

## Topics of work in GRE

(both *current* and *future* items)

### 1958 Agreement

#### I SIMPLIFICATION (IWG SLR)

##### **The new component Regulations (R.148, R.149, R.150) and the installation Regulations (R.48, R.53, R.74, R.86)**

- Performance based requirements
- Technology neutral requirements (starting with light sources)
- Ensuring the new requirements are more future proof (requiring less amendments, e.g. in case of the emergence of new technologies)
- Increase minimum performance of beam patterns for road illumination devices without increasing glare level
- Suitable application of the 'Unique Identifier' ('UI')
- Visibility and glare (human eye)
- Adaptive and intelligent lighting systems
- *Apparent surface, new definition and possibly new measurements, to ensure better correlation with appearance of the lamp in reality*
- *New, or additional, requirements related to optical sensors (e.g. ensuring adequate "illumination" for - and avoid "glaring" of - optical sensors)*
- *Awareness of GRVA activity on software updates*
- *Harmonization (with other regulatory systems)*
- *Transition from component to system approach*

#### II REGULATORY DEVELOPMENT

##### **Electromagnetic compatibility (R.10) – TF EMC**

- Further development of the requirements for electrical vehicles (EV's)
- Updating in relation to various international standards (e.g. CISPR, ISO, etc.)
- *New, or additional, requirements for automated/autonomous vehicles (AV's) and new systems*
- *Amendments to avoid bypassing the approval to other UN Regulations*
- *Reg. 10 should become the reference for EMC requirements for all GRs*

##### **The light source regulations (R.37, R.99, R.128 and R.E.5)**

- Development of replaceable LED light sources, including substitute and replacement light sources for filament lamps (TF S/R)
- *Potential regulatory improvement by further consolidation of the light source regulations*

##### **Installation regulations (primarily R.48)**

- AV light signalling (TF AVSR)
- Road Light projections
- *"Zero emission mode" light signalling (hybrid & EV, city centers...)*
- *Attention to environmental aspects (energy efficiency, waste reduction, etc.)*
- *Connected & communicating light Signalling lamps*

### 1998 Agreement

- *Potential development of globally standardized signalling for automated/autonomous vehicles (AV's)*
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