



Today's security for the cyber-physical systems of tomorrow

Wibu-Systems integrates CodeMeter in Smart Factories, the future of industrial automation

Karlsruhe/Kaiserslautern, Germany, June 13th, 2013 – At the Hannover Messe 2013 Wibu-Systems has shown with its security solution CodeMeter[®] how to effectively protect production processes in the Age of Industry 4.0. Within the framework of the BMBF project RES-COM, a mobile demonstration plant for the factory of the future has been developed. Named "SmartFactory^{KL}" by the German Research Center for Artificial Intelligence (DFKI GmbH), it has been equipped with CodeMeter as the security component meant at protecting the transport algorithms.

The SD card form factor of CodeMeter, namely "CmCard/SD", is plugged into the smart and mobile carrier that transports the product across the different manufacturing workstations. Upon removing the CmCard/SD, the mobile workpiece stops and the production process interrupts for safety reasons.

The CmCard/SD contains two components: the CodeMeter functions which are enabled through a smart card chip, and an industrial flash memory that holds the boot image of an operating system or configuration data. For encryption, decryption and electronic signature operations, algorithms such as AES 128, RSA 2048 and ECC 224 are used.

The increasing interconnectivity of machinery, plant and equipment in production requires special security mechanisms. Wibu-Systems has expanded its CodeMeter technology in view of the Industry 4.0 needs. It includes in fact embedded software protection from copy and reverse engineering, through the encryption of source code. In addition, the electronic signature of code and a certificate verification chain allow CodeMeter to protect the individual machines from



tampering. Furthermore, digital authentication certificates can be stored in the protected memory of the security hardware.

The CodeMeter product family has become a complete platform that, through a hardware device, i.e. a USB dongle, SD card, micro SD card, CF card, prevents production deviations in volume and quality. All available form factors from Wibu-Systems are suitable for the factory life; they have in fact been certified to withstand ample temperature and humidity ranges, be fully operative even in case of strong electric and magnetic fields, and easily retrofitting into existing systems.

Professor Wolfgang Wahlster, CEO and technical-scientific director of DFKI in Saarbrücken, Kaiserslautern, Bremen and Berlin, and one of the fathers of the futuristic project Industry 4.0 explains: "With Industry 4.0, the Internet of Things is entering the factory. A number of cyber-physical systems control the factory from remote and improve the efficiency, allowing at the same time cost advantageous small batch production. However, a critical acceptance criterion for the Internet-based factory is the security aspect, so that attacks of any kind can be averted. This is only possible with preventive security measures that prove their flexibility and practicability in industrial environments."

"In my opinion, a good cooperation between research, industry and trade associations is necessary to offer solutions characterized by security and usability. We feel called to take a pioneering step for the security of embedded systems. By dispensing our expertise in security, we can participate in the fourth industrial revolution and ultimately do our part in strengthening Germany's position", declares Oliver Winzenried, CEO and co-founder of Wibu-Systems.

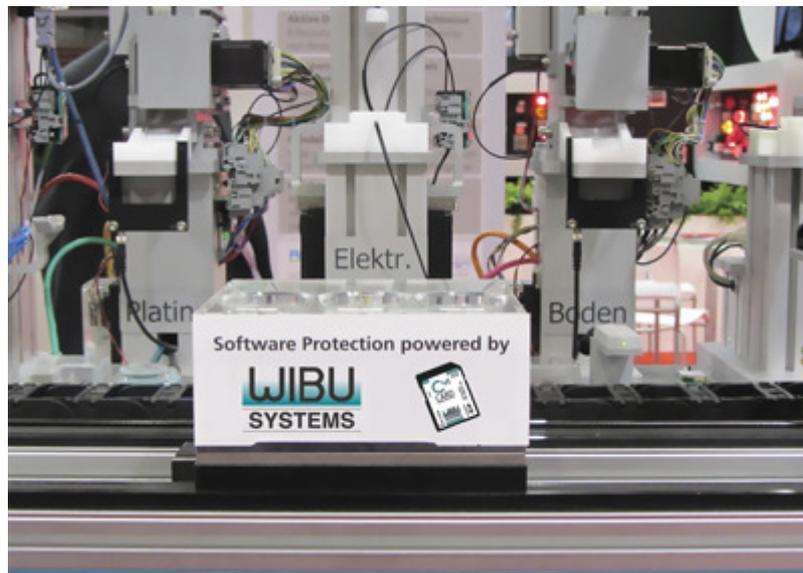


Figure: The CmCard/SD of the CodeMeter family protects the transporting algorithms in the factory of the future, just as illustrated in the "SmartFactory^{KL}" example of DFKI.

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WIBU-SYSTEMS AG (WIBU[®]), founded in 1989 by Oliver Winzenried and Marcellus Buchheit, is an innovative security technology leader in the global market of lifecycle software licensing. The broad range of Wibu-Systems solutions is unique and offers digital asset, intellectual property and integrity protection to application fields ranging from computers to mobile, from embedded automation to cloud computing, from SaaS to virtualized models.

Media graphic resources available at: <http://www.wibu.com/photo-gallery.html>

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The German Research Center for Artificial Intelligence, with sites in Kaiserslautern, Saarbrücken, Bremen (with an associated branch in Osnabrück) and a project office in Berlin, is the leading German research institute in the field of innovative software technology. DFKI projects cover the whole spectrum from application-oriented basic research to market- and client-oriented design of product functions. Currently more than 435 employees from 60 countries are conducting research focusing on Artificial Intelligence and its application.

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