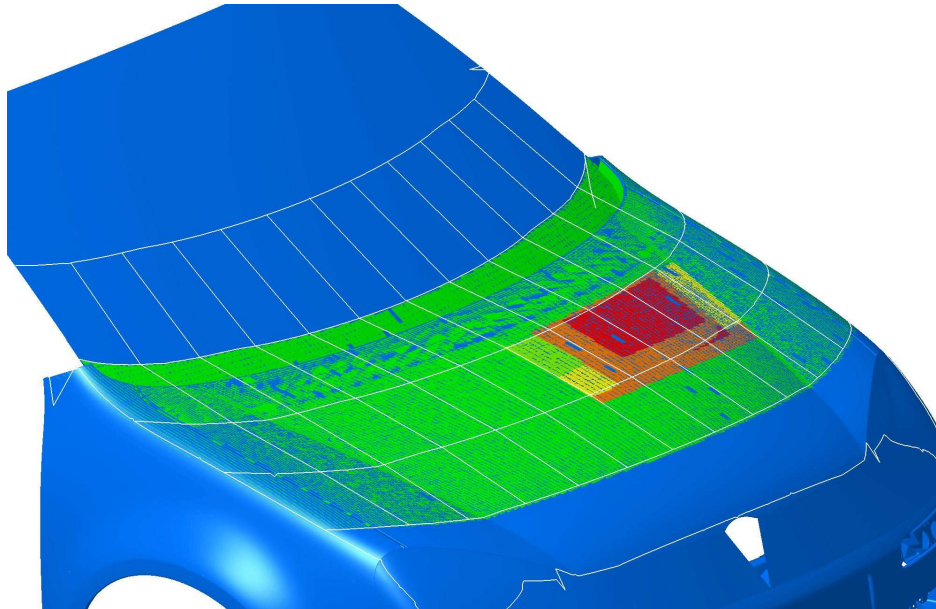


# Concept<sup>®</sup> - Pedestrian Positioning and Analysing- Tool (PPA-Tool)



## Application:

The topic pedestrian protection is currently a highlight in the area of vehicle safety.

Presently there are many different regulations regarding the determination for the appropriate testing area of an adult head, child head, legform and upper-legform. In order to determine the appropriate testing fields and possible impact configurations based on CAD-data from the beginning for a pedestrian protection development, CONCEPT TECHNOLOGIE GmbH developed a „Pedestrian Positioning and Analysing - Tool“. Furthermore, the calculation of the „critical distance“, allows a first worst-case estimation and evaluation of the vehicle front.

## Features of the PPA-Tools:

- ➔ Generation of all test fields for the corresponding regulations (european regulation: 2003/102/EC, 2004/90/EC, EuroNCAP and japanese regulation Article 18; TRIAS 63-2004).
- ➔ Analysing and evaluation of the available space in the area of head impact – „critical distance“
- ➔ Determination of the EuroNCAP Star-Ratings
- ➔ Illustration of input and output in a 3D-Viewer for visual inspection
- ➔ Mode of operation with neutral data format – working with CATIA, Unigraphics, ProE and other CAD-programs.

- ➔ This application is installed on a server and can be used over a web-browser – for the front-end computer there is no loading and so you have high performance.

## Planned options:

„Critical distance“ for the respective field of head impact and the appropriate head positioning, which is displayed as a transformation card for FE-Simulation.

## Benefits at a glance:

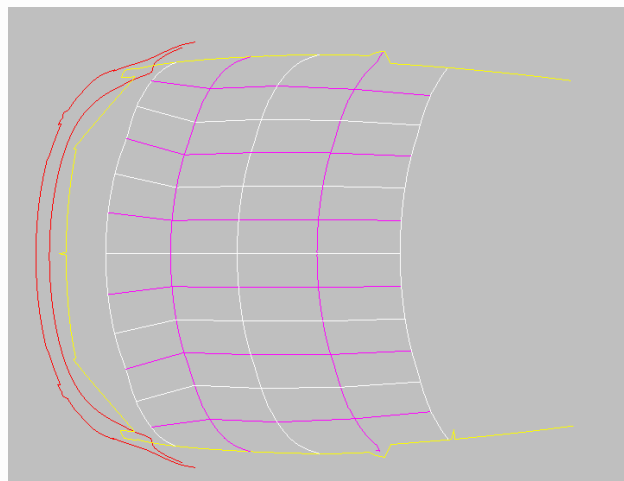
- ✓ Quick definition of the relevant areas of impact (about 5-60 min, depending on model size).
- ✓ Compliance of all legal requirements, as well as optimisation of the EuroNCAP Star-Rating
- ✓ Illustration of results in a 3D-viewer or in a CAD-program
- ✓ Analysis of different height of the vehicle because of different tires or motorisation per definition of the groundlevels
- ✓ First estimation of possible worst-case configurations already takes place before the FE-simulation

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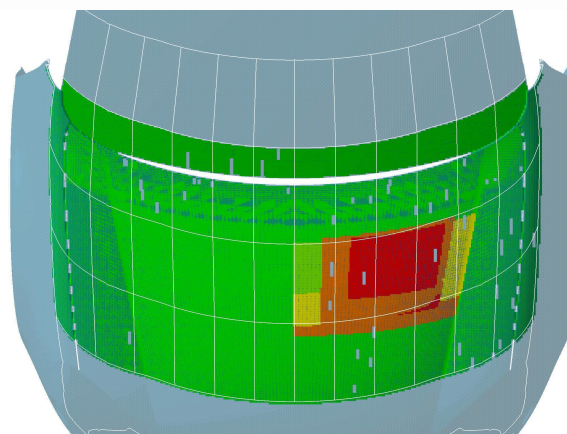


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Example: EuroNCAP test area

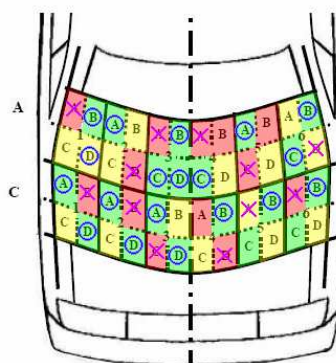


Example critical distance illustration



16.99 Points

### Headform



### Points:

A1 = 0.71	C1 = 1.00
A2 = 0.50	C2 = 1.00
A3 = 1.50	C3 = 1.00
A4 = 0.50	C4 = 0.50
A5 = 0.50	C5 = 1.00
A6 = 1.33	C6 = 0.50
Adult = 5.04	Child = 5.00

Total = 10.04

Illustration of the critical areas of the head impact

EuroNCAP Star-Rating incl. optimisation for additional nomination