Abstract
The entertainment industry has recently experienced a renaissance in interaction technologies. Many new interfaces have been popularized, from motion-sensing in products such as EyeToy and Wii, to multitouch in portable devices. Now, just as it did for real-time 3D graphics, the video game industry is bringing spatial 3D interaction into people’s living rooms through rather simple, yet effective technologies. This talk describes the underlying technologies that have been used to enable this 3D spatial interaction. In addition, it outlines the benefits and drawbacks of each technology. It will also describe the practical difficulties encountered while moving these technologies from the research lab into real consumer products. Finally, several applications will be demonstrated that use 3D spatial interaction. As will be shown, a wide variety of new experiences can be created using a simple set of 3D spatial interaction paradigms.

Bio
Richard Marks is currently a Senior Researcher in Sony’s US R&D group, investigating new interactive user experiences. Inspired in 1999 by the unveiling of PlayStation 2, he joined PlayStation R&D to investigate the use of live video input for gaming. He developed the technology for the EyeToy camera and worked closely with the Sony London studio to make it a successful product selling over 10 million units. Richard later helped create the PlayStation Eye camera and a computer vision SDK for the PlayStation 3. Concurrently, he explored the use of 3D cameras and the new experiences they could enable. Most recently, he led the creation of Sony’s new motion controller, PlayStation Move, which combines both visual and inertial sensing to enable 3D interaction. Richard received a B.S. in Avionics from MIT in 1990, then received his Ph.D. in 1996 from Stanford University in the field of underwater robotics.