Voice over Internet Protocol (VoIP)

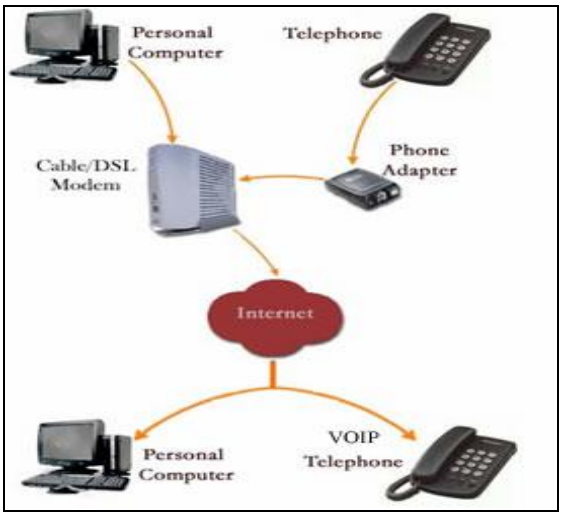
Background

Voice over Internet Protocol (VoIP) is a technology for communicating using “Internet protocol” instead of traditional analog systems. Some VoIP services need only a regular phone connection, while others allow you to make telephone calls using an Internet connection instead. Some VoIP services may allow you only to call other people using the same service, but others may allow you to call any telephone number - including local, long distance, wireless and international numbers.

How VoIP Works

VoIP converts the voice signal from your telephone into a digital signal that can travel over the Internet. If you are calling a regular telephone number, the signal is then converted back at the other end. Depending on the type of VoIP service, you can make a VoIP call from a computer, a special VoIP phone, or a traditional phone with or without an adapter. In addition, new wireless "hot spots" in public locations such as airports, parks and cafes allow you to connect to the Internet, and may enable you to use VoIP service wirelessly. If your VoIP service provider assigns you a regular telephone number, then you can receive calls from regular telephones that don’t need special equipment, and most likely you’ll be able to dial just as you always have.

Here is one example of how VoIP service works:



What Kind of Equipment Do I Need?

You may need an Internet connection, and, for many types of VoIP calls, you need a broadband Internet connection. For information on broadband Internet connections, see the FCC’s guide at **www.fcc.gov/guides/getting-broadband**.

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1-888-CALL-FCC (1-888-225-5322) · TTY: 1-888-TELL-FCC (1-888-835-5322) · Fax: 1-866-418-0232 · www.fcc.gov/consumer-governmental-affairs-bureau

Depending on the VoIP service you purchase, you may need a computer, a special VoIP telephone or a regular telephone with an adapter. If you are calling a regular telephone number, the person you are calling does not need any special equipment: just a telephone.

How Do I Use My VoIP Service?

If you use a VoIP telephone or regular telephone, you place and receive calls much like you do with regular telephone service. If you use VoIP with your computer, a telephone icon usually appears on your computer screen. Clicking the icon allows you to dial numbers from a pad, or dial a call by clicking on a contact's pre-programmed name and number. You will then hear a ring just like any other call. Computer-based VoIP services have a variety of ways for notifying you that you have an incoming call.

What Are Some Advantages of VoIP?

VoIP may offer features and services that are not available with more traditional telephone services. If you use VoIP, you can decide whether to pay the cost of keeping your regular telephone service. You can also use your computer and VoIP service at the same time. You can also take some VoIP services with you when you travel and use them via an Internet connection.

Are There Special Considerations for Using VoIP?

If you're considering replacing your traditional telephone service with VoIP, be aware that:

- Some VoIP service providers may have limitations to their 911 service. For more information on VoIP and 911 services, see the FCC's guide at **www.fcc.gov/guides/voip-and-911-service**.
- Some VoIP services don't work during power outages and the service provider may not offer backup power.
- VoIP providers may or may not offer directory assistance/white page listings.

These factors may change with new developments in VoIP technology. You should always check with potential VoIP service providers to confirm any limitations to their service, including 911 service.

With VoIP, Is There a Difference Between Making a Local Call and a Long Distance Call?

Some VoIP providers do not charge for calls to other subscribers to the service. Some VoIP providers charge for a long distance call to a number outside your calling area, similar to existing, traditional wireline telephone service. Other VoIP providers permit you to call anywhere at a flat rate for a fixed number of minutes. Your VoIP provider may permit you to select an area code for your VoIP service that is different from the area code in which you live. Calls within your VoIP area code may not be billed as long distance calls. People calling your VoIP area code from another area code, however, may incur long distance charges.

Does the FCC Regulate VoIP?

The FCC has worked to create an environment promoting competition and innovation to benefit consumers and, where necessary, has acted to ensure that VoIP providers comply with important public safety requirements and public policy goals.

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For example, due to reports that some VoIP subscribers were unable to access 911 emergency services, in June 2005 the FCC imposed 911 obligations on providers of "interconnected" VoIP services – VoIP services that allow users generally to make calls to and receive calls from the regular telephone network. (You should know, however, that 911 calls using VoIP are handled differently than 911 calls using your regular telephone service. Please see the FCC's guide on VoIP and 911 services at **www.fcc.gov/guides/voip-and-911-service** for complete information on these differences.)

The FCC requires interconnected VoIP providers and telephone companies that obtain numbers for them to comply with Local Number Portability (LNP) rules. Beginning in late summer 2010, VoIP providers, as well as wireless and wireline providers, must shorten the porting period for "simple" ports from the current four days to one business day. The new deadline applies to all simple ports – including "intermodal" ports such as wireline to wireless, wireless to wireline, wireline or wireless to VoIP, or any other combination. Simple ports generally do not involve more than one line or more complex adjustments to telephone switching equipment. VoIP providers must also contribute to funds established to share LNP and numbering administration costs among all telecommunications providers benefiting from these services.

For more information regarding the FCC's LNP requirements, see the FCC's consumer guide at **www.fcc.gov/guides/portability-keeping-your-phone-number-when-changing-service-providers**.

The FCC also limits interconnected VoIP providers' use of customer proprietary network information (CPNI) such as your telephone calling records, and requires interconnected VoIP providers to protect it from disclosure. For more information on these limits and requirements, see the FCC's guide at **www.fcc.gov/guides/protecting-your-telephone-calling-records**. The FCC also requires interconnected VoIP providers to contribute to the Universal Service Fund, which supports communications services in high-cost areas and for income-eligible telephone subscribers.

Interconnected VoIP providers must comply with the Commission's Telecommunications Relay Services (TRS) requirements, including contributing to the TRS Fund used to support the provision of telecommunications services to persons with speech or hearing disabilities, and offering 711 abbreviated dialing for access to relay services. Interconnected VoIP providers and equipment manufacturers also must ensure that, consistent with Section 255 of the Communications Act, their services are available to and usable by individuals with disabilities, if such access is readily achievable. For more information about Section 255 requirements, see the FCC's guide at **www.fcc.gov/guides/telecommunications-access-people-disabilities**.

Filing a Complaint with the FCC

If you have concerns about an interconnected VoIP provider's handling of your 911 calls or telephone calling records, making services available to and usable by individuals with disabilities, or porting your telephone number, first try to resolve the matter with the VoIP provider. If you can't resolve the matter directly, you can file a complaint with the FCC. There is no charge for filing a complaint. You can file your complaint using an on-line complaint form found at **www.fcc.gov/complaints**. You can also file your complaint with the FCC's Consumer Center by calling 1-888-CALL-FCC (1-888-225-5322) voice or 1-888-TELL-FCC (1-888-835-5322) TTY; faxing 1-866-418-0232; or writing to:

Federal Communications Commission
Consumer and Governmental Affairs Bureau
Consumer Inquiries and Complaints Division
445 12th Street, SW
Washington, D.C. 20554

What to Include in Your Complaint

The best way to provide all the information the FCC needs to process your complaint regarding any of these issues is to complete fully the online complaint form. When you open the online complaint form, you will be asked a series of questions that will take you to the particular section of the form you need to complete. If you do not use the online complaint form, your complaint, at a minimum should indicate:

- your name, address, email address and phone number where you can be reached;
- the telephone and account numbers that are the subject of your complaint;
- the names and phone numbers of any companies involved in your complaint; and
- the details of your complaint and any additional relevant information.

For More Information

For more information about VoIP, visit the FCC's VoIP web page at **www.fcc.gov/encyclopedia/voice-over-internet-protocol-voip**. For information about other telecommunications issues, visit the FCC's Consumer and Governmental Affairs Bureau website at **www.fcc.gov/consumers**, or contact the FCC Consumer Center using the information provided for filing a complaint.

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