VIPER

Visualization of Industry Processes in Enhanced Reality (VIPER)

Abstract for Final Presentation Days

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The V.I.P.E.R. project's goal is to create a new generation of instruction manuals for industrial (not only space) usage. Regular manuals are mostly paper based, at best a digital version in html or a PDF is available. VIPER pushes the presentation into a new dimension – a combination of physical reality and computer-generated content. Augmented reality does exist for many years, but only recently the power of regular devices like mobile phones or wearable glasses make it possible to use it in real life. The major problem still stays – how to generate the AR content in a quick and possibly automated manner. Here is the outcome of VIPER – a complete authoring, provisioning and presentation suite.

The Creator is a process modeler that combines step-by-step process descriptions with 3D CAD models and makes it easy to create user manuals. The Creator can load standardized manuals from S1000D format widely used in the aviation industry and can semi-automate the manual creation.

The Player is a mobile application capable of running on multiple platforms (HoloLens, iOS and even Android), that presents the instruction as a multimedia presentation in a 3D environment. It is also capable of storing the user's performance and providing a work report. It can run both on-line and off-line.

In VIPER, Misterine s.r.o. and GE Aviation Czech s.r.o. joined forces to provide a representative and validated set of instruction manuals for the GE new turboprop engine.