PC Assembling Introductory Using Android-Based Interactive Hybrid Reality

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Abstract: Hybrid-Reality combines two emerging technologies called virtual reality (VR) and augmented reality (AR). VR allows us to immerse in a virtual world as if we really are inside a temporal space while AR allows a computer generated object to appear in real world through with the help of several apparatus. Hybrid-Reality allow a mixed between those two concepts which produce a virtual object to exist and attached to the real world environment and can exist to multiple user perspective simultaneously. This attributes of hybrid reality can be used for many purposes including demonstration in computer education field. There are many tutorials about assembling a personal computer (PC) including books and video. In this research we propose another way to learn which may enhance or improve the current conventional method or pedagogical strategies. The completed application allow students to learn how to assembly a PC with simulation through hybrid reality. Over conventional method, the application has several advantages: it presented very realistic 3D object as it uses photogrammetry, it allows multiple users thus enable simultaneous group interaction, and the method does not require a real PC components which can reduce the cost of training activities.

Keywords: Hybrid-reality, pedagogy, computer assembly, photogrammetry, 3D (three dimension), augmented-reality, virtual-reality