Exploring the Contrasts of VoIP Phone Services

Bala Dhandayuthapani Veerasamy

Department of Computing, College of Engineering, Mekelle University, Ethiopia
dhanssoft@gmail.com

Abstract. A Voice over Internet Protocol (VoIP) is a protocol for transporting voice conversations across a data network. It is an emergent trend on Information and Communication Technology (ICT). This paper consist of connectivity, equipment, provider, cost factors, voice quality and phone book are the exploring contrasts among VoIP phone services that assist people to prefer VoIP phone services.

Keywords: Analog Terminal Adapter, Integrated Services Digital Network, Public Switched Telephone Network, Voice over Internet Protocol, Wireless Fidelity.

1 Introduction

Public Switched Telephone Network (PSTN) [1] is reachable by dialling a number. Instances on interconnection with PSTN is inappropriate, people have an expectation to reach the world at large. Integrated Services Digital Network (ISDN) [1] is a digital network, which divides a line into multiple channels to place simultaneous calls. VoIP services [1] receive real telephone number, with the area code that depends upon VoIP providers. They will route calls over VoIP infrastructure over the PSTN. If you place call to different countries/states/cities, it can be worthwhile at the same rate as local calls.

2 Types of Telephones Used in VoIP

2.1 VoIP Hard Phones

VoIP hard phone [1] can be seen, touched and linked with network cable. The RJ-45 connector on hard phone is an Ethernet port used to communicates over network with other IP based device on network. This phone includes server that keep tracks of everybody's telephone number, voice mail and gateway to PSTN for off-net calling, and router establishing connection to other VoIP phones on the network on-net calling.

2.2 VoIP Soft Phones

If computer is connected to a network using TCP/IP, you have the capability to run a VoIP soft phone [1]. Soft phones are software's, which enables us to do everything through computer. To dial a number on soft phone, you can either use mouse or keyboard.

V.V Das et al. (Eds.): BAIP 2010, CCIS 70, pp. 393–395, 2010.

2.3 VoIP Wireless Phones

VoIP wireless phones [1] will have a limited range and are strictly tied to corporate networks. One thing to watch for in IP wireless phones is whether they are WiSIP (Wireless Session Initiation Protocol) compatible or not. If they are, the phones can include quite a few features not normally available, such as the ability to connect WiFi (Wireless Fidelity) networks.

3 VoIP Phone Services

3.1 Internet VoIP Phone Services

Internet VoIP phone services [2] can provide phone services over the Internet. In home, you would have Analog Terminal Adapter (ATA), which enable phone handsets to work with digital VoIP. VoIP provider has softswitch, which acts like central office to route calls to/from phones. There are subscriber databases, voice-mail servers and gateway to the public switched telephone network for off-net calls. This call originates or terminates on a different network than the broadband phone service provider's. A phone number assigned will be assigned for dialing that almost identical to PSTN. AT & T CallVantage, EarthLink trueVoice, Verizon Voicewing are example for Internet VoIP service providers.

3.2 Cable VoIP Phone Services

Cable VoIP services [2] are replacement for PSTN line. Broadband cable modem usually serves dual role, also acting as terminal adapter. An Internet VoIP provider has softswitch, which acts like central office to route calls to/from phones. There are subscriber database, voice-mail server and gateway to PSTN for off-net calls. This call originates or terminates on different network than the cable VoIP service providers. A phone number assigned will be assigned for dialing that almost identical to PSTN. Cablevision Optimum Voice, Charter Telephone and Cox Digital Telephone are example for cable VoIP provides in USA.

3.3 VoIP Chat Services

VoIP chat services [2] works like Instant Messaging (IM) software's that are often referred as PC-to-PC calling. The terminal adapter function is provided by a desktop or laptop computer. Broadband Internet access provides connection to VoIP chat provider. Google Talk, MSN Messenger, Skype, Yahoo Messenger are example of VoIP Chat services.

4 Contrasts of VoIP Phone Services

Table 1 shows the contrasts among VoIP phone services, which include connectivity, equipment, provider, cost factors, voice quality and phone book. This assists people to prefer VoIP phone services.

Table 1. Contrasts of VoIP Phone Services

Contrasts	Internet VoIP	Cable VoIP	VoIP chat
Connectivity	Works similarly to a PSTN line and uses existing handsets. Can be added as an alternative line to a primary PSTN line.	Works similarly to a PSTN line and uses existing handsets. Can be added as a cable (TV) line to a primary PSTN line.	Available anywhere you take laptop. Requires Internet connection to place phone calls.
Equipments	Terminal adapter used (Analog Terminal Adapter - ATA).	Broadband cable modem usually serves instead of terminal adapter.	Terminal adapter function is provided by a desktop or laptop.
Providers	Choose from a number of providers.	Limited choice of providers.	Choose from a number of providers.
Cost factors	Cost is low.	Cost is low.	Cost is free or cheap.
Voice Quality	Voice quality can be affected by traffic.	Voice quality can be very high.	Voice quality varies from good to poor.
Phone Book	Can often keep existing phone number.	Can often keep existing phone number.	Can often keep existing conduct list.

5 Conclusion

ICT is a growing recent technology, which offers wide scope of providing connection to communication. One of the top most technologies includes VoIP. This paper emphasizes three types of phones and services. As a result of the exploring contrasts, people can prefer the VoIP phone services with no trouble.

References

1. Kelly, T., Peterson, D.: VoIP for Dummies, pp. 141–152. Wiley Publishing Inc., Chichester (2005)
2. Doherty, J., Anderson, N.: Internet Phone Services Simplified. Cisco Press (2006)