

EXPERINN E-LEARNING SYSTEM

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ABSTRACT

This paper describes how digital world elements can be used in ExperInn e-learning systems. ExperInn e-learning system is constructed on the foundation of 2 important base concepts they are 1) Object/Image recognition and 2)Augmented reality and it uses web as the major part of communication between learner and ExperInn e-learning service provider. The goal of the proposed system is to increase “Learners Level of Perception (LLP)” by providing them with realistic audio-visual content when they are leaning. The driving force behind the development of this web-based database delivery mechanism is to provide the benefits of the ExperInn (Experience Innovations) e-learning system to the learners all over the world. The proposed e-learning system consists of uploading scanned images of the textbook to the web, database creation by the experts, downloading the database package by learner, downloading the software and installing the software in the computer, installing the downloaded database files and supporting files (which consists of augmented reality outputs for particular situation and many more), image recognition, color band recognition, augmenting audio-visual content. When the web camera on a PC captures the current page of textbook, the e-learning system first identifies the images on the page, and augments some audio-visual content on the monitor. For interactive learning, the proposed e-learning system exploits the color-band markers which are stuck to the end of a finger. The color-band acts like the mouse cursor to indicate the position in the textbook image. Appropriate interactive audio-visual content is augmented as the marker is located on the predefined image objects in the textbook. Since the proposed e-learning system gives practical knowledge with audio-visual content while learning, it is expected that it will increase learner interest in that concept and encourage learners to discover.

Keywords: ExperInn e-learning system, interactive learning, augmented reality, pattern recognition