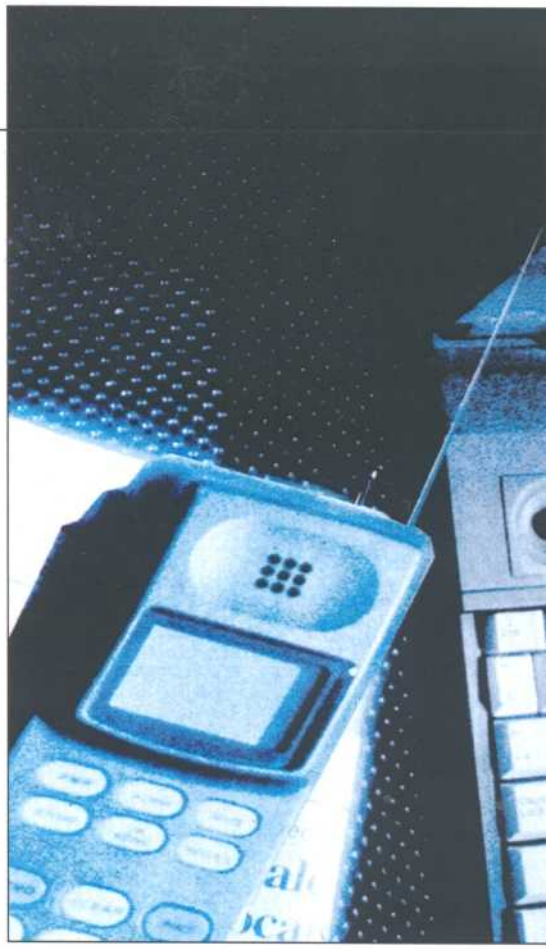
Is VoIP Ready For WiFi?



The talk has already started. As VoIP gains widespread adoption, technology providers have already started looking out to the future for the next "killer app" by combining VoIP phones with WiFi technology and cellular technology. However, the time to reach consumers and SOHO business users with life-changing VoIP technology is now. With the current infrastructure for VoIP phones already in place, the market is ready to provide the VoIP experience to a whole new range of customers. Proven systems have been set up to provide first-time users with a high-quality experience, at a tremendous value. For so-called WiFi phones that combine VoIP and cellular technologies, there are a number of infrastructure questions that need to be answered before this technology can show its full potential.

The tech industry often puts value on innovative, disruptive technologies, but it's important to remember that the most beneficial applications are often times the ones right in front of you.

At a recent industry conference, a quick survey of all of the service providers revealed that they are eager to deploy VoIP (define - news - alert) phones with Wireless LAN 802.11a/b/g technology (VoIP with WiFi). However, these providers don't see this technology becoming a mainstream play for consumers for at least two or three more years. Some of the main factors holding back the widespread deployment of VoIP WiFi (define - news - alert) phones include price, a lack of access point coverage in the home, interference, battery life, and quality of service.

Are We There Yet?

There is no doubt that VoIP WiFi phones will become a lucrative market in the future, but the question is, "Are we there yet?" These phones typically carry a price tag of $300, breaking the pain point that many consumers are willing to bear. Until WiFi phones get to the $100 price range, the market is not likely to see mass deployment. In addition, WiFi is still a technology that is generally suited solely for PC applications. Voice technology is still prone to packet drop over WiFi, which can disrupt a phone conversation and cause frustration among first-time users.

There are a number of working groups, such as 802.11r and 802.11s, that are actively working on technology that will enhance the WiFi VoIP experience. Although the current 802.11 standards on the market are evolving rapidly, the standards will most likely be completed in late 2005, early 2006. Products would not reach the market until mid to late 2006.

WiFi technology is still limited by the number of access points in the home or in other environments. In some cases, WiFi technology can require additional 802.11 access points around the average-sized home, which increases the cost of the experience. WiFi technology is also still prone to interference issues from cordless phones, microwave ovens, garage door openers and a myriad of other wireless applications found in a typical household. As such, WiFi-enabled VoIP phones are still relegated to the science experiment stage.

It could also be said that WiFi phones have the convenience of operating wherever there are hot spots, but the infrastructure is not yet to the point where WiFi phones can operate seamlessly everywhere. Perhaps WiFi-enabled communities may allow complete coverage within their own boundaries, but substantial gaps in coverage still exist between coffee shops and hotels where 802.11 connectivity is offered. Even in the cases where there have been developments of handsets that offer interoperability between WiFi access points and GSM or other cellular networks, battery life and physical size issues have limited their

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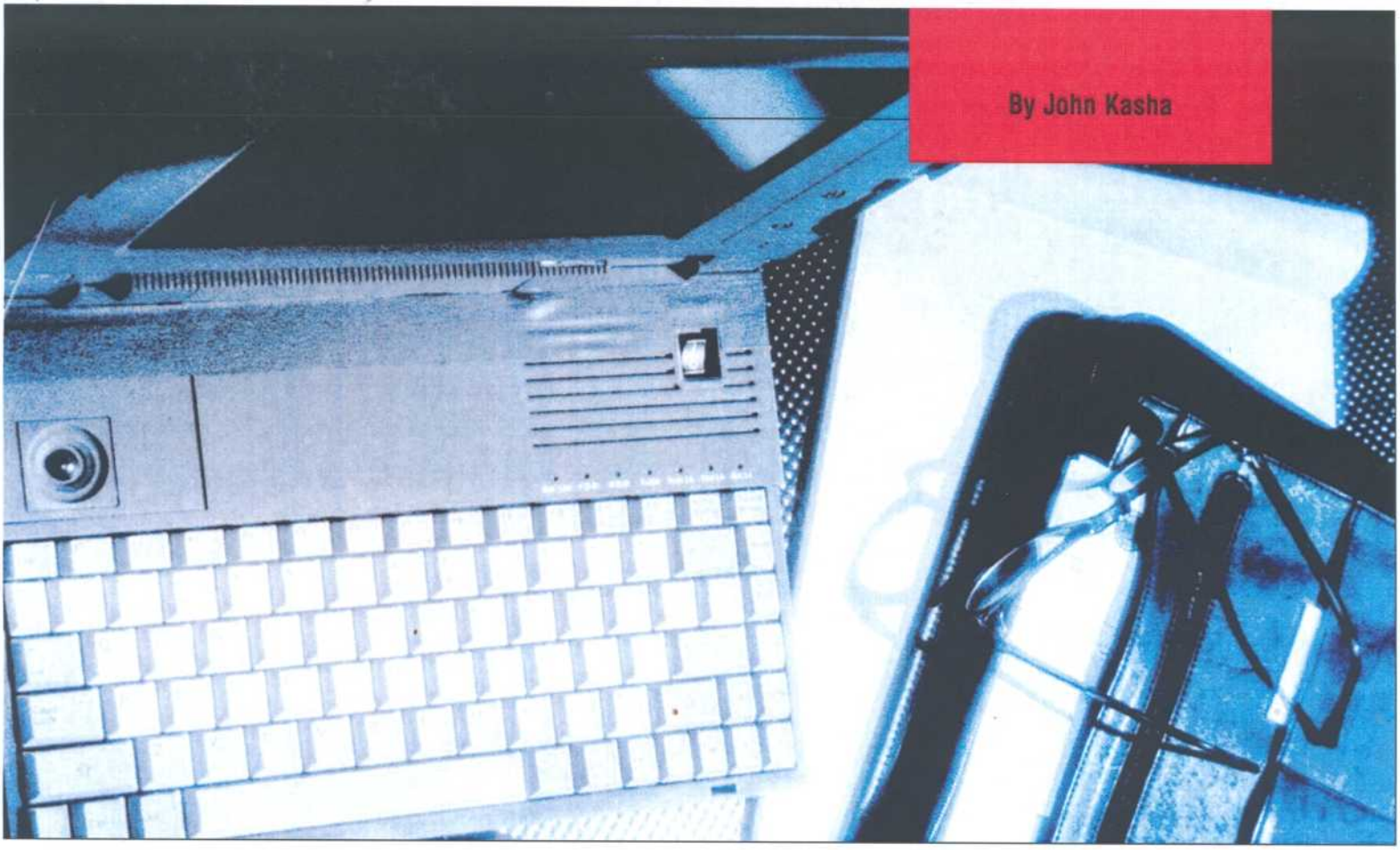
Go To Table of Contents | Go To Ad Index



By John Kasha

practicality. Under the most ideal situations, these phones can offer only about an hour of talk time, an experience not likely to promote widespread adoption.

The Answer Is Closer Than You May Think

Until VoIP with WiFi makes its big market entrance, it's important not to forget that just about everybody's cordless wireline phone can be made into a VoIP phone with the addition of a media terminal adapter (MTA). Consumers with broadband connections can today purchase a small telephony adapter box that plugs into their home network and connects to a simple "black phone," providing immediate VoIP service. Such MTAs are attractive as they preserve investment in legacy phones, too. Service providers are estimating adoption rates in the tens of millions worldwide at the end of 2005 for this type of application.

It is estimated that most households are already equipped with a cordless phone, given they have become reliable and ubiquitous. The wireless technology used in these phones, whether they are operating at 900MHz, 2.4GHz, or 5.8GHz, is inexpensive and users can easily roam their entire homes without dropping a call.

VoIP phones are at the stage in the industry's development where the Apple iPod or digital video recorders were two years ago and an area where TAs with cordless phones can excel. Consumers know about them and have a vague understanding of what their capabilities are but, until they get them into the home and into operation, they may not fully comprehend all of the benefits.

For example, when a consumer's VoIP phone rings, it can also ring his/her cell phone or send the voice message to the user's e-mail. That e-mail message can be played back over Windows Media Player or another audio playback software providing consumers with a convenient way of staying connected. Other services, like Internet applications, are readily available in existing VoIP-enabled phones. Certain buttons on a keypad can be configured to retrieve information from the Internet, like stock quotes, and display it on cordless handsets. In this sense, it is imperative that end-users have a flawless experience so that they view VoIP as a great, new, useful technology.

The most important aspect of VoIP technology, at this critical point in the technology's growth stage, is for users to have a positive experience with their first VoIP phone and service provider.

In order to realize the full potential of this growth rate, first-time VoIP consumers need to receive a seamless, trouble free experience that is very similar to the wireline phones they are now using on the public switched telephone network. Once end-users have become accustomed to these phones, they will start utilizing advanced data convergence features that VoIP enables. If, however, consumers are forced to deal with spotty coverage, reduced talk time, security leaks and high retail prices — all of the ills currently besetting WiFi phones — the VoIP rollout that we've been anticipating will get pushed back much further than we expected. WiFi phones for VoIP will be a technology to embrace, eventually. But VoIP phones using existing, successful cordless technology are ready now for consumers to enjoy without the current entanglements with WiFi. IT

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