Vehicle to Vehicle Communication using Light Fidelity

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Abstract

Intelligent Transport System (ITS) are advanced applications that are used to provide various innovative services to facilitate road safety and traffic management. Vehicular communication is an advance technology that can be used in ITS. Vehicle-to-Vehicle (V2V) communication system using the emerging wireless system provides early warning signals to reduce road accidents and congestions. To improve the safety of the users a cooperative driving is proposed it also helps to improve the efficiency by enabling vehicles to communicate accident related messages with each other. Cooperative driving can also be advantageous in improving the safety of the neighborhood. It assists and help driver to take proper decision and avoid collision and congestion. In this paper design and result of vehicle to vehicle communication using Li-Fi (Light Fidelity), is presented. The proposed use of Li-Fi Technology in this paper comprises mainly of Light Emitting Diode (LED) bulbs as a means of connectivity by sending data through optical spectrum as an optical wireless medium for signal propagation. In fact, the usage of LED eliminates the need of complex wireless networks and protocols. A small scale prototype of
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vehicle to vehicle communication system using Light fidelity is presented.

References

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Index Terms

Computer Science Information Systems

Keywords

Intelligent Transport System, Light Emitting Diode, Visible light communication, Photodiode, Vehicle-to-Vehicle communication