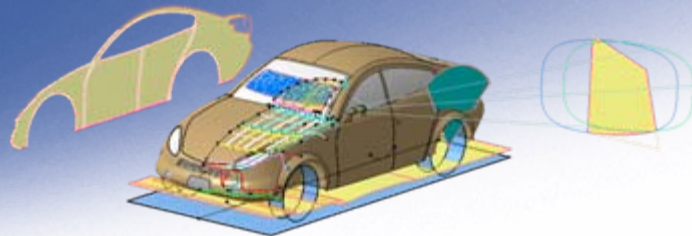


CAVA

## CAVA 1.17.1 – *What's new*



# **TRANSCAT**

A DASSAULT SYSTEMES COMPANY

## New option to define alias names for standards inside the configuration file

 Default standard name can be linked to a new alias name to use old/existing CAVA feature with this new name

 *In previous version feature could not be recognized if standard name has changed*

### Example for FreeSpace.xml

```
<FreeSpace>
  <standard name="Company Intern" loading="Empty weight USA/CDN">
    <category name="default" FSFrontAngle="45deg" FSMidAngle="35deg" FSBackAngle="21deg" FSSideAngle="71deg"
      FSNoseLength="11mm" FSHoleDistance="21mm" FSHoleHight="5mm" FSHoleLength="8mm" FSBottomHight="15mm"
      FSNoseHight="21.5mm" FSBodyHight="75mm" FSMidLength="55mm" FSNoseWidth="12.5mm" FSBodyWidth="111mm"/>
    <description>This is a description to the standard</description>
  </standard>

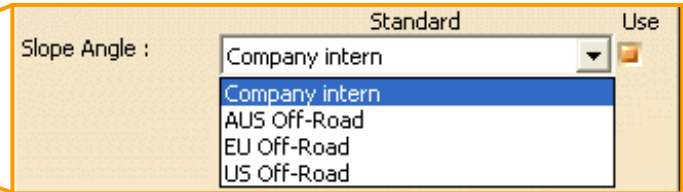
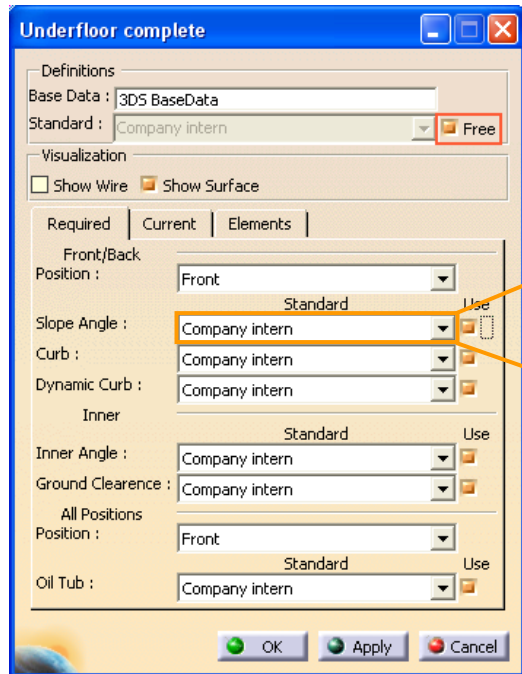
  <standard_aliases>
    <standard_alias std_name="Company Intern" std_alias="Free Space Transcat"/>
  </standard_aliases>
</FreeSpace>
```

## Underfloor Complete



Added option to use *Free Mode*

User can selected specific standard for each single clearance check



# CAVA – OVA

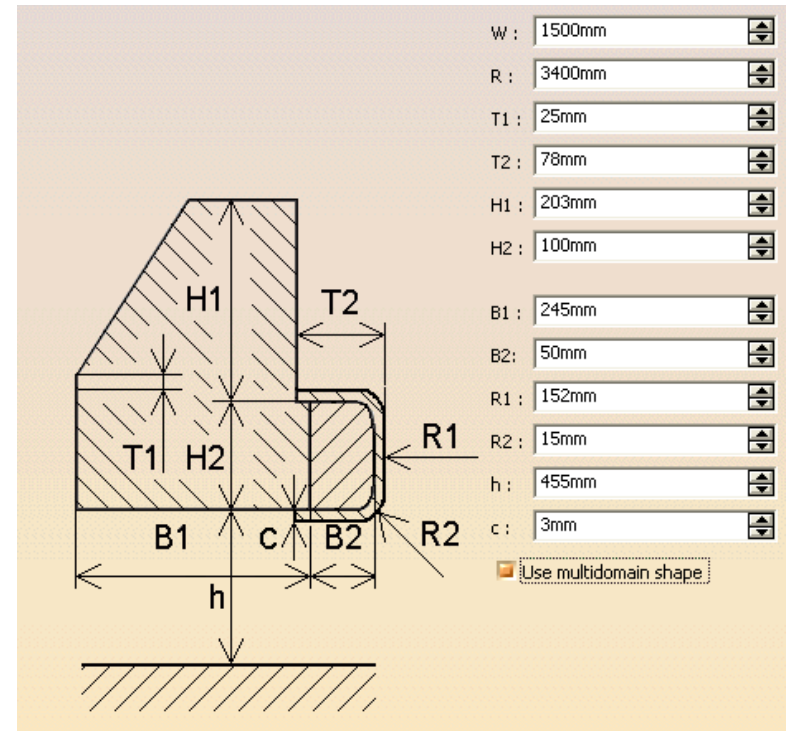
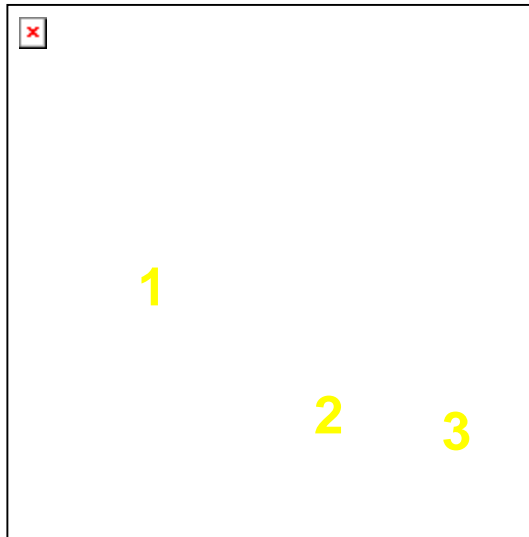


## New option for “Crash Barriers” geometry



Added option to split the barrier geometry into 3 parts

- 1. Bumper Barrier
- 2. Energy Absorber
- 3. Covering



## New Feature “Side Impact” (1/7)



3 types of side impact tests including different standards

1. *Vehicle to pole*

- *FMVSS 214*
- *Euro NCAP*

2. *Moving Deformable Barrier (MDB)*

- *FMVSS 214*
- *Euro NCAP*
- *IIHS*

3. *Door Crush Resistance*

- *FMVSS 214*

Visualization of the barrier shape at contact point with vehicle geometry

Optionally move the barrier forwards or backwards in impact direction

# CAVA.1.17.1 – OVA

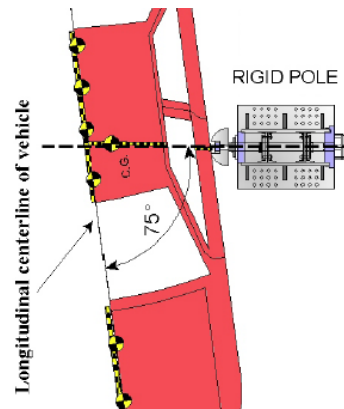
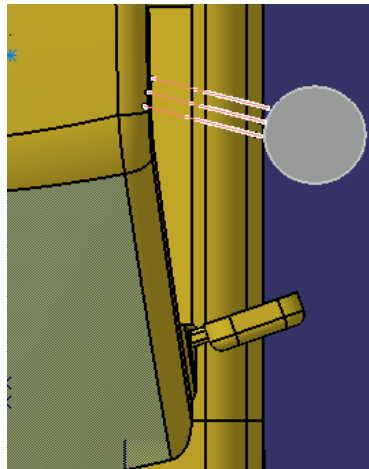


## New Feature “Side Impact” (2/7)

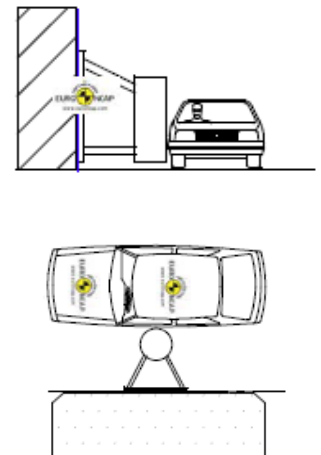
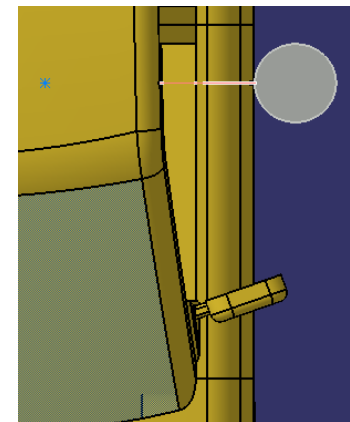


👤 Vehicle to pole

FMVSS 214 (2008)



Euro NCAP (2009)



# CAVA.1.17.1 – OVA

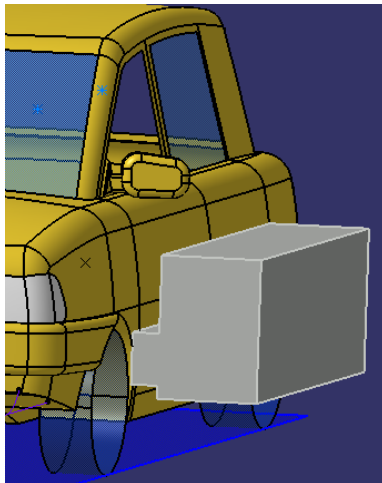


## New Feature “Side Impact” (3/7)

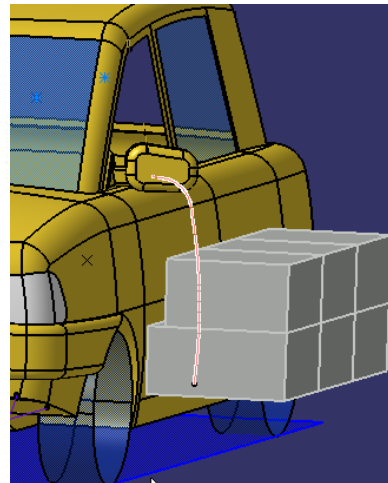


 Moving Deformable Barrier (MDB)

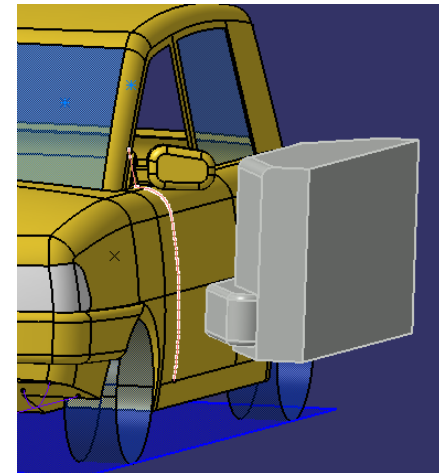
FMVSS 214 (2008)



Euro NCAP (2009)



IIHS (2007)



# CAVA.1.17.1 – OVA

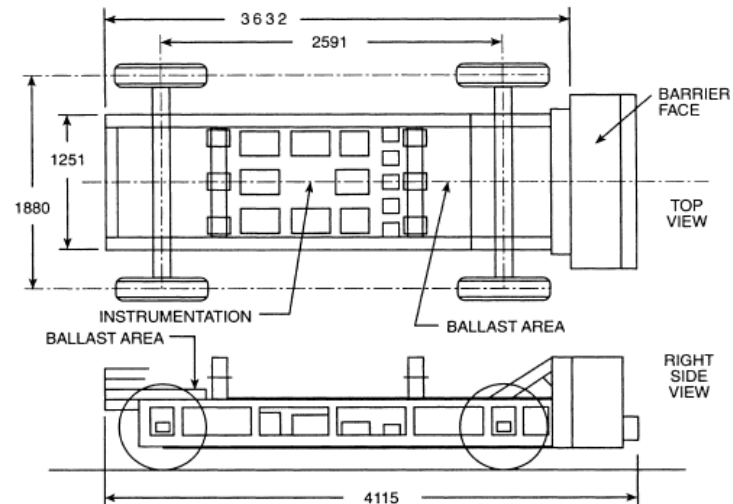
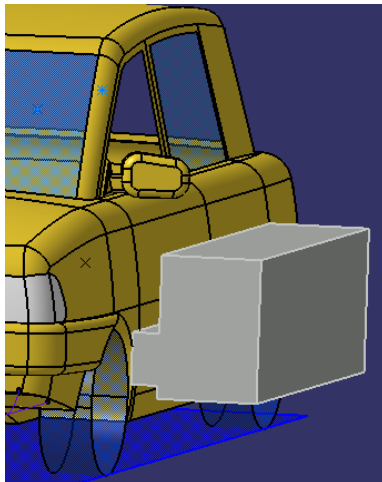


## New Feature “Side Impact” (4/7)



Moving Deformable Barrier (MDB)

FMVSS 214 (2008-08-08)



# CAVA.1.17.1 – OVA

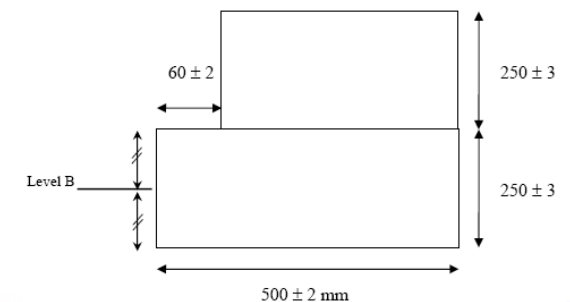
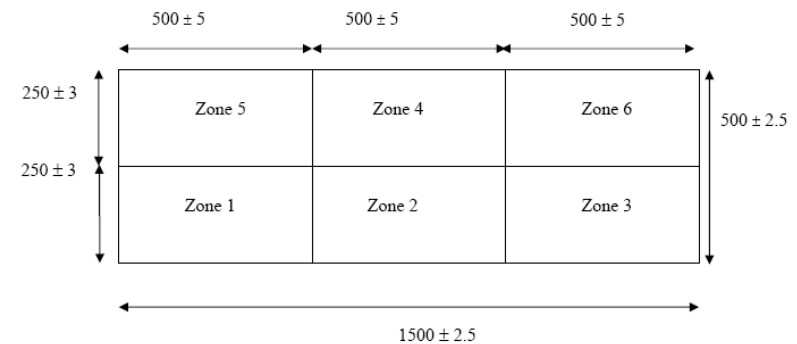
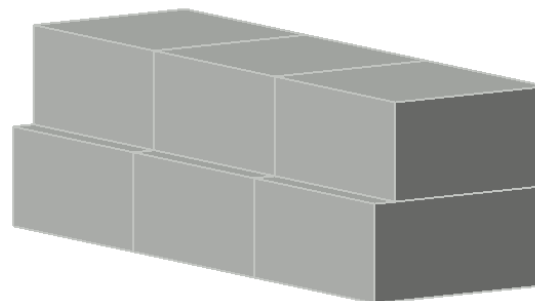
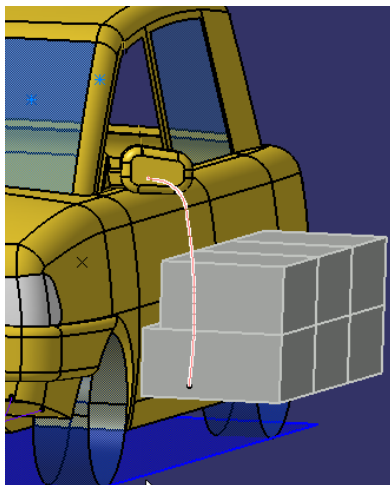


## New Feature “Side Impact” (5/7)



### Moving Deformable Barrier (MDB)

Euro NCAP (Version 5 2009)



# CAVA.1.17.1 – OVA

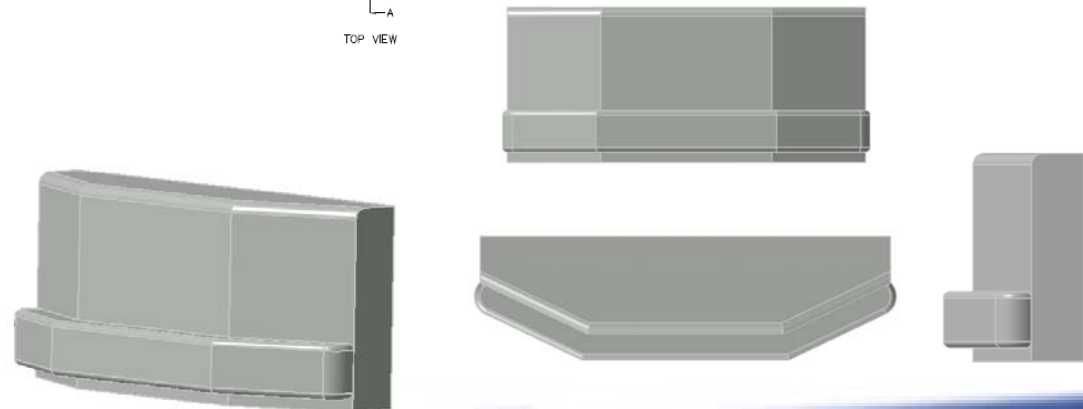
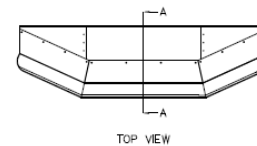
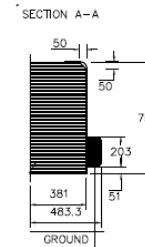
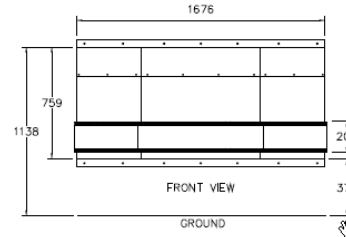
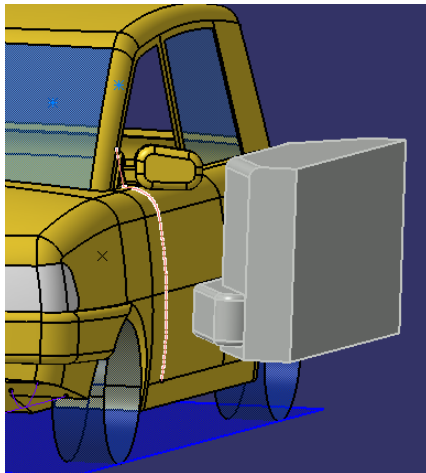


## New Feature “Side Impact” (6/7)



Moving Deformable Barrier (MDB)

IIHS 2007 (Element Version 4)



# CAVA.1.17.1 – OVA

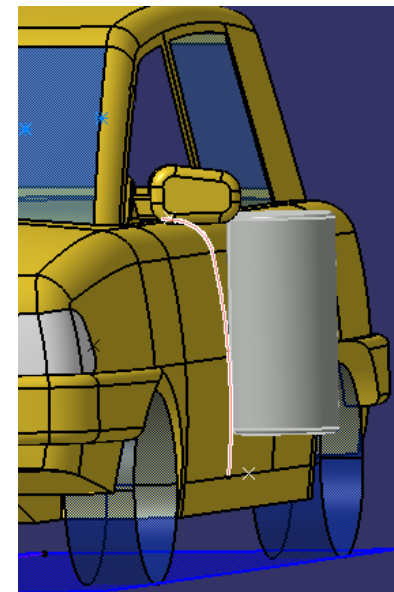
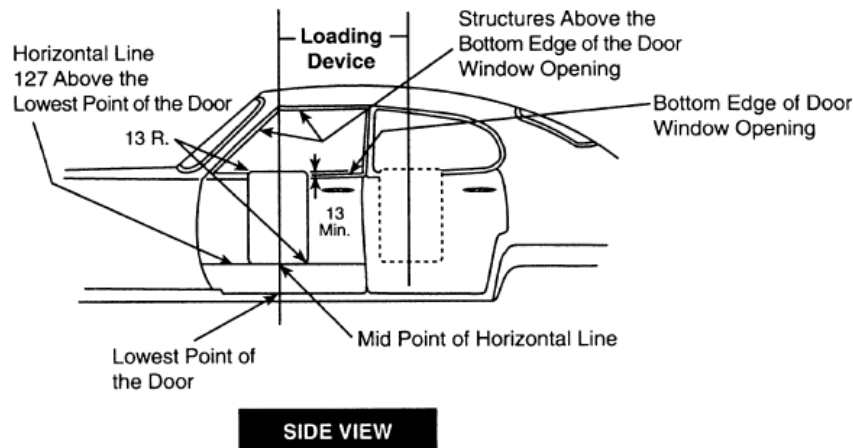


## New Feature “Side Impact” (7/7)



### Door Crush Resistance

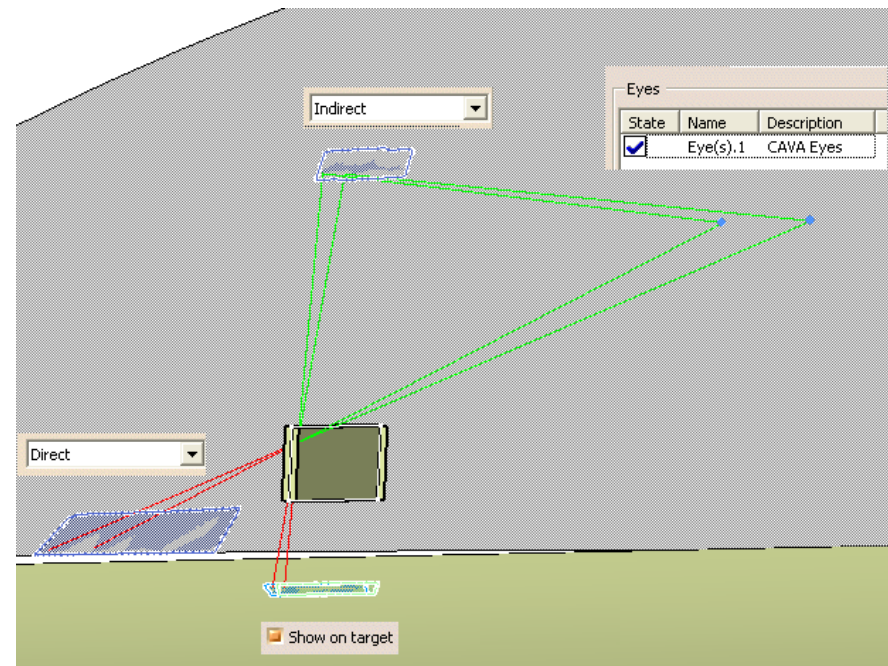
#### FMVSS 214



## Enhancements for feature "General Mirror"



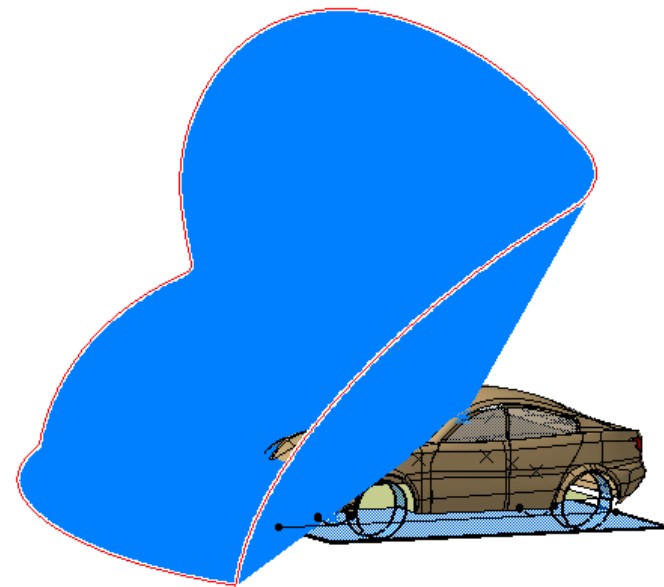
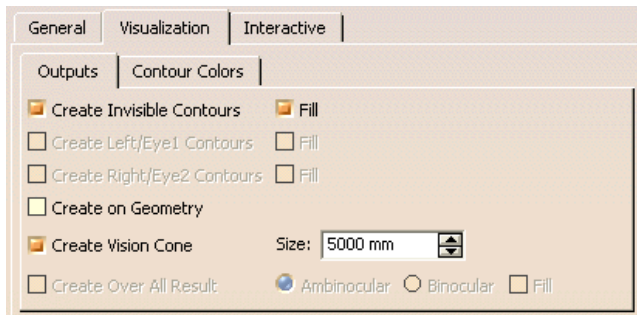
- Added option to display the boundary curves of the resulting pictures
- Calculate blocking elements using:
  - "direct only"
  - "indirect only"
  - "direct & indirect"



## Enhancements for feature “3D Direct View“ (1/4)



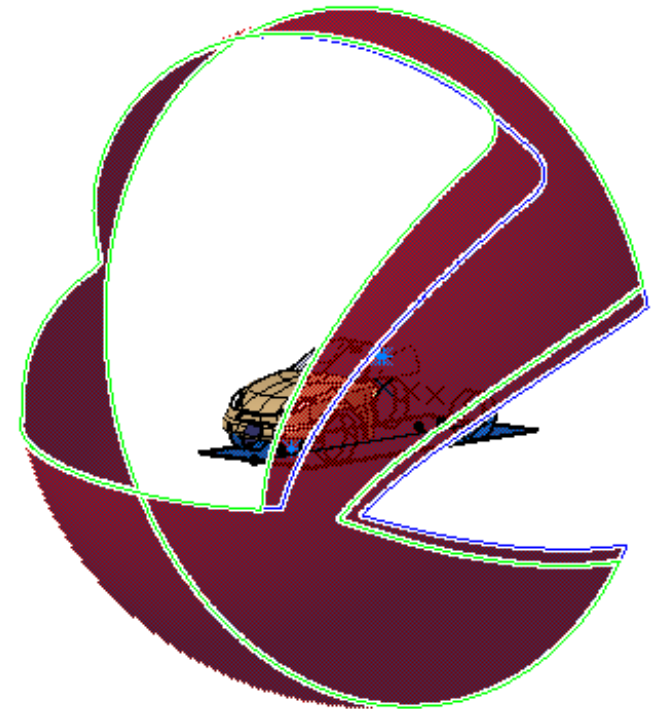
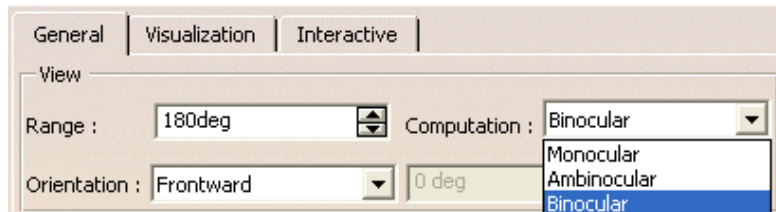
- Added option to create a vision cone starting from the used eye point(s)



## Enhancements for feature “3D Direct View“ (2/4)



- Added option to visualize resulting blockage for binocular calculation



# CAVA – Vision

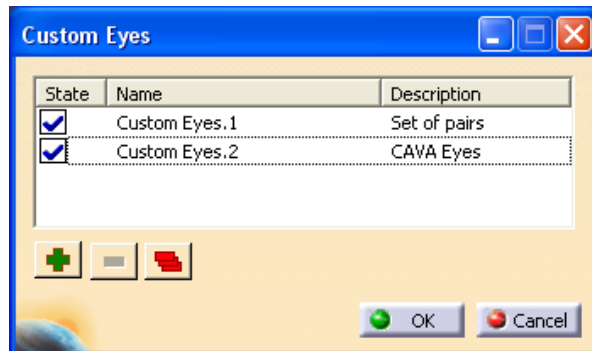
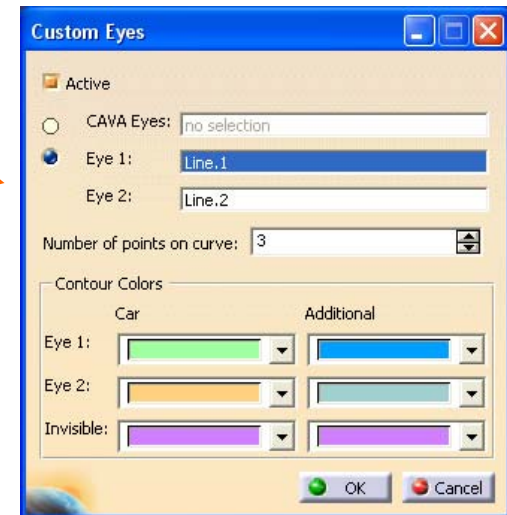
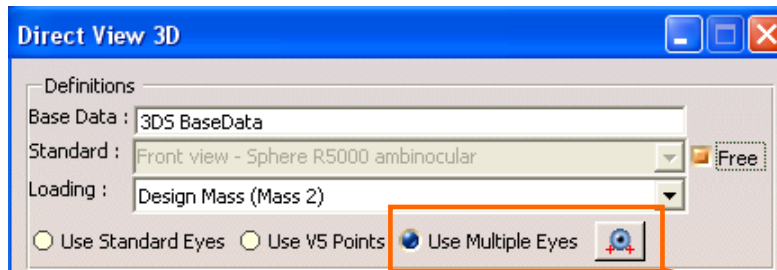


## Enhancements for feature “3D Direct View“ (3/4)



Added option to use several eye points

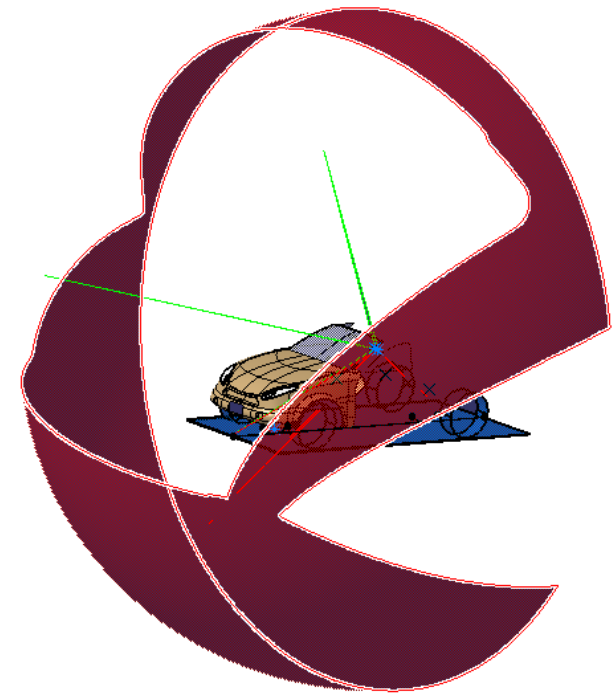
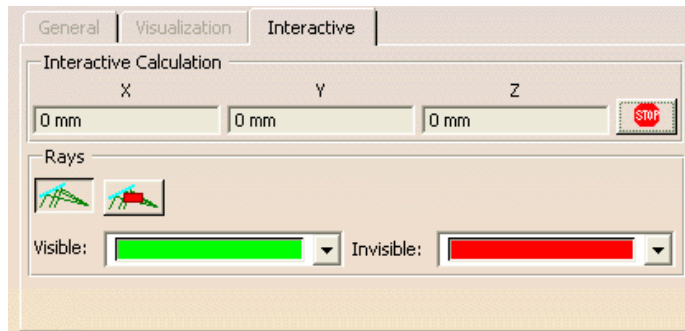
Points are placed in equidistant steps on a selected curve



## Enhancements for feature “3D Direct View“ (4/4)



- Added dynamic raytracing to visualize interactively the way of the sight ray and mark as visible or not



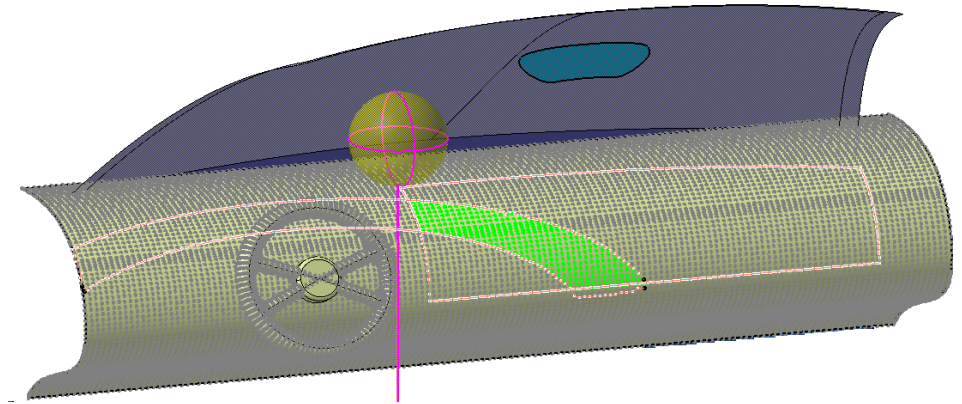
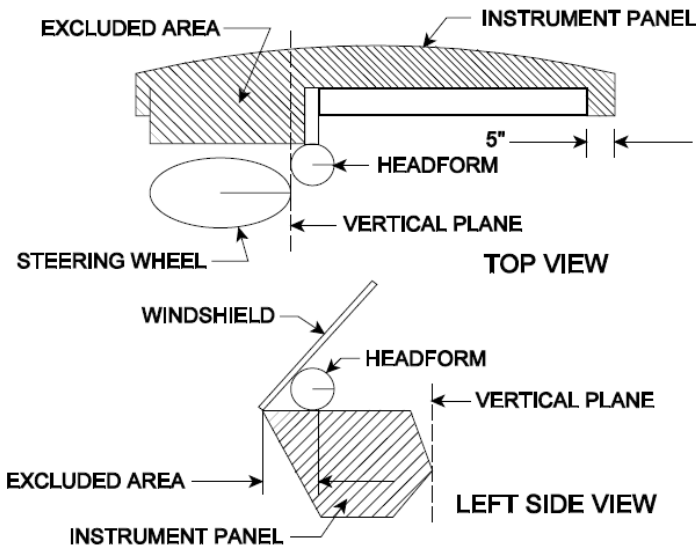
# CAVA - Safety



## Minimum Radius (interior)

Added standard "FMVSS 201"

Different Excluded Area as for ECE - R21



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***THANK YOU***

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