**Interdisciplinary Project**

Stand: 08.06.2017

The Fraunhofer Institute for Building Physics, Branch Nürnberg, Working Group Technical Building Systems is offering an Interdisciplinary Project with the topic:

„**Product Data Exchange for Heating Ventilation and Air Conditioning Equipment using Linked Data Principles**“

The Fraunhofer Institute for Building Physics IBP focuses its work on research, development, testing, demonstration and consulting in the various fields of building physics. It is internationally known and connected to companies and academia. The work group Technical Building Systems focuses on integrated solutions of building envelope, technical equipment and operation strategies. Main goal is to provide maximum comfort to occupants in buildings, while keeping costs reasonable and minimizing the use of energy.

Over the life cycle of a building product data for various components of the building as well as its technical equipment need to be specified and exchanged. For example, simulation-based evaluation of design alternatives of a component for a heating system allows assess and compare candidates of boilers for a certain installation. For configuration and parameterization of these simulation models product data is required. The VDI3805 standard defines a format for product data exchange specifically for the domain of heating ventilation and air conditioning (HVAC). Automatically integrating this data for simulations seems to be a promising path for better informed decisions on purchasing a certain piece of equipment.
Im Rahmen dieser Arbeit soll:

- Review of the state-of-the-art of product data exchange in the domain of Heating, Ventilation and Air Conditioning equipment;
- Development of a formal model for HVAC product data based on the VDI3805;
- Implementation of a web application to publish VDI3805 conformant product data as a SPARQL end point.

Zu Ihren Eigenschaften zählen Sie:

- Studies in computer science, web design, engineering or similar on a masters level;
- Advanced programming skills in Python, Java or JavaScript;
- Solid background on the Semantic Web technology stack (RDF, OWL, SPARQL);
- You are a team player and you have a goal oriented working attitude. You work is considered to be precise and you are able to document your work and results in a structured manner;
- You are fluent in English or German.

Ideally you have demonstrated all or one of these skills in previous projects.

What you can expect:

Fraunhofer is Europe's largest application-oriented research organization. Our research efforts are geared entirely to people’s needs: health, security, communication, energy and the environment. As a result, the work undertaken by our researchers and developers has a significant impact on people’s lives. We are creative. We shape technology. We design products. We improve methods and techniques.

Joining our young and dynamic team for your Interdisciplinary Project allows you to get deep insides into ongoing research projects and helps you to start your scientific career from sharpening your scientific profile.

General:

Contact:

Please send you application in the usual format including the identifier to:

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Please contact in case of questions related to the topic to:
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