

## A 2 x 2 imaging MIMO system based on LED Visible Light Communications employing space balanced coding and integrated PIN array reception - DTU Orbit (08/11/2017)

### A 2 x 2 imaging MIMO system based on LED Visible Light Communications employing space balanced coding and integrated PIN array reception

In this paper, we proposed a 2 x 2 imaging Multi-Input Multi-Output (MIMO)-Visible Light Communication (VLC) system by employing Space Balanced Coding (SBC) based on two RGB LEDs and integrated PIN array reception. We experimentally demonstrated 1.4-Gbit/s VLC transmission at a distance of 2.5 m. The proposed imaging system not only overcomes the limitation of bandwidth existing in LEDs, but also can reject the second-order nonlinearity distortion. It turned out to be very promising to use integrated antennas in the VLC system in the future. (C) 2016 Published by Elsevier B.V.

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