Advanced Driving Assistance Device with Built-in Pre-Crash and Post-Crash Maneuvers

Technology #013-035-hamdar

Motor vehicle safety is of great concern with the National Highway Traffic Safety administration reporting more than 30,000 fatalities every year due to car crashes. Although recent developments in technology have introduced assisted driving devices to enhance driver safety there is a broad need for improvement and upgrade on such systems. The present invention is a unique driving assistance device that helps overcoming crashes not only preemptively but also incorporates features to avoid hazardous outcomes by post-crash maneuvers.

The basic module acts as a passive driving assistance device, providing the driver with audio-visual signals indicating the risks he/she is taking, taking into account the driver’s perception, judgment and execution process. Another, more advanced module will act as an active driving assistance device and enable the car to conduct maneuvers needed to avoid collisions. This module may also reduce post-collision damage by automatically maneuvering the car based on its surroundings.

This revolutionary feature may improve vehicle safety even after the driver has been incapacitated following a collision and is thus unable to control the car.

Applications:

- Passive system can be licensed as software to be incorporated with GPS modules or assisted driving devices.
- Active system can be used as an assisted driving device and sold as a built-in feature in vehicles.

Advantages:

- The device encourages individual driving behavior by collecting driver’s psychological data.
- Automatic post-crash maneuvers to help minimize damage from collision

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