PD ISO/TR 23791:2019

This is a preview of "PD ISO/TR 23791:2019". Click here to purchase the full version from the ANSI store.



BSI Standards Publication

Road vehicles — Extended vehicle (ExVe) web services — Result of the risk assessment on ISO 20078 series



National foreword

This Published Document is the UK implementation of ISO/TR 23791:2019.

The UK participation in its preparation was entrusted to Technical Committee AUE/16, Data Communication (Road Vehicles).

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2019 Published by BSI Standards Limited 2019

ISBN 978 0 539 02709 9

ICS 43.040.15

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 30 September 2019.

Amendments/corrigenda issued since publication

Date Text affected

ISO/TR

This is a preview of "PD ISO/TR 23791:2019". Click here to purchase the full version from the ANSI store.

First edition 2019-09

Road vehicles — Extended vehicle (ExVe) web services — Result of the risk assessment on ISO 20078 series

Véhicules routiers — Web services du véhicule étendu (ExVe) — Résultats de l'évaluation des risques de la série de normes ISO 20078



Reference number ISO/TR 23791:2019(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Fax: +41 22 749 09 47 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

Contents					
Fore	eword			v	
Intr	oductio	n		vi	
1	Scop	Scope			
2	Norn	native re	ferences		
3	Terms, definitions and abbreviated terms				
	3.1	Terms	and definitions		
	3.2	Abbrev	viated terms		
4	General result of the risk assessment				
5	Cate	gories of	ries of the assessed risks		
6	Assessment of the risks related to the safety of the persons and the goods during				
		the ExVe life cycle 6.1 Safety risks considered			
	6.2	Analysi	is of the situation presented by the ISO 20078 series		
	012	6.2.1	SAFE 1: Possible overload of the electronic system of the moving vehicle		
			(numerous requests)		
		6.2.2	SAFE 2: Possible overload of the electronic system of the moving vehicle	4	
		6.2.3	(frequent requests) SAFE 3: Possible overload of the electronic system of the moving vehicle		
		0.2.5	(unexpected requests)		
		6.2.4	SAFE 4: Possible illicit or malicious remote control of vehicles	5	
		6.2.5	SAFE 5: Lack of compatibility with the existing systems and mechanisms	5	
		6.2.6	SAFE 6: Failures of the remote communication solution itself of the ExVe	(
		6.2.7	(including the back-end system of the manufacturer) SAFE 7: Lack of consideration of the complete ExVe life cycle	6 6	
		6.2.8	SAFE 8: Risks related to the design validation process		
		6.2.9	SAFE 9: Lack of misuse prevention		
		6.2.10	SAFE 10: Lack of, or inappropriate measures aiming at reducing the risks		
	()		in case of illicit or malicious remote control of vehicles	7	
	6.3	Conclusion: Assessment of the safety risks possibly originating from the ISO 20078 series		7	
7	Assessment of the risks associated to the security of the ExVe communication syst				
/	7.1	ty risks considered			
	7.2		is of the situation presented by the ISO 20078 series		
		7.2.1	General considerations relative to the specification of the OAuth2 framewor	rk 8	
		7.2.2	General consideration related to cybersecurity		
		7.2.3 7.2.4	SEC 1: Risks related to integrity and authenticity SEC 2: Security risks at vehicle systems that are not located at the moving	8	
		7.2.4	vehicle		
		7.2.5	SEC 3: Risks related to the consequences of a complete or partial		
			cybersecurity breach (this includes safety, security, competition,		
		726	confidentiality and data protection risks)	9	
	7.3	7.2.6 Conclu	SEC 4: Lack of misuse prevention measures sion: Assessment of the security risks possibly originating from the	9	
	7.5		078 series		
8	Assessment of the risks associated to the fair competition among the concerned acto				
U	8.1 Competition risks considered				
	8.2	-	is of the situation presented by the ISO 20078 series		
		8.2.1 8.2.2	Involved actors FAIR 1: Possible misuse of the acquired knowledge		
		8.2.2 8.2.3	FAIR 1: Possible misuse of the acquired knowledge FAIR 2: Possible gaining of unique knowledge of the market through	11	
		01210	monitoring		

This is a preview of "PD ISO/TR 23791:2019". Click here to purchase the full version from the ANSI store.					
8.2.4 FAIR 3: Possible gaining of unique knowledge of the customer's behav through monitoring					
8.2.5 FAIR 4: Competition risks among the involved parties	12				
8.2.6 FAIR 5: Risk of excluding competitors from playing roles					
8.2.7 FAIR 6: Risks related to the development of new after-sales application	ns				
8.2.8 FAIR 7: Competition risks among manufacturers and/or vehicle					
components (systems) suppliers					
8.3 Conclusion: Assessment of the competition risks possibly originating from the ISO 20078 series					
9 Assessment of the risks related to the responsibility of the concerned actors					
9.1 Liability and responsibility					
9.2 Analysis of the situation presented by the ISO 20078 series					
9.3 Conclusion: Assessment of the risks related to the responsibility of the concerr actors possibly originating from the ISO 20078 series	ned				
10 Assessment of the risks related to the protection of the resources owned by the					
resource owner (data protection)	14				
10.1 Data protection risks considered					
10.2 Analysis of the situation presented by the ISO 20078 series					
10.3 Conclusion: Assessment of the risks related to the protection of the resources owned by the resource owner and possibly originating from the ISO 20078 ser					
(data protection risks)					
Annex A (informative) Assessment of safety risks					
Annex B (informative) Assessment of security risks					
Annex C (informative) Assessment of competition risks					
Annex D (informative) Assessment of the risks related to responsibility and liability of the					
concerned actors					
Annex E (informative) Assessment of data protection risks					
Bibliography					

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 <u>www.iso</u>.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 <u>www.iso.org/members.html</u>.

Introduction

The ISO 20078 series specifies a possible web service to implement a certain web interface of the Extended Vehicle, depending on the concerned use case.

The development of this series has revealed several fears about possible risks related to safety, security, competition, liability, and data protection that may originate from that interface.

To address these fears, a list of criteria was first developed to be considered independently of the considered interface. This list is the object of ISO/TR 23786.

This list was then used for assessing the risks originating from the ISO 20078 series and concept to issue this document.

Finally, the risk assessment demonstrated that there are no risks resulting from the ISO 20078 series itself, however, there may be risks resulting from an implementation of that series.

Road vehicles — Extended vehicle (ExVe) web services — Result of the risk assessment on ISO 20078 series

1 Scope

This document presents the assessment of the safety, security, competition, responsibilities, and data protection risks that can originate from the ISO 20078 series.

In particular, the following risks are outside the scope of this assessment, because they relate to elements that are excluded from the scope of the ISO 20078 series:

- the risks associated with the implementation of the ISO 20078 series;
- the risks associated with the process that the accessing parties or any other parties would later on use to communicate the information they obtained;
- the risks associated with the process used by the resource owner to provide, modify, or revoke their authorization to pass information;
- the risks associated with the mitigation of the risks, should such a mitigation be necessary.

2 Normative references

There are no normative references in this document.

3 Terms, definitions and abbreviated terms

3.1 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 http://www.iso.org/obp
- IEC Electropedia: available at <u>http://www.electropedia.org/</u>

3.1.1

accessing party

entity which accesses resources (3.1.8) via web services (3.1.11)

[SOURCE: ISO 20078-1:2019, 3.1.6, modified — Notes to entry have been deleted.]

3.1.2

authorization provider

entity at the *offering party* (3.1.7) that manages the access rights to resources and *resource owner* (3.1.9) information

[SOURCE: ISO 20078-1:2019, 3.1.9, modified —Note 1 to entry has been deleted.]