

IVR Designer Hermes.Net V5



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1. Introduction

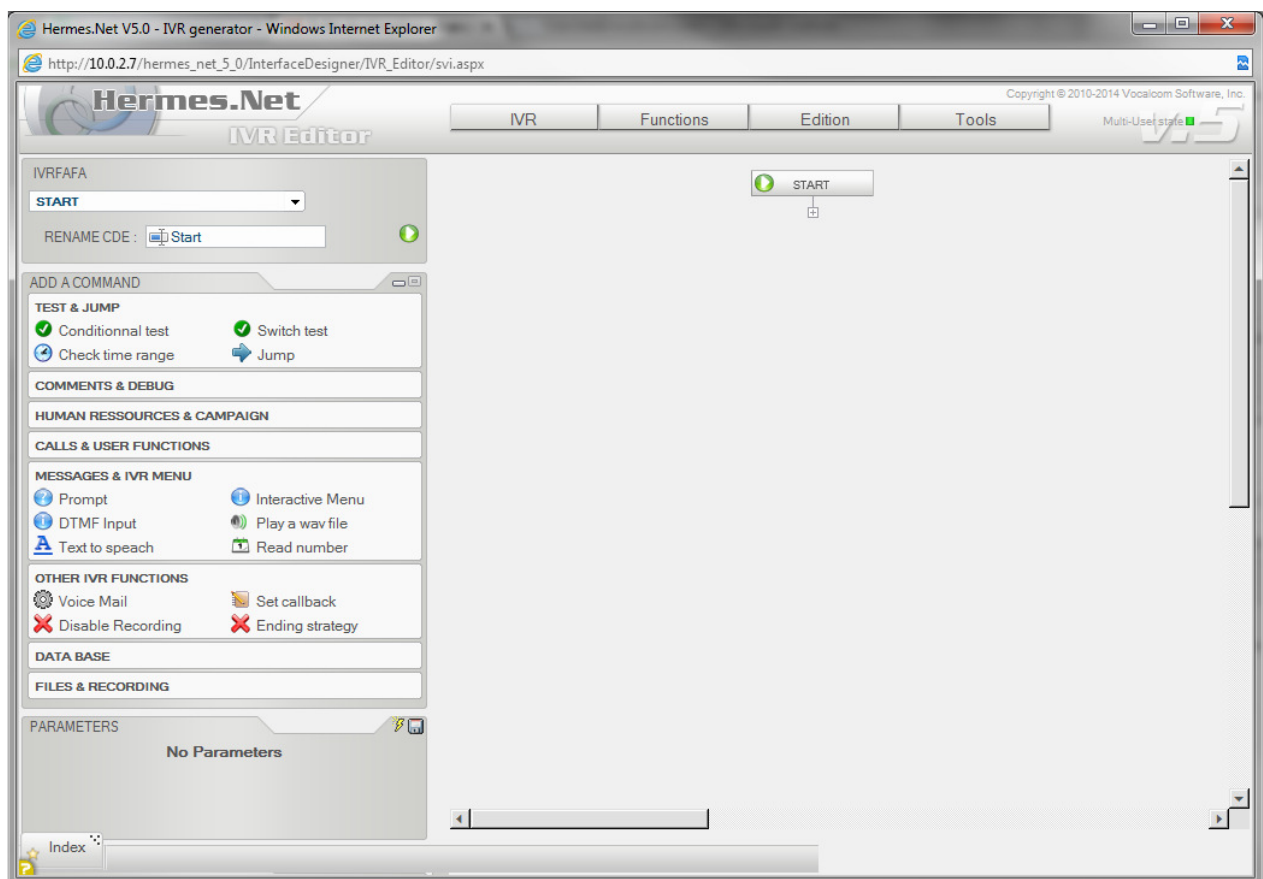
Hermes.Net script editor allows you to create your own IVRs from simple ones to more complex ones. All the features expected in an IVR are available:

- Playback of recorded messages
- Verifying date and time of the call
- Conditional trees
- DTMF menu
- DTMF input according to your settings speech
- Connecting to databases
- Statistics
- Supervision....

In addition you have a "tracking" mode to validate your scripts provided actual or changes before putting them into production.

In addition, IVR scripts generated through Hermes.Net IVR designer are supervisable through the Hermes.Net Supervision module. It is then very easy to monitor the influx of users and their navigation in the IVRs.

2. The interface

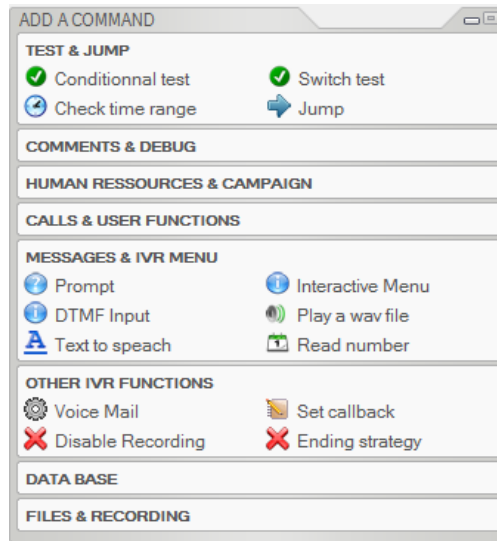


This is the general IVR designer screen, which we will now discover in full detail.

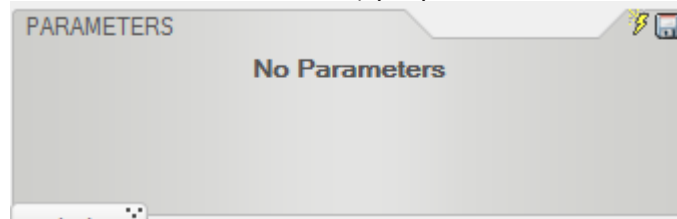
TOP: General menus.



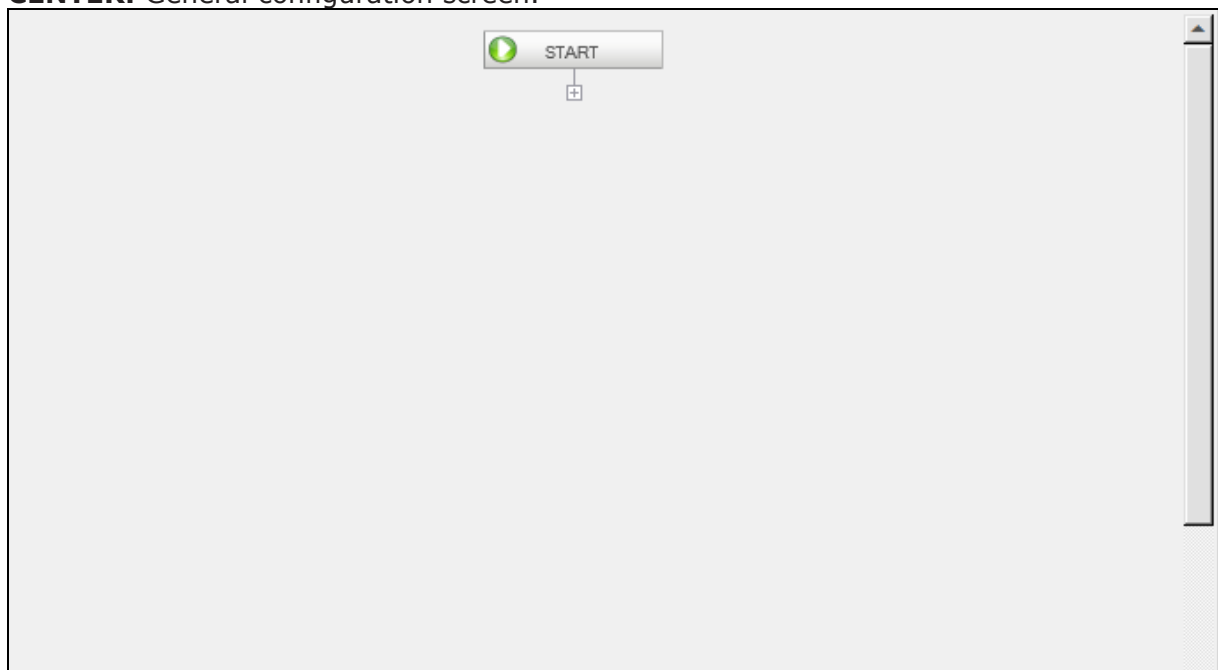
LEFT: Commands menus.



BOTTOM LEFT: Once a command is selected, properties of this command.

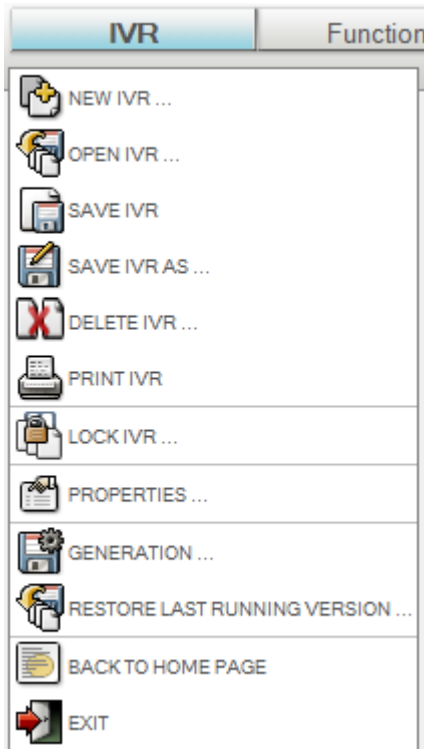


CENTER: General configuration screen.



3. The menus

3.1 IVR Menu



New IVR...

Allows you to create a new IVR. If an IVR is already loaded, a backup confirmation is asked.

Open IVR...

Loads an existing IVR. If an IVR is already loaded, a backup confirmation is asked.

Save IVR / Save IVR as ...

Saves the IVR. Is equivalent to the floppy disk icon to the right of the zone 5.

Delete IVR...

Displays the list of existing IVR, and selects the IVR to delete. If the current IVR is removed, the interface is reset with a new IVR.

Print IVR

Sends your IVR tree for printing on one of your devices.

Lock IVR...

Allows you to lock an IVR. To re- open again this IVR you will have to enter the password.

Properties...

The 'Properties' window displays the dates of creation, modification, and last successful build. It allows you to type a comment and change the name of the IVR.

Generation...

Opens the IVR generation screen. See below entry regarding IVR generation.

Restore last running version...

On each successful generation of IVRs, the IVR source code is saved. By clicking on this item, the editor is reloaded with the last published IVR version. If the current IVR was never generated, a message "Empty IVR" is displayed.

Back to home page / Exit

Closes the editor and returns to the list of scripts (Back to Home page) or leave the editor altogether (Exit).

3.2 Functions Menu



Add Function...

Creates a new function in the IVR. Only alphanumeric characters are allowed for function names. Spaces will be replaced by '_'.

View Function...

Opens an existing function.

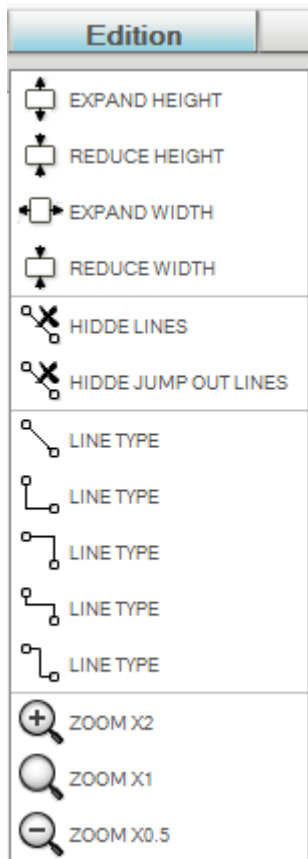
Delete Function...

Deletes one or more functions. For multiple selections, use CTRL + click button.

Import Function...

Allows you to import in the current IVR an existing function from another IVR.

3.3 Edition Menu



Expand/Reduce Height

Increases (Expand) or decreases (Reduce) the work area vertically.

Expand/Reduce Width

Increases (Expand) or decreases (Reduce) the horizontal working area.

Note: scroll bars appear only when the mouse is on the right side or bottom of the window.

Hide Lines/Hide Jump Out Lines:

Hides lines connecting commands together.

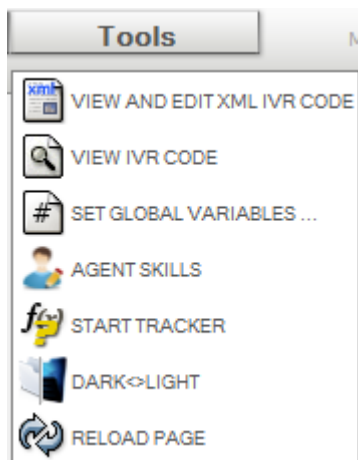
Line type ...

Defines the type of features used to connect commands between themselves.

Zoom x2 x1 x0.5...

Zooms in or zooms out on the workspace.

3.4 Tools Menu



View and Edit XML IVR code

Displays the current XML IVR code. XML is generated based on commands placed on the work area.

Note: This feature is intended for advanced users. Incorrect changes to the XML code can make the IVR unreadable.

View IVR Code

Displays the window containing the IVR code. This code is generated by the application from XML.

Set Global Variables...

Displays the window before your global variables.

Agent Skills

Displays the list of existing skills in Administration.

Start tracker

Opens the tracking of IVRs. Window tracking should be used on an IVR previously generated with the 'Debug option Mode. See the Tracker chapter later on.

Dark<>Light

Changes the editor interface from dark to light or vice versa.

Reload page

Allows you to refresh the page.

4. Using the interface

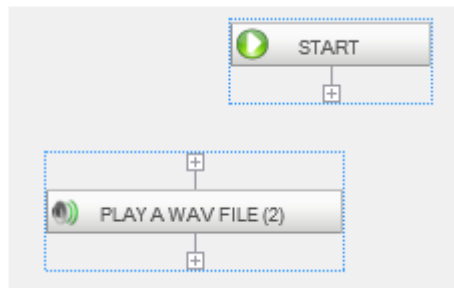
By default, when creating a new IVR Script, only one command is displayed.

This command: "Start", defines the beginning in the script, and contains only one parameter. This parameter specifies what should the script when the client hangs.

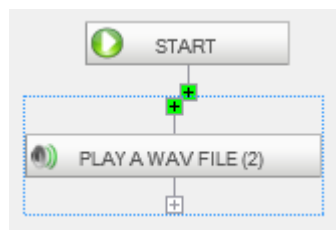
- 1 - Hang up the IVR line.
- 2 - Execute a specific IVR command.

4.1 Adding Commands

- 1 - Select the order in which to add a new command (in our example: Play a WAV file).
- 2 - Click on the command you want to add.

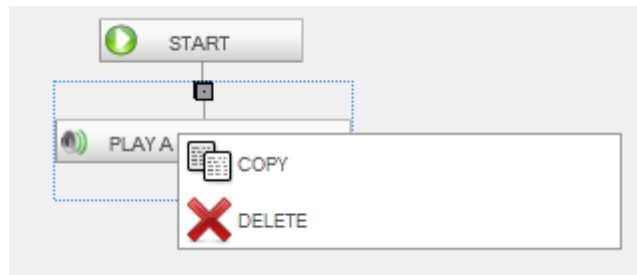


- 3 - The command appears on the area of work under the above command selected.
- 4 - Moved the new command (keeping the mouse button) until both connections are displayed in green. Then release the mouse click, the two controls are positioned automatically.



4.2 Deleting Commands

The selected command can be deleted by a right mouse click on the command, and then 'Delete'.



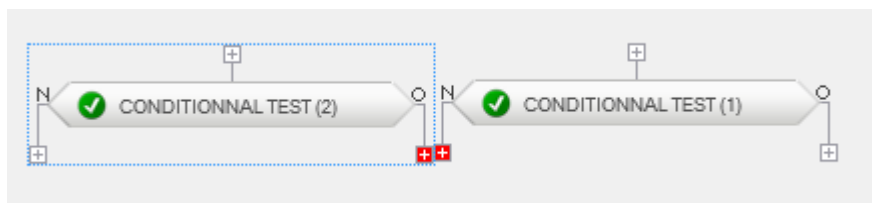
4.3 Deleting links between commands

To delete a link, just double-click on the link you want to delete.



4.4 Illegal links

When two commands cannot be linked together, the two connecting outputs become red, such as in the example below:



4.5 Various editing tools

4.5.1 Actions on commands panel

Move the panel: Use the drag / drop the titles of sections (Edition, CTI Data Base).

Replace the panel to its original location (top left): Double click on the title section to reposition the panel in the top left.

Open or close the different sections: Click on the blue arrows next to the section name.

4.5.2 Actions on commands

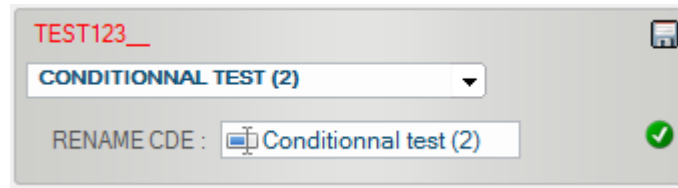
Enlarge / shrink an icon: Move the mouse over the command to resize, then use the mouse wheel while pressing the shift key 'keyboard.

Rotate an icon: Move the mouse over the control rotate, then use the mouse wheel while pressing the 'Alt' key.

5. The Commands

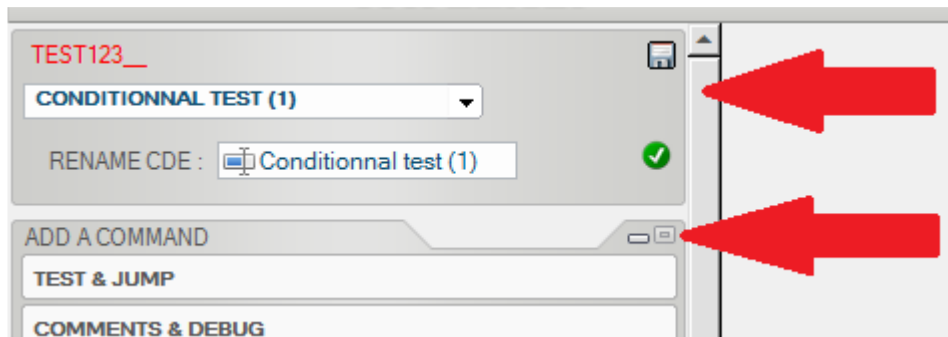
IVRs are built with the use of the commands, located on the left corner of the editor screen. Now let's look at the various commands we can use when building an IVR script.

Every command, once added to the script, can be renamed, using the box on top of the commands menu:



By pressing the disk icon, the IVR script is saved.

By clicking on the top right corner of each menu, it is possible to expand or collapse the list of commands available in each menu. If many menus are open, navigate the menus by scrolling up and down on the menus.



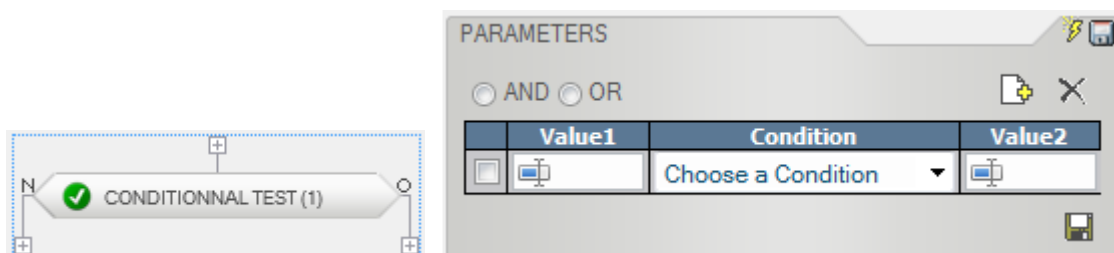
As we will see later, once a command is selected, its parameters are workable on the lower left corner of the editor screen.

5.1 Test & Jump commands

Conditional Test

This command allows you to test a variable and redirect the script to a command function test result. If the result is true, the output 'O' is used otherwise the output 'N'.

Parameter: To enter the settings for this feature the Hemes.Net criteria editor is used.

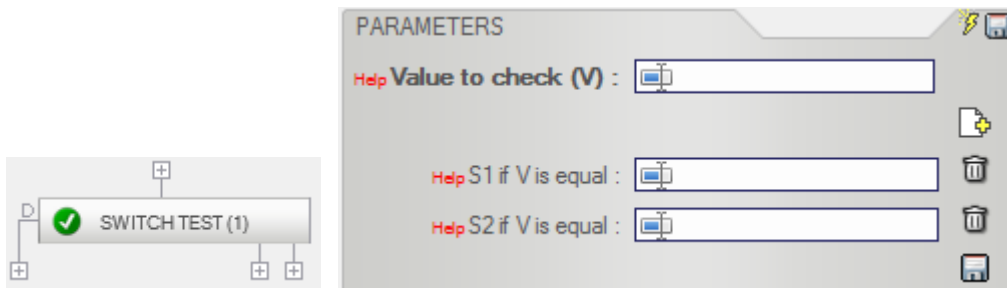


Switch Test

This command allows you to test a variable and redirect the script to a command function Depending of many possible results. Click on the icon 'More' to add new outputs. The script is directed to exit marked 'D' if the variable tested did not match any input value for S1 to Sx.

Note: To know what output is the test, click on the input field, the corresponding output is displayed in red. Fig. locating the outlet.

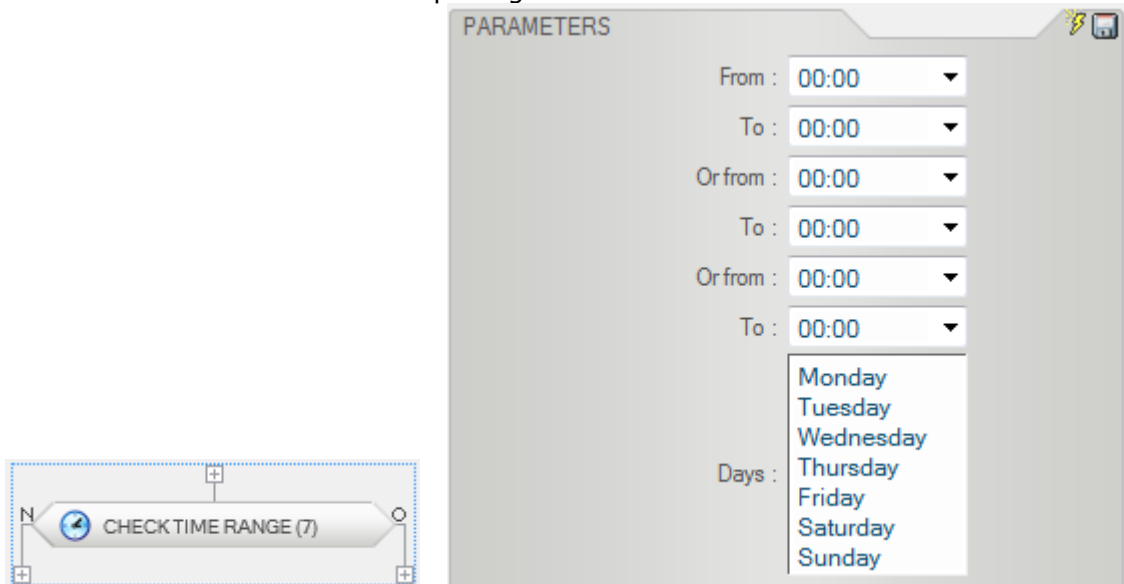
Parameter: The parameters to enter are: the test statistic and the corresponding values for different outputs.



Check Time Range

This command tests a specified time period, as chosen by the IVR creator in the Parameters section.

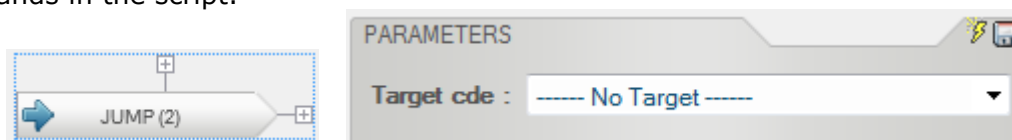
Note: If you want to test the planning specified in administration for the campaign, it's recommended to use the "Check Openings" Command.



Jump

This command continues the IVR script to another script command in progress.

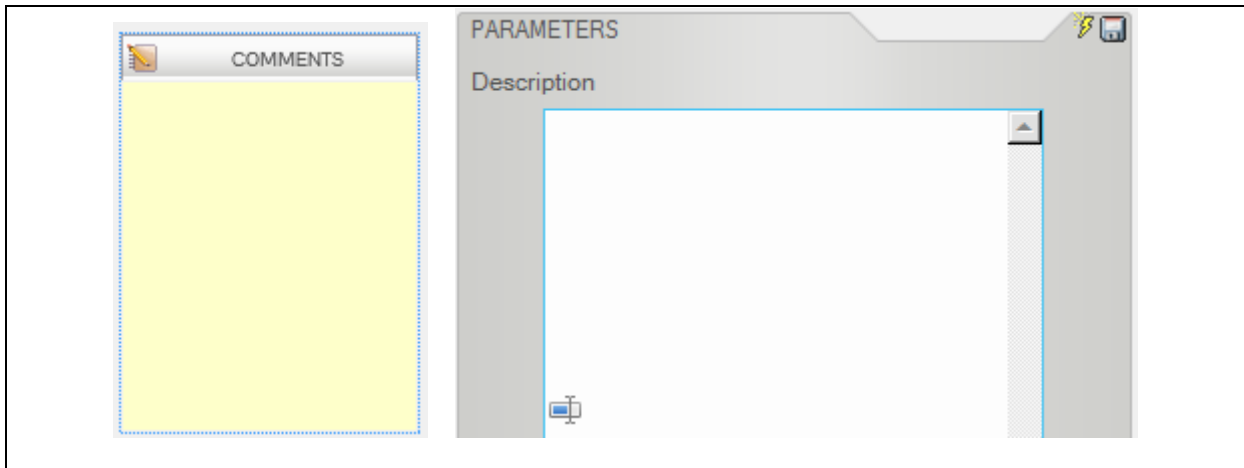
Parameter: The panel parameter dropdown list contains the currently available commands in the script.



5.2 Comments & Debug commands

Add Comments

This command allows the creator to type in and save comments for future use, reminders, etc... It is pinned to the main editor screen.

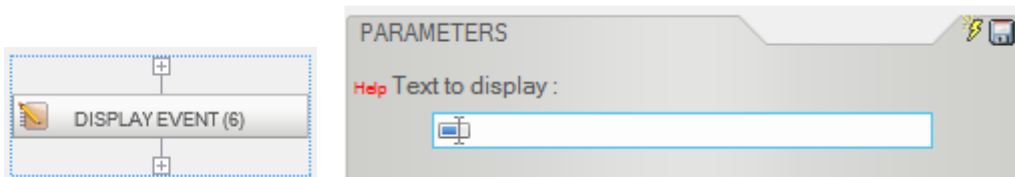


Display Event

This command displays information in the event viewer of OnXMedia.

Parameter: Enter the text to display, or choose a variable available in the dropdown zone 'Variables Available'.

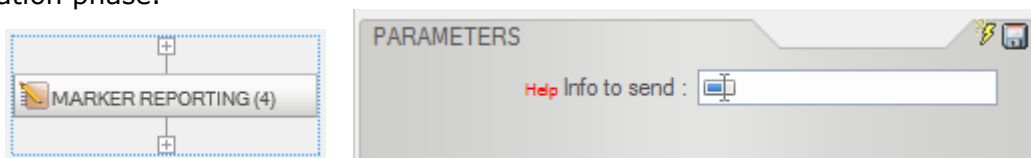
Note: the text display can be a mix of free text and global variables. Ex: We are the \$ WEB_IVR_EDITOR_DAY_OF_WEEK week.



Marker Reporting

This command creates a marker for supervision and reporting purposes.

Note: It is possible to automatically create markers for every command at the script's generation phase.

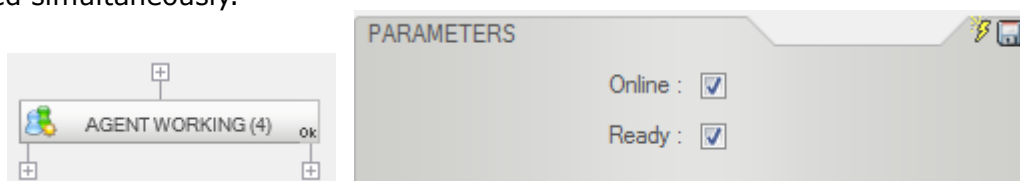


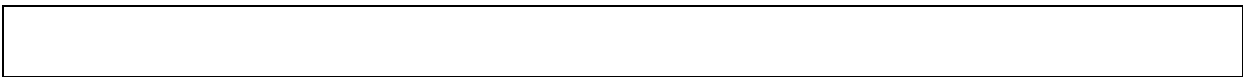
5.3 Human Resources & Campaign commands

Agent Working

This command shows whether the agents are available on the waiting queue of the campaign. If agents correspond to the selected criteria (*Online or Ready*), the script is directed to the right exit, otherwise to the left exit.

Parameter: Check the 'Online' to see if there are online agents on the campaign, check 'Ready' for whether there are agents available on this campaign. The two checkboxes can be used simultaneously.





Set Profile

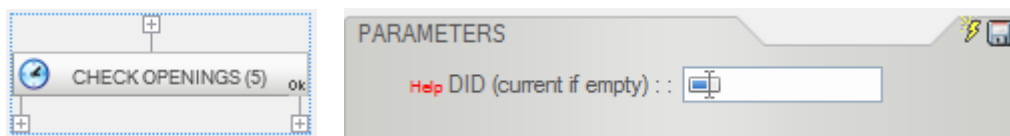
This command allows the selection of agent skills/profiles, as defined in the Administration module.



Check Openings

This command retrieves the opening times of the current DID (if empty) or another DID (if contains the number of DID). If the incoming campaign is open the script output is directed to the right otherwise to the left exit.

Parameter: DID-empty for current campaign, DID to test another incoming campaign.

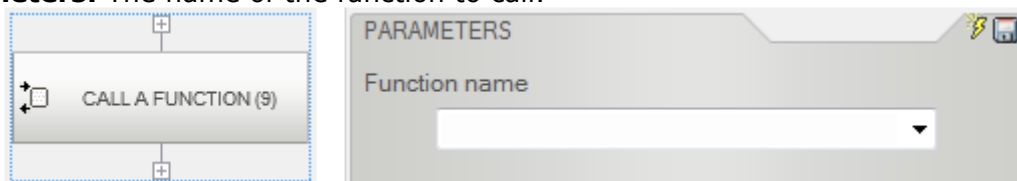


5.4 Calls & User Functions commands

Call a Function

This command allows you to call a function defined in the IVR.

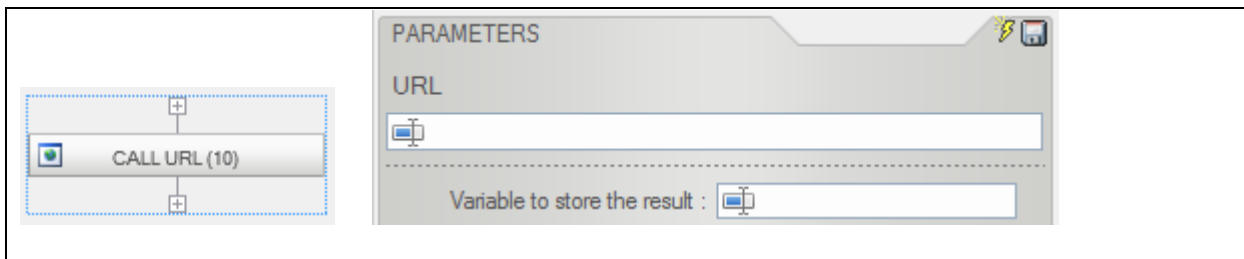
Parameters: The name of the function to call.



Call URL

This command allows you to call a web address and retrieve the contents of the answer in an IVR variable.

Parameters: Url to call and variable SVI information in return.



Call Assembly.net

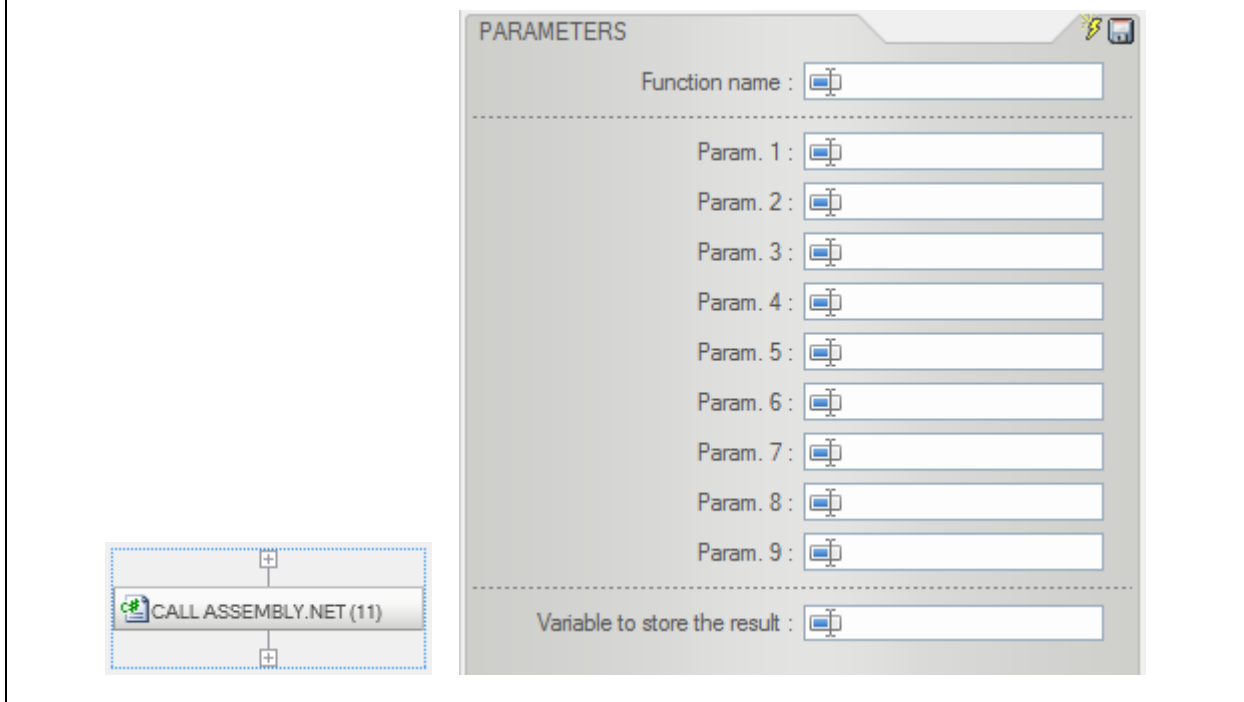
This command allows you to call a method created in the IVR_EXTERNAL_FCT.CS file. As a reminder, this file may contain C# .Net code, and is self-compiled by OnData on each modification.

Parameter:

- The name of the method of assembly.
- Up to 9 parameters to be passed to the method.
- The name of the variable will be stored or return the call.

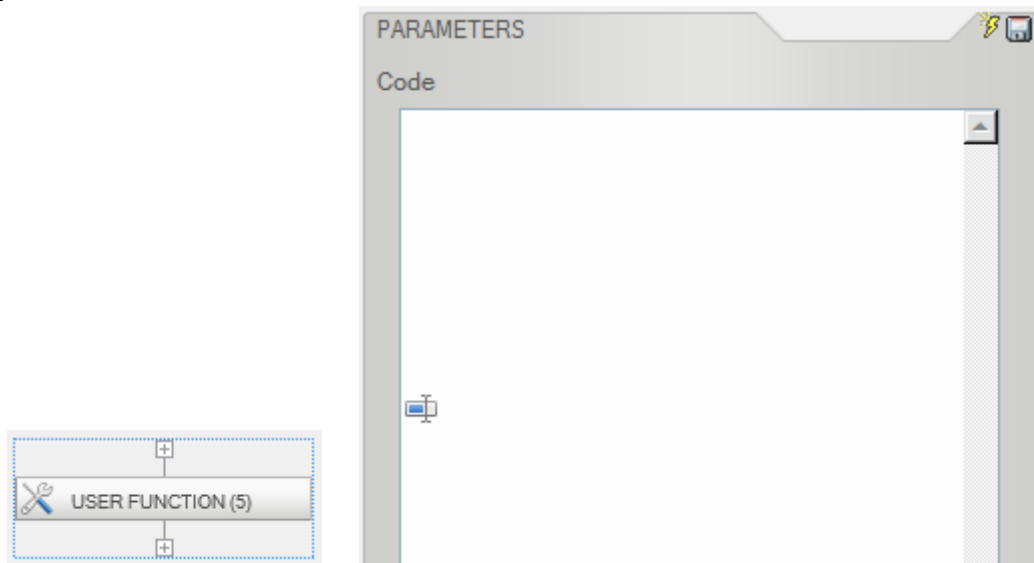
For this command to work properly, the IVR_EXTERNAL_FCT.CS file must contain at least the following code:

```
public class IVR_Plugin
{
public static string Hello_IVR (Stat_ID string, string param1, string param2, string param3)
{
return "test_id is" + + test_id "STAT_ID is" + + Stat_ID "Param1 is:" + param1 + ",
Param2 is:" + param2 + "Param3 is:" + param3;
}
}
```



User function

This command is for writing Javascript code, as in the Script Designer action builder mode.



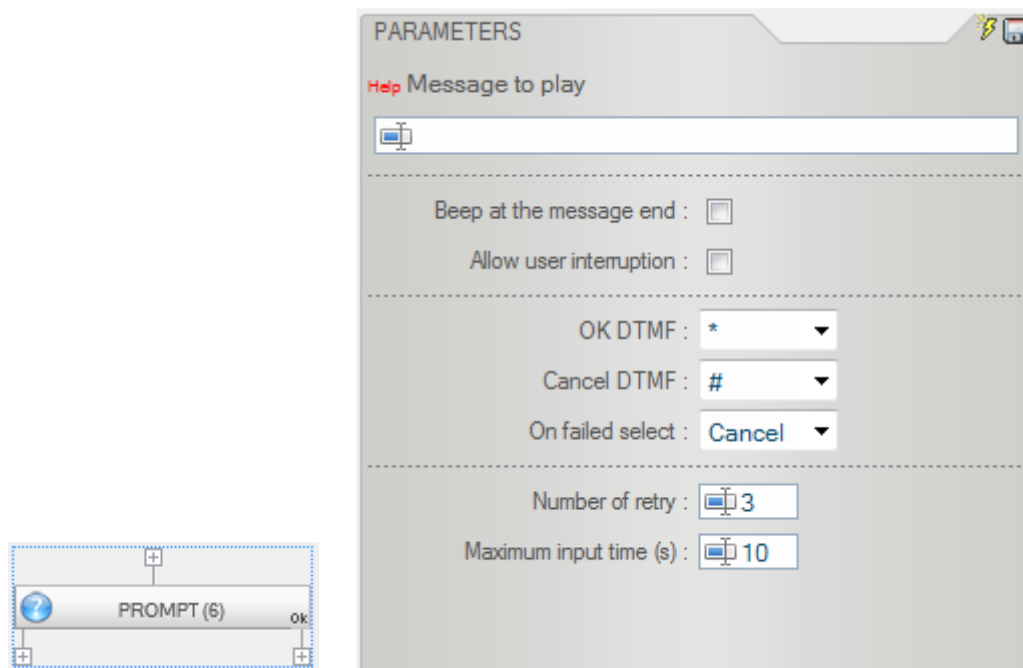
5.5 Messages & IVR Menu commands

Prompt

This command allows you to perform the equivalent of a prompt screen: message displayed and two choices. In this command, an audio file playing, DTMF and two keys corresponding to two choices.

Wav file eg: Do you want to continue? Yes, type *, No type#.

Parameter: 'OK DTMF ', sets the DTMF which will continue the script via the exit button 'ok' and 'Cancel DTMF' that that will make the script from the left. 'We Failed select' allows you to specify where the script continue if no DTMF is entered during the test X Y seconds out ok or cancel.



DTMF Input

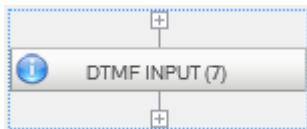
This command allows you to enter / DTMF and saved in a global variable.



Parameter: 'Ending type' defines what way is stopped entering DTMF

DTMF (s)> for a particular DTMF code

DTMF sequence> For a DTMF sequence, for example: * # *

'Variable to store the result' must contain a global variable. DTMF entered will be stored in this variable.



PARAMETERS  

Beep at the message end :

Help Maximum input size :

Ending type :

Ending with :

or with :

or with :

or with :

Maximum input time (s) :

Interdigit time (s) :

Variable to store the result :



Delete end character :

Text to Speech

This command allows you to convert and listen to a text file into an audio file.

Parameter: This command is very specific to speech synthesis system installed on OnXMedia. To use this, please consult with your Vocalcom sales representative.



PARAMETERS  

Help Tell the message

Use this voice

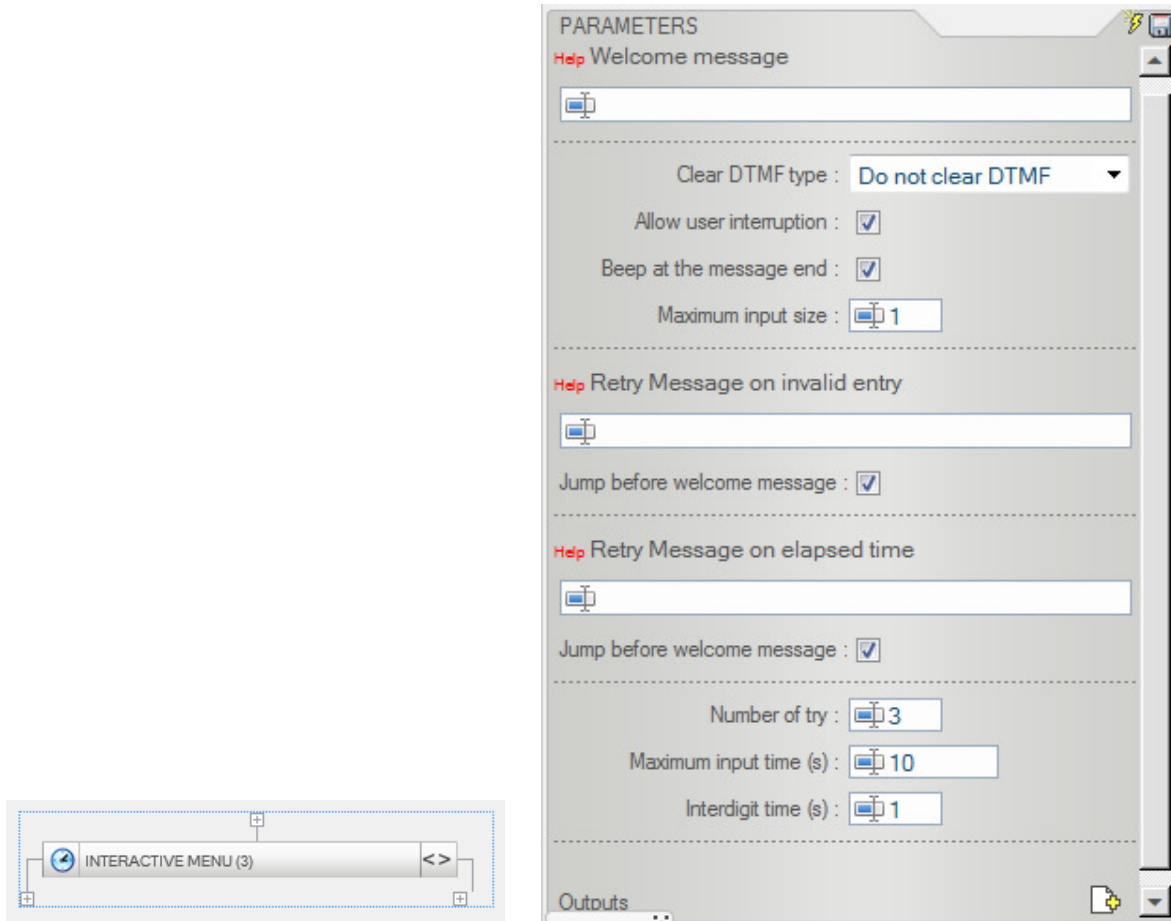
Interactive Menu

This command creates a mini voice scenario. To do this, the command requires three audio messages:

-The first as a greeting, eg Please type 1 for customer service, 2 for the sales service.

- The second as input error message ex: Sorry, this choice is not...
- The third as an error message on any input, eg time elapsed before.

Parameter: See later chapters for all the available options.

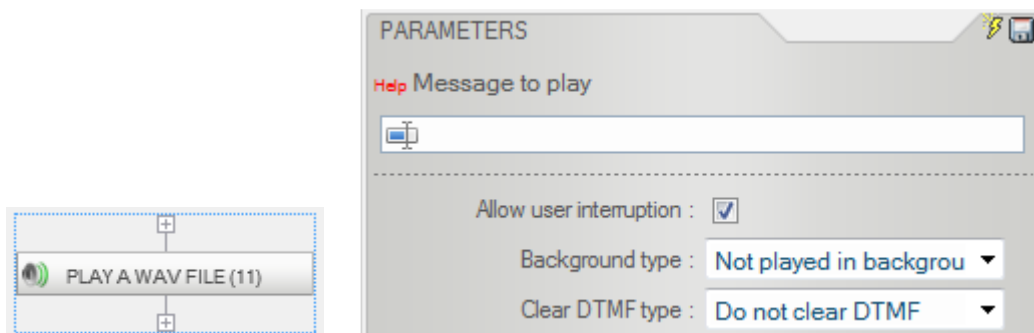


The image shows a software interface for configuring an 'INTERACTIVE MENU (3)' block. On the left is a small icon of the block. On the right is a 'PARAMETERS' dialog box with the following settings:

- Welcome message:** A text input field.
- Clear DTMF type:** A dropdown menu set to 'Do not clear DTMF'.
- Allow user interruption:** A checked checkbox.
- Beep at the message end:** A checked checkbox.
- Maximum input size:** A numeric input field set to '1'.
- Retry Message on invalid entry:** A text input field.
- Jump before welcome message:** A checked checkbox.
- Retry Message on elapsed time:** A text input field.
- Jump before welcome message:** A checked checkbox.
- Number of try:** A numeric input field set to '3'.
- Maximum input time (s):** A numeric input field set to '10'.
- Interdigit time (s):** A numeric input field set to '1'.
- Outputs:** A section at the bottom with a plus icon.

Play a WAV file

This command is to play a WAV audio file.



The image shows a software interface for configuring a 'PLAY A WAV FILE (11)' block. On the left is a small icon of the block. On the right is a 'PARAMETERS' dialog box with the following settings:

- Message to play:** A text input field.
- Allow user interruption:** A checked checkbox.
- Background type:** A dropdown menu set to 'Not played in backgrou'.
- Clear DTMF type:** A dropdown menu set to 'Do not clear DTMF'.

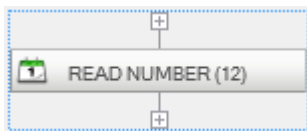
Read Number

This command reads a number or a decimal variable in several formats.

Parameter:

'Number': number or variable containing the name to read. (max 900e6 with empty format)

'Format': description of the format to use
 'Language': language in which the number needs to be told.
 'Listen': allows you to test the format and listen to the audio file.
 Example format:
 Number = 12345678 & format = empty
 File: Twelve million three hundred forty-five thousand, six hundred and seventy eight.
 Number = 12345678 & format = 2%
 File: Twelve Thirty-four, fifty six, Seventy eight.
 Number = 45678 & format = 3%
 File: Four hundred and fifty six, Seventy eight.
 Number = 12345678 & format = # # # # # # # # # #
 File: One, Two hundred thirty-four, fifty six, Seventy eight.



PARAMETERS

Help Number

Help Format

Langue : FR

Or variable :

Listen

Format example :

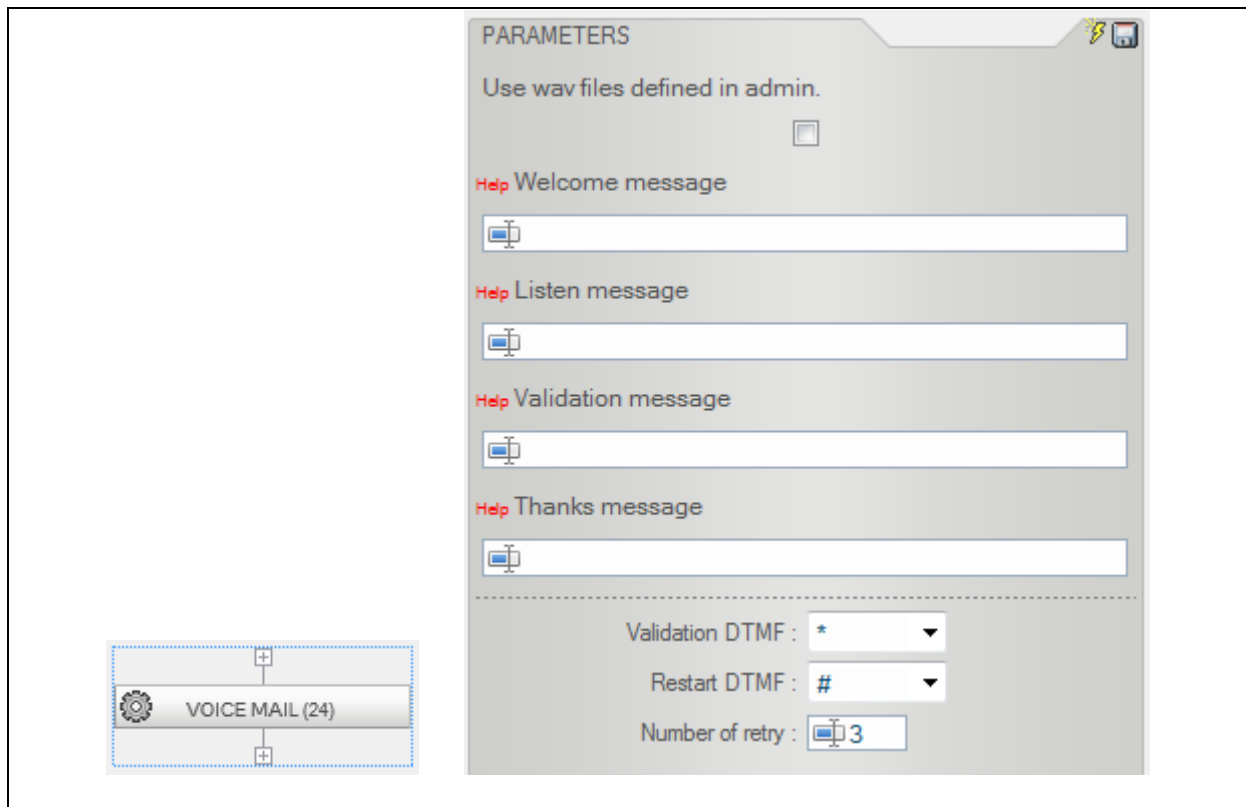
Empty string: read the full number (Max 900e6)
 1% : read digit one by one
 2% : read digits 2 by 2
 x% : read digit x by x, x max=9
 #### ## : read the 3 first digits then 2 second

Using # format element, the full number is read left to right, remaining digits are read one by one.

5.6 Other IVR commands

Voice Mail

This command enables clients to record voicemails.



Disable Recording

Disables a currently ongoing voice recording.



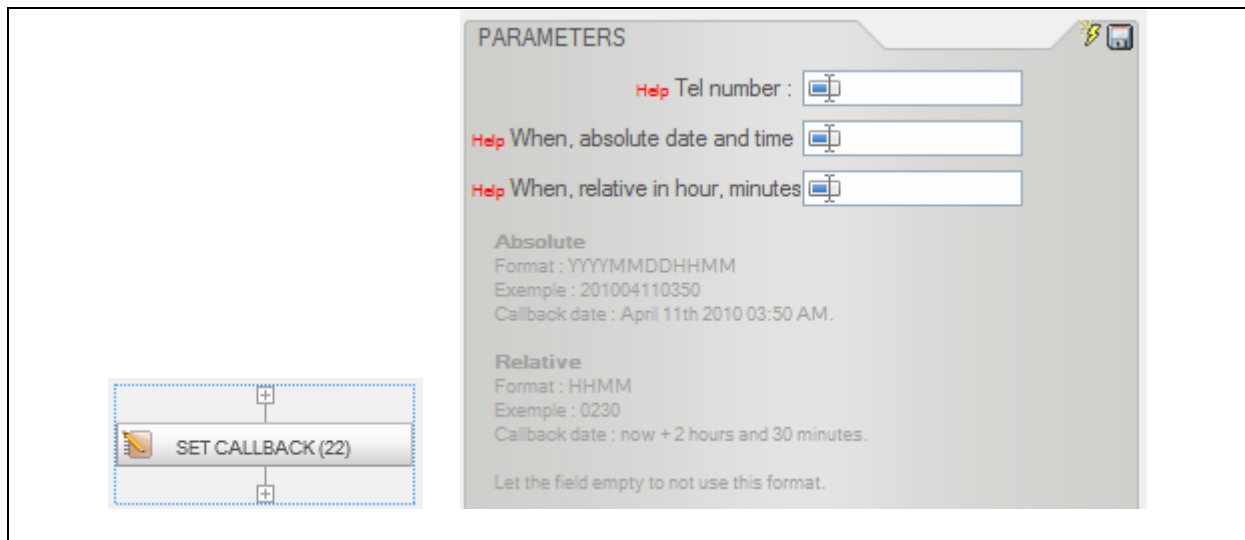
Set Callback

This command sets a callback on the inbound campaign.

Parameter:

'Tel number' phone of the person to be remembered.

'When...' callback specifies the date and time of the callback format: yyyyymmddHHMM.



PARAMETERS

Help Tel number :

Help When, absolute date and time

Help When, relative in hour, minutes

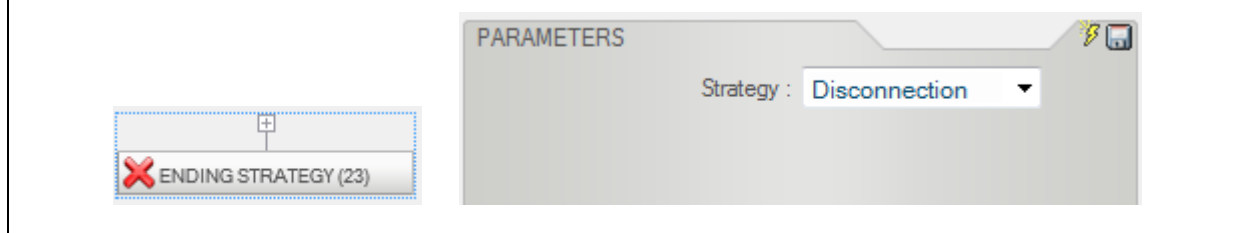
Absolute
 Format : YYYYMMDDHHMM
 Exemple : 201004110350
 Callback date : April 11th 2010 03:50 AM.

Relative
 Format : HHMM
 Exemple : 0230
 Callback date : now + 2 hours and 30 minutes.

Let the field empty to not use this format.

Ending Strategy

Ends the IVR for the incoming call. The call can be sent to a queue, disconnected, rerouted externally or to another DID.



PARAMETERS

Strategy :

5.7 Data Base commands

SQL SELECT request

This command allows you to query an Hermes table and retrieve the results or the name of columns in IVR variables.

Parameter:

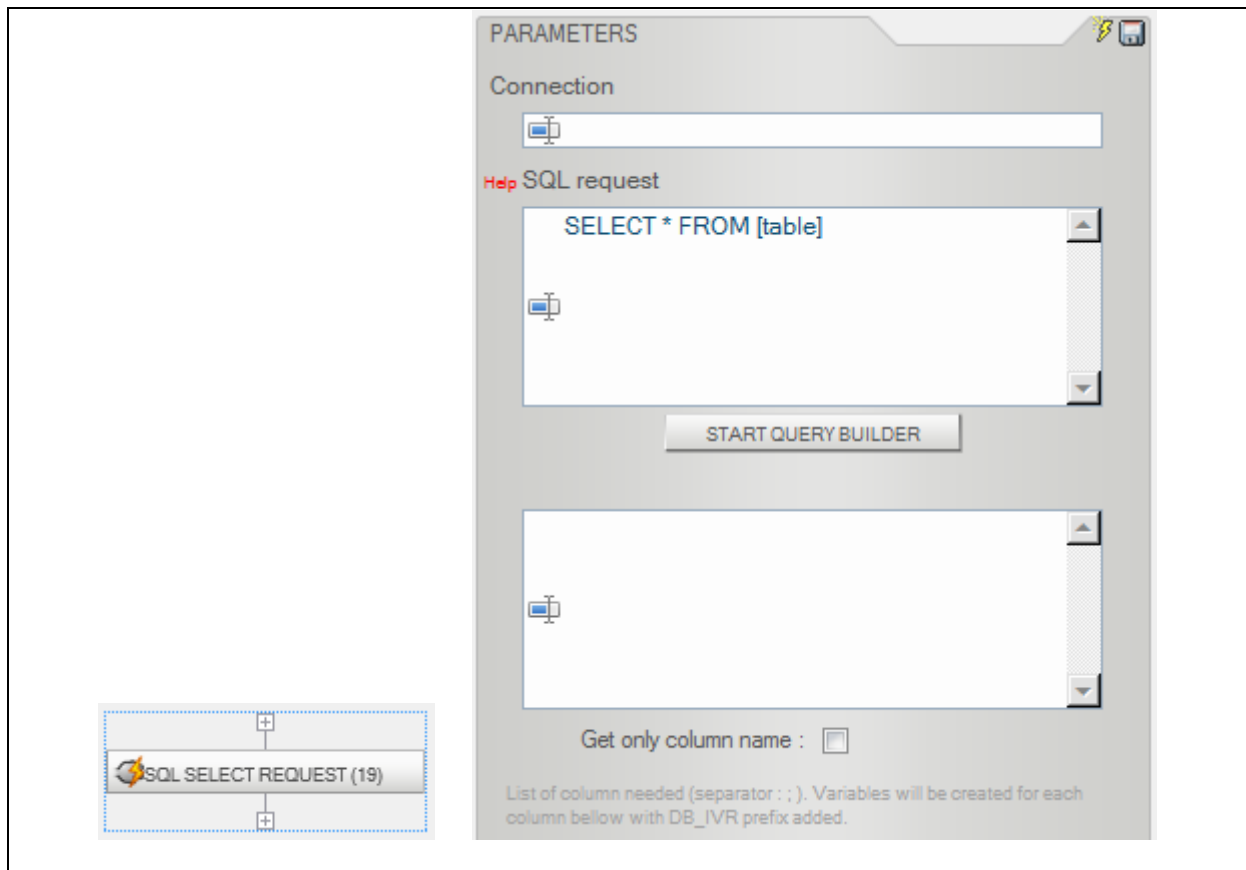
'Connection': DB Hermes.Net Login to use.

SQL request ': SQL query to execute. This query can contain global variables. The button 'Start Query Builder 'will launch the editor of Hermes query. Net V4.

'Get only column name': Retrieve only the names of columns returned by the query.

'List of columns': defines the column names whose contents should be recovered in global variables.

Global variables are created automatically with the prefix DB_IVR when returning the application.



SQL INSERT request

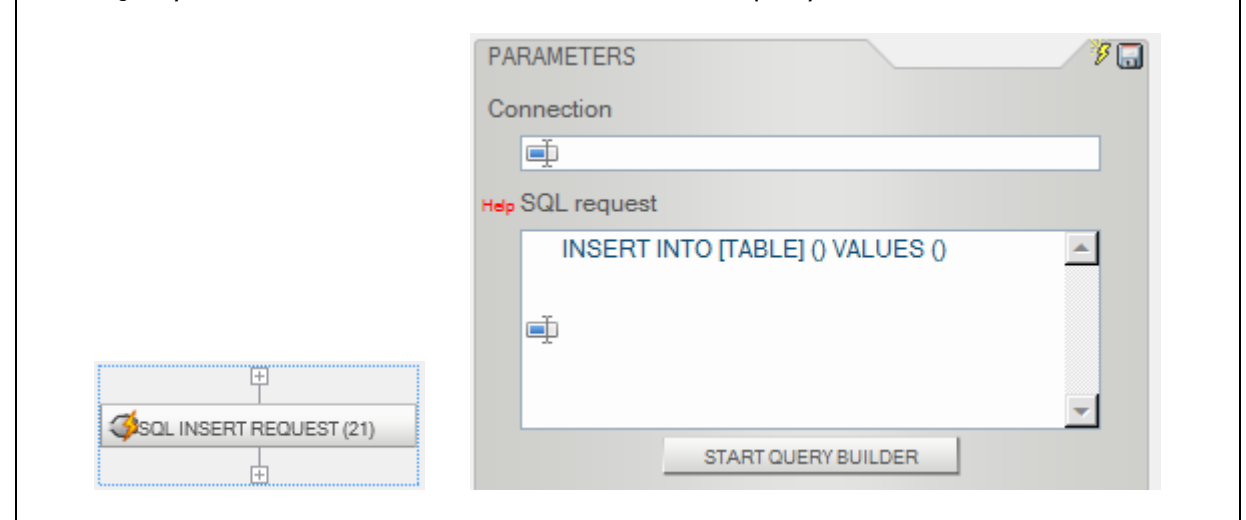
This command will perform an insert query on an Hermes table.

Parameter:

'Connection': DB Hermes.Net Login to use.

SQL request ': SQL query to execute. This query can contain global variables. The button

'Start Query Builder 'will launch the editor of Hermes query. Net V5.



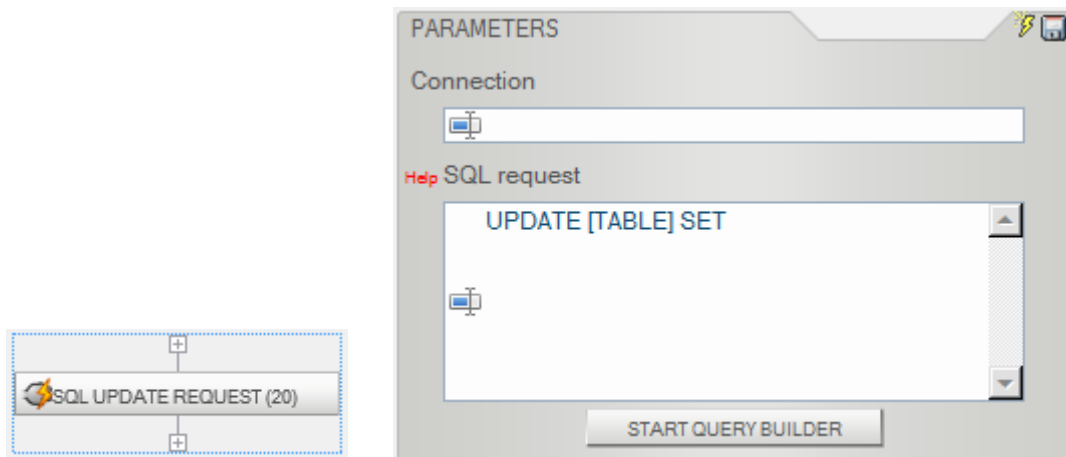
SQL UPDATE request

This command will perform an update query on an Hermes table.

Parameter:

'Connection': DB Hermes.Net Login to use.

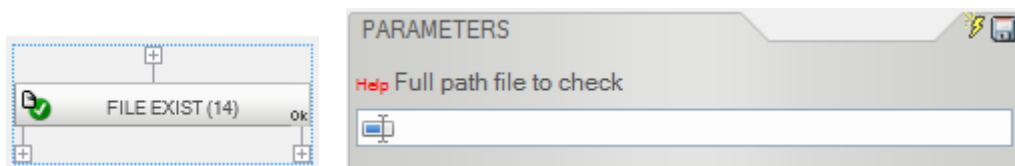
SQL request ': SQL query to execute. This query can contain global variables. The button 'Start Query Builder 'will launch the editor of Hermes query. Net V5.



5.8 Files & Recordings commands

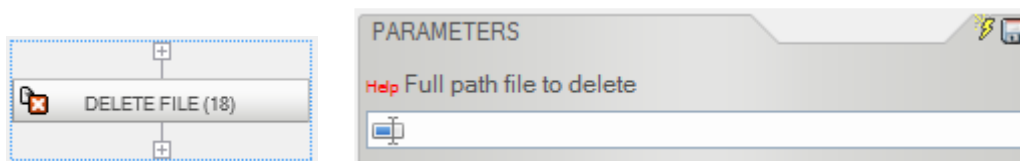
File Exist

Checks if a file exists.



Delete File

Deletes a file on disc.



Voice Record

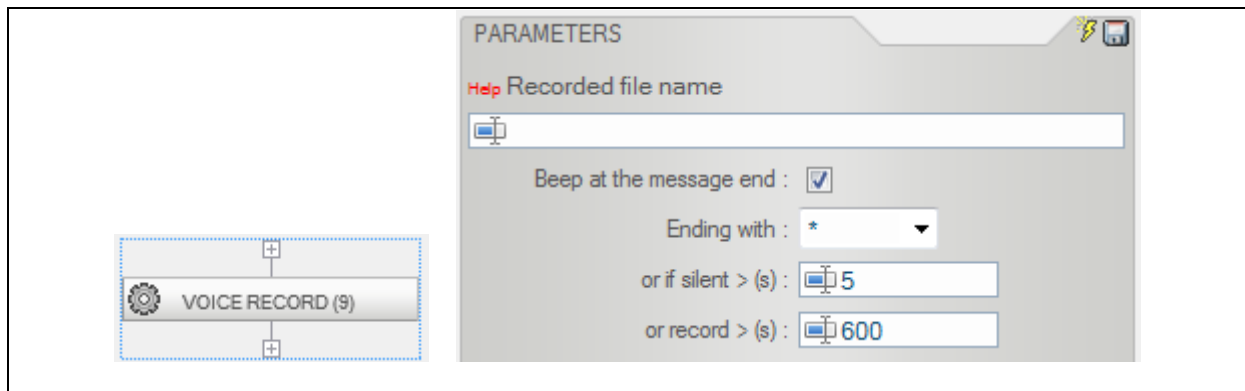
This command allows you to record an audio message from the client.

Parameter: 'File Name' is the path and name of the saved file.

'Ending with' specifies the DTMF to stop recording.

'or if silent>' specifies another way of stopping the recording.

'or record>' specifies the max duration of the recording.



5.9 Common parameters

Several settings are common for CTI commands and define how to play audio files, the DTMFs , or managing repeat sequences of audio files.

Check this box to add a ' Beep ' at the end of the message read.

Beep at the message end :

Check this box to allow the user to jump the audio file by typing the DTMF.

Allow user interruption :

Number of times we will replay the audio file if no DTMF is entered.

Number of try :

Time allocated to the input of one or more DTMFs.

Maximum input time (s) :

Sets the number of DTMFs that may be entered.

Maximum input size :

Sets the time allowed between two DTMF .

Interdigit time (s) :

Defines what way the audio file will be played.

- 1 - **Not played in background**: Reading the blocking audio file in the script. The following actions will be performed at the end of the reading.
- 2 - **Begin new play**: Starts a new audio file playback.
- 3 - **Synchronize previous play**: Wait for the previous message to start playback.
- 4 - **Cancel previous play**: Stops playing the last WAV.

Background type :

Specifies how the buffer containing previously entered DTMFs will be cleared.

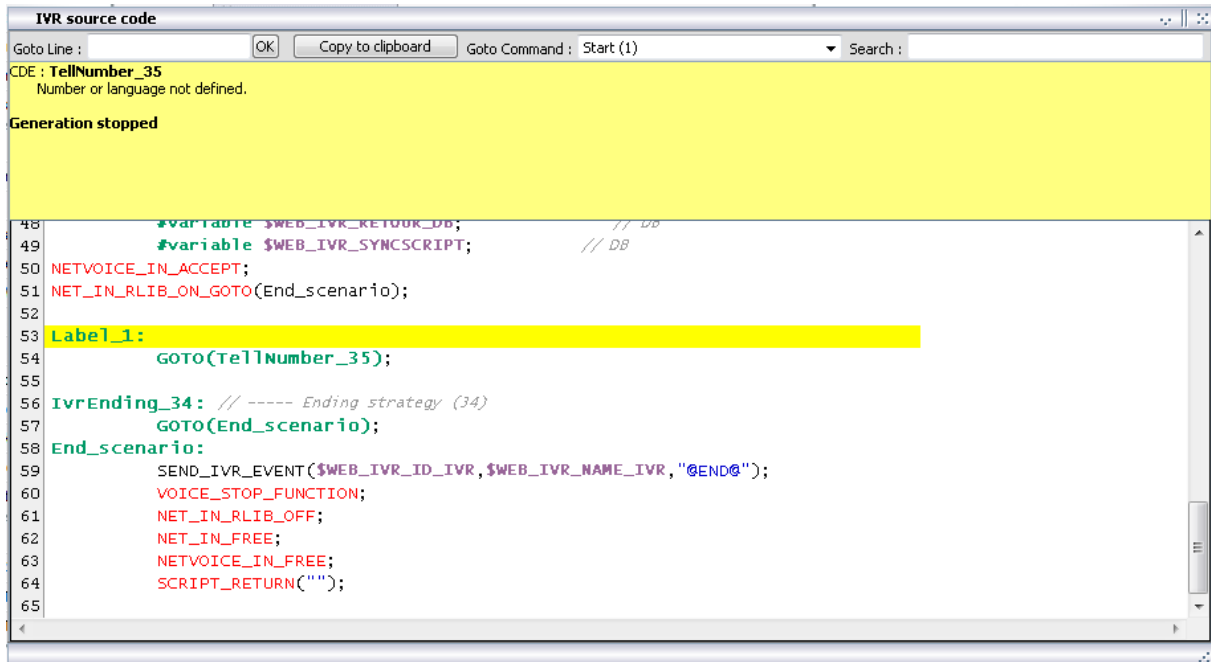
Clear DTMF type :

6. IVR Source code

The IVR code display window allows checking for errors. Eg missing audio files, parameters not indicated, etc. etc.. These errors are displayed at the top of the screen on yellow background.

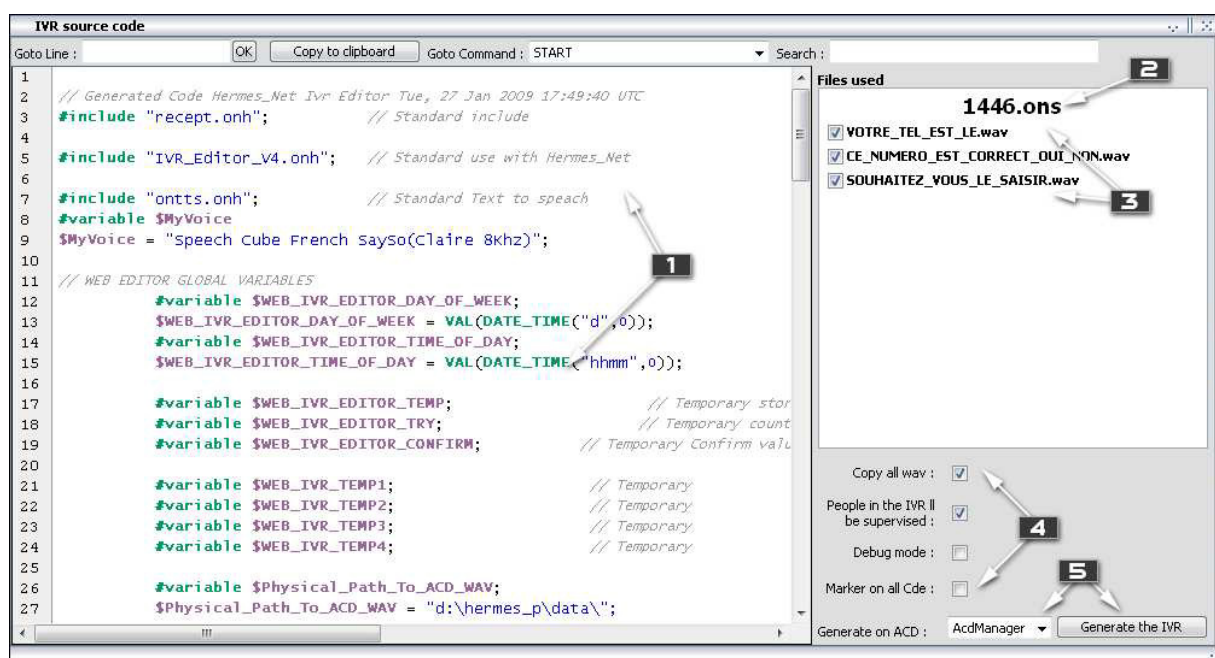
This screen also allows:

- To find the location of a control in the code: combo 'Goto Command'
- To find a word or phrase: 'Search'
- To go to a particular line: 'Goto line'



7. Generating an IVR

At the launch of the generation, the following screen is displayed. This screen summarizes: the source code, used audio files, generation options, the execution platform, and the generation button.



1) IVR script source code

Used to verify the generated code, and display any errors.

2) Name of the generated script

This name contains the id of the script.

3) List of audio files used in the script.

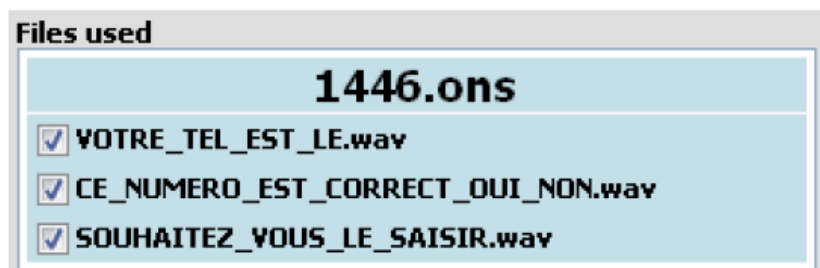
For each of these files, you can choose to copy or not the runtime server. Check the box to copy the file.

4) Generation Options

- Copy all wav: select or deselect all audio files.
- People in the IVR Will Be Supervised: This option lets you specify whether you want or not to oversee the IVR .
- Debug Mode: Specifies whether the generated script or not send the necessary commands the tracker (see chap. 7)
- Marker on all command: to specify whether you want to add markers reporting each control SVI .

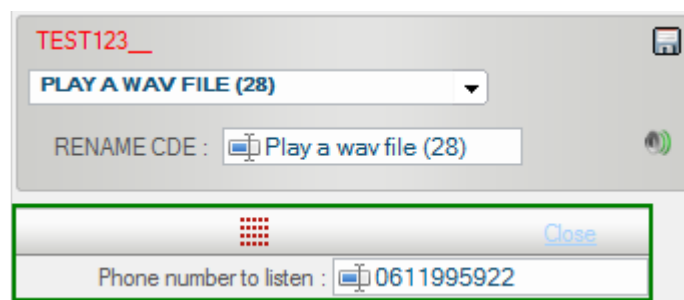
5) Select the execution machine (OnXMedia) from the dropdown list .

Click the ' Generate the IVR button to start generation.
 In case of successful generation, the top of the audio files box turns blue as below.
 In case of error the screen is the following , the error returned is displayed in red in the name of the IVR , and in correct code line is highlighted in yellow (in this example , we added a function omitting user parameters to the function VOICE_GET_DTMF) :



8. IVR Tracker

The Hermes.Net IVR Editor Tracking allows you to check the progress of a user in the generated script. For this, the system needs to know the phone number used by the caller. This number must be entered in the area "Phone number to listen". Once the number is entered, click the green arrow to start monitoring. As soon as the specified number enters the IVR, the tracking will begin.



9. Global variables

9.1 Principles of Global variables

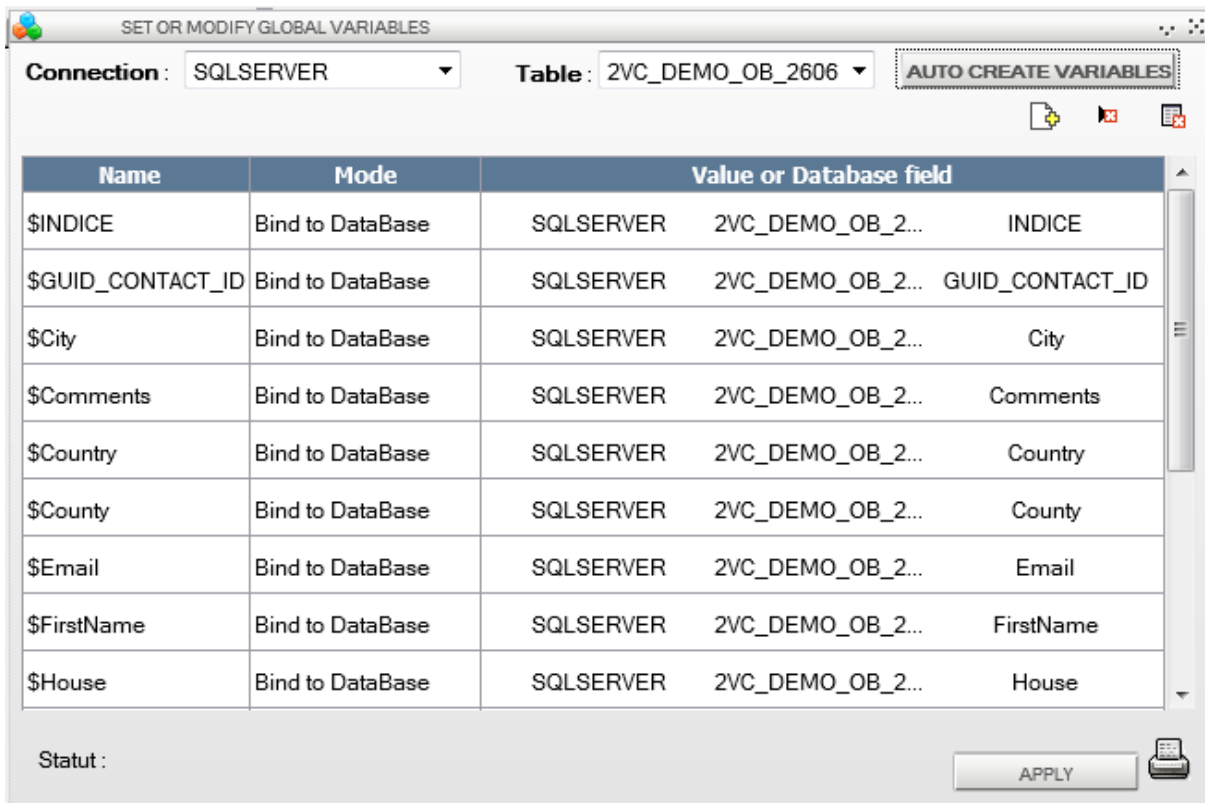
This screen allows you to define variables to be used in the script. A Script variable must start with '\$'. Each variable may be initialized to a specific value.

It is possible to create variables by the columns of a table contained in a database Hermes.Net. To do this, select the connection and the desired table, and then click Auto Create Variables. These variables are initialized to the entry in the IVR with the value of INDEX received from the system.

A variable declared but not used is not included in the script.

9.2 Global variables interface

Example of variables linked in the script.



Connection: Table:

Name	Mode	Value or Database field		
\$INDICE	Bind to DataBase	SQLSERVER	2VC_DEMO_OB_2...	INDICE
\$GUID_CONTACT_ID	Bind to DataBase	SQLSERVER	2VC_DEMO_OB_2...	GUID_CONTACT_ID
\$City	Bind to DataBase	SQLSERVER	2VC_DEMO_OB_2...	City
\$Comments	Bind to DataBase	SQLSERVER	2VC_DEMO_OB_2...	Comments
\$Country	Bind to DataBase	SQLSERVER	2VC_DEMO_OB_2...	Country
\$County	Bind to DataBase	SQLSERVER	2VC_DEMO_OB_2...	County
\$Email	Bind to DataBase	SQLSERVER	2VC_DEMO_OB_2...	Email
\$FirstName	Bind to DataBase	SQLSERVER	2VC_DEMO_OB_2...	FirstName
\$House	Bind to DataBase	SQLSERVER	2VC_DEMO_OB_2...	House

Statut :

10. Functions

10.1 Introduction to functions

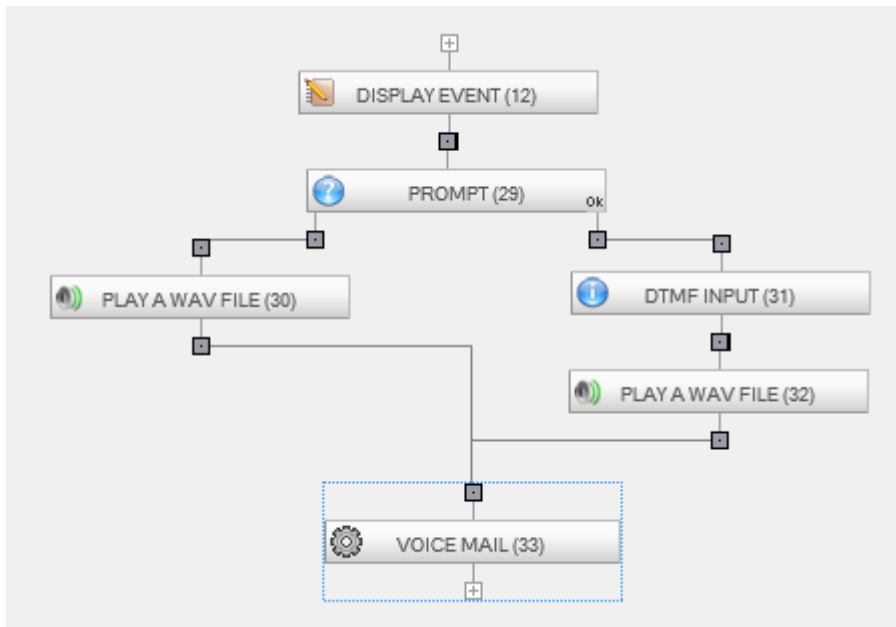
A function is part of the IVR code. This part can be called from any other function or from the Index page (homepage).

Important remarks about functions:

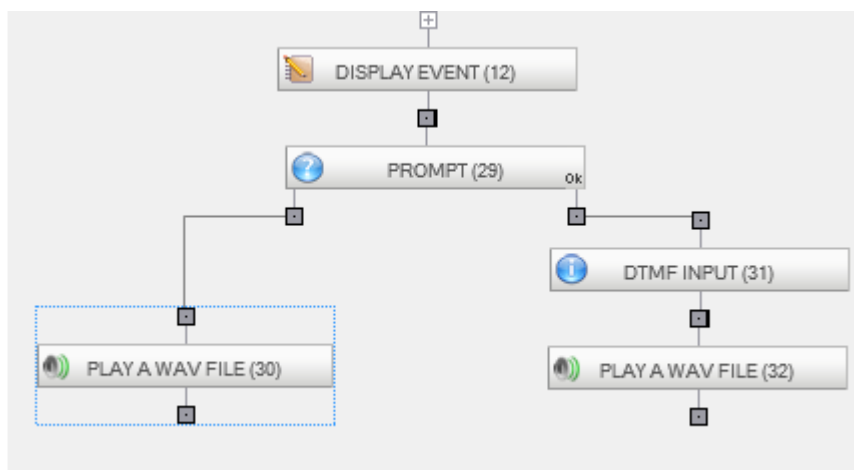
- A function must contain at least one command.

- A "Jump" command within a function cannot lead to another function, or the Index page.
- The variables are SVI cannot be declared local to the function.
- Currently, a function returns nothing. You must use global variables for return values.

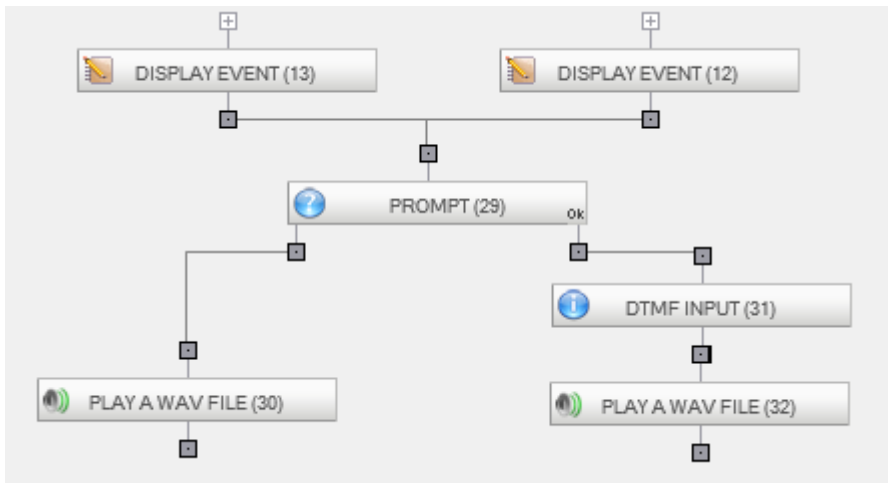
10.2 Examples of functions



Standard configuration: 1 entry, 1 exit. In this configuration, the entry is done in the Display event and exit is done via the Voicemail.



Configuration 1 entry, N exits: In this configuration, the entry is done in the Display event and exit is done via either Play a WAV file.



Configuration N entries, N exits: In this configuration, the entry is done in either Display events and exit is done via either Play a WAV file. This config is not advised.

Important remarks: If a function does not contain a command, it will not be saved. Whether on the index page or in functions, unbound controls are, whatever may be the case, compiled in the IVR. It is therefore preferable, once the IVR is in production, to remove any unbound controls.

11. Supervision

In Supervision module, it is possible to see what is going on at the IVR level, with three objects: the "IVR user" counter, the "IVR caller" list and the "IVR history" list. These objects work with markers, which we saw we can add to IVR trees earlier on.