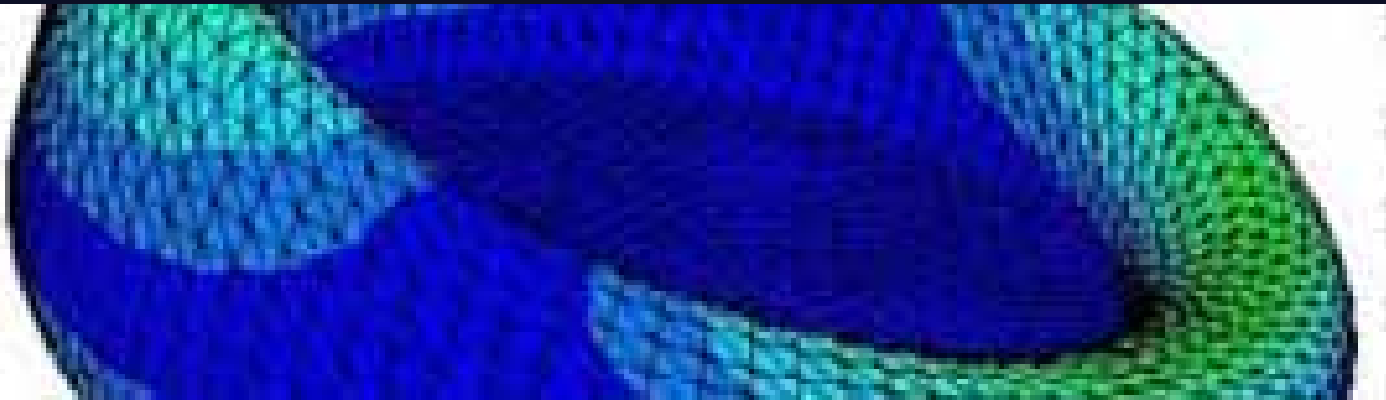


## Customer Spotlight

---

### CAD/DOE/ANSYS Adomesh Morpher powered by Open Inventor® Saving times in the meshing process



**CAD/DOE**, a subsidiary of ANSYS, Inc. is specialist of the CAD/CAE market.

The Company develops and markets a unique and innovative industrial solution for parametric analysis and optimization which can be applied to many disciplines such as Fluids, Structural Analysis (static and dynamic), Electromagnetism, Acoustics, ... in Linear and Nonlinear.

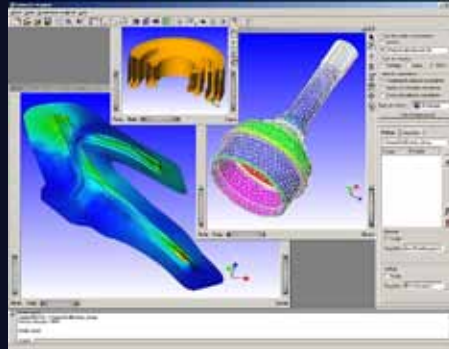
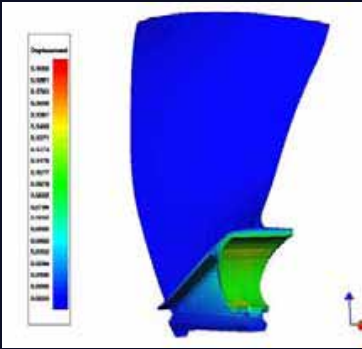
CAD/DOE has developed Adomesh Morpher, a powerful mesh parameterization software to easily modify any existing mesh without re-meshing and without CAD support.

#### Concept definition

When simulating products, a huge amount of time is spent on meshing the CAD models. If a geometrical change occurs on the model, it takes again a long time to perform any mesh modification. The same holds if an old Finite Element model has to be modified and you don't have any underlying CAD support.

Taking decisions on concepts during the early design stages has a great impact on both manufacturing costs and product performances. Then CAD/DOE has decided to develop a smart solution to simplify mesh modifications. It is thus important to be able to test many concept variations as soon as possible in the product lifecycle.

# Saving times in the meshing process



According to Bruno REYMOND, Director at CADOE, «Open Inventor has enough flexibility to allow improving our data visualization tools and, at the same time, smoothly integrate the model with our mesh parameterization software. Because Open Inventor package provides the power and functionality of OpenGL at an object-oriented level, we have reducing our programming time by two or three. This automatic OpenGL optimization allow our development team rapid construction and tuning of 3D interactive applications, without involving a detailed understanding of the OpenGL programming.»

## Benefits

Adomesh Morpher users will perform concepts analysis at the CAE level, improve shape optimization without CAD models, reuse of existing models from a previous design process, and explore many design alternatives, save time through automatic generation of modified meshes ...

Of course Adomesh Morpher provides a bunch of optimized import/export such as Nastran, Ansys, Abaqus, Fluent, Star-CD, Pam-Stamp ... I-DEAS, IGES, Parasolid, Pro/E, Unigraphics, Sat, Catia, Acis, STEP ...

Some of the specific benefits CADOE has achieved from using Open Inventor® by Mercury include:

### Reduced Development Time and Manage Costs with Open Inventor

Open Inventor is an open and scalable component technology that facilitates the fast and economical creation of advanced 3D software products. The precision and high functionality of Open Inventor enabled CADOE to create a world-class product in a minimum of time with carefully managed resources.

CADOE estimates it would have required an additional team of full-time engineers to perform internal development of advanced 3D visualization functionality, enhancements, and maintenance, as opposed to incorporating component technology into its products.

### Easy Integration of New Functionality

When we began exploring options for our core modeling functionality, we discovered that Open Inventor and Adomesh Morpher had complementary architecture. Both have a C++ object-oriented architecture. This means we can move from one Open Inventor version to the next in a very short order, giving us the advantage of integrating new visualization technology as soon as it becomes available.»

### High-Performance Rendering

Many of CAD/CAE's engineers are continually pushing the envelopes of model size and complexity, with a goal of fast rendering to ensure that the model is visually informative. Open Inventor helps Adomesh Morpher's products manage and render the largest of models with the highest possible throughput and performance.

Images: CADOE

## About Open Inventor®

Open Inventor® by Mercury provides the power and functionality of OpenGL® at an object-oriented level. Its extensible architecture, its large set of advanced components, including seamless integration between visualization and GPU computation, provide developers with a high-level platform for rapid development of the most demanding 3D graphics applications.

## About CADOE

CADOE develops solutions for parametric analysis applied to disciplines such as computational fluids dynamics, structural analysis, electromagnetism, and acoustics. CADOE count among their customers Michelin, Renault, Airbus, EADS, Peugeot Citroen, Air Liquide, Onera, Thales, Framatome, and France Telecom...



Open Inventor is a registered trademark of Silicon Graphics, Inc., used under license from Silicon Graphics, Inc. All other products mentioned may be trademarks or registered trademarks of their respective holders. VSG believes this information is accurate as of its publication date and is not responsible for any inadvertent errors. The information contained herein is subject to change without notice.  
Copyright © 2009 VSG SAS

[www.vsg3d.com](http://www.vsg3d.com)