

Solution
Partner

PLM

SIEMENS

Platinum
Smart Expert

Channel

Engineering Services

Leading Software Solutions and Services
for Product Development

Maya HTT Better thinking
Better future®

Better experience

Maya HTT offers services to help all types of engineering efforts. From preliminary concept validation to detailed finite-element-based design and simulation, we do it all. We provide mechanical test planning and procedure preparation, and will assist actual test campaigns and troubleshooting. We also offer software customization and development services. Our engineers have hands on industry experience in almost any industry you can imagine.

- 35 years' experience with a portfolio of thousands of projects
- Relied upon by top-tier companies world-wide
- Experience with all stages of product development

Success Stories

Aeronautics	Boeing Structural dynamics	COMDEV Fluid-structure analysis	Goodrich Thermal analysis	National Defense F-18 structural analysis
Automotive	Automotive Lighting Structural dynamics	Bayer Polymers Thermo-fluid analysis	Siemens FE model generation	Visteon Headlamp analysis
Biomedical	Cryocath Engineering support	GE Medical Ray tracing analysis	Millenium Biologix Thermo-fluid analysis	
Civil Engineering	Boeing Structural dynamics	COMDEV Fluid-structure analysis	Goodrich Thermal analysis	National Defense F-18 structural analysis
Consumer	Entegee CFD analysis	North Safety Crash analysis	UV Pure CFD analysis	National Defense F-18 structural analysis
Defense	General Dynamics Thermo-fluid analysis	National Defense Ablation analysis	National Defense IR signature	Raytheon CAE Software Development
Energy & Power	AEC Nuclear reactor study	GE Hydro Thermo-fluid analysis	Hydro-Quebec Thermo-fluid analysis	
Technology	Cisco Structural & dynamics	Motorola Thermo-fluid analysis	SONY Camera cooling analysis	Xerox Cooling strategy investigation
Space	Lockheed Martin On-orbit thermal	Magellan Dynamics, Laminates	Mitsubishi Thermal analysis	NASA Jet Propulsion Lab Engineering support

Better analysis



Engineering Experts

Call on us to improve design performance by simulating and visualizing fluid flow phenomena using computational fluid dynamics (CFD).

Rely on Maya HTT to accurately simulate thermal effects and help define appropriate cooling strategies within product constraints.

Apply Maya HTT's experience with Nastran, NX, I-deas and Femap to model and analyze detailed mechanical designs.

Draw on Maya HTT's experience with vibration, shock, and advanced dynamics simulation as well as with test data acquisition from vibration prototype testing to validate your mechanical design.

Concept Evaluation

We evaluate fluid flow, heat transfer and structural stresses impacts early in the design process to determine product viability, with preliminary assessments of multiple designs, performance & durability.

Design Validation

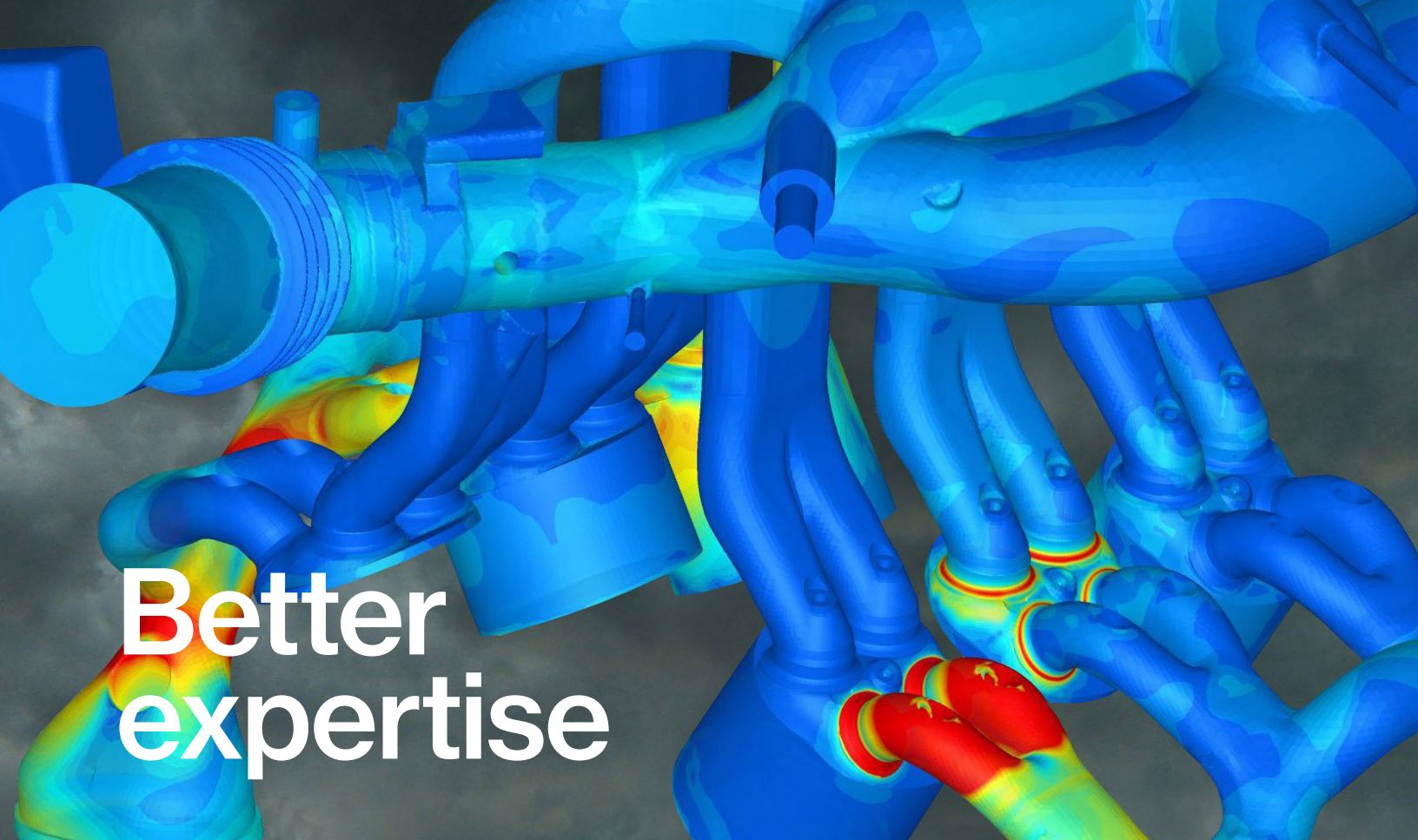
Our best-in-class solver capabilities, thermal, flow and structural competencies with a multi-physics approach leads to a thorough simulation of product designs. We evaluate under multiple operating conditions, and account for environmental and materials considerations. Our multidisciplinary approach provides a comprehensive design analysis, giving a clear understanding of product performance.

Physical Testing

Physical testing is a key component in engineering design. We manage test planning and execution, from test article instrumentation to data processing. We verify specification conformity and proper calibration as well as structural and thermal tests to fully validate units, and correlate performance results with engineering analysis.

Manufacturing Evaluation

We perform numerical simulation of manufacturing processes, to evaluate process control and production quality. We also simulate thermal and fluid effects under many operating conditions, to quickly detect process anomalies and improve overall manufacturing effectiveness.



Better expertise

Thermal Expertise

- Multi-layered and orthotropic conduction, convection and radiation
- Heat dissipation under a wide range of operating conditions, including phase change, solar and environmental heat sources
- Fast and efficient radiation calculations
- Specular reflection, absorption and transmission
- Orbital heating including solar, albedo and planet radiation calculations

Physical Highlights

- Structural tests include: vibration, acoustic, static, pyroshock and modal tests
- Thermal tests include: cycle, vacuum, balance and burn-in tests
- Sine and random vibration
- FE-based notching of vibration test levels
- Modal test definition based on Nastran, NX, I-deas and custom processors determines the optimal accelerometer and exciter locations

Structural Highlights

- Geometric and material nonlinearities, including contact and plasticity
- Frequency and time dependent simulation including random and harmonic base excitation
- Thermal distortion, normal modes and buckling
- Highly accurate and efficient meshes using state of the art meshing software
- Analysis of large assemblies using superelements and other reduction techniques
- Advanced post-processing tools

Flow Highlights

- Internal and external flow
- High speed, compressible flow and rotational flow
- Unstructured flow solver technology easily models free form and large geometries
- Leading flow solver technology to simulate moisture patterns including humidity distribution and condensation on solids

Better capabilities

Simulation + Analysis

- Conceptual design validation
- R&D efforts
- Simulation of detailed design
- Manufacturing processes analysis
- Mechanical testing execution
- Troubleshooting field or test failures
- Simulation/test correlation
- Operational product life premature defect analysis
- CAE knowledge capture
- Streamlining your CAE processes
- Custom software development and integration

Software Development

Leverage Maya HTT's experience with advanced numerical algorithms and applications development to extend your CAE software or enhance process specific CAE analysis requirements.

- Extensions to TMG-Thermal and TMG-Flow
- Nastran DMAP and Nastran Toolkit applications
- Custom in-house CAE applications
- MCAD interfaces and FE translators
- In-house solvers and CAE process automation
- Solvers and numerical methods



“Maya were highly recommended to provide assistance on this strategic project. They possess unique knowledge of the Teamcenter application and best industry practices. When working with Maya, we consider them as a natural extension of the Magellan engineering team. We would recommend Maya to other aerospace companies looking for help implementing Teamcenter within their organization.”

Dana Stanila – Aerospace Programs
Teledyne DALSA

Better know-how

Our engineers are skilled in numerical simulation, many with advanced degrees and senior project management experience. Their proficiency in thermal, flow and structural analysis, helps build and analyze thousands of individual components, sub-assemblies and entire structures around the globe.

Drawing on a portfolio of leading thermal, flow and structural solver technology, we support all stages of the product development cycle. We know that better methodologies lead to better design quality, even for the most intricate designs, which means you can trust Maya HTT to bring insight and understanding to the most complex engineering efforts.

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