Technology: Communication in "The Cloud": Skype, GoogleTalk, and Google Voice

Submitted by Marisa Ramirez, Robert E. Kennedy Library, California Polytechnic State University–San Luis Obispo; edited by Nancy R. Glassman, AHIP

In recent years, several free Internet-based phone services have emerged. Voice over Internet protocol, or VoIP (pronounced *voyp*), converts sound into digital signals, allowing phone calls to be placed using an Internet connection instead of a regular phone line. Other technologies simplify the management of numerous phone numbers. Librarians are incorporating these tools into their repertoire of tools to facilitate more robust communication with colleagues, patrons, and students.

Skype, a free computer software download, makes calls using VoIP. With an Internet connection, computer microphone, and speakers (built into many computers), Skype-to-Skype calls can be made without charge to anyone in the world. For a nominal fee, Skype users can place calls to non-Skype phone numbers. Skype offers many features, including instant messaging, screen sharing, and conference calls for up to twenty-five participants. With a webcam, users can video chat one to one. Skype also enables document sharing, which is useful for sending files that are too big for office email clients. A Skype application is also available for mobile smart phones with a WiFi connection or mobile data plan.

GoogleTalk is a VoIP technology that leverages a Gmail contact list as a phone contact list to make calls directly from Gmail. A Gmail account is required to use Google Talk. With an Internet connection, free calls can be placed to landlines and mobile numbers in the United States and Canada, and free computer-to-computer calls can be made anywhere in the world. The voice/video plug-in on a computer offers video and audio conferencing, instant messaging, and file transfer. The application requires Active-X, which some workplace browsers block. Screensharing is not built into the software, but users can install a third-party plug-in, such as Yuuguu. Currently, the GoogleTalk app for smart phones is only supported on the Apple iPhone, Nokia 770, and Blackberry.

Before using programs like Skype or GoogleTalk to conduct calls, it is necessary to run a call quality diagnostic test on computer speakers, microphone, webcam, processing speed, and Internet connection. While these services have built-in echo canceller programs that detect and reduce echo during calls, sound quality is best when conducting the call in a quiet environment. A USB headset is recommended for the best voice quality.

VoIP is subject to bandwidth availability, so call quality may suffer if the connection is not optimal. These services do not allow calls to be placed with emergency services. It is important to have alternative communication options available that can support 9-1-1 calls. Some firewall software may block Skype or GoogleTalk. Both services have instructions for configuring firewall settings. In terms of security, note that Skype is secure sockets layer (SSL) protected, but the GoogleTalk desktop client is not.

Unlike Skype and GoogleTalk, Google Voice is not a phone service, but a web-based application that simplifies the management of numerous phone numbers. Google Voice works with mobile, home, and work phones, as well as VoIP lines. There is nothing to download, upload, or install. Calls do not need to be received or placed using a computer. Google Voice assigns a phone number to a user, not to a device, so when an individual calls that number, it will ring all registered phones at the same time. Customizations can be made based on the caller or the time of day. Google Voice also has voicemail management features, including advanced call screening and a voicemail-to-text functionality. There are reports of uneven transcription quality, but this is a developing feature that should improve. Google Voice is an especially handy service given that phone numbers often change, particularly with the purchase of a new phone, a move, or a mobile carrier switch. Despite those changes, the Google Voice number always stays the same.

These communication technologies can be useful in assisting with work, teaching, or other professional responsibilities. With audio conferencing features, both Skype and GoogleTalk make it easy to connect with students and colleagues, and to conduct business meetings. Screen sharing, a built-in functionality in Skype, can be particularly useful for collaboration in real time or for long-distance instruction. Google Voice is valuable to those who juggle multiple phone services, so that one can be reached at any time, from any location, and from any device.

Resources

Federal Communications Commission Voice Over Internet Protocol: www.fcc.gov/VoIP/

GoogleTalk: www.google.com/talk/

GoogleTalk and Skype Comparison Table: www.cgxchange.org/collaboration-tools/google-talk-and-skype-comparison-table

Google Voice: www.google.com/voice/

"Google Voice: 5 Reasons to Use It, 5 Reasons to Think Twice" PC World: www.pcworld.com/article/167424/google_voice_5_reasons_to_use_it_5_reasons_to_think_twice.html

Skype: www.skype.com

USB Headsets: www.google.com/talk/accessories.html