Note by the secretariat

Informal document **WP.29-164-27**
(164th WP.29 session, 11-14 November 2014
agenda item 2.4.)

How to deal with advanced automations and self-driving technologies?

1. Relevant activities in 2014 under the auspices of UNECE linked to automations

1.   The policy segment of the 76th session of the Inland Transport Committee (ITC) took place in February 2014 and was entitled "Innovations for a sustainable mobility". It provided a stimulating impulse to the ITC subsidiary bodies, which worked on these innovations at various levels this year.

2.   Following the policy segment, UNECE and ITU jointly organized the "ITU symposium on the future networked car". The symposium concluded that: to benefit from ITS, it is important to address issues including: standards; cybersecurity; software reliability; information and education; legal frameworks and liability in a holistic manner with a wide range of actors. Actors from automotive and ICT sectors, regulatory, legal and standards bodies were called to collaborate on a roadmap that would facilitate the transition to a globally coordinated rollout until 2020, as, by then, self-driving vehicles would start being marketed.

3.   The World Forum for Harmonization of Vehicle Regulations (WP.29) discussed in June 2014 the way to take forward the challenges and coordinate the work of WP.29 and its subsidiary Working Parties (GRs) on issues related to automated driving.

2. Discussion at the 78th GRRF session (September 2014)

Documentation: GRRF-78-14

4.   At its September 2014 session, the Working Party on Brakes and Running Gears (GRRF), dealing with active safety, received a presentation from the supplier industry (CLEPA) about existing technologies as well as valet parking and highway autopilot, followed by a discussion introduced by Sweden and Japan proposing to remove the 10 km/h speed limitation for "*automatically commanded steering function*" and de facto not preventing anymore the approval of self-steering vehicles according to Regulation No. 79. In addition to the removal proposed above, Sweden and Japan drafted provisions for automatic steering systems. Some of the provisions drafted were considered being not assessable, for example, "excessive intervention of steering". GRRF also noted that the approach proposed would be a first step allowing the use of self-steering systems with some safeguards (e.g. provided by driver warning functions).

6.   GRRF noted the decision of WP.29 at its June 2014 session mandating the IWG on ITS to coordinate the work. GRRF also noted that Regulation No. 79 was under the responsibility of GRRF. The proposal was submitted to the IWG on ITS and kept on the agenda of GRRF. The Chair of GRRF proposed to report to WP.29 and AC.2 about these activities and to request guidance about the way to tackle this matter.

7.   The recent discussions with WP.1 concerning the Vienna Convention are directly relevant to the deployment of this type of technology and the proposal to amend Regulation No. 79. It appears that a strategic direction is necessary to support the GRs in their work to recognize these technical advances in vehicle control. The ITS group is transitioning into this area. Its challenge may be to provide sufficiently quick guidance to influence the GRs given the imperative for some Contracting Parties.

3.   Request for guidance

8.   Should GRRF start regulating the longitudinal and lateral control of automated vehicles in view of the introduction of self-driving functionalities? If yes:

   (a)   Does AC.2 and WP.29 wish to establish any guiding principles?

   (b)   Should GRRF deal with automation specifically (i.e. new regulations) or adapt existing regulations (e.g. Regulation No. 79)?

   (c)   Should regulations actively lead the technological development (a full set of performance based requirements) or flexibly complement it (only require minimum safety measure provisions)?

9.   Should a GR work on vehicle connectivity (V2V and V2I)? (GRSG?)

10.   Which GR or informal group should deal with the harmonization of definitions concerning the type of automations (e.g. SAE approach with 5 steps, NHTSA approach with 4 steps)?

———————