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Application of the situational management methods to ensure safety in intelligent transport systems

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Abstract

The article shows directions of intellectualization of vehicles, analyzed issues and ways to improve safety, reliability and sustainability of transport systems. Methods of situational management are shown. They are based on intelligent technologies for improving safety of complex technical systems. Development and application of precedent expert systems is actual for systems with incomplete information and high complexity of object of management. Such systems reflect decisions by analogy, i.e. according to reports of critical situations, which are potentially dangerous for this object. The object-oriented case model describing the dynamics of dangerous conditions object is developed. Measures on prevention, localization and mitigation of dangerous conditions (such as identification of the dangerous conditions, identify their causes, the safety evaluation, forecasting of development scenarios) are envisaged.

Keywords

Autonomous vehicle, Intelligent transport system, Road safety, Road transport, Situational management

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