

13.1.2015

## A new research project aims to develop novel augmented and virtual reality applications for industry use

**The goal of a new research project is to bring construction plans, models and product information to use outside of office buildings in an accessible and user-friendly form. The project is a joint effort between the University of Turku and several partner companies.**

Technology Research Center at the University of Turku has started a two-year MARIN2 (Mobile Mixed Reality Applications for Professional Use) research project. The project's research focus is in augmented reality and virtual reality.

The project builds on top of the research conducted in MARIN, a previous undertaking that researched augmented reality in the marine industry setting. In MARIN2, researchers and industry partners aim to take the results and experiences of the previous project in an effort to develop novel applications and to make them usable in other fields of industry.

### Plans and product information made easily available and accessible with new technology

One of the main goals of the project is to research how information regarding infrastructure and other construction targets could be extracted from separate documents and databases and brought to the end users in a user-friendly, always up-to-date form.

– In practice this could mean a system, with which users could observe the surrounding environment through augmented reality glasses, making it possible to simultaneously see the real environment and the virtual models of structures, some of which could even be obstructed or not even constructed yet. The user could also choose the visible information layers and make modifications to the virtual environment when for example noticing structural damage in the real world. The idea is that the virtual elements that are drawn into the user's field of view would function as a link to the information that they represent, describes **Teijo Lehtonen**, the project leader of MARIN2 from the Technology Research Center at the University of Turku.

Successful implementation of such a system would make it possible to request and receive information instantaneously at the construction site. It would also lower the need for manual information transit and translation considerably. Additionally, the system would make the communication between planners, workers and maintenance people much more efficient by bringing technical information directly to where it is needed.

The project is funded both with Tekes funding and by the industrial partners. In addition to the research conducted at the University of Turku, the partners simultaneously work on their own projects. The project's industry partners are Defour Oy, Destia Oy, Granlund Oy, Infrakit Oy, Integration House Oy, Lloyd's Register EMEA, Nextfour Group Oy and Meyer Turku Oy. The other partners are BuildingSMART Finland, Machine Technology Center Turku Ltd and Turku Science Park Oy.

### More info:

MARIN2 project leader, senior research fellow, D.Sc. (Tech.) Teijo Lehtonen  
[teijo.lehtonen@utu.fi](mailto:teijo.lehtonen@utu.fi), +358 (0)44 440 0005

The project's web page: <http://ar.utu.fi/research/marin2>