



Virtual Reality System for Rehabilitation of Children with Cerebral Palsy : a Preliminary study

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Résumé en anglais	<p>We present a non-immersive virtual reality (VR) system for the rehabilitation of children with Cerebral Palsy (CP). Our objective is to encourage and motivate children to improve their limb motor control while playing a game. Two tasks are available : (1) intercepting or (2) to catching / releasing moving objects using a Kinect sensor. These tasks are achieved via the control of a virtual character placed in a virtual island. A control-display ratio is used to virtually increase the child workspace allowing him/her to reach all the approaching objects. In addition, a dynamic difficulty adjustment (DDA) is used to keep a good motivation level. Furthermore, a virtual coach is provided to support and congratulate the children. Twenty healthy children participated in a preliminary experiment. The aim was (1) to collect control data concerning performance and workload, and (2) to investigate the effect of the virtual coach. Results show a good usability of the game and reveal a high rate (More)</p>
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