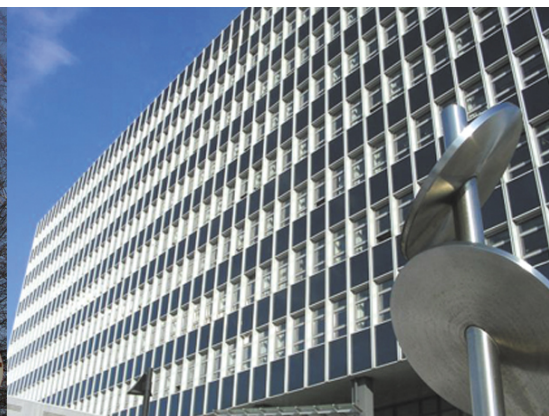


Kraftfahrt-  
Bundesamt



# UN Task Force on Cyber Security and OTA issues

Type-approval



# Type-approval

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## Current situation

- Changes of type approval related software could cause an extension of the type approval(s) or demand new type approval(s) and can be afterwards installed in new vehicles before registration (Issuing of a new CoC could be necessary)
- Software updates by the manufacture which does not effect type approval related issues and do not relate to the product safety act are possible to be installed in vehicles after first registration under the responsibility of the manufacturer
- Software after the first registration from another manufacturer and type approval relevant software changes have to be handle on a national level (individual approval, an approval with limited scope, etc.)
- Software updates could have influences on the national registration, the national procedures for changes of vehicles have to take into consideration

# Type-approval

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## Possible solution

- Develop an international regulation for type approval related software, which can be installed in vehicles after registration (replacement software), or develop annexes for software changes after the registration for the single regulations
- Develop a message for actual vehicle information (AVI), which can be shared between the member states, where an electronic CoC or DoC have to be a part of it

# Type-approval

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## Possible national interim process to deal with OTA issues in Germany

- With the documentation for the extension of the type approval or for the documentation for the new system approval the manufacturer declare on which vehicles the new software can be installed (VIN numbers or extension numbers of the whole vehicle type approval)
- The manufacturer have to describe, how the validity of the software can be checked during PTI
- The manufacturer explain, how the software is protected against manipulation and how the integrity of the software can be verified
- The technical service verifies, if the software can be installed in the vehicles declared by the manufacturer and if the validity and integrity of the software can be checked during the PTI
- The technical service confirms in the test report of the extension of the type approval or in the test report of the new system approval that the declaration and distribution of the manufacturer is correct

# Type-approval

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## Possible national interim process to deal with OTA issues in Germany

- The possibility to install the software on registered vehicles becomes part of the extension of the type approval or part of the new system approval
- The vehicle owner may need an extract of the extension or an extract of the new approval and the information if the changes modify the registration documents (immediately changes are necessary or changes have to be recorded at the next opportunity)
- If the registration documents have to be changed (immediately), e.g. because of an increase of engine power, the vehicle owner has to contact the registration authority
- What is the procedure in other member states? Could other member states accept the described process? How can the (extract of the of) the extension or (the extract of) the new approval be provided to other member states? Have the manufacturer to contact every member state, provided the (extract of the of) the extension or (the extract of) the new approval and ask for acceptance?

# Type-approval

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## General comments

- It is important to check during the PTI, if a valid software is installed on the vehicle - the PTI organizations therefore need access to the AVI and may also need to add single information to it
- Current legislation have to be analyzed regarding the impact of software changes and the demand of granting extensions of type approvals or granting new type approvals
- The difference between the current way of installing modified software on vehicles (in the car service station from professional personal) and the installation of software over the air by the customer should be a part of the discussion in the group - Under which circumstances it is allowed to install what functionality and how should the customer be informed (about the process and the changes)?

# Thanks for your attention!

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## Questions?

