Title describing the methodology/facility/set-up: Signals and Software group

Keywords: (Maximum 5) Visible light communications, White Space communication, RADAR signal processing, MIMO and Optical networks

Write-up: (Maximum 500 words) Arial font, size 12

Signals and Software group (SaSg) at IIT Indore works on cutting edge R&D in communications, optics and prototype development.

- Identification of White Space in and around Indore region.
- Development of White Space Transceiver based on IEEE 802.22 (PHY layer) using platform independent Open Source Software and LabView on SDR platform.
- Development of algorithms for Sparse Channel Estimation and Equalization.
- Testing and performance evaluation of algorithms on SDR.
- Transmitter and Receiver design for Visible Light Communication for 5G/IoT.
- Receiver design for Ultra-Wideband Communication for 5G/IoT.
- Pre-coder and receiver design for MIMO systems for 5G.
- Transmitter and Receiver design for next generation waveforms.
- RADAR signal processing for civilian and defence application.
- Analysis of Wireless networks with non-linear distortions.
- Service differentiation and reliability of elastic optical networks.