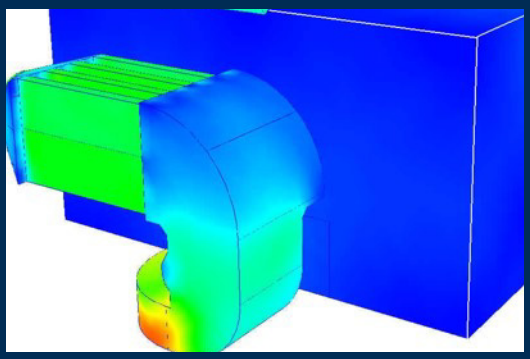
MAYA HTT - 3D Simulation For Building Engineering

Leading Provider of Software Solutions and Technical Services for Virtual Validation

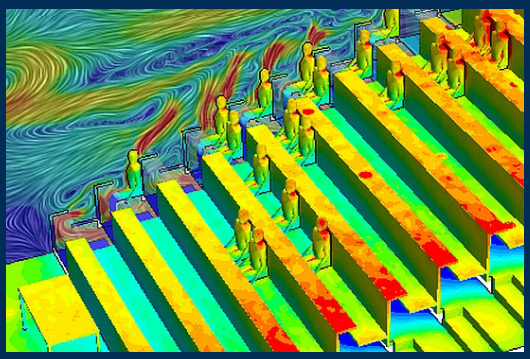
3D Simulation Solutions

Maya is a leading engineering firm specializing in 3D simulation services, software development and customization. With over 30 years of experience in thermal, 3D flow and structural analysis, we have developed unique expertise in building analysis that has given Maya a solid technical foundation to support the building design process . Maya's proficiency in this domain has led many international building engineering firms to rely on our solutions.



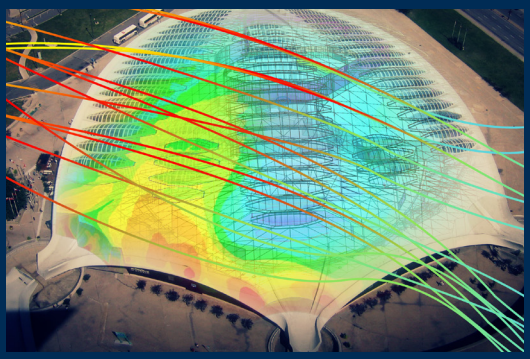
Business Benefits

Rapidly evaluate and reduce design iterations
Use simulation to gain insight into building air movements and quickly formulate effective cooling and heating strategies. Our solutions will also ensure adequate moisture management, predict curtainwall condensation issues and optimize building envelope performance.



Optimize size of HVAC systems / Lower costs / Respect budget
Reduce the need for multiple prototypes and testing by optimizing the design through simulation.

Comply with latest thermal comfort and air quality standards
Ensure that building design conforms to industry specifications such as ASHRAE 55, 62, 90.1 and 1365 among others.



What our customers are saying

"Maya HTT has been mandated for a thermo-fluid analysis to determine the exact causes of a problem. Their involvement and recommendations in the project helped to understand and validate the assumptions in relation to very complex thermal problems. Everything is now positioned to develop a solution to optimize the comfort of the 800,000 annual visitors"
- Biodome project manager

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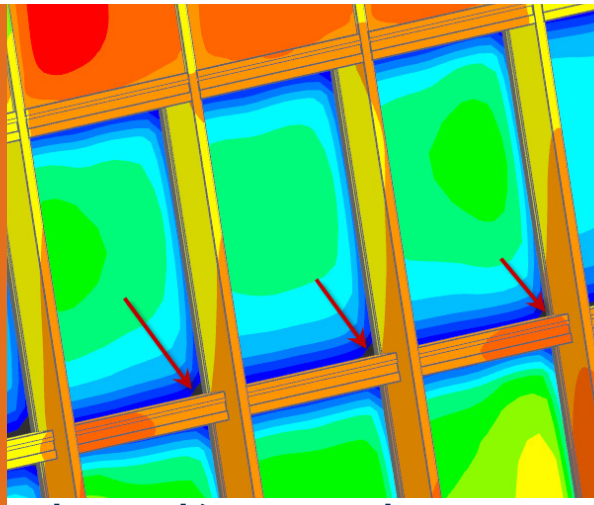
Thermal Analysis

- Accurately model heat generated from high temperature light sources
- Determination of temperature stratification and compliance for various conditions
- Modeling of solar heating over time given a building's orientation and position
- Analysis of thermal bridging effects for complex 3D geometries
- Comprehensive thermo-optical properties specification

CFD Analysis

- Determination of recirculation zones and air velocity
- Temperature stratification for thermal comfort analysis
- Multi-species flow for modeling pollutants for air quality compliance
- Accurate modeling for condensation
- HVAC and fan modelling for benchmarking purposes



Thermal/CFD Analysis

Flow/Structural Analysis

3D Flow Analysis

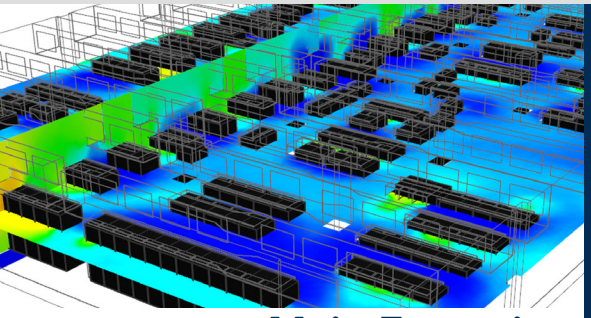
- Quickly identify areas with stagnant air flow
- Predict areas and rate of condensation and evaporation
- 3D flow simulation completely integrated with thermal calculations
- Wind analysis such as air speed and impact on building

Structural Analysis

- Acoustics and coupled fluid-structure interactions
- Perform specified test simulation
- Earthquake, impact and fatigue analysis

The Maya HTT Solution

Maya HTT leverages powerful, CAE software such as Siemens Simcenter 3D to provide expert solutions for building engineering companies. As a primary software developer, Maya HTT has been called upon to perform services such as: detailed 3D model development, comprehensive thermal, flow and structural analysis, design recommendations and material selection based on thermal performance. Analysis results are provided in a comprehensive report that can be used to develop cooling strategies, optimize design concepts and validate physical test data.



Main Expertise

- **Energy optimization for data centers**
- **HVAC systems positioning**
- **Condensation risks**
- **Thermal bridging and R-value calculation**
- **Thermal comfort and airflow velocities**
- **Air quality and contaminants ventilation**
- **Multi-CAD suppport including REVIT, AutoCAD and Sketch-up files**
- **Support of LBNL glazing library**
- **Training and global support**

Solution Partner PLM

SIEMENS

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