

# 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 and efficiently meet diverse business needs.

With speech analytics technology, businesses have begun to leverage voice interactions as a source of relevant and insightful business intelligence for customer analysis, legal compliance, and strategic operations. Autonomy has developed a unique approach to speech analytics that understands the meaning of customer interactions and automates the delivery of relevant intelligence to multiple business units. This technology is the industry's only conceptually-based solution for speech analytics.

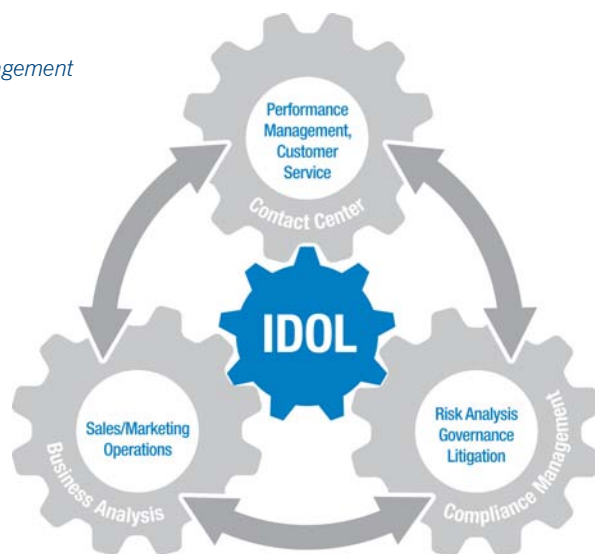
Features:

- *Understands the meaning of speech content in audio, video, and customer interactions*
- *Automates the delivery of relevant customer intelligence to all pertinent business units*
- *Uncovers trends and issues that definitively impact business performance and operations*
- *Supports legacy approaches such as phoneme processing and word spotting in addition to conceptual analysis*

## The Power of IDOL

Autonomy's Intelligent Data Operating Layer (IDOL) extends far beyond keyword search capabilities to deliver Meaning Based Computing technology to the enterprise. Meaning Based Computing is unique in its ability to understand the meaning of an interaction and automatically make that interaction accessible to the entire business. This technology not only enables basic key word searches, but also finds matches based on the main concepts and ideas that are discussed, even if the exact search term does not exist in the interaction. Additionally, IDOL's advanced capabilities provide automatic categorization of information based on conceptual meaning, automatically delivering new or relevant information directly to the enterprise. Autonomy speech analytics can be applied in areas such as:

- *Sales and Marketing Effectiveness*
- *Contact Center Performance Management*
- *Product and Service Development*
- *Legal Compliance and Litigation*
- *Risk Analysis*
- *Business Process Improvement*
- *Competitive Strategy*



## Highlights

**Meaning-Based Speech Recognition** understands the concepts expressed in speech to determine topics, speakers, and emotions present in a voice interaction.

- Processes real-time and recorded interactions, including pre-existing audio files from legacy recording platforms
- Understands the relationships that exist between words to overcome the variability of speech

**IDOL Technology** enables computers to comprehend the meaning of speech and perform sophisticated analysis based on the concepts discussed.

- Conceptual analysis goes beyond legacy phoneme and word spotting techniques to deliver actionable intelligence
- Delivers advanced analytical techniques such as auto-categorization and clustering that are not available in traditional speech analytics

**Supports over 20 Languages**, including English, Spanish, Dutch, Canadian French, European French, Danish, German, Hungarian, Italian, Polish, Portuguese, Romanian, Russian, and Simplified Chinese.

- Derives understanding through context, enabling the solution to determine meaning no matter what language is spoken.
- Language agnostic approach enables cross-lingual and multi-lingual voice analytics
- Automatically identifies language(s) present in an audio segment

*“The essence of Autonomy’s software lies in its ability to extract the core concepts of unstructured data. The way in which it achieves this is arguably some way ahead of any rival product.”*

—Peter Whiting, UBS

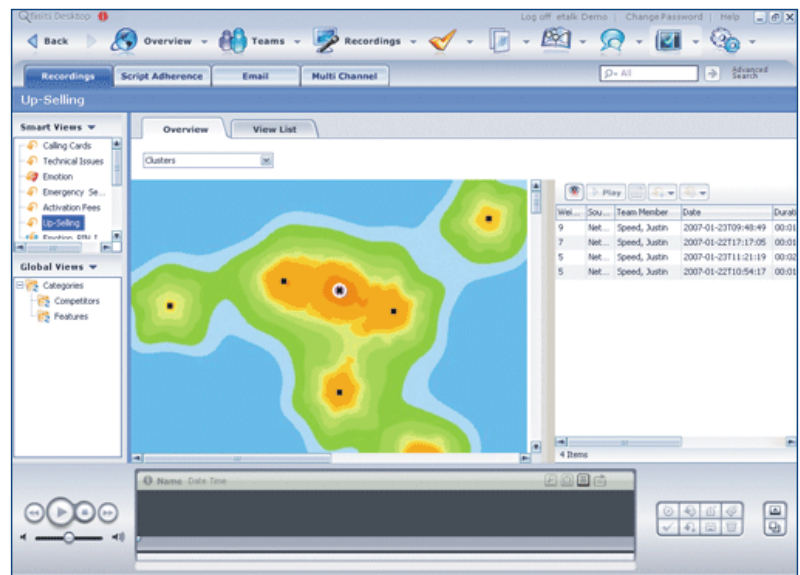


## Speech Processing

Autonomy processes audio in over 20 supported languages and in multiple formats including audio interactions and rich media content. This solution supports all forms of speech analysis, including phonetic searching, word-spotting, Boolean rules, parametric statistics, but is the only vendor to enable a meaning based understanding of speech based on its content. Additionally, results can be searched and sorted by speakers, topics discussed, and emotion present in the interaction.

Because human speech is affected by language, dialect, tone, and even the mode of communication, phonetic-only approaches are not equipped to return the most accurate results. Autonomy overcomes this variability in speech by employing an acoustic model and a self-learning language model that form a hypothesis of what is being said. This powerful and unique combination of speech models enables the speech engine to understand the context of spoken words to determine their meaning. By deriving meaning from spoken content, Autonomy's conceptual approach enables the speech engine to discern between words that have similar phonetic make-up but different meanings. This results in a higher degree of accuracy than phonetic-only models, especially for searches involving complex words or phrases. Advanced functionality such as clustering and hyperlinking connects users to further results, while trend and sentiment analysis features allow end-users to gain a deeper understanding of what is being said in the enterprise.

Autonomy	
Phonetic	✓
Keyword	✓
Boolean	✓
Parametric	✓
Conceptual	✓
Pattern Recognition	✓
Data	✓
Voice	✓
Video	✓
Email	✓
Chat	✓
Databases	✓
Structured	✓
Unstructured	✓



Cluster Mapping in the contact center

## Advanced Analytics

IDOL's conceptual analytics automatically clusters interactions that have similar or related meanings, such as all of the interactions in which a customer cancelled a particular service, even if the customers used different words for the same request. This capability allows IDOL to automatically uncover trends as they occur, enabling the timely resolution of customer, performance, or operational issues in the enterprise. IDOL also displays trends that occur over time, giving users a holistic analysis of competitive information, customer behaviors, root causes, and market trends. Some of the functionality available with Autonomy's advanced analytics includes:

- *Auto-categorization*—automatically presents content with new and common concepts as they are discussed
- *Cluster Maps*—A 2-dimensional visual map that allows end-users to see the conceptual relationships that exist among enterprise data
- *Automatic Query Guidance*—automatically suggests further topics or pertinent information that are conceptually related to a search
- *Trend Analysis*—uncovers emerging trends and issues or compares them to other trends over a set period of time
- *Sentiment Analysis*—searches or refines content by speaker or emotion present in an interaction, delivering insight into customer attitudes and behavior
- *Real-Time Alerts*—notifies business and compliance managers to fraudulent, inconsistent, or low performing interactions
- *Real-Time Information Assistance*—provides automatic information to customers or agents based on spoken queries
- *Spoken Language Identification*—automatically identifies the language spoken within an audio segment
- *Audio Conceptual Tracking*—enables a holistic view of all concepts represented at different points in the audio stream

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