



Demo

The Industrial Internet of Things

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Abstract

The application of the Internet of Things to manufacturing is the driving force of thenew industrial revolution (Industrie 4.0). In fact, most activities in the manufacturingindustry can benefit from the data collected in the context of the industrial process. TheIndustrial Internet of Things (IIoT), whose pillars are the usage of IP communicationbetween the devices and making the devices accessible through the Internet, can maximize the benefits of the information by the integration between multiple data sources, and by the ubiquitous fruition of the information itself.It is common belief that IIoT will transform companies and countries, opening up anew era of economic growth and competitiveness, since it has great potential for improving quality control, sustainable and green practices, supply chain traceability, andmaintenance of the user in the loop. Anyway, a number of challenges arise in this context, related for example to adaptability and scalability, real-time communication andQoS, and system deployment and management. A communication middleware can support the IIoT vision by coping with these issues. This talk introduces the IIoT, discusses its benefits and challenges, and presentscommunication middleware developed in different sub-areas of IIoT (service-orientedindustrial informatics [1], smart grids [2], maintenance of industrial machines [3]) thatenable the IIoT vision.

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This talk introduces the IIoT, discusses its benefits and challenges, and presents communication middleware developed in different sub-areas of IIoT (service-oriented industrial informatics [1], smart grids [2], maintenance of industrial machines [3]) that enable the IIoT vision.

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