Bundesanstalt für Straßenwesen

Federal Highway Research Institute



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Current Status of the Euro NCAP Whiplash Assessment Protocol

Bernd Lorenz



Structure of subgroup



- Chaired by Wilfried Klanner, ADAC
- Formed in 2002 and incorporating representatives of all Euro NCAP members, plus industry experts nominated by ACEA
- Occasional guests from IIHS on behalf of IIWPG
- Several members are also members of EEVC WG20 (Rear Impact)

Present situation



- TWG has developed a proposal, which they recommended to the Steering Committee (SC) in January 2006
- Proposal encourages state of the art seat performance associated with reduced field experience of whiplash injury
- Proposal builds on experience of separate established whiplash assessment methods used by IIWPG, SRA/Folksam and ADAC
- no final decisions made by the SC on January meeting

Test set up



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Based on the following:

- Geometric and dynamic assessments
- Seat on sled
- BioRID
- Multiple pulses
- Measures of seat performance as opposed to injury criteria

Proposed Assessment



- Dynamic assessment, multiple energy levels
- Dynamic results modified for
 - adequacy of head restraint adjustment
 - Vertical locking
 - Seat stability
- Stepped access to tests based on seat performance.
 - This minimises dummy damage and limits test costs

Proposed Assessment



- Encourages state of the art seat design for whiplash protection
- Produces comparative score for whiplash protection features
- Allows integration of whiplash protection score into adult occupant protection rating

State of protocol



- Concepts within protocol agreed
- Protocol ready for use in validation trial
- Proposed assessment methodology ready for checking against latest seat tests
- Results will be used to finalise protocol

Next steps



- Multiple laboratory programme, mainly sponsored by participating laboratories, to check robustness of test protocol for widespread use
- Major programme, funded by Thatcham, SRA and Folksam, to verify assessment protocol on latest designs of seats
 - This will provide robust basis for supporting structure and limits within assessment protocol



- Multiple laboratory harmonisation programme
 - Six laboratories for use by Euro NCAP
 - Five seat models representing a range of latest anti-whiplash designs
 - Harmonisation to ensure good reproducibility
 - check robustness of protocol

Next steps



- Large independent test programme funded by Thatcham, SRA and Folksam (30 seats, 90 tests)
- Offered as trial run for Euro NCAP by sponsors
- Provides for protocol refinement in light of latest seat performances
- Potential for Euro NCAP's first whiplash publication in 2006



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Thank You for Your

Attention!