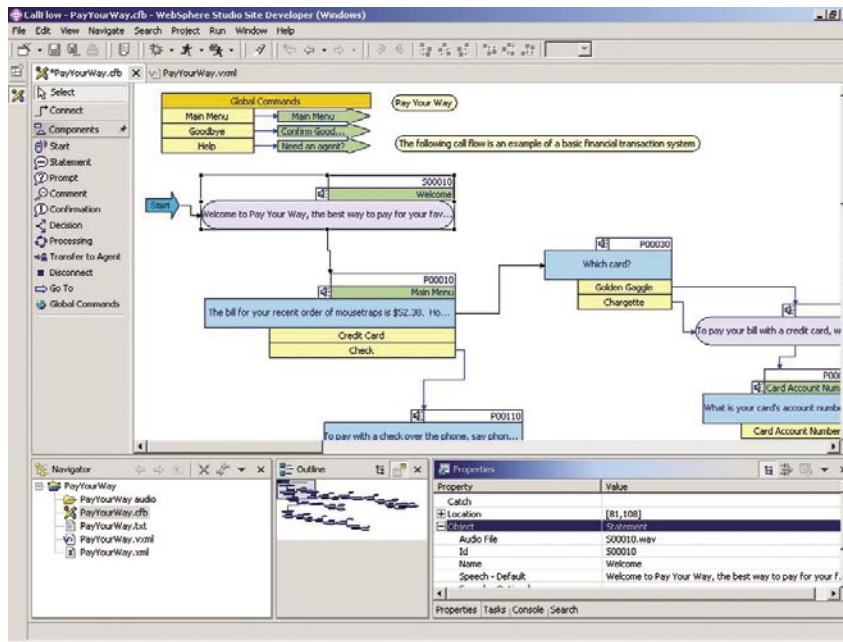


WebSphere® software

Voice Toolkit for WebSphere Studio



Voice Toolkit for WebSphere® Studio: A fast way to deliver voice applications

As part of the IBM WebSphere Voice family of products, Voice Toolkit for WebSphere Studio software provides the necessary components to get a voice application written and up and running, quickly and easily. It is available for free download to expedite the development process. You can download the toolkit by going to ibm.com/software/pervasive/products/voice/voicetoolkit.shtml

The Voice Toolkit for WebSphere Studio provides several key components:

- *VoiceXML application development environment*
- *Graphical call flow generation*
- *Reusable Dialog Components (RDCs) — working code that can be copied and reused throughout a voice application*
- *Wizard to help the user in selecting and customizing RDCs*
- *Grammar builder for VoiceXML 2.0 Speech Recognition Grammar Specification (SRGS) XML and Augmented Backus-Naur Form (ABNF) formats*
- *Pronunciation builder (using keyboard, microphone or audio files) to create and enhance how a word will be recognized by the application or heard through the text-to-speech (TTS) engine*

Highlights

- **Expedites the development of voice applications including graphical call flow building**
- **Provides pre-written, reusable code that can shorten the learning process and reduce development time**
- **Based on the VoiceXML industry standard**
- **Aids with overall voice application development, including VoiceXML and CCXML (Call Control XML) coding, grammar and pronunciation creation, debugging and call analysis**

Building business on a solid foundation

A leading provider of voice enabling e-business solutions, IBM delivers Web, middleware and telephony solutions that can help businesses quickly deliver information to their customers. As your single point of contact, IBM can help you extend your e-business reach by offering integrated hardware, software and services that support the convergence of voice and data by using open standards-based VoiceXML technology that is scalable and highly compatible. With IBM, you can bring your business to the next level, laying a solid foundation on which to build integrated, innovative voice solutions.

- *Support for building, deploying and debugging voice portlets*
 - *Call control support using CCXML*
 - *Support for application development in native languages*
 - *Integrated simulator for application testing and debugging to pinpoint problems in the VoiceXML code and speed application completion*
 - *Tools to analyze call logs and audio quality*

Benefits for the developer of voice applications

Voice Toolkit for WebSphere Studio can simplify the voice application development process. RDCs provide ready-to-use VoiceXML code for common functions. In addition, Voice Toolkit for WebSphere Studio includes a VoiceXML editor, a grammar editor to create and edit grammars, a pronunciation builder with pop-up composer, and other components that speed the creation of a customized voice application.

Voice Toolkit for WebSphere Studio can be used by anyone with VoiceXML, XML, HTML, Java™ or general information technology (IT) programming experience. By providing a productive environment for developing voice applications, the development experience is jump-started and the overall project duration is shortened. In fact, by using the Voice Toolkit for WebSphere Studio, voice applications can be created before IBM WebSphere Voice Application Access, IBM WebSphere Voice Response or IBM WebSphere Voice Server are even installed. This means that critical voice applications can be online sooner, serving your customers and saving you money.

Benefits for those with minimal voice experience

The graphical call flow generation support brings the ability to design and prototype VoiceXML applications to a higher level, giving those who understand voice applications but not code creation, the ability to build new applications. They can construct the entire application visually, by simply using 'drag and drop' of the desired actions on to the palette. And the tools allow for testing of the flow, for creation of grammars and prompts, and for producing reports and metrics based on an analysis of the call flow.

Benefits for enhancing NLU applications

The Natural Language Understanding (NLU) tools help the developer to create, maintain and test statistical models for use in a NLU application. The NLU tools are database-driven and can automatically make decisions on new/modified data to dramatically decrease the time it takes to build an application.

A standards-based environment

Voice Toolkit for WebSphere Studio is based on the VoiceXML industry standard for call flow generation and voice application development. The RDCs consist of tested building blocks of code based on this standard, serving as dialogs and sub-dialogs that can be grouped together to provide a desired function. RDCs act as a learning tool, as well as a quick way to get started, based on a common architecture instead of a proprietary model.

Developers with a wide range of programming skills and experience will appreciate the Voice Toolkit for WebSphere Studio's integrated development environment. Based on the WebSphere Studio Workbench development environment, WebSphere Voice Toolkit is compatible with other IBM application development tools and editors. Since the toolkit already conforms to the IBM strategic tools development framework, developers will have a common look and feel across IBM tools, whether for voice, Web or enterprise solutions, without having to figure out how to make all the tools interoperate.

Everything works together

Because Voice Toolkit for WebSphere Studio was architected with the complete development experience in mind, the various components complement each other extremely well. For example, the VoiceXML Editor can invoke the grammar editor, and both the VoiceXML and grammar editors can invoke the pronunciation builder. And since the Voice Toolkit is an extension to WebSphere Studio, simulation and debugging of voice applications are done within the development workbench.

A breeze to use

Voice Toolkit for WebSphere Studio can make it easy to build voice applications. The editors check both syntax and content. Pronunciations can be generated from typed text or microphone input and previewed to hear whether adjustments are needed. The integrated VoiceXML simulator can simplify testing and debugging. The debugger helps to find code problems so they can be fixed and the application quickly completed.

Voice Toolkit for WebSphere Studio:

| | |
|--------------------------------------|---|
| Call Flow Builder | <ul style="list-style-type: none">• Graphical tool for visual composition of a VoiceXML application• Provides a 'drag and drop' means of building the application from a palette of common VoiceXML elements• Includes call flow simulation to test the call design and anticipated dialogs• Generates a visual of the application as well as the associated scripts for dialog, prompts and audio files• Generates the standard-based VoiceXML code for deployment• Allows for text or recording as input to prompts |
| VoiceXML Editor | <ul style="list-style-type: none">• Text editor provides syntax checking based on VoiceXML 2.0 standards• Content assist through pop-up with valid VoiceXML elements and attributes• Provides conversion capability from VoiceXML 1.0 to 2.0• Source code formatting with color coding of VoiceXML elements• Provides ability to specify a user-provided Document Type Definition (DTD) for use in content assist and validation• Integrated VoiceXML simulator to test and debug your code• Verifies pronunciations for unknown words and creates custom pronunciations• Launches the grammar editor to define application grammars• Launches the RDC Wizard to import reusable code• Launches the audio recorder to record and play audio files |
| CCXML Editor | <ul style="list-style-type: none">• Text editor provides syntax checking of call control• Content assist through pop-up with valid CCXML elements and attributes• Assists with code development through color coding of CCXML elements• Source code formatting• Provides ability to specify a user-provided DTD for use in content assist and validation |
| Grammar Editor | <ul style="list-style-type: none">• Text editor provides syntax checking based on SRGS standards• Provides ability to specify a user provided DTD for use in content assist and validation• Provides an 'Unknown Pronunciation' view to show those words that are not recognized with the grammar• Ability to generate SRGS grammars for VoiceXML applications• Provides conversion capability from either SRCL/BNF and JSGF to SRGS grammars• Customizes grammar compilation options• Graphical grammar test tool that works with compiled grammar to provide debug assistance |
| Pronunciation | <ul style="list-style-type: none">• Generator to create pronunciations from keyboard input, microphone input or audio files builder• Includes a pop-up screen to assist in generating pronunciations based on phonemes defined by the International Phonetic Association• Offers multiple choices for default pronunciation generation using the recognition and TTS engines• Generates pronunciation files for recognition and TTS engine (exception dictionaries)• Audio assistance to hear the generated pronunciation and tune prior to application testing |
| Audio Recorder | <ul style="list-style-type: none">• Allows for the creation of audio files from microphone input• Provides a means to play a previously recorded audio file |
| RDC Wizard | <ul style="list-style-type: none">• Wizard that will allow the user to select and customize Reusable Dialog Components• Fully integrated into the VoiceXML Editor |
| Reusable Dialog Components | <ul style="list-style-type: none">• RDCs are pre-written VoiceXML building blocks of code that provide common functions for use in application development. Components include:<ul style="list-style-type: none">– Sub-dialogs include: Alpha (spelling), Alpha Numeric, Browsable selection list, Confirmation (active and silent and translated into UK English, French, German, Italian, Spanish, Simplified Chinese, Japanese), Credit Card type, Currency, Date Info (fully specified and partial), Digit, Direction, Duration (seconds, minutes), e-mail address, Expiration Date, Number, Postal code (5 or 9), Social Security Number, Telephone Number, Time Info (fully specified and partial), URL, Multiple Selection List, Stocks, Airports, U.S. Cities– Templates include: Name, Address, Credit Card info (type, number, expiration), Date Range, Time Range– Samples include: Utility Billing Application, Shopping Cart Shipping Information– SRGS grammars include: Credit Card names, Directions, e-mail, Street Type, U.S. Major Cities, U.S. States, URL, Countries, Airport Codes |
| Application Debugger | <ul style="list-style-type: none">• Makes it easy to watch the behavior and state of VoiceXML applications Debugger Allows for 'step through' of the VoiceXML applications and pinpoints the exact line of a problem• Examines all the variables in the application and modifies them on the fly as the program executes• Uses conditional breakpoints to suspend the application when a certain expression or variable action occurs• Provides simulation of browser functions |
| Voice Portlet Tools | <ul style="list-style-type: none">• Voice portlet perspective that brings the portlet and voice application creation together• Creation and validation of fragment VoiceXML portlet content• Log viewer shows what occurs when the voice portlet runs, to aid in problem determination• Portlet wizard creates the framework for a voice portlet• Local test and debug support that mirrors the WebSphere Voice Application Access environment |
| Integrated Development Environment | <ul style="list-style-type: none">• Multiple ways to view your projects, active work sessions, and all the elements needed to create a development voice application environment• One-button navigation between perspectives• Ability to access Online Help from within the development environment• Plug-in to WebSphere Studio |
| Analysis Tools | <ul style="list-style-type: none">• Ability to examine recognition log files for call analysis• Ability to verify audio quality of audio files |
| Natural Language Understanding Tools | <ul style="list-style-type: none">• Ability to train an NLU application to understand free-form user interactions, using an integrated, database-driven environment• Testing environment for trying out NLU statistical models using a keyboard or a microphone |

Hardware and Software Requirements

Hardware

- 500 MHz Intel® Pentium® processor with 768 MB of RAM requirements
- Hard disk: 150 MB of available disk space for minimum configuration
- Sound card and quality microphone recommended to test applications

Software

- Microsoft® Windows® 2000 SP4 (or higher) or Microsoft Windows XP SP1 (or higher)
- IBM WebSphere Studio Site Developer 5.1 or WebSphere Studio Application Developer 5.1

Reusable Dialog Components

The IBM RDCs are the building blocks for developing new VoiceXML applications. They allow developers with little VoiceXML experience to speed application development and write basic functions. These RDCs work with the WebSphere voice family of products. The package also provides developers with an architecture that promotes open standards when creating their own reusable dialogs. Examples of the RDCs delivered by IBM are: e-mail address, currency, telephone number and more.

WebSphere Software Platform

Voice Toolkit for WebSphere Studio is part of the IBM WebSphere software platform a comprehensive set of integrated, award-winning e-business solutions. No matter where you are in the e-business cycle, the WebSphere software platform delivers the flexibility you need to grow at the speed the market demands. Building on this robust platform, you can connect diverse IT environments to maximize your current investments and leverage existing skills. You

can deliver your core business applications to the Web using industry standards like Java technology and XML and create next-generation applications that differentiate you from the competition. And you can advance to a powerful platform for integrated e-business—the WebSphere software platform.

For more information

For more information about how IBM can help your business take advantage of conversational e-business, call your local IBM sales representative, or visit:

ibm.com/pervasive



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