

## What is VoIP and what it can do for You

VoIP and IP telephony are becoming increasingly popular with large corporations and consumers alike. For many people, Internet Protocol (IP) is more than just a way to transport data, it's also a tool that simplifies and streamlines a wide range of business applications. Telephony is the most obvious example.

VoIP (Voice over Internet Protocol) is simply the transmission of voice traffic over IP-based networks. VoIP is also the foundation for more advanced unified communications applications—including Web and video conferencing—that can transform the way you do business. The Internet Protocol (IP) was originally designed for data networking. The success of IP in becoming a world standard for data networking has led to its adaptation to voice networking.

Some history: although VoIP becoming more and more popular nowadays, it's actually not a new solution at all. VoIP has been around in one form or another since 1973 when it began as an experiment by the US Department of Defense (Internet also was a US Military network as you may know).

### Why VoIP is better?

The number one reason to switch to VoIP technology for telephone service is for sure *costs reduction*. VoIP has become popular largely because of the cost advantages to consumers over traditional telephone networks. VoIP based phone services offers cheaper international long distance rates which are generally 10% of what is charged by traditional phone companies. Its portability makes it a very good option and you could avoid expensive hotel phone charges and cell phone roaming charges. What is required is a good Internet connection.



### How it works?

There are many kinds of VoIP all around. Using voice chat in MSN , Google Talk, Yahoo messenger or Skype could be regarded as VoIP; but these are all proprietary systems. To talk to someone using MSN, the person at the other end also need to have MSN installed. The same applies to Yahoo and to Skype. They use their own special system that isn't open and won't connect to other systems easily.

True VoIP should really be based on the [SIP](#) system which is the recognized standard. Any SIP compatible device can talk to any other; you don't even use a PC. Any [SIP based](#) IP-phone can call another right over the internet, you don't need any additional equipment or even a phone provider. Just plug your [SIP phone](#) into the internet connection, configure it and then dial the other person right over the internet.

In all VoIP systems, your voice is converted into packets of data and then transmitted to the recipient over the Internet and decoded back into your voice at the other end. To make it quicker, these packets are compressed before transmission with codec (almost like zipping a file on the fly). There are many codecs with different way of compression and bitrate, thus each codec has its own bandwidth requirements and provides different voice quality of voip calls.

## Actual cost of VoIP

The promise of free international calls whenever you want them probably sounds a little too good to be true. There is probably some small letters somewhere in the agreement, right? Well, yes and no. Provided you only wish to use VoIP to communicate with other VoIP users, everything is very clear. But if you want to use VoIP to be able to make voip sip calls and receive incoming calls from people who don't have VoIP or you want to make outgoing calls to cellular phones or landlines, you will need to subscribe to a VoIP termination gateway and find proper ISP that provides a bridge between VoIP based phone network available from Internet and the conventional phone networks which are all around the globe.

Also for incoming calls there is a service called DID (Direct Inward Dialing) – you can rent a number in any city/country and forward it to your [SIP](#) VoIP phone or PBX. So people who has access to regular phone networks (PSTN or mobile phone networks) can dial local number (fees are the same as for local call) and reach your IP phone that could be installed in any point of the World.

## Quality of Service (in terms of IP transport quality)

Public Internet phone calling uses the Internet for connecting voip sip phone calls, especially for consumers. ***But most businesses are using IP telephony across their own managed private networks because it allows them to better handle security and service quality. Using their own networks, companies have more control in ensuring that voice quality is as good as, if not better than, the services they would have previously experienced with their traditional phone system.***

