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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



DRAFT International Standard

ISO/DIS 23792-2

Intelligent transport systems — Motorway chauffeur systems (MCS) —

Part 2: Requirements and test procedures for discretionary lane change

*Systèmes de transport intelligents — Systèmes de conduite
automatisée sur voie à chaussée séparée (MCS) —*

*Partie 2: Exigences et procédures d'essai pour le changement de
voie*

ICS: 03.220.20; 35.240.60

ISO/TC 204

Secretariat: **ANSI**

Voting begins on:
2025-04-18

Voting terminates on:
2025-07-11

This document is circulated as received from the committee secretariat.

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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols and abbreviated terms	2
5 MCS with DLC	4
5.1 DLC functionality	4
5.2 The lane change procedure	4
6 Requirements	5
6.1 State transitions	5
6.1.1 The states of DLC are defined within the Normal state of the MCS	6
6.1.2 The states of MCS (also referring to ISO/TS 23792-1)	7
6.1.3 Transitions between the states	8
6.2 Detection function	9
6.2.1 Detection of a sufficient gap and target lane availability	9
6.3 Driver interface	12
6.3.1 Internal Display elements	12
6.3.2 External notifications	12
6.3.3 FRU input	13
6.3.4 DLC manoeuvre	13
6.3.5 Failure reactions	13
7 Minimum performance	14
7.1 Duration of the lane change manoeuvre	14
7.2 Operational Limit	14
8 Performance evaluation test methods	14
8.1 Environment conditions	14
8.2 Test course conditions	14
8.3 Test vehicle conditions	15
8.4 Test system installation and configuration	15
8.5 Test procedures	15
8.5.1 Normal operation	15
8.5.2 Response to MCS cancellation condition during DLC	17
8.5.3 DLC conditions are not met before starting the lane change procedure (Phase1)	17
8.5.4 DLC conditions are not met after starting the lane change procedure (Start of Phase2)	17
8.5.5 Steering input during DLC	18
Annex A Allowed velocity to conduct a lane change	19

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.

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The committee responsible for this document is ISO/TC 204, Intelligent transport systems.

Introduction

In order to operate a vehicle automatically on motorways, the automated driving system (ADS) needs to be designed with the capability to cope with various conditions such as the driving environment, status of other vehicles in the surroundings, traffic regulations, etc.

In addition, an ADS designed to operate on motorways may encounter various situations such as merging into the main lane of traffic, adjusting the speed according to congested or freely flowing traffic, overtaking other vehicles, or changing lanes when approaching an exit/lane closure.

For Level 3 automated driving, the ADS issues a request to the fallback-ready user (FRU) to take over driving tasks when it cannot respond to certain conditions/situations.

This series of documents identifies the performance requirements of an ADS based on its capability to respond to various conditions and situations. The requirements are derived in order to reliably transfer the vehicle operation between the human driver and ADS, and for the safe operation by the ADS.

This series of documents focuses on the system functionalities, keeping in mind that the FRU is assumed to be receptive and properly responding to system requests to take over driving tasks, which is a prerequisite condition for the use of level 3 driving automation.

Intelligent transport systems — Motorway chauffeur systems (MCS) —

Part 2: Requirements and test procedures for discretionary lane change

1 Scope

Motorway Chauffeur Systems (MCS) performs level 3 automated driving ^[1] on limited access motorways with the presence of a fallback-ready user (FRU). MCS will be implemented in various forms capable of responding to different driving scenarios.

This document specifies the requirements and test procedure to verify the requirements for the discretionary lane change (DLC). The DLC is an additional functionality that can be added to a MCS compliant with the general requirements specified in ISO/TS 23792-1.

When conditions are satisfied, a DLC equipped MCS performs the entire DDT to change the current lane of travel independent of the possibility to continue operation within its current lane of travel. The system monitors the driving environment in the adjacent lanes and operates the SV by adjusting the speed and lateral position to move the SV to the intended lane. MCS may delay the manoeuvre until the conditions for initiating the lane change are satisfied or cancel the lane change when conditions are not satisfied.

Activation of the DLC requires an engaged MCS performing in-lane driving. Means related to setting a destination and selecting a route to reach the destination are not in the scope of this document. This document applies to the system installed in light vehicles [2].

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For updated references, the latest edition of the referenced document (including any amendments) applies.

ISO 17387, *Intelligent transport systems — Lane change decision aid systems (LCDAS) — Performance requirements and test procedures*

ISO 15037-1, *Road vehicles — Vehicle dynamics test methods — Part 1: General conditions for passenger cars*

ISO 21202, *Intelligent transport systems — Partially automated lane change systems (PALS) — Functional / operational requirements and test procedures*

ISO/TS 23792-1, *Intelligent transport systems — Motorway chauffeur systems (MCS) — Part 1: Framework and general requirements*

3 Terms and definitions

3.1

subject vehicle (SV)

the vehicle equipped with the system in question and related to the topic of discussion

3.2

lane

strip of road intended to accommodate a single line of moving vehicles, frequently defined by visible lane marking