

Guest Lecture: Issues in Living Room Mocap

Comp 790-058: 3D Game Engines

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Abstract. Motion input devices like Kinect and PlayStation Move have added a new dimension to gaming. Traditionally, motion capture for games was an offline production process requiring a very large, very expensive studio setup with a dozen or more cameras or magnetic tracking devices. Today, the evolution of gaming input from the Wii Remote to the Sixaxis to Kinect and Move have expanded the options for game input, and every gamer can now have a real-time motion capture studio in their living room as part of the gameplay experience. Unfortunately, these consumer solutions using a single camera or a few accelerometers do not quite offer the fidelity of their professional counterparts. Dealing with the problems presented by such devices is increasingly important for game developers.

Dan Amerson and **Shaun Kime**, two engineers at Activate3D, will discuss common problems and various approaches to deal with those problems in the motion gaming space. Issues will include signal filtering for noisy inputs, dealing with limited capture areas, managing discrepancies between virtual and physical environments, and handling fine grained motions like grasping in the absence of palm markers or buttons.