ECE/TRANS/WP.29/GRE/2013/57

Alternative aiming/leveling

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(65th GRE, 28-31 March 2011, agenda item 5(d))
AUTOMATIC LEVELLING

AT PRESENT - DESIGN ORIENTED REQUIREMENT

- 2000 lm (artificial arbitrary criterion)
- Gas discharge (35W, 25W?)
- LED

No relation to performance
REGULATORY (Reg.48) VISIBILITY DISTANCE [m]
Real sizes and distances

Possible road illumination distance in Reg 48.
Informal document No. GRE-65-30
(65th GRE, 28-31 March 2011, agenda item 5(d))
BASE FOR REAL HUMAN DECISIONS IN MOST SITUATIONS

IMAGINATION
BELIEF
FEELINGS
EMOTIONS
INTERESTS

SCIENTIFIC
CONFIRMED
REAL
VERIFIABLE
REPEATABLE

RATIONALITY IS IN MINORITY
WHO IS RESPONSIBLE FOR ROAD SAFETY?
(in lighting domain)

- LAW CREATORS (GTB, GRE, WP29, EU)
- ADMINISTRATIVE SERVICE
- MANUFACTURERS
- GOVERNMENT
- TECHNICAL SERVICE
- SERVICE
- PTI
- DRIVER

MY BOSS

Me

Me

Proposal to reduce glare comparing the present situation for most vehicles, especially cars.
HOW WILL WORK GRE/2012/21

1. GUARANTED VISIBILITY DISTANCE >[75m]?

- YES
  - OBLIGATORY AUTOMATIC LEVELLING (German proposal)
  - 3. INFORMATION FOR DRIVER (OPTIONAL)
    - A (optimal)

- NO
  - 2. GUARANTED GLARE PROTECTION? (PRESENT HEADLAMPS REG.)
    - NO
      - 2. GUARANTED GLARE PROTECTION? (PRESENT HEADLAMPS REG.)
        - NO
          - 3. INFORMATION FOR DRIVER
            - C (possible)
        - YES
          - B (outside GRE/2012/21)
Comments on GRE/2012/21 (Lighting & Signalling WG)

Headlamp Initial Aiming

March 2012
Comments on GRE/2012/27 (Lighting & Signalling WG)

Headlamp Initial Aiming

October 2012
Proposed Initial nominal aim to correspond to 75m theoretical range

- Under proposal,
  - No **overlap** between height bands
  - **Most** headlamps would be aimed **higher than at present**

It will depend on manufacturers decision and choice of range of amended Reg.48 (30 to 100m or 50 to 100m)

It will be safety oriented advantage and goal of amendment because of longer average road illumination distance.

- **Risks increased glare.**

Not true. Decreased glare comparing present state.
GOOD, COMBINED PROPOSAL

true
„PERFORMANCE ORIENTED”

AS TODAY:
ARTIFICIAL 2000lm „DESIGN ORIENTED”

OR

NEARLY AS TODAY BUT
„PERFORMANCE ORIENTED”
ROAD ILLUMINATION DISTANCE AS CRITERION, NO RESTRICTIONS MANUFACTURER CHOICE
NO 2000 lm NO LIGHT SOURCE CRITERION

MANUFACTURER CHOICE
THANK YOU FOR YOUR ATTENTION