

Challenges for Interface Designers in Designing Sensor Dashboards in the Context of Industry 4.0

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Abstract : Industry 4.0 is the fourth industrial revolution that focuses on interconnectivity of machine to machine, human to machine and human to human via Internet of Things (IoT). Technologies of industry 4.0 facilitate communication between human and machine through IoT and forms Cyber-Physical Production System (CPPS). In CPPS, multiple shop floors sensor data are connected through IoT and displayed through sensor dashboard to the operator. These sensor dashboards have enormous amount of information to be presented which becomes complex for operators to perform monitoring, controlling and interpretation tasks. Designing handheld sensor dashboards for supervision task will become a challenge for the interface designers. This paper reports emerging technologies of industry 4.0, changing context of increasing information complexity in consecutive industrial revolutions and upcoming design challenges for interface designers in context of Industry 4.0. Authors conclude that information complexity of sensor dashboards design has increased with consecutive industrial revolutions and designs of sensor dashboard causes cognitive load on users. Designing such complex dashboards interfaces in Industry 4.0 context will become main challenges for the interface designers.

Keywords : Industry4.0, sensor dashboard design, cyber-physical production system, Interface designer

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