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 co-resident 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.

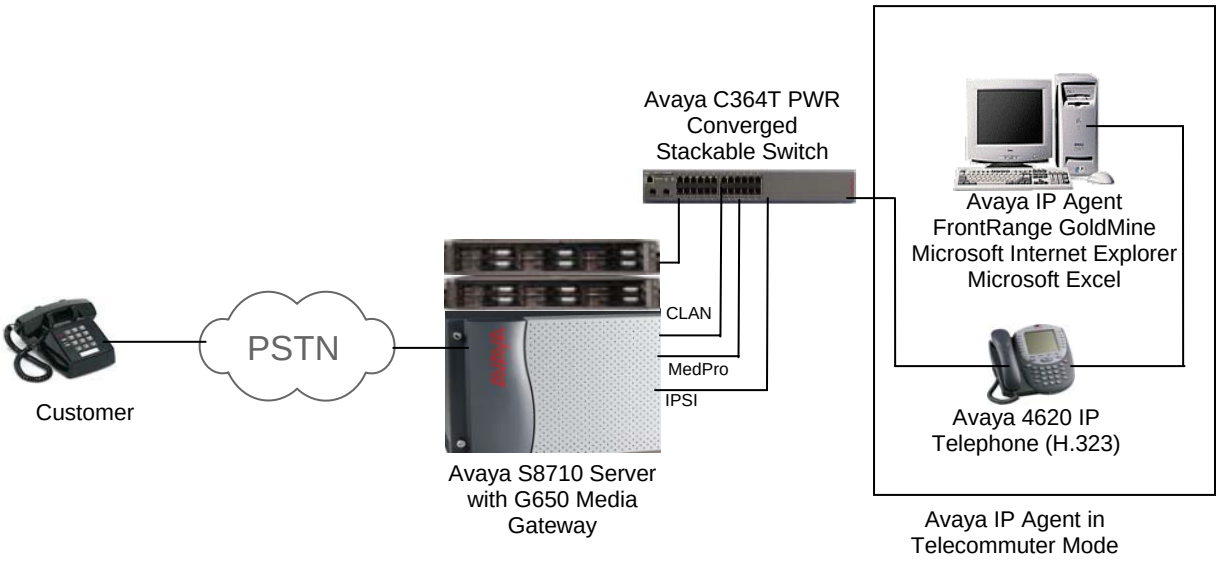


Figure 1: Reference Test Configuration

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) C-LAN (TN799DP) MEDPRO (TN2302AP)	 FW 030 FW 017 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.

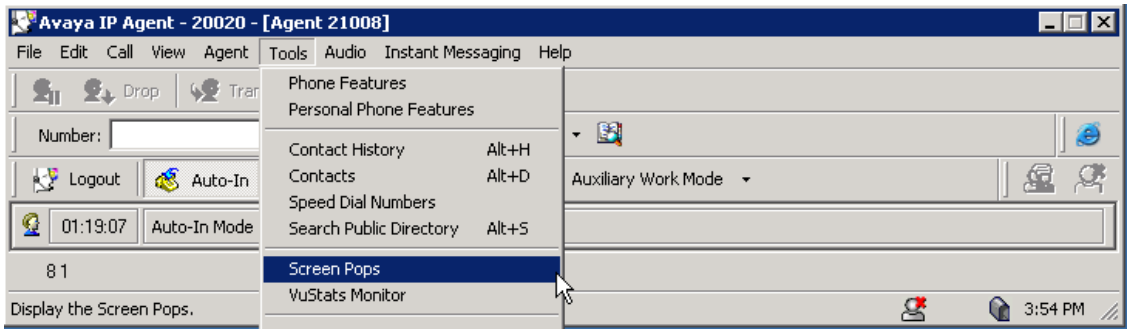
Step	Description
1.	Use the **change variables** command to create a vector variable *Var* **D** of *Type* **asaiuui** as shown below. This variable will be used in **Step 2** for storing the digits in the ASAI UUI string associated with a call. The *Scope* **L** means that the variable D is a local variable. The use of *Start* and *Length* parameters is described in **Step 2**. change variables Page 1 of 39 VARIABLES FOR VECTORS Var Description Type Scope Length Start Assignment VAC A stepcount stepcnt L B emergency value G 1 0 VV1 C ani ani L 11 1 **D uui asaiuui L 5 1** E F G H I
2.	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. The **set** command operation replaces or appends digits in the ASAI UUI string associated with a call as defined by the *Start* and *Length* 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**). 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 pri m 09 stop 10 announcement 24030 11 stop 12 announcement 24031 Press 'Esc f 6' for Vector Editingn

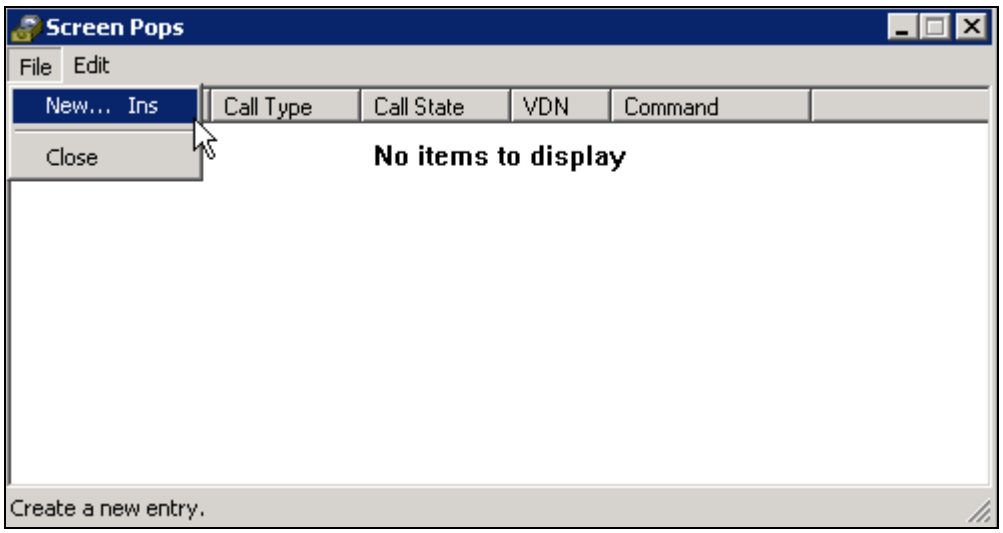
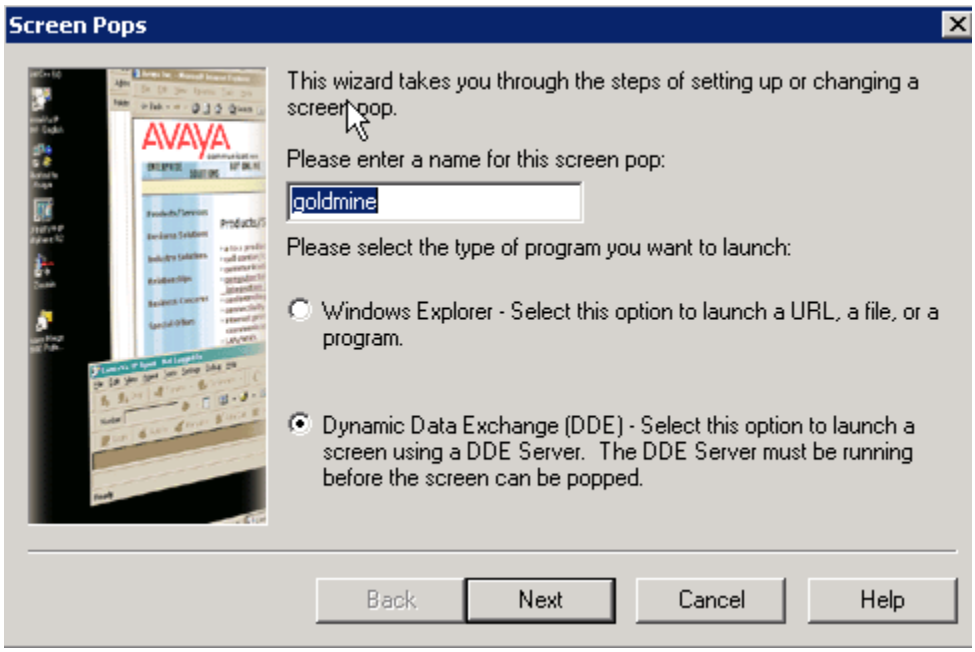
Step	Description
3.	Use the **change cor n** command, where n is a class of restriction number configured for an agent id and its associated telephone station, to enable displaying UUI data via a station button. change cor 1 Page 2 of 23 CLASS OF RESTRICTION MF Incoming Call Trace? n Brazil Collect Call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

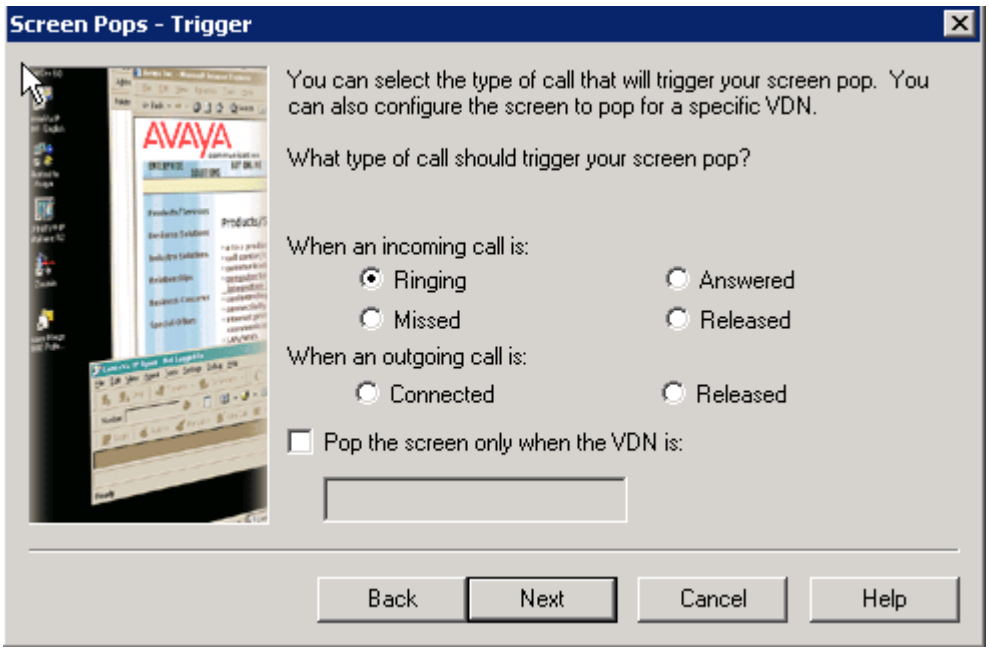
4. Configure Avaya IP Agent

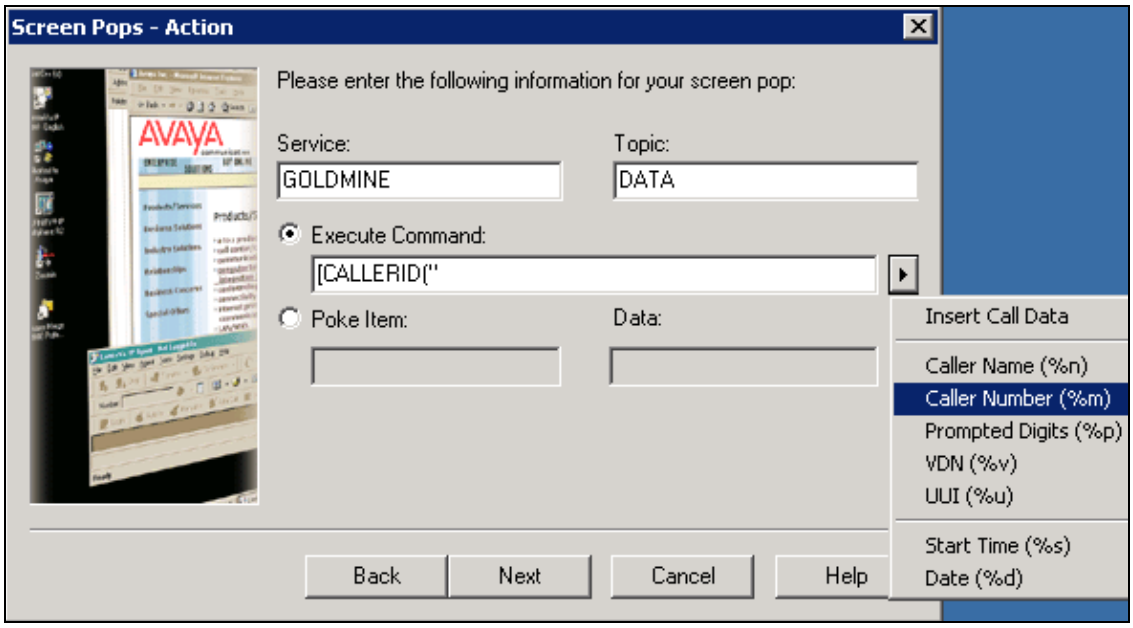
This section covers the screen pop configuration on Avaya IP Agent to start an external application. It is assumed that Avaya IP Agent software has already been installed on an agent's desktop. In the following example configurations, the type of caller information to be passed to an application was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

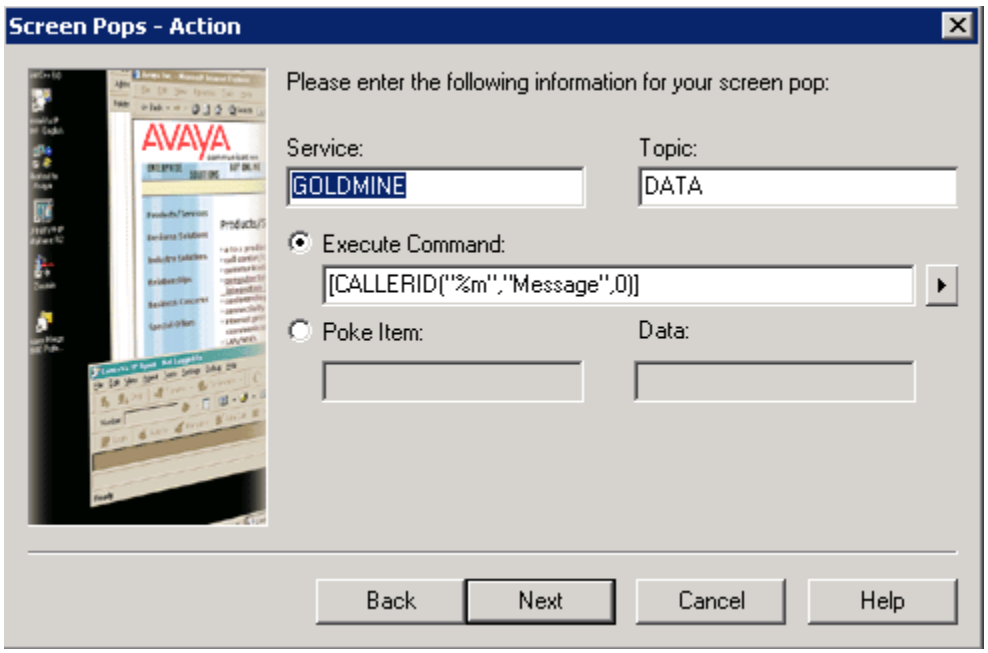
4.1. FrontRange GoldMine with Caller Number

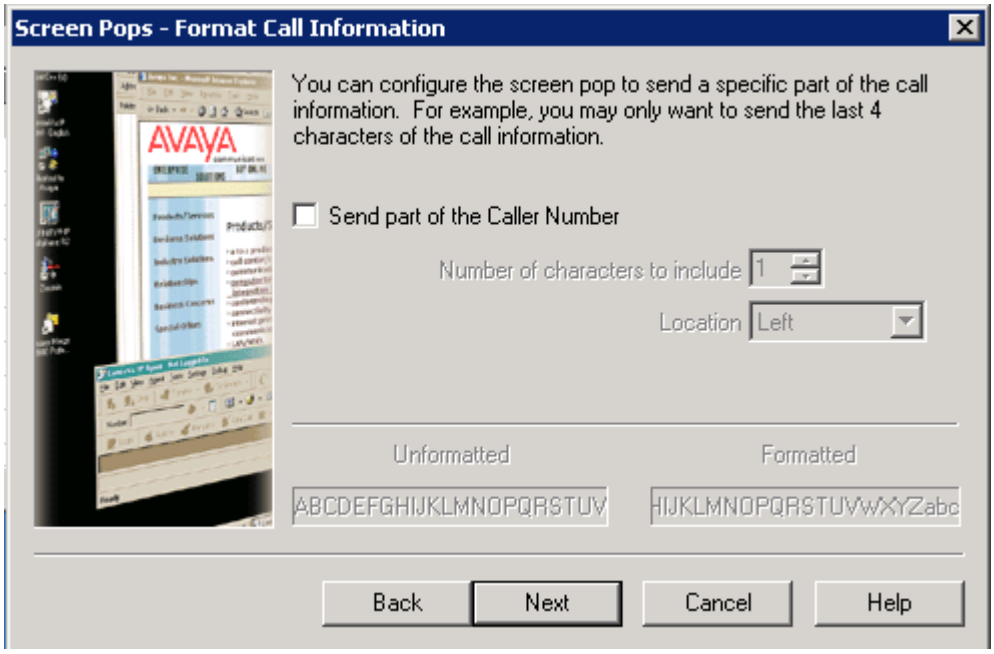
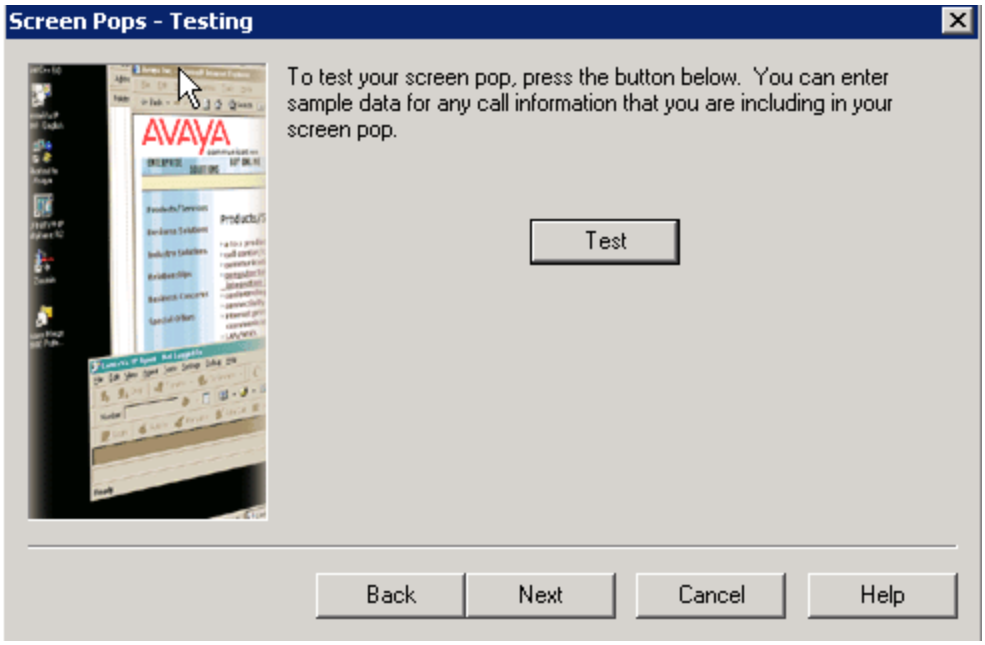
Step	Description
1.	From the Microsoft Windows desktop, start the Avaya IP Agent application by navigating to **Start → All Programs → Avaya → Avaya IP Agent → Avaya IP Agent - English**. Log in as a station and then as an agent with appropriate credentials. For the tested configuration the station associated with Avaya IP Agent was extension 20020 (refer **Section 3, Step 4**) and the agent login ID was 21008. Click on **Tools → Screen Pops**. 

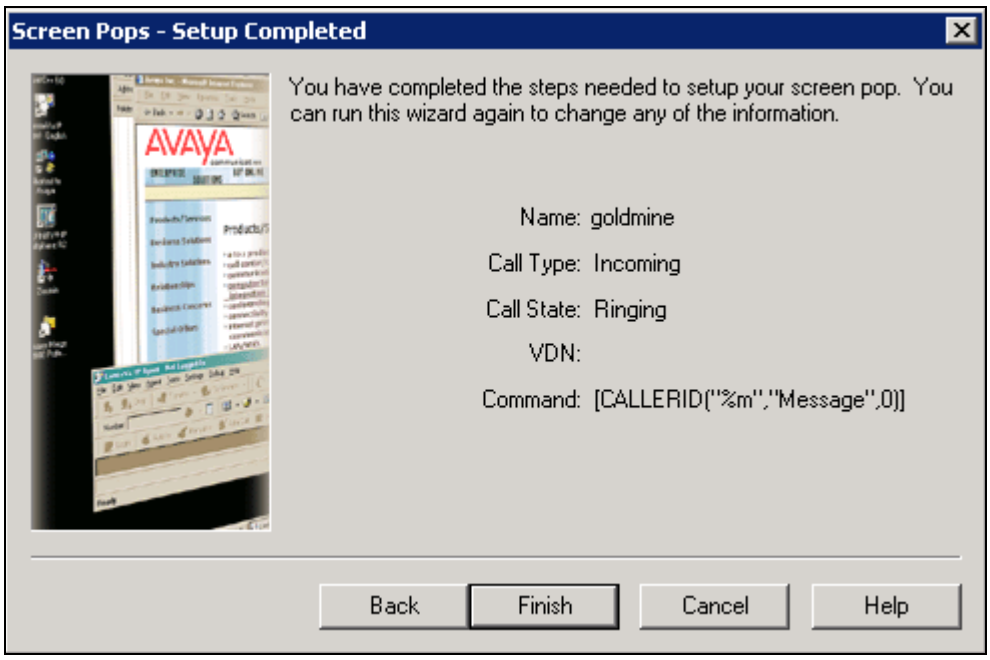
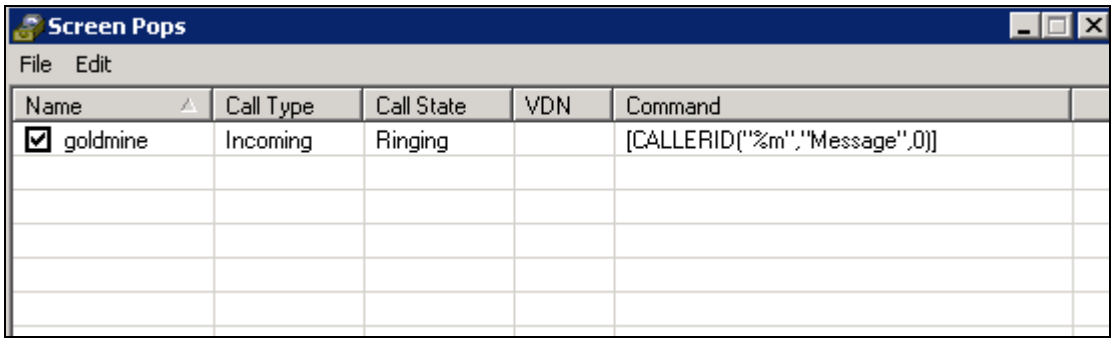
Step	Description
2.	Click on **File → New... Ins** to add a new screen pop configuration. 
3.	Enter a descriptive name for this screen pop. Select the type of program to launch. For the test configuration, *Dynamic Data Exchange (DDE***)** was selected as shown below. Click *Next*. 

Step	Description
4.	Select the type of call that will trigger the screen pop. For the test configuration, *Ringing* was selected as shown below. Click *Next.* 

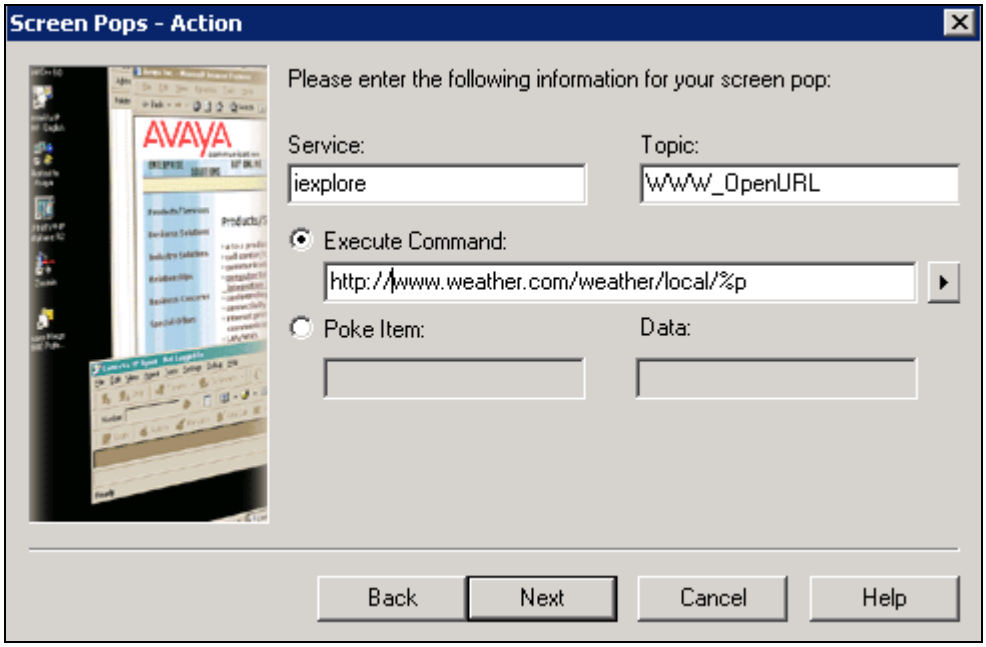
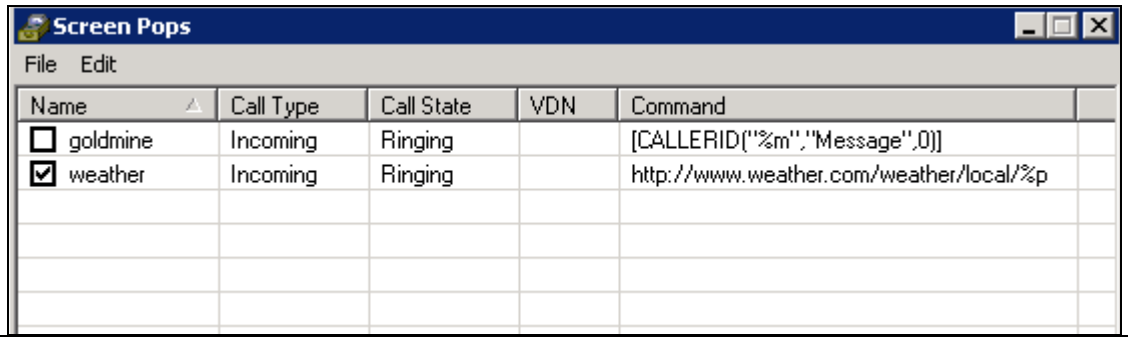
Step	Description
5.	Enter the necessary DDE information for the following fields: • Service - A string expression that identifies an application or DDE server that can participate in a DDE conversation. Usually, the application argument is the file name of a program for a Windows-based application. Do not specify the .EXE extension of the program. • Topic - A string expression that is the name of a topic recognized by the application argument. **Note**: Many DDE services have distinct features. For this reason, complete syntax for a DDE query cannot be specified in these Application Notes. For information regarding DDE service, refer to the documentation supplied with that product. Configure DDE *Service* and *Topic* associated with the GoldMine application as shown below.  Select *Execute Command* 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 **Step 6** for full command syntax. Modify the string to input caller information. Use the arrow button to the right of the Execute command to specify information that Avaya IP Agent will retrieve from the telephone call and pass to the DDE conversation. For example, the *Caller Number (%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 **Step 6**). Click *Next*.

Step	Description
6.	Complete the rest of the command in the *Execute Command:* field as shown below. For screen pop, the **CALLERID** 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 *Next*. 

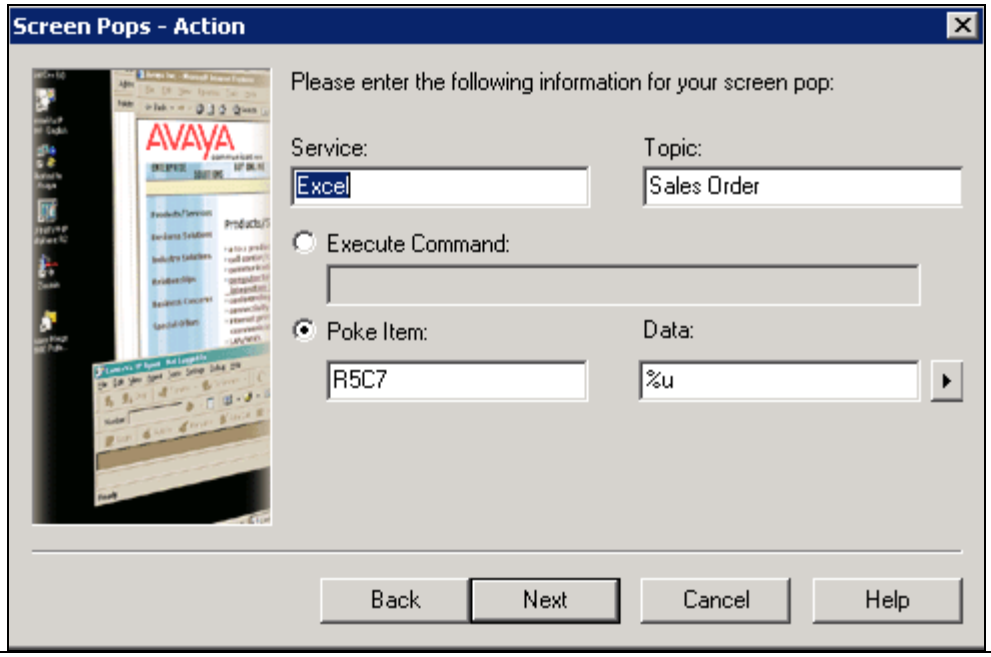
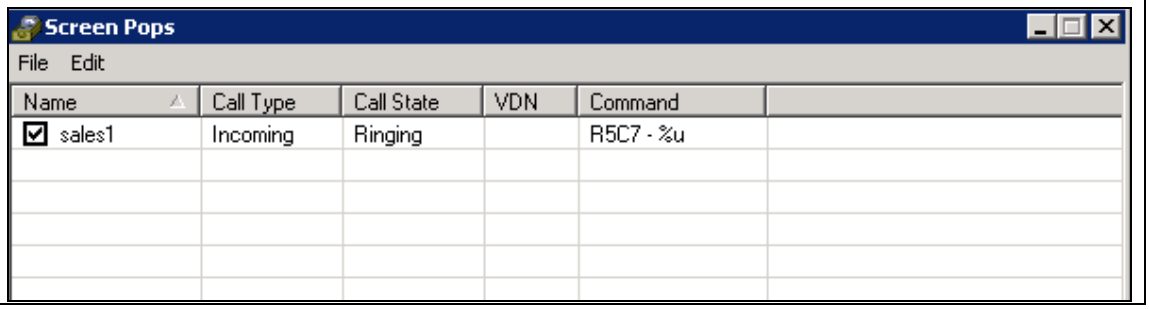
Step	Description
7.	If desired, configure to *Send part of the Caller Number* to the GoldMine application. For the test configuration, this field was not configured. Click *Next.* 
8.	Click the *Test* button to test the DDE exchange between the Avaya IP Agent and GoldMine without making any calls. The test procedure is not shown here. Click *Next.* 

Step	Description
9.	The following screen shows the configured parameters. Click *Finish*. 
10.	To enable this screen pop, click the check mark next to **goldmine** in the *Name* column as shown below. 

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 *Service*, *Topic*, and *Execute Command:* 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 *Execute Command:* 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. 
2.	The following is the final screen for this configuration enabled for screen pop. Note the new screen pop named **weather**. 

4.3. Microsoft Excel with UUI

Step	Description
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 *Service* as **Excel**. The *Topic* 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 *Poke Item* 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. 
2.	The following is the final screen for this configuration enabled for screen pop. Note the new screen pop named **sales1**. 

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.

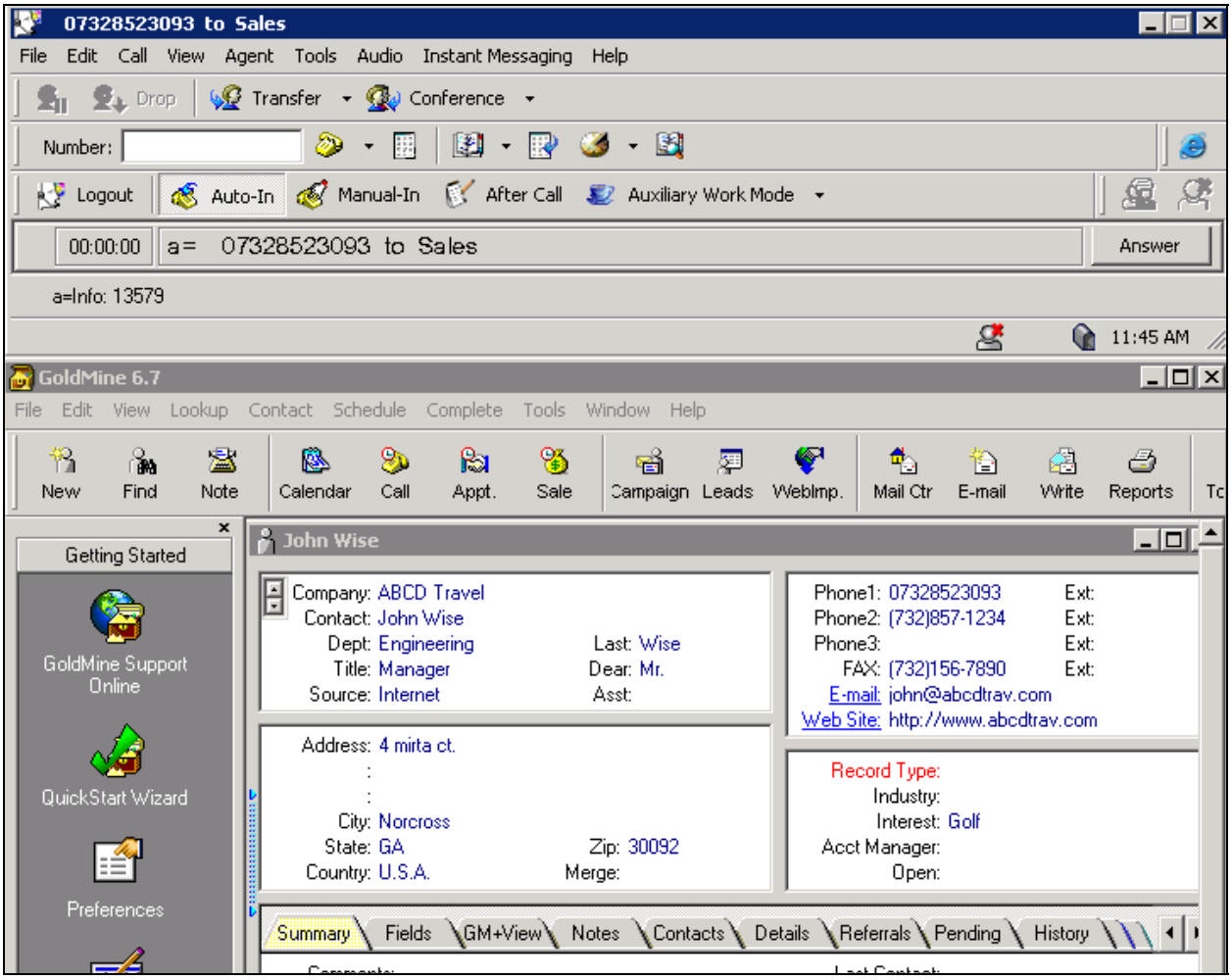
These Application Notes assume that FrontRange GoldMine application, a sample Microsoft Excel spreadsheet, and Internet Explorer are already in place and configured.

5.1. FrontRange GoldMine

From the Microsoft Windows desktop, start the GoldMine application by navigating to **Start → All Programs → GoldMine 6.7 Corporate Edition → 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.

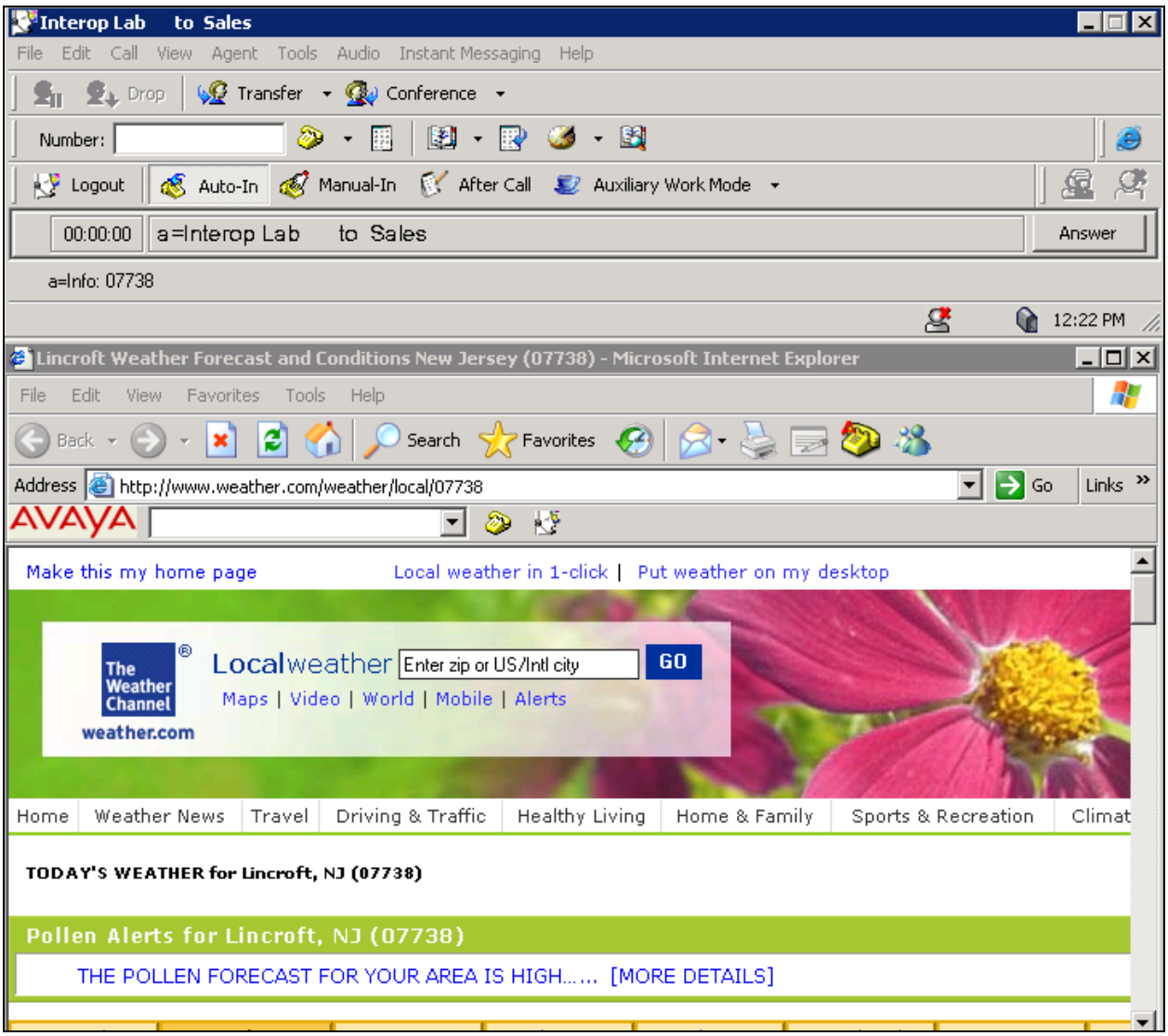
Make an inbound ACD call and let the call route to Avaya IP Agent. While the call is ringing, verify that the customer record associated with caller number is displayed. In the following example, the caller number is **07328523093**. The customer record associated with the caller number **07328523093**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

Note: 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

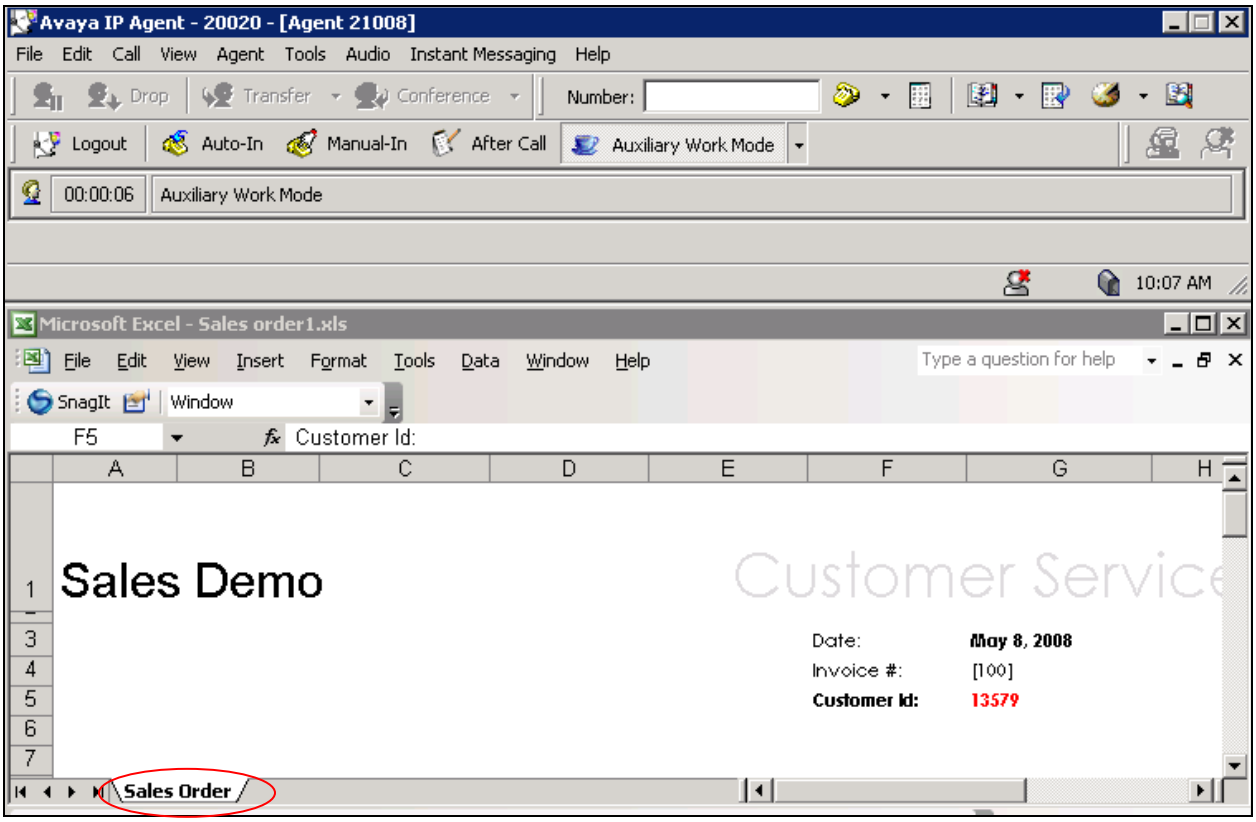
Make an inbound ACD call. Enter the digits when prompted, e.g. enter zip code. The call will route to Avaya IP Agent. While the call is ringing, verify that the "The Weather Channel" Web page pops up on the screen and the information associated with the prompted digits (zip code in this case) is displayed. 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 → All Programs → Microsoft Office → 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*:.



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 http://support.avaya.com.

[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.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title and filename, located in the lower right corner, directly to the Avaya Solution & Interoperability Test Lab at interoplabnotes@list.avaya.com.