GRE-AFS Working Paper No. 5-14

5th GRE-AFS Informal meeting 28 - 30 October 2003, Bonn

Japan's proposal on automatic operation of the class E passing beam

Proposal for modification of paragraph 6.20.7.4.3.(vs doc5-2)

6.20.7.4.3

The class E mode(s) of the passing beam may be activated only (E-signal E in the Approval Mark)

- (a) when the vehicle's speed is not less than 80 km/h,
- (b) the maximum speed limit of the motorway excepting road construction and adverse weather conditions is 80 km/h or more, and,
- (c) the road characteristics correspond to motorway conditions $\underline{8}/$;

where said condition according to (c) above shall be deemed to be satisfied if a continuous evaluation of one or more sets of information data is provided that can indicate motorway conditions, (e.g. the vehicle's speed being essentially steady together with steering parameters, or, the width and the course of the road lanes as indicated by means of optical detection).

<u>8</u>/ Such conditions can be found in Chapter I, Article 1 of the Convention on Road Traffic (Vienna Agreement, 1968)

Reason: The current draft provides that "[..] when the vehicle's speed is not less than 80 km/h and the road characteristics correspond to motorway conditions 8 [..]", but in Japan, as shown in photographs shown below, some motorways are equipped with only low separation between the driving directions and lack antiglare fences, even when they satisfy the definition of footnote <u>8</u>/. In other words, vehicles on these motorways are running in the same conditions as those on open roads: It should be avoided to use the class E mode of the passing beam that is less restricted about glare on oncoming traffic.

On motorways whose speed limit is 80 km/h or over, there are antiglare fences on the central divider and the activation of the class E mode of the passing beam doesn't cause problems, but it does on some motorways whose speed limit is 70 km/h or under where there are no antiglare fences on the central divider.

For this reason, in Japanese road environment, we have to prohibit the activation of the class E modes on motorways of 70 km/h or under in speed limit (Actually, even on these motorways, vehicles very often run at 80 km/h or more. This prevents us from solving this problem by authorizing the activation only to vehicles running "at 80 km/h or more".)

Another solution we suggested at the second meeting held in January 2003 was to modify the wording of this part to "[..] when the vehicle runs at a vehicle speed not less than 80 km/h on a motorway specified (approved as suitable) by the relevant country according to footnote $\underline{8}/[..]$ ", but the suggestion didn't win the agreement of other members. We propose a modification of this paragraph again here, because we will have to give up adopting R. 48 if it remains as it is now. (infdoc 10)

For reference

Current draft in document 5-2 is as follows:

[The class E mode(s) of the passing beam (E-signal, E in the Approval Mark) may optionally be activated instead the basic mode(s) only when the vehicle's speed is not less than 80 km/h and the road characteristics correspond to motorway conditions $\underline{8}$ /. This latter condition shall be deemed to be satisfied if a continuous evaluation of one or more sets of information data is provided that can indicate motorway conditions, (e.g. the vehicle's speed being essentially steady together with steering parameters, or, the width and the course of the road lanes as indicated by means of optical detection)."]

Investigation of Motorway Median Strips

1. 60 km/h Speed Limit Section





Tokyo Metropolitan Expressway

2. 70 km/h Speed Limit Section



Futtsu-Tateyama Expressway

3. 80 km/h Speed Limit Section



Chuo Expressway

Chiba-Togane Expressway



Aqualine Trans-Tokyo Bay

Tokyo Outer Loop



Tokyo Metropolitan Coastal Expressway

4. 100 km/h Speed Limit Section



Joban Expressway



Chuo Expressway