Vision Voice Vantage, Inc.

THINKING OUTSIDE THE BOX
IN CUSTOMER SERVICE

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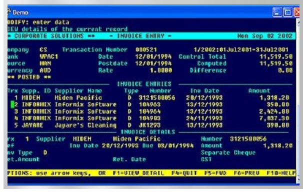
Connecting the IVR application to your data

The very definition of an **I**nteractive **V**oice **R**esponse application is that it is linked to live data making it truly interactive. This link can be accomplished by one of two methods. The decision of which method to use will depend on where you have the data. If you are using legacy green screens you could use a HALPI screen scraping and if not or if you are using other platforms, you may consider an ODBC link. This white paper will explain how that link is established for our IBM mid-range system users as well as other systems.

Method 1. Green Screen HALPI Screen Scraping

If you currently have programs that provide legacy green screens to provide access to data records, it is easy to establish a link to your IVR application. In this approach you just establish an IBM Client Access display session for every line (IP resource) and the customization program will navigate the HALPI screen scraping feature of the ODTVision VRU though those screens.



```
Demo
ODIFY: enter data
IEW details of the current record
* CORPORATE SOLUTIONS **      - INVOICE ENTRY -              Mon Sep 02 2002
ompany    CS    Transaction Number   000521        1/2002:01Jul2001-31Jul2001
ank       WPAC1              Date    12/01/1994  Control Total       11,519.50
ource     HAN            Postdate    12/01/1994       Computed       11,519.50
urrency   AUD                Rate        1.0000     Difference            0.00
** POSTED **
                              INVOICE ENTRIES
Trx Supp. ID Supplier Name        Type   Number      Inv Date          Amount
  1 HIDEN    Hiden Pacific         D   3121500056   20/12/1993       1,318.20
  2 INFORMIX Informix Software     D   104963       13/12/1993         350.00
  3 INFORMIX Informix Software     D   104964       13/12/1993       2,424.00
  4 INFORMIX Informix Software     D   104903       24/11/1993       7,037.30
  5 JAYARE   Jayare's Cleaning     D   JK1293       13/12/1993         390.00
                              INVOICE DETAILS
rx    1  Supplier  HIDEN     Hiden Pacific          Number  3121500056
ef               Inv Date 20/12/1993 Due 03/01/1994  Amount          1,318.20
nv Type   D                                         Separate Cheque
et.Amount                     Ret. Date             GST
PTIONS: use arrow keys,  OR  F1=VIEW DETAIL  F4=QUIT  F5=FWD  F6=PREV  F10=HELP
```

Method 2. ODBC Link

The alternative method of connectivity is to establish an ODBC link between the raw data files on the IBM mid-range system or any data platform by establishing a link to the “odt vision_data.mdb” database. This can also be done through IBM Client Access.

Where to begin with customization

Once you have determined how your link to the data is to be accomplished, you can begin the design and creation of your customization script. This isn’t actually as complex as writing a program and doesn’t require previous programing experience. It is more like writing a macro that does five general functions.

The script will do the following five functions:

1. Play voice files
2. Move logically through the application data records or application screens
3. Take data keyed in by user and send it to screen fields or database records
4. Retrieve data from screen fields or record fields to speak or use in a condition statement
5. Check for errors

PLAY VOICE FILES

Playing a voice file is the same whether you are using the “Screen Scraping” or “ODBC” link to connect to live data.

```
CustInput = PlayGet "Cust.wav",4,"#",6 ; "Enter your customer #"
```

In this example, we are determining the value of a variable that has been input by the caller (CustInput) by playing an audio wave file (Cust.wav) where we know the variable is “4” characters long, the caller will have 6 seconds to enter it. The system also moves on if the user has entered the termination key of “#”.

MOVING THROUGH THE DATA RECORDS OR APPLICATION SCREENS

If your connectivity method is an ODBC link, you need to move to the proper data record to obtain information from that record field or to write to a data record field. In this syntax example the user has entered a “Customer Number” and we go to see if we can find that record. This step is done by finding the record as follows:

```
;-------------------------------------------

; find customer number in database table

;-------------------------------------------
SeekDB CustomerFile, =, CustInput
If MatchDB then
       ErrorCt = 0

       gosub ClearScreen
       msgbox "----------------------------------------
----------"
       msgbox "All passwords are 1234"
       gosub ScrollScreen
Else
CustError:
       Play "CustEr.wav"                    ;
"Customer # in error"
       ErrorCt = ErrorCt + 1
       GoTo GetCust
Endif
```

If your connectivity method is HALPI screen scraping to Green Screens, your customization script will send key strokes by using the syntax verb “SessionSendKeys”. In this example, the customization script is sending a “CMD8” to move to the next screen to get to the proper data record. Any time you move between screens in this HALPI screen scraping approach, the script needs to have the next line be a “SessionWait” which stops the script from moving to the next line of code until the IBM host screen has changed which the system sees as the “Input Inhibited” is no longer on.

```
If OptionInput = "1" then ;
       SessionSendKeys "@8" ; do cmd 8
       SessionWait
ElseIf OptionInput = "2" then ;
       ……..
       Endif
```

WRITING THE USER’S INPUT DATA TO THE RECORD

If your connectivity is through ODBC, once the script has located the proper data record, it can simply write the variable value to the record field and then update the record.

```
       Opendb bobevans, "bobevans"
```

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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.

```
insertdb BobEvans
BobEvans.DateTime = DTVAR
BobEvans.trackingno = trackingno
BobEvans.StoreNo = StoreInput
BobEvans.age = AgeInput
BobEvans.Visit = visit
BobEvans.ref = ref
BobEvans.travel = travel
BobEvans.FOOD = Food
BobEvans.portion = portion
BobEvans.service = service
BobEvans.clean = clean
BobEvans.menu = menu
BobEvans.problem = problem
BobEvans.comments = comments
updatedb bobevans
closedb bobevans
```

If your connectivity is through the Green Screen using the HALPI Screen Scraping, the script just uses the "SessionSendKeys" syntax verb to send variable values to the host screen field.

```
SessionSetCusor 5,8 ;row 5, column 8
SessionSendKeys CustInput ; sends value of variable Cus-
tInput to field
SessionSendKeys "@E" ; enter key
SessionWait
```

RETRIEVING DATA VALUES

If your connectivity is through ODBC and the script has the current record located, it retrieves the data field value by just looking at that record field.

```
Itemfile.Itemcount ; inventory record on number on hand
```

For this example, we want to know the count of items on hand for an item we looked up.

```
Play "YouRequested.wav"  ; "You requested the onhand
count for..."
Play itemVoicefile    ; "Widgets"
Play "WhichHas.wav"   ; "which has an onhand count
of..."
rtn = SpeakNumbers Itemfile.Itemcount             ;
"$2200.00"
```

If your connectivity is though HLAPI screen scraping, the script uses this simple syntax to determine the value of the variable.

```
w = sessiongetscreen 6,17,4; row 6, Column 17, field
length of 6

if w = "User" then
        gosub signon
endif
```

CHECKING FOR ERROR CONDITIONS OR OTHER RECORD FIELD ELEMENTS

The final general function of the script is to check for error conditions or events.

In ODBC, you may look to see if you could find a record.

```
If PasswordInput <> CustomerFile.Password then
        Play "PasswdEr.wav"; "Password in error"
        ErrorCt = ErrorCt + 1
                GoTo GetPassword   ; Try again.
Endif
```

In this example, the script compares the retrieved value of the password for a profile and sees if it matches what the user entered. Most times we would suggest to add one to the variable to track the number of tries and loop back to the tag, "GetPassword" for one more try.

If you are using screen scraping, one way to check for an error condition like a customer number not being found is to look at the screen title.

In this example, the host screen is not showing "SL242" at row 1, column 2 for a field length of 5,….they script will loop back to the tag "CustomerNo" to request the user to enter the customer number again.

```
sc = SessionGetScreen 1,2,5

If SC <> "SL242" then
        ErrorCt = ErrorCt + 1
        GoTo CustomerNo
Endif
```

Sometimes it isn't the record that gives us the condition for our script logic but math. In this example, the script looks at the length of the CustInput Variable. No input ends the call while if it isn't the expected length of 4,

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the script will go to an "CustError" tag to provide the proper logic.

```
w = length CustInput   ; Check if length is correct
If w = 0 then GoTo EndScript
If w <> 4 Then Goto CustError
```

The value of variable can provide the script with the logic of what path to take. Say the application is doing a shipment status and if the field value is empty, it will tell the script what logic the application takes.

```
If OrderStatusFile.qtyShip = 0 then

    Rtn = Play "NotShip.wav" ; "item not shipped"

Else ; there is a value in this variable means it
shipped.

        orderVoicefile = OrderStatusFile.Itemno &
".wav"

        Speaknumbers OrderStatusFile.QtyShip  ; "22"

        Play "UnitsOf2.wav"    ; "units of..."

        Play orderVoicefile    ; "widgets"

        Play "WasShip.wav"     ; "were shipped on..."

        Speakdate OrderStatusFile.dateship, "mm dd
yyyy" ; "Dec 2, 2000"

        If OrderStatusFile.QtyShip <> Order-
StatusFile.Qtyorder then

                Play "OfTheQty.wav"    ; "of the orgin-
ial order amount of..."

                Speaknumbers OrderStatusFile.Qtyorder
        ; "50"

        Endif
Endif
```

CONCLUSION

It isn't hard to do the customization script once you have determined which method of connectivity you will use to access your data. What is most important is to establish from the beginning what this self-service IVR application is to do. Then you can build the script to match that logic flow and provide that application.◘