Avaya Dialog Designer

Getting Started with Dialog Designer
Release 5.1

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About Avaya Dialog Designer Documentation

Avaya Dialog Designer documentation provides an insight to the Dialog Designer tool. The documentation helps you understand various features and detailed information on how to use these features.

This section consistes of the following topics :

- Audience
- Pre-Requisites
- Resources
- Documentation Availability

Audience

The Dialog Designer documentation is useful for you, if you want to:

- Install and configure Dialog Designer for your own use or the use of:
  - Customers who want to create their own speech applications.
  - Avaya business partners and independent service vendors who create speech applications for Avaya customers.
- Use Dialog Designer to design and create speech applications for:
  - Avaya Interactive Response (IR), Release 1.3 (or later)
  - Avaya Voice Portal 4.0 (or later)

Pre-Requisites

The primary users of Dialog Designer are likely to be highly knowledgeable and skilled in telecommunications and Internet technologies.

We assume that the Dialog Designer users are already proficient and knowledgeable in the following areas:

- The operating systems in which users will develop and deploy Dialog Designer applications.

- Computer networking concepts and technologies.
- Telecommunication concepts and technologies, including switches and gateways.
- Basic programming logic and practice.

Note:
Knowledge and experience on Java programming is helpful.

Dialog Designer is built on several existing technologies and tools. Avaya therefore recommends that Dialog Designer users familiarize themselves with the following technologies:

- Eclipse open-source software
- Java servlet technology
- Servlet engine technologies
- Speech recognition and synthesis technologies
- Database administration
- Web service technologies

For more information and additional resources on these technologies, see Resources.

Resources

Avaya Dialog Designer functions with the use of several closely related software products and technologies. When using Dialog Designer, it is recommended to also review the documentation for these related products and technologies.

Avaya does not reproduce or package the documentation for these related products and technologies. We therefore recommend you to refer the following resources:

Note:
The listed URLs were valid at the time of publication of this document. Avaya assumes no responsibility for changed URLs. For more updated URLs, perform a search operation online.

- For Eclipse and supporting Eclipse components (GEF and WTP):

  http://www.eclipse.org/documentation/

  To view the Eclipse online Help in Dialog Designer, click **Help** > **Help Contents**.

- For the Java SDK (Software Developer's Kit):

  http://java.sun.com/j2se/1.5.0/docs/index.html

- For Tomcat: 5.5 or 6.0

  http://tomcat.apache.org/tomcat-5.5-doc/index.html

  http://tomcat.apache.org/tomcat-6.0-doc/index.html

- For IBM WebSphere or WebSphere Express:

  http://www.ibm.com/websphere

- WebLogic

  http://www.oracle.com/appserver/weblogic/weblogic-suite.html

- For the Microsoft Speech SDK:

  http://www.microsoft.com/speech/speech2007/downloads.mspx

- For databases and JDBC implementation:

  http://www.sql.org/

  http://www.firstsql.com/tutor.htm

  http://java.sun.com/developer/onlineTraining/Database/JDBCShortCourse/jdbc/sql.html

- For Web services:

  http://www.w3.org/TR/wsdl

  http://www.ws-i.org/Profiles/BasicProfile-1.1-2004-08-24.html

- For the W3C VoiceXML 2.0 Recommendation:

  http://www.w3.org/TR/voicexml20/

- For the W3C VoiceXML 2.1 Recommendation:

  http://www.w3.org/TR/voicexml21/

- For the W3C CCXML 1.0 Recommendation (January 19, 2007):

  http://www.w3.org/TR/ccxml/

- For the Speech Recognition Grammar Specification, Version 1.0:

  http://www.w3.org/TR/speech-grammar/#AppJ.5

Documentation Availability

The Avaya Dialog Designer documentation consists of four outputs:

- *Getting Started with Avaya Dialog Designer* – This PDF file contains information on installation and configuration of Dialog Designer and the basics of the Dialog Designer GUI.
- *Avaya Dialog Designer online Help* – This online Help provides detailed information and procedures for using Dialog Designer features and options in speech applications.

  When you install Dialog Designer, the online Help gets installed as an additional Eclipse plug-in.

  You can access the online help in one of the following ways:

  – With the cursor over an item within the interface, press the **F1** key to display help.

  – Click **Help** (menu) > **Help Contents** > **Dialog Designer documentation** > **Dialog Designer Developer's Guide**.
- *Avaya Dialog Designer Developer's Guide*– This PDF document contains the same content available in the online Help system, but in a format that you can print or view using Adobe Acrobat Reader.
- *Programmer Reference Guide* – This online documentation is designed for programmers of Dialog Designer. This guide includes:

  – A **Constants** quick reference guide

  – A **Class Hierarchy** reference guide

  – An **API Reference** guide

  You can acess this information by clicking **Help** (menu) > **Help Contents** > **Dialog Designer documentation** > **Programmer Reference**.

Where and How to View Documentation

The Dialog Designer documentation is available from:

- Dialog Designer CD-ROM (which includes the software).
- Avaya online support Web site http://support.avaya.com.
- Dialog Designer online help.

Chapter 1: About Avaya Dialog Designer

Overview

The Avaya Dialog Designer is a Java-based tool for creating speech and call control applications that comply with VoiceXML v2.1 or CCXML v1.0 (January 19, 2007 specification). Dialog Designer is designed as an Eclipse plug-in. It provides an integrated GUI for the design and implementation of speech applications that can operate with Avaya IR and Avaya Voice Portal systems.

Dialog Designer is based on the widely accepted Eclipse.org development framework. It provides a drag-and-drop environment for development and maintenance of speech and touch-tone applications.

Features and Benefits

Avaya Dialog Designer:

- Simplifies development, integration, reusability of speech and touch-tone applications.
- Significantly reduces time and cost of application prototyping and design.
- Provides unprecedented coverage of customer self-service, employee-facing productivity, and advanced call control application areas.
- Ensures consistent and more reliable deployment of voice enabled services and applications.
- Maximizes use of existing tooling investments for more rapid deployment of web based voice applications via the open Eclipse-based framework.

Chapter 2: Installation and Configuration

This describes how to Install and configure Avaya Dialog Designer. In addition, this section includes details on installing sample applications and procedures for upgrading Dialog Designer, or installing patches and updates.

Before installing Dialog Designer, ensure that the hosting system meets the requirements described in the following sections:

- License Requirements
- Hardware Requirements
- Software Requirements

License Requirements

A valid license is required to run Dialog Designer applications on Avaya Voice Portal, Avaya Interactive Response, or other supported VXML platform. Dialog Designer licenses are free. You can contact an Avaya sales representative or channel manager to get the license file. Avaya Partners can log on to the Partner Portal to find information on ordering additional licenses.

A separate WebLM server for Dialog Designer is not required. Avaya recommends that you install the Avaya Dialog Designer license on the existing WebLM license server that is installed with the Voice Portal, Interactive Response, or another Avaya product utilizing WebLM license server.

A license is not required to install or run the Eclipse-based Dialog Designer development and simulation environment.

Hardware Requirements

The system that hosts the Dialog Designer development environment must meet or exceed the following hardware requirements:

Required Hardware	Minimum	Recommended
CPU speed	1 GHz	2 GHz
RAM	512 MB	1 GB

Required Hardware	Minimum	Recommended
Hard disk drive	40 GB	n/a
Monitor resolution	1024 x 768 pixels	n/a

Software Requirements

The system that hosts the Dialog Designer development environment must have the following software packages installed. You must install these packages before continuing the Dialog Designer installation and configuration.

Important:
If preparing to upgrade Dialog Designer, see Upgrading Dialog Designer.

All these files are available on the Dialog Designer 5.1 distribution CD.

Supporting Software Requirements

Software Requirement	On CD	Notes and Links[1]
Windows XP (Professional or Home editions, Service Pack 2 or later) Windows 7 (Professional and Enterprise versions) Windows Vista (Business or Ultimate editions)[2]	No	Dialog Designer can be installed on any of these operating systems.
J2SE Development Kit 6.0 (JDK 6.0) (existing JDK 1.5 or JDK 1.6 are also supported)	Yes	The JDK includes the Java Runtime Environment (JRE) and command-line tools, compilers, and debuggers used in developing applets and applications Follow these steps to install JDK 6.0: 1. Locate the JDK installer on the Dialog Designer 5.1 CD. This file is located in the following directory: <CD_drive>:\Installation\Java\ 2. Double-click the downloaded executable file to install the JDK.

Supporting Software Requirements (continued)

Software Requirement	On CD	Notes and Links[1]
Eclipse-3.5-Prereq-DD.zip which includes: • Eclipse 3.5 SDK • GEF 3.5 SDK • WTP SDK 3.1 • emf-xsd 2.5 • DTP 1.7 **Note:** Avaya Dialog Designer 5.1 also supports Eclipse 3.4 with the following features: • GEF 3.4 • WTP 3.0 • DTP 1.6 • EMF-SDO-XSD 2.4	Yes	Eclipse is a Java-based open-source integrated development environment (IDE) for software development. Dialog Designer runs as an Eclipse plug-in. Dialog Designer uses the Eclipse GEF (Graphical Editing Framework plug-ins for Eclipse) for advanced graphical functions. It also includes the support files for CCXML (Call Control) development. Follow these steps to install the Dialog Designer Eclipse Prerequisite files: 1. Locate the package file on the Dialog Designer 5.1 CD. This file is located in the following directory: <CD_drive>:\Installation\Eclipse\ 2. Extract the ZIP file into an installation folder. **Note:** For Windows Vista Business, download the pre-requisite zip file before extracting it. This is because the native extract from the Web site does not work well sometimes on Windows Vista Business. 3. If required, create shortcut for the Eclipse executable. Dialog Designer is launched via Eclipse.

Supporting Software Requirements (continued)

Software Requirement	On CD	Notes and Links[1]
Tomcat 5.5 or Tomcat 6.0	Yes	Tomcat generates and serves VoiceXML pages to the Avaya Application Simulator. **Note**: ● You require administrative privileges when running Tomcat. ● If you upgrade to Tomcat 6.0, you may need to make some minor adjustments the first time you run Tomcat. If your applications have manually configured build paths or have resources in common/lib or common/classes, you will have to manually update the build path to point to <tomcat_installpath>/lib and also put any resources (libraries, etc) in that folder. Follow these steps to install Tomcat: 1. Locate the Tomcat distribution package on the Dialog Designer 5.1 CD. These files are located in the following directory: <CD_drive>:\Installation\Tomcat\ 2. Extract the ZIP file in a temporary folder. 3. Review the **RUNNING.txt** file for additional installation instructions. **Important:** Do not install Tomcat as an NT service. This configuration is not supported because Tomcat does not start and stop appropriately when developing applications. **Note:** If more than one Java SDK is installed, then you must set the Tomcat **JVM Settings** preferences option to JRE1.5.x. The JRE1.5.x should be available in Java before you select it in the Tomcat **JVM Settings**.

Supporting Software Requirements (continued)

Software Requirement	On CD	Notes and Links[1]
Microsoft Speech SDK 5.1 (SpeechSDK51.exe)	Yes	Dialog Designer uses Microsoft Speech SDK during application testing to perform automated speech recognition (ASR) and Text-to-Speech (TTS) functions. **Note:** If you already have Microsoft Office 2003 installed, check to see if a Speech Recognition and Text-to-Speech tabs are available in the **Control Panel > Speech**. If so, you need not install Microsoft Speech SDK . Follow these steps to install the Microsoft Speech SDK 5.1: 1. Locate the Microsoft Speech SDK file on the Dialog Designer 5.1 CD. This file is located in the following directory: <CD_drive>:\Installation\MSSpeech\ 2. Double-click the **Setup.exe** file, which launches the Microsoft SDK InstallShield Wizard. Click **Next** on the Welcome dialog box. 3. Accept the license terms, and click **Next**. 4. Enter a User Name and Organization in the Customer Information dialog box, then click **Next**. 5. Accept the default installation folder, when prompted, or navigate to another, if applicable. Then click **Next**. 6. Click **Install** to begin the Microsoft Speech SDK installation. 7. Click **Finish** when the installation is complete.
Storm Codec 7.01.19		You need to install Storm Codec 7.01.19 only if you intend to use 3GP video files for media. To launch the Storm Codec installer, refer the installation notes available on the CD.

1. Though specific locations on the CD are described here, it is intended that users simply launch the CD, and use the displayed HTML index page to navigate to the required resources. By following these instructions, installation will be smoother since the online navigation documentation leads the developer along the correct installation path. This is the preferred methodology for using the CD and installing Dialog Designer efficiently.

2. Requires Eclipse 3.3

Installing Dialog Designer

This section describes the procedure for fresh installations of the Dialog Designer software. To upgrade Dialog Designer, see Upgrading Dialog Designer.

Note:
Before you install Dialog Designer software, we recommend you to temporarily disable antivirus software and close any open or running applications. Dialog Designer installation involves extracting Java-related files from a compressed archive and the antivirus software may slow down the installation process significantly.

Follow these steps to install Dialog Designer:

1. Insert the Dialog Designer installation CD in the CD drive. The Install Wizard starts automatically.

   Note:
   If the Install Wizard does not start up automatically, browse to the root directory of the CD and double-click **autorun.exe**.

2. An Avaya Software License Agreement is displayed. Review the license agreement, and click **I accept. Please continue** to accept it.
3. A “start.html” file is displayed. This file provides an overview of the following available resources on the CD:
   - *Getting Started with Dialog Designer* – A link to a copy of this document on the CD.
   - *Installation Notes* – A link to additional installation notes. These notes include information on installing Dialog Designer and prerequisite software, and localization bundles available in the current release.
   - *Sample Applications* – A link to a page with information about accessing and using sample applications in Dialog Designer. Sample applications provide tangible ideas on how to use Dialog Designer most effectively.
4. Following the instructions and links in the CD, install supporting software and Dialog Designer software as described.
5. This completes the Dialog Designer installation. To start using the Dialog Designer, you must configure some basic settings. See Configuring Basic Settings to properly configure your development environment settings.
6. Once you complete the installation procedure, read the Eclipse “readme” file located in the /readme subdirectory where Eclipse is installed. The Eclipse readme file includes valuable information and tips for configuring Eclipse.

To determine the installed Dialog Designer version, go to **Help > About Eclipse SDK > Feature Details**.

Configuring Basic Settings

After you install all the required software for Dialog Designer, you need to perform some basic configurations. These configurations ensure that the environment is properly configured and ready to use. Perform these configurations before you start creating Dialog Designer projects:

- Creating Eclipse Shortcut
- Setting Up the Workspace
- Setting Dialog Designer Preferences
- Configuring the Microsoft Speech SDK for Microphone Input

Creating Eclipse Shortcut

Once you complete installing all the installation components, you can access Dialog Designer by launching Eclipse. To readily access Eclipse, we suggest you to create a Windows desktop shortcut icon to the Eclipse executable file. Follow these steps to create a shortcut and launch Eclipse:

1. To create Eclipse shortcut, right-click the Eclipse executable file (**eclipse.exe**) located where Eclipse is installed, go to **Send To > Desktop (create shortcut)**.
2. Double-click the created shortcut file to launch Dialog Designer. This will open the Workspace Launcher dialog box.

Setting Up the Workspace

When you launch Avaya Dialog Designer (via Eclipse) for the first time, the Eclipse **Workspace Launcher** dialog box prompts you for a workspace location. This is the directory where the Dialog Designer will save the project files.

Important:
If you are configuring a new version of Dialog Designer, make backup copies of all files in the original installation directory before configuring a new directory.

1. The default directory is relative to the installation path of Eclipse (for example, **C:\Eclipse\workspace**). Click **Browse** to navigate to a different directory, if desired.
2. To stop the **Workspace Launcher** dialog box from prompting for this directory with every launch of Eclipse, select the **Use this as the default and do not ask again** option on the dialog box.

Setting Dialog Designer Preferences

You must configure the Dialog Designer preferences when you use Dialog Designer for the first time. These configured preferences are set for all your subsequent launches of Dialog Designer.

To access these preference settings, from the **Window** menu, select **Preferences**. Verify or configure the preference settings as described.

Dialog Designer Preferences Settings

Preferences Area	Notes

Perspectives	In the selection pane on the left, select **General > Perspectives**. Follow these steps to configure the options:
	• In the **Open a new perspective** panel, select **In the same window**.
	• In the **Open a new view** panel, select **Within the perspective**.
	• In the **Open the associated perspective when creating a new project - Prompt** panel, select **Prompt**.
	• In the **Available perspectives** panel:
	  • Select either **Speech** or **Call Control** as your default perspective, depending on the type of work you are doing.
	  • Click **Make default**.

Tomcat	Tomcat installation with default settings automatically configures Tomcat Preferences. If you have installed Tomcat with default settings, you need not configure Tomcat Preferences again. Check that the appropriate Tomcat version, home directory, and Contexts directory are populated. **Note:** If you are running Dialog Designer only in your development environment (that is, if you are not running deployed applications), you do not have to install the runtime config to your local Tomcat. You only need to set up your production system when you are deploying and running live applications.

Dialog Designer Preferences Settings (continued)

Preferences Area	Notes
Avaya > Dialog Designer	If your design environment is behind a firewall (only), proxy settings are required. Click **Avaya > Dialog Designer** to display the proxy settings. ***Proxy Settings*** • **Enable HTTP proxy connection** – If a proxy server for Internet access is required, select this check box. • **Ignore hosts with addresses** – To allow Dialog Designer to ignore HTTP hosts with specific addresses, specify the IP address(s). For multiple addresses, use either a comma or semi-colon for a separator character. • **HTTP proxy host address** – Enter the full HTTP path to, or URL of, the proxy server. • **HTTP proxy host port** – Enter the port that Dialog Designer can use to access the proxy server. ***Copy HTTP Settings to HTTPS*** • Click this button to copy the configured HTTP settings to HTTPS settings automatically.

Dialog Designer Preferences Settings (continued)

Preferences Area	Notes
Avaya > Dialog Designer (continued)	***HTTPS Proxy Settings*** • **Enable HTTPS proxy connection** – If you require a proxy server for Internet access, select this check box. If you do not require a proxy server for Internet access, clear this check box. Dialog Designer then disables the other options in this area. • **Ignore HTTPS hosts with addresses** – To allow Dialog Designer to ignore HTTPS hosts with specific addresses, specify the IP address(s). For multiple addresses, use either a comma or semi-colon for a separator character. • **HTTPS proxy host address** – Enter the full HTTPS path or the URL of the proxy server. If you do not know this address, look at the proxy server settings for your Internet browser software. • **HTTPS proxy host port** – Enter the port that Dialog Designer can use to access the HTTPS proxy server If you do not know the URI, contact the Avaya technical service representative. **Note**: These settings are required even if proxy options are also set in Microsoft Internet Explorer or any other Web browser. ***Runtime License Server*** **Note:** A runtime license is not needed to run applications using the application simulator. You need to specify the license server only if you have a platform (Voice Portal or Interactive Response) accessing your application from the development environment. The format for this URI is **http://*webServerName*:*port*** where: • ***webServerName*** is the fully qualified host name or IP address of your WebLM license server • ***port*** is the number of the HTTP/HTTPS port the system uses to access the license server For example **http://licenseServer.myCompany.com:8080**. ***Context Files*** Tomcat opens the context files of all the projects each time you simulate a project. Therefore, Dialog Designer performance may degrade if you have several workspaces with a huge number of projects.

Dialog Designer Preferences Settings (continued)

Preferences Area	Notes
	• **Remove context files on project close** – If you enable the **Remove context files on project close** option, Dialog Designer automatically deletes the corresponding context files when you close the Dialog Designer projects. Dialog Designer recreates the context file when a project is reopened. This improves the performance by controlling the size of the workspaces. **Note**: This option does not affect the projects which are not opened in the current session. This applies only to Dialog Designer projects which you open and close subsequently.
Java > Installed JREs	Verify that **jre1.5.x** (or **jre1.6.x**) is selected. If **jre1.5.x** (or **jre1.6.x**) does not appear in the list, click **Add...** to add it.
Java > Compiler	For Eclipse 3.3, JDK Compliance should have a value of 5.0. For Eclipse 3.4, select JDK Compliance as 1.5.

Configuring the Microsoft Speech SDK for Microphone Input

Dialog Designer uses the Microsoft Speech SDK to handle ASR input from a microphone during application simulation. To use the Microsoft Speech SDK for ASR input, you must configure the SDK to use a microphone.

Follow these steps to configure the Microsoft Speech SDK for using a microphone:

1. On the system where Dialog Designer is installed, access the **Control Panel**.
2. Double-click the **Speech** option.

   The system displays the **Speech Properties** dialog box.
3. In the Speech Recognition tab, with a microphone plugged in and turned on, speak into the microphone. The **Level** indicator in the Microphone panel should show that the system is receiving microphone input. If it does not, click **Audio Input** and correct the audio input source settings.
4. Click **Configure Microphone** to further tune the microphone settings.
5. Click **OK**.

Installing Sample Applications

Dialog Designer includes numerous sample applications. This will help you understand how finished applications work and operate. This will also help you examine how many features of Dialog Designer work.

Follow these steps to install and run sample applications:

1. Navigate to the **/Sample Applications/files** directory on the Dialog Designer installation CD.
2. Locate and double-click the **DialogDesigner [*version*] Sample Applications.doc** file.
3. Follow the instructions in that document to finish installing and configuring Dialog Designer sample applications. Also, for detailed information about each of the sample applications available for reference.

Important:
Included sample applications are intended to be used as technical samples for reference only, and not production-ready applications.

Upgrading Dialog Designer

The procedure to upgrade Dialog Designer 5.0 to Dialog Designer 5.1 is slightly different depending on whether you want to keep the prior version (5.0) available while installing a concurrent new version (5.1), or not.

See the following sections:

- If Maintaining a 5.0 Environment Is Necessary
- If Preserving a 5.0 Environment Is Not Necessary

Note:
Upgrades to Dialog Designer might require updates to connectors or other dependant libraries on the application server. Avaya recommends that you update the connector applications (**icconnector.war** and **cticonnector.war**) and runtime support files (runtimeSupport<*platform*>.zip) after upgrading Dialog Designer.

For more information on installing runtime support files and connectors, see *Installing Required Files on the Application Server* in *Dialog Designer Developer's Guide*.

If Maintaining a 5.0 Environment Is Necessary

If it is necessary for you to keep a Dialog Designer 5.0 environment (for example, to continue maintenance of 5.0-based applications), you can install Dialog Designer 5.1 in a separate directory.

In this case, review the following considerations:

1. Preserve the Dialog Designer 5.0 and Eclipse 3.4 (or 3.5) installation and workspace. Dialog Designer 5.0 will continue to use the previous Tomcat installation.
2. Install Dialog Designer 5.1, and Tomcat 5.5 or 6.0 (Tomcat upgrade is optional) to a separate location (for example, **C:\DD5.1**)

   (You must install Tomcat under the Dialog Designer 5.1 installation location to keep it separate.)
3. To upgrade a Dialog Designer 5.0 application to Dialog Designer 5.1:
   - Copy the project from the Dialog Designer 5.0 workspace to the Dialog Designer 5.1 workspace.

     Keeping a copy in the 5.0 workspace ensures that you have a backup in case of upgrade problems.
   - Import the copied project into Dialog Designer 5.1. The project will be converted for Dialog Designer 5.1. This project can no longer be opened in Dialog Designer 5.0.
4. If you use a source control system, store the 5.1 application in a different location (or a different branch) so that the old 5.0 application can be maintained in the future.

Following are example (recommended) installation paths for multiple Dialog Designer/Eclipse versions. (base) means any parent directory.

c:\(base)\DD5.0

eclipse	(Eclipse 3.3 or 3.4 install, with GEF 3.3 or 3.4 and Dialog Designer 5.0 features)
tomcat	(Tomcat 5.0 or 5.5 for running Dialog Designer 5.0 applications
workspace	(Dialog Designer 5.0 projects)

c:\(base)\DD5.1

eclipse	(Eclipse 3.4 or 3.5 install, with GEF 3.4 or 3.5 respectively, and Dialog Designer 5.1 features)
tomcat	(Tomcat 5.5 or 6.0 for running Dialog Designer 5.1 applications)
workspace	(Dialog Designer 5.1 projects)

This is a convenient installation structure that keeps the Dialog Designer 5.0 and Dialog Designer 5.1 environments and prerequisite software separate.

Note:
After creating a new workspace during an upgrade, go to Window > Preferences to configure your preferences before importing old projects. See Setting Dialog Designer Preferences for more details.

If Preserving a 5.0 Environment Is Not Necessary

Follow these steps to install Dialog Designer 5.1 if it is not necessary to preserve a Dialog Designer 5.0 environment:

1. Before uninstalling Dialog Designer 5.0, make a backup copy of the projects in your workspace.
2. Uninstall Dialog Designer 5.0 using the **Control Panel > Add or Remove Programs** option. Depending on the location of your workspace, your projects may be removed by the uninstall process.
3. Install Dialog Designer 5.1 and associated supporting software requirements. See Hardware Requirements and Software Requirements.
4. Copy the Dialog Designer 5.0 projects (from the backup) into the Dialog Designer 5.1 workspace.

   It is a good idea to keep your old backup copy in the event that there are errors upgrading.
5. Import each project into Dialog Designer 5.1. The project will then be converted for Dialog Designer 5.1.
6. If you use a source control system, create a branch or store the 5.1 application in a different location so that the old 5.0 application can be maintained, if necessary, in the future.

Note:
After creating a new workspace during an upgrade, go to **Window > Preferences** to configure your preferences before importing old projects. See Setting Dialog Designer Preferences for more details.

Installing Dialog Designer Patch Updates

This section describes various steps for installing Dialog Designer patches.

Note:
The procedure described in the section is for installing patches or updates to released software, not upgrading software versions completely. For upgrading the software, see Upgrading Dialog Designer.

Prerequisites For Installing a Patch Update

At this time, Avaya does not automatically alert you to the availability of new patches to Dialog Designer. Therefore, periodically check the Avaya support Web site for the availability of patches. Or, as an alternative, use the Eclipse update mechanism to check for available updates.

Before installing a patch update, make backup copies of all files in the default **/eclipse** installation directory, as well as all files in the designated **/workspace** directory (if not a subdirectory of **/eclipse**). This is important in case an update needs to be reverted for any reason.

Also, consider whether to keep and continue to use the older version for existing applications. In this case, Avaya recommends installing the new version using a “clean installation” in a new directory.

CAUTION:
When opening an application created with a prior release of Dialog Designer, Dialog Designer prompts you to update the project to the new version. Consult the Release Notes for project conversion considerations.

Installing a Patch Update

You can access Avaya Dialog Designer patch updates from Avaya’s support Web site. Follow these steps to access these updates directly from within the Eclipse user interface:

1. From the **Help** menu, select **Software Updates** > **Find and Install**.

   Note:
   If you are unable to connect to the update site, ensure you have correctly configured the proxy settings.

2. In the **Install/Update** dialog box, select the option **Search for updates of the currently installed features**.
3. Click **Next**.

   Dialog Designer automatically checks both the Eclipse and Avaya Support Web sites for updates. If patches or updates are found, the search mechanism returns the results. Select the updates or features to install and then follow the prompts.

CAUTION:
The Eclipse Install/Update mechanism can be used by other features besides Dialog Designer. To avoid installing incompatible features, it is recommended to only update Dialog Designer features.

If you are not sure which updates to install or have questions about the installation procedure, contact Avaya support at http://support.avaya.com.

Chapter 3: Getting Familiar with the Dialog Designer User Interface

This describes Dialog Designer user interface (within the Eclipse framework) and different areas of the Dialog Designer workbench, menus, and toolbar options. In addition, this chapter also describes how to access the *Eclipse Workbench User Guide.*

See the following sections:

- Eclipse Workbench Concepts
- Dialog Designer Workbench
- Dialog Designer Menu and Toolbar Options

Eclipse Workbench Concepts

Eclipse Workbench User Guide provides an overview of many of the similar concepts used within Dialog Designer. However, these are described from the Eclipse development environment framework perspective. Nonetheless, reviewing this information is valuable as a first step in getting familiar with the Eclipse user interface.

Follow these steps to access the *Eclipse Workbench User Guide* online help:

1. Within Dialog Designer, access the **Help** menu, and then click **Help Contents**. The system displays the *Help - Eclipse Platform* window.
2. In the **Contents** navigation pane, click **Workbench User Guide**.
3. Double-click **Concepts**. Review the multiple sections of the Concepts section to gain familiarity with Eclipse.

Dialog Designer Workbench

This section assumes familiarity with Eclipse concepts and terminology. See Eclipse Workbench Concepts.

The Dialog Designer workbench is designed as a *speech project* perspective in Eclipse. The layout of the views and workspace are optimized to assist you in the creation of speech application projects.

The following descriptions provide an understanding of how the Eclipse environmental elements are arranged in Dialog Designer and why.

Note:
As with any Eclipse perspective, the user is free to arrange perspective elements as desired, but if this occurs, the following view descriptions may no longer be applicable.

Dialog Designer Speech Perspective

This section describes views available in the standard Dialog Designer speech perspective. See Dialog Designer Menu and Toolbar Options for details on menus and toolbar items.

Starting in the upper-left corner of the window and working left-to-right and top-to-bottom, the Dialog Designer speech perspective consists of the following major elements:

- Speech Navigator View
- Navigator View
- Editor View
- Outline View
- Avaya Application Simulator View (Tab)
- Problems View (Tab)
- Tasks View (Tab)
- Eclipse Properties View
- Console View

You can manipulate most views or tab groups within the Eclipse perspective. Right-click on a tab area (on top of the tab label), and select any of the available options to modify views.The options are:

- **Fast View** - Minimizes the selected tab view, which is accessible via a clickable icon in the lower right corner, for access at a “fast view” access at a later time.
- **Detached** - Allows to be detached from the Speech perspective for the selected tab view. This action is similar to how **Move** works.
- **Restore** - Restores the default settings of the selected tab view. Alternatively, select **Window > Reset Perspective**, which also returns the tab view settings to the default positions and sizes.
- **Move** - Allows the tab view, or complete tab group (if more than one) to be moved outside of the perspective (such as to the Desktop area outside of the Eclipse window).
- **Size** - Adjust the size of the panel border relative to the option selected. Only borders that can be adjusted, per the selected tab, are active options. Options are Left, Right, Top, Bottom. For example, in the Speech Navigator tab, to make the area wider, select Size > Right, and then drag the dark blue highlighted border to make the view wider.
- **Minimize** - Minimize the size of the tab view selected.
- **Maximize** - Maximize the size of the tab view selected.
- **Close** - Close the tab view that is selected.

Speech Navigator View

The **Speech Navigator** view is the default Eclipse view. In Dialog Designer, this view provides multiple hierarchical views of the resources in the Dialog Designer speech project.

Dialog Designer has developed Speech Navigator since the Eclipse Navigator View can get busy due to scattered code elements. The Speech Navigator helps application developers remain focussed while exploring and navigating across the code base.

You can access this view by selecting **Window > Show View > Other... > Dialog Designer > Speech Navigator**. A new hierarchical application view tab is displayed, showing all your applications. At the tabs toolbar area a number of icons that provide the following functionality:

-  - **Show Projects**. Similar to the Eclipse Navigator View, displays the physical structure.
-  - **Show Easy Find**. Shows all elements in your development environment grouped by resource type (logical structure), and then grouped by the application name.
-  - **Show Custom**. Presents a hybrid view grouped by projects and then grouped by resource type.

In the Speech Navigator, you can:

- Drag and drop. For example, if you drag and drop a dbop file into the Call Flow Editor, Dialog Designer will create a data node with a database operation defined. If you drop a phrase onto a prompt item, Dialog Designer will create the phrase.
- Launch exports (except for the "Show Easy Find" view).
- Launch resource wizards. When you select a resource in one of the views, the selection will persist even if you switch to another view.
- Drill down to variables from all view types.

You can expand any of the resource groups (grammars, phrases, phrasesets, prompts) to see the actual resources of same type.

When you right click on a resource, and select **Properties**, a context-sensitive properties window (specific to the resource type) opens. Click the <down arrow>, and select **Customize view** (for the view that is displayed) to tune the view with a number of options.

Navigator View

The **Navigator** view is a standard Eclipse view. It provides a hierarchical view of the resources in the Dialog Designer speech project. (See the Speech Navigator View for additional control options for your resources.)

Following are the main features of the Navigator View:

- When you create a speech project in Dialog Designer, it automatically creates the following element folders in the project folder:

Element Folders in the Project Folder

Folder Name	Description
connectivity	This folder contains any database or Web service operations files you create as part of your project.
data	This folder contains mostly files that are derived from other files. For example, when you create a grammar, the Grammar File Editor creates a ***.gram** file that contains the metadata for the grammar. When you generate the project, Dialog Designer creates a ***.grxml** file that contains the actual XML grammar file. This ***.grxml** file is derived from the ***.gram** file. Usually, the derived files in this folder are hidden, and are not shown in the **Navigator** view. **Important:** Do not attempt to manually edit these files. This folder also contains: • the **log** folder. The log folder is where log files created during application testing are written. You can view these log files as an aid in debugging your applications. • a **temp** folder. A temp folder stores the messages you record during application testing.
flow	This folder contains the **main.flow** file. This file is the core of your call flow application (speech project). It is built and edited using the Call Flow Editor.
icons	This folder contains several icons used for Dialog Designer. **Note:** Do not delete or alter these icons.
languageName	This folder contains all the phrase, prompt, and grammar definition files for your speech project. Whenever you create or import a phrase file, a prompt file, or a grammar file, Dialog Designer places the file in the appropriate subfolder of this folder. The actual name of this folder is the name assigned to the project primary language.

Element Folders in the Project Folder

Folder Name	Description
WEB-INF	This folder contains all the output files created whenever you generate or build the project. These files are packaged when preparing the application for deployment.
work	This folder is used as a temporary folder by the Tomcat servlet engine. Do not attempt to manually edit the contents of this folder.

- You can open the editors for many project resources, such as phrases, prompts, and grammars by double-clicking the file in the **Navigator** view. For example, to open a specific phrase in the Phrase File Editor, double-click the ***.phrase** file.
- You can also perform many other actions on selected project resources by right-clicking the desired resource and then, selecting the appropriate action from the context menu.



Tip:
One useful option of these context menus is the ability to generate individual files or project resources. For example, to regenerate a project grammar without having to regenerate the entire project, right-click the *.gram file in the **Navigator** view. Then click **Generate** from the context menu.

For more information about the Navigator view in Eclipse, see the topic "Navigator view" in the Eclipse *Workbench User Guide* online Help.

Editor View

The Editor view is located in the upper-right area of the window by default. The main area of this view is called the *workspace*. Most of the development work for building a speech application project takes place in the Workspace.

Within the Editor View, there are numerous “sub”-editors that can be launched for creating, updating and managing the development of your speech application.

See the following sections:

- Dialog Designer Editors
- Editor View Tabs

Dialog Designer Editors

Following is a high-level overview of the editors available in Dialog Designer:

Editors in Dialog Designer

Editor	Description
Call Flow Editor	The Call Flow Editor is the primary editor for Dialog Designer. In this Editor, nodes are placed and connected, which create the call flows that direct the caller experience.
Phraseset File Editor	The Phraseset File Editor is used to modify phrase set metadata, such as phrase text, relevant comments, and search keywords. Phrase sets can also be recorded and saved in ***.wav** file format.
Prompt File Editor	The Prompt File Editor is used to define and modify prompts from very simple announcements to very complex prompts. Complex prompts involve variables, conditions and logic.
Variable Editor	The Variable Editor is used to create, define, and modify and view variables.
Grammar File Editor	The Grammar File Editor is used to define custom grammar files or select built-in grammar files.
Database Operation File Editor	The Database Operation File Editor is used to define and modify the way a project works with selected databases.
Web Service Operation File Editor	The Web Service Operation File Editor is used to define and modify the way a project works with selected Axis Web services.
Web Service Operation File (Axis2) Editor	The Web Service Operation File (Axis2) Editor is used to define and modify the way a project works with selected Axis2 Web services.
Event Type Editor (available only from within the Call Flow Editor)	The Event Type Editor is used to define and modify custom events and how they are implemented within a project.
CCXML File Editor	The CCXML File Editor is used to modify CCXML files that are part of Call Control projects.
JSP File Editor	The JSP File Editor is a Text-based editor. This is used for modifying JSP files that are a part of Call Control projects.

Editors in Dialog Designer

Editor	Description
Audio Editor	The Audio Editor is used to record audio. This Editor is also used to define and view file properties, file location, setup an external location and preview/edit the content of the file.
Video Editor	The Video Editor is used to preview videos. It does not allow you to record vidoes.
Image Editor	The Image Editor is used to preview images. It does not allow you to capture images.
Text Editor	The Text Editor is used to view and modify text files.

Editor View Tabs

Dialog Designer (Eclipse) uses two types of tabs in an Editor view:

- **Editor tabs (or top tabs)** - Whenever you open an editor, the Editor view displays a tab for that editor in the view toolbar. Each tab displays an icon which represents
  - The type of editor associated with the tab and
  - The name of the project element which is currently open.

  You can close an editor by clicking the **X** on the tab. When the editor closes, the Editor view no longer displays the tab.

  Note:
  One exception is the Event Type Editor. To close this editor, click the small **x** in the upper-right corner of the Call Flow Editor workspace.
- **Page tabs (or bottom tabs)** - Some editors are multiple page editors. That is, they have more than one workspace page associated with them. In such cases, the Editor view displays a *page tab* for each workspace page available in the active editor. The Editor view displays page tabs at the bottom of the view.

  For example, when the Phrase File Editor is active, the **Phrase** and **Audio** page tabs both become available along the bottom toolbar of the Editor view.

Outline View

Located by default in the lower-left corner of the window, the **Outline** view is a standard Eclipse view. In Dialog Designer, the **Outline** view functions only in the following conditions:

- When the Call Flow Editor is the active editor.
- When a Java (***.java**) file is being edited.

You can select three different views in the Outline View. Following is a description of the three icon buttons in the upper right section of the Eclipse window:

- First icon provides a *Node List view*. It lists the nodes in the call flow in alphabetical order and also lists all symbolic node references.
- Second icon provides the *Thumbnail view*. If the call flow is complicated, it allows you to navigate around easier within the flow. When you click and drag the shaded area in the **Outline** view, the main workspace simultaneously updates to display the full size view of the shaded area.
- Third icon provides the *Bookmark View*. It displays a list of all the bookmarks in a call flow. Use this list to navigate between bookmarks in a call flow, which is useful with large complex call flows.

  To use the **Bookmark** option in the **Outline** view, click the **Bookmark** icon in the **Outline** view toolbar. Dialog Designer displays a list of all the bookmarks in your call flow. Navigate to a particular bookmark by clicking the bookmark in the main workspace. The focus in the main workspace of the Call Flow Editor shifts to display the clicked bookmark.

Avaya Application Simulator View (Tab)

The **Avaya Application Simulator** view offers controls for the Avaya Application Simulator to test applications by simulation.

By default, Dialog Designer displays the Avaya Application Simulator view in a tabbed notebook, on top of the **Problems** view and the **Tasks** view, in the lower-center area of the window.

Avaya Application Simulator View—Buttons/Features

Button/Feature	Description
Available Projects	Select the project to simulate. If multiple projects are available, select only one at a time.
Input Parameters	Used to simulate input expected from another application module. The format of this simulated input must match the expected format.
Run Application	Click this button to start the simulation. This button is active only when a project is selected for simulation. **Note:** If there are any errors in the project to be simulated, this button is inactive.

Avaya Application Simulator View—Buttons/Features (continued)

Button/Feature	Description
End Application	Click this button to end the simulation before it finishes running. This button is active only when a project is in simulation mode. **Note:** This action is different from that of the **Hang Up** simulation button. This button stops the application wherever it is when you click it. The **Hang Up** button on the **Input** tab simulates a caller being disconnected either by hanging up or some other means.
Do Not Run As Module	Lets you run Dialog Designer applications that are modules as standalone applications. Otherwise, it generates a default VXML page to invoke the Dialog Designer application as a subdialog.

Problems View (Tab)

The **Problems** view automatically displays any errors, warnings, or informational messages generated while saving a project or any of its elements. At the same time, Dialog Designer displays a Code Generation error message, unless you click **Do not show me this message in the future.** This view also shows any errors generated while compiling the Java-code.

In most cases, if the error, warning, or informational message entry is clicked in this view, Dialog Designer directs the focus to the exact location where the problem occurs. This feature makes it easier to debug an application and fix the problem.

By default, Dialog Designer displays the **Problems** view in a tabbed notebook, along with the **Avaya Application Simulator** view and the **Tasks** view, in the lower-center area of the window.

Tasks View (Tab)

The **Tasks** view is a standard Eclipse view. It automatically displays tasks related to various types of errors that might occur, such as Java syntax errors. You can also manually add tasks to this list, for things you do not want to forget to take care of.

For more information about the **Tasks** view in Eclipse, see the topic “Tasks view” in the Eclipse *Workbench User Guide* online Help.

By default, Dialog Designer displays the **Tasks** view in a tabbed notebook, along with the **Avaya Application Simulator** view and the **Problems** view, in the lower-center area of the window.

Snippets View (Tab)

The **Snippets View** contains shortcut snippets in JSP or CCXML that can be dragged into your CCXML or JSP page while building call control projects.

Eclipse Properties View

The **Eclipse Properties** view is a modification of the standard Eclipse Properties view. In a layout optimized for Dialog Designer, it displays property names and values for nodes, palette options, or other items. The properties available for editing vary according to the editor, node, or item you are working with. For more information about the properties you can edit for a particular node, option, or other item, see the online Help topic for that node, option, or item.

For more information about the standard Properties view in Eclipse, see the topic “Properties view” in the Eclipse *Workbench User Guide* online Help.

Note:

By default, Dialog Designer displays the **Eclipse Properties** view in a tabbed notebook, along with the **Console** view, in the lower-right area of the window. Dialog Designer brings the **Eclipse Properties** view to the foreground whenever you click the **Eclipse Properties** tab.

Console View

The **Console** view displays information about the Tomcat server status and activity.

- If you run simulations, CCXML, VXML and Connector logs are written to Console view windows.
- If you have the debug output for tracing function turned on, this view also displays the VoiceXML output generated by the application. This information is read only, but it might be helpful in debugging applications, especially if you can read and understand VoiceXML code.

To turn on the debug output for tracing function:

1. In the **Window** menu, click **Preferences**.

   The system displays the Preferences window.

2. In the navigation pane on the left, click **Dialog Designer** > **Avaya Application Simulator**.
3. Among the options on the right side of the **Preferences** window, verify that the check box labeled **Enable Dialog Designer logging of tracing output** is selected.
4. Click **OK**.



Tip:

With this function turned on, Dialog Designer displays the VoiceXML output in the **Console** view and writes the output to a trace log file. This file is located at ***applicationName*/data/log/trace.log-*yyyy-mm-dd*.log**, where *applicationName* represents the top level application directory, and *yyyy-mm-dd* represents "today's" simulation runs generated. To view this log file, locate the file in the **Navigator** pane and double-click the file name.

By default, Dialog Designer displays the **Console** view in a tabbed notebook, along with the **Properties** view, in the lower-right area of the window. The **Console** view is brought to the foreground whenever you start Tomcat or click the **Console** tab.

Dialog Designer Menu and Toolbar Options

There are several main menu and toolbar options that are specific to Dialog Designer. The following table presents a quick reference and summary of these options. This following table presents only the options that are specific to Dialog Designer. It does not include generic Eclipse options.

Dialog Designer Menu and Toolbar Options

Icon	Descriptor	Function/Comments	Where Available
	Speech Project	*Speech Perspective only*. Opens the wizard to create a speech project.	• **File** > **New** menu • Main toolbar • **Navigator** context (right-click) menu
	CCXML File Editor	*Call Control Perspective only*. Opens an editor to edit CCXML files.	• **File** > **New** menu • Main toolbar • **Navigator** context (right-click) menu
	JSP File Editor	*Call Control Perspective only*. Opens an editor to edit JSP files.	• **File** > **New** menu • Main toolbar • **Navigator** context (right-click) menu
	Call Control Project	*Call Control Perspective only*. Opens a wizard to create a call control project.	• **File** > **New** menu • Main toolbar • **Navigator** context (right-click) menu
	Database Operation File	*Call Control or Speech Perspective*. Opens the wizard to create a database operation file (can be used in either a speech application or call control application).	• **File** > **New** menu • Main toolbar • **Navigator** context (right-click) menu
	Grammar File	*Speech Perspective only*. Opens the wizard to create a grammar file.	• **File** > **New** menu • Main toolbar • **Navigator** context (right-click) menu
	Phraseset file	*Speech Perspective only*. Opens the wizard to create a phraseset file.	• **File** > **New** menu • Main toolbar • **Navigator** context (right-click) menu

Dialog Designer Menu and Toolbar Options (continued)

Icon	Descriptor	Function/Comments	Where Available
	Prompt File	*Speech Perspective only*. Opens the wizard to create a prompt file.	• **File** > **New** menu • Main toolbar • **Navigator** context (right-click) menu
	Web Service Operation File	*Call Control or Speech Perspective*. Opens the wizard to create a Axis Web service operation file (can be used in either a speech application or call control application).	• **File** > **New** menu • Main toolbar • **Navigator** context (right-click) menu
	Web Service Operation File (Axis2)	*Call Control or Speech Perspective*. Opens the wizard to create a Axis2 Web service operation file (can be used in either a speech application or call control application).	• **File** > **New** menu • Main toolbar • **Navigator** context (right-click) menu
	Start Tomcat	*Call Control or Speech Perspective*. Starts the Tomcat servlet engine, which is required to simulate applications in Dialog Designer.	• **Tomcat** menu • Main toolbar
	Stop Tomcat	*Call Control or Speech Perspective*. Stops the Tomcat servlet engine, which is required to simulate applications in Dialog Designer.	• **Tomcat** menu • Main toolbar
	Restart Tomcat	*Call Control or Speech Perspective*. Restarts the Tomcat servlet engine, which is required to simulate applications in Dialog Designer.	• **Tomcat** menu • Main toolbar
No icon	**Update Context** option	*Call Control or Speech Perspective*. Updates the Tomcat server with the current application information, known as the context definition. This action is sometimes required when you update the application but changes do not get communicated to the Tomcat server. One indication that this might be required is if you get a “General Error 404" message.	• Right-click **Project** in Navigator, and select **Dialog Designer > Update Context**.

Dialog Designer Menu and Toolbar Options (continued)

Icon	Descriptor	Function/Comments	Where Available
No icon	**Generate** option	*Call Control or Speech Perspective*. Generates the project code.	• Right-click **Project** in Navigator, and select **Dialog Designer > Generate**.
No icon	**Validate** option	*Call Control or Speech Perspective*. Validates the Call Flow.	• Right-click **Project** in Navigator, and select **Dialog Designer > Generate**. • Expand project in Navigator • Right-click **flow/ main.flow** file, and select **Dialog Designer > Validate**.
	Event Type Editor	Opens the Event Type Editor.	• Main toolbar, Call Flow Editor icon • **project.events** file under the flow folder in the Speech Navigator.
	Add row after	Adds a row to a grammar table, inserting the new row *after* the selected row.	Main toolbar, Grammar File Editor only
	Add row before	Adds a row to a grammar table, inserting the new row *before* the selected row.	Main toolbar, Grammar File Editor only
	Add column after	Adds a column to a grammar table, inserting the new column *after* the selected column.	Main toolbar, Grammar File Editor only
	Add column before	Adds a column to a grammar table, inserting the new column *before* the selected column.	Main toolbar, Grammar File Editor only
	Delete row	Deletes the selected row from a grammar table.	Main toolbar, Grammar File Editor only
	Delete column	Deletes the selected column from a grammar table.	Main toolbar, Grammar File Editor only

Glossary

AAS	Avaya Application Simulator.
ADR	*See* application detail record (ADR).
ANI	*See* automatic number identification (ANI).
API	*See* application program interface (API).
application detail record (ADR)	Data records which contain historical information about an application used as part of a session. These records include information such as the session ID number, a timestamp, and a “friendly name” string determined by the developer who created the application.
application program interface (API)	A set of routines, protocols, and tools for building software applications. A good API makes it easier to develop a program by providing all the building blocks.
application server	A computer on which the Avaya Dialog Designer speech application resides and runs. This computer is also where the Dialog Designer run-time libraries are installed, thus making it possible to run Dialog Designer applications on that server. The IVR system must be configured to start the speech application from this location.
ASR	*See* automated speech recognition (ASR).
automatic number identification (ANI)	A service that provides the originating telephone number of a call coming in to the system.
automated speech recognition (ASR)	Technology that employs a computer to recognize spoken words and respond appropriately.
call flow	As implemented in speech applications, the call flow determines how a call is handled when it enters an interactive voice response system, based on options offered to callers and their responses to those options.
CCXML	Call Control eXtensible Markup Language. An emerging XML specification, being developed to work in conjunction with VoiceXML and which addresses some of the technical limitations of VoiceXML. It enables the processing of asynchronous events, filtering and routing of incoming calls, and placement of outbound calls. Note that it is not intended to replace VoiceXML but rather to supplement it. See Ian Moraes’s excellent article, “VoiceXML, CCXML, SALT: Architectural Tools for Enabling Speech Applications,” on the Internet.
Computer Telephony Integration (CTI)	Software technology that integrates the use of telephones and computers without the need for special telephones, connectors, computer circuit packs, or other specialized hardware.
CTI	*See* Computer Telephony Integration (CTI).

dialed number identification service (DNIS)	A service that identifies for the receiving system what telephone number was dialed by the caller. In the Voice Portal system this is often used to direct the call to a particular speech application, which is identified with that dialed number.
DNIS	*See* dialed number identification service (DNIS).
DTMF	See dual tone multi-frequency (DTMF).
dual tone multi-frequency (DTMF)	The system used by touchtone telephones, DTMF assigns a specific frequency (consisting of two separate tones) to each telephone key on the keypad, so that it can easily be identified by a microprocessor.
Eclipse	A Java-based open-source extensible IDE (integrated development environment) that provides application developers a feature-rich interface to develop their applications. Avaya Dialog Designer is designed as a set of Eclipse plug-in modules that make it possible for application developers to design and build speech applications without having to write the code manually.
gateway	A network point that acts as an entry point to another network. In the context of Avaya Dialog Designer and VoIP applications, a gateway is the entry point, often associated with one or more switches, to the interactive voice response (IVR) system application environment.
grammar	In the context of Dialog Designer, a grammar is are speech elements used in conjunction with automated speech recognition (ASR) technology. Grammars are lists of possible responses that callers might make when they respond to prompts using spoken replies. Grammars define which words or phrases the ASR engine can recognize and respond to.
H.323	A hierarchical, IP-based telephony standard for connecting IP telephones and speech applications to switches.
IC	*See* Interaction Center (IC).
IDE	*See* integrated development environment (IDE).
integrated development environment (IDE)	A software application that usually provides a GUI environment, a text and/or code editor, a compiler and/or interpreter, and a debugger. This environment means that application or web developers can develop, test, and build their applications or Web sites within a single integrated space.
Interaction Center (IC)	A multichannel contact management platform that enables businesses to align real-time contact center operations with business objectives.
interactive voice response (IVR) system	A system, such as Avaya Voice Portal or Avaya IR, in which callers interact with a self-service application to get information, conduct transactions, or help with problems.
IVR system	*See* interactive voice response (IVR) system.
JDBC	An application program interface (API) specification in which programs written in Java connect with and access data contained in database programs using Structured Query Language (SQL).

localization	The process of modifying an application to operate and be understood in a different language, or locale. This usually involves modifying any phrases, prompts, and grammars associated with an application.
notebook	(Also known as a tabbed or stacked notebook) In the Eclipse context, a notebook is a set of views “stacked” on top of one another as a space saving measure. The views in the notebook are accessible by clicking tabs arranged along the top of the notebook. See the Eclipse documentation.
Open Speech Dialog Module (OSDM)	Speech application modules produced by Nuance software products, similar to application modules created with Dialog Designer. OSDMs can be used in Dialog Designer applications. (Dialog Designer supports the following OSDM versions: Address OSDM 2.0.3, Core OSDM 2.0.4, and Name OSDM 2.0.1.)
OSDM	*See* Open Speech Dialog Module (OSDM).
palette	In the Avaya Dialog Designer Editor views, this is the pane to the left of the view, in which editor options are displayed and selected.
Real-time Transfer Protocol (RTP)	A protocol for transmitting “real-time” data, such as audio or video data, across the Internet. This protocol does not guarantee “real-time” delivery of such data, but it does provide mechanisms to support data “streaming.”
RTP	*See* Real-time Transfer Protocol (RTP).
SCE	*See* service creation environment (SCE).
service creation environment (SCE)	A set of software tools used to develop, test, and debug speech applications. Avaya Dialog Designer is an SCE.
servlet	A small program that runs on a server, often Java-based.
servlet engine	A program that coordinates the overall operation and integration of a number of servlets. In the context of Avaya Dialog Designer, the supported servlet engines are Apache Jakarta Tomcat and IBM WebSphere/WebSphere Express.
Session Initiation Protocol (SIP)	A signaling protocol for the Internet that makes it possible to set up conferencing, telephony, events notification, and instant messaging. Within a VoIP framework, it initiates call setup, routing, authentication, to endpoints within an IP domain.
SIP	*See* Session Initiation Protocol (SIP).
speech user interface (SUI)	Any software interface in which the user interacts with the system using speech commands and audio prompts.
speech recognition	*See* automated speech recognition (ASR).
speech synthesis	*See* text-to-speech (TTS).
SQL	*See* Structured Query Language (SQL).
SSL	Secure Sockets Layer. A protocol for transmitting private data securely over the Internet. By convention, URLs that use SSL require a connection using the HTTPS protocol, rather than just HTTP.

SSML	Speech Synthesis Markup Language. A W3C standard designed to provide an XML-based markup language for assisting with the generation of synthetic speech in Web and other applications. The essential role of the markup language is to provide authors of synthesizable content a standard way to control aspects of speech such as pronunciation, volume, pitch, rate, and so forth, across different synthesis-capable platforms.
stacked notebook	*See* notebook.
Structured Query Language (SQL)	A standard interactive and programming language for getting data to and from a database.
SUI	*See* speech user interface (SUI).
tabbed notebook	*See* notebook.
TDD	*See* Telecommunications Display Device (TDD).
Telecommunications Display Device (TDD)	Sometimes designated as a teletypewriter (TTY) device, a telephone equipped with a keyboard and display, used by hearing- or speech-impaired callers to send and receive typed messages.
telephone user interface (TUI)	Any software interface in which the user interacts with the system using a telephone or similar device.
teletypewriter (TTY) device	*See* Telecommunications Display Device (TDD).
text-to-speech (TTS)	Technology by which information in text format is rendered as audio output using a speech synthesis engine to simulate human speech.
TTS	*See* text-to-speech (TTS).
TTY	*See* Telecommunications Display Device (TDD).
TUI	*See* telephone user interface (TUI).
VoiceXML	(Sometimes presented as VXML) Voice eXtensible Markup Language. A specification which provides for a user to interact with Internet-based resources using voice recognition technology. Instead of a typical Web browser that requires a combination of HTML, keyboard, and mouse device, VoiceXML relies on an Internet voice browser and/or telephone. Using VoiceXML, the user interacts with the Web “page” by listening to audio outputs (either pre-recorded or using a technology such as TTS) and by submitting input in the form of the user’s natural speaking voice and/or manual responses, such as telephone key presses.
Web service	A standardized way of offering Web-based applications or services. Since they are Web- and standards-based applications, delivered over the Internet, Web services make it possible for organizations to communicate and share data that use different file formats and programming languages.

workspace	In Avaya Dialog Designer, the area within the Editor view used to build the functionality for the selected editor. For example, in the Call Flow Editor, this is the space to the right of the palette, in which you place the nodes that represent application functions.
WSDL	Web Services Description Language. An XML-formatted language used to describe a Web service's capabilities.
XML	eXtensible Markup Language. A specification for the presentation of Internet documents, one which expands on the capabilities of HTML. A pared down version of SGML (Standard Generalized Markup Language), XML makes it possible for designers to create their own customized tags, which in turn makes it possible to do things over the Internet that cannot be done using simple HTML.