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PROPOSAL
for involving the electronic stability enhancement systems in the regulatory scheme

Transmitted by the expert of Hungary

Electronically controlled stability enhancement systems are regarded as innovative and effective – by the Hungarian experts' view revolutionary – technical means of accident avoidance. Systems utilizing the extended functionality of electronically controlled brake systems have been available commercially for a while and the appearance of steering by wire systems has further widened the field of possible technical solutions. Active suspension systems may achieve a partially similar effect. However, none of these have yet resulted in a breakthrough in this field.

This rapidly evolving technology helps the intention of countries to decrease the number and severity of road accidents (e.g. the European Union aims to halve the number of fatalities between 2000 and 2010). On the other hand, manufacturers and consumers could be encouraged and a quicker market acceptance facilitated, if the regulatory system accepted the stability enhancement system and defined its major features and requirements.

Taking into account the inevitable time investment that would be required to establish the necessary regulationary measures, it would be advisable to begin this work now. The task should be given to the GRRF.

Hungary asked WP.29 to take a decision on this matter. WP.29 agreed to refer the subject to GRRF (TRANS/WP.29/953, para, 92.)

As WP.29 decided positively, a further decision should be taken: establish a new Regulation or amend three existing Regulations Nos. 13, 79 and 111 would be the more promising way. From the very beginning, this proposal presumes, that a stand-alone Regulation on Complex Electronic Systems (CEL) shall be established not later than the Reguation(s) in question, so that it can make use of Regulation "CEL" by references and other appropriate interfaces as required.

The regulationary requirements may be different for the various categories. The first candidates for approval should be vehicles carrying dangerous goods, vehicles within categories N3 and O4 (differentiating between full trailer and semi-trailer combinations) and long distance buses of category M3. Existing stability enhancement systems were developed mainly for the needs and construction properties of these categories, so a gradual approach should also begin with a Regulation on these categories.

The possibility of a step by step approach (it is questionable, whether enough knowledge is available for any other approach), amending the three aforementioned Regulations would

perhaps lead to a quicker result as even these amendments need not necessarily be introduced simultaneously.

In the above scenario, Regulation No. 13 and 79 would be amended to further consider safety related general provisions, brake- and steering- specific definitions, construction, fault-tolerance requirements etc. (building on existing texts as far as possible). A stability enhancement system utilising only brakes could be approved within the brake approval as an extended function of the brake system, and similarly, a stability enhancement system utilizing only steering, could be approved within the steering approval as an extended function of the steering system.

Meanwhile, one or more new annexes in a basically (including title and scope) amended Regulation No. 111 should possibly contain a system-independent (but probably not category-independent) performance test. Given previous unsuccessful efforts to develop Regulation No. 111/01, this part of the work may take longer than the modification of Regulation No. 79 and especially of Regulation No. 13, where most knowledge is currently concentrated. In any case, an approval based on requirements bound to the system characteristics of either braking or steering only is conceivable in the very first stage, even if not optimal.

A more strategic step forward would be to set a single new Regulations including both system and performance requirements for any kind of stability enhancement systems which could then be approved independently from brake or steering approvals. This would lead to a clearer separation of the technical areas of the approval scheme and to the possibility of a more flexible implementation, an advantage for both the authorities and the applicants. In a technical sense, a more complete system approach could be so realized. This could also encourage the development and acceptance of future sophisticated systems. Thus, this solution is worthy of consideration as well.

However, links to brake and steering approvals even in this case still exist. Modification of the stability approval may affect the validity of brake or steering approvals, therefore appropriate interfaces should be set up in all affected regulations.
