FIA Consumer Views on Automated and Connected Vehicles

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246 member organisations representing over 80 million people from 145 countries

Founded in 1904, with headquarters in Paris, the Fédération Internationale de l'Automobile (FIA) is a non-profit making association.

It brings together 246 national motoring and sporting organisations from 145 countries on five continents.

Its member clubs represent 80 millions of motorists.
THE FIA: two pillars

SPORT

Mission: ensures that fair, capably regulated and above all safe events are conducted in all corners of the globe.

MOBILITY

Mission: ensure that safe, affordable and clean systems of transport are available to all.
FIA Consumer Views on Automated and Connected Vehicles

- Automated and Connected Vehicles may improve Road Safety and offer new smart Mobility Services for the benefit of road users.

The FIA welcomes the UNECE initiative to regulate IT Security, Data Privacy and Over The Air Updates

- The FIA sees potential for improvement in the current drafts of GRVA, such as:

  1. Next to software, also hardware shall be updated

  2. A harmonized communication channel shall ensure highest security as well as authorised remote access to in-vehicle-data

  3. IT security shall be ensured over the lifetime of the vehicle
IT security over the lifetime of the vehicle; is this a topic for UNECE WP 29?

Existing examples of UN Regulations (1958) that cover the lifetime of the vehicle are:
No. 59 (Replacement (retrofit) silencing systems)
No. 83 (including durability requirements and "in use" requirements)
No. 90 (Replacement braking parts)
No. 133 (Recyclability of motor vehicles)

National Legislation?
Current legislations on national or regional level do not cover IT security issues, like updates of soft- or hardware. IT security is a new area in automotive regulation and requires technical adequate specifications, like updated software with better performance.

FIA sees UNECE as the right place to regulate IT security over the lifetime of the vehicle.
Lifetime vs Lifecycle

The Lifetime of a vehicle starts with first registration of the vehicle and ends with the scrappage of the vehicle. It does not end with its decommissioning!

Lifecycle is related to the CSMS of a vehicle manufacturer, consumers need certainty for their vehicles, so **Lifetime** is the relevant term to look at.
A harmonized communication channel can ensure highest IT security over the lifetime, e.g. an Automotive Gateway (A-GW)

The A-GW covers all use cases of an automated and connected vehicle, such as V2V and V2I as well as diagnostics.

Harmonised Automotive Gateway, externally administrated (A-GW Admin) including firewall and authorisation concept.

Authorisation, Authentication, Certification.

Bi-directional transfer of vehicle data and functions, NO software changes.

Software Updates OTA by VM.
A harmonized communication channel can ensure highest IT security over the lifetime, e.g. an Automotive Gateway (A-GW)

Privileged Role for VM to update software OTA

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After Cyber Attack

**Example 1**: The VM updates the software of ECU(s) and the firewall of the A-GW by OTA update by his privileged role through a communication channel to the vehicle.
A harmonized communication channel can ensure highest IT security over the lifetime, e.g. an Automotive Gateway (A-GW).

After Cyber Attack

**Example 2**: The hardware is not any more powerful enough to tackle new cyber attacks.

The vehicle manufacturer decides to update the Automotive Gateway. It is the central unit that controls the data stream from/to the in-vehicle-network.
A harmonized communication channel can ensure highest IT security over the lifetime, e.g. an Automotive Gateway (A-GW)

By using a harmonized communication channel from/to the vehicle, hardware updates over the lifetime of the vehicle are possible.

Even if the mobile network changes, a simple hardware update of the A-GW is sufficient to keep the vehicle securely connected.
FIA proposes WP 29 to mandate GRVA to regulate IT Security over the Lifetime of a Vehicle at UNECE level in the framework of the 1958 agreement
Thank you for your attention