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Road vehicles — Ergonomic aspects of transport information and control systems (TICS) — Procedures for determining priority of on-board messages presented to drivers

Véhicules routiers — Aspects ergonomiques des systèmes de commande et d'information du transport (TICS) — Modes opératoires pour la détermination de la priorité des messages embarqués présentés aux conducteurs

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Foreword

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ISO/TS 16951 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 13, *Ergonomics applicable to road vehicles*.

Introduction

When multiple in-vehicle information systems are present, including both transport information and control systems (TICS) and non-TICS, various kinds of messages will be presented to drivers from these systems and displayed at various times. If these messages are not managed properly, drivers could fail to obtain critical information, which may degrade safety. This Technical Specification establishes two prioritization methods for TICS and other system-initiated or driver-requested messages presented to drivers while driving. Other prioritization methods are possible. The primary method given in this Technical Specification takes criticality and urgency ratings of such messages into consideration when calculating a priority index. An alternative method involving paired comparisons of all possible messages to form a priority matrix is presented in Annex A and its relative advantages and disadvantages are discussed.

Priority is one of the parameters to consider in determining when, where and how system messages are to be displayed. As TICS applications are deployed, the number and frequency of TICS messages presented to drivers can be expected to increase. This Technical Specification will provide road vehicle manufacturers and TICS suppliers with a consistent basis for the management of messages competing for the driver's limited information processing capability. This, in turn, will reduce the driver's workload and help ensure that the most important messages reach the driver. This Technical Specification complements ISO 15005 [3], a dialogue management standard.

This Technical Specification is intended for those involved in the design of message management systems that integrate in-vehicle messages. It describes how to establish message priorities. It also specifies criteria for message prioritization and, therefore, serves as an evaluation tool for TICS installed in vehicles as standard equipment and for after-market TICS devices.