Customer Reference

Company-Wide Search @ MTU Aero Engines

Knowledge management through enterprise search in product data, terminology, technical literature and the intranet page.

INTRAFIND

The Challenge

As a manufacturer of aircraft engines, MTU Aero Engines is responsible for aviation safety in the civil and military aviation. All documentation on the company's projects and products is subject to very high quality standards and the obligation to store these documents up to 50 years and more. Thus, an extensive, continually growing pool of knowledge, documents and information that are stored in different systems, has developed in the course of the company's history. But information must not only be stored according to legal requirements, it must also be retrieved efficiently.

Customer profile

The leading German engine manufacturer MTU Aero Engines, with its headquarter in Munich, develops, manufactures, sells and supports commercial and military aircraft engines in all thrust and power categories and stationary gas turbines. Currently, MTU Aero Engines employs approximately 8,700 people worldwide, around 5,000 of them regularly access internal project and product information.

The know-how of MTU is distributed on the centrally long-term archiving system Siemens Teamcenter, which contains all company product data in the form of PDF/A documents, MTU's intranet and the expert and term database Star/Star Term. Each of these systems has its own search with individual, partly complex search syntax, paired with the disadvantages and limitations of the search capabilities of a database search. For a successful search, the users must not only know the system in which the required information is stored, but they also need to know and master the application-specific search mechanisms.

Benefits of iFinder

+ Improving the quality throughout the research process
+ Uniform, right-checked access to corporate data sources
+ Increasing user acceptance by easier handling of the search
+ Cost minimization through the connection of data sources with a generic XML connector

At an internal event, executives from the department Development & Technology criticized the given search capabilities and asked for a clear and intuitive usable search solution that provides uniform access to MTU's internal data sources. The handling should be as easy for the user as a search on the internet.

The project realization was assigned to Uwe Urra, Head of Product Documentation, Technical Information & Central Archives, who has many years of experience in the implementation of solutions in the Product Lifecycle Management (PLM) and knowledge management and is very familiar with the respective systems and processes at MTU. In the IT department at MTU the project management was given to Dr. Christoph Spleiß, System Architect at MTU. In addition to meeting the technical requirements, the project knowledge management proved to be a challenge also from an organizational point of view. It was neccessary for example, to meet the high requirements for data protection.

„The new search solution delivers the desired hits quickly, easily and reliably - the result: Valuable time savings and satisfied users thanks to IntraFind."

Uwe Urra
Head of Product Documentation,
Technical Information & Central Archives
MTU Aero Engines AG

The Solution

After starting the project, the search began for a powerful enterprise search solution with a modern and scalable architecture. For the exact definition of the project objectives and system requirements employees were interviewed, resulting in the following expectations of users and the IT department:

- Uniform platform (one search page/one search entry field) to search in MTU's various internal data sources
- Easy-to-use solution and search assistance (e.g. through facets) for achieving greater user acceptance
- Scalability and high performance of the system
- Providing high quality search results
- Allowance of complex right and role concept of the source system
- Optimal intergration into the existing IT landscape

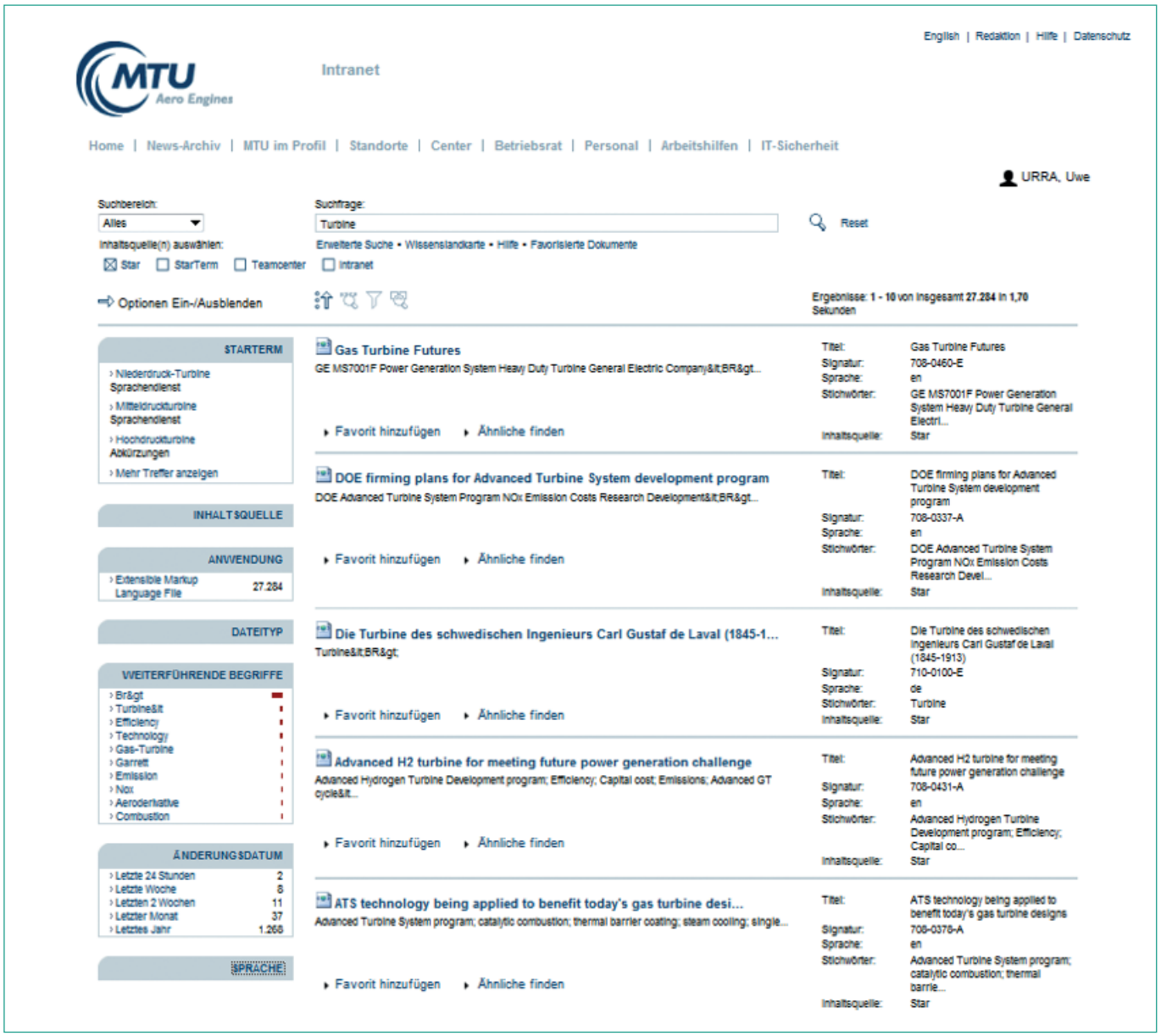

Fig. 1: Numerous facets facilitate a quick limitation of the hit list

Next, a number of software solutions from leading vendors were evaluated. MTU formed a comprehensive project team of IT, Corporate Communications and specialist departments, which executed the selection. Here, Intrafind Software AG was able to prevail with its enterprise search product iFinder. The most important reasons for this decision were the high quality of IntraFind products, the fast and professional performance of the proof of concept and an optimal price-performance ratio.

MTU decided to use the Enterprise Search product iFinder in combination with the qualitative expansion modules Linguistics and Similarity Search. The result is a technically powerful and highly scalable, but at the

„As an engine manufacturer, we are obliged to keep documents for a long time. If necessary, the access to information can be critical. The new solution provides fast, easy and reliable the desired hits – the result: saving valuable time and satisfied users thanks to IntraFind“

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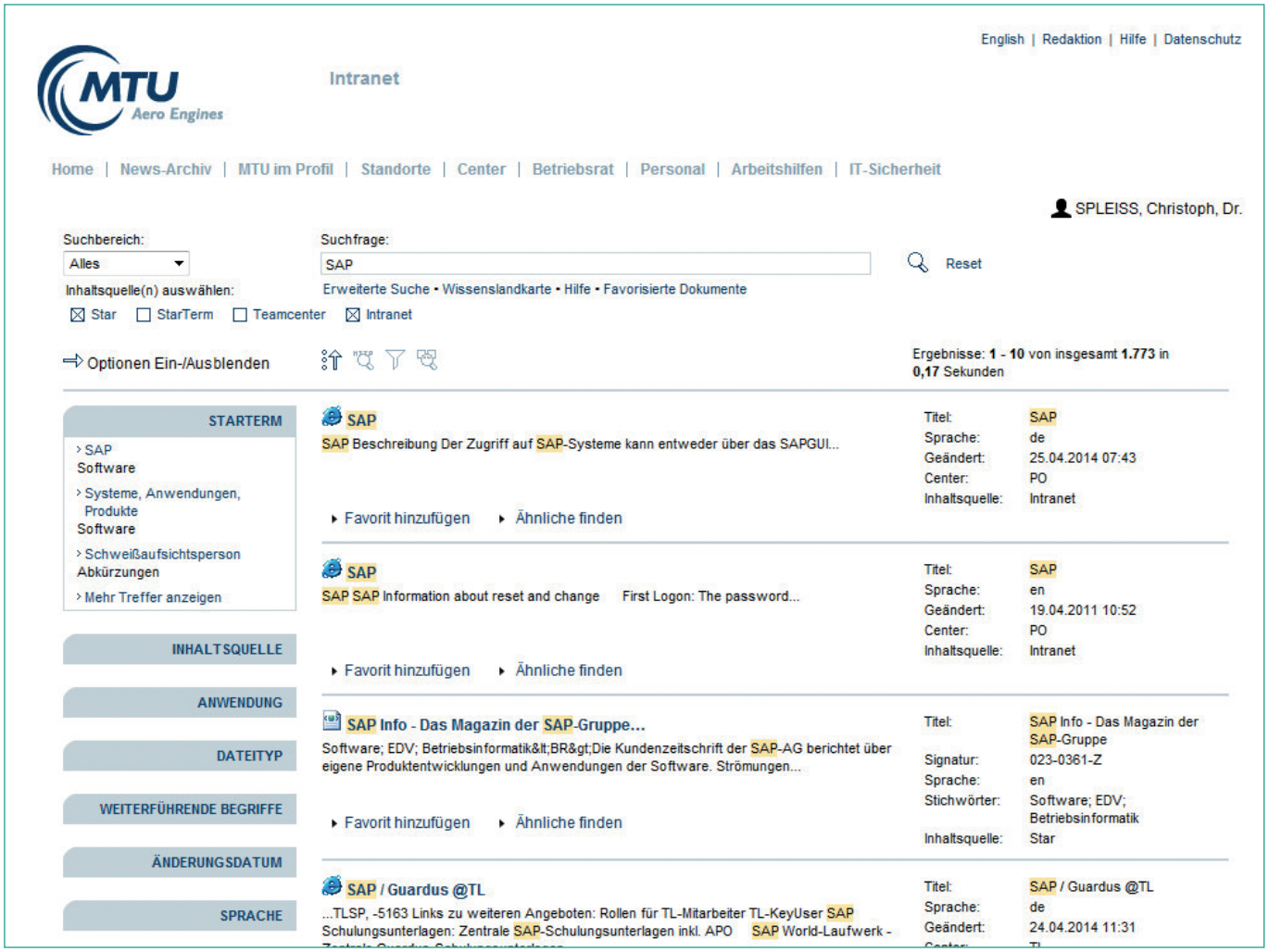

Fig. 2: Search for “SAP“ with hit list, filter function and StarTerm box

same time easy-to-use, user-friendly system that allows users to search the full text of documents as well as the database (metadata). Central point of entry for starting the search is the MTU intranet.

Functionalities on the search interface such as selecting a search area (e.g. intranet or Teamcenter) or refining the search through facets (e.g. limitation of the search results to a specific file type, author, or a specific topic), serve as efficient search assistance and are familiar to the users from browsing in online shops.

The hit list provides a document preview where the search term is highlighted as well as a link that allows users to open the document in the source system. A favorite feature of the users: If they search for a term for which a definition exists in the company's internal expert and term database Star/Star Term, its definition including alternative terms (synonyms) or the associated expert are displayed in a highlighted box on the left of the hit list.

In the background, linguistics and a powerful relevance determination cater for a high quality of the hits. Uppercase or lowercase, singular or plural form, correct spelling or typing errors aren't an issue - the search query of the user is always processed correctly and leads to the desired result.

Also the requirements of the IT department could be met. The adoption of user rights from the source systems ensures right-checked research - no user sees documents for which he is not entitled. The allowance of the complex role and rights concepts had been tested in extensive test scenarios. The load distribution on different servers ensures high system reliability. By using the generic XML connector of IntraFind, the complexity of linking different data sources could be reduced significantly.

This mainly affects the indexing process: MTU requested that changes in the document inventory (add new documents/change or delete existing documents/change user rights) need to be transferred to the live search very quickly and without high manual efforts. This requirement has been realized through the use of the XML connector, which tracks and displays any change in the index in no time. Therefore, the overall system is much more robust and flexible than a native connection to the data source systems via individual connectors. Moreover, the use of the XML connector is more economical than a native connection - an important advantage for the customer MTU, since the integration of data sources and the mapping of complex rights and role concepts are always the biggest cost factors of an enterprise search project.

Summary

The enterprise search of MTU Aero Engines was successfully taken into operation in late 2013. Key to the project's success was, according to the responsible project manager Uwe Urra, on the one hand the selection of a proper provider with high quality products and solutions. On the other hand, it proved to be a wise strategy, to comprehensively involve the users at an early stage and consider their wishes when defining the project objectives and system requirements. Also the Corporate Communications department, which is in charge of the MTU intranet, was involved and took over the internal project communication after going live with the solution.

"When we thought about the introduction of an enterprise-wide search, we did not realize what a wide range of possibilities is available in this field. Some functionalities, which initially appeared useful and important to us, were overruled in the course of the project. We were able to benefit from the extensive search expertise, many years of project experience and high advisory skills of the IntraFind experts."

Uwe Urra
Head of Product Documentation,
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Through the consulting services of IntraFind, MTU succeeded to avoid typical pitfalls in enterprise search projects that could jeopardize the project's success. In addition, the project team was able to overcome the mentioned organizational challenges and completely refute concerns regarding a comprehensive search solution. An intensive test phase gave proof of the high quality and accuracy of the solution.

A great success of the knowledge management project is the high user acceptance: Shortly after the implementation, the new search solution showed around 20,000 hits per week, which corresponds to a tripling of searches compared to the old solution. „We were able to tremendously increase the use of our most valuable corporate resource, our product data, and receive very positive feedback from our users. With IntraFind we definitely chose the right partner," is the conclusion of IT project manager Dr. Christoph Spleiß.

In a planned next step, the search should be expanded with additional functions.

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