Machines Search for Meaning:

*Tackling the Chaos of Big Data for Customer Care with AI*
Conversational AI is a fast-growing phenomenon made possible by the introduction of vast computing resources, massive amounts of data and the use of cognitive resources to detect patterns that mere humans perceive as understanding and intent recognition. By taking an open approach, Daisee's Lisa is a speech analytics solution designed to have an impact far beyond the contact center with the highest level of accuracy in order to make prediction affordable at scale.
Welcome to the New Age of Conversational Analytics

So-called “Conversational AI” (for Artificial Intelligence) is a fast-growing phenomenon that has been decades in the making. It is made possible by the introduction of fast computing resources and massive amounts of data in “the cloud,” coupled with the use of cognitive resources and deep neural networks that are able to detect patterns that mere humans perceive as understanding and intent recognition.

Analytic resources, like Daisee’s Lisa (an acronym for Linguistic Interpretive Semantic Analysis), employ key elements of artificial intelligence – specifically speech analytics, natural language processing, machine learning – to understand and, in many cases, anticipate the purpose of each customer’s contact with an agent, IVR or intelligent assistant. By taking an open approach that integrates the latest cloud-based technologies, Lisa accomplishes design and performance objectives that were not possible in the past and are not being offered by alternate solutions providers. Specifically, Lisa makes it possible to:

- **Monitor 100% of conversations between individuals, agents and IVRs** – In contrast to making analytic decisions based on less than 5% of calls that most companies are able to listen in on affordably.

- **Look both ahead (predictive) and backward (instructive) through analytic lenses** – Enabling contact center managers, chief customer officers, CIOs, product marketing managers and chief compliance officers to weave insights derived from Big Data into their decision-making.

- **Blend and visualize all types of Big Data through an Open Data Architecture** – Analysis of conversations informed by and correlated to “structured” data, like that residing in customer files, billing systems, directories; and unstructured data, which describes most spoken conversations, documents and anything that involves natural language input.

**Open Data Architecture: Blending Structured and Unstructured Data**

A revolution in data storage and processing that enables applications, including virtual assistants, to conduct analysis and derive meaning from many sources in ways that are indifferent to whether they are structured (like an Excel spreadsheet or rigidly defined customer record) or free-form, like product documentation or a chat transcript.

These capabilities make up the foundation for conversational analytics and, ultimately, commerce. Its impact is being felt far beyond the contact center and highlight the direct connection between speech analytics, when properly deployed, and Conversational Commerce - an emerging model for brands to support highly accurate, consistent and compliant responses to customer requests at large scale.

**Speech Analytics: The Greatest Common Denominator**

Today, based on a survey of over 500 executives conducted by Opus Research in mid-2018, speech analytics systems are effectively ubiquitous. Eighty-two percent of the companies surveyed were already deploying some
flavor of the technology in their call centers. Yet it also was amply clear that not all systems are equal in age and corresponding capability. The first generation of speech analytic solutions were implemented more than a decade ago when processing power and immature algorithms put a limit on the level of accuracy in recognizing individual words and derived meaning.

Speech analytics platforms were large systems that were able to take a sampling of conversations and conduct basic “word spotting” to detect individual words or phrases that exposed under-performing agents or undesired outcomes (like service interruptions or customer churn). They delivered value, but they were considered slow and inflexible, often relying on the input of employees as subject matter experts to specify which “trigger words” or patterns to try to detect. These systems were used most often for agent training and other flavors of workforce management (WFM) and workforce optimization (WFO).

The next generation of solutions were generally faster to deliver results and able to behave more autonomously when detecting word patterns. This made it possible to incorporate speech analytics platforms into the very important domain of regulatory compliance. The systems could be trained to detect, for instance, when an agent had gone “off-script” and was not adhering to specific requirements surrounding disclosures or the protection of consumer privacy. Customer experience officers, chief compliance officers and contact center managers came to rely on the key functions offered by these second generation platforms. But the best was yet to come.

Finally, today’s systems, like Daisee’s Lisa, offer significant improvements in speed to results; achieving near-real time in detecting (and even predicting) results. They go far beyond simple word spotting and begin to understand meaning and context of each call, leading to rapid recognition of intent. Rather than having results ingrained in future training programs, speech analytics platforms are able to offer what amounts to near real-time prompts that reinforce training programs efficiently and, often, in the course of a conversation.

Lisa Personifies Conversational Analytics

Lisa is the latest offering in third-generation Speech Analytics. It is an example of an emerging category of software termed “conversational middleware.” It is “middleware” because it is a layer of software installed within the IT infrastructure that supports customer interactions and interoperates with or leverages distributed applications, databases and devices. It is “conversational” because it is chartered to capture, understand and recommend actions as part of every conversation across every channel.

Lisa can listen to all customer conversations all the time, checking for regulatory and brand compliance based on a business’s individual needs and priorities, identify training needs and then check for training effectiveness.
Beyond wearing the middleware mantel, Lisa can be characterized by the following anthropomorphic descriptors:

- **Active listener**: Ingesting 100% of the conversations carried out between brands and their constituencies across multiple channels.

- **AI coach**: Applying insights derived from a variety of sources to make suggestions to agents or to inform speech-enabled IVRs, chatbots or other forms of automated intelligent assistants or advisors.

- **Company-wide reporter**: Making both data and results of analysis of 100% of customer conversations available to the systems that inform marketing, product management, sales optimization, and general business operations that were previously only available to individuals on the front line.

- **Customer advocate**: Incorporating sentiment analysis and mood mapping into analytics enhances a company’s ability to detect when a customer has a grievance and interpret the nature of his or her issues.

Across the globe, new rules and regulations for the financial services industry, among others, have catapulted “compliance” into a top priority for speech analytics systems. Failure to conform to well-defined requirements can result, not just in significant fines, but even jail time. Daisee’s approach enables companies to use analytics to serve multiple outcomes. Lisa can be tooled to monitor 100% of a specified set of calls, subjecting them to analysis and reporting that integrates data and metadata from a multiplicity of sources. Remediation efforts can tackle the factors that drive profitability, customer satisfaction and reduced customer effort.
Lisa isolates elements of the most meaningful conversations with successful representatives or spokespeople to support business objectives starting with compliance, but expanding to address categories of calls with high-impact on specific business objectives, including customer onboarding, new sales and customer retention. These elements improve satisfaction for both employees and customers and ultimately bolster profitability by encouraging better conversations that foster longevity and a correspondingly higher lifetime value.

**Achieving Non-Disruptive Disruption**

Lisa’s capabilities are a revolutionary step forward from simple speech analytics to full-blown conversational AI. This could be considered disruptive by the standards that most large enterprise IT systems have traditionally supported. However Lisa’s open architecture approach applies to systems as well as data. It supports augmentation strategies that enable enterprise IT execs to leverage existing contact center, CRM and data management systems.

The speed of technology refresh is accelerating, especially among customer-facing operations. During the past year alone, device makers have brought out tens of millions smart speakers, major car makers have pursued their #VoiceFirst strategies and messaging platforms have made it simpler to add voice and video to real-time conversations.

By design, even though it has a proprietary kernel of code that drives all of Lisa’s capabilities, Daisee has taken an “open” approach to product development, enabling it to incorporate the most accurate transcription resource available, that can achieve market-leading accuracy. Likewise, it employs a combination of Natural Language Processing and Machine Learning tools, models and algorithms that are unsurpassed. In addition, this distributed approach enable’s Daisee’s customers to integrate its platform and reporting resources in ways that let enterprises leverage existing monitoring and QM platforms. This enables them to add such capabilities as sentiment analysis to augment basic “Topic Analysis” (categorization) and “Word Analysis” (from which managers can derive intent).

**Topic Analysis, or categorization, when conducted early in the course of a conversation, enables the system or service to address the conversations that have the highest impact on customer success and experience. It can correlate a question about the pricing for a mortgage, for example, as a high impact call. Likewise it can rely on the true voice of the customer to determine when a disgruntled patron should move up the queue.**

**The Clear Path to Conversational Commerce**

Daisee’s open approach, embodied in Lisa is designed to have impact far beyond the contact center. It enables unprecedented scale in monitoring which, in turn, leads to the highest levels of accuracy. The net result is to make prediction affordable at scale. While the term “prediction” conjures the image of a fortune teller with a crystal ball, in the context of improved CX it is better thought of as accurate identification of an individual’s intent and the best action to take so that an agent or intelligent virtual assistant can help fulfill it.
Based on available data and metadata, Lisa will know the identity of a caller and already have a pretty good idea about the intent of a call. Lisa’s purpose is to make a more pleasant experience for each customer, and because we humans value our ability to help people successfully, it could also lead to improved agent and supervisor job satisfaction, lower employee turnover, customer value and profitability.

When all the discussion of Conversational Commerce is said and the implementation of Conversational AI is done, profitable deployment of systems that provide accurate answers or recommendations to each individual customer at scale and regardless of channel is the objective. It makes it obvious that the role of AI in this context is not to replace humans but to improve their performance. Humans cannot be commoditized, while the same thing cannot be said about technology.
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About Opus Research

Opus Research is a diversified advisory and analysis firm providing critical insight on software and services that support multimodal customer care. Opus Research is focused on “Conversational Commerce,” the merging of intelligent assistant technologies, conversational intelligence, machine learning, intelligent authentication, enterprise collaboration and digital commerce. [www.opusresearch.net](http://www.opusresearch.net)

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