



Application Notes for CGI Computer Assisted Collection System Enterprise 8.1 Dialer Remote Control with Avaya Proactive Contact 3.0 - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for CGI Computer Assisted Collection System Enterprise 8.1 (CACS 8.1) Dialer Remote Control to successfully interoperate with Avaya Proactive Contact 3.0. The Dialer Remote Control component of CACS 8.1 is a browser-based agent application that uses the Agent API of Avaya Proactive Contact 3.0. The Dialer Remote Control allows an agent to handle outbound and inbound calls using the feature buttons to invoke call control function. Information in these Application Notes has been obtained through interoperability compliance testing and additional technical discussions. Testing was conducted via the Developer*Connection* Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the compliance-tested configuration utilizing Avaya Proactive Contact 3.0 (PC3) and CGI Computer Assisted Collection System Enterprise 8.1 (CACS 8.1) Dialer Remote Control. The CACS 8.1 application is an online system that supports the collection of delinquent and over limit accounts. The Dialer Remote Control (DRC) is a component of CACS 8.1 which interacts with Avaya PC3 via an ActiveX control. The DRC allows agents to handle outbound and inbound calls from Avaya PC3. The DRC uses the following feature buttons to invoke functions on Avaya PC3.

- Logon/Logoff
- Go available/Go unavailable
- Terminate Call
- Transfer/Consult/Conference Call
- Release Call
- Callback (Recall)
- Manual Dial
- Place Managed Call
- Play Message

The following diagram illustrates the Dialer Remote Control:

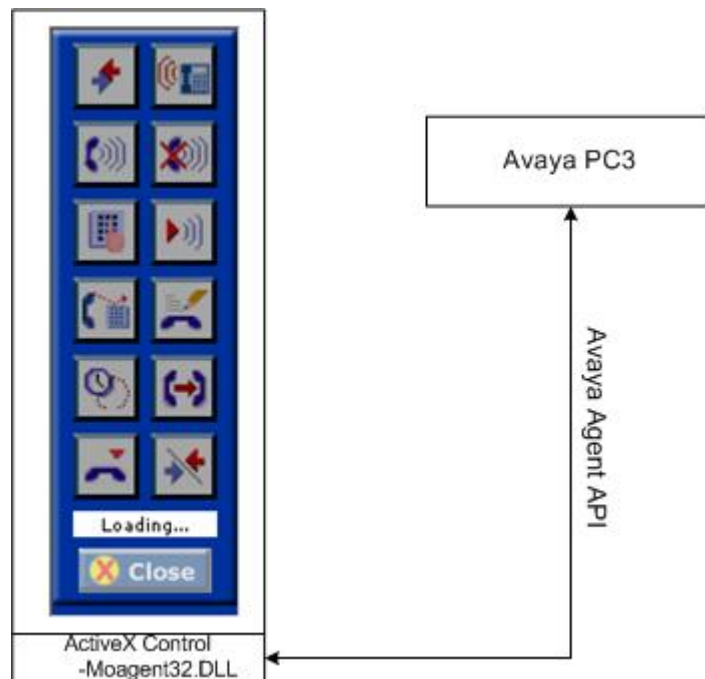


Figure 1: Dialer Remote Control

1.1. Integration Overview

Figure 2 depicts an overview of the CGI CACS 8.1 Dialer Remote Control integration to Avaya Proactive Contact 3.0. The configuration consists of a pair of redundant Avaya S8700 Media Servers, an Avaya MCC1 Media Gateway, an Avaya AES server, Avaya IP Telephones, an Avaya Proactive Contact System, agent workstations, and a CGI Web server. The dashed lines show the TCP/IP connections between the components. The dotted lines show the CTI and Agent API applications used by Avaya Proactive Contact 3.0.

There are different system deployment options for Avaya Proactive Contact 3.0. The deployment used in this integration is the Avaya Proactive Contact with Computer Telephony Interface (CTI). A TSAPI CTI link is configured between Avaya Proactive Contact 3.0 and Avaya Communication Manager via Avaya AES in this test environment. This CTI link is used with the Predictive Agent Blending feature on Avaya PC3 to allow agents to handle both inbound and outbound calls.

The Dialer Remote Control uses Microsoft Visual Basic ActiveX Control to interface to the Avaya PC3 Agent API DLL (Moagent32.dll). The DialerProperties.xml file on the CGI web server is used to configure the DRC. The configuration parameters on the DialerProperties.xml file are passed to the ActiveX Control on the agent machine and are used to establish a connection with Avaya PC3.

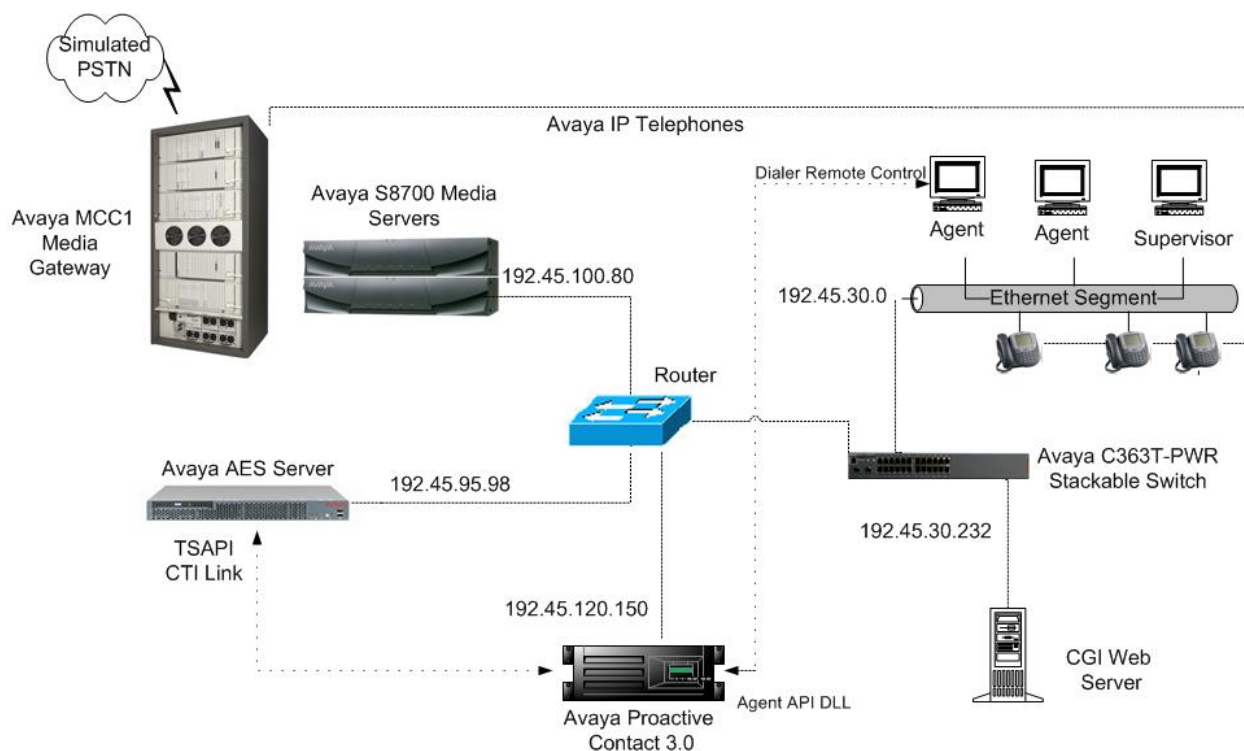


Figure 2: Avaya PC3 and CGI CACS 8.1 DRC Configuration

2. Equipment and Software Validated

The following equipment and software were used for the test configuration provided:

Equipment	Software
Avaya Proactive Contact Avaya Agent API – Moagent32.dll	3.0 Build 36 3.0.0.36
Avaya S8700 Media Servers	Avaya Communication Manager 3.0.1 (R013x.00.1.346.0)
Avaya MCC1 Media Gateway	
TN2312BP IP Server Interface	HW03 FW012
TN799DP C-LAN Interface	HW01 FW015
TN2302AP IP Media Processor	HW13 FW095
Avaya Application Enablement Services	3.0 Build 46
Avaya 4610 IP Telephones	2.1.3 (4610SW)
Avaya C363T-PWR Converged Stackable Switch	4.3.12
CGI Web Server Patch for Predictive Agent Blending	IBM Websphere 5.1 CACSAvayaPCInterface.CACSAvayaControl CACS 8.1 with DRC
Agent PC	<ul style="list-style-type: none">• Microsoft Windows 2003• Microsoft Internet Explorer 6.0

3. Configure Avaya Proactive Contact 3.0

There are three possible system deployments of Avaya Proactive Contact 3.0.

- Avaya Proactive Contact with Computer Telephony Interface (CTI)
- Avaya Proactive Contact with Avaya Proactive Contact Gateway PG230
- Avaya Proactive Contact (with the traditional system cabinet)

The compliance testing was configured with Avaya Proactive Contact with CTI only. Avaya Proactive Contact with CTI is a software solution that uses the Telephony Services API (TSAPI) of Avaya Application Enablement Services (AES) and Avaya Communication Manager.

These Application Notes assume that Avaya Proactive Contact 3.0 with CTI is configured and operational for outbound and managed jobs. The Predictive Agent Blending feature of Avaya PC3 integrates outbound calling activities on Avaya PC3 with inbound calling activities on the ACD of Avaya Communication Manager. The following features should have already been configured on Avaya PC3.

- Predictive Agent Blending
- Completion Codes
- Agent Owned Recall
- Recall/Callback
- Agent Playable Message
- Autowrap

- Job Linking

The Avaya PC3 configuration files for the features above are used to configure the DialerProperties.xml file located on the CGI web server. The sections below highlight the fields in the Avaya PC3 files that are needed to configure the DialerProperties.xml file.

3.1. Completion Codes Configuration Files

Avaya Proactive Contact 3.0 uses completion codes to identify the result of a phone call with a customer. The completion code configuration file, compcode.cfg, is located in the /opt/avaya/pds/config folder on the Avaya PC3 server. The configuration code numbers will be used in Sections 4.1 and 4.3 to configure the DialerProperties.xml file.

```
0:NOTCALLED:SYS:YES:NO:NO:NO:NO:NO:NO:NO:NOTCALLED:Record not yet called
1:RESERVED1:UNDEF:NO:NO:NO:NO:NO:NO:NO:NO:RESERVED1:Reserved for system
2:ERROR:SYS:YES:YES:NO:NO:NO:NO:NO:NO:ERROR:Invalid number
3:TIMEOUT:SYS:YES:YES:NO:NO:NO:NO:NO:NO:TIMEOUT:No dial tone
4:HANG_PORT:SYS:YES:YES:NO:NO:NO:NO:NO:NO:HANG_PORT:Line idle after dial
5:NOTINZONE:SYS:YES:NO:NO:NO:NO:NO:NO:NO:NO:NOTINZONE:Outside calling hours
11:BUSY:SYS:YES:YES:NO:NO:NO:NO:NO:NO:BUSY:Busy signal
12:CONTTONE:SYS:YES:YES:NO:NO:NO:NO:NO:NO:CONTTONE:FAX or MODEM
13:AUTOVOICE:SYS:YES:YES:NO:NO:NO:NO:NO:NO:AUTOVOICE:Answering machine
14:VOICE:SYS:YES:NO:NO:NO:NO:NO:NO:NO:NO:VOICE:Person on the line
15:NOANSWER:SYS:YES:YES:NO:NO:NO:NO:NO:NO:NOANSWER:No answer
16:RINGING:OP:YES:YES:NO:NO:NO:NO:NO:NO:RINGING:Ringing phone
17:CUSTHU:OP:YES:YES:NO:NO:NO:NO:NO:NO:CUSTHU:Cust hung up in queue
18:TRANSFER:OP:YES:NO:NO:NO:NO:NO:NO:NO:TRANSFER:Transfer release
19:RECALL:OP:YES:NO:NO:NO:NO:NO:NO:NO:RECALL:Recall release
20:CODE20:OP:YES:NO:NO:NO:NO:NO:NO:NO:CODE20:Code 20
```

Figure 3: compcode.cfg file

3.2. Agent Owned Recall Configuration files

Agent Owned Recall allows an agent on an outbound call to set a specific recall time for a customer record. This will mark the record as an “agent owned recall” record. Avaya PC3 will then make the recall when the specified time occurs and pass the call to the agent that owns the recall. The completion code for the Agent Owned Recall feature is in the configuration file, compcode.cfg, located in the /opt/avaya/pds/config folder on the Avaya PC3 server. The configuration code number for the AORECALL completion code will be used in Section 4.1 to configure the DialerProperties.xml file.

```

84:CODE84:UNDEF:NO:NO:NO:NO:NO:NO:NO:CODE84:Code 84
85:CODE85:UNDEF:NO:NO:NO:NO:NO:NO:NO:CODE85:Code 85
86:CODE86:UNDEF:NO:NO:NO:NO:NO:NO:NO:CODE86:Code 86
87:CODE87:UNDEF:NO:NO:NO:NO:NO:NO:NO:CODE87:Code 87
88:CODE88:UNDEF:NO:NO:NO:NO:NO:NO:NO:CODE88:Code 88
89:MANAGEDA:OP:YES:NO:NO:NO:NO:NO:NO:MANAGEDA:Managed non-connect A
90:MANAGEDB:OP:YES:NO:NO:NO:NO:NO:NO:MANAGEDB:Managed non-connect B
91:VIRTVOICE:OP:YES:NO:NO:NO:NO:NO:NO:VIRTVOICE:Virtual msg to VOICE
92:VIRTAUTOV:OP:YES:NO:NO:NO:NO:NO:NO:VIRTAUTOV:Virtual msg to AUTOV
93:SOLD:OP:NO:NO:NO:NO:NO:NO:NO:SOLD:Sold campaign
94:VERIFIED:OP:NO:NO:NO:NO:NO:NO:NO:VERIFIED:Sale verified
95:UNVERIFIED:OP:NO:NO:NO:NO:NO:NO:NO:UNVERIFIED:Sale NOT verified
96:RESERVED96:UNDEF:NO:NO:NO:NO:NO:NO:NO:RESERVED96:Reserved for system
97:RESERVED97:UNDEF:NO:NO:NO:NO:NO:NO:NO:RESERVED97:Reserved for system
98:AORECALL:OP:YES:YES:NO:NO:NO:NO:NO:AORECALL:Agent Owned Recall

```

Figure 4: compcode.cfg file

3.3. Recall/Callback Configuration files

Recall/Callback feature allows an agent on an outbound call to set a specific recall time for a customer record to be recalled. Avaya PC3 will then make the recall when the specified time occurs and passes the call to any available agent. The completion code for the Recall feature is in the configuration file, compcode.cfg, located in the /opt/avaya/pds/config folder on the Avaya PC3 server. The configuration code number for the RECALL completion code will be used in Section 4.1 to configure the DialerProperties.xml file.

```

13:AUTOVOICE:SYS:YES:YES:NO:NO:NO:NO:AUTOVOICE:Answering machine
14:VOICE:SYS:YES:NO:NO:NO:NO:NO:NO:VOICE:Person on the line
15:NOANSWER:SYS:YES:YES:NO:NO:NO:NO:NOANSWER:No answer
16:RINGING:OP:YES:YES:NO:NO:NO:NO:NO:RINGING:Ringing phone
17:CUSTHU:OP:YES:YES:NO:NO:NO:NO:NO:CUSTHU:Cust hung up in queue
18:TRANSFER:OP:YES:NO:NO:NO:NO:NO:NO:TRANSFER:Transfer release
19:RECALL:OP:YES:NO:NO:NO:NO:NO:NO:RECALL:Recall release

```

Figure 5: compcode.cfg file

3.4. Agent Playable Message Configuration files

The Agent Playable Message feature allows an agent to play a message to a customer at the end of the call. The message to play and the completion code number used to terminate the call are defined in the ag_cmd1.ky file located in the /opt/avaya/pds/config folder on the Avaya PC3 server. The message file that plays back at the end of the call, voicemsg.cfg, is located in the /opt/avaya/pds/config folder on the Avaya PC3 server. The completion code for the Agent Playable Message feature is in the configuration file, compcode.cfg, located in the /opt/avaya/pds/config folder on the Avaya PC3 server. The message number of “19” and the completion code number of “20” will be used in Section 4.5 to configure the DialerProperties.xml file.

```

KEY: ^A^M:::F1
KEY: ^AA^M:LOGOUT:::F2    Logout of job
KEY: ^AB^M:DIAL:::F3      Dial previewed record
KEY: ^AC^M:CANCEL:cancel_call:35:F4    Managed cancel call
KEY: ^AD^M:RELEASE:call_complete:89:F5    Managed non-connection
KEY: ^AE^M:RELEASE:pf_msg_1:20:F6        Play pre-recorded msg
KEY: ^AF^M:HOME:::F7      Goto first editable field
KEY: ^AG^M:RELEASE:call_complete:21:F8

```

Figure 6: ag_cmd1.ky

```

1:fwait1:1001:Female:Folder1:Voice:Message1
2:fwait2:1002:Female:Folder1:Voice:Message2
3:fwait3:1003:Female:Folder1:Voice:Message3
4:fwait4:1004:Female:Folder1:Voice:Message4
5:infwait1:1005:Female:Folder2:Voice:Message5
6:infwait2:1006:Female:Folder2:Voice:Message6
7:infwait3:1007:Female:Folder2:Voice:Message7
8:infwait4:1008:Female:Folder2:Voice:Message8
9:mwait1:1009:Male:Folder1:Voice:Message9
10:mwait2:1010:Male:Folder1:Voice:Message10
11:mwait3:1011:Male:Folder1:Voice:Message11
12:mwait4:1012:Male:Folder1:Voice:Message12
13:inmwait1:1013:Male:Folder2:Voice:Message13
14:inmwait2:1014:Male:Folder2:Voice:Message14
15:inmwait3:1015:Male:Folder2:Voice:Message15
16:inmwait4:1016:Male:Folder2:Voice:Message16
17:fvirt1:1017:Female:Folder3:Voice:Message17
18:mvirt1:1018:Female:Folder3:Voice:Message18
19:pf_msg_1:20205::Folder4:Music:Message19
20:pf_msg_2:1020::Folder4:Music:Message20
21:pf_msg_3:1021:Female:Folder4:Voice:Message21
22:pf_msg_4:1022:Female:Folder4:Voice:Message22
23:pf_msg_5:1023:Female:Folder4:Voice:Message23
24:pf_msg_6:1024:Female:Folder4:Voice:Message24
25:pf_msg_7:1025:Female:Folder4:Voice:Message25
26:pf_msg_8:1026:Female:Folder4:Voice:Message26
250:greeting:20206:Female:Folder4:Voice:Message27
251:inbound:20207:Female:Folder4:Voice:Message28
252:outbound:20208:Female:Folder4:Voice:Message29
253:notLoggedIn:20209:Female:Folder4:Voice:Message30

```

Figure 7: voicemsg.cfg file

```

14:VOICE:SYS:YES:NO:NO:NO:NO:NO:VOICE:Person on the line
15:NOANSWER:SYS:YES:YES:NO:NO:NO:NO:NOANSWER:No answer
16:RINGING:OP:YES:YES:NO:NO:NO:NO:NO:RINGING:Ringing phone
17:CUSTHU:OP:YES:YES:NO:NO:NO:NO:NO:CUSTHU:Cust hung up in queue
18:TRANSFER:OP:YES:NO:NO:NO:NO:NO:NO:TRANSFER:Transfer release
19:RECALL:OP:YES:NO:NO:NO:NO:NO:NO:RECALL:Recall release
20:CODE20:OP:YES:NO:NO:NO:NO:NO:NO:CODE20:Code 20
21:CODE21:OP:YES:NO:NO:NO:NO:NO:NO:CODE21:Code 21

```

Figure 8: compcode.cfg file

3.5. Auto Release/Wrap Configuration files

The Autowrap feature automatically puts an agent into update mode when a customer hangs up. When the hang-up is detected, an AutoRelease message is sent to the agent. This is configured in the job configuration files (e.g., outbnd.job), located in the /opt/avaya/pds/job folder on the Avaya PC3 server. The **AUTORELEASE** field is set to “YES”.

```
CONNTOL:1:
QUOTAVAL::
QUOTA_EXTFILE::
QUOTA_SAVE:NO:
AUTOEND:NO:
AUTORELEASE:YES:
DISPLAY:YES:
SINGLEEDIT:NO:
JOBEND:YES:
```

Figure 9: outbnd.job file

3.6. Calling List Fields Configuration files

The calling list contains the customer records. The calling list fields are configured in the list configuration files (i.e. list1.fdict), located in the /opt/avaya/pds/lists folder on the Avaya PC3 server. The calling list fields will be used in Section 4.7 to configure the DialerProperties.xml file.

```
RECLN:990:
ACCTNUM:16:C:ACCOUNT NUMBER:
BALANCE:10:$:BALANCE:
TOTALDUE:10:$:TOTAL DUE:
NAME1:25:C:NAME LINE1:
NAME2:25:C:NAME LINE2:
CITY:25:C:City:
STATE:2:C:State:
ZIPCODE:5:N:ZIPCODE:
PHONE1:12:C:HOME PHONE:
PHONE2:12:C:BUSINESS PHONE:
COMMENT1:60:C:COMMENT LINE 1:
AGENT:8:C:AGENT ID:
DTE:10:D:SYSTEM DATE:
```

Figure 10: list1.fdict file

4. Configure CGI Web Server

The CGI web server contains the configuration file, `DialerProperties.xml`, which is specific for the Dialer Remote Control. It is used to configure the dialer interface, to configure various settings for the dialer dialogs, and to provide mappings for the dialer call record. The following parameters need to be configured on the `DialerProperties.xml` file for the DRC to function with Avaya PC3.

- Configuration Parameters
- Logon Dialog Parameters
- Terminate Call Dialog Parameters
- Recall Dialog Parameters
- Play Message Dialog Parameters
- Transfer Call Dialog Parameters
- Field Map Parameters

4.1. Configuration Parameters

The Configuration parameters are used to establish a connection with Avaya PC3 and to pre-define some of the termination codes. The following parameters need to be defined:

- **DialerServerIP** – set to the IP address of the Avaya PC3 server.
- **ServerPortNumber** – set to “22700”.
- **HeadsetVolume** – set to “5”.

The following parameters are optional. If a value is provided, the call will be automatically terminated using the administered completion codes.

- **RecallRelease** – set to the completion code number for **RECALL** from Section 3.3.
- **AORRelease** – set to the completion code number for **AORECALL** from Section 3.2.
- **TransferRelease** – set to the completion code number for **TRANSFER** from Section 3.1

The remaining parameters can retain the default values.

```

<<ConfigParms>
- <ConfigParm>
  <DialerServerIP>192.45.120.150</DialerServerIP>
</ConfigParm>
- <ConfigParm>
  <ServerPortNumber>22700</ServerPortNumber>
</ConfigParm>
- <ConfigParm>
  <HeadsetVolume>5</HeadsetVolume>
</ConfigParm>
- <ConfigParm>
  <KeyField>ACCOUNT_NUMBER</KeyField>
</ConfigParm>
- <ConfigParm>
  <ConnectWithLogon>Y</ConnectWithLogon>
</ConfigParm>
- <ConfigParm>
  <RecallRelease>19</RecallRelease>
</ConfigParm>
- <ConfigParm>
  <AORRelease>98</AORRelease>
</ConfigParm>
- <ConfigParm>
  <TransferRelease>18</TransferRelease>
</ConfigParm>
- <ConfigParm>
  <AvayaLogging>N</AvayaLogging>
</ConfigParm>
- <ConfigParm>
  <DebugLogging>Y</DebugLogging>
</ConfigParm>
</ConfigParms>

```

Figure 11: Configuration Parameters in DialerProperties.xml

4.2. Logon Dialog Parameters

The Logon Dialog parameters are used to define the logon dialog that the agent will use. This provides the userid, password, extension and agent type fields that will be available to the agent when logging into Avaya PC3. The following parameters need to be defined.

- **Dialog Prefix** – set to “AVAYA_MULTI”.

With the Predictive Agent Blending feature configured on Avaya PC3, the agents can log in as outbound, managed or predictive blend types of agents on the DRC. If the Intelligent Call Blending feature was configured on Avaya PC3, the agents would be able to log in as outbound, inbound, managed or blended types of agents. For the compliance testing, the Predictive Agent Blending feature was configured.

The **TypeCode** and **TypeName** parameters should be defined based on the agent type supported by the DRC.

To allow agents to log in as outbound agents, set the following parameters.

- **TypeCode** – set to “O”. This will allow agents to log in as outbound agents to handle outbound calls.
- **TypeName** – set to “Outbound”.

To allow agents to login as predictive blend agents, set the following parameters.

- **TypeCode** – set to “B”. This will allow agents to log in as predictive blend agents to handle inbound and outbound calls. This agent type is only supported with the Predictive Agent Blending feature on Avaya PC3.
- **TypeName** – set to “Predictive Blend”.

To allow agents to log in as inbound agents, set the following parameters.

- **TypeCode** – set to “I”. This will allow agents to log in as inbound agents to handle inbound calls. This agent type is only supported with the Intelligent Call Blending feature on Avaya PC3.
- **TypeName** – set to “Inbound”.

To allow agents to log in as managed agents, set the following parameters.

- **TypeCode** – set to “M”. This will allow agents to log in as managed agents to handle previewed outbound calls.
- **TypeName** – set to “Managed”.

To allow the agent to select from a list of dialers to log on to, the dialer host IP addresses and hostname can be defined in the following parameters.

- **ServerIPAddress** – set to the IP address of the Avaya PC3 server.
- **ServerHostName** – set to the Avaya PC3 server host name that should be displayed to the agent.

```

=<LogonDialogParms>
  <DialogPrefix>AVAYA_MULTI</DialogPrefix>
  - <!--
    Set height and width as appropriate for the logon dialog (usually
    through trial and error).
    -->
  <Height>300</Height>
  <Width>400</Width>
  - <!--
    AgentType lists the codes to use for the Agent Type radio
    buttons.
    -->
=<AgentType>
  <TypeCode>O</TypeCode>
  <TypeName>Outbound</TypeName>
  <Default>Y</Default>
  </AgentType>
=<AgentType>
  <TypeCode>B</TypeCode>
  <TypeName>Predictive Blend</TypeName>
  </AgentType>
=<AgentType>
  <TypeCode>I</TypeCode>
  <TypeName>Inbound</TypeName>
  </AgentType>
=<AgentType>
  <TypeCode>M</TypeCode>
  <TypeName>Managed</TypeName>
  </AgentType>
=<DialerHost>
  <ServerHostIP>192.45.120.150</ServerHostIP>
  <ServerHostName>Avaya PC 3.0 Dialer</ServerHostName>
  </DialerHost>
</LogonDialogParms>

```

Figure 12: Logon Dialog Parameters in DialerProperties.xml

4.3. Terminate Call Dialog Parameters

The Terminate Call dialog parameters define the termination codes/completion codes that the agents can use. The **TerminationCode** parameters are set to the Avaya PC3 configured completion code numbers from the compcode.cfg file in Section 3.1.

```

<C<TerminateCallDialogParms>
- <!--
Set height and width as appropriate for the terminate call dialog (usually
through trial and error).
-->
<Height>365</Height>
<Width>400</Width>
- <!--
Indicates if AutoTerminate logic should be used
-->
<UseAutoTerminate>N</UseAutoTerminate>
<SubmitDelay>1000</SubmitDelay>
- <!--
TerminationCodes are vendor specific values. Enter as many as desired. The
order they appear here is the order they display in the dialog.
-->
- <TerminationCodes>
<TerminationCode>2</TerminationCode>
<TerminationCode>3</TerminationCode>
<TerminationCode>4</TerminationCode>
<TerminationCode>11</TerminationCode>
<TerminationCode>12</TerminationCode>
<TerminationCode>13</TerminationCode>
<TerminationCode>15</TerminationCode>
<TerminationCode>16</TerminationCode>
<TerminationCode>17</TerminationCode>
<TerminationCode>20</TerminationCode>
<
</TerminationCodes>
</TerminateCallDialogParms>

```

Figure 13: Terminate Call Dialog Parameters in DialerProperties.xml

4.4. Recall Dialog Parameters

The recall dialog parameters define the Recall dialog. The **ShowAgentOwned** parameter is set to “y” if the Agent Owned Recall feature on Avaya PC3 is administered.

```

- <RecallDialogParms>
- <!--
Set height and width as appropriate for the recall dialog (usually through
trial and error).
-->
<Height>240</Height>
<Width>400</Width>
- <!--
PhoneNumberFieldSize is the max characters that can be entered in the free
form field.
-->
<PhoneNumberFieldSize>10</PhoneNumberFieldSize>
- <!--
StartTime and EndTime are the ranges of the times displayed in the recall
time dropdown, in military time.
-->
<StartTime>0800</StartTime>
<EndTime>2100</EndTime>
- <!--
Indicates if Agent Owned field should display
-->
<ShowAgentOwned>Y</ShowAgentOwned>
</RecallDialogParms>

```

Figure 14: Recall Dialog Parameters in DialerProperties.xml

4.5. Play Message Dialog Parameters

The Play Message dialog displays the recorded audio messages that have been defined in DialerProperties.xml. The Play Message dialog will play the message for the customer and then terminate the call using the defined completion code. The format of the **MessageCode** parameter is “message number, completion code number”. In this example, the MessageCode parameter is set to “19, 20” which corresponds to the message number and configuration code number from Section 3.4.

```

<<PlayMessageDialogParms>
- <!--
Set height and width as appropriate for the play message dialog (usually
  through trial and error).  Add approx 30 to height to display another row.
-->
  <Height>295</Height>
  <Width>400</Width>
- <!--
  MessageCodes are vendor specific codes for automated messages to play.
  Enter as many as desired.  The order they appear here is the order they
  display in the dialog.
-->
- <MessageCodes>
  <MessageCode>19,20</MessageCode>
</MessageCodes>
</PlayMessageDialogParms>

```

Figure 15: Play Message Dialog Parameters in DialerProperties.xml

4.6. Transfer Call Dialog Parameters

The Transfer Call dialog allows the agent to transfer, consult or conference. The deployment of Avaya PC3 with CTI, which is the one used during the compliance testing, does not allow an agent to transfer, consult or conference using the agent application. The agent must use the physical telephone to perform these functions. The other two deployments of Avaya PC3 do allow the agent to transfer, consult or conference via the agent application. The

ShowTransferButton, **ShowConferenceButton**, **ShowReleaseButton** and **ShowSupervisorSection** parameters should be set to “N” when using Avaya PC3 with CTI. The **ShowSupervisorSection** parameter requires the Intelligent Call Blending and Native Voice and Transfer features to be configured on Avaya PC3.

```

<<TransferCallDialogParms>
- <!--
Set height and width as appropriate for the transfer call dialog (usually
  through trial and error).
-->
<Height>300</Height>
<Width>400</Width>
- <!--
FieldSize tags are the max characters that can be entered in the field.
-->
<ExtensionFieldSize>5</ExtensionFieldSize>
<SupervisorIdFieldSize>8</SupervisorIdFieldSize>
- <!--
The Showxxx tags indicate if buttons (or section) displays on the dialog.
-->
<ShowTransferButton>N</ShowTransferButton>
<ShowConferenceButton>N</ShowConferenceButton>
<ShowReleaseButton>N</ShowReleaseButton>
<ShowSupervisorSection>N</ShowSupervisorSection>
</TransferCallDialogParms>

```

Figure 16: Transfer Call Dialog Parameters in DialerProperties.xml

4.7. Field Map Parameters

The Field Map parameters are needed in order for the DRC to map a field name as expected by the CACS application to the field name as defined on the call record on Avaya PC3. For example, **CACSField** parameter “NAME” maps to the **DialerField** parameter “NAME1”. The **DialerField** parameters are the field names in the call record as shown in Section 3.6. The mapping needs to be configured based on the fields required by the CACS 8.1 application.


```

<<OutboundCallRecord>
- <!--
The Outbound call record is defined by a set of FieldMaps. For each
  CACSFeld, specify the corresponding field on the dialer (as accessed by
  the DialerImpl class or ActiveX control).
-->
- <FieldMap>
  <CACSFeld>NAME</CACSFeld>
  <DialerField>NAME1</DialerField>
</FieldMap>
  <FieldMap>

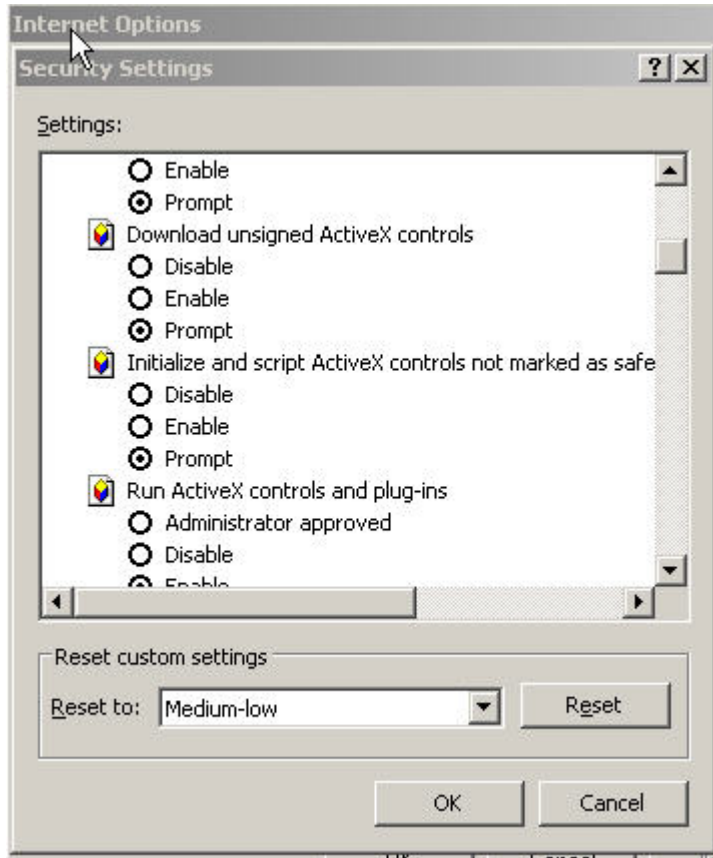
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- <FieldMap>
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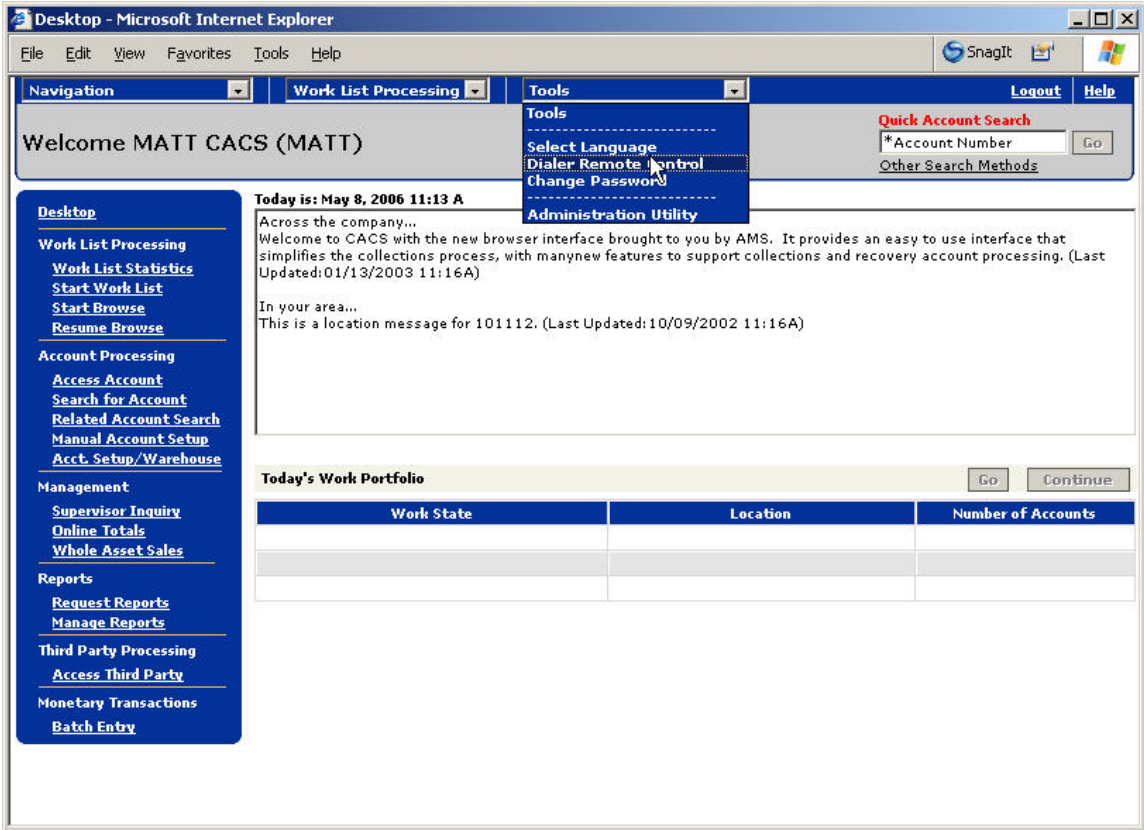
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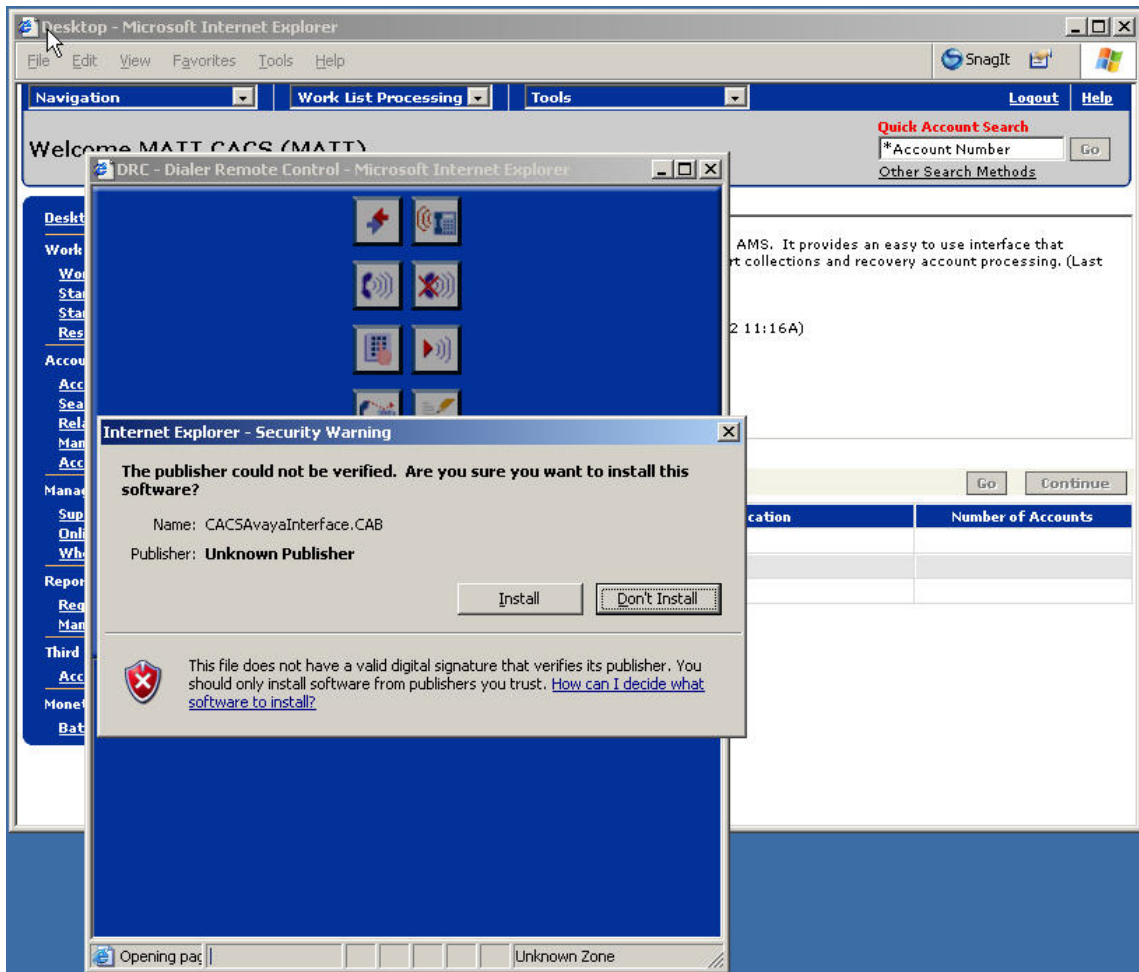
Figure 17: Field Map Parameters in DialerProperties.xml

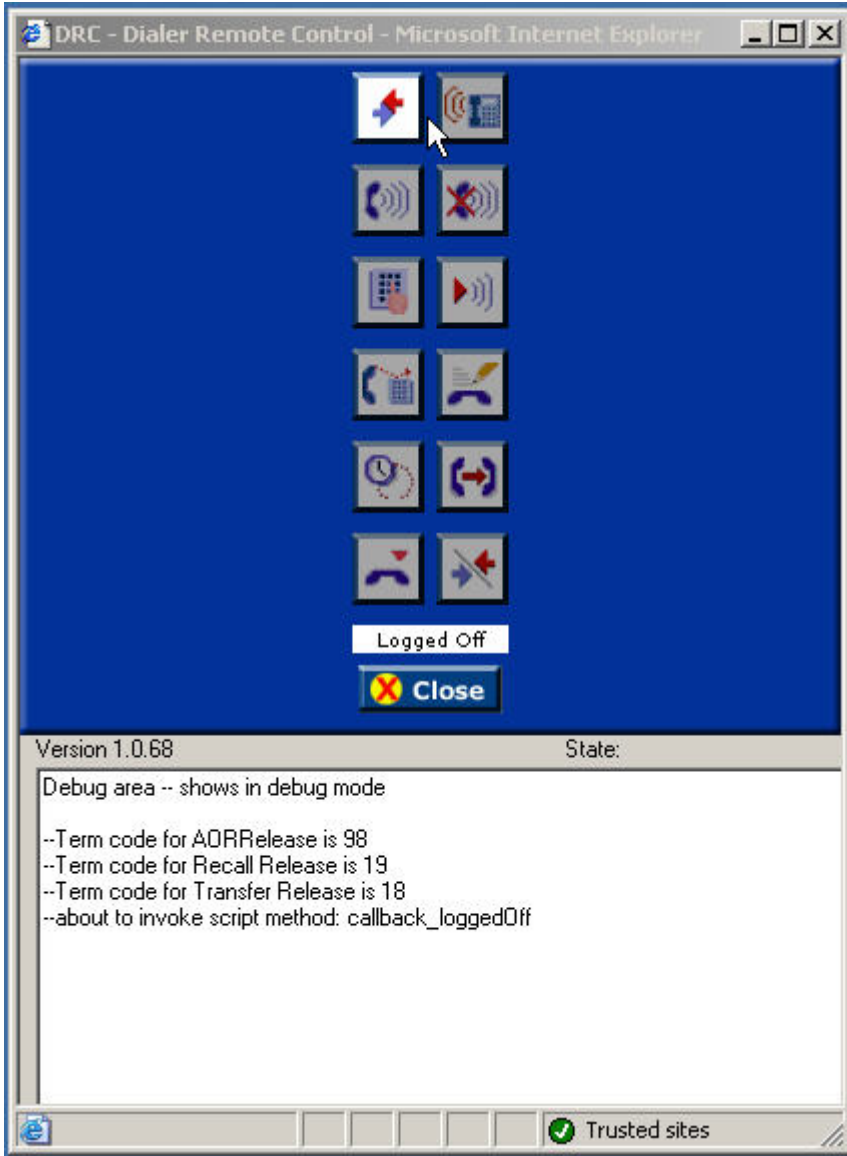
5. Configure CGI Dialer Remote Control on Agent PC

The Dialer Remote Control can be launched when the agent connects to the CACS 8.1 application on the web server. The CACS 8.1 application contains the DRC. The DRC is the browser based agent application that is used with Avaya PC3. When the DRC is first launched on the agent machine, Microsoft Visual Basic Active X Control and the Avaya Agent DLL, Moagent32.dll are installed automatically on the agent machine.

Step	Description
1.	<p>Microsoft Visual Basic ActiveX Control is used to interface between the DRC and the Avaya PC3 Agent API DLL. Launch Microsoft Internet Explorer and click on Tools → Internet Options. Select the Security tab, and click on Custom Level. Select the radio button labeled “Prompt” for the Download unsigned ActiveX controls field. Click OK.</p> 

Step	Description
2.	<p>Launch Internet Explorer and enter the link to the CACS application. From the Tools drop-down menu, select Dialer Remote Control.</p> 

Step	Description
3.	<p>The following Internet Explorer – Security Warning window appears. Click Install.</p>  <p>The screenshot shows a Microsoft Internet Explorer window titled 'Desktop - Microsoft Internet Explorer'. The address bar shows 'DRC - Dialer Remote Control - Microsoft Internet Explorer'. The main content area displays a 'Welcome MATT CACS (MATT)' message and a 'Quick Account Search' section with a text input field for '*Account Number' and a 'Go' button. A security warning dialog box is overlaid on the browser window. The dialog box is titled 'Internet Explorer - Security Warning' and contains the following text: 'The publisher could not be verified. Are you sure you want to install this software? Name: CACS Avaya Interface.CAB Publisher: Unknown Publisher'. Below this text are 'Install' and 'Don't Install' buttons. At the bottom of the dialog box, there is a red shield icon with a white 'X' and the text: 'This file does not have a valid digital signature that verifies its publisher. You should only install software from publishers you trust. How can I decide what software to install?'. The status bar at the bottom of the browser window shows 'Opening page' and 'Unknown Zone'.</p>

Step	Description
4.	<p>The Dialer Remote Control window appears.</p>  <p>The screenshot shows a web browser window titled "DRC - Dialer Remote Control - Microsoft Internet Explorer". The main content area has a blue background and contains a grid of 12 icons arranged in 6 rows and 2 columns. A mouse cursor is hovering over the icon in the top-right position. Below the grid of icons are two buttons: "Logged Off" and "Close". At the bottom of the window, there is a status bar with the text "Version 1.0.68" on the left, "State:" in the middle, and a "Trusted sites" indicator on the right.</p>

6. Interoperability Compliance Testing

The interoperability compliance testing covered feature functionality and serviceability testing. Feature functionality focused on verifying the proper operation of the Dialer Remote Control when integrated with Avaya Proactive Contact 3.0 using the Avaya Agent API. Serviceability testing verified that the Dialer Remote Control and CGI web server recovered from adverse conditions, such as rebooting, power failure and network disconnect.

6.1. General Test Approach

All feature functionality test cases were performed manually to verify proper operation. The general test approach was to test the features on the Dialer Remote Control that are supported with Avaya Proactive Contact 3.0.

- The following feature buttons on the DRC were tested.
 - Login
 - Logout
 - Return ID
 - Go Available
 - Go Unavailable
 - Terminate Call
 - Release Call
 - Call Back
 - Agent Owned Recall
 - Play Message
- The following events from Avaya PC3 to the DRC were tested.
 - AutoRelease Line
 - JobEnd
 - JobTransLink
 - JobTransRequest
 - Receive Message
- The following agent types were tested.
 - Outbound agent
 - Managed agent
 - Predictive Blended agent
- Inbound calls were tested using the Predictive Agent Blending feature of Avaya Proactive Contact 3.0. This is the only type of inbound feature on Avaya PC3 that was tested.

6.2. Test Results

All feature and performance tests passed. The CGI CACS 8.1 Dialer Remote Control successfully interfaced with Avaya Proactive Contact 3.0 for outbound and inbound calls. For serviceability testing, the Dialer Remote Control was able to resume handling of inbound and outbound calls after restoration of connectivity to the Avaya PC3 server, from network disconnect/re-connect, and CGI web server resets.

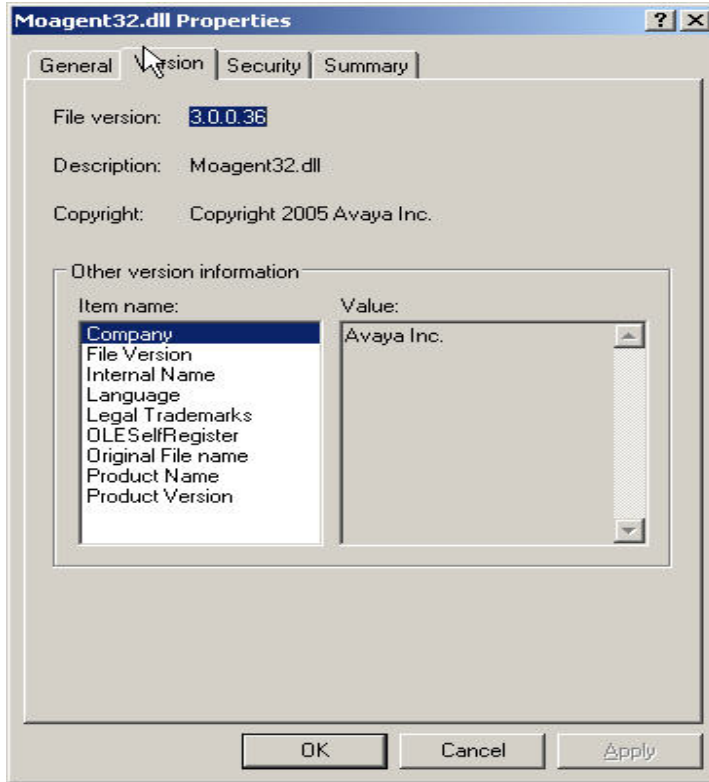
CGI provided a patch, CACSAvayaPCInterface.CACSAvayaControl, to support the Predictive Agent Blending feature of Avaya PC3 for the Dialer Remote Control. The patch was verified with the following observation.

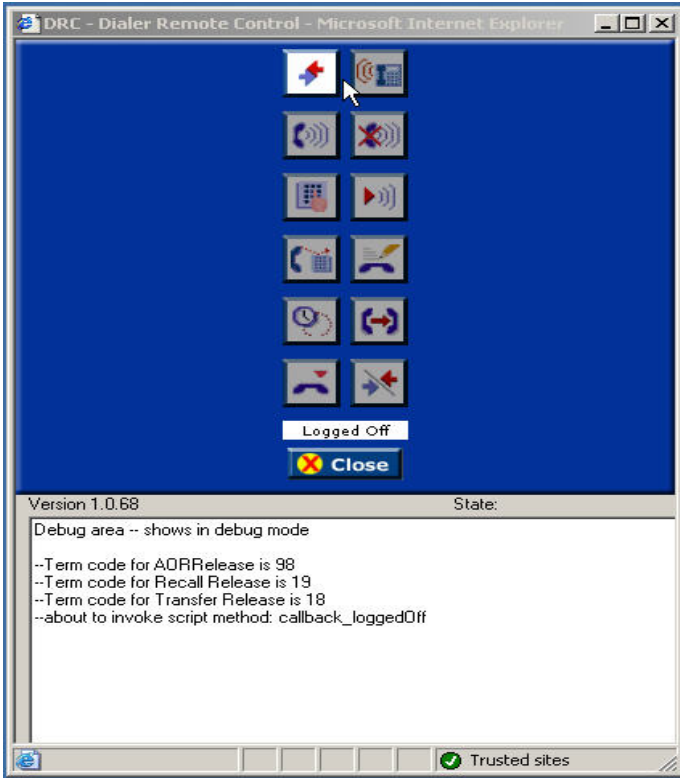
- When the agent logged in as a predictive blend type of agent, the agent was only able to join outbound jobs but not managed jobs.

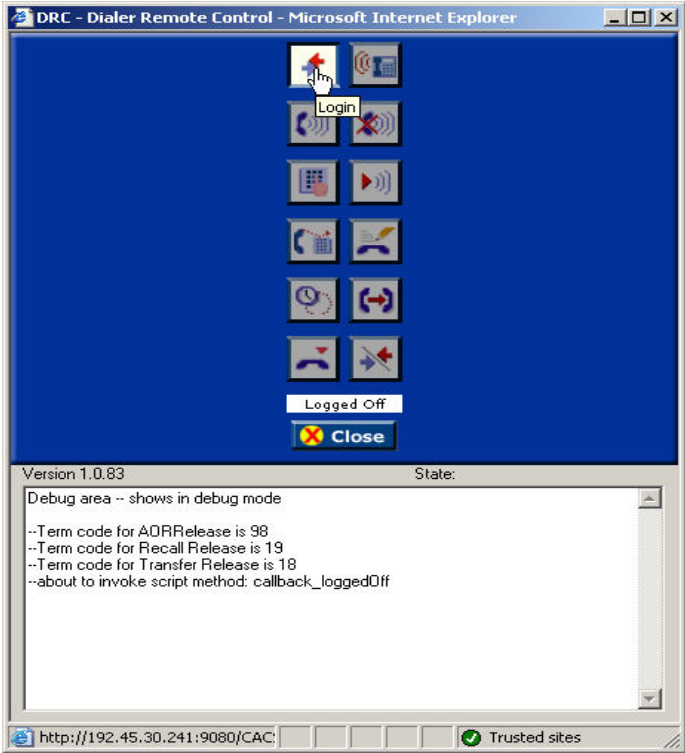
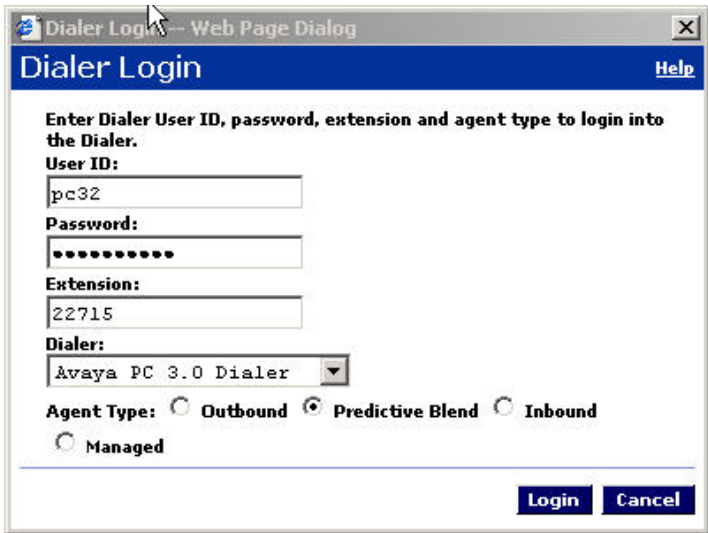
7. Verification Steps

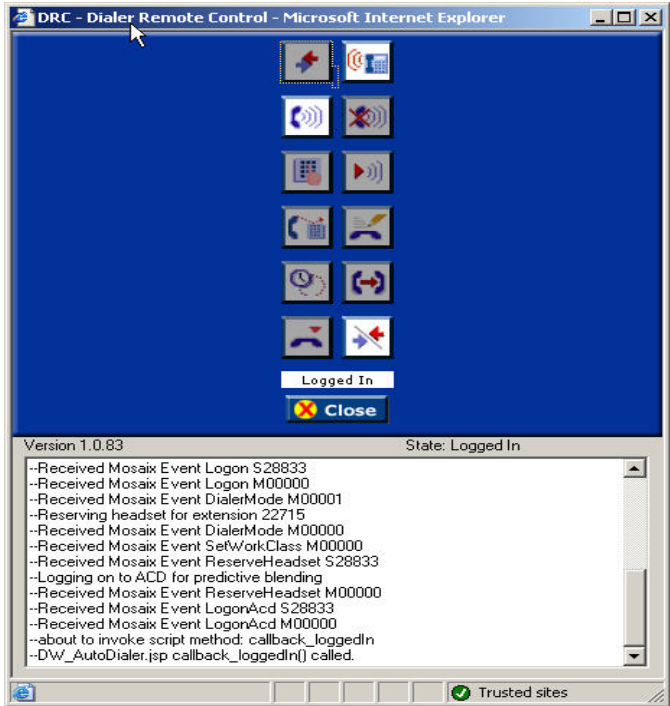
7.1. Direct Remote Control verification

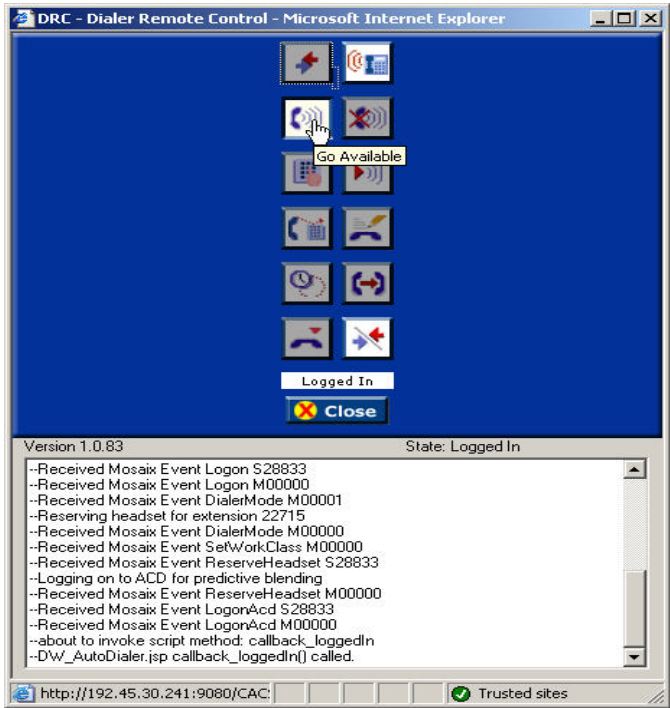
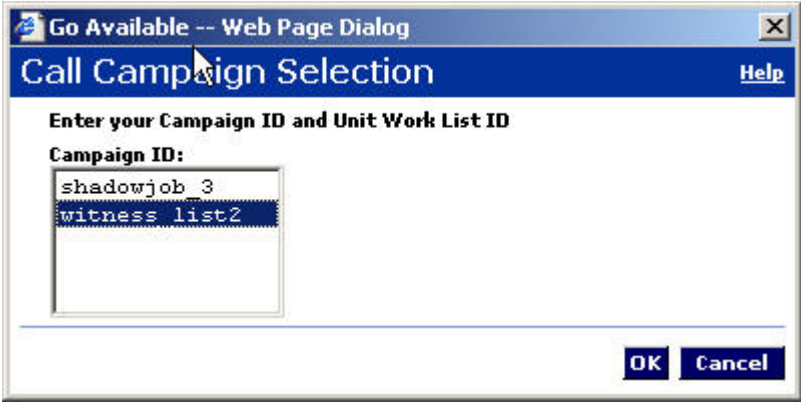
The following steps can ensure that the DRC can log in to Avaya Proactive Contact 3.0 to receive outbound and inbound calls. Avaya PC3 should have outbound jobs running.

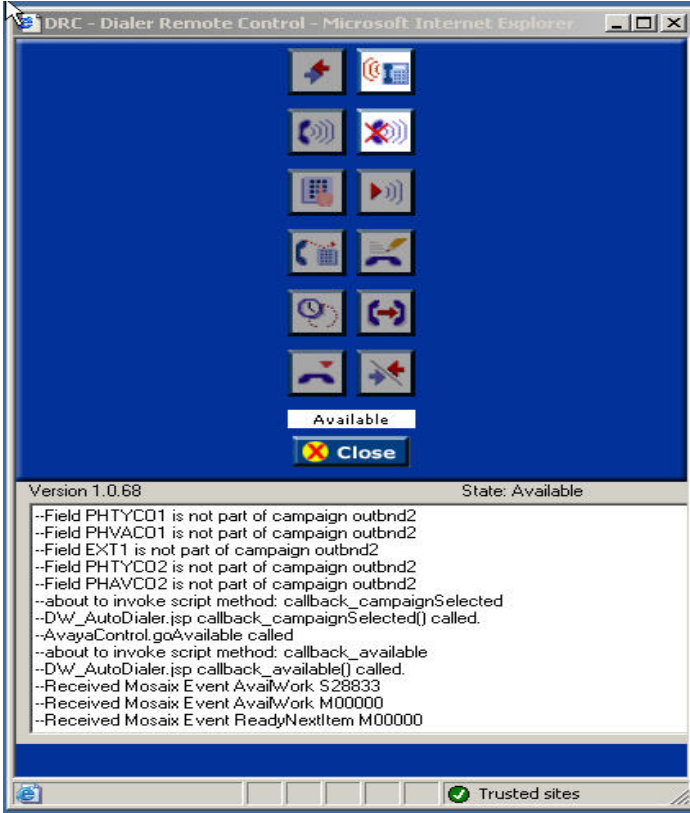
Step	Description
1.	<p>On the agent machine, navigate to C: \WINDOWS\system32 and double click on the Moagent32.dll file. Select the Version tab. Verify the correct Avaya PC3 Agent API DLL File version is installed.</p> 

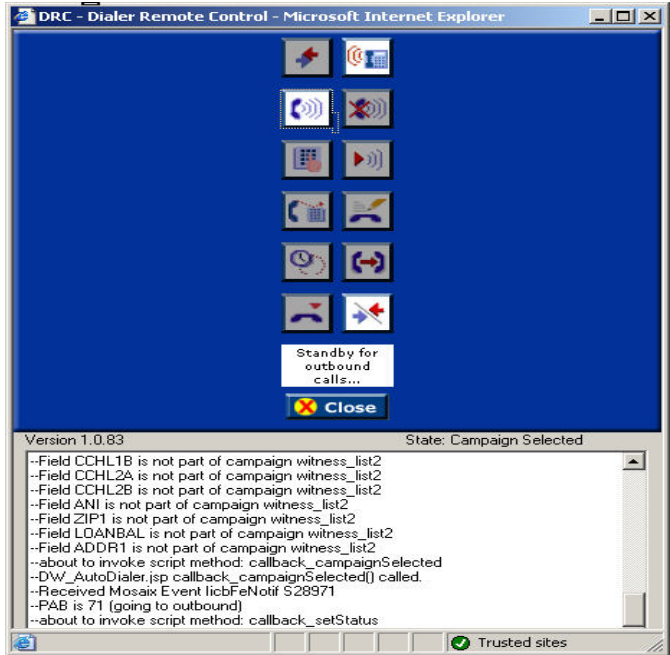
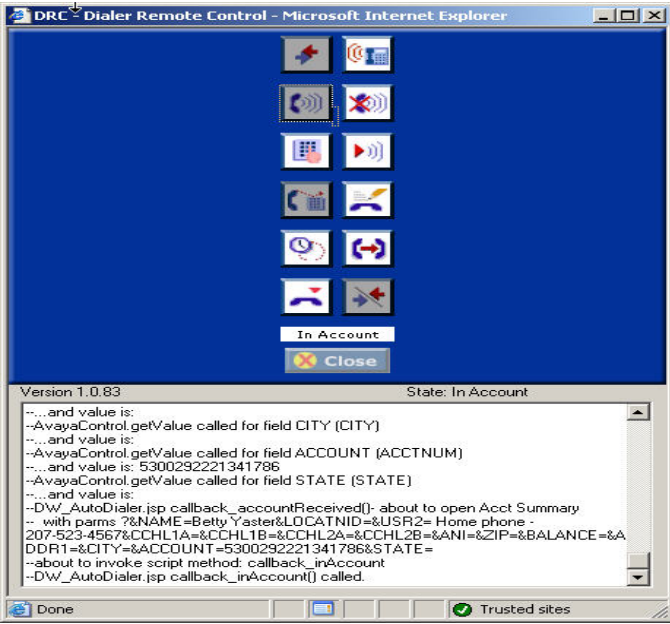
Step	Description
2.	<p>For an agent to receive inbound and outbound calls using the Predictive Agent Blending feature, the agent must log in to both the Avaya Communication Manager ACD and Avaya PC3.</p> <p>First log in an agent's telephone to the ACD using the agent login-id as configured in Avaya Communication Manager. Move the agent to the Auto-In state so that it is ready to accept incoming calls.</p> <p>Launch the DRC from the CACS application as described in Section 5 Step 2.</p> 


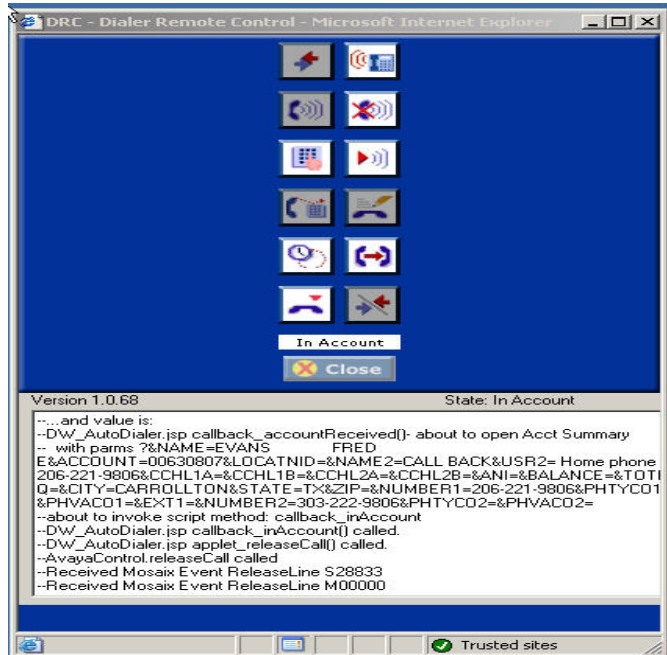
Step	Description
3.	<p>From the DRC, click the Login button.</p> 
4.	<p>Enter the agent login information on the Dialer Login screen. To allow the agent to handle outbound and inbound calls, select “Predictive Blend” for Agent Type. This will log in the agent on Avaya PC3.</p> 

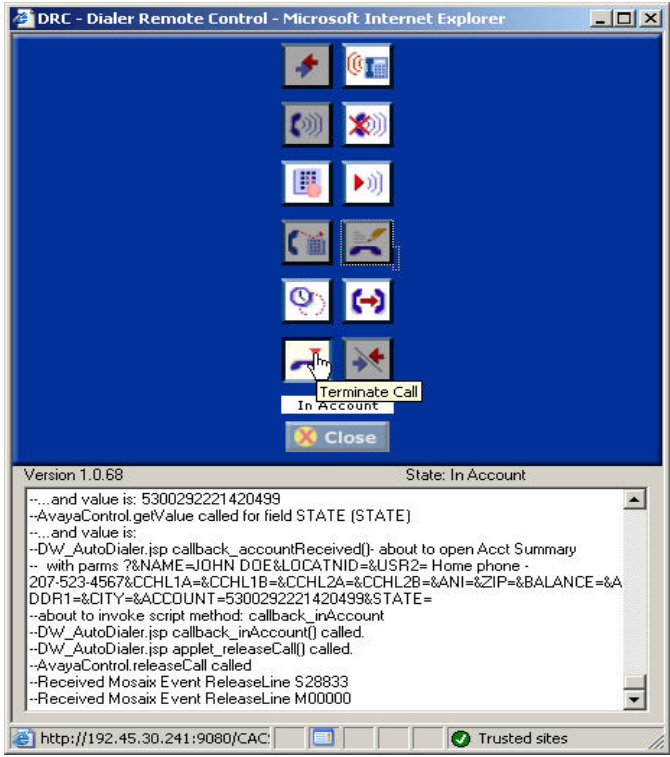
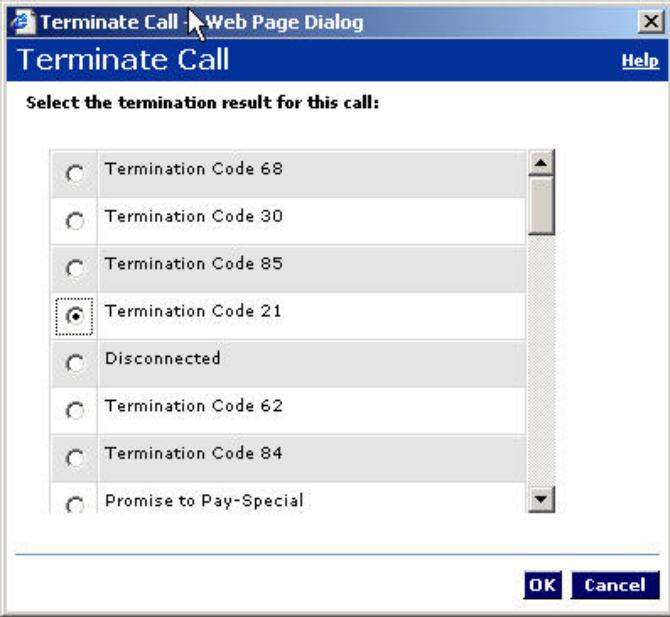
Step	Description
5.	<p>Once the agent is logged into Avaya PC3, the DRC state should display “Logged In”.</p> 

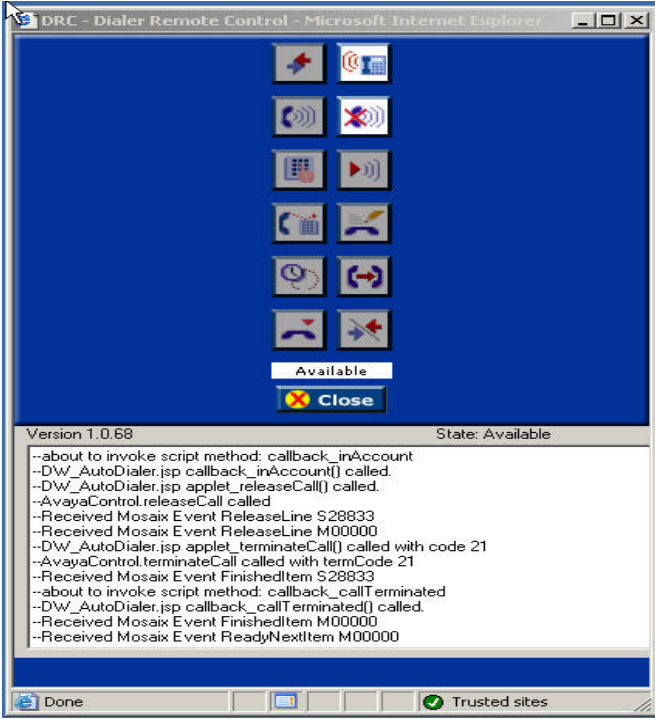
Step	Description
6.	<p>From the DRC, click the Go Available button.</p> 
7.	<p>On the Call Campaign Selection screen, select the Campaign ID that the agent wants to join. Then click OK.</p> 

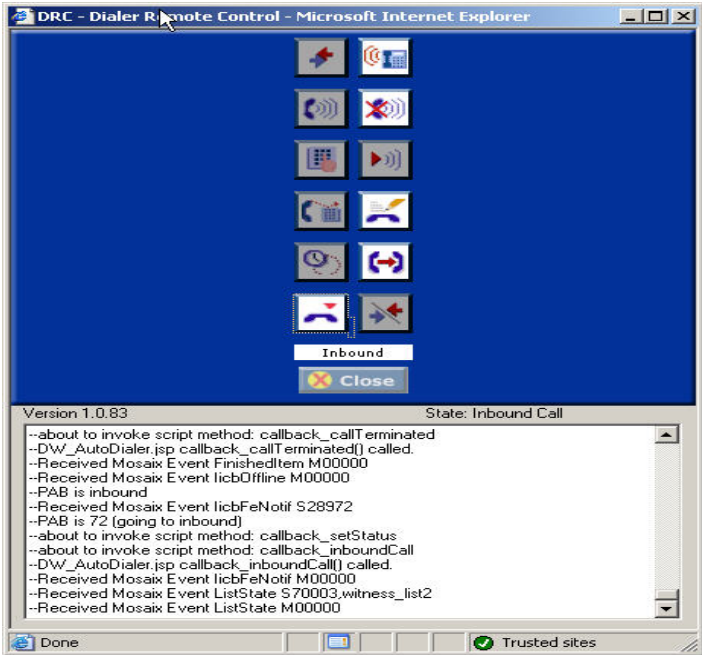

Step	Description
8.	<p>Once the agent has joined a campaign, the DRC state should display “Available”. The agent is now ready to receive inbound and outbound calls.</p>  <p>Version 1.0.68 State: Available</p> <pre>--Field PHTYC01 is not part of campaign outbnd2 --Field PHVAC01 is not part of campaign outbnd2 --Field EXT1 is not part of campaign outbnd2 --Field PHTYC02 is not part of campaign outbnd2 --Field PHAVC02 is not part of campaign outbnd2 --about to invoke script method: callback_campaignSelected --DW_AutoDialer.jsp callback_campaignSelected() called. --AvayaControl.goAvailable called --about to invoke script method: callback_available --DW_AutoDialer.jsp callback_available() called. --Received Mosaix Event AvailWork S28833 --Received Mosaix Event AvailWork M00000 --Received Mosaix Event ReadyNextItem M00000</pre>

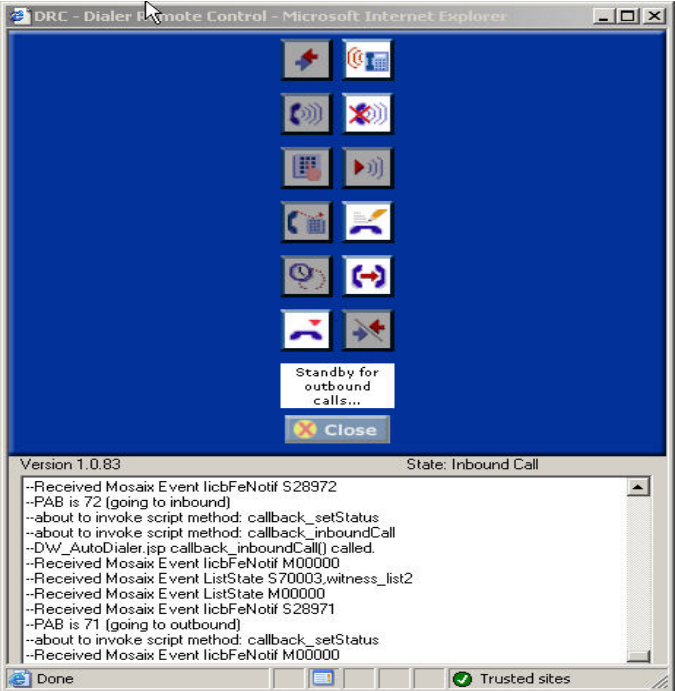
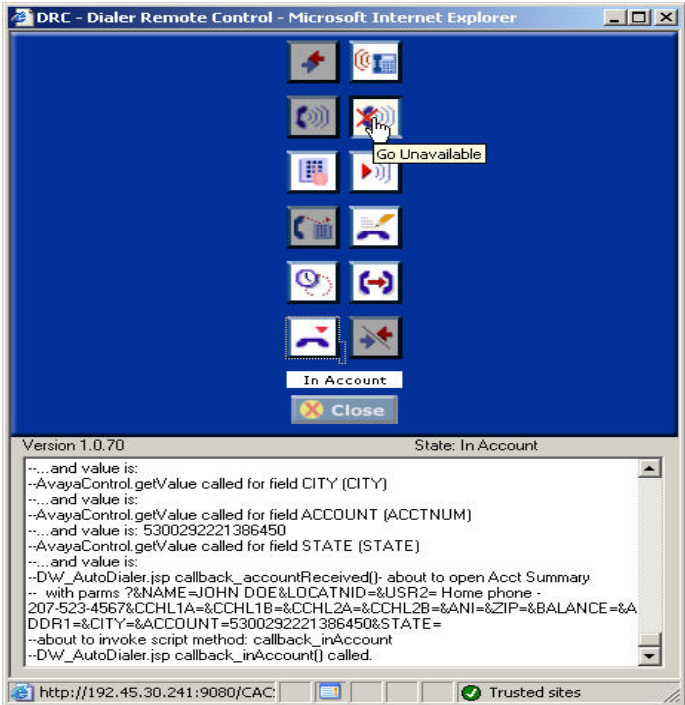
Step	Description
9.	<p>Avaya PC3 will first acquire the agent for outbound calls if there are no inbound calls in queue. The DRC state should display “Standby for outbound calls...” This is an intermediate state before the agent receives an outbound call.</p> 
10.	<p>Once an outbound call is answered by the customer, Avaya PC3 connects the call to the agent. The DRC state should display “In Account”.</p> 

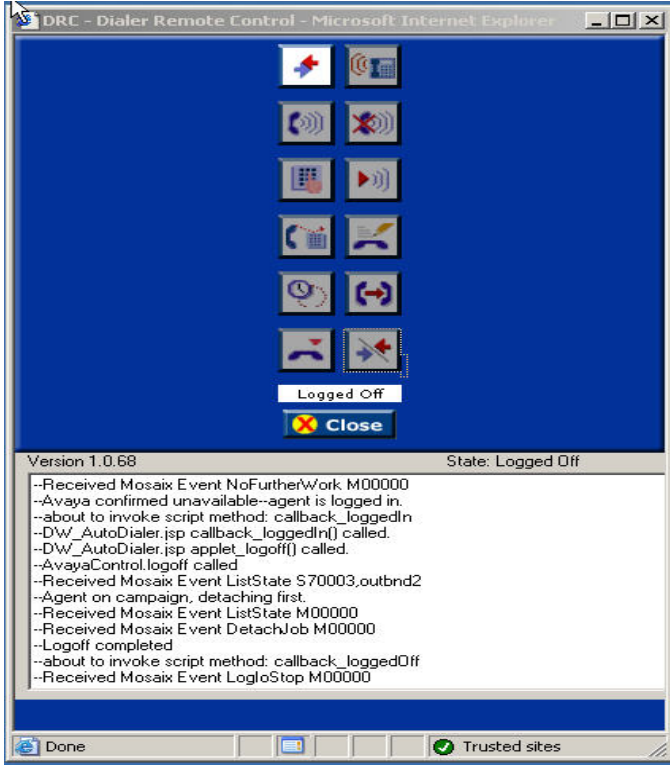
Step	Description
11.	<p>From the DRC, click the Release Call button to end the call.</p> 
12.	<p>The DRC state should display “In Account”.</p> 

Step	Description
13.	<p>From the DRC, click the Terminate Call button.</p> 
14.	<p>On the Terminate Call screen, select a termination code. Click OK.</p> 

Step	Description
15.	<p>The DRC state should display “Available” and is ready to receive outbound or inbound call.</p> 

Step	Description
16.	<p>Send an inbound call to the ACD Inbound queue on Avaya Communication Manager. When the inbound call is delivered and answered by the agent, the DRC state should display “Inbound”. The agent can release and terminate the inbound call.</p> 
17.	<p>After all the inbound calls in queue are completed, a warning message is given to the agent. Click OK.</p> 

Step	Description
18.	<p>Avaya PC3 will again acquire the agent for outbound work. The DRC state should display “Standby for outbound calls...”</p> 
19.	<p>From the DRC, click the Go Unavailable button to leave the campaign.</p> 

Step	Description
20.	<p>Then click the Logoff button to log off the agent from Avaya PC3. The DRC state should display “Logged off”.</p> 

8. Support

If technical support is required for the CGI CACS 8.1 Dialer Remote Control solution, contact CGI Technical Support. Full details are available at <http://www.cgi.com>.

9. Conclusion

These Application Notes describe the required configuration steps for CGI CACS 8.1 – Dialer Remote Control to successfully interoperate with the Agent API of Avaya Proactive Contact 3.0. Functionality and performance were successfully validated. The configuration described in these Application Notes has been successfully compliance tested.

10. Additional References

The following documents may be found at <http://support.avaya.com>:

- Administrator's Guide for Avaya Communication Manager, Release 3.0.1, Issue 1, June 2005; Doc ID: 03-300509
- Avaya Proactive Contact 3.0 Administration (UNIX-based), October 2005; Doc ID: 07-300488
- Sample Avaya Proactive Contact 3.0 (PC3) with CTI Installation and Configuration, Issue 1.0, Avaya Solution and Interoperability Test Lab

CGI product documentation is available on request from <http://www.cgi.com>.

- CACS Enterprise Browser AutoDialer Guide, April 2006; Release 8.1

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