



# E-SAFE | The ModernOffice™ TECHNOLOGIES

E-Safe's Educational Series To Modernize Your Office

## “What is VoIP?”

**V**oice Over Internet Protocol (VoIP) is a phone service that is delivered to your organization over the Internet instead of from your local phone company. The steps involved are similar to traditional digital telephony but the information is packetized and transmission occurs as Internet Protocol packets over a packet-switched network. VoIP converts analog voice signals into digital data packets and supports real-time, two-way transmission of conversations. Calls can be made on the Internet using a VoIP service provider and standard computer audio systems. Some VoIP

providers may only allow you to call other people using the same service, while others may allow you to call anyone who has a telephone number—including local, long distance, mobile, and international numbers. All VoIP services require your broadband Internet connection to be active, which can sometimes cause problems for people utilizing the service. VoIP systems employ session controls and signaling protocols to control the sig-

naling, set-up, and tear-down of calls. They transport audio streams over IP networks using special media delivery protocols that encode the voice, audio, and video using audio codecs and video codecs as digital audio by streaming media. Dedicated VoIP phones in the corporate setting connect directly to the IP networks using technologies such as wired Ethernet or wireless Wi-Fi. They are typically designed in the style of traditional digital business telephones. A softphone is application software installed on a network computer that presents dial pads and digital displays to operate by mouse or keyboard.



Start with a Plan,  
Finish with Success.

## “How Can VoIP Improve My Business?”

There are many different ways that VoIP can have a direct impact on daily operations and the bottom line. Here are just a few:

**Cost Savings**—The initial investment in VoIP is much less than standard telephones because you don't have to run designated cabling for each phone. You can use standard computer equipment and networking hardware for the network and endpoints.

**Portability** —Your company's phones don't need to be tied to one location as they do with regular systems. The system recognizes the protocol for your phone, enabling you to plug into a switch at any location. Also, just about every mobile computing platform has a Skype client, which can be

utilized for face-to-face interaction from anywhere and at any time.

**Usability**—Managing your phone with the software linked to your workstation is easier than ever. You can use this software to handle inbound calls, dial outbound calls, coordinate conference calls, and even start video conferencing. Also, one single network can be used for both data and voice communications.

**Efficiency**—Techniques can be used to compress the voice data and suppress the sending of voice data during periods of silence. This enables more efficient usage of the network and lower call costs as well.

### Next Issue:

**Software as a Service (SaaS)**

#### Other Things to Know:

**Mobility** —VoIP systems can forward calls from your office to your mobile phone.

**CRM Integration** —VoIP phones can integrate with various CRM applications, making it easy to keep track of vital business information.

**Outlook Integration** —VoIP systems can email voicemail to your inbox so you can listen to your messages at any time.

**Soft Phones** —VoIP systems often provide special software to allow you to make calls right from your computer using a headset.

## “How Does VoIP Work?”

**V**oIP is a method for taking analog audio signals and turning them into digital data that can then be sent over the internet. The digital packets travel like any other type of data, such as e-mail, over the public Internet and/or any private Internet Protocol (IP) network. There are a few different ways you can use a VoIP service. You can call landline or cell phones or you can call computer-to-computer. Users of the VoIP phone system simply plug their IP phone into the nearest LAN port. Then, the



IP phone registers automatically at the VoIP phone system. The IP phone always keeps its number no matter where you plug it in.

With VoIP, voice data can be compressed if necessary and sent over

the network in User Datagram Protocol (UDP). The advantage of VoIP is that one high-speed network can carry the packets for many voice channels and possibly share with other types of data at the same time. A single high-speed network is much easier to set up and maintain than a large number of circuit switch connections. The UDP is then used to transmit voice data over the VoIP network. Then, the signaling invite message is used by the VoIP phone that initiates a call to inform the called party that a connection is required.

## “What’s My Investment In VoIP?”

**V**oIP allows both voice and data communications to be run over a single network, which can significantly reduce infrastructure costs. Also, you don’t have to invest in any networking equipment for the phone system. This is because standard computer equipment and networking hardware can be used for the network and endpoints. This also occupies less physical space. As mentioned above, more efficient usage of the network can result in lower call costs, which can directly have an effect on the bottom line. Most VoIP companies are offering minute-rate



plans structured like cell phone bills for as little as \$30 per month. On the higher end, some offer unlimited plans for \$79. With the elimination of unregulated charges and the suite of free features that are included with these plans, it can be quite a savings. Most VoIP packages includes features that normal companies charge extra for, including caller ID, call waiting, call transfer, repeat dial, return call, and three-way calling. If you are seriously considering VoIP, there are many different features other than the ones mentioned that can increase productivity and efficiency across your organization.

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Want to Learn More About  
VoIP or E-Safe’s  
Modern Office Series?

Contact Tim Steinour at  
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