

Modeling, Simulation, and Analysis

fast facts

Teledyne Solutions, Inc. (TSI) is an industry leader in the application and development of multi-disciplinary, science-based models. Our models and processes are devoted to aerospace, missile defense, homeland security, and commercial industry.

TSI develops models and tools to aid:

- Systems Engineering
- Hardware / Software Design and Development
- Algorithm Development
- Trade Studies / Optimization
- Experiment / Mission Planning
- Data Analysis



TSI Modeling and Simulation Technologies

- Dynamics and Kinematics
 - Ballistic Trajectories (3-DOF, 6-DOF)
 - Orbits
 - Rocket and Missile Flight
 - Aerodynamics (Drag, Lift, and Moments)
- Thermodynamics
 - Phase Change
 - Combustion / Chemical Reaction
- Fluid Dynamics and Heat Transfer
 - Aerothermal Effects
 - Thermal Response
 - Heat Shield Ablation
 - Thermal Control
 - Rocket Exhaust Plumes
- Environmental Modeling
 - Solar Illumination
 - EO/IR and RF Propagation
 - Near-Earth Radiation
- Radiometry and Spectrometry
 - Sensor Modeling
 - Data Analysis
- Passive Optics, Ladar, and Radar
 - Signature Prediction and Analysis (Visible through Infrared)
 - Signature Control; Target Design
 - Image and Scene Synthesis
 - Signature Database Construction
- Data Analysis and Signal Processing
 - Data Reduction and Application
 - Frequency Estimation
 - In-depth Analysis and Modeling
 - Anomaly / Failure Resolution
 - Inverse Engineering Analysis
- Decision Support
 - Automatic Target Recognition (Discrimination or Pattern Recognition)
 - Parametric & Monte Carlo Trade Studies
 - Optimization using Genetic Search
- Software Engineering
 - Parallel Cluster / Distributed Processing
 - Source Code Modernization
 - Java, C++, and Fortran 77/90/95
 - Visualization Tools
 - Graphical User Interface (GUI)

Corporate Contact:

Teledyne Solutions, Inc.

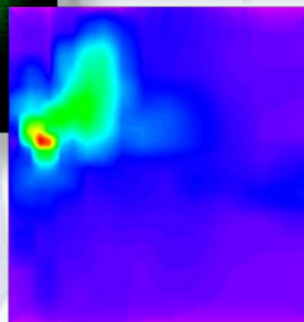
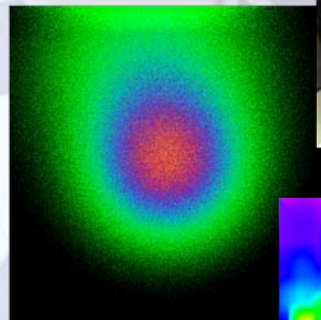
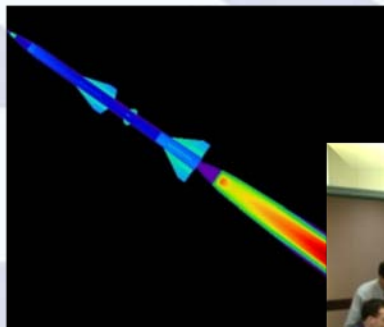
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Simulated using concepts of heat transfer, radiation transport, and optics



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