Draft minutes for 3rd meeting of the Informal Group on

Safer Transport of Children in Buses and Coaches

Date:	**Start**	**January 16th**	**9:30**
	End	**January 17th**	**12:30**

Place:

Clepa Offices

Cours Saint Michel 30

B1040 Brussels

Belgium

1. **Welcome & meeting arrangements**

   Marta Angles, Chair of the IWG-STCBC, welcome the participants, including those online and thanked CLEPA for hosting the meeting.

2. **Adoption of the agenda - STCBC-03-01**

   The agenda was adopted with no changes

3. **Minutes review from last meeting**

   The minutes were adopted with no changes

4. **Actions from last meeting**

   a. Clarification types and classes of busses & coaches (Victor Calzadilla)

      Victor presented a table that defines the types of vehicles and their corresponding classes (**STCBC-03-02).**

      Action: Finalize the classification table with seat belt requirements (Farid)

      Decision: IWG to focus in Phase 1 on Class B and III, later in Phase II we will deal other classes

      Action: Investigate the seat belt installation in all classes except for Class B and III (Anika)

   b. Establish a summary matrix combining seat belt type as a function of vehicle category/ testing (Farid)

      Farid presented the summary matrix (**STCBC-03-03**).

      Comment: Need to add a note to document STCBC-03-03 saying that the R80 static push test is under revision at GRSP

      Conclusion from this presentation: IWG to consider the dimensions and the 2 types of seat belts as key parameters.

      Action: Provide dimensions according to R107 for Korea (Jongsoon) and Japan (Yoshinori San) next meeting

   c. Requirements applied in vehicles in Korea (Jongsoon)

      Moved to next meeting as Mr Jongsoon was unable to attend.

d. List of key elements to collect the accident data for future accident investigation (Farid Bendjellal, Marta Angles, Philippe Lesire)

No progress, next meeting, if no progress then will be cancelled.

e. Decision if use of R44 should be allowed in busses and coaches

See ítem 5d

f. Presentation on ISOFIX (Thomas Gold) – **STCBC-03-04**

Investigation of installation of CRS fixtures in Forward Facing and Rear Facing modes with respect to seat-to-seat distance in an M3 vehicle

C**onclusion** – R107 dimension not sufficient to accommodate those CRS fixture

If all sitting positions were equipped with ISOFIX Rear Facing CRSs, that with would lead with present seat-to-seat distance in that vehicle, to a loss of 5 rows (10 seats), i.e. this could be a worst case for coaches.

Action:

- Expand the analysis to top and front views (Thomas G)
- Do similar analysis combining CRSs and Support Leg volumes (Sebastian, Thomas)

5. Definition of key elements of the regulation

a. *Key test configurations Frontal Impact, Rollover*

Yoshinori presented a study (**STCBC-03-05**) where an integral CRS was tested according to R80 with a HIII 3y old dummy and with 3 and 2pts belt restraint systems.

Key results: No head contact with 3 pts belt system, head contact occurred with 2 pts belt system.

Conclusion: More data are needed. It was agreed to define a test plan to generate more input.

Parameters for the test plan:

- Restraint systems: 2 pts and 3 pts belt,
- CRSs: Infant carrier, toddler, booster cushion
- Dummies: Q1.5, Q3, Q6 and Q10
- Test configuration: 2pts vs. 2pts + CRS, 2 rows of seats with distance seat to seat according to R80
- R80 test pulse (recommended by Thomas: justification R100 pulses has a different aim – battery testing);

Test Matrix

Dummy		2 pts & CRS	2 pts
Q1,5	Infant carrier 129 belted	X	X
Q3	Toddler R44	X	X
Q6	Booster cushion R44	X	X
Q10	Booster cushion R44	X	X

- Vehicle seat:

Action

- CRS manufacturers to provide CRSs
- Vehicle seat manufacturers to provide seats

- Site for tests: Idiada

  Applus IDIADA

  Carretera C-17, Km. 17,5

  Polígono Industrial Batzacs, E 08400

  Granollers.

  Spain

- Sled floor platform: Rigid floor
- Test date deadline: next 2 meetings

Experience: Van Hool received requests to have some seats dedicated to CRS from platforms.

b. *Test tools (dummies, test bench)*

Test dummies: Q dummies

Test bench: more time needed to define it

c. *Performance criteria*

For the test matrix parameters: R129 criteria

d. *Type of CRS R44/R129*

Reasons why specific CRSs for buses and coaches are not possible:

- Risk of misuse
- No incentive to develop such a CRS for a niche category of vehicles
- Phase out of R44 products: 1 Sept 2023 according to EU GSR 2019/2144 & GRSP 66-37

e. *Type of Pulse R 80*

Action: comparison of M2 & M3 pulses (Salim)

6. Confirmation of tasks and responsibilities (see below)

7. Next meeting

Next meeting: In Cologne, 6 & 7 May

Action: Confirm meeting place for workshop on 6 May by Annika and place for the meeting 7 May

Topics to cover

- Workshop: Installation of CRSs (to be provided by CRS manufacturers) in various types of buses/coaches, (Annika to provide)
- Agenda
  - Table Victor: add seat belt spec (Victor)
  - Market overview of seat-belt installation (Annika)
  - Distance between bus/coaches seats in Korea (Jongsoon)

- Presentation of requirements that apply in Korea to buses/coaches (Jongsoon)
- Key elements for future accident investigation (Farid, Marta, Philippe)
- Top and front views from Evobus simulation (Thomas)
- Support leg assessment volumen (Sebastian, Thomas)
- Testing (All)
- Comparison of loads in R80 and using M2 pulse in R100 (Salim)
- Confirm meeting place (Rudolf), confirm workshop place (Annika)
- 5th Meeting: October 28st Start 13h, whole day 29 finishing at 16h (Farid to check with Pierre Bazzucchi)

List of attendees

In person: Marta Angles, Farid Bendjellal, Victor Calzadilla, Annika Stienen, Ronald Vroman, Marianne Le Claire, Sebastian Weber, Walter König, Salim Abdennadher, Pascale Reyntjens, Thomas Müller, Costandinos Visvikis, Mark Pitcher, Yoshinori Tanaka,

On line: Thomas Gold, Slawomir Stadnik, Hasan Sahin