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GESTURE BASED HARDWARE INTERFACE FOR RF LIGHTING CONTROL

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ABSTRACT

This paper represents the design and implementation of a novel interactive hardware which recognizes certain hand gestures and responds in a way of controlling a remote light source. The hardware is made as a “Hand Sensing” which provides 3-dimensional light control for switching the light on/off or dimming to a desired level. Control parameters are calculated by an accelerometer mounted on the hand, which detects positions of a user’s palm in a 3D space. Slow palm rotation is translated into commands for the light dimming, whereas specific hand movements control the light switching. RF transmitter connected to the accelerometer sends the current palm and hand coordinates to the remote luminary. The luminary is managed by an RF receiver and a module for the light control which translates the received data into lighting commands.