

Platform for Smart Data Research Starts Operation

Information Technology for Big Data in Industry and Daily Life / SDIL Links Research with Application / Project Presentation at the National IT Summit

Big amounts of digital data are gaining importance in industry and society, for instance, when efficiently controlling power grids, machine parks, or urban traffic. Now, the Smart Data Innovation Lab, SDIL, has started operation at KIT. On this national research platform, the tools required for handling these big data are to be developed. Industry and research cooperate closely in order to produce economic and societal added value from the big data and to generate smart data.

“We are very happy that we found so many competent partners for the SDIL,” Wilfried Juling, Head of Division 2 – Informatics, Economics, and Society of KIT, says. The consortium agreement and, hence, corporate charter of the SDIL was signed by leading companies and research institutes in various sectors: Bayer, Bosch, EnBW, IBM, SAP, Siemens, Software AG, the German Research Center for Artificial Intelligence, Fraunhofer IAIS, Forschungszentrum Jülich, and KIT. Another 50 partners are associated. “Together, we will develop new algorithms and instruments to manage big data and to make them usable as a source of knowledge for our society.”

“Already prior to the establishment of the platform did the partners fill SDIL with life,” emphasizes Michael Beigl, Coordinator of the SDIL at KIT. In four working groups on energy, smart cities, medicine, and industry 4.0, project ideas were discussed and first pilot projects identified. Now, the projects enter the implementation phase. Science and industry jointly generate new innovative applications. Among the research topics are decentralized energy markets, flood protection, and personalized medicine. “As soon as the SDIL will be in full swing, we want to work on about 30 smart data projects in parallel,” Beigl says.

“For the work of the SDIL, two high-performance data systems are presently available at the KIT,” emphasizes Bernhard Neumair, Director of the Steinbuch Centre for Computing, where the SDIL infrastructure is operated. The hardware will grow with the increasing demand of the research projects. Moreover, the SDIL will offer diverse and unique software equipment for smart data innovation. This includes the software

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packages of the partners SAP: HANA, Software AG: Terracotta, and IBM: Watson.

The SDIL supplies a research platform and latest analysis functions, by means of which big data of companies (real data sources) and publicly available data sources can be evaluated. In addition, the platform is planned to enhance information flow among individual branches and to result in competitive advantages for the companies. Small and medium-sized enterprises in particular are granted unique access to the infrastructure and know-how to foster their big data applications.

Via the SDIL, scientists are granted access to data of industrial processes under defined projects. These data are stored safely on the platform. The analysis of the data, such as the description and structurization of specific data sets or the finding of anomalies, take place in close cooperation with the industry partner, thus ensuring rapid knowledge and technology transfer. The participating research institutes will also develop universal tools and methods for data analysis. Via the platform, these tools and methods will be made available to all participants of the Smart Data Innovation Lab.

Apart from the SDIL, the KIT already operates other infrastructures for big data. Examples are the GridKa Data Center as part of the worldwide distributed network of the European Particle Accelerator Center CERN and the Large-scale Data Facility, LSDF, for science in the state of Baden-Württemberg. The KIT coordinates the Large-scale Data Management and Analysis – LSDMA project of the Helmholtz Association. For years now, the informatics institutes of KIT have been focusing on analysis methods, evaluation algorithms, and data security.

The concept of the SDIL research platform was developed by the working group “Education and research for a digital future” of the national IT summit of the federal government. The working group concentrates on the education and further qualification of specialists as well as on research for the digital future and has already implemented two successful initiatives in this connection: Software Campus Network (2011) and Academy Cube (2012).

The SDIL is embedded among others in the Baden-Württemberg Initiative “Forward IT” that is planned to strengthen the interaction of industry and science in the areas of industry 4.0, company software, mobility, and IT security.

Homepage of SDIL: www.sdil.de.

The Karlsruhe Institute of Technology (KIT) is a public corporation according to the legislation of the state of Baden-Württemberg. It fulfills the mission of a university and the mission of a national research center of the Helmholtz Association. Research activities focus on energy, the natural and built environment as well as on society and technology and cover the whole range extending from fundamental aspects to application. With about 9400 employees, including more than 6000 staff members in the science and education sector, and 24500 students, KIT is one of the biggest research and education institutions in Europe. Work of KIT is based on the knowledge triangle of research, teaching, and innovation.

This press release is available on the internet at www.kit.edu.