VoIP (Voice over Internet Protocol)

Comment:

PhoneWorld currently does not offer nor recommends VoIP calling due to a number of privacy and security concerns as well as some technical issues outlined below. The disadvantages clearly outnumber the advantages - particularly for corporations, UN-type institutions, diplomatic services, the legal and financial community.

Moreover, internet calling is not 'free'. Whilst domestic calls are frequently free of charge, customers still have to pay termination charges when calling mobiles or international.

Additionally, PhoneWorld rates are substantially discounted. Thus VoIP would generate only marginal cost advantages given all the additional hardware and servicing costs associated with this technology.

**KEY DISADVANTAGES**

**Dependence On Power And Internet**

One of the main **VoIP disadvantages** or limitations is that VoIP Telephony needs both power and internet to work. When the power goes out, you don’t have VoIP.

The same occurs when the ISP (Internet Service Provider) doesn’t have power or is down for maintenance. In this situation, if you don’t have an additional landline phone, you are left with no means of communication with the outside world.

Here is where the traditional phone line scores over the VoIP telephone system. Even when there is no power in your house or office, your traditional landline phone works as it is powered by the electricity at the phone company.

**Emergency Calls**

Power outage may not be much of a problem if it is for a short duration, but this can cause severe difficulty if you want to make an emergency call during this time. One way to get around this problem is to have a back-up power system or maintain a regular landline phone for such emergency situations.

Another area where your traditional phone has advantage over the VoIP telephone is that when you dial Emergency numbers on it, you are immediately connected to the nearest PSAP (Public Safety Answering Point), a physical location where emergency telephone calls are received and then routed to the proper emergency services.
**Home Security**
If you have a home/office security system which runs on your traditional telephone line, it will shut down when you replace your landline phone with an internet phone. The solution here is to go for a VoIP-compatible or independent wireless security system.

**DSL Internet Connection**
If you have broadband DSL connection coming through a wired telephone line, you will have to replace it with cable broadband when replacing your landline phone to achieve adequate bandwidth.

**You Lose Your Phone Number**
Still another VoIP disadvantage is that when you give up your regular phone in favor of an internet phone, you get a new phone number. You have to inform your relatives, friends and business contacts about this change.

**PC Power**
One of the advantages of VoIP is that you can make a VoIP call and surf the internet at the same time. This can turn into a VoIP disadvantage if your PC has limited process capacity. Your call can be affected or totally crash if you are downloading a big file or running a program that needs lots of process power.

**VoIP Security**
Still another VoIP disadvantage is that VoIP can suffer the same security threats that your PC does – **viruses, identity theft, phishing and spam**. If you have been using your PC to surf the internet you know that there are ways to safeguard yourself against such threats. It is the same with VoIP.
There are other technical issues to consider:

VoIP calls typically require 24kbps to 90kbps of bandwidth (200kbps is ideal), but video calling and conferencing can require 3 to 20 times more bandwidth. In planning for your network, estimate how many simultaneous calls your organization expects to have at any given time and multiply those calls by 200 kbps.

Assuming you have 10% of the organization on the phone at any given time, you may want to calculate optimum bandwidth needed. As an example, if you have 20 employees and anticipate 2 simultaneous calls at any given time, the network would ideally have 2*200kbps, or 400kbps of bandwidth dedicated to VoIP calls. Note that if your company heavily utilizes your network for bandwidth-intensive activities such as streaming video, you should account for that traffic as well.

Here are the typical issues associated with a network with 'under-allocated' bandwidth:

**Packet Loss** generally occurs when there’s not enough bandwidth on your network (usually <24 kbps) for an acceptable call to take place, though hardware issues and Internet connectivity problems can also lead to this. Packet loss cause gaps and stutters in your call.

**Latency** refers to the amount of time it takes a data packet to reach its destination. The lower the latency, the clearer your call will be.

**Jitter** measures how much latency varies within your network, and it is often caused by network congestion and route changes.

Finally, firewalls can also complicate communications over a VoIP network. Firewalls sometimes perform Network Address Translation (NAT). Disabling NAT traversal technologies is not recommended due to security concerns.

Don’t forget also that VoIP modems are online 24 hours and consume ‘electricity’!! Experience tells us they have to be replaced all 2 to 4 years at a substantial cost.

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