INF GR /FI-08-05_draft

Minutes of 8th meeting of the Informal Group on Frontal Impact

Held at BASt, Bergisch Gladbach

04th March 2010

1. Welcome

The chairman Pierre Castaing opened the meeting and welcomed the delegates.

2. Roll call

3. Adoption of the agenda

Doc. INF GR / FI-08-01

The Agenda was adopted with minor amendments.

Top 6.1, 6.4, 6.5 and 6.6 is postponed for the April Meeting (9th meeting) in Paris.

4. Adoption of the Minutes of last Meeting

Doc. INF GR / FI-07-07

The minutes were discussed, amended and adopted.

5. GRSP position after December 2009 session

Doc. INF GR / FI-08-02

(GRSP-46-26)

5.1. Presentation of IWG R94 chairman

Mr Castaing introduced the presentation he had given to GRSP after the 7th meeting of IWG R94 in Geneva, about the current status of IWG R94.
In particular it has been concluded that IWG R94 needs more time to come to a common position on amending R94.

Comments & Discussion
Mr. Frost said that the accident data analysis has shown a higher risk for “female occupants” in frontal impacts, whereas the status report indicates a higher risk for “small occupants”. He said that the higher risk of “females” is a quite important point from the UK perspective and that it shall become apparent.
Mr. Casting agreed to change the wording. The characteristic “small occupant” could be one reason for the higher risk of females and has been put down in this respect.

5.1.1. Future steps – What are the important steps to be taken

Doc. INF GR / FI-08-03

The group agreed on the following points to be important:

5.1.1.1. Change of test severity in Offset test

Next steps to be taken are:

- **Define and motivate test metric (implicit definition of test severity) (FIMCAR)**
- **Fix level of test severity by a suitable reference collision (FIMCAR)**

Comments & Discussion

It was agreed that the definition of "test severity" is complex and that it is best defined implicitly by a suitable test metric.

5.1.1.2.Introduction of Full Width test in frontal impact

Next steps to be taken are:

- **Addresses real-world injury sources (includes also** FI-08-03 paragraphs **1.1.1.3 & 1.1.1.4) (THORAX)**
- **Restraint System assessment (THORAX / COVER)**
- **Frontal structure architecture assessment (includes** FI-08-03 paragraph **1.1.1.6) (FIMCAR)**
- **Define and motivate test metric (implicit definition of test severity) (FIMCAR)**
- **Fix level of test severity by a suitable reference collision (FIMCAR)**

Comments & Discussion

5.1.1.3.Protection of female occupants

Next steps to be taken are:

- **Find reasons for higher risk for females (stature, scenario, seating position, biomechanics e.g.) (THORAX)**
- **Availability of appropriate dummies (EEVC WG12)**

Comments & Discussion

Mr. Ammerlaan made a comment that regard shall be taken as to which testing tools /

dummies are available

5.1.1.4.Protection of older occupants

Next steps to be taken are:

- **Find reasons for higher risk for older occupants (biomechanics, scenario e.g.) (THORAX)**
- **Availability of appropriate dummies (EEVC WG12)**

Comments & Discussion

5.1.1.5.Protection of rear occupants

Next steps to be taken are:

- **Establish injury patterns for belted rear seat passengers comparing them to injury patterns for belted front seat passengers (THORAX, EEVC WG12, EC-Study APROSYS)**

Comments & Discussion

Mr. Johannsen made a comment that submarining could be an injury mechanism to be delt with for rear occupants. Mr. Pastor commented that fatalities for rear seat passengers are most common in cases there rear seat passengers have not been belted. Mr. O'Brian said that accident analysis during the EU Project "APROSYS" detected "low seat belt usage" for rear seat passengers as well. Adjusting for seat belt usage rates the injury risk for rear seat passengers was not higher for rear seat passengers than for front passengers.

Mr. Broertjes mentioned that rear seat dummies will increase the crash weight of cars to be tested. Problems can also arise in case of testing 7 seaters. Mr Pott added that it must also be considered whether there is enough "space" in the rear of the car to position additional dummies.

Besides it was agreed that looking at rear seat passengers is an important point.

5.1.1.6.Geometric requirements

- **Define Interaction Area (FIMCAR)**

Comments & Discussion

Mr. Damm added that geometric requirements can be a first step introduced in order to improve cars compatibility.

With regard to the end of the groups mandate in May 2010 discussion took place on what conclusions of the groups work shall be given to GRSP in May 2010. It was agreed that the chairman shall announce to GRSP, that

- **The group identified a certain number of points**
- **The group will continue to integrate these points into R94**
- **The group has difficulties for a clear planning with regard to delivering a draft for a new R94 yet, but that the group will come back to GRSP in May 2011 with a clear planning.**
- **During the next year work in parallel with EU Projects THORAX and FIMCAR and collaboration with other countries involved in R94 will take place**

5.2. French presentation on the extension of French accident analysis to European Scope

Doc. INF GR / FI-08-04

Mr. Chauvel gave a presentation which extends the French benefit analysis to an European scope. The analysis was based on a comparison of the European and French fleet. It was shown that the European and French fleet is similar with regard to mass classes of cars. It was also shown that the five biggest countries in Europe represent more than 70% of the European fleet. Conclusions have been that the number of fatal and serious car occupants can be reduced by 7%, in Europe and France.

Comments & Discussion:

Questions have been raised about the technical justification of the approach. Mr. Schäfer asked how the Severity Rate Target has been chosen. Mr. Kinsky mentioned that the fleet data used for the projection might have been old. In particular the German fleet data seems to be old, because the number is too low.

5.3. A.O.B.

6. Next Meetings

27th of April 2010, Paris CCFA, room to be announced (9:30 – 17:30 full day)

7. Actions

7.1. Japanese benefit analysis for a Full Width Test

7.2. Mr. Castaing to prepare a paper on the groups conclusions to present in May 2010 to GRSP

7.3. European Accident Analysis on behalf of the European Commission (TRL)

7.4. Input from Accident Analysis done for EU-Project Thorax / FIMCAR(TRL/Technical University Berlin)

7.5. APROSYS Data to be presented by Mr. Schramm

8. Attachments and Working Documents

Annex No.	Presented by / on behalf of	Title
1	PC	Attendance list
2	PC	Actions list
3	PC	Documents list

Action Number	Action	Target Date	Action By	Comp Date
3.				
3.1.	Amend the minute of the first meeting	09/03/10	Secretary	09/03/10
3.2.	Amend the minute of the second meeting	09/03/10	Secretary	09/03/10
3.3.	Document on German accident analysis: for March meeting	09/03/10	Germany	postponed
3.4.	Document on French accident analysis: more detailed	09/03/10	France	09/03/10
3.5.	Injury mechanism (thorax injury)	09/03/10	Sweden	09/03/10
3.6.	Thorax Injury frequency	09/03/10	All	postponed
3.7.	Update of EU project SARAC I&II	09/03/10	Germany	postponed
3.8.	Input from VC-Compat	09/03/10	Sweden	postponed
3.9.	EES Calculation method =>Put the software on the PDB web site.	09/03/10	France	09/03/10
3.10.	PDB test result on heavy weight cars	09/03/10	Japan	09/03/10
3.11.	Update the Swedish document	09/03/10	Secretary	09/03/10
3.12.	VDA to present Document FI_03-09	09/03/10	VDA	09/03/10
3.13.	Input open questions, what is missing, next steps	09/03/10	All	open
4.				
4.1.	Document on German accident analysis: for May meeting	25/05/09	BASt	25/05/09
4.2.	Document on French accident analysis: more detailed for May meeting	25/05/09	France	25/05/09
4.2.1.	Eliminate the older cars	25/05/09	France	25/05/09
4.2.2.	Check if there are 30 people also outside the car for the partner protection.	25/05/09	France	25/05/09
4.2.3.	Compare the fatality rate with the current two categories (single car and car-car)	25/05/09	France	25/05/09
4.3.	Thorax injury frequency :report similar data than Doc FI_03-06	25/05/09	All	
4.4.	Thorax injury frequency: update data from EU Project SARAC I&II	25/05/09	Germany	closed
4.5.	Results on car-car tests and explain the higher passenger loadings and the barrier calculation.	25/05/09	Japan	
4.6.	UK, Nl, Japan are asked to prepare a position on the VDA presentation	25/05/09	All	open
4.7.	Amend Document FI_03-09 to focus on frontal impact	25/05/09	VDA	

Action Number	Action	Target Date	Action By	Comp Date
4.8.	Present the methodology for PDB introduction in the regulation.	25/05/09	France	25/05/09
5.				
5.1.	Propose solutions to solve the problem of car to car accident	15/09/09	All	
5.2.	Do similar exercise than Doc. INF GR / FI-05-04 proposed by Sweden	15/09/09	All	
6.				
6.1.	Extension of German Accident Analysis	7/12/09	BASt	7/12/09
6.2.	Extension of French Accident Analysis	7/12/09	LAB	postponed
6.3.	European Accident Analysis (PART 1)	7/12/09	TRL	7/12/09
6.4.	Input from Accident Analysis done for EU-Project Thorax	7/12/09	TRL/BASt	postponed
6.5.	Reference Collision Data based on Real World Accidents	7/12/09	BASt	open
6.6.	Review Doc. INF GR / FI-05-07 presented by France	7/12/09	ALL	7/12/09
7.				
7.1.	Japanese benefit analysis for a Full Width Test for March 2010 meeting	04/03/10	Japan	postponed
7.2.	Extension of French Accident Analysis	04/03/10	France	04/03/10
7.3.	European Accident Analysis on behalf of the European Commission (PART 2)	04/03/10	TRL	postponed
7.4.	Input from Accident Analysis done for EU-Project THORAX	04/03/10	TRL / BASt	postponed
7.5.	Reference Collision Data based on Real World Accidents	04/03/10	BASt	open
7.6.	Time schedule	04/03/10	ALL	04/03/10
8.				
8.1.	Japanese benefit analysis for a Full Width Test	27/04/10	Japan	
8.2.	Paper on the groups conclusions to present in May 2010 to GRSP	27/04/10	Chairman	
8.3.	European Accident Analysis on behalf of the European Commission (PART 2)	27/04/10	TRL	
8.4.	Input from Accident Analysis done for EU-Project THORAX	27/04/10	TRL	
8.5.	Input from Accident Analysis done for EU-Project FIMCAR	27/04/10	TUB	
8.6.	Input from Accident Analysis done for former EU-Project APROSYS	27/04/10	Mr. Schramm	

Document Number	Title	Origin
8.4	Extension of French accident analysis to European Scope	France
8.3	Future steps – important points for R94 change	Secretary
8.2	IWG R94's GRSP position after December 2009 session	Chairman
8.1	Agenda of the 8th Meeting of the informal group on frontal impact	Chairman
7.7	Draft Minutes of the 7th Meeting of the informal group on frontal impact	Secretary
7.6	Presentation on ideas to amend R94	Germany
7.5	Presentation on possibilities to avoid misuse of the PDB	France
7.4	Presentation to review open questions	Sweden
7.3	Presentation on the first results of a frontal impact study by order of the EU Commission	UK
7.2	Presentation on updated German accident analysis	Germany
7.1	Agenda of the 7th Meeting of the informal group on frontal impact	Chairman
6.6	Draft Minutes of the 6th Meeting of the informal group on frontal impact	Secretary
6.5	Update work on reference collision	Sweden
6.4	Presentation on MPDB problems	France
6.3	Presentation on frontal impact issues	UK
6.2	Report on frontal impact issues	EU-Commission
6.1	Agenda of the 6th Meeting of the informal group on frontal impact	Chairman
5.10	Minutes of the 5th Meeting of the informal group on frontal impact	Chairman
5.9	dummies-position in Japanese tests	Japan
5.8	joint-researches-USA-France-presentation	France/USA

5.7	French-answer-to-R94amendement-issues	France
5.6	R94-METHODOLOGIE-BENEFITS-May-2009	France
5.5	PDB Research in JPN Mini-Cars & Minivan & PC	Japan
5.4	Swedish-Accident Data Review	VTI
5.3	French-accident-data-analysis	LAB
5.2	German-accident-data-analysis	BASt
5.1	Agenda of the 5th Meeting of the informal group on frontal impact	Chairman
4.6	Final minutes of the 4th Meeting of the informal group on frontal impact	Secretary
4.5	Contract with EC: Provision of information for the development of frontal impact legislation	TRL
4.4	Performance as Test Procedures of the PDB and ODB Tests for the Light and Heavy Cars	Japan
4.3	Injuries Reported in Frontal Impacts in Swedish Accident Data	VTI
4.2	Work progress regarding Self-Protection and Partner-Protection	LAB
4.1	Agenda of the 4th Meeting of the informal group on frontal impact	Chairman
3.12	Draft minutes of the 3rd Meeting of the informal group on frontal impact	Secretary
3.11	PDB research in Japan	Japan
3.10	Mobile Progressive Deformable Barrier and Mobile Rigid Barrier Tests	BASt
3.09	Detailed discussion of the VDA position on the proposal for draft amendments to UN-ECE R94	VDA
3.08	Influence of the PDB on the pulse	France
3.07	Additional research on PDB and MPDB	Netherlands
3.06	Evolution of mortality rate and fatal injury frequencies in Frontal impact since 1990.	France
3.05	APROSYS - Development of a Full Width Frontal Impact Test for Europe	UK

3.04	Single Vehicle Collisions - Extracts from the RISER project.	Sweden
3.03	Accident analysis - Work progress regarding Self-Protection V2	LAB
3.02	Evaluation of the Effect of the Implemented Full-Width Frontal Impact Standard on Reduction of Fatalities in Japan	Japan
3.01	Agenda of the 3rd Meeting of the informal group on frontal impact	Chairman
2.09	Minutes of the 2nd Meeting of the informal group on frontal impact	Chairman
2.08	VDA position on the proposal for the draft amendments to Regulation N° 94	VDA
2.07	Japan research on Regulation N°94 amendments	J apan
2.06	Outstanding issues with PDB test	UK
2.05	Accident analysis - Work progress regarding Self-Protection V1	LAB
2.04	First finding of additional research	Netherlands
2.03	UNECE Reg. 94 – Past, Present & Future	Netherlands
2.02	Issue to be resolved in evaluation of Regulation N°94 amendments	Secretary/Sweden
2.01	Agenda of the 2nd Meeting of the informal group on frontal impact	Chairman
1.04	Draft Minutes of the 1st Meeting of the informal group on frontal impact	Secretary
1.03	Agenda of the 1st Meeting of the informal group on frontal impact	Chairman
1.02	Proposal of rules of procedure and terms of reference	Chairman
1.01	ECE/TRANS/WP.29/GRSP/2007/17 – Proposal for draft amendments	France