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## The Telephone Joins the Internet

The iPod Touch has been heralded as the iPhone without a telephone. That has now changed; at the Apple App Store you can now download free applications to make free phone calls on your Apple iPod Touch.

The "Gadgetwise" column in *The New York Times* (February 2, 2010) featured iCall as its application pick of the week. The column's writer chose it because it lets iPhone users make free phone calls when they are in range of a Wi-Fi signal. The column indicated that with iCall, iPhone users can reduce their calling plans and save money. The column didn't mention that iCall also lets iPhone users partially escape the swamped AT&T cellular network.

This same application also makes it possible for iPod Touch users to make free Wi-Fi phone calls. You can learn how at <http://icall.com/iPhone/videos>. At the time this



Photo 1

column went to press, the app store also had Fring (check it out on YouTube), which also lets you make free phone calls with an iPod touch.

With iCall or Fring, your iPod Touch or iPhone turns into an Unlicensed Mobile Access (UMA) phone. A UMA phone uses VOIP (Voice over

Internet Protocol) to transmit voice and data over a Wi-Fi connection. Since the iPod Touch doesn't have a built-in microphone, iPod Touch owners need to purchase a 3.5 mm set of ear buds that include a built-in microphone on its wire. (See Photo 1.)

UMA technology won't be limited to Apple products for long. Royal Philips Electronics has developed the Nexperia 6120 chipset which performs UMA tech magic to create hybrid cell phones. The company

has a deal in place with a U.S. cellular carrier to launch hybrid phones this year. The next cell phone that you purchase could be a hybrid that combines UMA broadband Wi-Fi service with your standard cellular service.

When this column went to press, UMA phones had not yet been released. However, a new competing technology has already been announced that might steal UMA's thunder. AT&T is testing femtocell units that can be attached to current home and business broadband modems. Femtocell technology can turn a broadband modem into a micro cellular tower, enabling standard nonhybrid cell phones to have a full strength cellular signal in previous dead zones.

In a February 2010 report, the International Telecommunication Union stated that there were "4.6 billion [cell phone] users worldwide in 2009 and that figure will hit 5 billion this year." The landline telephone was once ubiquitous. It was the cornerstone for home and business communication. Many people are now turning to the Internet for their home phone connection. The question now is how long before VOIP knocks off the landline phones that still exist in people's homes and offices?

There is no doubt that landline telephone use is on the decline. To save money, many people have switched to a triple-play service plan (television, Internet, and telephone) from the company that provides them with Internet service. In these tough economic times, some people have cancelled their landline phone and rely on their cell phones for all their telephone needs. Some have turned to Skype and other VOIP phone services that require you to have your computer on to make a phone call.

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For this column, I tested Ooma, a VOIP system that promises “to deliver in 20 minutes free unlimited phone service within the U.S.” I chose this system because the company sells, rather than rents, the equipment needed to turn your home into a VOIP telephone zone.

Your computer doesn't need to be turned on for the system to work. In many ways, Ooma sells you parallel equipment to what you get if you go with phone service from your Internet provider. You have to install it yourself, you don't save any money until your landline savings equal the cost of purchase, and technical help doesn't make house calls.

The Ooma system consists of an Ooma Hub and Ooma Scouts. You connect the hub to your Internet modem, the telephone wiring in your home, and one of your existing home telephones. Photo 2 shows you what the Ooma system looks like. You connect extra phones to this system using Ooma Scouts. (Refer again to Photo 2.) If you use cordless phones, only the phone's base station must be connected to the hub or a scout to use as many phones as your cordless system supports. An Ooma hub can support only four scouts.

Tino Venegas, a tech support manager from Ooma explained to me that scouts might not work well in a large home or even in a small one, noting that “it all depends

on how the home's landline wiring was originally installed.” The hub works great, but the scouts didn't work when I plugged them directly into my house's landline wiring.

You should know what you lose if you fully replace your landline with any VOIP service. Your landline phone system has its own power supply that is impervious to usual household blackouts. All VOIP telephone systems share the same weakness—they stop working and you can't make 911 emergency calls any time you lose Internet service.

There is no doubt that the telephone service of our parents and grandparents is now in a decline. The pace at which the Internet and broadband is becoming the communication super highway for all forms of communication is quickening.

### Recalling the Facts

1. What is the difference between a femtocell phone call and a UMA phone call?
2. What are the advantages and disadvantages of replacing landline phones with a VOIP telephone system? ©



Photo 2





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