Informal document No. **GRSG-91-8** (91<sup>st</sup> GRSG, 17-20 October 2006 agenda item 1.1.)

## Report of the informal group IG/R.66 on its second meeting

(Held in Warsaw, 27-28 of June, 2006)

- 1. The expert group IG/R.66 was invited by Mr. J. Kownacki of the Motor Transport Institute (ITS Poland) to hold its second meeting in Warsaw. The list of participants (19 experts) is shown in Annex 1. The final agenda was agreed at the scene of the meeting taking into account all the available presentations.
- 2. Before the meeting some new working documents were circulated among the experts. The list of working documents is given in Annex 2. At the request of the Geneva Secretariat a new numbering system has been introduced. The two systems are parallel running until the end of the Warsaw meeting, but after that only the new numbering system will be used. The experts agreed to a request that future documents use UNECE definitions and categorizations when describing vehicles.
- 3. The list of the presentations which were listened to and discussed during the meeting is shown in Annex 3. Some of the presentations were prepared and finished just before the meeting, but the authors promised to circulate the electronic version of the presentation among the experts.
- 4. From the presentations it appeared:
- The official, national road accident statistics rarely contains information about buses and not one identified the bus categories (small bus, DD coach, etc.) and/or the accident types (rollover, frontal collision, etc.)
- The injury criteria used in the different countries varies and instead of identifying the bus categories the road categories are used (highway, city road, rural road, etc.) on which the accident happened.
- In the last 10-15 years, at the well known international automotive conferences (FISITA, EAEC, ESV, Meeting of Bus and Coach Experts, ECBOS, APSN, etc.) there were no presentations which could give new information to the expert group.
- Useful data and information for the group are available only from those statistics and evaluations which were collected and made by specialists, special groups in special projects. The in-dept analysis could be a useful tool to get more detailed knowledge about the different bus categories.
- 5. The presentations No. 2, 3, 4, 5, 6, 7 and 15 (see in Annex 3) gave information, useful data about the rollover of small buses and DD coaches. Presentation 6 highlighted that many of the vehicles under analysis were not equipped with passenger restraint systems. In respect of the enhanced rollover safety of buses (lateral stability, ejection, standard approval test, etc.) the presentations No. 1, 5, 8, 9, 10, 11 and 15 brought new information.
- 6. The expert from IRU asked if, in the case of DD vehicles, any analyses had been conducted as to whether the injury levels would have been reduced had the vehicles complied with R.66?
- 7. The group agreed that for the next meeting the working documents and the presentations shall concentrate on the subjects of small buses and DD coaches, this subject has a priority. German, French, Czech, Finnish, Norwegian, Hungarian experts offered new working documents. If there is sufficient time, the subject of the enhanced rollover safety of buses should

be also discussed. SMMT, IRU and CLCCR experts were asked to try collecting data about the number of DD coaches and small buses being produced or being in service. Everyone is welcome to provide this kind of information.

- 8. The Polish expert (Mr. Kownacki) informed the group about an international conference on Masses and Dimensions of Heavy Vehicles (Washington, 2006 June). One of the presentations (Hungarian one) informed the audience about the GRRF's proposal to install ESC systems (Electronic Stability Control) on Class III vehicles of M3 category. IG/R.66 suggests to GRSG to make proposal for GRRF and WP.29 to study the extension of this proposal to other classes (Class II) and bus categories (DD coaches, small buses), too. IG/R.66 already touched on this subject during the discussions and will come back to this issue again.
- 9. The Polish expert also informed the group about a possible cooperation. A team, formed by the Florida State University (FSU), Warsaw Technical University (Politechnika Warszawska PW) and the Polish Motor Transport Institute (ITS Poland)could work together with IG/R.66 in the subject: strength of superstructure of small (paratransit) buses. The team does not need financial support, they would cover their expenses. The cooperation could start next year, in January. All the IG/R.66 members are asked to express their opinion about this offer.
- 10. It is known that 33 countries already accept R.66 and it would be useful to know how many apply it in their national legislation. (The 25 EU member states accepted R.107/Rev.1. in which Annex 5. is equivalent with R.66). The expert from SMMT asked, if the extension of the scope of R.66 was considered so important, how could those governments not applying R.66 today justify their position?
- 11. The next meeting of IG/R.66 will be held in Budapest at the beginning of 2007. The exact date will be proposed by the Hungarian delegate on the next GRSG meeting, in October.

# Annex 1

# LIST OF PARTICIPANTS

Name	Country	Institution/Company/Organization
Annie Luchie	Belgium	CLCCR
Jean-Paul Delneufocourt	EU	European Comision
Michael Becker	Germany	Evobus
Gregor Steinmetz	Germany	Evobus
Alan Davis	France	IRISBUS
Patrick Botto	France	CEESAR
Allan McKenzie	UK	SMMT
Asbjorn Hagerupsen	Norway	Directorate of Public Roads
Juhani Intosalmi	Finland	Vehicle Administration
Mátyás Matolcsy	Hungary	GTE
Theresa Vicente	Spain	INSIA/UPM
Ras Hashemi	UK	CIC Cranfield
Petr Pavlata	Czech Republic	TÜV-SÜD
Colin Copelin	UK	IRU
Jerzy Kownacki	Poland	ITS - Poland
Wojcieck Przybylski	Poland	ITS - Poland
Dariusz Michalak	Poland	Solaris
Leslaw Kwasniewski	Poland	Techn. Univ. of Warsaw
Zbigniew Barszcz	Poland	PIMOT

The following experts excuse themselves by e-mail:

Louise TurnerUKDept of transportHarry JongenelenNederlandRDWGiulio MendogniItalyIVECO

## Annex 2

# WORKING DOCUMENTS OF IG/R.66

Number WD.1. (GRSG-IG/R.66-1-1)	Title The working method of IG/R.66	<b>Document by</b> Chairman
WD.2 (GRSG-IG/R.66-1-2)	Preliminary time-table of IG/R.66	Chairman
WD.3. (GRSG-IG/R.66-1-3)	Accident statistics and accident analysis (Available sources)	Chairman
WD.4. (GRSG-IG/R.66-1-4)	Required protection level for all bus categories in rollover (Possible approach)	Hungarian expert
WD.5. (GRSG-IG/R.66-1-5)	The rollover process and the severity of rollover accidents, considering all bus categories	Hungarian expert
WD.6 (GRSG-IG/R.66-1-6)	Requirements on extending the scope of R.66 (The first reflections, starting to think about it)	Hungarian expert
WD.7 (GRSG-IG/R.66-1-7)	Agenda of the Madrid meeting	Chairman
WD.8 (GRSG-IG/R.66-1-8)	Spanish accidents with buses involved injury mechanism analysis	Spanish expert (INSIA)
GRSG-IG/R.66-2-1 (WD.9)	Bus rollover accident analysis (Children injury mechanisms)	French expert
GRSG-IG/R.66-2-2 (WD.10)	Bus rollover statistics from Hungary	Hungarian expert
GRSG-IG/R.66-2-3 (WD.11)	World wide information about bus rollovers	Hungarian expert
GRSG-IG/R.66-2-4 (WD.12)	Available technical publications	Hungarian expert
GRSG-IG/R.66-2-5 (WD.13)	Accidents with buses in Germany	German expert
GRSG-IG/R.66-2-6 (WD.14)	German bus accidents, reported by the Hungarian media	Hungarian expert
GRSG-IG/R.66-2-7	Remarks to the ECBOS summary report	Hungarian expert
GRSG-IG/R.66-2-8 GRSG-IG/R.66-2-9	Czech Overall Statistic Data APSN Workshop (Bus and Track Safety)	Czech expert Czech expert
GRSG-IG/R.66-2-10	Structural response of paratransit buses in rollover	Polish expert
GRSG-IG/R.66-2-11	accidents Spanish rollover statistics 1995-2004	Spanish expert
GRSG-IG/R.66-2-12	In-depth analysis of a DD coach rollover accident	Spanish expert

#### Annex 3

### LIST OF PRESENTATIONS DISCUSSED ON THE MEETING

- 1. Spanish rollover statistics 1995-2004 (Spanish presentation GRSG-IG/R.66-2-11)
- 2. In depth analysis of a DD coach rollover accident (Spanish presentation GRSG-IG/R.66-2-12)
- 3. Accidents with buses in Germany (GRSG-IG/R.66-2-5, German presentation)
- 4. German bus accidents, reported by the Hungarian media (GRSG-IG/R.66-2-6, Hungarian presentation)
- 5. Bus rollover statistics from Hungary (GRSG-IG/R.66-2-2, Hungarian presentation)
- 6. Analysis based on a bus accident databank (French presentation)
- 7. Structural response of paratransit (small) buses in rollover accidents (Polish-American presentation, GRSG-IG/R.66-2-10)
- 8. Lateral stability of buses in the light of ESC development (Polish presentation)
- 9. Conclusions learned from the ECBOS project (Presentation from UK.)
- 10. Remarks to the ECBOS summary report (Hungarian presentation GRSG-IG/R.66-2-7)
- 11. The effect of the friction coefficient and the rigidity of the ditch in basic rollover approval test. (Czech presentation)
- 12. Available data from APSN Workshop documents (Czech presentation, GRSG-IG/R.66-2-9)
- 13. Accident statistics from Czech Republic. Bus accidents (Czech presentation GRSG-IG/R.66-2-8)
- 14. Available technical publications: FISITA, EAEC, ESV Congresses, Meetings of Bus and Coach Experts (GRSG-IG/R.66-2-4, Hungarian presentation)
- 15. World wide information about bus rollovers (GRSG-IG/R.66-2-3, Hungarian presentation)

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