

# VoIP

VOICE OVER INTERNET PROTOCOL

# What is VoIP?

- **VoIP (*Voice over Internet Protocol*)** is a great technology that allows you to make and receive telephone calls over the Internet and has been in the mainstream now for going on 9 years. It can also be referred to as an Internet Phone.
- **VoIP (*Voice over IP*)** enables you to make cheap telephone calls over a broadband Internet connection, (usually a DSL, broadband cable connection, or T1), instead of using your regular telephone service. You can connect to regular telephone numbers locally or in other parts of the US or Canada, or anywhere else in the world, usually all for one low price for US and Canada, eliminating long distance fees by using a VoIP service from an "Interconnected VoIP Provider", (which most VoIP providers are).

## What is VoIP? – cont'd

- In addition, you will usually have low international phone call rates to other countries. The savings can be substantial, with lower fees and taxes levied by traditional telephone carriers. Plus, most VoIP providers offer services with "unlimited" calling plans and an array of features all for one monthly fee.
- A requirement for a VoIP connection is a high speed internet connection, such as cable, DSL, T1, or even wireless, as long as the wireless provider's bandwidth meets the minimum requirements for the VoIP provider you choose and their connection is stable enough to offer a connection without **packet loss and jitter**.

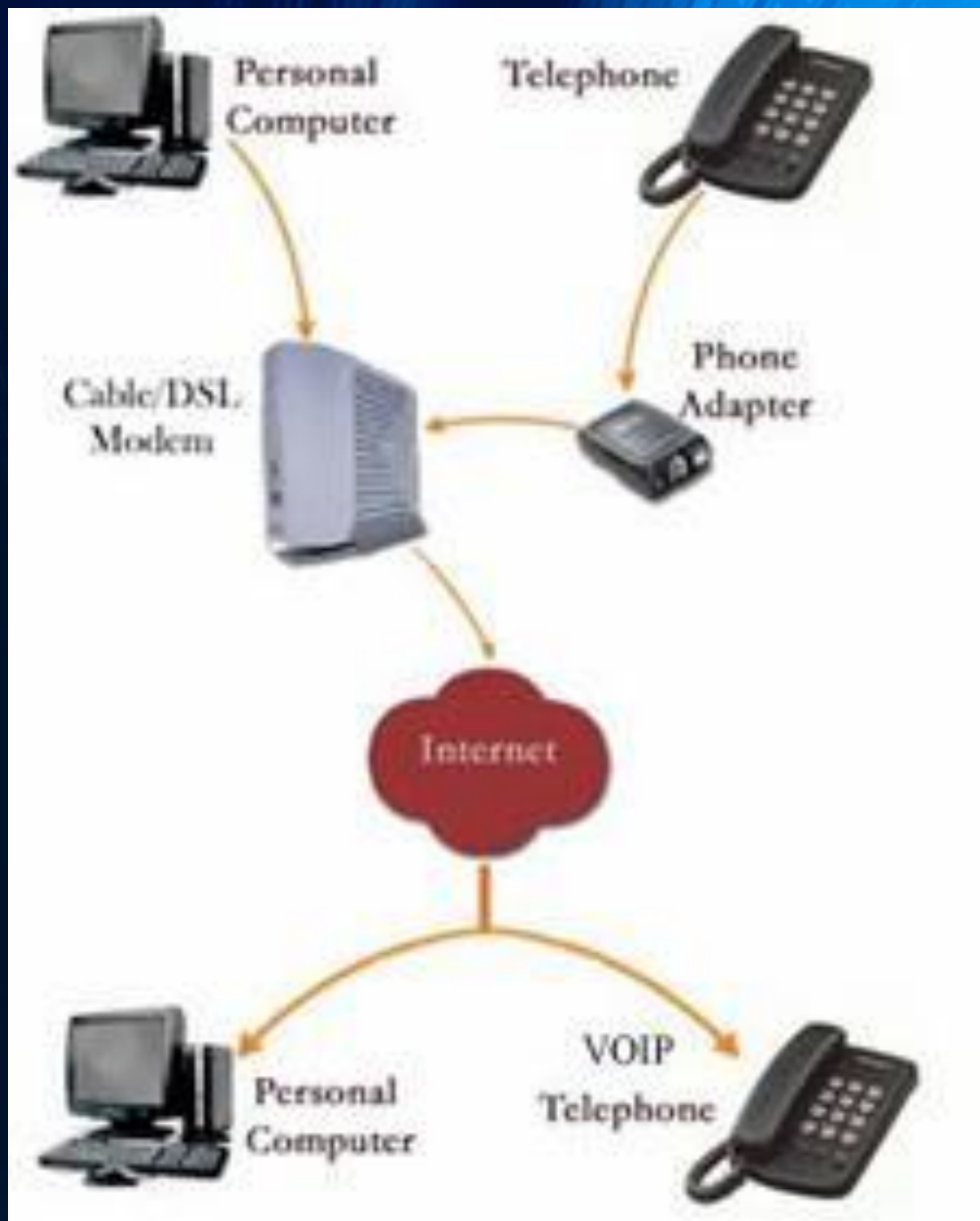
# How Does VoIP Work?

- **First, voice is converted by an ATA (*Analog Telephone Adapter*) or IP phone, from an analog signal to a digital signal.** It is then sent over the Internet in data packets to a location that will be close to the destination.
- Then it will be converted back to an analog signal for the remaining distance over a traditional circuit switch (PSTN) (unless it is VoIP to VoIP). Your call can be received by traditional telephones worldwide, as well as other VoIP users.

## How Does VoIP Work? – cont'd

- VoIP to VoIP calls can travel entirely over the Internet. Since your voice is changed to digital (so that it can travel over the Internet), other great features such as voice messages to email, call forwarding, logs of incoming and outgoing calls, caller ID, etc., can be included in your basic calling plan all for one low price.
- Many of these special features are great for the small business person who relies on their phone service to be more a information center rather than just a telephone.





# What are the Benefits of VoIP?

- First and foremost more for less money, so if you're looking for [VoIP Service Provider with Cheap Call Rates](#), including features that will make your communications state of the art you can find it. Many VoIP providers have plans that allow unlimited calls in the continental US and Canada all for one low monthly fee.
- In addition, added features such as Voice Mail, Call Waiting, Call Forwarding, a web based control panel, Voicemail received as Email, Advanced Call Forwarding features, etc., are added at no additional cost.

## What are the Benefits of VoIP? – cont'd

- International rates are a lot less than traditional telephone companies. You are not limited to just a certain local's numbers, but can even choose one from another state. In addition, you can add virtual numbers from other areas that will ring in on your primary number.



## So, the benefits of VoIP are:

- Lower monthly telephone bills; cheap Long Distance and cheap calls.
- Unlimited monthly calling to certain locations eliminating long distance charges and plans with unlimited International calling.
- Additional features; all included in your one monthly flat rate.
- Lower prices on International calling.
- Virtual numbers; numbers that ring in on a primary number and can be from other areas, even other states.
- Portability (LNP), or the ability to take your phone service with you.

# What is Required for VoIP?

- You will need a broadband Internet connection, such as DSL or cable, T1 or wireless.
- In most cases you will need an "always on" type of connection with a bandwidth of at least 128kbps on both upload and download for a single VoIP voice connection (an uncompressed voice connection will use approximately 90kbps on both the upload and download. There are connections using a compressed voice "codec" that will use less.)

# Are There Any Drawbacks to VoIP?

- VoIP is dependent on your broadband Internet connection and the quality of the voice connection for which voip service you choose will vary greatly depending on the quality of your ISP's service. Since Internet connections have become more stable, and have far more capacity than just a few years ago, this variable has improved significantly.
- **Faxing over VoIP** is not the most ideal medium, so if you are a heavy fax user, such as an attorney, mortgage broker, or appraiser, then you may want to keep at least one traditional phone line for faxing. In some cases, faxes may all fail when tried over VoIP.

# Are There Any Drawbacks to VoIP? – cont'd

- Some services, such as some Alarm systems, Tivo, credit card machines, and dial-up modems may not work over a VoIP line. These services have greatly improved integrating with VoIP, but problems can and do persist.
- 911 services; although they are mandated for VoIP providers, you still want to make verify that your service is "911 verified". Most providers offer 911 service and you will want to make sure yours does and your number is tied correctly for your physical address.
- VoIP is newer technology and although it is getting better and better, there can be occasional quality issues. Some VoIP providers are more stable than others, which VoIP service provider is best varies and depends on several different items.