VoiceGuide ACD

Introduction

VoiceGuide ACD system is included as part of VoiceGuide v7.

Features:

- Smart call routing to agents (skill based, algorithm based, etc)

- In queue announcements.

- Caller returns to IVR script after end of agent call (eg: for call rating).

- Inbound/Outbound call blending. Agents are sent pre-loaded outgoing calls when no incoming calls are queued.

Agent Software Installation

VoiceGuide Agent software should be installed on PC used by the Agent.

VoiceGuide Agent is a software application installed on call center agent's PC to allow the agent to control the receiving and making of calls through the VoiceGuide ACD system, and to receive call related information for each call.

VoiceGuide Agent software is supplied in a self-contained installation package.

Agent PC requirements:

- Windows with .NET 4.7 or later installed.

- Network connectivity back to main VoiceGuide system.

Agent Software Configuration

Configuration of VoiceGuide Agent software is done using the vgAgent.ini configuration file.

This configuration file is located in the same directory as the VoiceGuide Agent application.

vgAgent.ini contents after installation look like this:

```
[Agent]
AgentID=1002
AgentTelephone=208
AgentName=Terry Brown
Skills=sales:5,support:5


[AcdServer]
ServerConnectionWcf=net.tcp://localhost:7138/AcdService/


[PopUp]
Height=700
Width=300
```

The vgAgent.ini file needs to have its entries set to hold the details of the agent which will be using this PC.

The entries need to be set as follows:

AgentID	Agent's Numeric ID. Max 10 digits long.
AgentTelephone	Telephone Number which the VoiceGuide server needs to dial to reach this agent.
AgentName	Agent's Name.

Skills	Skills assigned to agent. Notation used is: **skill1:level1,skill2:level2,skill3:level3** eg: **redque:5,bluque:5,whiteque:5**
ServerConnectionWcf	WCF connection string that specifies where the vgAgent app can find the VoiceGuide server. The connect string is in this format: **net.tcp://[ip_address]:7138/AcdService/** where [ip_address] is replaced by the IP address of the VoiceGuide server. eg: **net.tcp://10.1.1.43:7138/AcdService/** HTTP connection method is also supported, using this connect string: **http://[ip_address]:7131/AcdService/**

eg:


```
[Agent]

AgentID=5007

AgentTelephone=97625551234

AgentName=Bob Brown

Skills=sales:6,accounts:2

[AcdServer]

ServerConnectionWcf=net.tcp://192.168.1.90:7138/AcdService/

[PopUp]

Height=800

Width=600
```

Agent Software Operation

When agent software is started the agent is initially placed in "Not Ready" mode.

The agent must manually change their status to "Ready" in order to be able to receive calls.

When each call is ended the Agent will automatically be placed in "Work" mode. After completing after call work the agent can then select whether to go back to "Ready" state, or whether to select another status.

Sending Calls to Agent

VoiceGuide will send to agents any calls that have been placed in the ACD queues by the ACD script.

Skill and Algorithmic based routing will be used to select most suitable agent to connect the call.

Any call on VoiceGuide system can be placed into an ACD queue. Please see the 'VoiceGuide Script Design' section of this document for more information on how calls can be placed in the ACD queue.

If an agent becomes available and there are no calls in ACD queues available for this free agent, VoiceGuide will check whether any 'Preview Dialer' or 'Predictive Dialer' outgoing calls have been queued in the Dialer database that would match the agent's skills. If such outbound calls are found then they are then presented to the agent.

VoiceGuide ACD Queues Configuration

ACD queue options can be set in VoiceGuide's Config,xml file. These options are used to set behavior of the various queues. Here is an example **<acd>** section:

```
<acd>

<queues>

<queue>

  <name>sales</name>

  <paths>

    on {timeout 600} goto [Voicemail box 0001]

    on {1} goto [sales self service]

  </paths>

  <callrecord_dir>C:\calls\sales</callrecord_dir>

  <agent_invite_options>

    <CallerID>1234@10.1.1.70</CallerID>
```

```
    </agent_invite_options>

</queue>

<queue>

  <name>accounts</name>

  <paths>

    on {timeout 600} goto [Voicemail box 0002]

    on {1} goto [accounts self service]

  </paths>

  <callrecord_dir>C:\calls\</callrecord_dir>

  <agent_invite_options>

    <CallerID>5678@10.1.1.70</CallerID>

  </agent_invite_options>

  <onhold_music>onhold_240.wav</onhold_music>

  <onhold_information></onhold_information>

</queue>

</queues>

</acd>
```

The **<acd>** section is in the **<VoiceGuideConfig>** section.

name	Name of the queue. Agent must have a skill for this queue name order to receive calls from that queue.
paths	What modules the script will jump to if caller presses a particular key while waiting in the queue. Timeout paths can also be specified and will trigger if caller spends that amount of time in queue.

`callrecord_dir`	If defined the system will automatically record all the conversations between callers and agents for this queue and save the sound files in the specified directory. Result Variables can be used to specify the directory. eg: `C:\calls\$RV_ACD_AGENTID\$RV_YY$RV_MM$RV_DD\` Where `$RV_ACD_AGENTID` is the ID of the agent to whom the call was connected. If the directory does not exist it will be created.
`agent_invite_options`	Options to include in calls sent to agents. A common option to use is to set the `CallerID` on calls sent to agents. On VoIP systems the setting of CallerID is usually necessary in order to let the call be forwarded to agent by PBX. eg: `<CallerID>5678@10.1.1.70</CallerID>`
`onhold_music`	On-hold sound file that will be played to the caller while the caller is in the queue.
`onhold_information`	What information will be played to caller while caller is in queue. This includes itemps like position in queue, and estimated wait time. Set to `none` if no information is to be played.

VoiceGuide Script Design

VoiceGuide script can send calls to ACD queue. ACD system will then send calls from ACD queue to agents.

Send calls to ACD queue can be done in two ways:

1. Using 'Transfer Call' type module, with the ACD queue expression used as the transfer destination, or:
2. The ACD queue expression can be specified in a 'path' destination in any script module.

The ACD queue expression that identifies the ACD queue is:

`acd:queue_name`

eg:

`acd:sales`

When using a 'Transfer Call' module, specifying `acd:sales` as the transfer destination would transfer the call the ACD's "sales" queue.

From any other module, the 'path' to send the call to the ACD queue would look something like this:

`On {1} goto [acd:sales]`

Another example:

`On {Timeout 10} goto [acd:sales]`

In above examples the call will be placed in ACD queue named "sales", and will then be connected to agent that a can accept a call from "sales" queue as soon as appropriate agent is available.

From the script's point of view the call remains the same module until one the following happens:

- Caller pressed a tone that triggers a path specified in the Config.xml's `<paths>` section. (in `<acd><queues><queue>`)

- The caller wait time in queue is longer than timeout value for that queue, and caller is transferred to another module (or voicemail box) as per timeout path specified in the Config.xml's `<paths>` section.

- Agent hangs up : The path then taken is either: `OTHER_LEG_Disconnected` or `OTHER_LEG_Idle_NotYetReleased` - depending on type of telephone connection used.

- Caller Hangs up : The 'after hangup' script is then ran (if defined).

ACD Result Variables

When call is routed to ACD agent the following Result Variables will be created:

`$RV_ACD_AGENTID`	Agent's ID.
`$RV_ACD_AGENTNAME`	Agent's name
`$RV_ACD_AGENTPHONE`	Agent's telephone number.
`$RV_ACD_AGENTSKILLS`	Skills defined for this agent.

These Result Variables can be used in the VoiceGuide script that is wrapping up the call, eg,. For call rating purposes.

Agent Popup

VoiceGuide Agent call information popup is constructed around a flexible information display framework which allows displayed call data to be merged from multiple sources, including direct from VoiceGuide server or from a variety of templates or http/https sources. Agent Popup can also be easily modified and extended to allow integration with other applications, allowing quick deployment of structured call systems, or integration with CRM systems.

VoiceGuide Agent popup incorporates a fully featured browser control, allowing the display of related information using a number of different methods and sources.

- http/https link

- text or html template file

- text or html stream sent directly from VoiceGuide

The browser control supports advanced options, including client side scripting, allowing for advanced interactive web pages to be used within the popup window.

All the call related data is also supplied to the popup application, allowing for Result Variable placeholder replacements to be made in any links or files or stream prior to popup display.

Below is an example of a simple html template based popup. The template has placeholders which were substituted with call related data and the resulting filled out html template is then displayed.

The popup example below shows agent is 26 seconds into a call, with the details of the person called displayed in the popup:

The timer on the left is used to display time spent in conversation with customer. The timer on the right is used when agent is in 'Wrap Up' mode after end of call. While in wrap up mode the popup continues to display the data:

Once agent completes wrapping up the call they can:

- Request new outbound call previewed, by pressing the Preview button. Next outbound call details will then be displayed in the popup window.

- Request new call dialed, by pressing the Dial button. Next outbound call details will then be immediately made, and call details displayed in the popup window.

- Change their status to indicate whether they are able to receive inbound calls or other communications, or whether they are Busy, On Break, etc.

Displaying Information in Popup

Contents of the popup windows can be specified in a number of ways, with each call having call related data attached to it, and this call related data then used in creating the popup contents.

The popup attempts to retrieve data for display in this order:

1.   From supplied http/https/filename etc. URI link

2.   From directly supplied html/text

3.   Loading the vgAgentPopUpTemplate.htm file from \popups\ subdirectory

If the http/https link or filename is not specified then the vgAgent app will use the html/text message sent, and if that is not specified then the default vgAgentPopuptemplate.htm will be used.

On the VoiceGuide server the following $RVs can be set in VoiceGuide scripts to specify what the ACD agent popup displays:

`$RV[AcdAgentPopup_DisplayLink]`	URI pointing to the http/https/file template to be displayed.
`$RV[AcdAgentPopup_DisplayHtml]`	The html text to be displayed.

If the popup loads the display template from a local file then any Result Variables template placeholders ($RVs) used in the source to display are replaced before it being displayed to agent.