Highly Portable Augmented Reality for Safeguards

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ABSTRACT

Augmented Reality (AR) is a means of overlaying digital information and images upon an actual view of a scene. This differs from virtual reality in which the entire scene is digitally fabricated. AR has been successfully used in any number of of applications, particularly special effects in entertainment industry. However recent improvements in mobile devices, software platforms, operating systems, and multimedia publishing systems have made it possible to implement AR effectively on smartphones, tablet computers, and wearable systems such as Google Glass. Untethered from bulky helmets or computer hardware, AR can now be deployed fairly inexpensively in a highly portable fashion. This poster demonstrates a number of applications based on target images that may be viewed with the smartphone or tablet. The target images represent examples of visualizations of open-source safguards and INMM information displayed using a variety of techniques, which are of interest in their own right. Use cases for combining portable AR with advanced visualization methods include site familiarization, design verification, 3D visualization, tabletop exercises, interactive training systems, and equipment identification.