

HEARING VOICES?

The advent of Voice over Internet Protocol

(First of Two Parts)

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Voice over Internet Protocol (VoIP) is the transmission of voice traffic over Internet Protocol (IP) based networks. The IP was originally designed for data networking. VoIP or Internet Voice allows you to make telephone calls over a data network like the Internet. In other words, communication services -- voice, facsimile, and voice messaging applications -- that pass through traditional telephone lines are transported via the Internet, rather than the public switch telephone network (PSTN).

IP's success in becoming a world standard for data networking has led to its adaptation to voice networking. VoIP converts the voice signal from your telephone into a digital signal that travels over the Internet and converts it back at the other end so you can speak to anyone with a regular phone. When placing a VoIP call using a phone with an adapter, you'll hear a dial tone and dial just as you always have. VoIP may also allow you to make a call directly from a computer using a conventional telephone or a microphone.

One way to place a VoIP call is to dial the desired number, using an adaptor that connects to your existing high-speed Internet connection. The call goes through your local telephone company to a VoIP provider, then over the Internet to the called party's local telephone company. Another way is to utilize a microphone headset plugged into your computer. The number is placed using the keyboard and is routed through your cable modem.

VoIP has become popular largely because of the cost advantage to consumers over traditional telephone networks. In the Philippines as in other countries, a flat monthly fee is charged for local telephone calls and a per minute charge is made for long distance, overseas or cellular phone calls.

Using the Internet connection of both data traffic and voice calls will allow consumers to save the equivalent of one month payment. In addition, most VoIP plans do not charge a per-minute fee for long distance calls. For international calls, the savings to the user from switching to VoIP technology can be enormous as most Internet service providers in the Philippines charge only the usual flat monthly fee.

In the United States some VoIP providers offer their services for free, normally only for calls to other subscribers to the service. Other VoIP providers, though, may permit you to select an area code different from the area in which you live. This means you may not incur long distance charges if you call a number in your area code. It also means that people who call you may incur long distance charges depending on their area code and service.

Some VoIP providers charge for a long distance call to a number outside your calling area, similar to existing wire line telephone service. Other VoIP providers permit you to call anywhere at a flat rate for a fixed number of minutes.

If your service provider allows you to call any phone number in the world, this call may be made to a local, a mobile phone, a long distance or an international number. The service can even be used to speak to more than one person at the same time and the person you are calling does not need special equipment, just a phone.

A high speed Internet (or broadband) connection is required. This can be done through a cable modem, or high speed services such as DSL or a local area network. You can hook up an inexpensive microphone to your computer and send your voice through a cable modem or connect a phone directly to a telephone adaptor.

Because Internet Voice is digital, it may offer features and services not available with a traditional phone. If you have a broadband Internet connection, you need not maintain and pay the additional cost for a line just to make telephone calls.

With many Internet Voice plans you can talk as long as you want with any person in the world (so long as the other person has an Internet connection). You can also talk with many people at the same time without any additional cost. This arrangement has several advantages over traditional telephony:

- *Freer innovation.* Innovation progresses at market rates rather than the slow pace of the multilateral International Telecommunications Union ([ITU](#)) committee process, resulting in more new advanced features.
- *Lower per-call costs.* Once a network connection is in place, a phone call may have no additional charge. There are significant financial savings on running the network itself. One infrastructure carrying both data and voice, provided by one supplier, can be managed, maintained and upgraded much more efficiently than two separate networks for voice and data.
- *Lower infrastructure costs.* VoIP reduces the traditional scheme—two separate wiring systems, one for voice and one for network—to a single connection. Each network's value is maximized when the two systems are consolidated. Computer applications and communications technologies can be linked to streamline the working environment.
- *Integrated System.* VoIP allows organizations to integrate telephone, fax, e-mail and other applications to benefit from unified messaging. Integration eliminates unnecessary interruptions while ensuring that individuals always receive information in the most convenient format.
- *Stability.* A higher degree of reliability and flexibility becomes possible, as the system is used to support flexible working practices, when people work from home or in dispersed, 'virtual' teams. Using the VoIP network, team members can see when colleagues are logged on to the LAN or using the telephone. VoIP makes video-conferencing a viable and cost-effective option for dispersed team workers.
- *Improved management information.* The larger the organization, the more information that must be shared, so an efficient communications system is particularly important. The VoIP

network enables individuals to tap into colleagues' areas of specialization, by searching for experts according to specific criteria.

- *Improved customer service.* Converged call centers, or 'IP contact centers', allow agents to answer all customer enquiry mediums, including telephone, e-mail, fax, web call back, web chat and instant messaging. Customers appreciate the flexibility of interacting with an organization that can handle feedback from a range of different sources, and are more inclined to do business with those who offer an integrated response.
- *Future proof hardware.* Future proofing refers to the effort to anticipate future developments and take action to minimize negative consequences. Electronically stored data, like paper data, is subject to risk over time. Future proofing electronic data involves the selection of physical media and data formats which are most likely to ensure the continued accessibility of the original information. In the business world future proofing is one name for anticipating market trends and investing in suitable technology

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