



DETA Software Information & Integrity

IWG on DETA, 07.11.2019

CS-OTA Proposal (TFCS 16-09rev1):

- “To integrate information about a software update in a DoC (Declaration of Conformance), an adaptation of the DoC definition and the implementation of IWVTA (International Whole Vehicle Type Approval) and the DETA (Data Exchange for Type Approval) database will be necessary. **Therefore it is important for UNECE to invest in the development of DETA and DoC**”
- “It should be investigated if relevant organizations should be provided limited **access to DETA and DoC** to check the RXSWIN numbers of the single vehicles during the **PTI**”
- “Information regarding all initial and updated software versions, including checksums or similar integrity validation data, of the single components of the electronic control systems of every produced vehicle and the link to the RXSWIN shall be stored at the vehicle manufacturer. For the purpose of certification, including the validation of the conformity of production, and the market surveillance, including **recalls and PTI**, the vehicle manufacturer shall provide this information to the authority if requested.”

ToR IWG on PTI:

- “The ways to **identify tampering of safety and environment related components** and systems have to be considered, including but not limited to, the following:
 - in coordination with the activities under the 1958 and 1998 agreements and especially the issue of software identification and Over the Air Updates, **the version and integrity of the software**, since tampering practices may also involve software modification”

Motivation

Safe / valid vehicle software

With the rise of vehicle functionality realized by software – especially for the automation of vehicles – the importance of **software** for vehicle safety, environmental compatibility and compliance grows rapidly.

Therefore **vehicle software and software updates** are, respectively will soon be, a central part of Type Approval, including the validation of the conformity of production, and market surveillance, including recalls and the PTI.

→ the **detection of tampered software** and the check of **compliance with recalls** will ensure vehicle safety and conformity

Key for these use cases is reliable information about the **identity of a vehicle's software versions, their validity and integrity.**

Proposal

Software information within DETA

Extend DETA (DoC) to store **up-to-date, VIN-related information** about **permissible vehicle software** including:

- **Software version numbers** and
- **integrity validation data**

Provide this data to **all relevant stakeholders** including Approval Authorities, Technical Services and the Periodical Technical Inspection (**PTI**)

In order to support use cases like **certification**, including the validation of the conformity of production, and **market surveillance**, including recalls and PTI.

Benefit of using DETA for this purpose:

Harmonized, reliable and efficient distribution of this information

Proposal

Possible next steps

- Decide whether a dedicated drafting group shall draft an extension to the DETA System (i.e. the drafting group on DoC)
- Involve experts from other IWGs, i.e. the IWG on PTI, if questions regarding use cases or the need for certain levels of information arise
- Identify whether changes to the regulation or amendments are needed
- Further discuss the access rights within WP29 to enable stakeholders like the PTI to ensure vehicle safety regarding vehicle software during the lifetime of the vehicle