

## Avaya Dialog Designer

### Overview

Avaya Dialog Designer is an open standards based Integrated Development Environment (IDE) for Avaya Voice Portal and Avaya Interactive Response. Dialog Designer accelerates time to market for businesses seeking higher automation and closure rates, and delivers superior customer satisfaction at a lower investment level. Based on the widely accepted Eclipse.org development framework, Dialog Designer offers web application developers a reusable drag-and-drop environment for development and maintenance of speech and video self service applications.

### Highlights

For enterprises and integration partners seeking rapid and easy speech and interactive video self service creation, Avaya Dialog Designer is a complete Integrated Development Environment offering support for both design and management of voice and speech self service applications. Dialog Designer was designed to conform to common IT application development practices by integrating into customer's existing Java, Web Services, and Eclipse-based development systems and allowing them to more easily leverage their investment in Avaya Self Service solutions.

Dialog Designer simplifies lifecycle activities associated with development of VoiceXML and ccXML applications including design, simulation, and integration. VoiceXML applications are designed using a graphical "drag and drop" metaphor allowing for rapid application development. Dialog Designer includes several design wizards for recording phrases, building prompts, defining grammars, and synthesizing speech. In addition, the

database wizard provides a simple interface to local or remote SQL databases via the Java Database Connector (JDBC) architecture. For faster integration of web services assets, DD also supports Web Services integrations with the simple to use Web Services interface through the Web Services Description Language (WSDL) wizard supporting SOAP/XML remote procedure calls.

Through the advanced call control XML (CCXML) capabilities, first party call control applications can be built that allow direct integration with Web Services, databases, and business logic for applications such as "find-me, follow-me". By combining the ccXML and VoiceXML capabilities, Voice Dialogs can perform tasks that simple VoiceXML only applications can't perform.

Dialog Designer provides pre-built and validated integration points for Computer Telephony Integration (CTI) through support the JTAPI interface within Avaya Application Enablement Services as well as the VOX interface within Avaya Interaction Center (IC). This approach simplifies integration by exposing CTI and IC

functions and variables within the call flow, making it easier for developers to deploy more personalized and seamless handoffs between self and assisted service.

The latest release of Dialog Designer takes development options a step further by providing a complete authoring, simulation, and deployment support for interactive voice and video kiosk or 3G mobile device applications. Video support is provided through Synchronized Multimedia Integration Language (SMIL) which enables authoring of audiovisual presentations and integration of streaming audio and video with images, text of any other media type.

An embedded VoiceXML and ccXML browser allows fast simulation and debug of speech or voice enabled applications. By leveraging your existing Web Server environments for deployment, Dialog Designer facilitates reuse of Web-based integrations, Web Server assets and skills, Web-based application development and consistent supply chains, all driving faster time to market and reduced cost of ownership.

Dialog Designer is an included and integral component provided with both Avaya Voice Portal and Interactive Response.

Dialog Designer, Voice Portal, and Interactive Response all share the same common VoiceXML browser to ensure consistent and reliable deployment of voice enabled services and applications. DD includes pre-built Java classes for dynamic generation of VoiceXML and Speech and Touch-tone grammars that are validated with Avaya Self Service platforms. It also supports simple integration with existing Java Servlet classes for simple data integration and reuse of business logic already developed for Web Applications. It features a multi-lingual application model and simple pre-built templates for common IVR interfaces that integrate with Voice Portal and Interactive Response through the common VoiceXML 2.1 certified browser.

## SYSTEMS SUPPORTED

Dialog Designer Development Environment Requirements - Customer provided Windows developer workstation (laptop or desktop) with the following minimum requirements

- Windows XP or Windows 2003 Professional or Windows Vista (requires Eclipse 3.4) operating system
- Minimum 1 GHZ CPU
- Minimum 512K RAM (1 GB recommended)
- Minimum 40 GB Disk Space
- Connectivity to Application Web Server for Deployment (LAN connectivity)

Dialog Designer Deployment Environment Requirements - Customer provided Web Server Platform with the following minimum requirements

- Operating Systems: Windows 2003, XP, Vista, Solaris 10, Red Hat Linux ES 4.0/5.0
- Web Server Software: Apache Tomcat 5.5, 6.0, IBM WebSphere Express 6.1, IBM WebSphere Application Server 6.1, BEA Weblogic 9.2, 10
- High Performance Web Server Architecture
  - Recommended minimum 2 GHZ CPU
  - Recommended minimum 2 GB RAM
  - Recommended minimum 40 GB Disk Space

Dialog Designer supports the open source Eclipse.org application development tool framework. Eclipse is an open framework for tools vendors to develop and certify their tools to work together. Originally developed and contributed by IBM, Eclipse supports over 900 different tools for performing application design, development, testing and deployment functions from a wide range of vendors. The Eclipse framework offers significant advantages for editing and building of Java code.

The open source community provides tools for source code control or file browsing, allowing vendors like Avaya to provide tools for building call flows, editing grammars, simulating and debugging Voice self service applications. These tools can communicate through this framework and the customer can realize best in breed solutions through combining these assets.

## Key Benefits

- **Design wizards for integrating web services, recording phrases, building prompts, defining grammars, and synthesizing speech** reduce the time and cost of application prototyping and design.
- **Familiar developer work environment and extension points** reduce learning curve.
- **Create powerful user experiences integrating visuals and video** with ease of speech recognition.
- **Shares same VoiceXML browser with Voice Portal and Interactive Response** to ensure consistent and reliable deployment of voice enabled services and applications.
- **Maximizes applications interoperability and lower ownership costs** through support of open standards integration with 3rd party Eclipse-based tooling
- **CCXML integration** with JSPs, Web Services, and databases for advanced call control applications without the overhead of CTI.
- **Supports simple to install lightweight and standard deployment scenarios (Web Application Servers)** without specialized or proprietary containers
- **Support for multiple speech vendors**

## Components

Avaya Dialog Designer includes three primary components:

- Development Environment
- Application Execution Environment
- Communications Applications Integration

### Development Environment

Dialog Designer greatly simplifies and speeds services creation through features such as the Web Services Wizard that allow developers to quickly integrate public or enterprise web services elements within dialog call flows. The Eclipse-based graphical drag-and-drop environment allows development of applications, simulation using the included VoiceXML browser, and deployment on to customer provided Web Server environments. Developers select, configure, and link application templates, and build reusable components to design new automated voice services and call flows. Support for Web Services (SOAP/XML/WSDL), Databases (JDBC), CTI, and Java (Servlet, EJB, JMS, etc.) and legacy integrations (3270/5250/MQ) are all facilitated within the Dialog Designer environment.

### Application Runtime Environment

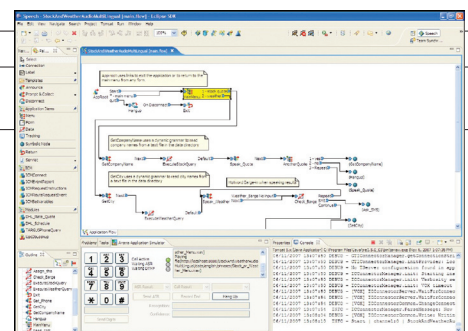
Dialog Designer creates simple Java Servlet applications that generate industry standard VoiceXML 2.1 markup that is processed via Interactive Response and Voice Portal, while supporting integrations of multiple data sources and applications. Dialog Designer creates an application runtime environment which is then deployed on customers IBM Websphere, BEA Weblogic, or Apache Tomcat based Java Servlet environments.

### Communications Applications Integration

Dialog Designer supports advanced integration with Avaya Application Enablement Services and Avaya Interaction Center. Through the AES JTAPI interface, developers can design sophisticated communications applications that leverage AES Computer Telephony Integration (CTI) from a simple Dialog Designer Environment for advanced call control and data integration. Within the contact center, Dialog Designer simplifies services creation and integration with Avaya Interaction Center for Agent Desktop Integration and Workflow integration.

Feature	Benefits
<b>Java-based, Open Standards Architecture for Application Hosting and Integration</b>	<p>Java Servlet framework architecture simplifies development, integration, and reusability of video, speech, and touch-tone applications.</p> <p>Reduces learning curve and increases component reusability, helping ensure best practices are used across all self service web and voice applications.</p>
<b>Complete Open Standards-based Speech and Touch-Tone Self Service Creation. CCXML support for call control applications and events.</b>	<p>Open Eclipse based framework supports integrated tools for call-flow design, phrase recording, prompt and grammar development.</p> <p>Application developers, system testers, and business managers can work more closely to rapidly prototype, develop and verify applications with minimal hardware footprint.</p> <p>Consistent VoiceXML browser across Dialog Designer, Voice Portal and Interactive Response results in a transparent user experience between simulation and deployment.</p> <p>ccXML browser supports design of coordinated advanced call control and event-based applications with Voice Dialogs or even stand-alone call control applications</p>
<b>Market Leading Speech Technologies</b>	<p>Leverage best of breed speech self service solutions from market leaders while maximizing applications reusability and reducing risk.</p> <p>Supports market leading speech platforms, speech recognition engines, and text to speech engines from IBM and Nuance.</p> <p>Supports 3rd party application development components such as Nuance OpenSpeech Dialog Modules grammars and applications</p>

Features	Platforms, Protocols, Interfaces
<b>Application Development Environment</b>	<b>Data integration support (built in)</b>
Eclipse 3.4: Eclipse.org based Integrated Development Environment	JDBC database support for customer supplied databases/ drivers (Oracle, MS SQL, etc)
Embedded VoiceXML 2.1 Certified Browser	SOAP/XML/WSDL for Web Services integration
Embedded CCXML 1.0 browser	Pluggable Data Connector for integrators to provide back-end integration point e.g. for packaging of complex Web Services or integration to virtually any 3rd party application
Advanced CCXML functionality like 3-way conferencing included for design, simulation and deployment	Interactive voice and video authoring based on Synchronized Multimedia Integration Language (SMIL)
Telephony Simulation Environment	Java Servlet Integration
Support for integrated SAPI ASR/TTS resources and Video Simulation Environment	3270/5250 through Partner
Drag-and-drop environment for call flow design	<b>Data integration support (through Java integration in Application Servers)</b> (requires Application Server Components)
Integrated Call Flow Builder (Enhanced)	JMS (MQ Series)
Integrated Grammar Editor	EJB (transactional support through supported Application Servers)
Integrated Prompt and Phrase Editor (Enhanced)	Enterprise Applications (Siebel, SAP, etc) through Web Services and Java Integration
Common Speech and IVR Templates	Java Native Interface (JNI) for legacy support
Live Application Highlighting	
Multiple Call Flow support	
Enhanced Call Classification through programmability support for answering machine/ human detection and fax tone detection (CCXML and VXML)	



Dialog Designer allows developers to have access to dialog component libraries, design wizards, workflows, and component properties all from one interface.

Features	Platforms, Protocols, Interfaces
<b>Advanced Capabilities</b>	<b>CTI and Platform Support</b>
Pre-built Computer Telephony Integration support	Avaya CT with JTAPI 3.1
Pre-built Contact Center (Interaction Center) support	Avaya Interaction Center (IC) 6.1 or later with Vox Interface
Support traditional call center integration with Universal Call ID (UCID) and User to User information (UUI)	
Multi-lingual call flow support with dynamic language binding	Application Enablement Services 3.1 (AES) with JTAPI
AudioVariable dynamic prompts available in 20+ languages (embedded dynamic prompts)	Application Enablement Services 3.1 (AES) with XCSTA through Web Services Integration
Localization Bundles support for Optional Packages	
Application and Integration Simulation Scripting	Third party CTI Available through Web Services Integration
Supports Voice Portal Privacy Feature	
Modules	
Support for VoiceXML Object Tag and Sub-dialog (OSDM support)	
Easier integration of 3rd party subdialogs	
<b>Management, Reporting Support</b>	<b>Application Programmer Interfaces</b>
Application Logging Tag with Arbitrary Data Support; Automated "breadcrumb" reports for mining of business intelligence	Java API
Integration with Web Deployment Environments through Eclipse Plug-ins (Tomcat and WebSphere Managers)	VoiceXML
Retargeted platform and grammar support	Dynamic Grammar API
<b>Speech Capabilities</b>	<b>Speech Engine and Grammar Specification Support</b>
Static and Dynamic Grammar Editors	Nuance 9; Nuance OSR 3.0.6
ASR Simulation (through SAPI resources)	Nuance 8.5
Grammar Simulation (through GUI)	IBM WVS 5.1.3
Grammar Simulation (through scripting)	SRGS
OSDM core 2.0.02, address 2.0.2, name 2.0.0	
Capture Expression supports Complex Variables	
<b>Text-to-Speech Capabilities</b>	<b>Text-to-Speech Engine and Specification Support</b>
Prompt Support for TTS	Nuance RealSpeak 3.5/4.0
SSML Editor for TTS	Vocalizer 3.0/4.0
TTS Simulation (through SAPI resources)	IBM WVS 5.1.3
TTS Simulation (through GUI)	
TTS Simulation (through scripting)	

## About Avaya

Avaya is a global leader in enterprise communications systems. The company provides unified communications, contact centers, and related services directly and through its channel partners to leading businesses and organizations around the world. Enterprises of all sizes depend on Avaya for state-of-the-art communications that improve efficiency, collaboration, customer service and competitiveness. For more information please visit [www.avaya.com](http://www.avaya.com).



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