Abstract

Delivering affordable education is one of the main millennium goals of the United Nations. Science labs are relatively expensive and hazardous. Dangerous chemical reactions, misusing the burners are two good examples of possible hazards. In this paper, we present KinEd which is a Kinect-based platform that provides students and teachers with an environment where they can download and upload different mini-games and learning tools for different school subjects in a way that encourages human interaction with the material to be learned. Students interact with KinEd using body gestures and postures to perform their experiments. We developed an API for gestures and postures then used it to develop KinEd. The current version of KinEd includes
mini-games for chemistry, biology, physics and Mathematics. We will introduce the analysis and design of the tool and the API together with some snapshots of the environment and samples of the mini-games. We will also include initial assessments to verify the feasibility of using KinEd.

References

- Learning RX. 10 April 2003-2013. 15 April 2013.
- Tracking Users with Kinect Skeletal Tracking. 2013. 25 March 2013
- Mobile Science Lab. n. d. 12 April 2013
- Mobile Science Laboratories. n. d. 22 March 2013
- Scratch web-site. n. d. 20 MArch 2013.

Index Terms

Computer Science  Information Sciences

Keywords
Kinesthetic learning education using games