

Subject: Workflow Management System with Mobile Devices Management.

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Abstract:

The primary goal of the system is to improve the quality of service by ensuring complete execution, continuous monitoring, and accurate reporting of compliance. The system enables the definition of each service procedure as a workflow process, stored in XML format.

Supporting the system relies on providing detailed descriptions of the tasks to be performed and technical documentation which describes these tasks in detail using e.g. augmented reality (AR) and/or technical documentation such as pictures, technical documents, 3D models with animation, movies, and parameter values). In addition, the system automates certain actions, such as measuring and decision-making.

A serviceman can utilize mobile terminals or AR glasses, along with Bluetooth measurement devices. Once registered in the workflow system, these tools facilitate the transmission of measurement results from the procedural level to the workflow management system. All sent values can be validated in the workflow procedure and stored in the process documentation for reporting purposes.

Related funding:

- The European Regional Development Fund under the Innovative Economy Operational Programme, POIR.01.01.01-00-0170/17. (Altrad Babcock Europe S.A. and AGH Technical University).

Related publications:

1. Chmiel W. et al. Integration of image analysis component with industrial workflow management system, Multimedia Communications, Services and Security, 11th international conference, MCSS 2022, Poland (2022). Springer Nature Switzerland Cham.
2. Chmiel, W. et al. Workflow management system with smart procedures, Multimedia Tools and Applications (2022), vol. 81 iss. 7.
3. Chmiel, W. et al. Workflow management system with automatic correction. Multimedia Communications, Services and Security, 10th international conference, MCSS 2020, Poland (2020). Springer Nature Switzerland Cham.

Related patents:

Patents pending (selected):

Diagnostic and repair support system, P.448198, [WIPO ST 10/C PL448198], Altrad Babcock Europe S.A., Rybnik, Polska.