



Do More with MESSAGEmanager

MESSAGEmanager Speech Recognition

For High Quality Speech Enabled IVR

Say MESSAGEmanager
Solutions

'MESSAGEmanager
Solutions' enterprise
software for speech
delivers strategic
advantage, a superior
caller experience and
increased operational
efficiencies.'

"Speech is a core component of MESSAGEmanager Solutions' strategy to embed communications into the heart of business, helping organisations improve the productivity of mobile workers and enrich customer service through the power of speech."

Faced with steadily rising costs and pressure to improve the speed and efficiency of business processes, organisations are searching for more efficient ways to deliver consistently outstanding service.

Through speech applications that support the latest standards and technologies, MESSAGEmanager Speech solution enable companies to accelerate self-service across an organisation and turn communications into a core competitive advantage.

Speech

Speech technology is not just a technology that can save money. It can be used to generate business by making the most of every call from a customer to build a brand, deepen a relationship, or make a sale.

Automation makes it cost-effective to view the telephone as another marketing channel—even an alternative investment from the advertising budget. Speech recognition can make interactions between the caller and the system natural and intuitive, a pleasant experience for the caller while completing transactions reliably and quickly.

With the power of Speech Recognition, callers can interact with any wireless and fixed wire phone and many mobile devices to get information or conduct transactions instantly -- simply by speaking naturally. Speech recognition replaces the touch-tone interface that can confuse and frustrate callers with an engaging, helpful, natural interface that serves callers quickly, efficiently and consistently.

Speechworks Open Speech Recognizer Engine

MESSAGEmanager and Speechworks multi-lingual OpenSpeech Recognizer (OSR) provide high performance speaker independent speech recognition for telephony applications.

Open Speech Recognizer processes callers' spoken commands and ascribes meaning to them. It handles extremely large vocabularies, even over one million words, with outstanding accuracy and unmatched efficiency in 44 languages and dialects.

OSR has been shown to return the correct response on more than 98% of the time on fully loaded systems.

Speaker Independence

OSR understands multiple speakers - including those with accents - without the need for user training. OSR supports a 2-level dictionary look up for determining the pronunciation of words:

- A 'system' dictionary that covers most words in general usage and 150,000 proper names. This dictionary cannot be altered.
- Supplemental 'user' dictionary defined by the developer and/or administrator. The user dictionary allows the default pronunciations assumed by OSR to be overridden and is used when addressing applications with task specific jargon or deploying applications with strong regional dialects.

Density

OSR deployment density varies significantly with CPU speed, grammar size and structure and response time required. Most applications will support at least 48 channels per machine and 72 channels per machine is not uncommon.

Adaption

OSR supports Barge-in which allows callers to interrupt prompts when they know what they want to do next.

Complex algorithms ignore high-energy noise events that are not speech, and help the speech application determine speech starts and stops. As a result, false barge-in's are reduced, enhancing performance in wireless environments.

OSR LEARN Technology automatically improves accuracy in deployed systems by adapting to callers' language patterns. For example the system is able to adapt to work best with cellular signals in an application where the users are predominately mobile callers. LEARN can also adapt for novel pronunciations in a call routing application eg Bernstein, Burnstein, Burnstine etc.

LEARN works by analysing data logged as the application executes and focuses on instances where the speech recognition confidence score was low enough to request confirmation with the caller but the confirmation proved the system was correct. LEARN is typically executed frequently when an application is first deployed and less frequently, if at all, once the application is mature.

VoiceXML and Speech

OSR is optimized for VoiceXML systems. OSR does not provide an interpreter that processes the VoiceXML language, rather it includes many features such as Grammar Management that simplify construction of such an interpreter and improve its performance.

In a VoiceXML environment, grammars reside separately from the OpenSpeech Recognizer and are loaded into the engine only when they are needed to recognize speech. Because the grammars reside separately from the recognizer, enhanced grammar management features such as dynamic grammar usage, fast grammar loading and shared grammars have been added to support efficient grammar loading, optimizing the OpenSpeech Recognizer for VoiceXML.

Text to Speech

RealSpeak™ market- leading software converts text into friendly, expressive, highly intelligible startlingly human-sounding synthesized speech in more than 20 languages, and across more than 30 voices in a variety of different accents and speaking styles.

LICENSING

Speech is licensed according to the number of Text to Speech and Open Speech Recogniser ports required and for OSR the number of grammars required to sustain the application.

ABOUT SPEECH

Speech Recognition is not a new technology, it has been available for over 60 years. During the 1940's the US Department of Defense first attempted to use Speech Recognition to translate Russian messages. In 1952 Bell Labs developed a Speech Recognition program that would recognise the numbers zero through 9 spoken into a telephone. In 1959 MIT started working with Speech Recognition and successfully developed a system that recognised vowel sounds with 93% accuracy. In the 1970's Carnegie Mellon University developed the HAPPY system which could successfully recognise a spoken sentence.

Computing power and electronic components prevented further improvements in recognition technology.

In the 1980's, the processing power of computers began to double yearly allowing the accuracy and speed of text entry to significantly increase. With new algorithms and database querying enhancing overall performance, Speech Recognition became feasible for public consumption. Early systems required the user to pause between each word spoken. These were known as discrete systems. Today Speech is now a continuous recognition system allowing the user to speak normally in phrases or sentences.

Speech recognition and text-to-speech has made the automation of telephone applications a caller-friendly option whilst other trends in telephony have made calls and delivery platforms less expensive and more flexible. The many successful deployments of speech technology in call centres today has erased doubts about the viability of the technology.



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