Abstract

The Driver Fatigue Detection (DFD) plays an important role in automobile safety and security. Driver fatigue is one of the leading causes of traffic accidents. Long-vehicles driving are needed to keep drivers under monitoring due to fatigue and more accidents. This monitoring include: eyes blinking, face expressions. Without these monitoring, the accidents is increasing and caused the driver death. Driver’s tiredness and drowsiness are the major causes of traffic accidents on road. This proposed prototype is monitor the driver's fatigue level and analyze fatigue reason's (tiredness, drowsy or a drunken) and real-time DFD online. The proposed model depend on eye gestures (eyes blinking) and sensors such as an infrared camera (camera remotely) to detect driver expression. These sensors directly pointed towards the driver's face. This technology is not interactive with an outside driving situation. The system consist of Mesh network equipped Zigbee protocol, sensors and Xbee tag. The system analyze the variation of driver's eyes movement rate. According that parameters, the system can specify the level of driver's fatigue based on the response signals and alert driver. Practically, this system is robust, reliable, and accurate to detect fatigue levels.
References

Conference on “Fuzzy Systems and Knowledge Discovery” (FSKD 2010).

Index Terms
Computer Science
Security

Keywords
Driver Fatigue Detection, Eyes Blinking, E-Safety.