Beyond Imagination

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Abstract

This paper brings information into real time experience through Mixed Reality (MR) technology. Ability to merge real and *virtual spaces* is applied to merging different knowledge types, such as *existing in thought* and *concrete* knowledge. To evaluate whether the merging of knowledge types can benefit learning, MR is applied to an innovative problem in the field of education. We present an approach requiring a single RGB-D *camera* image only for generating *glossy reflections* on virtual objects. Our approach is based on a partial 3D reconstruction of the real environment combined with a *screen-space ray-tracing* mechanism. Learners can experience the information in a *3D (Animation)* format which are incorporated into a *virtual environment* and then *linked* to a real time data associated with that asset.

Keywords
Augmented Reality, 3D reconstruction, Holo Lens, Mixed Reality, OCR technology, Ray Tracing, Virtual Reality

Biography

Deepak T is a Student, Department of Computer Science Engineering at Jyothy Institute of Technology, Karnataka, INDIA. Earned java developer in Computer Science at Bangalore. Worked as front end web designer for the company, Bangalore. Computer Networking and communication. Database management. Programming language skills. Android development. Have been awarded at game developer conference for the game platform provided by corona labs at Bangalore. Intro at national level game developer conference at NASCOM2016 at Hyderabad. Works also as freelancer .Worked on the graphics design, 3d model development, application development, augmented reality, virtual reality. Interests include analyze, construction, development, testing with the real world entity and produce best application, Computer Science department.

Guru Charan R is a student, Department of Computer Science Engineering at Vivekananda Institute of Technology, Karnataka, INDIA. Earned as java and j2EE Developer, Android nano degree, Computer hardware and Networking certification. Worked as a freelancer and notable works are performed into web development, Android application development. Have handled the projects into augmented reality, virtual reality and travelling database. Interests include developments and construction of real time applications, Computer Science department.