



Enterprise Search

Enterprise data comes in many shapes and forms and can be structured or unstructured. Data is stored digitally and on paper. The amount of data needing to be processed is unprecedented and it is estimated that it doubles every six to twelve months. It is increasingly common that non-electronic data is transferred into digital format due partially to the need to streamline data processing, but also in order to meet the external legal and regulatory obligations requiring lengthy data storage.

Accessing the right data is necessary for making good business decisions – and fast access to vital data results in a competitive edge. The impact of enterprise search solutions on the effectiveness of employees is very important. This is true for private corporations as well as in the public sector and non government organisations (NGO's).

The increasing amount of data stored makes it an ever growing challenge to retrieve and share data. The user must not encounter problems finding data, nor should the user be overwhelmed by too much information resulting from a search. Irrelevant data should be filtered out, relevant data should be highlighted. Ideally, search engines should understand the user – rather than users spending a considerable amount of time adjusting to the needs of the search engine. Furthermore, enterprise data is considered private and proprietary to the organisation. As such, you want to have full control.

Historically knowledge was closely linked to individuals; when an employee left an organisation, a lot of the knowledge left with him. Knowledge management solutions have reduced that problem.

Infolution Enterprise Search is applying advanced technologies and has taken things to the next level; providing users with capabilities not seen before. **Infolution Enterprise Search** provides a competitive edge without exposing an organisation's most important assets, information, to others.

Infolution Enterprise Search understands the user. Not only does it work at a high level of precision to retrieve and recall data, but it provides filters to separate irrelevant data. It is also able to learn along the way and adapt to its user's profile.

Infolution Enterprise Search is designed to address all demands of enterprise search users. It is important to note that the software does not just provide data or information, but knowledge, since context information is provided.

Other key benefits for enterprise search users include:

- Automatic summary of data from multiple sources.
- Applicable to structured and unstructured text data.
- Automated categorisation of documents.
- High accuracy and relevance.
- Automatic extraction and indexation of knowledge from data.
- Very fast access to information.
- Unlimited scalability with data sizes.
- Intuitive interfaces.
- Associative help.



Enterprise search solutions require a good coordination between the customer and Infolution. Although it is relatively easy to install, parameters need to be set and the solution needs to be tailored to the specific client needs. Once the system is up and running, it requires very little technical support. The Infolution team has very strong technical skills and hence is able to install and implement the system in a very short time. One of the unique aspects of buying Infolution solutions is that each project will benefit from the involvement of the founder, one of the world's best experts in semantic search techniques.

Infolution search solutions can also be installed by Infolution distributor partners and or by Infolution OEM partners. The OEM partners have typically embedded the Infolution capabilities within a larger solution set.

Example

An investment bank – a wholly owned subsidiary of one of the oldest banks in the Netherlands – is providing asset consulting and funding to medium sized enterprises. It has been implementing an Infolution based search solution for their analysts and bankers allowing them to get access to company internal as well as external data. A powerful solution was required, since analysts and bankers are confronted with an ever-increasing amount of corporate data, which includes items such as business plans, market research and internal compliance documents. Previously used tools have not been able to keep up the pace of data growth. The Infolution software does not only provide fast and accurate access to information, but it also supports the bank's collaborative team structure enabling knowledge sharing. According to bank executives, the organisation has seen "a quantum leap in productivity and quality for our specialists."

The technology

Infolution Enterprise Search is making use of the **Semantic Search Engine** which uses semantic algorithms, statistical rules (Boolean and Bayesian), linguistic technologies and self teaching and learning capabilities.

There are four major components to it:

Harvest: Data collection from various sources is done with intelligent software utilising a semantic analysis of the text surrounding the actual link. This allows Infolution software to determine the context in which the data stand and ultimately determines the priority of the document for the user.

Analysis: The core of this module is the first ever scalable and commercially viable semantic processor. It operates similar to the human brain understanding and classifying content – and it is capable of learning as it goes along. In other words: not only does it understand the meaning of a user query and the context of a found document, but it can also correlate the two.

Storage and retrieval: An SQL compatible database is the core of the storage module, which is operating on a semantic basis. It allows retrieving more from a document than just the actual content. It allows, for example, summarising a document tailoring it to the intention of the initial request. This is possible because not only facts are stored, but also the relation between them.

Access Control: A conditional module is incorporated that will follow the access control list of the underlying data storage. Infolution uses this information to safeguard that both documents and indexes are only visible to authorised users.

The Infolution engine works continuously, conducting the above four functions in the background, and updating its files as soon as documents are added or modified. Its architecture is such that it provides unlimited scalability and high performance which are critical for searches in large websites or across content rich multiple websites. The engine prepares data for the main functions of the **Internet search solution:** search and summarize.

Search may be regarded as a matching function: in search, queries are matched with document indexes. Search can be applied to structured and unstructured text documents across multiple languages.



Summarize: During the retrieval process, users will encounter one of the most visible benefits of the system: its capability to automatically create a summary. This feature is one of the most spectacular elements of the Infolution software. It is based on a document synthesizer which can take any number of documents and present a summary as one virtual document.

The summary can easily be changed in length without loss of coherence. Also, it can easily be rewritten at any point in time placing an emphasis on different topics as required by the user.

The following features of **Infolution Enterprise Search** make it a very powerful solution for companies of any size:

Scalability: Infolution supports up to 8 WWW servers, 128 file locations, 4 CPUs and allows more than 1000 users to share knowledge.

Industry standard platforms: Allows integrating Infolution technology into existing infrastructures. Not only can it be installed on existing servers, but also does it come with a documented open Application Programming Interface (API) to allow for tighter integration into existing software solutions.

Multi-language support: Allows international companies to standardise across borders. In total 72 languages are supported by Infolution.

User Interface: The rich user interface is especially designed for professional use. It supports the user with dynamic context interactive visualisation. The search engine finds the conceptual context of a search and gives the user a number of intelligent alternatives by relating queries. The contexts of the results are shown in an intuitive three-dimensional graph, in which more important concepts appear to be closer to the user than less important ones. Using visual cues, like mouse-over effects and animation, the system clarifies how and why certain concepts appear.



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