

Avaya Solution & Interoperability Test Lab

# **Configuring Sample Screen Pop Applications with Avaya IP Agent Passing Caller Number, Prompted Digits or User to User Information - Issue 1.0**

## Abstract

Screen pops are used to start an application or interface when an incoming call is received by Avaya IP Agent or when an outgoing call is placed. These Application Notes describe example scenarios of screen pop configurations with three such third party applications – FrontRange GoldMine contact management application, Microsoft Internet Explorer, and Microsoft Excel. How to pass the caller information such as caller number, prompted digits, or User to User Information (UUI) is also illustrated.

# 1. Introduction

Screen pops are used to start an application or interface when an incoming call is received by Avaya IP Agent or when an outgoing call is placed. These Application Notes describe example scenarios of screen pop configurations with three such third party applications – Front Range GoldMine contact management application, Microsoft Internet Explorer, and Microsoft Excel. How to pass the caller information such as caller number, prompted digits, or User to User Information (UUI) is also illustrated.

### 1.1. Avaya IP Agent Screen Pop

Avaya IP Agent provides agents with the ability to display Web pages, start applications, or retrieve and display caller information from a database. Screen pops are created using the Screen Pops Wizard, which guides through their creation.

There are two types of screen pops:

• Windows application - This type of screen pop starts a Windows application, such as an HTML browser, a database interface, a trouble ticket program, or a custom application. This type of screen pop is also capable of passing parameters as part of an HTML string when it is initialized.

• Dynamic Data Exchange (DDE) - This type of screen pop retrieves information specified for a call and passes it to a DDE server or application. The DDE server or application can then send information from its database or a file to an interface displayed on the personal computer.

These Application Notes describe the screen pops using DDE.

### **1.2. Reference Test Network**

**Figure 1** illustrates the reference configuration used to verify these Application Notes. It consists of Avaya S8710 Servers with an Avaya G650 Media Gateway, and an Avaya IP Agent desktop in a telecommuter mode using an Avaya 4620 IP (H.323) telephone for voice delivery. The applications FrontRange GoldMine, Microsoft Internet Explorer, and Microsoft Desktop are corresident with Avaya IP Agent.

**Note:** These Application Notes assume that Avaya Communication Manager, Avaya S8710 Servers, Avaya G650 Media Gateway, ethernet switches, Avaya IP Agent, Avaya IP telephone, FrontRange GoldMine application, a Microsoft Excel spreadsheet, and Internet Explorer are already in place and configured.



**Figure 1: Reference Test Configuration** 

## 2. Equipment and Software Validated

The following table shows the equipment and software/firmware relevant to the test configuration shown in **Figure 1**.

Equipment	Software/Firmware
Avaya S8710 Server	Avaya Communication Manager R5.0
	(R015x.00.0.825.4)
Avaya G650 Media Gateway	
IPSI (TN2312BP)	FW 030
C-LAN (TN799DP)	FW 017
MEDPRO (TN2302AP)	FW 214
Avaya 4620 SW IP Telephones (H.323)	2.8
Avaya IP Agent	7.0.23.116
Avaya C364T Converged Stackable Switch	4.5.14

# 3. Configure Avaya Communication Manager

It is assumed that Avaya IP Agent is already configured and the relevant call center configurations such as Automatic Call Distribution (ACD), vectors, Vector Directory Numbers (VDN), and Expert Agent Selection resources are already in place. For the test configuration, the following Avaya IP Agent attributes were used:

Agent Id: 21008 Station Extension: 20020 Station Type: 8434D

#### **Passing Caller Information**

The Avaya IP Agent screen pop feature can pass caller information to an external application, such as caller number, prompted digits, or User to User Information (UUI).

For passing caller number from Avaya IP Agent to an external application, it is assumed that the incoming trunk calls are enabled to send caller number to Avaya Communication Manager. Make sure that the delivery of the caller name is disabled on the incoming trunk calls; otherwise the external application that is expecting caller number from Avaya IP Agent will not get started.

To pass the Prompted digits, it is assumed that the appropriate vector steps are configured for collecting digits from a caller and the station associated with Avaya IP Agent has a **callr-info** button administered.

To pass UUI, Avaya Communication Manager must have the Display UUI Information feature enabled. User-to-User Information (UUI) is added to an incoming call typically through an external application via Avaya ASAI, ISDN, H.323, or SIP trunks. For these Application Notes, UUI was configured (by replacing an empty UUI string) in Avaya Communication Manager instead of getting it from an external application or trunks.

This section describes how to configure UUI so that UUI data can be passed from Avaya IP Agent to an application. The following configuration of Avaya Communication Manager was performed using the System Access Terminal (SAT). After completion of the configuration in this section, perform a **save translation** command to make the changes permanent.

Step	Description							
1.	Use the <b>change variables</b> command to create a vector variable <i>Var</i> <b>D</b> of <i>Type</i> <b>asaiuui</b> as shown below. This variable will be used in <b>Step 2</b> for storing the digits in the ASAI UUI string associated with a call. The <i>Scope</i> <b>L</b> means that the variable D is a local variable. The use of <i>Start</i> and <i>Length</i> parameters is described in <b>Step 2</b> .							
	change variables Page 1 of 39 VARIABLES FOR VECTORS							
	VarDescriptionTypeScopeLengthStartAssignmentVACAstepcountstepcntLUVVVVVBemergencyvalueG10VV1CaniL1111IIIDuuiasaiuuiL51II							
2.	<ul> <li>Use the change vector n command, where n is a vector number, to add a vector set command. In this example, the set command in vector step 7 is used to set the UUI variable D created in Step 1 to the digits collected in vector step 6.</li> <li>The set command operation replaces or appends digits in the ASAI UUI string associated with a call as defined by the <i>Start</i> and <i>Length</i> definition for the vector variable D (refer to Step 1). The SEL operator selects the right-most number of digits specified by the second operator (eg. 5) from the first operator (e.g. digits).</li> </ul>							
	change vector 1 Page 1 of CALL VECTOR							
	Number: 1 Name: CC Agents Meet-me Conf? n Lock? n Basic? y EAS? y G3V4 Enhanced? y ANI/II-Digits? n ASAI Routing? y Prompting? y LAI? y G3V4 Adv Route? y CINFO? y BSR? y Holidays? y Variables? y 3.0 Enhanced? y 01 goto vector 10 @step 1 if unconditionally 02 collect 1 digits after announcement 24005 for none 03 goto step 6 if digits = 1 04 goto step 10 if digits = 2 05 goto step 12 if digits = 3 06 collect 5 digits after announcement 24004 for none 07 set D = digits SEL 5 08 queue-to skill 1st prim 09 stop 10 announcement 24030 11 stop 12 announcement 24031 Press 'Esc f 6' for Vector Editingn							

Step	]	Description						
3.	Use the <b>change cor n</b> command, where n is a class of restriction number configured for an agent id and its associated telephone station, to enable displaying UUI data via a station button.							
	change cor 1 CLASS O	Page 2 of 23 DF RESTRICTION						
	MF Incoming Call Brazil Collect Call Bl Block Transfer D Block Enhanced Conference/Transfer Di Remote Logout of	locking? n Display? n isplays? y f Agent? n						
	Station Lo Outgoing Trunk Disconnect Timer (mi	ock COR: 1 inutes):						
	Station-Button Display of UUI I Service Observing by Recording ERASE 24XX Dissociate or unmerge this EMU login or logoff at this Mask CPN/NAME for Internal	IE Data? y Device? n K USER DATA UPON s phone: none s phone: none l Calls? n						
4.	Use the <b>change station xxxxx</b> comma Avaya IP Agent, and navigate to Page UUI data from an Avaya IP Agent asso application.	and, where xxxxx is a station associated with the 4. Add the <b>uui-info</b> button to enable passing sociated with this station to an external						
	change station 20020	Page 4 of 6						
	SITE DATA Room: Jack: Cable: Floor: Building:	Headset? n Speaker? n Mounting: d Cord Length: 0 Set Color:						
	ABBREVIATED DIALING List1: List2:	: List3:						
	BUTTON ASSIGNMENTS 1: call-appr 2: call-appr 3: call-appr 4: auto-in Grp: 5: manual-in Grp:	6: aux-work RC: Grp: 7: after-call Grp: 8: release 9: <b>uui-info</b> 10: callr-info						

# 4. Configure Avaya IP Agent

This section covers the screen pop configuration on Avaya IP Agent to start an external application. It is assumed that Avaya IP Agent software has already been installed on an agent's desktop. In the following example configurations, the type of caller information to be passed to an application was arbitrarily chosen to illustrate various possibilities. For additional information, refer to [3].

### 4.1. FrontRange GoldMine with Caller Number

Step	Description								
1.	From the Microsoft Windows desktop, start the Avaya IP Agent application by navigating to Start → All Programs → Avaya → Avaya IP Agent → Avaya IP Agent - English. Log in as a station and then as an agent with appropriate credentials. For the tested configuration the station associated with Avaya IP Agent was extension 20020 (refer Section 3, Step 4) and the agent login ID was 21008. Click on Tools → Screen Pops.								
	Eile Edit Call View Agent	[Agent 21008] Tools Audio Instant Messaging		4					
	Image: Call View Agent       Sill State       Number:       Logout       Color       Auto-In       Image: Call       Ol:19:07       Auto-In Mode	Phone Features Personal Phone Features Contact History Alt++ Contacts Alt+Contacts Alt+Contacts Alt+Contacts Alt+Contacts Alt+Contacts Search Public Directory Alt+S	H D Auxiliary Work Mode +	-					
	81     Screen Pops       Display the Screen Pops.     VuStats Monitor								

Step	Description								
2.	Click on <b>File</b> $\rightarrow$ <b>New</b> Ins to add a new screen pop configuration.								
	Screen Pops								
	File Edit								
	New Ins Call Type Call State VDN Command								
	Close No items to display								
	Create a new entry.								
3.	Enter a descriptive name for this screen pop. Select the type of program to launch. For the test configuration, <i>Dynamic Data Exchange (DDE)</i> was selected as shown below. Click <i>Next</i> .								
	This wizard takes you through the steps of setting up or changing a screen op.								
	Please enter a name for this screen pop:								
	Please select the type of program you want to launch:								
	• Windows Explorer - Select this option to launch a URL, a file, or a program.								
	<ul> <li>Dynamic Data Exchange (DDE) - Select this option to launch a screen using a DDE Server. The DDE Server must be running before the screen can be popped.</li> </ul>								
	Back Next Cancel Help								

Step	Description						
4.	Select the type of call that will trigger the screen pop. For the test configuration, <i>Ringing</i> was selected as shown below. Click <i>Next</i> .						
	Screen Pops - Trigger       Image: Screen Pops - Trigger         You can select the type of call that will trigger your screen pop. You can also configure the screen to pop for a specific VDN.         What type of call should trigger your screen pop?         When an incoming call is:         Image: Ringing         Image: Ringing						
	Back Next Cancel Help						

Step	Description							
5.	Enter the necessary DDE information for the following fields:							
	<ul> <li>Service - A string expression that identifies an application or DDE server that can participate in a DDE conversation. Usually, the application argument is the file name of a program for a Windows-based application. Do not specify the .EXE extension of the program.</li> <li>Topic - A string expression that is the name of a topic recognized by the application argument.</li> <li>Note: Many DDE services have distinct features. For this reason, complete syntax for a</li> </ul>							
	DDE query cannot be specified in these Application Notes. For information regarding							
	Configure DDE Service and Topic associated with the GoldMine application as shown below.							
	Screen Pops - Action							
	Please enter the following information for your screen pop:         Service:       Topic:         GOLDMINE       DATA         • Execute Command:       [CALLERID("         • Poke Item:       Data:         • Poke Item:       Data:         • Prompted Digits (%p)         • VDN (%v)         • UUI (%u)							
	Back     Next     Cancel     Help     Date (%d)							
	Select <i>Execute Command</i> for the DDE conversation. Enter a string expression that specifies a command recognized by the server application. The syntax must match the syntax required by the DDE program. The command string shown above has been partially entered. See <b>Step 6</b> for full command syntax.							
	Execute command to specify information that Avaya IP Agent will retrieve from the telephone call and pass to the DDE conversation. For example, the <i>Caller Number</i> (%m). This will insert %m as one of the arguments at the end of the partial command entered so far (inserted %m is shown in <b>Step 6</b> ). Click <i>Next</i> .							
BS; Revie SPOC 10/	wed:Solution & Interoperability Test Lab Application Notes10 of 216/2008©2008 Avaya Inc. All rights reserved.IP-agent-spop							

Step	Description							
6.	Complete the rest of the command in the <i>Execute Command:</i> field as shown below. For screen pop, the <b>CALLERID</b> command will be executed in the GoldMine application via DDE, passing the caller number (the %m is replaced by the actual caller number). The rest of the arguments are optional. Click <i>Next</i> .							
	Screen Pops - Action							
	Please enter the following information for your screen pop:     Service:     Topic:     DATA        © Execute Command:     [CALLERID["%m","Message",0]]     • Poke Item:     • Data:							
	Back Next Cancel Help							

Step	Description								
7.	If desired, configure to Send part of the Caller Number to the GoldMine application. For								
	the test configuration, this field was not configured. Click Next.								
	Screen Pops - Format Call Information								
	You can configure the screen pop to send a specific part of the call information. For example, you may only want to send the last 4 characters of the call information. Send part of the Caller Number Number of characters to include 1 Location Left								
	1     1     1     1     1     1     1       2     1     1     1     1     1     1     1       3     1     1     1     1     1     1     1       4     1     1     1     1     1     1     1								
	Unformatted Formatted								
	ABCDEFGHIJKLMNOPGRSTUV HIJKLMNOPGRSTUVWXYZabc								
	Back Next Cancel Help								
8.	Click the <i>Test</i> button to test the DDE exchange between the Avaya IP Agent and								
	GoldMine without making any calls. The test procedure is not shown here. Click Next.								
	Screen Pons - Testing								
	Screen Pops - Testing       X         Image: Constraint of the streen pop, press the button below. You can enter sample data for any call information that you are including in your screen pop.         Image: Constraint of the streen pop.       Test								
	Back Next Cancel Help								

Step	Description								
9.	The following screen shows the configured parameters. Click Finish.								
	Screen Pops - Setup Completed								
		You have completed th can run this wizard aga	eded to setup your screen pop. You je any of the information.						
	oldmine								
	Call Type: Incoming								
	Based Based Concern - and Second	C.	all State: R	inging					
	Description of the contract of		VDN:						
	5 5 1 1 5 T 11 - J	Co	mmand: [(	ALLERID(''%m'',''Message'',0)]					
	Back Finish Cancel Help								
10.	To enable this screen as shown below.	n pop, click the che	ck mark	next to <b>goldmine</b> in the <i>Name</i> column					
	Province Deere								
	File Edit								
	Name 🛆 Call	Type Call State	VDN	Command					
	✓ goldmine     Incoming     Ringing     [CALLERID("%m","Message",0)]								

## 4.2. Microsoft Internet Explorer with Prompted Digits

Step	Description						
1.	Repeat Section 4.1, Steps 1 through 10 to configure a screen pop for the Microsoft Internet Explorer application For Section 4.1, Step 3, enter an appropriate name for the new screen pop. For Section 4.1, Steps 5-6, configure <i>Service</i> , <i>Topic</i> , and <i>Execute</i> <i>Command:</i> as shown below. In this sample configuration, the "The Weather Channel" website will be popped up with the weather details for a zip code. The %p in the <i>Execute Command:</i> is replaced by the digits (e.g. zip code) collected during the vector processing, configured in Section 3, Step 2, and are passed to Internet Explorer.						
	Screen Pops - Action     Please enter the following information for your screen pop:     Service:   iexplore     VWWV_OpenURL     • Execute Command:   http://www.weather.com/weather/local/%p     • Poke Item:     Data:						
		Ba	ack	Next	Cancel Help		
2.	The following is the new screen pop nam	final scre ed <b>weath</b>	en for this er.	configu	ration enabled for screen pop. Note t	he	
	Screen Pops					1	
		Tupe C	Call State	VDN	Command	-	
	goldmine Inco	oming F	Ringing		[CALLERID("%m","Message",0)]		
	weather Inco	oming F	Ringing		http://www.weather.com/weather/local/%p		
						_	

### 4.3. Microsoft Excel with UUI

Ct	Description							
Step				Descri				
1.	Repeat Section 4.1 Steps 1 through 10 to configure screen pop for Microsoft Excel. For Section 4.1, Step 3, enter an appropriate name for the new screen pop. For Section 4.1, Steps 5-6, configure <i>Service</i> as Excel. The <i>Topic</i> field should be populated with the name of an open Excel spreadsheet tab, e.g. Sales Order (see Section 5.3 for the open spreadsheet with the tab Sales Order). Select <i>Poke Item</i> instead of Execute Command. Enter a string expression that is the name of a data item recognized by the topic Sales Order sheet, e.g. a cell coordinate R5C7 on the spreadsheet. Set the Data to the value to be passed to the cell R5C7 in the spreadsheet, e.g. setting it to %u will pass the UUI data to the spreadsheet. For screen pop, the %u will be replaced by the actual UUI data.							
	Screen Pops - Ac	tion				×		
		Plea	se enter the foll ice: :xecute Comma Poke Item: R5C7	owing info	mation for your scre Topic: Sales Order Data: %u	een pop:		
			Back	Next	Cancel	Help		
		_						
2.	The following	is the final	screen for	this con	figuration enal	bled for screen po	p. Note	
	the new screen	pop name	d sales1.					
	Name 🛆	Call Type	Call State	VDN	Command			
	✓ sales1	R5C7 - %u						

# 5. Verification Steps

This section provides verification steps that may be performed to verify that the solution described in these Application Notes is configured properly. To verify the screen pops as described in this section, configure the call center routing as follows:

- Incoming trunk calls are routed to a Vector Directory Number (VDN), e.g. 23001.
- This VDN is mapped to vector 1 (refer to the screenshot in Section 3, Step 2).
- The vector step 6 prompts the caller and collects the digits.
- The vector step 7 sets the UUI.
- The vector step 8 routes the calls to skill 1.
- Avaya IP Agent is logged into skill 1 with agent Id 21008 and is ready to receive calls.

These Application Notes assume that FrontRange GoldMine application, a sample Microsoft Excel spreadsheet, and Internet Explorer are already in place and configured.

### 5.1. FrontRange GoldMine

From the Microsoft Windows desktop, start the GoldMine application by navigating to Start  $\rightarrow$  All Programs  $\rightarrow$  GoldMine 6.7 Corporate Edition  $\rightarrow$  GoldMine 6.7 Corporate Edition. Log in with appropriate credentials. If not configured already, add a new contact record with the *Phone1* field set to a caller number. In this example, a customer record with the *Phone1* field set to 07328523093 was created.

Make an inbound ACD call and let the call route to Avaya IP Agent. While the call is ringing, verify that the customer record associated with caller number is displayed. In the following example, the caller number is **07328523093**. The customer record associated with the caller number **07328523093** is displayed.

**Not**e: Make sure that the delivery of the caller name is disabled on the incoming trunk calls; otherwise the external application that is expecting caller number from Avaya IP Agent will not get started.



### 5.2. Microsoft Internet Explorer

Make an inbound ACD call. Enter the digits when prompted, e.g. enter zip code. The call will route to Avaya IP Agent. While the call is ringing, verify that the "The Weather Channel" Web page pops up on the screen and the information associated with the prompted digits (zip code in this case) is displayed. In the following example, the prompted digits are **07738**. The weather information for zip code **07738** is displayed.



### 5.3. Microsoft Excel

From the Microsoft Windows desktop, start the GoldMine application by navigating to Start  $\rightarrow$  All Programs  $\rightarrow$  Microsoft Office  $\rightarrow$  Microsoft Office Excel 2003. Open a preconfigured spreadsheet and open a tab named Sales Order. The name of the tab should be the same as the Topic field configured in Section 4.3, Step 1.

Make an inbound trunk ACD call. Enter the digits when prompted. These digits are also set to UUI digits (refer to **Section 3, Step 2**, vector step 8). The call will route to Avaya IP Agent. While the call is ringing, verify that the UUI data pops up in cell row 5, column 7 (recall that these cell coordinates, **R5C7**, were set in **Section 4.3**, **Step 1**. In the following example, the digits collected were **13579** and were also set to UUI data, and are displayed in the cell R5C7 next to the field *Customer Id*:.

😵 Avaya IP Agent - 20020 - [Agent 21008]	
File Edit Call View Agent Tools Audio Instant Messaging Help	
📙 🔩 Drop 🛛 🐙 Transfer 🕞 🌒 Conference 👻 🗌 Number:	🤌 • 🖩   🕅 • 🖭 🤞 • 🛤
📙 🛃 Logout 🛛 💰 Auto-In 💰 Manual-In 🐼 After Call 🗾 🖅 Auxiliary Wo	rk Mode 🗸
2 00:00:06 Auxiliary Work Mode	
	😤 🛛 👔 10:07 AM 🎢
Microsoft Excel - Sales order1.xls	
Eile Edit View Insert Format Iools Data Window Help	Type a question for help 👻 🗕 🗗 🗙
SnagIt 📷 Window	
F5 🗸 🏂 Customer Id:	
A B C D	E F G H
1 Sales Demo	Customer Service
3	Date: <b>May 8, 2008</b>
4	Invoice #: [100]
5	Customer Id: 13579
b 7	
Sales Order	

# 6. Conclusion

With appropriate configuration as described in these Application Notes, Avaya IP Agent can start and/or pass caller information such as caller number, prompted digits, or User to User Information (UUI) to an external third party application such as FrontRange GoldMine, Microsoft Internet Explorer, and Microsoft Excel.

# 7. Additional References

The following Avaya product documentation can be found at <u>http://support.avaya.com</u>.

[1] *Feature Description and Implementation For Avaya Communication Manager*, Issue 6.0, January 2008, Document Number 555-245-205.

[2] *Administrator Guide for Avaya Communication Manager*, Issue 4, January 2008, Document Number 03-300509.

[5] Avaya IP Agent Release 7.0 Installation and User Guide, September 2007, Document Number 125770.

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