

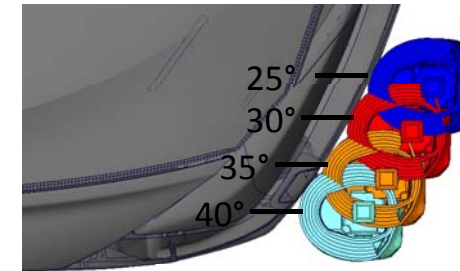


PEDESTRIAN PROTECTION

Assessment on vehicle tested with
Lower Legform at
limits of BTA and beyond

Pedestrian Protection

Lower Leg Impact



I. Impact Locations

Colour	Y-coordinate	Angle [°]	
dark blue	628	25	Test approx. at outer border of BTA (= COB -66 mm)
red	690	30	Test at COB
orange	756	35	
Light blue	802	40	

angle of vertical plane touching at given Y-coordinate to vertical transversal plane

BTA = Bumper Test Area
COB = Corner of Bumper

Pedestrian Protection

Lower Leg Impact

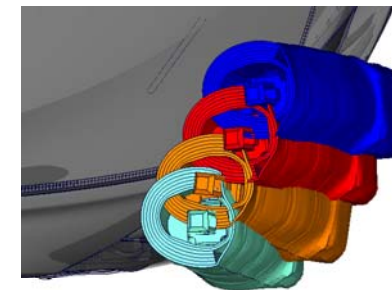
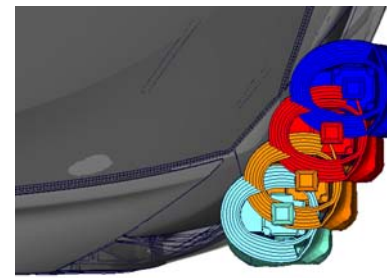
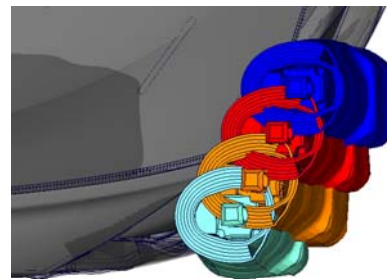
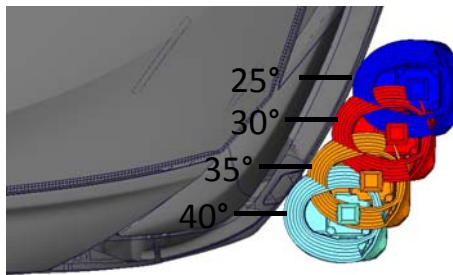
II. Vehicle impacted by Flex Pli – in top down view

0ms

10ms

15ms

20ms

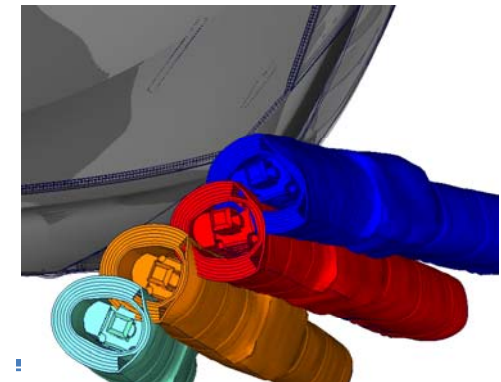
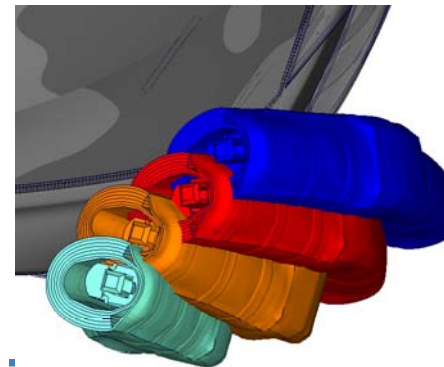
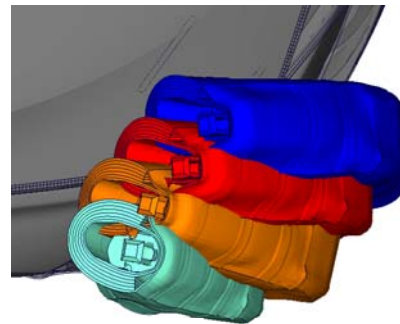
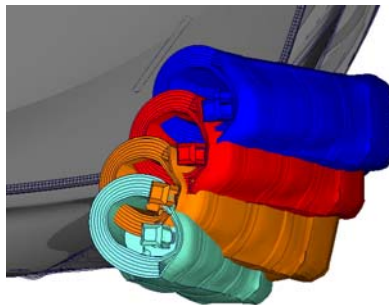


25ms

30ms

40ms

50ms

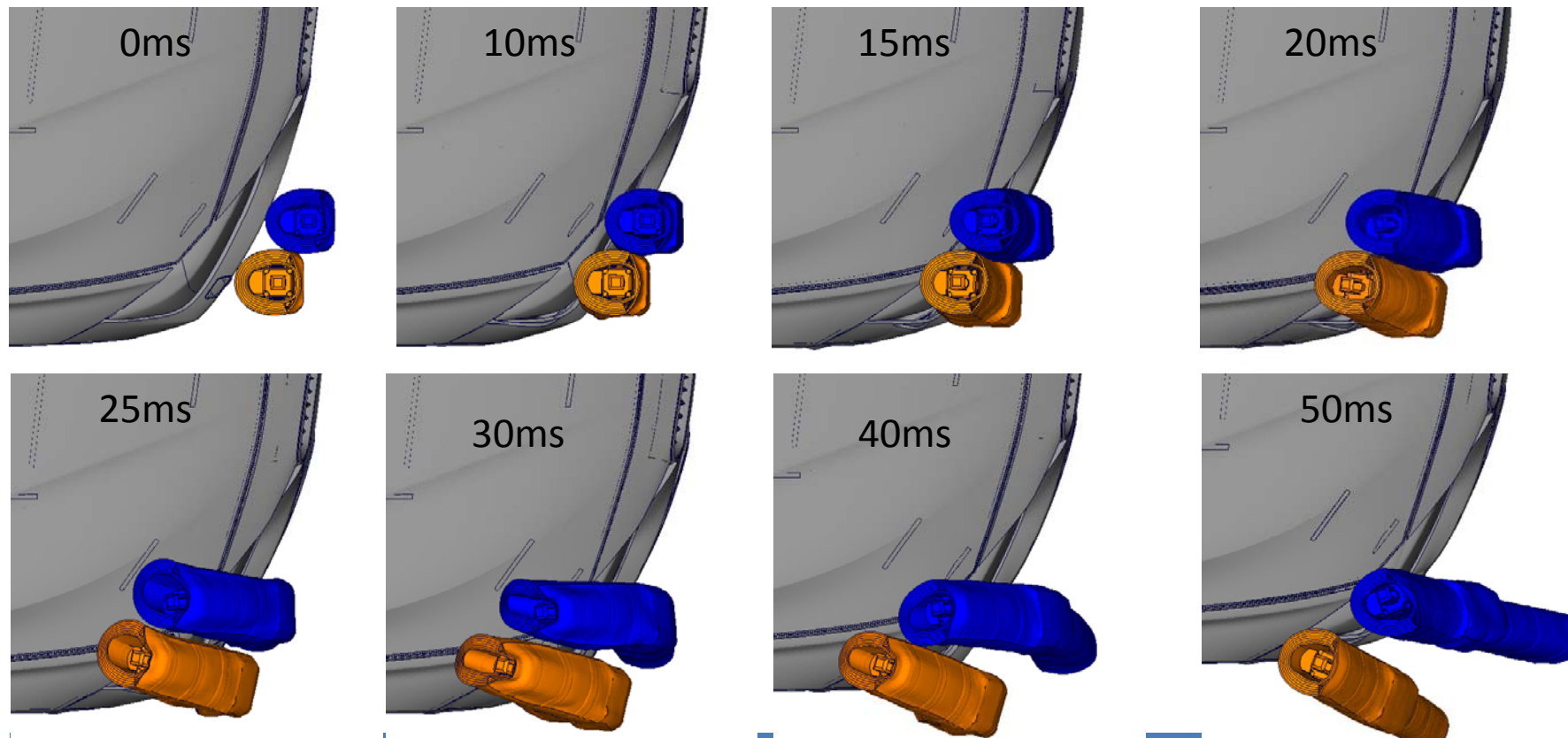


Pedestrian Protection

Lower Leg Impact

II. Vehicle impacted by Flex Pli Impactor in top down view

$Y = 628, \alpha = 25^\circ$ / $Y = 756, \alpha = 35^\circ$



Pedestrian Protection

Lower Leg Impact

II. Vehicle impacted by Flex PLI Impactor in top down view

$Y = 628, \alpha = 25^\circ$ / $Y = 756, \alpha = 35^\circ$

0ms

10ms

15ms

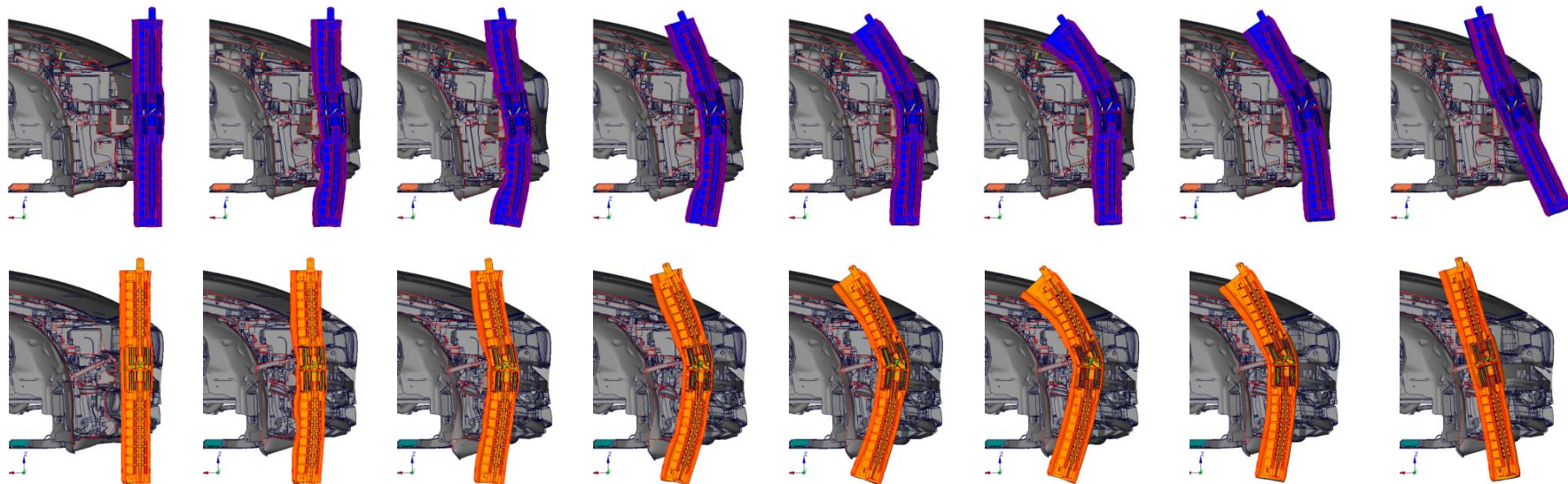
20ms

25ms

30ms

40ms

50ms



Pedestrian Protection

Lower Leg Impact

II. Vehicle impacted by Flex PLI Impactor - Observations

- Increasing impactor rotation at more outboard impact locations
- Increasing lateral motion at more outboard impact locations; rebound transforms to sidewise sliding or deflection motion

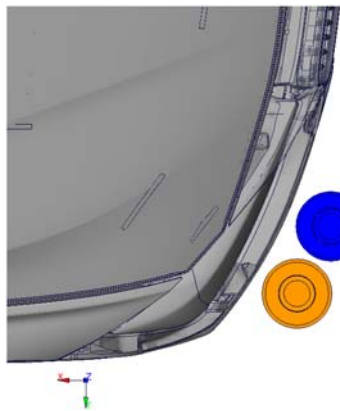
Pedestrian Protection

Lower Leg Impact

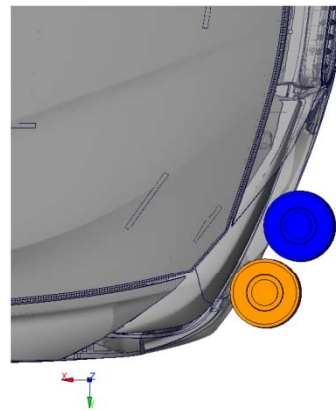
$Y = 628, \alpha = 25^\circ$ / $Y = 756, \alpha = 35^\circ$

III. Vehicle impacted by EEVC Legform impactor in top down view

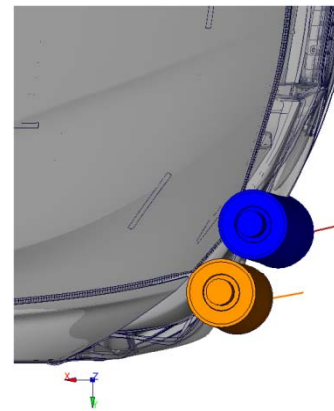
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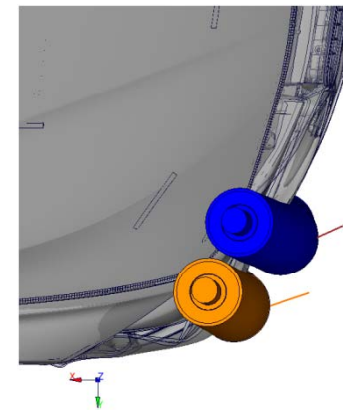
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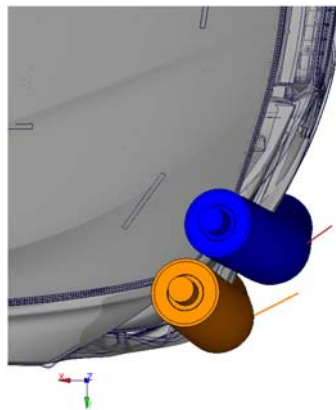
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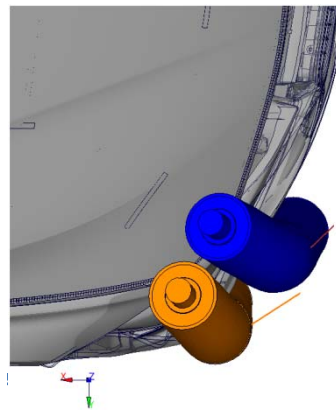
10ms



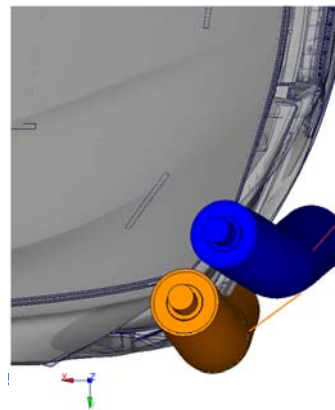
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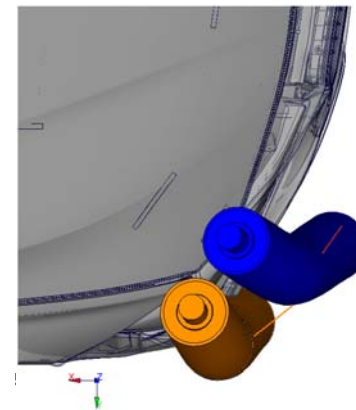
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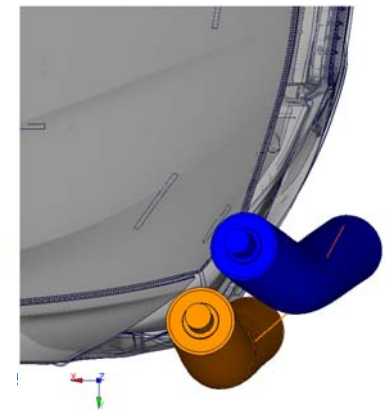
16ms



18ms



20ms

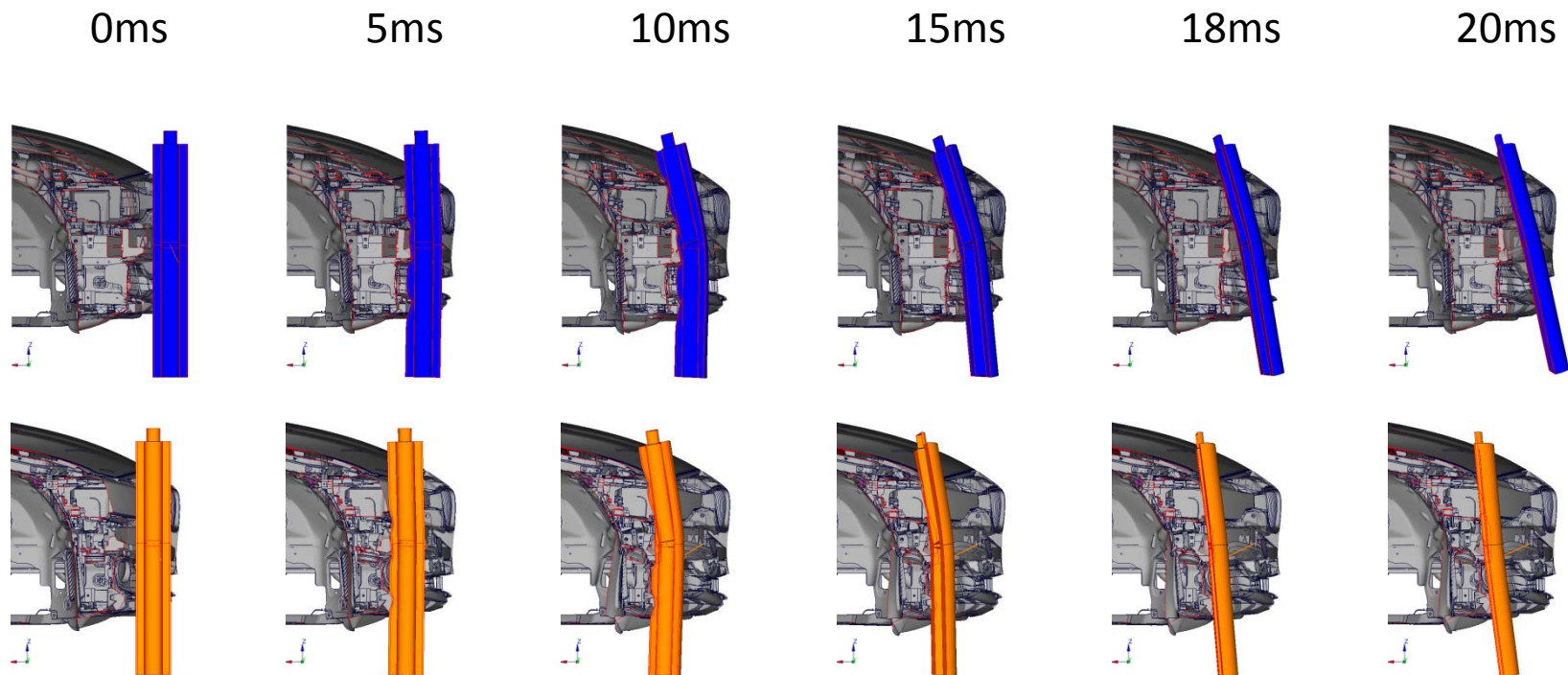


Pedestrian Protection

Lower Leg Impact

III. Vehicle impacted by EEVC legform impactor in top down view

$Y = 628, \alpha = 25^\circ$ / $Y = 756, \alpha = 35^\circ$



Pedestrian Protection

Lower Leg Impact

III. Vehicle impacted by EEVC Legform Impactor - Observations

- Increasing impactor rotation at more outboard impact locations
- Increasing lateral motion at more outboard impact locations; rebound transforms to sidewise sliding or deflection motion

Thank you for your attention

Winfried Schmitt, BMW
