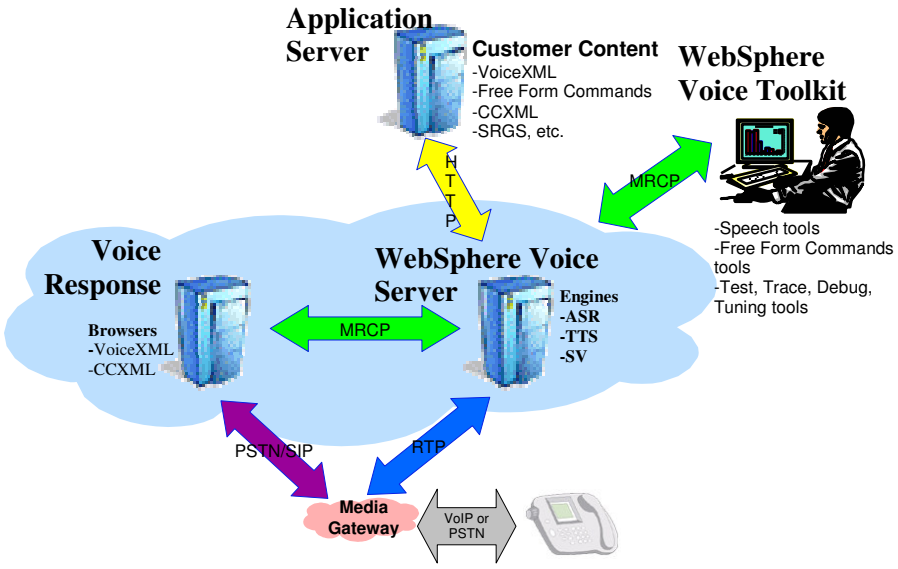
Improving Customer Self Service with Advanced Speech Solutions

WebSphere. software

IBM WebSphere Voice Server for Multiplatforms, Version 6.1.1

Highlights

- **Improve access to applications using natural speech input and output**
- **Supports industry programming standards such as VoiceXML and J2EE, simplifying creation of new speech-enabled applications or adding voice interfaces to existing applications**
- **Improved scalability, availability, reliability, systems management, and integration capabilities through integration with WebSphere Application Server**
- **Supports MRCP, Version 1, an industry-standard speech interface, giving you more flexibility in your choice of IVR and gateway vendors**
- **Improved user interaction through support of multiple types of barge-in capabilities**
- **Extends Web information to anyone with a telephone by enabling speech access, via IBM Automated Speech Recognition and Text To Speech features, to enterprise and Web applications**
- **New features in Version 6.1.1 include: improved recognition accuracy, improved noise adaptation, performance improvements, support for application controlled speech parameters, support for $Garbage, new text to speech voices, and additional speech tools to aid in tuning and testing.**



Middleware for On Demand Business
IBM is a leading provider of voice-enabling solutions, providing speech middleware, tools, development and consulting services that can help your business deliver information to your customers quickly and easily. IBM WebSphere® Voice Server software helps you connect with your customers by providing robust self-service solutions that help increase customer service, cut costs, optimize your contact center and differentiate your organization from your competition.

Add speech-enabling capabilities to your enterprise applications
Based on open standards, WebSphere Voice Server software provides:

• Speech middleware with broad integration points—based on open standards such as Java™ 2 Platform, Enterprise Edition (J2EE) and Eclipse technology —to use the existing skills and code assets of enterprise developers

• The ability to reuse and more easily deploy assets through a service oriented architecture (SOA) to respond quickly to market changes

• The benefits of critical reliability, scalability and systems management that enterprise IT has enjoyed for years. Speech-enabled applications give your customers, employees and suppliers greater access to information and services. WebSphere Voice Server supports industry standards such as VoiceXML, Media Resource Control Protocol (MRCP), Speech Recognition Grammar Specification (SRGS), Speech Synthesis Markup Language (SSML) and Semantic Interpretation for Speech Recognition (SISR).

Key product capabilities
With WebSphere Voice Server, Version 6.1.1, IBM delivers a range of product features to help you increase customer satisfaction while lowering your total cost of ownership (TCO). These features include:

• The ability to use the J2EE architecture and Enterprise JavaBeans (EJB) components to provide core functionality. WebSphere Voice Server runs as an enterprise application on IBM WebSphere Application Server to extend its reliability, scalability and availability.

• Support for MRCP, Version 1 Draft 4; SRGS, Version 1.0; SSML, Version 1.0; and SISR, Version 1.0.

• Support for both grammar-based speech recognition, including support for dynamic grammars, and statistical language modeling for more dynamic speech applications.

• WebSphere Voice Server extensions to the WebSphere Application Server administrative console to enable configuration, monitoring and troubleshooting.

• The interface to WebSphere Voice Server uses MRCP for connectivity to speech servers. For a list of compatible IVR and IP telephony vendors, visit **http://www.ibm.com/speech**

• The ability to support more than one language installed on a single machine.

• Support for Red Hat Enterprise Linux® , and Microsoft® Windows® 2003 Enterprise edition.

• Delivers advanced deployment services such as clustering, centralized administration and configuration, and high availability for distributed configurations. These capabilities enable you to:
• Dynamically reconfigure WebSphere Voice Server by non-disruptively adding or removing servers from the WebSphere Voice Server environment
• Choose from multiple deployment options from single-server to clustered highly available high-volume configurations.
• Provide simplified system management (through Java Management Extensions, JMX) and administration using browser-based remote administration
• Support advanced failover including failure bypass and clustering capabilities.

• Take advantage of the features of the WebSphere Application Server J2EE, run time, which enables you to focus on adding value through speech—and not being burdened by developing unique infrastructure.

Voice application-development tools
IBM WebSphere Voice Toolkit is powered by Eclipse technology and makes it easy to develop VoiceXML applications without having to know the internals of voice technology. This toolkit enables you to build, debug and deploy speech applications that utilize WebSphere Voice Server.

Global access
WebSphere Voice Server, Version 6.1.1 is available in multiple languages, including Australian English, U.K. English, U.S. English, German, and Spanish.

Free Form Commands (FFC)
Free Form Commands enable advanced call routing applications that react or respond to a request for service, information, or commands from a caller speaking in conversational sentences. FFC offers significant benefits to both your enterprise and your users by providing self-service capabilities through familiar, natural spoken commands that improve the customer experience. WebSphere Voice Server provides support for the Statistical Language Models (SLMs) that are used by FFC. This enables you to leverage WebSphere Voice Server to build the

SLM and use it during the speech recognition process. The Action Classifer engine is another component of the Free Form Command capability, and it can be incorporated into an application to classify the intent of each sentence (the heart of a call routing system).

Speaker Verification (SV)
Speaker Verification is an optional extension to WebSphere Voice Server. SV uses a caller's voiceprint to improve security for telephone based applications. The SV product provides a text and language independent capability, providing a robust and user friendly approach to reducing fraud risk in voice self service applications. SV easily integrates into the application infrastructure, using simple HTTP interaction with WebSphere Voice Server to provide the verification functions.

IBM lab services
IBM provides a range of services, based on deep technical and industry expertise, which can be customized to meet your specific business needs. These include:
•IBM Speech Persona and Usability Assessment Service Offering:

Provides an assessment of the persona and usability of your existing IVR and speech interfaces, helping to determine ways to improve the user interface with speech technology. This services package is tailored to help you get started with speech technology quickly, using IBM human-factors expertise.

•IBM Self-Service Opportunity Assessment Service Offering:

Provides an assessment of the technical, business (financial) and user issues in an existing IVR environment. helpingt to identify ways to improve these systems using speech technology. IBM evaluates how speech can streamline your service delivery; identifies the potential of your current architecture; and creates a business case that can help you get the greatest return on your investment in the shortest time. IBM can also help you create a customer-experience vision that will make your customers thrilled with the self-service features you provide.

For more information
WebSphere Voice Server is uniquely capable of handling your voice recognition needs because it is built on robust WebSphere Application Server software. WebSphere Application Server provides an operating environment with advanced performance and availability capabilities that can support dynamic application environments. To learn more about IBM WebSphere Voice Server, Version 6.1.1 visit:
http://www.ibm.com/speech

Hardware requirements (Version 6.1.1)
• Supported Linux or Windows systems that meet the following minimum criteria:
- Operating system: Red Hat Linux V4.6 or V5.1 or Windows Server 2003 Enterprise
- Processor: Intel® or equivalent x86 at 1GHz minimum
- RAM: 2GB (minimum)
- Available disk space: 20 GB
- Network: TCP/IP
- DVD-ROM drive

Hardware requirements (WebSphere Voice Toolkit)
• Operating system: Microsoft Windows XP Professional
• System suitable for IBM Rational Application Developer Version 7, IBM Rational Software Architect Version 7, or Eclipse 3.2
• Processor: 800MHz minimum Pentium or equivalent; 1GHz recommended
• RAM: 2 GB
• Available disk space: 800MB minimum (in addition to available disk space for Rational Web Developer, Rational Application Developer or Rational Software architect); additional disk space required to accommodate installation options selected by the user
• Temporary disk space: additional 800MB for installation
• Display: 256 colors; 1024x768 resolution or higher
• Sound card and speakers for audio playback