

ABSTRACT

FSOCs (Free Space Optic Communication system) has been develop for broadband channel and large data rate. This is transmit electric signal from transmitter to receiver into optic with free space channel. There are many kinds of data, either is video.

Transform electrical domain to optical domain, we need modulation. The video will be extract to frames (images) with DCT2 process, that will change to bits binary unipolar with LED (700 nm).

Design transmitter, receiver, and noise will be place to 3D cartesian diagram, to get maximum path distance from optical wireless indoor communication system.

At receiver, photo detector will absorb incident irradiance with noise and transform to electric photocurrent. It will regenerate pulses unipolar to form images. Acceptance of pulses having a delay because propagation. With bitrate 2,5 Gbps and maximum path distance, be obtained BER=1,396e-6.

Key : FSO, video, visible light