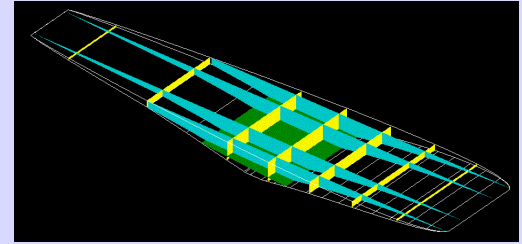
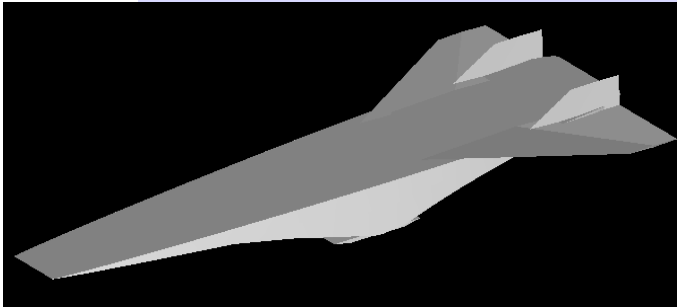




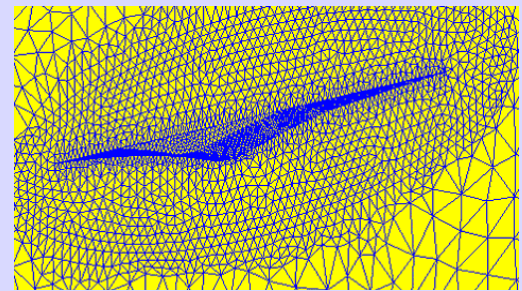
# Supersonic/Hypersonic Vehicle Design

The design of hypersonic and trans-atmospheric vehicles is a complex multidisciplinary problem. This involves geometric modeling, subsystem layout, internal/external interface specification, and system integration, along with various analyses including: thermal, mass properties, trajectory, structures, control systems, aerodynamics, propulsion, cost estimation, reliability, resource availability and maintainability.

Historically, these analyses and simulations are not integrated and the overall design process is inefficient and poorly defined. TechnoSoft, Inc. is developing a state of the art software technology that mitigates those drawbacks.



simulation tools, including detailed arbitrary body geometry, aerodynamics, aero-heating, thermal protection systems (TPS), Rocket and Air-breathing propulsion systems, trajectory analyses, structural weight optimization and cost.



The technology enables a design methodology simultaneously supporting conceptual, preliminary, and detailed designs and simulations in one common environment. In addition to innate platform independence and collaborative capabilities, the technology can be easily extended to incorporate additional functionality as needed in the various domain specific applications.

Based on the object-oriented, web-enabled, and distributed framework of AML (Adaptive Modeling Language), this technology enables the design and simulation of trans-atmospheric vehicles automating and managing the data transfer between various design, analyses and

