Validation of a framework for future assembly information systems

Introduction
The Volvo Group is one of the world’s leading manufacturers of trucks, buses, construction equipment and marine and industrial engines under the leading brands Volvo, Renault Trucks, Mack, UD Trucks, Eicher, SDLG, Terex Trucks, Prevost, Nova Bus, UD Bus, Dongfeng, Sunwin Bus and Volvo Penta.

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Description of thesis project
In order to improve production quality and prepare for an even more competitive market with dispersed demands, the IT infrastructure within production needs to be further developed. In terms of assembly work instructions, the IT systems must in flexible and dynamic means, deliver valid assembly information to the operators in an optimal manner. In previous work, a framework for future assembly information systems has been developed to assure that current challenges and requirements for future functionality are grasped when new IT solutions are developed.

Currently, we are developing a physical demonstrator which comprises the requirements based on the developed framework. The aim of the master thesis project is to conduct a validation of the newly developed framework for future assembly information systems. The physical demonstrator will be used to conduct the validation. The validation will be conducted within the scope of X-beam preassembly, a part of the truck chassis. The master thesis work will be focused on designing the validation study, conducting the validation with appointed stakeholders (operators) and performing the data analysis.

Suitable background
2 Students are required for this master thesis project, preferably from the Industrial Engineering, Mechanical engineering, Automation & Mechatronics (I/M/Z) programs with focus on production.

Starting date
2018-01-08

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