

NEC develops high speed semantic search engine for text classification

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NEC Corporation announced today the development of a "semantic search engine" that rapidly analyzes and classifies the meaning of text, enabling users to quickly and easily process information. Recent deployment of this search engine with a contact center resulted in more efficient operations and greater customer satisfaction.

A "[semantic search](#)" is a method that locates text related to a keyword by referencing keyword aspects such as synonyms, broad concepts and narrow concepts.

This [search engine](#) consists of technologies that rapidly search for and classify large volumes of data in order to help users understand the content of documents. This enables call center operators, for example, to improve the efficiency of operations by quickly locating information that relates to customer inquiries, such as the symptoms, causes and best solutions for a product or service's troubled performance.

The use of this search engine at the NEC [Oracle](#) Response Center, an NEC contact center, reduced the average operator search time and increased the number of complete inquiry responses by 25% per month. Moreover, customer satisfaction increased as a result of fewer days required to respond to inquiries and an improvement in the quality of responses.

Primary features of these technologies are as follows:

- **Compressed index management technologies for high speed semantic searches**

NEC developed technologies that compress and save index data for text that relates to a search term, including both broad and narrow concepts. This enables on-memory processing and high speed searches for meaning.

- **Causal association map that enables quick understanding of representative examples**

NEC developed mapping technologies that rapidly classify and display representative examples, including causes and solutions, for a large number of search results. This enables operators to quickly understand the cause of customer inquiries and the best ways to process them.

- **Classification technology that easily identifies important words for a refined search**

[NEC](#) developed technologies that rapidly classify and display words that are considered most important within a search result. This enables operators to easily locate important search terms that are most relevant to search results.

In recent years, contact centers are becoming more important as companies seek to improve [customer satisfaction](#) through quickly resolving inquiries and developing new products that reflect customer demands. As companies continue to expand their range of support, it becomes more challenging for them to quickly provide solutions. NEC's semantic [search](#) engine helps to address this challenge and to ensure the high quality of customer services.

Provided by NEC

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