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## (54) Title of the invention: SAFETY SYSTEM FOR COLLISION AVOIDANCE IN RURAL ROADS AND HIGHWAYS

## (57) Abstract:

This device is conceived and will be developed with a primary objective to avoid head on collisions on curved undivided rural highways. Till date, device-to-device communication and device-to-human communication as a complete mechanism to avoid head-on-collisions has never been devised. Even though, there are studies and inventions related to highway safety and roadway accident mitigations. This invention -is first of its kind to develop such an alert mechanism system with intervention of technology. The developed system will improve the decision-making of a driver in a difficult highway manoeuvring operation, especially due to poor visibility conditions. The devised system will reduce the perception-reaction time, thereby reducing the total safe stopping distance and improving safety for the vehicle and the driver. Furthermqre, this invention will improve road safety and reduce road accident related human and property losses. Since, road way accidents are one of the major causes of fatalities on Indian highways. For example, a study conducted by Gururaj et al. [1] for Tumkur, showed that annual rate of mortality was 18.1/1,00,000/year with majority of deaths due to road tragic injuries (RTI).

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