Abstract

Road accidents, due to the tiredness or the distraction of the drivers, unfortunately became more serious than a war. Although more or less effective solutions were developed to solve this problem, these last remain in general constraining and/or sensitive to the variations of lighting. This paper presents a new approach for analyzing the driver's vigilance based on motion analysis of an on-head reflecting point. Proposed solution is non-intrusive and easily adaptable to all types of vehicles. Moreover, developed tracking algorithm has a low computational complexity and is therefore well suited for a hardware implementation to suit real time driving constraints.


Keywords

Vehicles safety  vigilance analysis  drowsiness  distraction  head motion.