

Virtual MTM – Analysis of a Packaging Working Place

Keywords: Virtual Reality, Measured-Time-Method



Overview

To classify a process consisting of various steps and interactions, industry often relies on so-called Measured-Time-Method (MTM). With this method, each interaction of an employee is identified and its execution time is recorded. In many cases, using such a method helps improve, even optimise, manual working steps due to reduction of redundant auxiliary interactions or sometimes even work process iterations.

In this project, you model, implement, and evaluate a working place specified by the industry partner based on MTM.

Tasks

Will be specified in detail in close collaboration with the industry partner Geberit A.

In general, a working place will be modelled and thus ported into a VR capable coding environment called Unity3D. In Unity3D, the manual interactions with products need to be implemented and tested. Optionally, the complete system will be further presented and evaluated at our industry partners site.

You present your work in an intermediate and a final presentation to the ICVR lab. Finally, you summarise your results in a written report.

Workpackages

- Literature research on the state-of-the-art MTM and its adaption to VR
- Projection of real working place into VR
- Implementation of VR interactions of the working place
- Optional: User study and evaluation of recorded data
- Intermediate and final presentation
- Written report

Skills

- Basic programming skills, preferably in C#/C++
- Unity and/or VR experience is a plus
- Strong communication and interpersonal skills

Results

The results of this thesis need to be summarised in a written report and will be presented to the ICVR in a 20min talk.



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