

Dummy Head Improvements

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Informal Working Group Meeting for GTR7
In Tokyo
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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

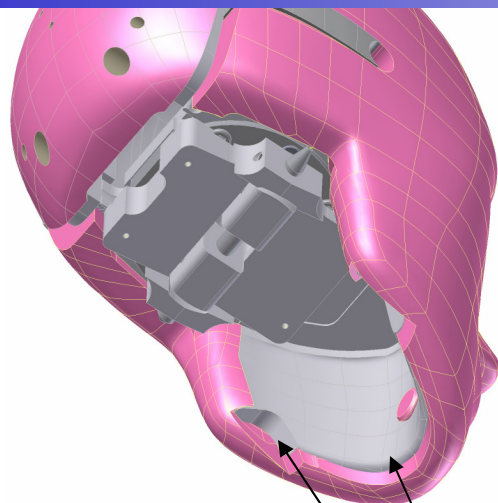


Current GBUM Head Proposal

- 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

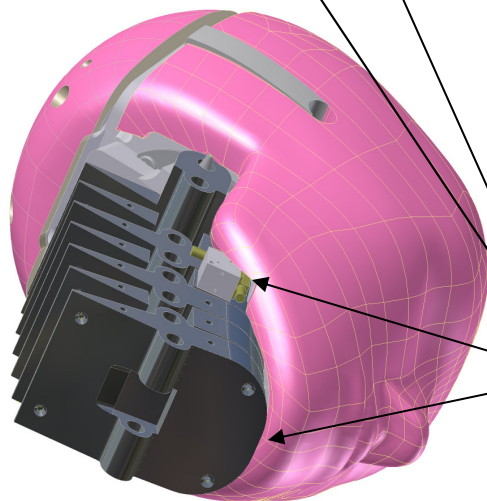
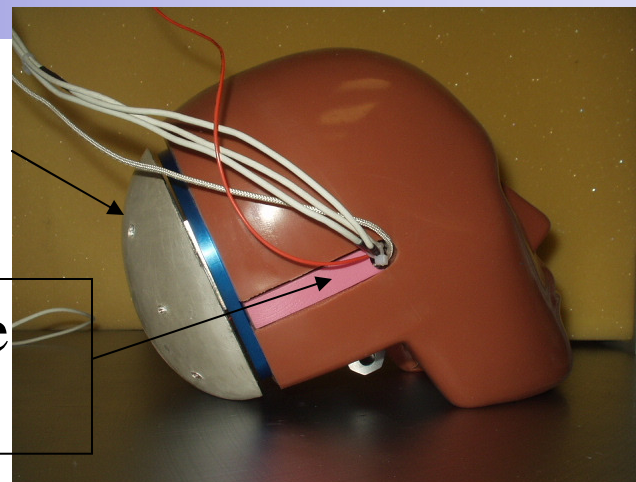


Current GBUM Head Proposal

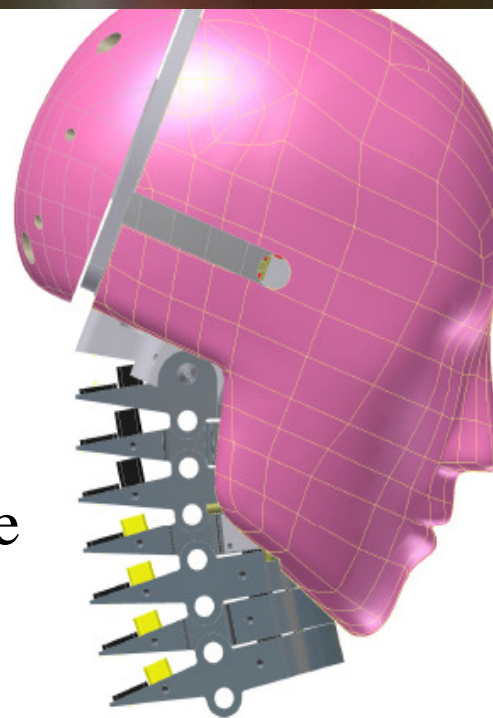


Switch

Side cable exits



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?

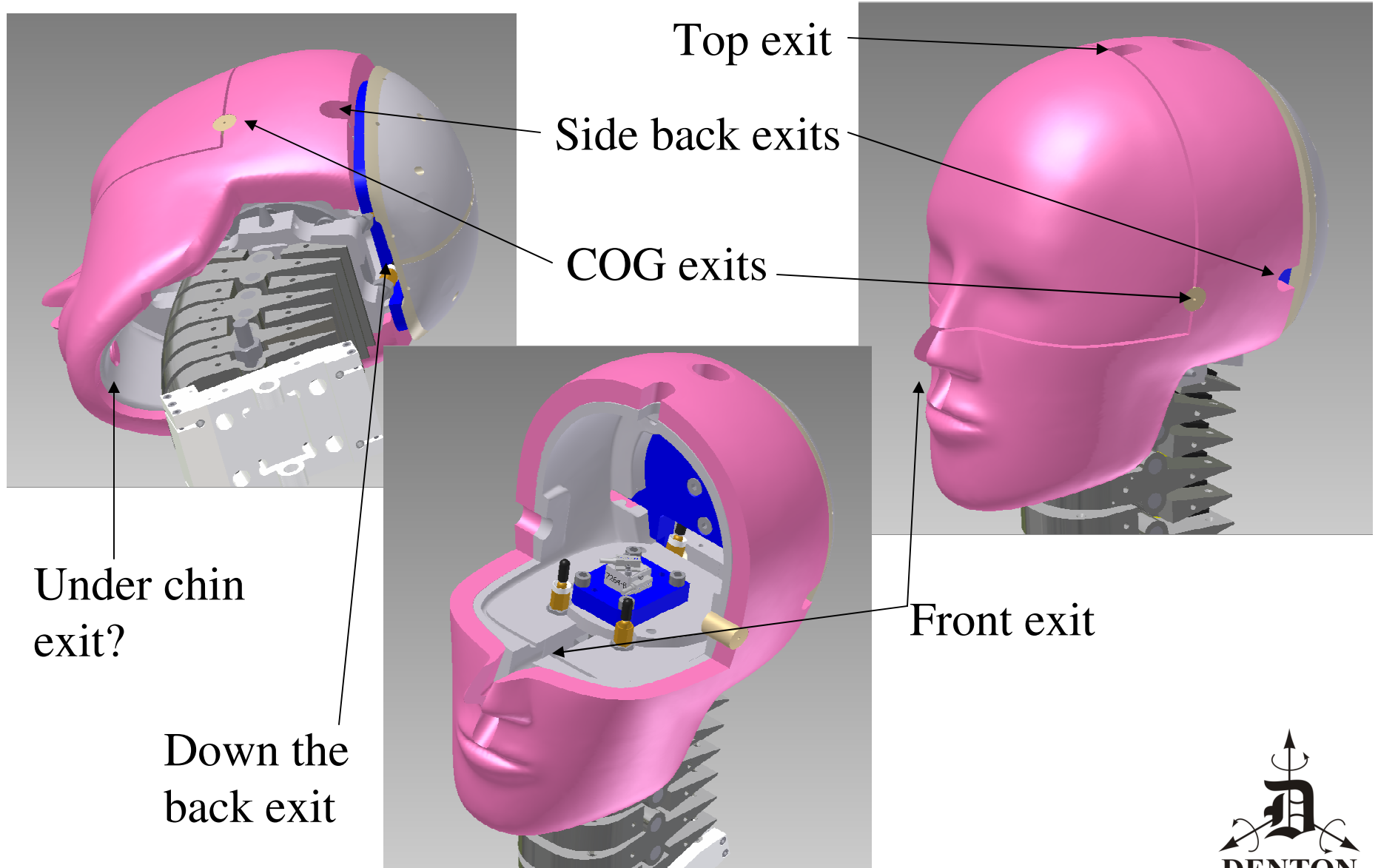


New Head Proposal

- 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



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

