



RESEARCH NOTE

Neural Phonetic Speech Analytics

The Brains behind Nexidia Interactions Analytics 11.0

Summary

On June 23, 2014, Nexidia of Atlanta, GA announced the upcoming release of Nexidia Interaction Analytics 11.0, which the company describes as the next generation of customer interaction big data analytics. Nexidia's latest technology development, Neural Phonetic Speech Analytics™ is the power behind the platform driving the applications within Interaction Analytics 11.0.

Neural networks are computational models that are capable of pattern recognition and machine learning. Neural networks are typically used to address complex tasks that are difficult to address using rules-based programming. Speech recognition is a prime example of one of these complex tasks.

Nexidia's Neural Phonetic Speech Analytics combines the strengths of automatic speech recognition (ASR) with phonetic indexing to produce word-level transcription of audio, a phonetic index and customer sentiment scores using language models developed by Nexidia's in-house scientists. The neural speech engine builds the dictionaries and adds the contextual development that greatly simplifies the speech analytics query function.

Nexidia Interaction Analytics 11.0 will be generally available during the third quarter of 2014.

The View From The Saddle

Nexidia has leveraged its considerable search capacity and phonetic indexing intellectual property for this new software release, adding proprietary techniques for ASR and transcription that simply are not available to other solutions relying on third-party speech engines for analytics. The result is a comprehensive speech analytics solution that significantly expands the functionality of speech analytics in the contact center while simultaneously improving accuracy and simplifying the analytics process.

Nexidia's use of neural speech engines to build and continually improve the phonetic indexing dictionary function is not only innovative; it is potentially game-changing for the speech analytics industry. While other solutions generally require dictionaries and language model building be done by the user, Nexidia's Neural Phonetic Speech Analytics does this automatically. While the user has the option of pushing words into the Nexidia dictionary manually, it is not required.

Interaction Analytics 11.0 is also revolutionary in the way in which Nexidia has leveraged their acoustic model building into the ASR side of this new release. Neural Phonetic Speech Analytics enables Nexidia to process a greater number of variables in a shorter period of time than most other analytics solutions on the market today. Applied, this means that Nexidia is able to bypass the sampling of calls for analysis in favor of searching virtually 100 percent of calls, leading to an unprecedented degree of analytics accuracy.

In recent years the use of neural networks in communications industries has been gaining momentum but Nexidia Interaction Analytics 11.0 represents one of the first instances of applied neural networks in a contact center environment. Because of the intensity of computations required to support the analysis of 100 percent of calls along with Nexidia's ability to support real-time performance management and innovative new applications such as agent self-evaluation (see SaddleTree Research Note of 6/23/14 entitled, "Nexidia Pushes Speech Analytics Envelope with Nexidia Interactions Analytics 11.0"), the mathematical processing power of neural networks is a necessity for this market-leading product.

As it has since developing the process of phonetic indexing over a decade ago, Nexidia continues to impact the industry with its innovative use of such leading-edge technology as neural networks, once again redefining analytics efficiency in the contact center.

