FEDERATION INTERNATIONALE DE L'AUTOMOBILE

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- DRAFT -

On-Board Authorisation Concept

Further clarification and outlook at next steps

Informal working group on Cyber Security and Over-The-Air Software Updates (CS/OTA) – TFCS-30-XX

29th IWG on CS/OTA: further clarification was demanded

Submitted by the Secretary
of IWG CS/OTA

Working Paper **TFCS-29-07 Minutes**
29th TFCS, 12th & 13th March 2024

VI. Accessibility & privacy by design

[…]

The representatives from CECRA and FIGIEFA stated interest in a suggested drafting group and the representative from CITA expressed support for the FIA proposal. […]

The representative from the European Commission stated support to keep the topic on the agenda but explained that the detailed proposal, intention and how to align with national/regional law would not be totally clear. […]

The co-chair […] stated that further clarification of the proposal by FIA would be required to solve raised unclarities and open questions. FIA confirmed to update their proposal including technical requirements for clarification.

UN R155 addresses CPs' sovereignty as well as dependencies of manufacturers and service providers

UN Regulation No. 155

Uniform provisions concerning the approval of vehicles with regards to cyber security and cyber security management system

1.3. This Regulation is without prejudice to other UN Regulations, regional or national legislations governing the access by authorized parties to the vehicle, its data, functions and resources, and conditions of such access. It is also without prejudice to the application of national and regional legislation on privacy and the protection of natural persons with regard to the processing of their personal data.

7.2.2.5. The vehicle manufacturer shall be required to demonstrate how their Cyber Security Management System will manage dependencies that may exist with contracted suppliers, service providers or manufacturer's sub-organizations in regards of the requirements of paragraph 7.2.2.2.

To discuss technical concepts and administrative tasks, authentication and authorization shall be differentiated

Authentication shall be understood as the process of verifying the identity of a user, system, or application trying to access a resource like a generic tool.

- In simpler terms, it answers the question: "Who are you and is it really you?"

Authorization shall be understood as the process of determining what actions or operations (IO) a verified user, system, or application is allowed to perform on a resource.

- In simpler terms, it answers the question: "What are you allowed to do?"

For purposes of authentication and authorization, a digital certificate shall securely state:

- "I am who I claim to be, and I am authorized to access level a, b, c, d etc."

Such authentication information shall be contained in a digital certificate. A neutral trust centre shall confirm this, and the vehicle shall require this as prerequisite for authorization.

Multi-factor authentication may be used to confirm that a user really is who they claim to be.

Proposal for harmonising on-board authentication and authorisation on an UNECE level

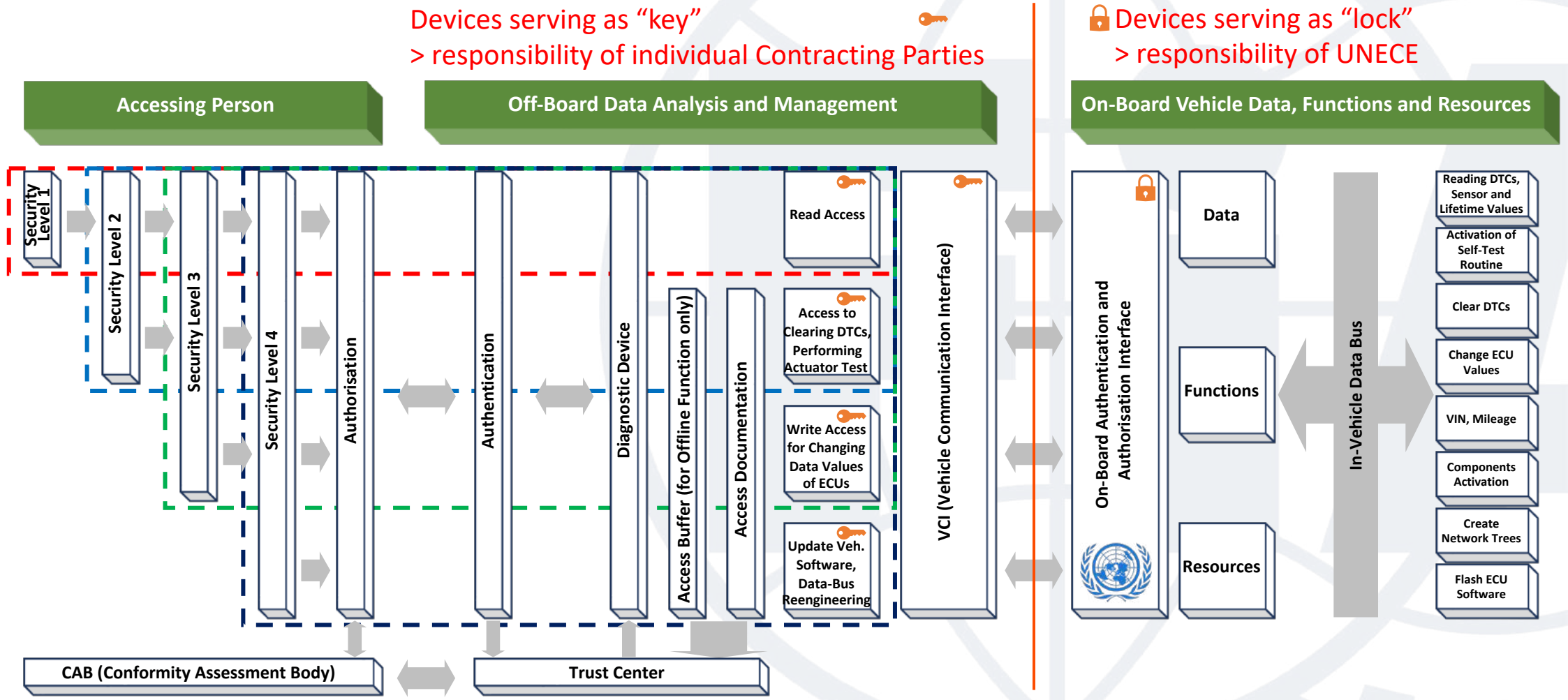
- Implementation of UN R155 and UN R156 regulatory requirements by different Contracting Parties in national / regional legislations require a matching **on-board authentication and authorisation concept.**

- The FIA and Mobility Club's proposal seeks to regulate a **secure on-board part of an authentication and authorisation concept.** It does not seek to grant access to in-vehicle data and functions.

- The **off-board authentication and authorisation concept** shall be left to regulation and control on national / regional levels.

An authorisation concept shall split responsibilities and differentiate between off- / on-board data & functions

Architecture example for off-board and on-board authentication and authorisation



Source: ÖAMTC, adapted

Amendments to UN R155 should be considered to harmonise the on-board authorization concept

UN Regulation No. 155

Uniform provisions concerning the approval of vehicles with regards to cyber security and cyber security management system

*The proposed changes to the current text of the regulation are indicated in **bold** for new text and should be further refined in a working group to which FIA invites all interested parties.*

5.1.1. The Approval Authority or the Technical Service shall verify by means of document checks that the vehicle manufacturer has taken the necessary measures relevant for the vehicle type to:

[…]

(f) ….[1)]

7.2.2.2. The vehicle manufacturer shall demonstrate that the processes used within their Cyber Security Management System ensure security is adequately considered, including risks and mitigations listed in Annex 5. This shall include:

[…]

(i) ….[1)]

1) Amendments to address the on-board authentication and authorization concept shall be added here

Next steps: form group to amend / supplement UN R155

1. **FIA is inviting interested parties to join the drafting work on amendments to UN R155 based on:**
   - WP.29 Programme of Work stating in Table 5, p. 24 as one of its Tasks / Deliverables: "Develop deliverables regarding recommendations for SW updates after registration and address items passed by GRVA"

2. **The outcome of such a working group will be reported back to the IWG on CS/OTA for further consideration.**

3. **The concept of Privacy by Design (TFCS-28-03) will be discussed at a later meeting of the IWG on CS/OTA.**

UNECE

PUT CITIZENS IN THE POLE POSITION

Maintain the balance between vehicle security and accessibility over the vehicle's lifetime

Respect privacy citizens and put them in control