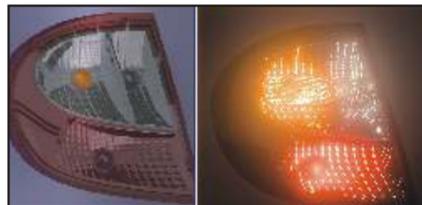


### Visual Ergonomics & Light Simulation

Visual Ergonomics helps designers to simulate visual perception based on a physiological human vision model and predict visual obstructions, glare, and reflection. By using light simulation techniques; designers are able to validate their choice of light fittings and to make decisions about materials.

SPEOS from OPTIS is the world's most widely used light simulation software. It helps designers to simulate all the photometric and colorimetric characteristics of the light on manufactured products of any size, from electronic goods to automotive and aircraft.



- SPEOS gives standardized results (SAE, ECE, JIS...)
- SPEOS simulate contrast, glare, nuisance reflections and potential obstructions
- SPEOS is used for Human Vision Analysis
- SPEOS contains light sources like filament, arc, fluorescent, sun, sky etc

### Human Ergonomics

Products are accepted by consumers only if their wishes are fulfilled by the design. This is especially true of a product that moves human beings - the vehicle. Vehicle design and construction today must be fine-tuned to a passenger's need for space and to his or her movements.



RAMSIS from Human Solutions is an intelligent manikin for the automotive industry for ergonomics design and analysis of vehicle interiors. It guarantees optimal accessibility and operability for all controls whether it is brakes, gearshift levers, belt guides, outward visibility or all-around view of the instruments.

- RAMSIS has a wide spectrum of anthropometric data
- RAMSIS is used by more than 70% of all automotive OEMs
- RAMSIS does task-related posture simulation, health and comfort analysis
- RAMSIS creates a manikin for the simulation of vehicle occupants

### Product Data Quality Management

Creating a high quality CAD model is the most time-consuming and costly part of the new product development process. Companies rely on these models to create the products that are the lifeblood of their business. Each time the same data is handled by different users the likelihood of poor product data quality increases.



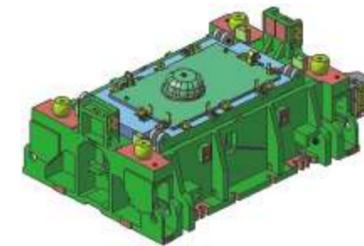
Q-Checker is a management system for Product Data Quality (PDQ) developed by TransCAT, a Dassault Systemes company. It is fully integrated within the PLM process chain.

- Q-Checker verifies data for structural and geometric quality based on standards.
- Q-Checker has more than 300 checks
- Q-Checker has embedded "Best Practices" for each check criteria
- Q-Checker promotes design reuse, pro-active learning and saves time spent on fixing models

Q-Monitor from TransCAT makes Product Data Quality visible over the whole process chain. It stores all check results into a single database and its easy-to-use interface automatically creates a user-friendly graphical interpretation.

### Parameter Driven Die Design

VAMOS from T-Systems is an ideal solution for the process chain of die design. With a parameter driven and solids oriented procedure VAMOS facilitates quick design and modification of complex and large dies.



- VAMOS is completely integrated in CATIA V5
- VAMOS helps designers to define numerical, geometrical and topological parameters
- VAMOS is used for design dies to manufacture car body panels
- VAMOS is used for both conventional and progressive die design

### 3D Engineering Content

TraceParts provide Standard Parts Library seamlessly integrated with all major CAD software. It supplies the engineers & designers with high quality CAD models at their fingertips and let them concentrate on adding value to their company's products.

- TraceParts contains more than 100 million CAD drawings
- TraceParts is a critical and unique resource for every mechanical designer
- TraceParts can be launched directly from any CAD software
- TraceParts provide multi-CAD compatible models

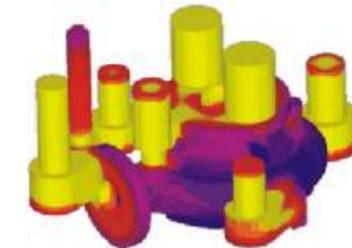
### Casting Simulation

Casting Simulation is a technology to design casting process before making expensive molds or patterns. It simulates and visualizes the entire process of casting the part and fine-tunes the design to produce the best casting possible, at the lowest cost.

SOLIDCast from Finite Solutions simulates casting solidification before pattern equipments and dies are made. The Software design gates, risers and test them out before making the first casting. Solidification modeling helps to shorten lead time, produce higher quality and improve yield.

FLOWCast from Finite Solutions simulates the molten metal flow through gating systems and casting cavity in the mold. The Software models convection, conduction and radiation within the mold cavity and analyzes casting and gating design to predict and minimize flow-related defects.

OPTICast from Finite Solutions works in conjunction with SOLIDCast and automates the simulation process. The Software starts with an initial design and then selects the optimization elements. The system modifies the initial design and running simulations automatically and achieves an optimum result.



- SOLIDCast contains both Gating and Riser Design Wizards
- SOLIDCast simulates molding processes such as green sand, chemically-bonded sand, investment and permanent mold
- FLOWCast is a fully-featured CFD solution based on Navier-Stokes equations
- OPTICast automates the simulation process