



# **ERGONOMICS FOR VEHICLE DESIGN**

TRANSPORTATION & MOBILITY



# Use 3D virtual manikins to analyze and understand the ergonomics of your vehicle design concepts

DELMIA's Ergonomics for Vehicle Design solution for the Transportation & Mobility Industry lets designers identify driver and passenger ergonomics issues early in the design process to avoid costly, timeconsuming changes down the road. DELMIA's Transportation & Mobility Ergonomics for Vehicle Design solution allows designers to measure effects on driver and passenger ergonomics. Reach, posture and vision prediction is based on precise anthropometry and results in automatic SAE standards compliance. Issues are revealed at the most cost-effective time – when the design process is just getting under way and live occupants cannot be used. Designers can simulate the way humans interact with seats, spaces, and controls in a vehicle under design. The experience makes it possible to predict posture and access to key vehicle functions for specific populations selected from a global database.



Discover ergonomic issues early in the design process.





Predict occupant posture with virtual 3D manikins.

## **INDUSTRY CHALLENGES**

- How to achieve a high level of comfort and satisfaction for drivers and passengers?
- How to design a car in a global market?
- How to reduce physical mockups?
- How to measure the design change effect on driver's and passenger's ergonomics?

## **SOLUTION HIGHLIGHTS**

- Precise automatic positioning of drivers and passengers using a proven posture prediction algorithm
- 3D manikins based on precise anthropometry
- Seat and steering wheel parameter adjustment capability
- Enterprise-accessible reporting
- Access to Virtual Ergonomics assessment without leaving the unique 3D environment

## **SOLUTION VALUES**

- Design errors can be corrected while the cost of change is minimal
- Reduce the number of physical prototypes
- Reduce the number of design iterations
- Designers can collaborate throughout the design process using the manikins
- Immediate view of any design impact on posture position
- Market globalization with variable manikin sizes and shapes
- Improved driver and passenger satisfaction

### **USERS**

- Industrial Designer
- Ergonomic Specialist



# **Delivering Best-in-Class Products**

S CATIA

**3S SOLID**WORKS 3D Design

35 SIMULIA

**Realistic Simulation** 

**Digital Manufacturing and Production** 

35 enovia

Collaborative Innovation

### About Dassault Systèmes

SGEOVIA Model and Simulate our Planet

**SEXA**LEAD Information Intelligence

inonination intelligence

**Dashboard Intelligence** 

Social Innovation

**3D** Communication

Dassault Systèmes, the **3D**EXPERIENCE Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 150,000 customers of all sizes, in all industries, in more than 140 countries. For more information, visit www.3ds.com.

CATIA, SOLIDWORKS, SIMULIA, DELMIA, ENOVIA, GEOVIA, EXALEAD, NETVIBES, 3DSWYM and 3DVIA are registered trademarks of Dassault Systèmes or its subsidiaries in the US and/or other countries.

#### Europe/Middle East/Africa

Dassault Systèmes 10, rue Marcel Dassault CS 40501 78946 Vélizy-Villacoublay Cedex France

# Visit us at

**3DS.COM/DELMIA** 

### Asia-Pacific

Dassault Systèmes Pier City Shibaura Bldg 10F 3-18-1 Kaigan, Minato-Ku Tokyo 108-002 Japan Americas

Dassault Systèmes 175 Wyman Street Waltham, Massachusetts 02451-1223 USA



Item: 3DS.WP.TRI.2012x.0417