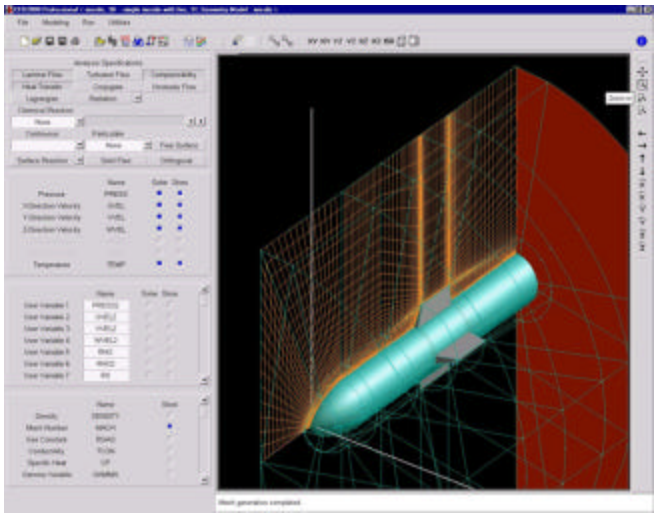
CFD Analysis of Supersonic Flow around a Missile Shape (M=3.0)

Adaptive Research
A division of Simunet Corporation

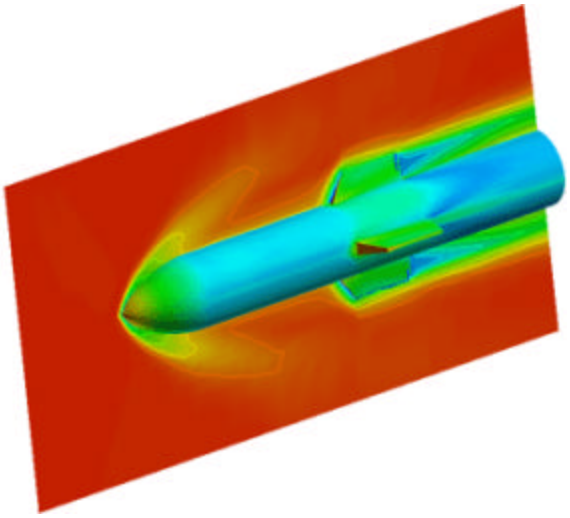
Computational Fluid Dynamics techniques are used to study the highly compressible turbulent flow field around a missile in supersonic flight regime. Critical parameters such as skin heating characteristics or shock wave interactions are directly available from the numerical simulations. Total Variation Diminishing (TVD) schemes are implemented to guarantee a sharp capture of shock waves and pressure fronts around the missile.



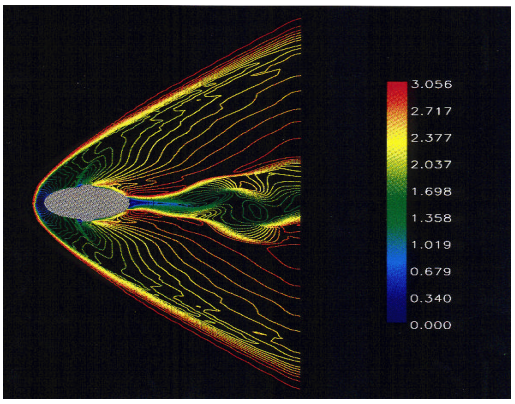
CFD2000 User Interface

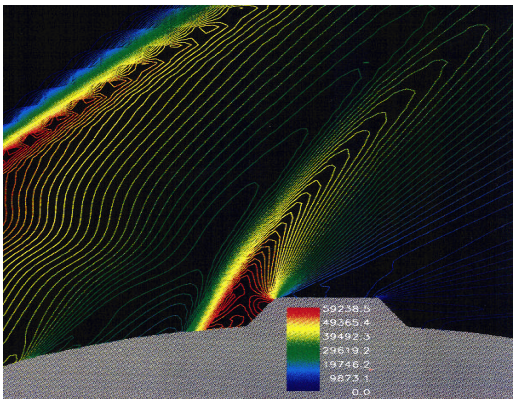
STORM®/CFD2000®

A powerful computational fluid dynamics software program developed by Adaptive Research. STORM/CFD2000 solves real-world engineering problems by simulating virtually any physical process involving fluid flow and heat transfer.



Skin Temperature and Mach number





Shock Waves – Pressure and Mach number