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Discover HyperWorks' powerful linear analysis solution

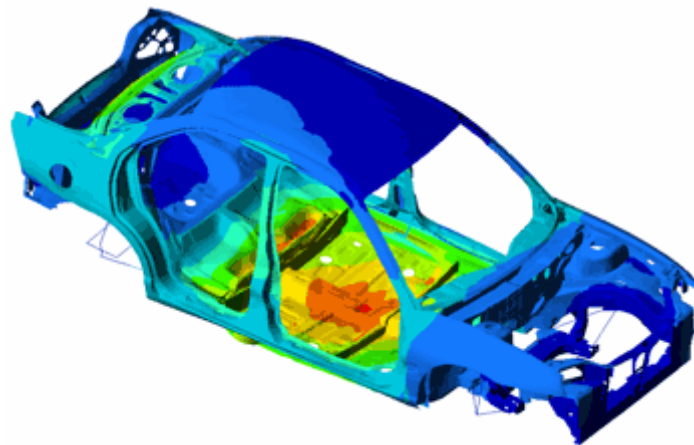
HyperWorks 7.0 Service Pack 1 and CATIA V5

Macros to boost your productivity: available now

OPTISTRUCT/ANALYSIS

Altair's cost effective technology for linear analysis

In recent years, linear finite element analysis has become a standard in many aspects of product development. With its release of OptiStruct/Analysis, Altair Engineering is offering a very cost efficient solution to cover linear static, eigenvalue, inertia relief, buckling and frequency response analysis. OptiStruct/Analysis is embedded into the patented Altair HyperWorks licensing system. Therefore, the majority of customers are able to run a complete finite element analysis package without any extra costs. OptiStruct/Analysis uses 25 HyperWorks Units (HWU) during execution for the solutions above, except for frequency response solution which requires 38 HWU.



High accuracy

The accuracy of OptiStruct/Analysis has been proven in numerous industry standard benchmarks, such as the NAFEMS tests. These benchmarks compare the performance of solver elements with analytical results. OptiStruct/Analysis results are in the same accuracy range as other FE solvers in the industry.

The NAFEMS benchmark test suite is provided as part of the HyperWorks standard installation, so every customer can easily run these tests in their own environment.

Compatibility

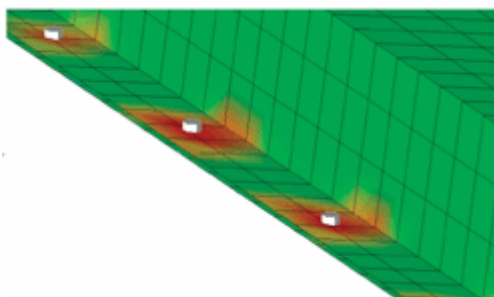
OptiStruct/Analysis uses NASTRAN syntax by default, so in many cases no additional training is needed in order to run it. Due to the integration into the HyperWorks environment, jobs can be easily pre-processed by HyperMesh and results can be visualized in HyperView.

Modern code

Because it was developed in recent years, OptiStruct/Analysis uses the most modern element formulations available today. As a benefit, customers receive better results faster and have less trouble setting up the job. Even if the run doesn't complete, meaningful and easy to interpret error messages help you get the right answers quickly.

OptiStruct/Analysis also offers functionality that can often only be found in more expensive packages:

- Composite analysis
- Mesh independent spot welds
- Non-linear gap elements
- Modal and direct frequency response analysis



OptiStruct/Analysis: "Ready for optimization"

Altair's FE analysis package was developed with optimization in mind. Should customers have the need to automatically optimize part shapes or model properties, OptiStruct's solutions are "optimization-ready". Advanced sensitivities are calculated for almost every sequence in the package, meaning that even complex optimization problems can be solved very efficiently.

If you have any questions about OptiStruct/Analysis, please contact our Support team on **1-248-614-2425**, e-mail ossupport@altair.com.

FROM THE SUPPORT TEAM

HyperWorks and CATIA V5

Altair HyperWorks 7.0 Service Pack 1 now allows the import of CATIA V5 models (.CatPart or .CatProduct files), or CATIA V4 models embedded in CATIA V5 models. Customers should note that a separate CATIA V5 Reader license is required in addition to your HyperWorks license. Please contact your local office for further details regarding this.

HyperWorks 7.0 Service Pack 1

[Download Now](#)

HYPERWORKS ADDITIONAL MACROS

Boost your productivity with free macros

Plotting material energy components for displayed parts

This tool gives the user the option of plotting a particular material energy component for the displayed parts from the *matsum* file. Either *d3plot* files or *h3d* files can be loaded in the animation window. At a particular time, one or more material energy components can be selected for plotting. The macro will add a plotting window to the existing windows layout or find an empty plot window to plot these curves.

TIPS AND TRICKS

New additions to our online [archive](#) of Tips and Tricks documents this month:

OptiStruct:

Minimize the regional mass of multiple components without creating an equation

[Download PDF](#)

Non-linear (iterative) solutions using gap elements

[Download PDF](#)

If you don't have access to the web, please e-mail hwsupport@altair.com for a copy of these documents.

[Login to Altair Client Center online](#)

NEWSLETTER FORMAT

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SEMINAR ANNOUNCEMENT

Safe Technology Ltd - Durability and Fatigue Seminars

Hosted by Altair Engineering,
Troy, Michigan

June 13 – 17, 2005

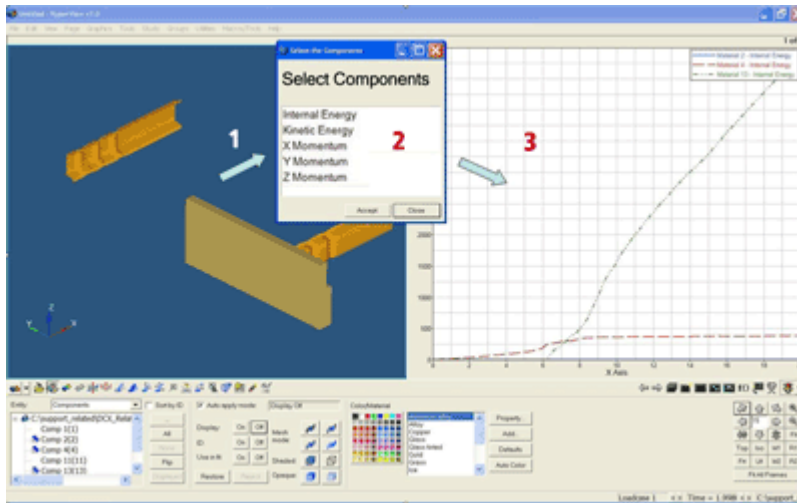
Courses include:

Durability by Design

**Fundamentals of Modern
Metal Fatigue Analysis**

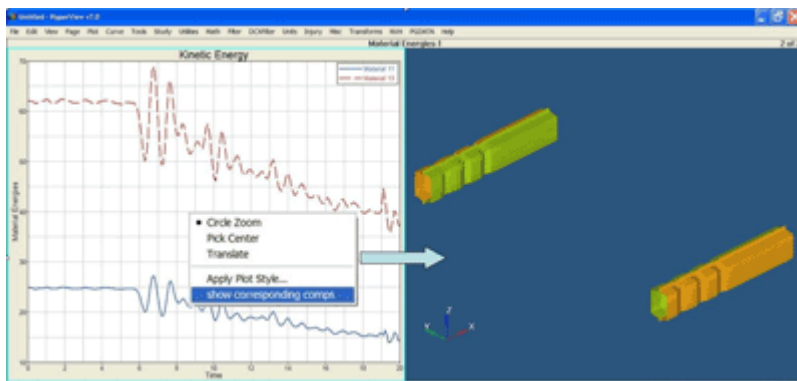
**Advanced Modern Metal
Fatigue Analysis**

[Click here for more information](#)



Displaying parts for material energy curves

This tool is a plot type context-sensitive menu. When invoked from the plotting window, it will show the corresponding parts in the animation window. The user can choose to load either *d3plot* or *h3d* files in an animation window for the model. Once invoked, the tool adds an animation window to the existing layout to load the model or looks for an empty window.



If you would like to try out these tools or want to know more about them, please contact the local Altair support office or (where appropriate) the applications engineer for your company.

TRAINING COURSES

Develop your skills

Here are our upcoming training sessions for HyperWorks. Simply click on each title to view details of the course's content.

Michigan training classes

- [Intro. FEA Modeling & Results Visualization](#)
May 2-4
- [Interfacing HyperWorks with LS-Dyna](#) *May 5*
- [Intro. HyperMorph](#) *May 9*
- [Intro. Results Visualization & Data Analysis](#)
May 9
- [Intro. Concept Design & Fine Tuning with OptiStruct](#) *May 10-11*
- [Intro. DOE, Optimization & Stochastic Studies](#)
May 12
- [Advance HyperMorph](#) *May 13*
- [Intro. Managing & Using PBS Professional](#) *May 16-18*
- [Intro. FEA Modeling & Results Visualization](#)
May 16-18

California training classes

- **Intro. FEA Modeling & Results Visualization**
May 3-4
- **Intro. Results Visualization & Data Analysis**
May 5
- **Intro. Concept Design & Fine Tuning with OptiStruct** *May 17-18*
- **Intro. DOE, Optimization & Stochastic Studies**
May 19

>> You can get more details on these courses, obtain a full schedule, or enquire about tailored, on-site training by **calling your local Altair office** or e-mailing **training@altair.com**



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For more info about Altair, please visit www.altair.com**

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