A core part of decision-making processes involves the meticulous collection of relevant knowledge, from within the organization as well as from the Web. In most cases our searches simply retrieve lists of documents to review, while what we need are more intelligent information systems which respond quickly with precise answers.

At Fraunhofer IAIS, we are developing state-of-the-art technologies to solve this very problem: making information access intuitive.

AskNow, our question answering solution, is capable of retrieving answers from heterogeneous data, as a response to factual questions asked in natural language. Through seamless interfacing between humans and knowledge, easy configurability and high performance, AskNow goes to great lengths to boost the efficiency and productivity of your enterprise.

As a result, different industries can benefit from using AskNow: as a supportive module for customer service in telecommunication companies, as an integrated part of in-car systems in the automotive industry and likewise in countless public sector portals, just to mention a few examples.

To understand natural language and return relevant answers, AskNow applies intelligent analysis techniques, built on Deep Learning as well as semantic parsing-based approaches.

We begin by structuring data and knowledge into a noise-free knowledge graph. To do so, we go through the available resources and find the entities and the relationships between them. Additional ontologies may also be linked as a coherence layer, to cover different aspects of the content and apply an industry-ready structure to it. Thereafter, AskNow can interact and communicate with the knowledge graph and answer factual questions, which refer to the facts expressed there.

We look forward to having AskNow embedded into various enterprise information systems, solutions and services and letting it improve reactively, by learning during its use to give more contextually relevant answers.
CONCEPT AND WORKFLOW OF THE ASK KNOW QUESTION ANSWERING SYSTEM
OUR OFFER

AskNow is capable of answering questions over the knowledge that enterprises generate and accumulate. It focuses on domain-specific knowledge and terminologies, as well as external – structured and unstructured – data sources. AskNow requires minimal user interaction, supports multilingualism and integration with dialogue systems.

- State-of-the-art question answering solution for a defined scope.
- Developing domain-specific vocabularies and adopting internal and external ontologies.
- Applying intelligent analysis techniques, including Deep Learning and Semantic Parsing.
- Expandable to automatic knowledge extraction, named entity recognition (NER) and information extraction (IE) for self-training systems and self-expanding knowledge.
- Performance measuring, results-based monitoring and re-evaluation activities.

Artificial Intelligence and Semantic Data Technologies

Fraunhofer IAIS is working closely with industrial partners in developing state-of-the-art technologies and excellent solutions. Our Artificial Intelligence technologies combined with Semantic Data have proved their application in accessing, linking and searching data to enrich the IT capacity of many organizations. Through our participation in the HOBBIT Project\(^1\), we have also developed benchmark metrics and tools for QA systems, shaping the future of search engines. HOBBIT aims at abolishing the barriers in the adoption and deployment of Big Linked Data by European companies.

Publications


\(^1\) Project funded by the European Union’s H2020 research and innovation action program, http://project-hobbit.eu
Fraunhofer Institute for Intelligent Analysis and Information Systems IAIS

Schloss Birlinghoven
53757 Sankt Augustin
Germany

www.iais.fraunhofer.de/en/AskNow

Enterprise Information Systems

Prof. Jens Lehmann
Lead Scientist
Phone: +49 2241 14-2792
Jens.Lehmann@iais.fraunhofer.de

Mohammad K. Nammous
Business Developer
Phone: +49 2241 14-2206
Mohammad.Kheir.Nammous@iais.fraunhofer.de