MuSES

Software

Rapid Engineering Tools

ThermoAnalytics' MuSES (**Mu**lti-**S**ervice **E**lectro-optic **S**ignature code) combines advanced heat management analysis with infrared signature prediction, enabling engineers to rapidly improve thermal designs and predict radiometric signatures. MuSES is a standard tool for the US Military, and supersedes our PRISM software.

Thermal Solutions and Radiometric Analysis

MuSES integrates target thermal models with background geometry for heat management and infrared signature prediction. Solve for 3D radiation, conduction and convection under steady state or transient conditions. View spatial/ temporal physical temperatures or apparent temperatures/radiances.

Validated Accuracy

MuSES' surface temperature predictions have been thoroughly documented and validated by independent 3rd party temperature measurements on operating vehicle systems and terrain background surfaces. Complete agreement with analytical solutions yields additional independent validation.

State-of-the-Art Speed

Our highly intuitive user interface allows rapid model setup, while advanced algorithms deliver extremely fast results.

Cross-Platform Operation

MuSES operates on nearly all platforms (UNIX, Windows, Linux) with an identical user interface. MuSES employs single-file data storage that can be shared across platforms.

Guaranteed Performance

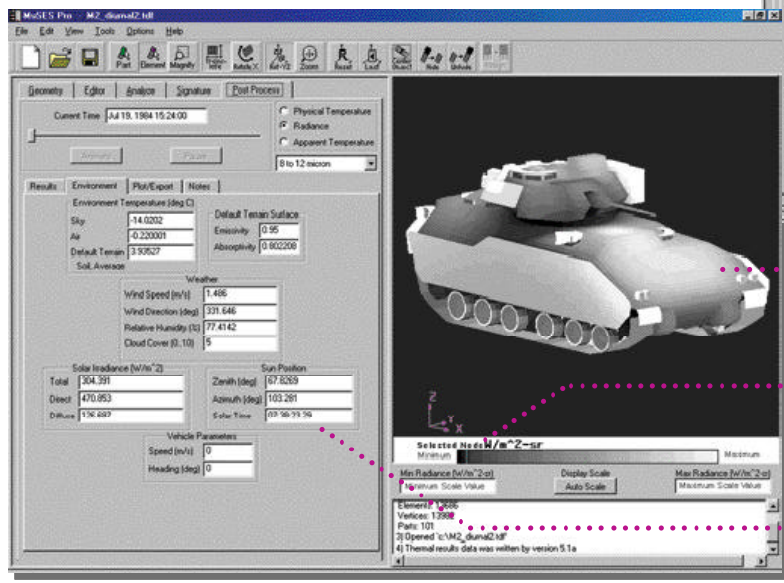
We stand behind MuSES Software with a 30 day unconditional guarantee.

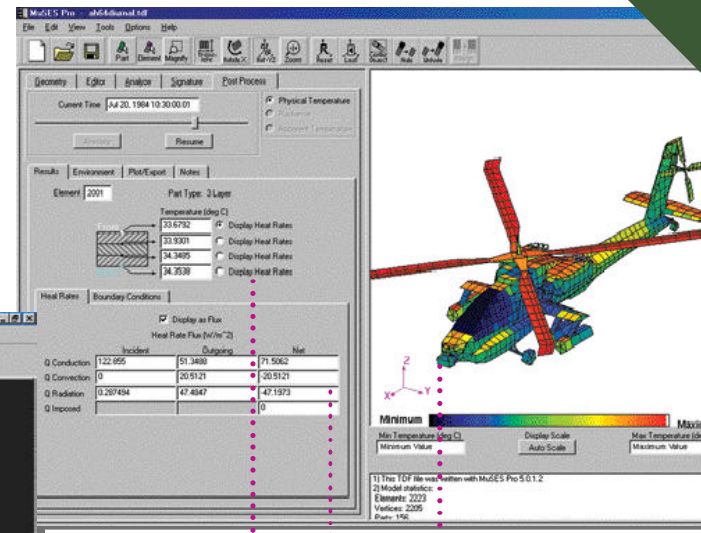
Designed by Engineers for Engineers

We focused the design of our graphical user interface for MuSES around the principle concerns and expectations of engineers. The feedback from our customers has been most rewarding: most engineers report that little or no training is needed because the software is organized to match engineering intuition. The bottom line is shorter design cycles with improved results.

See Results NOW!

View detailed thermal results during the solution process and in the post-processor. Interact with the model during the simulation - rotate, zoom-in, and view temperatures at critical locations. Specify sensor radiance bands and view signature predictions in the post-processor.





Model-Level Results Displayed Graphically

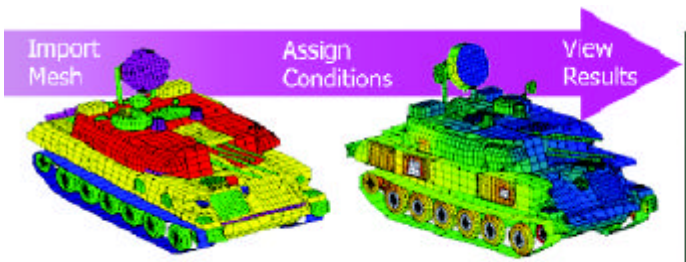
Scale Indicates Selected Node Radiance

Highly Detailed Environmental Parameters

Surface Temperatures or Radiances are Displayed *during* the Simulation

Part- and Node-Level Results Available for Plot or Export

Multi-layer Parts for Modeling Composite Materials



Model Setup **Thermal Results**

Infrared Signature

5 MINUTES

In only 5 minutes you can install MuSES and view sample models of ground, air, and naval vehicles. Animations of thermal and infrared signature results are just a click away.

Preview the advanced engineering that your team can do with the world's most powerful and user friendly infrared signature prediction code - MuSES from ThermoAnalytics.

About ThermoAnalytics

ThermoAnalytics is a world leader in infrared signature modeling and analysis. We have set the industry standard with modeling tools; first PRISM and now MuSES. We have developed these tools to address the unique needs of signature management engineers and scientists. ThermoAnalytics has taken a lead role in developing modeling techniques and tools applied specifically to cutting edge technologies, not just for post design system evaluation, but for technology and system design from the conceptual level up.

Contractual Modeling Services for Signature Management

Our expert staff can assist you with your design and modeling needs. Models can be developed for use with MuSES or your specific CAD/CAE program. Beginning with your CAD geometry, we refine the mesh for thermal analysis or build a complete model from scratch. Our modelers can formulate a thermal model that will result in quicker, more cost-effective answers.

Our on-site modeling facility ensures efficient interaction between signature modelers and modeling code developers. This interaction allows us to quickly adapt our software and modeling approach to customer needs.

With MuSES, we are able to offer a very short turn around time on completed models, while allowing the customer a great deal of flexibility with design variations, including shielding additions and adaptations, convective cooling schemes, surface treatment options and immediate reevaluation of composite layering formulas.

Custom Software Development Services

We can custom design and build thermal/fluid software tools that are integrated with your designated CAD or analysis program. Many complementary utilities for visualization, geometry format translation, and fluid flow (including CFD) can also be developed.

Training and Instructional Services

ThermoAnalytics can provide thermal or infrared signature model training with MuSES, PRISM/FRED, or one of our custom developed packages. Practical and theoretical training can be provided on-site or at our facility.

Awards for MuSES and ThermoAnalytics

MuSES was developed through a Phase II SBIR (Small Business Innovation Research) from the US Army TACOM. ThermoAnalytics is now commercializing and distributing MuSES under a Phase III SBIR. ThermoAnalytics has received two prestigious awards: the 2000 Army SBIR Phase II Quality and the 2000 Tibbetts Award. The Tibbetts Awards were established to give well-deserved, national recognition to those small firms, individuals, various organizations and projects that exemplify the business, economic and technological achievements of the Federal SBIR Program.