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Avaya Speech Server

Avaya is an industry leader in self-service solutions (Interactive Voice Response) with over thirty years of proven success in deploying thousands of systems worldwide. Avaya provides a complete solution, including networking, telecommunications systems, call center management systems, as well as self-service solutions — DTMF or enabled with speech. Avaya has unmatched expertise in speech recognition solution deployment, offering speech algorithms, speech deployment tools, complete applications project management, training, installation, ongoing maintenance and enhancement services — and Avaya Speech Server, a media server optimized for advanced speech technology.

Avaya Speech Server

The Avaya Speech Server (formerly known as OSCAR) is a state-of-the-art speech processing platform that integrates popular speech technologies into the Media Processing Server (MPS) Series portfolio. Large Vocabulary Speech Recognition, Natural Language Understanding, Text-to-Speech and Speaker Verification are time-tested tools that can improve customer service and reduce operating expenses. Avaya has partnered with global leaders in speech technology to enhance our market-leading self service and media processing systems and, going beyond Text-to-Speech, we have developed an Internet Audio Server engine that supports playback of Internet audio files such as .wav, .mp3 and .au from web URLs.

The challenge

Typical self-service speech solutions, such as shrink-wrapped integrated hardware and software solutions, are predominantly software-only engines. To deliver acceptable response times, these solutions require significantly more processing power than that provided by traditional Digital Signal Processor (DSP) boards used in IVR systems. To supplement IVR processing power, they require additional processors which adds complexity to the support and effective management of the system overall.

The solution: superior design

To resolve these issues, Avaya developed a speech processing platform that integrates these technologies into our Media Processing Server series. This platform supports speech processing as an open shared resource and is based on an open client environment using UNIX and Windows. Providing multifunction capabilities, our speech servers are accessed in a seamless manner by applications within our VXML environment and within our GUI service creation environment, Avaya MPS Developer.

Essentially, Avaya Speech Server is a speech-processing platform within an IVR / media processing platform. Delivering the benefits of an open system architecture, it utilizes Avaya-developed advanced system software integrated with industry-standard components. Our design leverages high-performance Intel Pentium-based processors that plug into a separate resource subsystem that is integrated into the core operating architecture of our IVR / media server platform. This approach provides a cost-effective, scalable resource that runs advanced speech recognition and analysis, or other signal processing algorithms, and enables future speech recognition algorithms to be ported to the system as they come along. Our Speech Server enables efficient deployment of complex algorithms or rapidly evolving technology, minimizes time spent testing and debugging, and can be scaled without software redesigns.

Complementary to our embedded DSP resource solution (e.g., DTMF detectors, recorders, conference, etc.), voice response applications can use both embedded and Speech Server resources during the same call. Any combination of advanced speech processing algorithms we offer (including Nuance ASR, SpeechWorks ASR and RealSpeak text-to-speech) may be used by online applications within an MPS system. This same system capability applies to all speech engines supported on the system, including resource sharing and load balancing, and is part of Avaya's speech vendor independent approach to platform design.

The Speech Server is an integral component of the Avaya Web-Centric Self- Service (WCSS) portfolio which brings the advantages of web-based development to voice self-service applications. In addition to a VXML R2.0 Browser, WCSS encompasses CCXML which provides a set of voice web application development tools (WVAD) for testing and debugging prompts, grammars and dialogs and also a Portable Application Framework that enables efficient reuse of application modules and a consistent user interface.

A speech platform for today and tomorrow

Avaya's flexible Speech Server delivers choice and investment protection. As highly scalable as our MPS systems, it uses industry standard components and consistent software developer interfaces that can help you meet current and evolving business needs.

Scalable design

Adding speech servers to enhance solution response time, to address resource requirements of complex applications, or to increase functionality (by adding technologies such as text-to-speech or speaker verification) is easy. Adding audio channels is software configurable and additional Speech Server modules plug into the speech subsystem shelf. Once modules are plugged in, the MPS system is notified when additional processors are configured.

Dedicated speech processing resources

With Avaya's approach to speech processing, host interaction does not impact availability of Speech Server resources. Because Speech Servers are dedicated to their configured speech engine, host interaction surges (that can increase response time) and negative caller experiences are minimized.

Cost-effective resource sharing

Avaya's unique shared resource architecture delivers one of the industry's most efficient, reliable platforms for modern speech technologies. Large pools of MPS system ports can share pools of speech resources to support popular speech technologies such as advanced speech recognition, text-to-speech and verification. And, by effectively managing the recognition processing load between and among Speech Servers, our solution optimizes performance.

SPEECH SERVER

Speech processing reliability

The Speech Server delivers the reliability your mission-critical customer interfaces require. Automatically detecting module outages, our Speech Pool Manager directs new speech requests to available resources and resumes normal operation when the situation is resolved. And, without disabling the application or call flows, specific servers can be taken out of service for maintenance or system upgrades.

Best-in-class speech processing algorithms

The Speech Server architecture supports advanced speech processing applications in a robust, modular, scalable environment. Through the market leading speech processing technologies we offer and our partnerships with industry leaders, our customers select from among the best technology available for any project.

Avaya: The best approach

Cost-effective deployment platform

The client server architecture enables speech resources to be shared and managed across multiple clients.

Scalability

Multiple phone lines can be serviced by a single speech module and adding Speech Server modules is easy. The impact of speech algorithms on an application processor at peak load is minimal and the application system scales from small to very large applications.

Lower risk

Ethernet connectivity enables reliable speech systems, easy addition of servers, and protection when a server goes off line.

Investment protection

In addition to our system design and history of reducing cost of ownership through compatibility, scalability and upgradeability, our open approach offers protection against leap-frogging technology or the business failure of an algorithm provider.

Choices of best-in-class speech technology

Our solution delivers high-accuracy, continuous, very large vocabulary, and speaker independent recognition capability that can include speaker verification and natural language. In addition, we offer industry leading text-to-speech algorithms.

Multiple language choices

Any language a vendor supports is available to all Avaya customers because our integration of phonetic recognition engines within our platform is language independent.

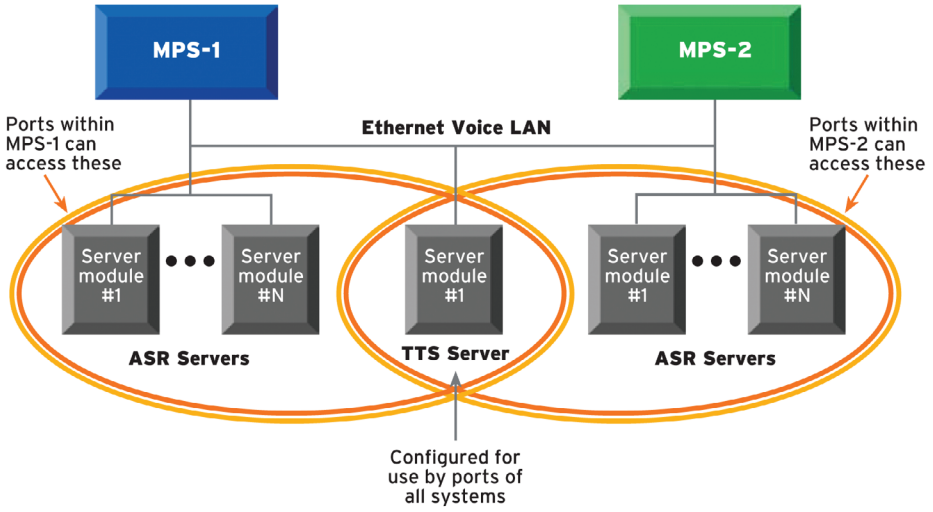
Load balanced performance

Our load-balanced performance minimizes points of failure, enhances resiliency and optimizes CPU resources. Our server architecture enables multiple phone lines to be serviced by a single speech module and modules are easy to add.

A Speech Server to meet your needs

Designed to meet your speech technology requirements, our solution resides on an industry-standard server that is optimized for speech performance and scalable to any size application. The Avaya Speech Server is part of an end-to-end solution with open interfaces to popular Web development tools.

COST-EFFECTIVE RESOURCE SHARING



The Avaya Speech Server supports speech applications written within VXML, the emerging industry standard. It also supports MPS Developer (formerly known as PeriProducer), a proprietary application development tool that enables a phased solution migration that preserves server investments.

Learn More

To learn more about the Avaya Speech Server, contact your Avaya Account Manager, Avaya Authorized Partner, or visit us at **www.avaya.com**.

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.

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