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Intelligent transport systems — Low-speed automated driving system (LSADS) service

Part 2: Gap analysis

bsi.

National foreword

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Part 2: Gap analysis

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

A list of all parts in the ISO 5255 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

Standardization of service role and functional model is necessary for the introduction of low-speed automated driving systems (LSADS) to support safe and efficient mobility used as a means of moving people, goods and services in urban and rural areas.

ISO 22737 and ISO 7856 describe vehicle driving supports and do not cover the requirements of service role and functional model covering infrastructure facilities. Many business use cases regarding low-speed automated driving system (LSADS) services are currently emerging and many more variations are coming to be deployed. Various role and functional model presentation methodologies are currently in use and there is therefore a need for a common understandable role and functional model presentation baseline standard.

ISO/TS 5255-1 defines a common LSAD system service role and functional model presentation guidelines. Future emerging business cases can refer to ISO/TS 5255-1 as a baseline document which does not hinder the development of future business cases, but instead assists them.

This document focuses on safety operation gap analysis and serves as a baseline document describing which supplemental roles need be considered to take a safe operation lead in addition to the roles described in ISO/TS 5255-1. The purpose of this document is to assist in the introduction of LSADS, including infrastructure facilities to support mobility in urban and rural areas.

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TECHNICAL REPORT **ISO/TR 5255-2:2023**

Intelligent transport systems — Low-speed automated driving system (LSADS) service —

Part 2: Gap analysis

1 Scope

This document:

— examines and analyses the safety environment for low-speed automated driving services (LSADS);

— describes the safety role supplement to the functional model described in ISO/TS 5255-1;

— describes the supplemental safety points for LSADS;

— describes role for the functional model of service applications for LSADS.

This document can contribute to the development of future automated driving system service safety requirement use cases, other than the one described in ISO/TS 5255-1.

This document is applicable to services using LSADS-equipped vehicles only.

In-vehicle control system is not in scope of this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/TS 14812, *Intelligent transport systems — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/TS 14812 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
artificial intelligence
AI
<system> capability to acquire, process, create and apply knowledge, held in the form of a model, to conduct one or more given tasks

[SOURCE: ISO/IEC TR 24030:2021, 3.1]

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