Dummy Head Improvements

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Agenda

• Background
• Current GBUM Head Proposal
• New Head Proposal
• Decision?
Background

- Concerns about cables exiting down back of skull for a rear impact dummy
- Concerns about hinging skull cap with two screws cantilevered at top
- No certification test for skull cap skin
- Extensive discussions about how to bring out cables
Current GBUM Head Proposal

• Denton proposed new head to GBUM
  – Uses skull cap load cell or structural replacement
  – Integrates contact switch to skin
  – Provides cable exists down back of neck or out sides of head at Center of Gravity (COG)
  – Tunable cap skin to use with headrest certification test to control stiffness
  – Eliminates possible interferences of chin with neck or C4 accel. Block

• Several labs have tried new head
Current GBUM Head Proposal

- Side cable exits
- Switch
- Eliminate possible C4 and chin contacts
Feedback on GBUM Head Proposal

- Cap skin is softer than existing older heads
- Giving wiring options for cap switch
- Some labs are very opposed to side cable exits
- Side cable exits cause either Mz loads (one side) or interfere with video
- Switching cables side to side is nuisance
- Don’t like appearance of side inserts
- Other?
New Head Proposal

• Denton is proposing a new head to address concerns
• Features
  – Eliminate possible interferences of chin with neck or C4 accel. Block
  – Use skull cap load cell or structural replacement
  – Integrates contact switch to skin (allow wiring options)
  – Tunable cap skin to use with headrest certification test to control stiffness
    • Match average of new and old heads from head drop test
  – Provide multiple cable exit options
  – Removable face to enhance flexibility
New Head Proposal

- Top exit
- Side back exits
- COG exits
- Front exit
- Under chin exit?
- Down the back exit
Decision?

- GBUM head?
- Go back to original head?
  - With or without skull cap load cell option?
- New Head Proposal?
  - What features should be included?
- Other proposals?
THANK YOU
for your attention