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[New Night Vision for Intelligent Cars](#)

Based on infrared cameras

Humans are not made for traveling during nighttime: around 42% of fatal car crashes happen at night, taking into consideration that at this time there is 60% less traffic. There's little visual acuity and field of vision at night provided by illumination from the headlights. Now a team at the Department of Computer Architecture and Technology at the University of Granada has created an electronic system that significantly increases night driving ability by employing data provided automatically from night visors. This is part of the European project named DRIVSCO, in which researchers from various countries investigate real-time vision and its application to the car industry. The research made at UGR developed a microchip which can be installed in a car, turning it easier to choose the data from cameras to elements linked to driving (bends, pedestrians, cars etc.) and present on the road. Thus, this system will deliver information to the drivers using visual, acoustic or other clues about the emerging obstacles, turning the intelligent cars even more complex. "Dipped headlights only illuminate about 56 m (185 ft) when the breaking distance at 100 km/h is about 80 meters," said author Professor Eduardo Ros Vidal, pointing that the illumination of the car is insufficient for ideal vision. His team developed that system based on two infrared cameras located on the car which investigate the surroundings much further than the classical headlights illumination. The chip can use data about factors like movement or depth in real time for a rapid detection of specific significant elements and situations. By now, the artificial vision systems can spot objects, pedestrians, bends etc. The system delivers data about the depth of the scene in real time in a color code: warm colors for increasingly close objects (reddish and more dangerous) and cold colors for remote objects (bluish and safer), but also real-time movements, pointing the objects' direction and how the locations change related to the car's movement.