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Audio And Video Transmission System On Visible Light Communication

With the increasing popularity of solid state lighting devices, Visible Light Communication (VLC) is globally recognized as an advanced and promising technology to realize short-range, high speed as well as large capacity wireless data transmission. In this paper, we propose a prototype of real-time audio and video broadcast system using inexpensive commercially available light emitting diode (LED) lamps. Experimental results show that real-time high quality audio and video with the maximum distance of 3 m can be achieved through proper layout of LED sources and improvement of concentration effects. Lighting model within room environment is designed and simulated which indicates close relationship between layout of light sources and distribution of luminance.