PRESS RELEASE

Fraunhofer IIS presents technologies for the Internet of Things and Industry 4.0 at CeBIT

Erlangen/Hanover, March 15, 2016 – CeBIT, Hall 6, Booth B36: In the Internet of Things (IoT), objects and products communicate and link up independently and exchange important information. With MIOTY, the Fraunhofer Institute for Integrated Circuits IIS is presenting an intelligent platform for IoT applications at CeBIT 2016. Up to 100,000 sensors can connect to the platform at the same time and send and exchange information. Transmission from the sensor to the platform is by means of a patented and robust wireless protocol, which works even over large distances and guarantees reliable relaying of the sensor data. MIOTY can be used for IoT applications in digitized production and for long-distance querying of data in intelligent environments. Fraunhofer IIS also shows the practical use of intelligent wireless sensor networks for goods picking and in digital production, as well as in software-based energy management solutions with a special safety security.

The basis of the Internet of Things is formed by intelligent sensors and wireless communication technologies that link objects, systems, and persons together and relay important data for subsequent actions and process independently. In order to guarantee reliable, problem-free transmission, the Fraunhofer IIS scientists at CeBIT 2016 will present new wireless protocols, software platforms, intelligent sensor networks, and energy management solutions. These technologies can be combined with one another in a robust, energy-efficient, and intelligent manner in order to carry out various applications in digital production, in logistics, in goods picking, or for remote maintenance. This year, at our new location (Hall 6, Stand B36), the IIS developers will show practical solutions.

MIOTY - wireless communication as the basic technology for the Internet of Things and Industry 4.0

Small, robust, and energy efficient – that are the sensors of the MIOTY platform, which can be integrated into every environment whether it is a production plant or a smart city. Equipped with a special, patented wireless protocol, up to 100,000 sensors can transmit their data via this protocol to the MIOTY platform, even over distances of several kilometers. There, the information is collected and relayed for additional actions or

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to provide detailed information to other sensors or actuators, just as is required by applications on the Internet of Things. The wireless transmission process requires the relaying of several data packages that ensure that no information is lost – this is particularly important when this information is required to provide additional settings, such as when monitoring large plants or in automated production systems. The sensors can be used for many years without requiring maintenance, which is particularly energy efficient.

s-net® - wireless multi-hop networks used for production preparation and goods picking

Production preparation and goods picking can be optimized using intelligent, energy-efficient sensor network technology. The information about the goods or production parts required is transmitted individually and wirelessly to the removal shelf in question for each job. Thanks to bidirectional communication, light-guided picking reacts immediately once the removal of the goods or parts has been confirmed. A new job is then displayed. A color code guides the goods picker directly to the correct shelf, where the picker is shown the number of parts to be removed. After confirmation, the picker is guided to the next shelf. The technology can also be used for subsections or individual shelf aisles and is an intelligent, upgradeable solution for medium and large enterprises that are on the look-out for a practical and efficient way to get into Industry 4.0 applications.

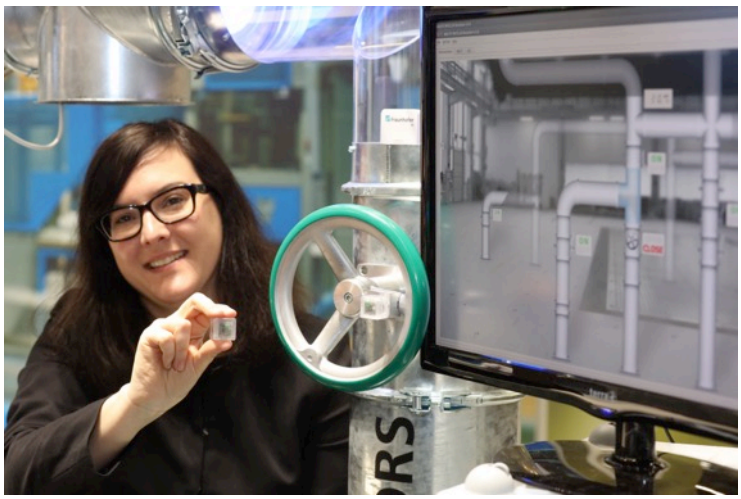
Energy management and Industry 4.0 with OGEMA 2.0 to unite different communication languages

There is a wide range of communication languages for the use and control of energy systems and devices, from ZigBee® and HomeMatic to Modbus. The software platform OGEMA 2.0 offers the ability to integrate energy management and control, as well as industrial processes, into a single system. The Fraunhofer IIS experts show how convenient it is to create your own applications to allow control by means of mobile devices. The incremental security concept developed by the scientists offers different setting options and individual user rights depending on the application and whether it is for professional or personal use. A test version of the software is available from the website www.iis.fraunhofer.de/ogema.

Precise and compact information – the Fraunhofer technology briefings at CeBIT

With the Fraunhofer technology briefings, the Fraunhofer institutes would like to address the CeBIT attendees who don't have a lot of time to spare. On Wednesday, March 16th 2016, Prof. Alexander Pflaum of the University of Bamberg and Dr. Günter Rohmer, Head of Division Positioning and Networks at Fraunhofer IIS, will present trends and technologies for the digital value creation chain and Industry 4.0 and will

discuss ways of getting into Industry 4.0 applications with various representatives of industry.



MIOTY – IoT platform for Industry 4.0 applications.
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s-net™ technology used for PickbyLocalLight application.
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OGEMA 2.0 links energy worlds. © Fraunhofer IIS/Kurt Fuchs | Picture in color and print quality: www.iis.fraunhofer.de/en/pr