SLOVENSKI STANDARD
SIST EN ISO 15007-1:2003

01-oktober-2003

Cestna vozila – Merjenje voznikovega vizualnega obnašanja glede na transportne informacije in kontrolne sisteme – 1. del: Definicije in parametri (ISO 15007-1:2002)

Road vehicles - Measurement of driver visual behaviour with respect to transport information and control systems - Part 1: Definitions and parameters (ISO 15007-1:2002)

Straßenfahrzeuge - Messung des Blickverhaltens von Fahrern bei Fahrzeugen mit Fahrerinformations- und -assistenzsystemen - Teil 1: Begriffe und Parameter (ISO 15007 -1:2002)

Véhicules routiers - Mesurage du comportement visuel du conducteur en relation avec les systemes de contrôle et d'information sur le transport - Partie 1: Définitions et paramétres (ISO 15007-1:2002)

Ta slovenski standard je istoveten z: EN ISO 15007-1:2002

ICS:

01.040.43	Cestna vozila (Slovarji)	Road vehicle engineering (Vocabularies)
43.040.15	Avtomobilska informatika. Vgrajeni raḷ unalniġki sistemi	Car informatics. On board computer systems

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EUROPEAN STANDARD

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Road vehicles - Measurement of driver visual behaviour with respect to transport information and control systems - Part 1: Definitions and parameters (ISO 15007-1:2002)

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This European Standard was approved by CEN on 1 March 2001.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

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Foreword

This document (ISO 15007-1:2002) has been prepared by Technical Committee ISO/TC 22 "Road vehicles" in collaboration with Technical Committee CEN/TC 278 "Road transport and traffic telematics", the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2002, and conflicting national standards shall be withdrawn at the latest by September 2002.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of ISO 15007-1:2002 has been approved by CEN as EN ISO 15007-1:2002 without any modifications.

INTERNATIONAL STANDARD

ISO 15007-1

First edition
2002-03-01

Road vehicles — Measurement of driver visual behaviour with respect to transport information and control systems —

Part 1: Definitions and parameters

Véhicules routiers — Mesurage du comportement visuel du conducteur en relation avec les systèmes de contrôle et d'information sur le transport —

Partie 1: Définitions et paramètres

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 15007 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 15007-1 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 13, *Ergonomics applicable to road vehicles*.

ISO 15007 consists of the following parts, under the general title *Road vehicles — Measurement of driver visual behaviour with respect to transport information and control systems*:

— *Part 1: Definitions and parameters*

— *Part 2: Equipment and procedure*

Annex A of this part of ISO 15007 is for information only.

Introduction

Vision provides the primary source of information available to a driver. Information is gathered by looking at objects and events and this in turn affords control and navigation of the vehicle in the road traffic environment. Assessment of a driver's visual behaviour provides a method of quantifying the driver's visual allocation to the roadway or in-vehicle information sources.

Transport Information and Control Systems (TICS) applications for vehicles may have visual displays that can present a range of driver-selected information. If these visual displays have associated controls (e.g. to select a zoom level or menu option) then these associated hand-control activities may also be visually guided and become part of the visual behaviour associated with a display/TICS application. For this reason it may be important to consider not only the visual behaviour in relation to information display, but also the duration and frequency of glances following driver control actions.

Comparisons between separate evaluations of specific vehicle systems in different environments have been made more difficult by dissimilar approaches in experimental technique and analysis methods.

ISO 15007 has been developed to give guidance on the terms and measurements relating to the collection and analysis of driver visual behaviour data. This approach aims to assess how drivers respond to vehicle design, the road environment, or other driver-related tasks in both real and simulated road conditions. It is based on the assumption that efficient processing of visual information is essential to the performance of the driving task.

Practical assessments of drivers in real or simulated environments are conducted to quantify the allocation of visual behaviour to specified targets. It may be quantified by the location, duration and frequency of glances to a specified target in the visual scene. This approach often uses commonly available video-recording equipment. However, it does not preclude the use of more sophisticated technologies which may elicit additional driver visual behaviour information.

Results from such assessments should enable comparison of the relative influence of the TICS use with reference conditions.

Road vehicles — Measurement of driver visual behaviour with respect to transport information and control systems —

Part 1: Definitions and parameters

1 Scope

This part of ISO 15007 defines key terms and parameters applied in the analysis of driver visual behaviour. It can be applied in environments from real-world trials to laboratory-based driving simulator studies.

Minimum requirements for reporting the results of Transport Information and Control Systems (TICS) evaluations are provided.

The procedures described in this part of ISO 15007 could also apply to more general assessments of driver visual behaviour without the introduction of TICS specific systems. The parameters and definitions described below are intended to assist development of a common source of reference for driver visual behaviour data.

Due to the limitation of visual behaviour measurement techniques, e.g. related to the effects of accommodation and adaptation of the eyes, this part of ISO 15007 does not apply to the evaluation of head-up displays.

Further guidance including the specification of analysis methodologies and results presentation for visual behaviour analysis is available in other ISO publications. Data collated and analysed in this way allow comparisons to be performed across different TICS applications and experimental scenarios.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 15007. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 15007 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 2854, *Statistical interpretation of data — Techniques of estimation and tests relating to means and variances*

ISO 13425, *Guide for the selection of statistical methods in standardization and specification*

ISO 15007-2, *Road vehicles — Measurement of driver visual behaviour with respect to transport information and control systems — Part 2: Equipment and procedures*