Vision Voice Vantage, Inc.

THINKING OUTSIDE THE BOX IN CUSTOMER SERVICE

Inside this issue:

What is VOIP

So your boss just came into your office and announced that your firm is going to a VoIP phone system and you need to prepare for that as if this means nothing to be concerned about. After all, that is what the salesman told him....**it is just like the current phone system.** Now to put this in context, you are an IT professional that has always been concerned with hardware, software, databases, security and applications. Nowhere in your job description is phone technician or communication specialist. You have seen the "Vonage" commercials that play over and over on TV and have heard many companies are now going to this method of phone service but you immediately have many questions...

☎ What is VoIP?

☎ How is it different from our current phone network?

☎ Are there differences in VoIP networks?

☎ Are my current devices connected to the existing phone network going to work on the VoIP network?

☎ What does any new device need in order to be connected to the VoIP network?

☎ How do I define the VoIP network that I have?

What is VoIP

VoIP is an acronym that stands for Voice over Internet Protocol. This is the communication protocol and transmission technique for the delivery of voice communications and various multi-media sessions over the internet using the standard IP protocol.

Early providers of this technology have always tried to mirror the architecture and functionality of existing legacy telephone networks. VoIP does not use traditional phone lines; your devices connect to your Ethernet network to obtain access to the internet.

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Instead of tones and voltage switches, VoIP systems use special network protocols to control the processing of calls and audio software which encodes speech and allows its transmission over an IP network as digital audio.

How is VoIP Different From Your Current Phone System

The obvious difference is that instead of phone lines and PBX hardware you will have IP network devices and Ethernet cabling. Once operational, you would be placing a phone call in much the same way that you do today over the public switched network. Companies are now moving to VoIP because of the availability of inexpensive bandwidth and the low costs that VoIP technology can provide. Businesses are migrating from traditional copper-wire telephone systems to VoIP systems to reduce their monthly phone costs; however, there are issues as well as benefits.

Communications on the IP network is inherently less reliable in comparison to the circuit-switched public telephone network. It does not provide a network-based mechanism to ensure that data packets are not lost, and are delivered in sequential order. Another issue to note is security. VoIP telephone systems are as susceptible to attacks as other internet-connected devices. Not only can they be hacked but it is possible for others to eavesdrop on a phone conversation. There are open source solutions, such as "Wireshark", that facilitate sniffing of network traffic including VoIP conversations. Securing the content of conversations from malicious observers requires encryption and cryptographic authentication which is sometimes difficult to find at a consumer level. A third challenge is the configuration of firewalls and other network equipment to allow the routing of VoIP traffic to and from the internet.
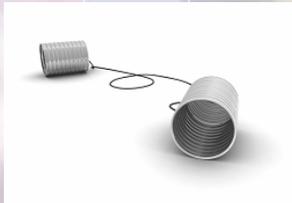
Are My Current Phone Devices That Are Currently Working on my PBX Going to Work with the VoIP System

There are two major considerations to be concerned with here, connectivity and functional capability. First is the actual physical connection itself. Let's say you have an existing fax machine or ODTVision VRU which has internal telephone cards with standard analog ports to connect to traditional phone lines. You will either need to upgrade the equipment (possible with the ODTVision) or use a converter box (VoIP SIP FXO gateway) that simulates analog lines. Once provided, the phone line from the gateway can ring and your device off the simulated analog port of the gateway now has a connection and is working. That's great, but now you will need to know if that connection will provide all of the functionality you need. You may not be able to put a call on hold or more importantly, be able to implement a call transfer.

Every VoIP gateway device is different in the functionality it provides and the requirements of its application. You will need to work closely with your VoIP equipment vendor to assure that your configuration will meet both connectivity and functional requirements of your existing equipment.

Whenever possible and economically feasible it will be best to implement I/O devices that were made for VoIP rather than converting analog equipment.

How Do I Define My VoIP Network

Each VoIP environment is different and we need to define the connection parameters and application requirements in order to set up the

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http://www.ibmsystemsmag.com/ibmi/productnews/

ODTVision VRU in an all digital environment. For example, some VoIP systems can do call transfer and some can not. If your VoIP network does not do call transfer and your VRU application requires call transfer out to a live representative, you will have to use a workaround. The ODTVision VRU can accomplish that by the addition of VoIP line re-sources so that the incoming call can be transferred via the outbound VoIP channels. In most cases we can provide functionality missing in some VoIP systems if we are aware of it when we spec your system and begin the design of your application.

Proof of Concept

In order to define the VoIP environment and determine its functionality, we have partnered with ExceleTel to provide a Proof of Concept Service. What takes place is ExceleTel personnel make arrangements for you to load temporary testing software on a PC on the network that has access to the VoIP system. They then schedule a conference call/support meeting where they use this software to identify the configuration parameters of your VoIP network that the ODTVision VRU will use to connect to your VoIP system. They will also be able to identify whether your VoIP system supports call transfer or if you need to purchase addition line resources in order to do call transfer. This is a required billable service that needs to be done prior

to the installation of the ODTVision VRU in a VoIP environment.

How Do I Configure the ODTVision VRU for VoIP

The ODTVision for VoIP includes a soft-ware component for the configuration of the VoIP connection. You first bring up the "Comisdn" configuration program.

Select the network then the account tab to load the SIP values obtained from your VoIP provider.

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Get Your Own Demo Today

Contact us to get your own demonstration of the ODTVision Voice Response Unit. This demo application is a simplistic order entry and shipment status system which is running off a Microsoft Access database. The demo is in the test mode and you will be using the "Test Phone" feature of the ODT VISION VRU to simulate a phone call to the data.   Manuals and case studies are also available on the web site.

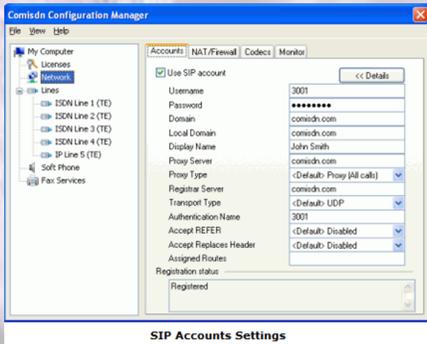### Improving Customer Service Affordability

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Conversion of Existing ODTVision Applications to VoIP

ODTVision users converting from analog systems will see a few differences. If your application is allowing users to transfer out of the IVR self-service application to live customer service representatives, you will need to determine if the new VoIP system allows call transfers. If so, you will be using the normal blind transfer. There is a new syntax called "Transfer" to initiate that call transfer. If your VoIP environment does not allow call transfer, we do have a work around where the inbound call is actually conferenced to an outbound port of the VoIP interface. Those two VoIP resources are linked together to accomplish the call transfer. This is different from the normal blind transfer you were doing but in effect provides the same function.

In addition, the voice file format for a VoIP system is different from the format required by your system's Dialogic cards so you will have to either re-record or change the format of your application's existing voice files.

Characteristics	Dialogic	VOIP
Audio Sample Size	8 bit	8 bit
Channels	Mono	Mono
Audio Sample Rate	11 kHz	8khz
Audio Format	PCM	u-Law

Final Considerations

In conclusion, yes VoIP is a different beast and there is more to know then with standard analog connections. With a little planning and the right set-up, you can accomplish all the tasks required by your IVR application. You just need to define your environment and know what you are working with from the beginning of the project. When evaluating a move to VoIP, please be careful to consider all possible issues as well as potential benefits ◘