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Road vehicles — Solutions for remote access to vehicle — Criteria for risk assessment

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National foreword

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Véhicules routiers — Solutions relatives à l'accès à distance du véhicule — Critères d'évaluation des risques

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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).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 22, *Road vehicles*, Subcommittee SC 31, *Data communication*.

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

The development of one of the remote communication solutions that ISO/TC22/SC31/WG6 was in charge of revealed several concerns about possible risks related to safety, security, competition, responsibility, and data protection that may originate from that solution.

To address these concerns, a list of criteria was first developed to be taken into account, independently of the considered solution. ISO/TC22/SC31/WG6 then decided to perform a risk assessment of any interface solution under its responsibility. This task was achieved based on the expertise of its expert members.

The aim of this document is to capitalize the achieved work in order to:

— Allow any ISO working group to use that list if they so want without having to redo the complete work.

— Allow stakeholders to conduct a risk analysis on remote communication solutions using the basis of a comprehensive and consolidated document produced by international experts and referring, as necessary, to complementary specific documents.

The proposed list of possible risks does not pretend to be exhaustive and its users are kindly invited to refer as much as possible to the more detailed work performed in other ISO working groups (for example, regarding the risks related to cyber-security, they are invited to refer to the work performed in ISO TC22/SC32/WG11).

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Road vehicles — Solutions for remote access to vehicle — Criteria for risk assessment

1 Scope

This document identifies criteria that can be considered for assessing the risks related to solutions for remote access to road vehicles, including extended vehicles (ExVe) and their implementation.

Internal communication within the vehicle or the ExVe is out of the scope of this document.

Cybersecurity risks related to the VM infrastructure (except the elements that are part of the extended vehicle) and the road-side equipment are out of the scope of this document.

The criteria identified in this document are also applicable in the case of a risk assessment related to the specification of remote communication solutions, for example a technical standard.

The list of criteria that is provided can be considered as sufficiently comprehensive but not exhaustive, from a global point of view, to allow coherent risk mitigation, if such mitigation is necessary.

This document does not suggest nor specify any methodology for performing a risk assessment.

It does not aim at replacing any methodology, technical specification or standard relative to one or other specific type of risks (for example cyber security risks).

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

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

3.1
extended vehicle
ExVe
entity, still in accordance with the specifications of the vehicle manufacturer, that extends beyond the physical boundaries of the road vehicle and consists of the road vehicle, off-board systems, external interfaces and the data communication between the road-vehicle and the off-board systems

[SOURCE: ISO 20077-1:2017, 3.5, modified — The term ExVe has been added.]

3.2
remote communication solution specification
RCS-specification
set of technical specifications for a remote communication solution

EXAMPLE ISO 20078-1:2019 *Road vehicles — Extended vehicle (ExVe) 'web services' — Part 1: ExVe content*[3].

Note 1 to entry: A technical standard can be considered as RCS-specification.

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