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AUGMENTED REALITY FOR THE ENHANCEMENT OF SPACE PRODUCT ASSURANCE AND SAFETY

Abstract

The space sector is becoming a highly competitive and dynamic business environment where industry has an increasingly active role and demands higher effectiveness and efficiency to achieve low cost and reduced time to market. On this regard, a growing number of companies in the aerospace industry are leading projects to deploy Augmented Reality (AR) to improve their workplace performance, knowledge transfer as well as workforce productivity. In parallel, national and international agencies in aerospace, such as the European Space Agency (ESA), are running their own studies to evaluate its use to enhance the quality and cost effectiveness of space missions.

We hereby present the results of a study performed by ESA to assess the maturity and potential business value of AR for application to space product assurance and safety activities. An on-line survey and interviews were conducted with product assurance and safety professionals. In parallel, it was also performed a detailed study of five space industry use case requirements and the readiness level of the technology components. This research reveals that the maturity of many components enabling AR may not fully meet the space industry requirements, however there is a great deal of potential for impact and long term benefits from AR introduction.