

PRODUCT DETAILS

kinematics, statics, quasi-statics, dynamics, linearization, Eigen analysis and state matrix export. MotionSolve is fully integrated within Altair MotionView providing a seamless, user-friendly environment for multi-body dynamics modeling, simulation and results visualization. MotionSolve provides the ability to predict motions and forces within multi-body systems as well as a direct link to HyperStudy for DOE, optimization and stochastic studies. MotionSolve also provides the ability to tackle a wide range of problems in areas such as vehicle dynamics, vibration isolation, control systems design, loads prediction for durability analysis and robotics. Mechanical systems with zero degrees of freedom as well as models with complex, non-linear compliances can all be simulated using MotionSolve.

ALTAIR HYPERGRAPH

Altair HyperGraph is a powerful data analysis and plotting tool with interfaces to many popular file formats. Its sophisticated math engine is capable of processing even the most complex mathematical expressions. HyperGraph combines these features with high-quality presentation output and customization capabilities to create a complete data analysis system for any organization.

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Technology Arrangement

- Marketing



Technology Export Development Organisation

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Estb. : 1985

ISO 9000



Altair Engineering

India /Asean headquarters in Bangalore, Worldwide Headquarters in Troy, Michigan with offices in North America, Europe & Asia, Altair Engineering is a leading global Product Design Consulting and Technology company. The objective is to help clients gain market power through product development differentiation. Altair India is having over 170 consultants serving more than 520 clients.

Applications

- Sheet Metal
- Dies Making
- Plastic Moulds

Major Customers

Maruti Udyog Limited	Swaraj Mazda
Bajaj Auto Limited	Ashok Leyland
Aircraft Engine Design Organisation	Larson & Toubro Limited
Mahindra & Mahindra	Bharat Forge
TVS Motor Company	Bharat Heavy Electrical Limited
Tata Johnson Controls Automotive	Lear Corporation
Molex	Rites
Eicher Motors	Godrej & Boyce (Tooling Division)
Mahindra & Mahindra	Samtel
Arvin Meritor	JBM Auto Components

Manpower

Altair Engineering have 170 Technical Consultants.

Major Strengths

- Altair Engineering have experienced set of people who understand process and tools and have successfully delivered simulation (CAD/CAE) based projects.
- Altair Engineering have a compute centre which has state of the art computing facilities (HP/SGI) multi-CPU servers and a range of CAD/CAE softwares viz. Catia/I-DEAS/Solidworks and CAE tools like HyperWorks.

PRODUCTS AND SERVICES

Software Products

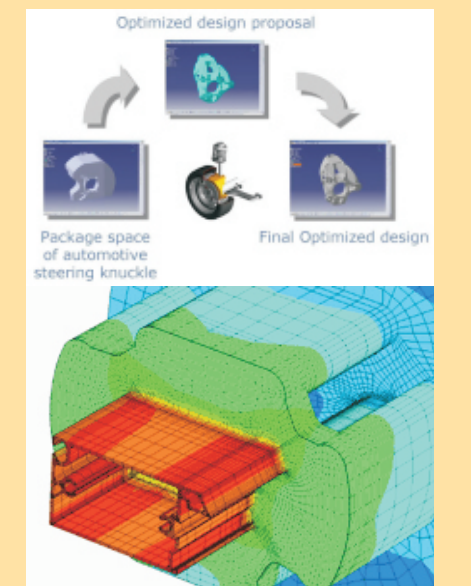
- Altair Hyper Form (For Sheet metal forming simulation).
- Hyper Xtrude Extrusion Simulation

Services

- CAD/CAE services for Tool Design and manufacturing simulation

Training

- CAE training



ALTAIR HYPERFORM

Altair Hyper Form is a finite element based sheet metal forming simulation tool. This easy-to-use, advanced virtual manufacturing software provides a complete desktop environment for:

- Early manufacturing feasibility assessment using HyperForm's fast & accurate inverse solver technology
- Parametric Die Design
- Interactive morphing of die geometry
- User-friendly & automated incremental forming analysis using HyperForm Rapid Macros and LS-Dyna solver technology
- Formability optimization using Altair Hyperstudy

ALTAIR HYPERVIEW

Altair HyperView is a complete post-processing and visualization environment for finite element analysis (FEA), multi-body system simulation, video and engineering data. Amazingly fast 3D graphics, open architecture design and unparalleled functionality set a new standard for speed and detailed post-processing of CAE results. HyperView enables engineers to visualize data interactively as well as capture, standardize and automate post-processing activities. HyperView also saves 3D animation results in Altair's compact H3D Format, so you can visualize and share CAE results within a 3D web environment and Microsoft Powerpoint using Altair HyperView Player.

ALTAIR HYPERMESH

Altair HyperMesh is a high performance finite element pre- & post-processor for popular finite element solvers allowing engineers to analyse product design performance in a highly interactive & visual environment. HyperMesh's user-interface is easy to learn & supports many CAD geometry and finite element model files increasing interoperability and efficiency. Advanced functionality within HyperMesh allows users to efficiently mesh high fidelity models. This functionality includes user defined quality criteria and controls, morphing technology to update existing meshes to new design proposals & automatic mid-surface generation for complex designs with of varying wall thicknesses. Automated tetra-meshing and hexa-meshing minimizes meshing time while batch meshing enables large scale meshing of parts with no model clean up & minimal user input.

ALTAIR OPTISTRUCT

Altair OptiStruct is highly advanced finite element based software for both structural analysis & design optimization. OptiStruct is used to design, evaluate & improve performance of mechanical structures. Unlike classical finite element solvers, OptiStruct software purposes new & better solutions throughout the entire design process. Powerful optimization routines are deeply integrated with popular analysis types including linear statics, buckling and frequency analysis making design optimization easy, robust & accurate.

ALTAIR HYPERSTUDY

Altair HyperStudy is a parametric study and a multi-disciplinary optimization tool for robust product design. Specifically developed for design of experiments (DOE), stochastic simulations and optimization techniques, engineers can:

- Gain insight into the physics of a design
- Assess the robustness of a design for variations in design parameters
- Optimize a design for multi-disciplinary attributes

Hyper Study has an easy-to-use interface that enables a process-based study set up. Further, HyperStudy's deep integration in Altair HyperWorks® provides direct accessibility to a broad range of CAE solvers including linear, non-linear, fluid dynamics and other multi-physics solver technologies

ALTAIR MOTIONVIEW

Altair MotionView is a general purpose pre- and post-processor and visualization tool for mechanical system simulation including industry-leading capabilities for flexbodies. MotionView pre-processing provides analysts with an intuitive interface for PC and Unix and an efficient, neutral multi-body dynamics language that can export to several solvers including MotionSolve, ADAMS, DADS, SIMPACK, ABAQUS and NASTRAN. MotionView post-processing contains the power of HyperView, combining data plotting and high-performance interactive 3D animation for models containing rigid as well as flexible components. Optimized for speed, MotionView post-processing is capable of synchronized multi-graphic animation and plotting for CAE results

ALTAIR MOTIONSOLVE

Altair MotionSolve is a multi-body dynamics solver for mechanical systems simulation supporting

