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Transportation Research Part C 16 (2008) 320–331

TRANSPORTATION
RESEARCH
PART C

www.elsevier.com/locate/trc

In-vehicle data recorders for monitoring and feedback on drivers' behavior

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Received 15 April 2007; received in revised form 24 December 2007; accepted 3 January 2008

Abstract

This paper describes the potential of in-vehicle data recorder (IVDR) systems to be used in various commercial and research applications as tools to monitor and provide feedback to drivers on their on-road behavior. The implementation of IVDR is demonstrated using the example of the DriveDiagnostics system. This system can identify various maneuver types that occur in the raw measurements, and use this information to calculate risk indices that indicate on the overall trip safety. Drivers receive feedback through various summary reports, real-time text messages or an in-vehicle display unit. Validation tests with the system demonstrate promising potential as a measurement tool to evaluate driving behavior. Reductions in crash rates and the risk indices are observed in the short-term.

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Keywords: In-vehicle data recorder; Driving behavior; Feedback
