Draft annotated outline for recommendations on Integration of fully automated motor vehicles in road traffic

Submitted by the Chair

All recommendations to be developed are to build on the 1949 and 1968 Conventions on Road Traffic to ensure an internationally harmonized set of traffic rules that accommodates the admission to international traffic of fully automated motor vehicles.
Option 1

Basic principles

It may be useful to agree on a set of basic general principles addressing most pressing issues before the set of final recommendations addressing fully automated motor vehicles (from the international perspective) has been fully developed and adopted. Some examples are provided below for illustration:

- The domestic legislation shall ensure that fully automated motor vehicles when moving prioritize road safety in any road maneuver, and comply with traffic code in force.
- The domestic legislation shall require that fully automated motor vehicles are capable of effective communication with police, public safety and emergency officials before being admitted to traffic.
- The domestic legislation shall also require that fully automated motor vehicles undergo periodic inspections and that they record and store the necessary data that can be retrieved from the motor vehicle in accordance with regional or domestic privacy regulations.
- The domestic legislation shall also require that monitoring of the interaction of other road users with fully automated motor vehicles is put in place and that data from this monitoring is used, on one hand, to better understand requirements for additional regulations, and on the other hand, to develop educational materials and programs to ensure that all road users - especially pedestrians, cyclists, motorcyclists, children, the elderly, and those with special mobility needs - are aware of unique characteristics of fully automated motor vehicles.
- Etc..

Option 2

1. Preamble

This section will clarify the purpose, status and intended users of these recommendations. It will clarify the relationship between these recommendations and the 1968 Convention on Road Traffic and possibly the 1949 Convention on Road Traffic. Finally, it will describe their scope and applicability.

2. Definitions

This section will provide the relevant definitions of terms used in this document such as fully automated motor vehicles, motor vehicle driving systems, and other definitions as needed.

3. Interaction of fully automated motor vehicles with driving environment

This section will contain recommendations/principles for fully automated motor vehicles to follow rules of the road. Among others, they will prioritize road safety in any road maneuver, will follow instructions by law enforcement authorities, and will ensure smooth traffic flows or will not obstruct traffic.
Education issues may be included here, including additional measures for road users to ensure safe interaction with fully automated motor vehicles.

4. Interaction of fully automated motor vehicle systems with other road users
   This section will contain recommendations/principles for fully automated motor vehicles to avoid any maneuver likely to endanger other road users, in particular vulnerable road users, and to endeavour to compensate for errors made by other road users. Special focus on interaction with motorcycles, other PTW and pedestrians may be necessary.

5. Interaction of fully automated motor vehicle systems with their users
   This section will contain recommendations/principles describing the obligations of fully automated motor vehicle towards its occupants, including in emergency (and conversely the occupants’ obligations).

6. Technical conditions concerning fully automated motor vehicles
   This section will provide recommendations/principles similar to issues addressed in Article 39 of 1968 Convention on Road Traffic with regard to motor vehicles and trailers. In this case, they need to be of relevance to fully automated motor vehicles.
   Among other issues to be considered in this section: conformity of fully automated motor vehicles with the minimum standard for construction, type approval/certification for HMI for communication of fully automated motor vehicle with the occupants and law enforcement officials; periodic motor vehicle inspections (over the air updates to the automated motor vehicle system); recording, securing and sharing of data by fully automated motor vehicles with law enforcement/others.

7. Conditions for the admission of fully automated motor vehicles to international traffic
   This section will provide recommendations/principles expanding on those addressed in Articles 35 and 36 of the 1968 Convention on Road Traffic that may be required to be more specific to fully automated motor vehicles. It will thus cover registration, registration certificate and registration number for fully automated motor vehicles.

8. Final provisions
   TBD