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Abstract

A ZigBee based collision avoidance system for railways has been proposed in this paper. The Train Anti-Collision System (TACS) has four sub centers namely, Train Subsystem, Station/Control Center Subsystem, Signalling Post Subsystem and Level Crossing Subsystem. A safe distance of 1 Km has been given for braking between the trains in case of collision distance. Based on the studies, it has been observed that even for two trains travelling at 120kmph, the safe distance after automatic braking under normal conditions has been estimated to be 920m. All subsystems have been designed and simulated using Proteus electronic simulation package and implemented. It is expected that if this system is

implemented, train collisions can be avoided in the future

Refer

ences

- Bhatt, Ajaykumar A, 'An Anti-Collision Device Network – A train Collision Prevention System (TCPS)';
- <http://www.konkanrailway.com/node/392>
- <http://irsse.wordpress.com/2010/08/29/tpws-or-acd-the-debate/>
- Signal Engineering Manual, Indian Railway Institute of Signal Engineering and Telecommunication.
- <http://www.digi.com/products/wireless-wired-embedded-solutions/zigbee-rf-modules/zigbee-mesh-module/>
- <http://www.iriset.indianrailways.gov.in/>
- <http://www.hindustantimes.com/ACD.html>
- David Barney David Haley and George Nikandros: Calculating Train Braking Distance, Signal and Operational Systems Queensland Rail PO Box 1429,

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Index Terms

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Keywords

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