Simplification of the UN Lighting and Light-signalling Regulations

Progress report on the Stage 1, Stage 2 and Future steps
Workload and meeting pace

26 meetings held until now:

I. 11 September 2014 in Brussels (BE)
II. 23 October 2014 in Geneva (CH)
III. 14 January 2015 in Brussels (BE)
IV. 13 April 2015 in Geneva (CH)
V. 13 October 2015 in Brussels (BE)
VI. 5-6 November 2015 in Brussels (BE)
VII. 15-16 December 2015 in Brussels (BE)
VIII. 13-14 January 2016 in Brussels (BE)
IX. 29 February & 1 March 2016 in Brussels (BE)
X. 14-15 April 2016 in Brussels (BE)
XI. 9-10 June 2016 in Brussels (BE)
XII. 5-7 September 2016 in Brussels (BE)
XIII. 5-7 October 2016 in Brussels (BE)
XIV. 5-7 December 2016 in Brussels (BE)
XV. 21-23 February 2017 in Brussels (BE)
XVI. 22-24 March 2017 in Brussels (BE)
XVII. 16-18 May 2017 in Tokyo (JP)
XVIII. 13-15 June 2017 in Brussels (BE)
XIX. 12-14 July 2017 in Brussels (BE)
XX. 4-6 October 2017 in Brussels (BE)
XXI. 18-21 December 2017 in Brussels (BE)
XXII. 29 Jan / 1 Feb 2018 in Shenzhen (CN)
XXIII. 4-6 April 2018 in Brussels (BE)
XXIV. 30 May / 1 June 2018 in Brussels (BE)
XXV. 3-5 July 2018 in Brussels (BE)
XXVI. 24-26 September 2018 in Brussels (BE)

Next meetings:
SLR-27 on 10-12 December 2018 in Brussels (BE)
SLR-28 on 25-27 February 2019 in Brussels (BE)
SLR-29 on 27-29 March 2019 in Brussels (BE)
SLR-30 on 22-24 May 2019 in Brussels (BE)
SLR-31 on 3-5 July 2019 in Brussels (BE)
SLR-32 on 18-20 September 2019 in Japan
Work plan and time schedule for “Stage 1”

<table>
<thead>
<tr>
<th>STAGE 1</th>
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</thead>
<tbody>
<tr>
<td>The objective was to update and freeze the existing device Regulations and produce three new UN Regulations (for road illumination (RID), light-signalling (LSD) and retro-reflecting devices RRD)) based on the text of existing UN Regulations.</td>
<td></td>
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<tr>
<td>This was primarily an editorial task to leave the prescriptions of the various Regulations unchanged, other than where the objectives of simplification and consolidation so required.</td>
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<tr>
<td>Completion at GRE 80</td>
<td>October 2018</td>
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<tr>
<td>Final adoption by WP.29 of the new LSD, RID and RRD Regulations and the associated package of amendments to existing Regulations</td>
<td>November 2018</td>
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**SLR “Stage 1”**

**The complete package**

**NEW SIMPLIFIED UN REGULATIONS**
- Road Illumination Devices (RID) → WP.29/2018/158 + GRE/2018/37
- Retro-Reflective Devices (RRD) → WP.29/2018/159 + GRE/2018/38

**Transitional Provisions**
Coll. Amd. for Regs Nos. 3, 4, 6, 7, 19, 23, 27, 38, 50, 69, 70, 77, 87, 91, 98, 104, 112, 113, 119 and 123
WP.29/2018/091 to ../098, ../103, ../106, ../107, ../109, ../112 to ../119
+ GRE/2018/34 + GRE-80-21 (OICA)

**Updated References** to device Regs. + Reorganized and grouped **definitions**
+ Use of **“Change Index”** and its definition
- R48, series 03, 04, 05 and 06 of amendments
  (WP.29/2018/102, ../101, ../100, ../099/Rev.1)
- R53, series 01 and 02 of amendments
  (WP.29/2018/105, ../104/Rev.1 + GRE/2018/35 as corrected by GRE-80-05)
- R74, series 01 of amendments
  (WP.29/2018/108/Rev.1)
- R86, series 00 and 01 of amendments
  (WP.29/2018/111, ../110/Rev.1)
## Work plan and time schedule for “Stage 2”

**STAGE 2 = SIMPLIFIED REGULATIONS** with technology neutral and performance based requirements

<table>
<thead>
<tr>
<th>STAGE 2</th>
<th>The overarching objective is to update and harmonise the technical requirements for lighting and light signalling to be suitable for global implementation under the UN 1958 and 1998 agreements.</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAGE 2 STEP 1</td>
<td><strong>Revise the technical requirements of the new LSD, RID and RRD Regulations</strong>, to become technology neutral with performance-based and objective test requirements. Minor amendments will be required to the installation Regulations</td>
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<tr>
<td></td>
<td><strong>Informal submission to GRE-82</strong></td>
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<td><strong>Final consideration at GRE-83</strong></td>
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<td><strong>Adoption by WP.29</strong></td>
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<tr>
<td>STAGE 2 STEP 2</td>
<td><strong>Simplify and update the technical requirements of the UN installation Regulations (48, 53, 74, 86)</strong>, to become technology neutral with performance-based and objective test requirements</td>
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<tr>
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<td><strong>Informal submission to GRE-86</strong></td>
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<td><strong>Final consideration at GRE-87</strong></td>
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<tr>
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<td><strong>Adoption by WP.29</strong></td>
</tr>
</tbody>
</table>
LIGHT SIGNALLING DEVICES (LSD)
Stage II – Regulation No. [LSD]

SIMPLIFICATION

Technology independent
Objective test-methods
Performance based

Reg. 4 License plate illuminating devices
Reg. 6 Direction indicator
Reg. 7 Position, Stop, End-outline marker
Reg. 23 Reversing
Reg. 38 Rear fog
Reg. 50 Position, stop, direction indicator (Vehicles Class L)
Reg. 77 Parking
Reg. 87 Daytime running
Reg. 91 Side marker

Reg. [LSD] Stage I
Merge to one single Regulation

Reg. [LSD] Stage II
Extraction Analysis
Main topics to be worked on in future

- Rearrangement of the requirements -> §5.x.x
- Align „D“ and „Y“ lamp provisions -> §4.4
- Light source module definition -> §4.3.2.ff
- Harmonise failure provisions -> §4.6. (see also §5.4.4.ff)
- Rear registration plate lamp – harmonisation -> §5.11.
- Reversing lamp – improvement -> §5.8.
- Rear fog lamp – improvement -> §5.9.
- Additional functions -> New §x.y.
- Move requirements to main text -> Annex 2,3
ROAD ILLUMINATION
DEVICES (RID)
Installation requirements after SLR “Step 1”

GREEN colour means «optional»
BLACK colour means «mandatory»

Should the beam requirements be based on the category of the vehicle?
RETRO REFLECTIVE DEVICES (RRD)
Stage II – Regulation No. [RRD]

System of classes
Harmonized test-methods
Independent from technology
Performance based

Reg 3 - Retroreflectors
IA
IB
IIIA
IIIB
IVA

Reg 27 - Advance Warning Triangle
Type 1
Type 2

Reg 69 - Slow Moving Vehicle Plate
Class 1
Class 2

Reg 70 - Rear marking Plate for long and heavy vehicles
Class 1
Class 2
Class 3
Class 4
Class 5

Reg 104 - Conspicuity Marking for long and heavy vehicles
Class C
Class D
Class E
Class F

RRD Stage I
RRD Stage II
All existing Regs to merge to one single document
Extraction Analyse

SIMPLIFICATION
Stage II – Regulation No. [RRD]
Main topics to be worked on in future

- Requirements for CIL for retroreflective devices – classes
- Requirements for R´ (R_A) for retroreflective devices/markings – classes
- Colorimetric requirements – daytime and nighttime visibility enhanced visibility
- Photometric measurement conditions – to define independent from device
- Water-penetration test and corrosion test independent from the device
- Weathering test (colour fasness) to adapt to state of the art testing
- Mechanical requirements to define testing independent from device
- Chemical and environmental requirements - testing independent from device
- Specific requirements and testing, which is depending from the device
FUTURE STEPS...
SOME OF THE MAJOR PROJECT STEPS

• Develop, unless technically not feasible, performance-based and technology-neutral requirements to ensure freedom for technical innovation within a framework of safety principles.

• Simplify, adhering to a technology-neutral approach, the Installation Regulations (Reg. Nos. 48, 53, 74 and 86). All working documents on lighting installation Regulations whose purpose is to improve the performance-based and technology-neutral approach shall be taken into account.

• Take over and consider the outcome of IWG VGL, based on the discussion document GRE-79-29 as recommended by GRE-79 (ECE/TRANS/WP.29/GRE/79, Par. 31).

• Draft the technical requirements for lighting and light signalling to make them suitable for implementation under the UN 1958 and 1998 agreements.