Large Vocabulary Speech Recognition – Changing the Way Callers Access

Introduction

Advanced speech technology is dramatically changing the way customers access services, making organizations re-think their self-service strategy. Speech recognition provides a direct link between customer needs and business activities. Teaming with the global leaders in advanced speech technologies, Avaya has integrated Large Vocabulary Speech Recognition (LVR) capabilities into its MPS family of self-service systems. LVR algorithms that can recognize thousands of words and sentences spoken naturally by nearly anyone have made it possible for Avaya to deploy solutions that automate significant numbers of customer transactions using spoken input. Good examples of LVR are the automated stock quote/trading systems deployed by major financial institutions.

What LVR Can Do for You and Your Customers

With LVR, you can dramatically enhance customer services while realizing significant benefits for your organization. These advantages go well beyond simply reducing hold (queue) time for callers. With LVR your callers perceive higher satisfaction because they are able to accomplish more in less time while using a more natural method of communication. Your firm, as a service provider, is able to achieve greater automation by significantly off-loading calls from agents and reducing call lengths. By enabling your callers to speak their requests, you provide an easier, more user-friendly interface to your telephone-based services. Callers can say what they want directly and provide multiple pieces of information in a single phrase, reducing the need for multi-level menus and simplifying navigation.

The ability of the solution to recognize natural numbers, money amounts, dates and times, can further reduce transaction time and increase customer satisfaction. LVR also enables you to offer unique services through automation of revenue generating calls that are too complex for touchtone. For one major firm, Avaya LVR systems have cut in half the number of calls taken by human agents. For another, the cost per call was reduced to less than half when compared to the same function performed by agents. The systems paid for themselves in months.

State-of-the-Art Platform

In addition to partnering with global leaders in Advanced Speech Processing, Avaya has developed a state-of-the-art speech processing platform to integrate these technologies into our market leading IVR and Computer Telephony Integration (CTI) systems. This Speech Server, provides a dedicated speech processing platform within our IVR and CTI systems. Advanced system software integrated with industry-standard components delivers the benefits of an open architecture. Speech Server employs high-performance Windows 2003 Standard Server Operating System and processors in a separate resource subsystem that is integrated into the architecture of the

MPS via a Local Area Network (LAN). This approach delivers a scalable, cost effective implementation, which can be expanded to meet the individual requirements of a particular recognition task or Advanced Speech Processing algorithm. The choices provided by Avaya include multiple algorithms for LVR, Speaker Verification (SV), Text-to-Speech (TTS), and Natural Language Understanding (NLU). The system dynamically allocates the Advanced Speech Processing (e.g., recognition) resources to the multiplicity of phone calls active in an application and can run multiple recognition, verification and TTS tasks simultaneously. Controlled application development as well as management of Advanced Speech Processing resources is made easy through the use of Avaya advanced tools – including VXML or Avaya MPS Developer and Avaya MPS Manager.

Comprehensive Industry-Leading LVR Offering

Recognizing the trend toward Advanced Speech Processing solutions and the benefits to be achieved, Avaya was first to commercially deploy Large Vocabulary Recognition (LVR) technology. Avaya has by far the largest speech deployment world wide at an extremely large financial institution, providing unparalleled customized options to millions of callers daily. Avaya demonstrates leadership through continued deployment of Advanced Speech Processing solutions and through a comprehensive offering that complements a world-class solution.

Avaya's Advanced Speech Processing division includes highly qualified speech recognition professionals with the skills and experience required to deliver successful speech enabled solutions. Avaya brings behavior analysis, an interpretation of the human element response factor, to its speech solutions; behavior analysis is not automatically inherent with the VXML experience. Take advantage of our dedication to "best practices" and our time-tested expertise in deploying Advanced Speech Processing based solutions. We are the market leader. We understand how to make Advanced Speech Processing work for your business.

Benefits Delivered

- **Enhance Customer Services and Customer Satisfaction** – Callers can accomplish more in less time while using a natural method of communication

- **Increase Automation** – Greater satisfaction and interaction is provided by the speech interface, facilitating wider deployment and additional automation of services

- **Improve Operational Efficiency** – Greater automation and reduced talk time result in decreased overhead costs and staffing requirements

- **Maximize Revenue Opportunity** – Flexible interface enables automation of complex revenue-generating transactions

- **Realize Rapid Return on Investment (ROI) with Best-In-Class Speech Technology** – High accuracy, continuous, very large vocabulary, speaker-independent solutions

- **Scale as Business Needs Dictate** – Server architecture allows multiple phone lines to be serviced by a single speech module, and modules are easy to add

- **Reduce Risk** – With our industry leading experience, we know how to make speech recognition work in real-world solutions

Learn More

To learn more about Large Vocabulary Speech Recognition, 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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