Are you looking to create great user experiences and increase operating efficiencies for your business solution or consumer application? Consider voice-enabling your solution or application by integrating Vestec’s Automatic Speech Recognition Engine, VASRE.

Now, with VASRE, you can incorporate speech recognition into a wide range of applications that involve software navigation (such as in video games and web searching), dictation and record keeping (for medical professionals and authors), finance (for regulatory compliance tracking), control systems (for home automation use), to name a few.

What is an Automatic Speech Recognition (ASR) Engine?

ASR Engine software allows an application or a device to convert a spoken utterance into words. Modern ASR Engines use sophisticated Statistical Modeling (SM) approaches to determine the most likely word outcomes. Most recently, Vestec has consolidated Artificial Intelligence (AI), Machine Learning and SM tools to build the most powerful ASR Engines, significantly increasing accuracy while lowering development and implementation costs.

Choosing an ASR Engine

When choosing an ASR Engine, ask about the efficiency of the noise reduction and echo cancellation pre-processing functions. Reducing the background noise and hiss from extraneous signals is critical to improving the accuracy of the recognition.

A strong acoustic model is the key to a powerful ASR Engine. The acoustic model contains information that matches sounds to words. An ASR Engine takes these and creates statistical representations of the sounds (a base sound unit is called a phone or a phoneme). These statistical representations are then used to match the digitized sound inputs into your application.

As you evaluate ASR Engines, consider: Does it provide acoustic models for the country localization in the languages you need? How well do the acoustic models handle non-native accents? Ask if you can fine-tune, modify or customize the acoustic models to fit your needs. If you already have a standards-compliant acoustic model, can you “plug and play”?

Vestec ASR Engines

Vestec designs its ASR Engines as robust, low-cost, standards-compliant alternatives to traditional offerings. We currently offer three speech recognition engine models, VASRE Tier-1, VASRE Tier-2, and VASRE Tier-3, supporting vocabulary sizes of 500, 2,500, and 15,000 distinct items per recognition, respectively.

Invest in Your Success

Vestec’s solutions offer a lower Total Cost of Ownership, delivering a higher Return On Investment/payback in 4 to 12 months, depending on the application.

Learn More

Learn more about Vestec at www.vestec.com. Contact us for more information or to arrange for a demonstration by emailing us at info@vestec.com.

About Vestec

Vestec is a spinoff of the University of Waterloo, one of the top technology-oriented universities in the world. Our team of leading researchers and scientists believe that speech recognition and natural language understanding have the power to change radically the way we interact with machines and devices. By leveraging the power of Artificial Intelligence, we’re making speech recognition more accurate, versatile, and affordable, than ever before.
While the acoustic model contains sound-word associations, a speech grammar, sometimes called a grammar lexicon, contains sets of pre-defined word combinations that are organized into rules. The ASR Engine's decoder applies these rules to recognize relevant words and uses its Filler Model to reject irrelevant words.

When choosing an ASR Engine, select one that is standards-compliant. You should be able to define rules using a document standard such as SRGS version 1.0 in ABNF or XML format. It should support the MRCP v1 and v2 communications protocols. Tuning and testing tools should be included. It should provide confidence level scores for words so you know whether to accept or reject an item while tuning and testing.

Choose Vestec's ASR Engine

Vestec's small, medium, and large vocabulary ASR Engines generate high recognition accuracy and are designed for a variety of different tasks and different platforms. As they are standards-compliant, they are easily integrated into your product or service. For the best speech accuracy, VASRE is equipped with sophisticated noise reduction and voice detection algorithms. We support many languages (with more to come), covering country localization needs with exceptional handling of a variety of native and non-native accents.

In addition to their core capability to detect command words accurately, Vestec's ASR Engines are designed to interact with Vestec's Natural Language Understanding (NLU) to support applications requiring natural speech human-machine interaction.

A comprehensive feature set.

- High recognition accuracy
- Real-time decoding
- Acoustic models for multiple languages
- SRGS (ABNF & XML) grammar
- MRCP (v1 & v2) support
- Echo cancellation & noise reduction
- DTMF detection
- NBest recognition results
- World-level confidence scores
- Online/Offline grammar loading
- Stream/Batch auto processing
- Sentence generator
- Comprehensive logging records
- Tuning tool for performance optimization
- C and C++ API
- Powerful voice activation detection
- Auto pronunciation generation
- Scalable architecture and redundancy
- Support for Windows and Linux
- Support for server and embedded applications
- Limited computational load
- Ease of implementation and use
- Affordable