ICEM Surf Professional

Surface modelling of the highest quality

ICEM Surf Professional is a tool for designers and design engineers that opens up new ways for free-form shape definition enabling you to model and diagnose complex CAD surface models to the highest quality.

Key capabilities

Independently or with reference to scan data, creation of curves and free-form surfaces can be modeled directly without the need to commence construction of edge curves. Reliable quality examination of the surface model, numerically and visually, directly on screen minimizing manual corrections to the form by early error detection

Creation tools
Powerful Curve and Surface modeling tools facilitate the designers need to create high quality Class A surface geometry. Curve Offset, Projection, Blend, Intersect, Arcs etc. are amongst many commands delivering advanced wireframe construction techniques in support of surface creation.
Ruled, Offset, Profile, Blend and Advanced filleting are amongst the many surfacing creation tools that incorporate capabilities to control typical Class A surfacing criteria over tangency and curvature continuity to support the designers need to finalize their design in meeting aesthetical , engineering and often legislative requirements.

Diagnosis
ICEM Surf provides real time dynamic curve and surface diagnostic tools of both numerical and graphical display to analyze angles, continuity quality between surfaces, intersection curves of two surfaces, reflection lines, forming edges, bends and section cuts too run in parallel with all construction and modeling functions.

Modification
Advanced modification tools such as Control Point manipulation & Matching provide the capabilities and techniques that enable the user to control the shape of the design to within a micron of accuracy in order to achieve the desired aesthetical Class A quality. Bezier mathematics are at the core of achieving the Class A quality within ICEM Surf and additional tools for smoothing and approximating curves or surfaces further extend the user possibilities to manipulate and manage the quality of the geometry.

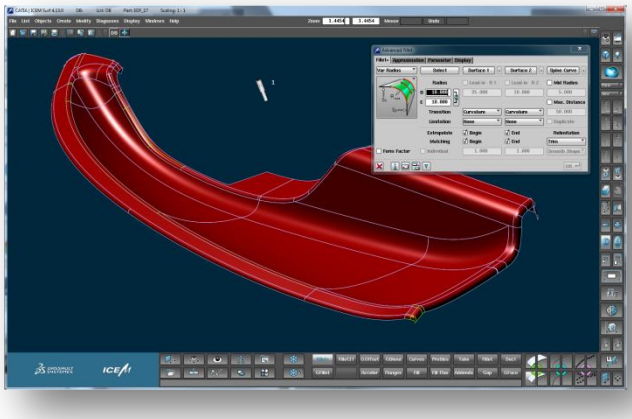
User Interface
Optimized user interface supporting the designer's need for rapid and efficient interactions during geometry creation and modifications. Dynamic display and navigation tools to zoom, fly through, rotate, measure, change view perspectives, view filters, etc..
Local and global undo/redo functions allow the designer to test designs before acceptance. Advanced structured data management tools of model databases with advanced mechanisms to manage variants in support of design review processes

Included standard data I/O Interfaces

IGES (IGES = Initial Graphics Exchange Specification) interface is the most used standard interface to exchange data between different CAD-systems.

VDA/FS interface (Verband der Automobilindustrie/Flächen Schnittstelle) was developed through the initiative of several German automotive manufacturers.

User Interface



Customer benefits

- Direct dynamic modeling of surfaces without having to generate curve descriptions first, delivering results much quicker.
- Design changes are performed quicker through modification of the original geometry instead of having to create a new model.
- Optimal surface quality for Class-A and Class-B surfaces.
- Continuity in modeling techniques from the first surface creation all the way to the creation of forms and tools.
- ICEM Surf generates small databases with few well-structured geometry elements which accelerates the sequence of operations for the final post-construction processes.
- Fewer iterations within the construction process.
- Quicker creation of models.
- Easy to use 3D-modelling and 2D curve sketching functions.
- Real time representation of surface modeling. Surface modeling with turned on diagnosis makes an exact and permanent control of the modification possible (numerical and graphical display of diagnosis).
- Reliable quality examination of the surface model, numerically and visually, directly on screen, saving you from having to make manual corrections on the form or tool later on, by early error detection.

About Dassault Systèmes

As a world leader in 3D and Product Lifecycle Management (PLM) solutions, Dassault Systèmes brings value to more than 100,000 customers in 80 countries. A pioneer in the 3D software market since 1981, Dassault Systèmes develops and markets PLM application software and services that support industrial processes and provide a 3D vision of the entire lifecycle of products from conception to maintenance to recycling. The Dassault Systèmes portfolio consists of CATIA for designing the virtual product - SolidWorks for 3D mechanical design - DELMIA for virtual production – SIMULIA for virtual testing - ENOVIA for global collaborative lifecycle management, and 3DVIA for online 3D lifelike experiences. Dassault Systèmes shares are listed on Euronext Paris (#13065, DSY.PA) and Dassault Systèmes ADRs may be traded on the US Over-The-Counter (OTC) market (DASTY).

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