Vision Voice Vantage, Inc.

THINKING OUTSIDE THE BOX IN CUSTOMER SERVICE

How to Design and Build an IVR Application using the ODTVision VRU

The ODTVision Voice Response Unit (VRU) is a customizable interface that allows the end user to create Intelligent Voice Response (IVR) applications to provide self-service telephony solutions. This IVR application cam then turn any phone in the world into a terminal to your data. There are whole host of reasons to add this form of self-service:

- To create savings by reducing the cost by using a VRU vs. live personnel
- To filtering off routine calls so the existing live personnel is more efficient (stretching staffing)
- To be able to offer a self-service solution on a 24/7 basis
- To increase the number of concurrent calls
- To monitor and log all activities
- To support users that don't speak English
- To support users who can't or won't use a web interface
- To avoid the cost and security issues of a web interface

Building your IVR application is like putting a puzzle together. There are many elements that come into play and you must understand each component that will be a part of the telephony solution. The function of this newsletter is to help you review and plan for a future IVR application.

Defining the Application

You will always begin by defining the users and the needs or trends of that user group. It is important to realize that you most likely have more than one type of user and the needs that that group of users have for this self-service solution may/will vary based on these requirements. The same IVR application may deal with customers, employees, or 3rd party business partners. In this example, the various group of users may have a variety of different needs so the initial identification of who is logged into the system may define how the caller can use the system.

Where to Begin

You will always begin by defining the user and the needs or trends of that user group.

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- *To support users who can't or won't use a web interface*
- *To avoid the cost or security issues of a web interface*

A very important part of the IVR solution may be the security that the application offers your data. Banks and financial institutions have used VRUs for years to allow users of all different sophistication levels to work interactively while not being able to breach the integrity of their systems. It is unlikely anyone could use an ODTVision VRU system to hack system data as the logic of the caller's application and what user is allowed to do is controlled by the customization script. This is why financial firms have used this technology for years as they have the need to offer 24/7 self-service to a varied group of users without any breach of security.

Once you have defined the user and the needs of the application, you must look at the data that will be used by the IVR application. Is it on a host system such as the IBM AS400 (I, I5, iSeries) or is it located on some other server such as a windows server? The location of the data and its format will define the method of connectivity. On the IBM AS400 you may have green screen legacy applications so the method of connectivity may be HLAPI screen scraping where the script is just layering overtop of that display application program or the script may go directly to the data. The data may also be connected to the VRU container through an ODBC link. It is also possible that the IVR application may require connectivity to more than one data source.

A main element in most IVR applications is the ability to transfer out to a live customer service representative upon the user's request, if the user can't seem to work within the application, or if certain conditions exist. Some examples would be a caller being in arrears where the firm needs payment from this user, or a scheduled appointment has been missed and the unit has identified that the caller has passed the required date for that delivery. Basically you will need to define what elements will require the transfer and then the hours of operation that a transfer to a live customer service representative is allowed. The ODTVision has both hours of operation and days the office is closed within simple setup screens that will be used to make the determination of what is allowed. Along this same topic is the question of how do you want to handle an emergency situation afterhours. All these elements are used to define the application requirements for transfers.

Are there any special requirements for connectivity to other elements such as a bank or credit/debit card for payment processing? When doing payment processing there are many requirements to consider. Please review March and April 2006 newsletters with details about credit card processing.

Are there any special application requirements such as the support of multiple foreign languages besides English? Addressing Spanish speaking users is a feature of may IVR applications. Does your application require features such at "Text to Speech" or Voice Recognition? What is the phone environment of your company like? All these elements need to be taken in to consideration.

Where to Begin

Once a project is defined, you start by building a flowchart of what the application will look like. This flowchart will show the logical paths that a caller goes through as they call into your unit. It will also show the nature of the data and what considerations there are to be scrutinized. This gives you a visual tool to understand all the elements of the application and factors that must be considered. It can also be used to show your associates and get

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feedback. Always go directly to the people that do the function that the IVR application is to perform to make sure the new solution will indeed do everything it needs to do. Ask two questions:

1) How do we currently do that?
2) What improvements or changes need to be made?

The system screen flow or data may also define the flow of your application.

Building a Base Script

Your own voice response applications can be created using the script compiler. The ODTVision® uses an easy to learn "Basic" like scripting language that allows you to quickly create your own voice applications that access data from any display screen application from the ISERIES/AS400 or from micro databases.

There are five general elements to your script:

1) Play voice file (i.e. "Please enter account #")
2) Move through database records or screens with keyboard mnemonics
3) Get information from fields to use in condition logic or to speak
4) Interact with phone lines and system administration duties
5) Check for error conditions and react

Testing and Debugging

The ODTVision doesn't require previous programming experience and it is more like writing a macro than writing code.

Once the script is created, you will run the ODTVision compiler to create a successfully compiled script that can then be applied to a phone line. The software can be run on any PC in the test mode using a "test phone" simulation window program to make a call. If your IVR application is layered overtop a green screen application with Client Access you can actually watch the script move through the screens as the call processes through the script. A very helpful tool to use is the syntax "MsgBox" that can be used to display values of the variables or just banners to show you have reached this part of the script.

Another great tool to see what is happening in the script is to turn on the logging level to debug "5" and then look at the system log file created. The latest release of the ODTVision solution will actually show detail to the line of script level so you can see how the system interprets each line of script. Building a script and debugging it will be easy if you take the time to familiarize yourself with the elements of the application, the nature of the data/screens, and some simple operational features of the ODTVision.

Implementation

Once you have fully tested the script and are happy with its performance, you will need to review everything before signoff to go live. Most likely you will re-record some of the text of the voice file banners to make the flow more human like.

Always document all changes and note anything that needs your attention. Your application may be done in phases where there are functionality or applications to be done in the future. The beauty of the ODTVision VRU solution is that changes can be done quickly in-house or new application can be added at any time. You may have chosen the ODTVision VRU because of our affordability but you will love our ease of customization.

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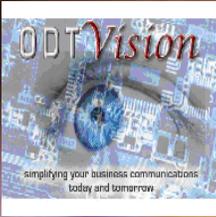
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Questions that help define your Voice System Applications

1. List the applications you want to accomplish in order of priority. (Please note which needs to be done in the first phase and which will be done later if multiple phases will be used.)
2. Define the users of these applications and their needs
3. Designate a date that the project needs to be live
4. Does this type of project require a capital budget expenditure and if so, when does the new period begin or has the money been allotted for this project
5. Identify a customer service representative who knows how this application is done
6. What computer system platform provides the data that these applications use
7. Identify the technical contact for the computer system, who can provide technical information regarding the host system
8. Define the characteristics of customer service you do well and what functions can be improved
9. Define the hours of operation for customer service and strategy changes, if necessary for after hours communications
10. Define any special requirements (e.g. bank connection for credit/debit card clearance) that this application requires
11. How many calls does the department where the ODTVISION VRU will be used currently take
12. What is the average length of call within this department
13. Are there any peak periods during the day or week
14. Identify future applications
15. Decide whether to implement a transfer (exit strategy) for a caller to talk with a live representative upon request or for certain conditions (i.e. Credit Hold on Shipment is met) during office hours
16. Define protocols for emergencies
17. Define if you need to support personnel in the field or individuals on call
18. Define if you need to support multiple foreign languages and if so, what are they (i.e., Spanish…etc.)
19. Define your logging and audit trail requirements
20. Define your security requirements
21. Define if you need to support 3rd party programs or connect to other devices or sensors
22. Once a project is defined, we can start by building a flowchart of what the project will look like. This flowchart will show the logical paths that a caller goes through as they call into your unit. We also examine where the data is and in what format it is stored. (Helps in defining the means of connectivity.) The computer system screens or database will define the flow of this routine. ◘