Speech Analytics

Improving business operations is a challenge for any organization, whether the focus is on enhancing customer service, increasing revenue, or meeting corporate governance policies. As a result of growing expectations across all areas, businesses are adopting next-generation technologies like speech analytics to automate complex tasks such as determining customer preferences, compiling competitive intelligence, and understanding cross-channel challenges.

The Power of the Spoken Word

If you have ever listened to recorded calls from a contact center, you will know the information contained within these conversations is invaluable. Traditional Contact Center statistics such as ACD wrap-up codes, Average Speed of Answer, and Average Hold Time are important, but never tell the whole story. The context associated with each interaction, found only in the actual dialog, forms the genesis of a complaint. Grasping the customer's disposition, tone, and the specifics of what transpired during the call is vital to gaining a complete understanding. It is only when you can listen to customers interacting with your agents that you will see the whole picture.

Of course, actively listening to even a statistically significant sampling of these calls is daunting, and manually capturing that data is inherently inconsistent. Hence, why the ability to use technology capable of automating these processes can be so powerful.

Let Computers do the “Heavy Lifting”

Historically, businesses have relied on random samples of calls and manual call coders to listen to and evaluate recorded interactions for quality assurance (QA). But today, customer-centric businesses recognize the value in this rich data for more than just QA, and with the improving power and capabilities of speech analytics technologies, the barrier to value continues to erode. The technology now exists to easily analyze even as much as 100 percent of a business's calls for both quality assurance and business discovery and insight. Scalability is no longer a problem.

Underlying Speech Analytics Methodologies

There are three general speech analytics methodologies in use today. Each has its benefits and drawbacks and appropriate usage scenarios.

The first approach to speech analytics focuses on Phonetics. In the phonetics methodology, technology converts recorded audio into raw sound phonemes for pattern matching. The application then searches against the phonetic index to match the phonemes to known patterns. This approach does not have the ability to distinguish homophones (words with same pronunciation, different meaning) and lacks high level analysis elements like clustering.

The second approach focuses on Word Spotting. In the word spotting methodology, recorded audio is transcribed as whole words (rather than phonemes). This method relies on a static language model to recognize the words. This approach lacks the ability to detect language changes over time, cannot deal with slang, and suffers greatly in situations when the audio transcription is not clear.

“Understanding all customer interactions, regardless of source, is the cornerstone to both effective marketing and world-class customer service. Autonomy’s solutions enable advanced understanding of customer data and therefore propel customer experience improvements.”

—Diana Helfenstein, SVP Operations
The third approach ignores phonetics and words and focuses on what is meant. This is called the **Conceptual** method. This approach looks at the entirety of the communication, as well as drawing on other, similar pieces of communication, for context, and forms a dynamic understanding of the concepts being conveyed. It does not rely on transcribed words or phonemes, but instead listens in the same way a human would. This method is not impeded by homophones, slang, or imperfect transcriptions, because it does not rely on a language model; instead, it identifies meaning. The conceptual model is self-learning, and is most effective when dealing with large volumes of recorded calls.

While each of these methods has its place, and Autonomy’s technology supports all of them, the method that delivers the most relevant results over time is the Conceptual approach. Because the Conceptual approach can learn over time, it is able to deliver increasingly relevant and accurate results. Now, businesses making a long-term investment in mining their customer data realistically have no choice but to investigate this approach.

**Autonomy Explore**

With Autonomy Explore, powered by Autonomy's Intelligent Data Operating Layer (IDOL), businesses no longer have to rely on manual listening efforts to organize and understand their recorded customer calls. Using Autonomy Explore, businesses can analyze their recorded contact center calls, and also link call center activity to the prospect’s visit to the website, their interactions with social media sites, or even notes from a storefront representative.

Autonomy Explore provides the power to understand the recorded contact center interactions through Sentiment Analysis, Spoken Language Identification, Related Concepts and Real-time Analytics. These capabilities facilitate robust business benefits including real-time alerts, conceptual auto-categorization, customer intent, agent support and assistance and quality control.

**Conclusion**

Don’t waste another moment ignoring your contact center interactions just because the tools you use are not capable of making sense of the most overlooked, most insight-rich assets you have – the unstructured data of the call recordings. Autonomy's Speech Analytics solution enables businesses to analyze the recorded calls based on meaning and apply an unprecedented level of understanding throughout the business, helping each department meet its diverse needs, such as reducing hold time, increasing cross-selling opportunities and improving first call resolution. You own the data. You should settle for nothing less than a complete understanding of that data, for the greatest benefit to your business.

**About Autonomy**

Autonomy Corporation, an HP Company, is a global leader in software that processes human information, or unstructured data, including social media, email, video, audio, text and web pages, etc. Autonomy’s technology manages and extracts meaning in real time from all forms of information, both unstructured and structured, enabling companies to leverage their data assets. Autonomy’s product portfolio helps power companies through enterprise search analytics, business process management and OEM operations. Autonomy also offers information governance solutions in areas such as eDiscovery, content management and compliance, as well as marketing solutions that help companies grow revenue, such as web content management, online marketing optimization and rich media management.

Autonomy’s solutions are used by more than 25,000 customers including 87 of the Fortune 100, 10 of the top 10 financial services firms, 75% of the global 100 law firms, 9 of the top 10 pharmaceutical companies and many government agencies. Over 400 of the world’s leading technology companies embed Autonomy’s technology in their products. Autonomy also owns the largest private cloud of diverse data, with 31 Petabytes of information.

Please visit [www.autonomy.com](http://www.autonomy.com) to find out more.