

## Microsoft Elaborates on IllumiRoom

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Remember [Microsoft's IllumiRoom "peripheral projected illusion" system](#) from CES 2014? Microsoft Research builds further on the concept to present RoomAlive, a means to transform any room into "an immersive, augmented entertainment experience."



Currently in proof-of-concept prototype stage, RoomAlive uses a commodity wide field of view projector, a Kinect sensor and a PC to build a projector depth-camera unit (aka procam). The Kinect and PC capture and analyse a 3D model of the room required for the projection of images users can interact with, and keep track of all users-- in other words interactive projection mapping.

Microsoft Research says RoomAlive projection mapping is independent of the room in question, as it takes place in real-time and dynamically adapts to room geometry and colour. Impressively projected images are also in 3D, as the system tracks viewers' head positions to render "view-dependent projection."

The system is scaleable, meaning one procam can provide IllumiRoom-style experiences while six procam units can transform an entire living room into an interactive display. Procam units can be installed around the room light fixture-style, and system calibration takes place automatically.

As mentioned earlier RoomAlive is still very much a prototype, and such a system might be out of pocket for most customers, but Microsoft Research believes the system can become smaller and lower-cost in the future. "There's still lots to explore with RoomAlive as a gaming platform," the RoomAlive team says. "We envision a future where games can use physical objects as part of the game."

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