5G Initiative – “5G Roadmap” Working Group

LiFi Atto cellular Networking

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This contribution relates to a new wireless access network based on visible light and infrared and is coined ‘LiFi’ [1,2].

Relation to SDOs and other
- 3GPP, IEEE 802.15.7 and IEEE 802.11

Impact Horizon (short, medium, long)
- short/medium horizon – next three years. Technology is on the market.

From mmWave to nmWave
LiFi Attocell Networking

The idea is to use the vast visible and infrared spectrum (300 THz) to build a new small cell wireless networking layer based on ‘LiFi’ technologies. The principal concept is depicted below. Illumination infrastructure becomes a new small cell networking layers. The communication is bi-directional with an infrared uplink channel.
A new paradigm shift affecting two industries...