

## **VOIP** (Voice over Internet Protocol)

VOIP is the hype of the communications industry and is the number one topic I am being asked about. This is an attempt to clarify the many complex issues associated with this topic in the business environment.

Wyatt Communications Inc is focused on bringing the latest technology available to our customers. The market we service is primarily made up of small to medium sized businesses of 10 to 50 phones. The question is: When is the proper time to deploy new technology to the market we service?

VOIP is a term that can mean many things and the application must be defined to understand how it relates to your business.

**Digital Trunking** replaces standard telephone lines.

- ◆ **Benefits:** There can be a great cost savings in digital trunking and many features you pay extra for on telephone lines, like Caller ID and call forwarding, are standard with digital trunking.
- ◆ **Disadvantage:** Service may be interrupted during a power outage. Extra equipment is required at the customer site. Digital trunking **cannot** be used for elevator phones, fire and security systems, etc.
- ◆ **Recommendations:** Digital trunking is great, but you might spend the extra money and leave a fax or credit card machine on a standard line for emergencies. On average we have been able to reduce our customers' phone bills by as much as 30%.

**Networking** of multiple locations

- ◆ **Benefits:** If you have multiple offices, using VOIP technology to connect these locations together can have many advantages. Communication between offices is simplified by helping your employees be more productive. If your office locations cover a large geographic area, great savings can be seen in the elimination of long distance calling. The T1 circuit required can also be used for networking your computers in a wide area network (WAN) greatly increasing your data security.
- ◆ **Disadvantage:** A dedicated point to point T1 is recommended to obtain the greatest quality and reliability. Routers have to be able to give priority to voice over data.
- ◆ **Recommendations:** A study of your applications, office locations, and data network needs to be analyzed to cost justify this application.

## VOIP Phone Systems

**There are two different categories VOIP systems and Converged systems.**

**VOIP Phone Systems** are systems that with phones that connect to computer network cabling and use a network address for each phone. Some manufacturers offer soft phones that can run on a notebook computer and connect to your system from remote locations as long as high speed internet connections are available.

- ◆ **Benefits:** Adds, moves, and changes in many cases can be performed by IT departments. Connectivity from remote locations with high speed internet connections through soft phones or IP phones for remote offices.
- ◆ **Disadvantages:** VOIP systems normally cannot match the feature package available on traditional systems. Wyatt Communications believes a VOIP system should have its own cabling infrastructure. VOIP systems require managed switching equipment with power over Ethernet capability. Battery Backup units need to be in place to support all switching equipment. Cabling systems can get complex since data cables have a maximum length of 100 meters. Integration of analog devices such as paging systems, credit card machines, fax machines, stamp machines need special equipment to integrate into VOIP systems. Features may be phone based instead of system based.
- ◆ **Recommendations:** VOIP phone systems are the wave of the future. Define your applications, do a network analysis of your cabling infrastructure, make sure your switches and routers meet the specifications of the VOIP system, and ride the wave.

**Converged Phone Systems:** Converged systems support VOIP, SIP, digital, and analog technology.

- ◆ **Benefits:** Many traditional phone system manufacturers have headed in the direction of integrating VOIP applications in their traditional phone equipment, creating a converged platform. The main advantage in the feature package is more robust with greater options and flexibility. The features are normally system based (server) not phone based (peer to peer). Digital and analog devices can use the existing cabling system and are more cost effective than the VOIP phones. A single battery backup system at the phone server is all that is required to ensure service during power outages. VOIP applications can be applied on an as needed basis reducing the cost of the overall system and infrastructure.
- ◆ **Disadvantages:** Adds, moves, changes are not plug and play and either require vendor assistance or IT people to be trained on the system. VOIP applications may not be as flexible as a true VOIP system.
- ◆ **Recommendations:** These systems offer the greatest value for the investment. They give you greater flexibility. Manufacturers of these systems have decades of experience and understand the applications needed in a business environment. They may not be as flexible in a data environment, but will give you years of dependable service.

## Conclusion

Converged systems are the best investment. The manufacturers that are producing converged systems normally have many years experience and a higher understanding of telephony features and reliability. Converged systems give you greater flexibility, and are more cost effective.

Manufacturers that are producing VOIP only systems typically are data manufacturers that are entering the world of Telephony. They do not understand many traditional telephony applications and are coming from an environment that expects you to replace your infrastructure every 3 to 5 years.

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