

Virtual Reality – “Just to be cool is not enough”

An intermediate report of the FIG Working Group 6.3

Peter Bauer (Austria), Dimitrios Bolkas, Matthew O'Banion (USA), Christoph Blut (Germany) and Werner Lienhart (Austria)

Key words: Education; Engineering survey; Young surveyor

SUMMARY

Immersive technologies such as augmented reality (AR) or virtual reality (VR) have become an important topic in surveying engineering. These technologies can be used where conventional 2D screens reach their visualization limits, and the availability of high-resolution 3D data is already partially challenging conventional approaches. However, the application of immersive technologies still lags behind their actual technical possibilities.

FIG has set up Working Group 6.3 to bring together surveyors with immersive technology expertise to share knowledge but also to support the community. This paper is an introduction to the working group's work and action plan.

An initial consensus in the discussions on the state of the art, was the distinction between the technical state of the devices (e.g. head-mounted displays) and the state of the applications in which they are used. Although great progress has been made in hardware development, and sophisticated devices are available on the consumer market, geodetic applications are mostly limited to demonstration and training. Moreover, the acceptance of the various immersive technologies varies greatly. For example, augmented reality is already part of commercial products, while virtual reality is still lacking widespread commercial adoption. Therefore, a focus of the working group is on VR technology and its promotion as a sophisticated tool for various geodetic applications.

This is to be achieved through workshops, and sample applications and code. An online survey has been set up to ask the surveying industry about their experiences with immersive technologies in order to gain a better understanding of the state of the art, and preliminary results are shared in this paper.

Virtual Reality – “Just to be cool is not enough”
An intermediate report of the FIG Working Group 6.3
(13493)

Peter Bauer (Austria), Dimitrios Bolkas, Matthew O'Banion (USA), Christoph Blut (Germany) and Werner Lienhart (Austria)

FIG Working Week 2025
Collaboration, Innovation and Resilience: Championing a Digital Generation
Brisbane, Australia, 6–10 April 2025