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SESSION 3 - MODELLING TOOLS
17 . 05 . 2014

# AUGMENTED REALITY DEVELOPED WITH "BuilAR" SUPPORTING TEACHING AND LEARNING PROCESS OF PROJECTIVE GEOMETRY

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ABSTRACT

Regarding teaching and learning, the Augmented Reality (AR) allows student interaction with other "realities" such as surgical training on scenes and / or virtual patients in the medical field. In engineering, it can serve as an aid in the detection of physical interference. As to teaching and learning, it can also contribute to the spatial learning abstract. Searching a viable applicability of AR in classrooms, we have experienced the use of the "BuildAR" Software (free version), which has proved to be useful as a teaching tool. So far, it has been observed that, besides being free, simple and friendly, this software provides good quality in terms of digital projections reading and stability. Positive results in some previous experiments in a Computer Aided Design (CAD) discipline stimulated the wish to verify its applicability in a traditional discipline of Technical Drawing, which already teaches concepts of projective geometry with the use of different media besides the blackboard and clipboard drawings. The aim of the application was the improvement of teaching materials and classroom dynamics, helping to speed up student learning, as this discipline contains only 45 hours of classroom activities. This paper describes the undergone experiment and the viability of this software tool to help to understand concepts of projective geometry.

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