52\textsuperscript{nd} GRSP Session
IWG on draft new Regulation on child restraint systems

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Extended Mandate

• The IWG asks GRSP to extend the mandate until the end of 2014
  – Draft regulation for phase 2 (May 2013)
  – Development of transitional provision to withdraw ISOFIX application from ECE R44 (December 2013)
  – Draft regulation for phase 3 (May 2014)
Meetings

• 06 June 2012 at OICA – Paris
• 30 August 2012 at ACEA – Brussels
• 10 October 2012 at EC – Brussels
• 22 November 2012 at EC – Brussels
• 29 January 2013 at OICA – Paris *
• 28 February 2013 at CLEPA – Brussels
• 18 April 2013 at SMMT – London
Dummies Meetings

• 25 October 2012 Webex meeting

• *29 January 2013 at OICA – Paris
  IWG CRS special meeting dedicated to Q10
Phase 2 & 3 philosophy

• Child is restrained by the belt system of the vehicle

• Different categories for Booster seat & Booster cushion
  – With ISOFIX
    • Alignment
    • Misuse
  – Without ISOFIX
    • Similar to Current Universal
    • ISOFIX could be a Sub-category, class, ..
i-Size name

- Based on size of the child
- Based on “plug and play principle” on i-size ready positions
- i-Size position / i-Size vehicle
Phase 2

- Phase 2 is already underway
  - Non-integral CRS
    - Booster seats (up to 1,35 m)
    - Booster cushion (between 1,35 m and 1,5 m)
  - ISOFIX, simplified ISOFIX, no ISOFIX?
  - Belt routing
    - geometric approach
  - Belt guidance
    - mechanical robustness control
Tasks

- Alignment data
- New i-Size gabarit influence
- Efficiency of ISOFIX connectors (rigid)
- ISO definition of vehicle / booster interface
  Definition of interface between Child dummies and standard belt routing as defined by the 5th % female dummy
- 3D points for belt routing on 5th%
Work on progress

- **Child Dummy Subgroup**
  - Validation of the drawing packages for Q0, Q1, Q1.5, Q3 dummies
- **Child Dummies definition for Q6 and Q10**
- **A Q10 production version is currently under development**
  - Addressing issues raised in EPOCh and third party testing programs
  - Items needing decision from Stakeholders:
    - Belt penetration in pelvis thigh groin
    - Belt – suit interaction
    - Side impact performance
    - Injury thresholds
    - Abdominal sensor
  - Solutions (not affecting development of production version dummy):
    - Belt penetration dealt with using hip shields
    - Belt slip occurred after introducing Cordura layer in suit
    - For side impact a kit consisting of minimal number of parts under investigation
    - Injury thresholds proposed by EPOCh to be further evaluated
    - Abdominal sensor: research item which should not affect abdominal behavior
- **Need decision making on issues by group like EEVC WG12 or alternative**
COUNCIL DIRECTIVE of 16 December 1991 relating to the compulsory use of safety belts and child-restraint systems in vehicles (91/671/EEC)


No reference made to the New regulation
Phase 3

- Still an open cogitation on belted integral CRS.
  - Still needed for non ISOFIX or i-Size positions
  - Still needed for old vehicles in current fleet
- Two solutions
  - Develop new requirements in a phase 3
  - Upgrade ECE R44