

Knowledge Management

Since the beginning of the 19th century, the volume of information that we have to deal with daily is increasing constantly. But mere information alone is useless. Only understood information becomes knowledge – one of the essential competitive factors of our time.

What is knowledge?

Knowledge in a given context is useful information. Examples for this are the CV of a person mentioned in an article, products that ‘fit’ to other products or recommendations of documents that are based on a user profile. Many companies have huge treasuries of information that waste away in a dark data-‘basement’. With intelligent software, as the InterRed ContentAgents, these useless data can be transformed to useful knowledge.

Its a kind of magic

The InterRed ContentAgents are an innovative recommender, as well as an intelligent search system. They analyse any information basis, for example the content in the content management system InterRed or documents from a file system or content of other websites. This does not involve any manual work, as no additional information (meta information) and no classification regarding structures is required. The mere texts are sufficient. Only in this way, large amounts of data can be used and new information can be taken into account. As the InterRed ContentAgents work fully-automated, they are paid off quite quickly in comparison to semi-automated approaches. The InterRed ContentAgents, for example, learn the connections between texts and the associated concepts. Thereby, the system is able to independently identify similar content for a respective text. Furthermore, it can identify personal names or establish connections between products autonomously. There are diverse fields of application for the unique InterRed ContentAgents. The system is based upon the latest information technology. Innovative approaches, as genetic algorithms, Fuzzy Logic and SNLP create intelligent behavior from bits and bytes - it’s a kind of magic.

Intelligent agents

Building upon the basis technology of the InterRed ContentAgents, different agents are provided. A couple of these are presented briefly below. . .

ContextAgent

Modern knowledge management with ‘semantic web’ technologies. Semantic, intelligent linking of content. Fully-automated topic bundling. Perpetual

analysis of existing content and implication of new information.



The ContextAgent is the semantic recommender system of the ContentAgents. With the latest methods (text data mining, concept detection) textual content is analysed by the ContextAgent and similar content is identified. It is not necessary to manually enter additional information (meta data) – the ContextAgent works fully autonomous. Similar to a human brain, the neuronal network of the ContentAgents applies new knowledge (new texts) on already existing information. The intelligent linking of content enables innovative, intuitive information retrieval, as well as an optimal presentation of existing texts and information. The recommendations that are automatically generated increase the information content, as well as the interest, thereby increasing the click rate and depth of the own website. When using the ContextAgent for an intranet, innovative information retrieval and the optimal use of existing information become possible.

KeywordAgent

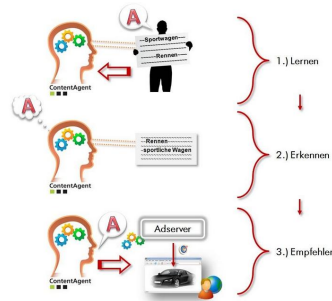
Automatic tagging of texts.

The KeywordAgent analyses texts and autonomously identifies associated keywords. Being based in the ContentAgents, it knows the entire text-universe and is thereby able to concentrate the selection on the so-called ‘discriminating’ keywords. Thereby, manual tagging is a thing of the past.

AdServerAgent

Ideal interface to AdServer applications.

The AdServerAgent enables proactive generation of thematic foci. The thematic foci can be used for placing additional target-oriented content, as for example advertisement. Each article is analysed by the AdServerAgent and automatically assigned to the appropriate topic area. When the topic areas are changed, the assignment of the articles to the topics is automatically updated. No manual work is required. With the AdServerAgent an



Automatic product worlds and efficient advertisement management

up-to-date and target-oriented management of advertisements is made possible.

PeopleAgent

Recognition of persons.

Whether politics, economics, science or history – people move the world. The PeopleAgent independently recognizes persons mentioned in a text. These can then be used for various purposes, for example the creation of a glossary or person-related topic pages. With the PeopleAgent people are at the focus.

RelationAgent

Whether persons, products, companies or others – the RelationAgent recognizes connections and correlations between known entities.

These topic-oriented relations can be used for improving the teamwork of the own employees (intranet), creating person-related content pages (glossaries) or for the research in the ‘relation browser’ SearchAgent.

ProductAgent

Automatic product recognition in continuous text. Perfect, automated interface to e-commerce applications.

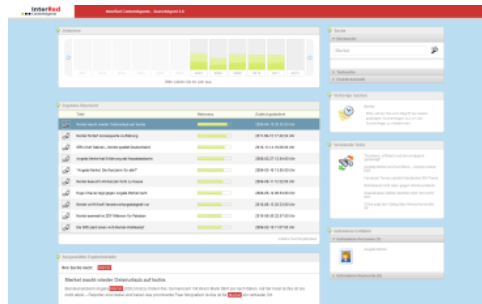
Test and consumer magazines carry out product tests and inform consumers to make buying decisions easier. The ProductAgent enables fully-automated product recognition in continuous texts and offers the possibility to link these products to external application, as online shops or price search engines. For the user it is thereby possible to directly buy the desired product. The operator is able to commercially distribute the tested/advertised



products with the ProductAgent. Due to this, the work-intensive and error-prone manual linking of textual content with product offers becomes a fully or partly automated process.

SearchAgent

Information retrieval for the information age. Sematic search. Information extraction. Innovative text search. Semantic connections. Thematic concentration on the time axis. Dynamic creation of a semantic web.



The SearchAgent is the GUI (graphical user interface) of the ContentAgents. The SearchAgent visualizes the results of the ContextAgent, KeywordAgent, PeopleAgent, LocationAgent and ProductAgent. It uses the SynonymAgent to optimally support users in the finding of words and phrases. Thereby, the SearchAgent enables optimal information retrieval and offers large advantages compared to conventional search engines.

vBulletinAgent

Interface of ContentAgents to vBulletin-communities and -forums.

The vBulletinAgent is the link between communities / forums and the possibilities of the ContentAgents. Especially for the rapidly growing worlds of forums and communities, the ContentAgents offer the possibility to process and analyse the involved huge volumes of information. Together with

the ContextAgent, thematically similar threads can be offered to the website users. With the aid of the ProductAgent, products that are mentioned in texts can be identified. These can then be associated to offers and be provided to the user. The teamwork between the ContentAgents family and communities enables attractive forums with linked content.

SynonymAgent

Semantic Query Expansion (SQE). Expansion of vocabulary with related or synonym words.

The SynonymAgent provides related words to a specific word or a phrase, thereby offering an easy and targeted search function. It is optimally suited for ‘semantic query expansion’, meaning an enhancement of search requests with regard to synonyms, providing the user with better and more precise results than conventional processes do.

LocationAgent

Automatic location recognition in continuous text. Identification of local thematic foci.



The LocationAgent autonomously recognizes all towns within Germany, as well as the important global megacities. This can be used for information retrieval in the intranet/extranet or can be displayed on a map in the SearchAgent. Often hidden connections between a topic and a location are made visible with the LocationAgent.