

Understanding VoIP

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Sample of Content:

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Content:

What is VoIP? It stands for Voice over Internet Protocol. It is a technology that lets you make telephone calls over the Internet, rather than a regular phone line. Which is almost always cheaper.

In order to use VoIP, both sender and receiver need to have a "broadband" connection. This is a high-speed Internet connection usually provided by cable or a DSL modem.

Broadband modems are usually used to connect computers to the Internet, but in the case of VoIP, computers are not necessary, because now there are telephones that connect directly.

High-Speed Connection

The simplest form of VoIP is a computer-to-computer voice connection. The only requirements: a computer with a broadband connection, a headset consisting of earphones and microphone, and VoIP software.

Most VoIP software packages are free (you can download one from the Internet at versiontracker.com), and they allow you to connect to any computer that also has VoIP software. The only time that both parties need the same VoIP software package is when they are making computer-to-computer calls. There is no charge for this type of connection, and calls can be made to anywhere in the world.

VoIP software can also be used to connect to landline phones, that is, phones that are not connected directly to the Internet. This type of call is usually not free, but still costs quite a bit less than your telephone company charges. Some VoIP services also allow you to make calls to cellular phones. Parties receiving landline or cellular calls do not need any extra equipment or software.

Your Voice Becomes Data

VoIP is based on digital data transmission. So, the first step in any VoIP call is to convert the analog human voice into digital data and divide it into groups of numbers. The next step is to compress the data to reduce the data size as much as possible without sacrificing audio quality.

The compressed digital data is then divided into packets which add information about their destination and their place in the data stream.

Multi-Layer Transmission

Now you probably don't need to know about this section of techno-speak, so feel free to skip to the final section. I won't be offended.

All data sent over the Internet has discrete layers to aid in its accurate delivery. For example, a network layer specifies destination and origin addresses, a transport layer creates a connection between 2 computers, and an application layer might allow a page to be displayed correctly at the receiving end.

The transport layer used by most VoIP transmissions is called User Datagram Protocol, which is a very high-speed protocol. A commonly used application layer is Real-time Transmission Protocol, which provides information about the sequence of the data packets, so they can be reconstructed in the correct order at their destination.

Data Becomes Voice

If packets do not arrive within a certain time limit, they are dropped. This is necessary to avoid unacceptable delays in the audio stream. Even though some packets are sometimes dropped, there is usually enough information left to make the conversation understandable. The number of packets that are dropped depends on the speed of your Internet connection and the distance between the 2 parties.

Once the voice data has arrived at its destination, it is reassembled in the correct order and converted from digital back to analog -- the sound of your voice.

Ron King is a full-time researcher, writer, and web developer. Visit voip-solutions-now.com to learn more about this fascinating trading vehicle.

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