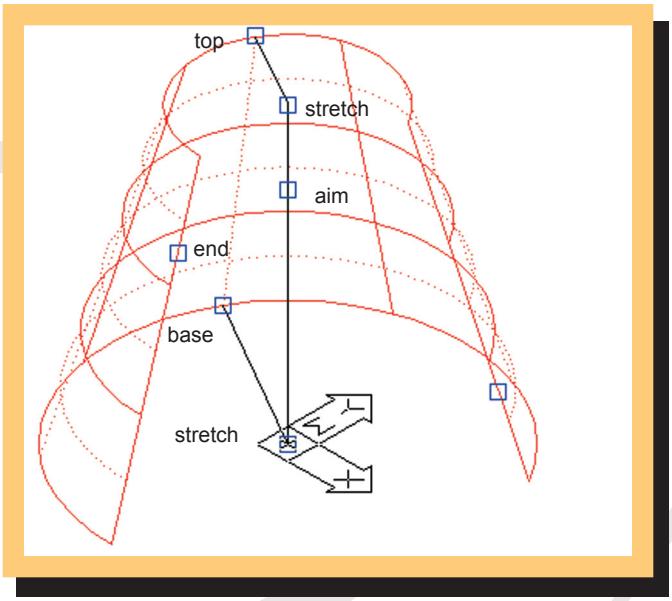
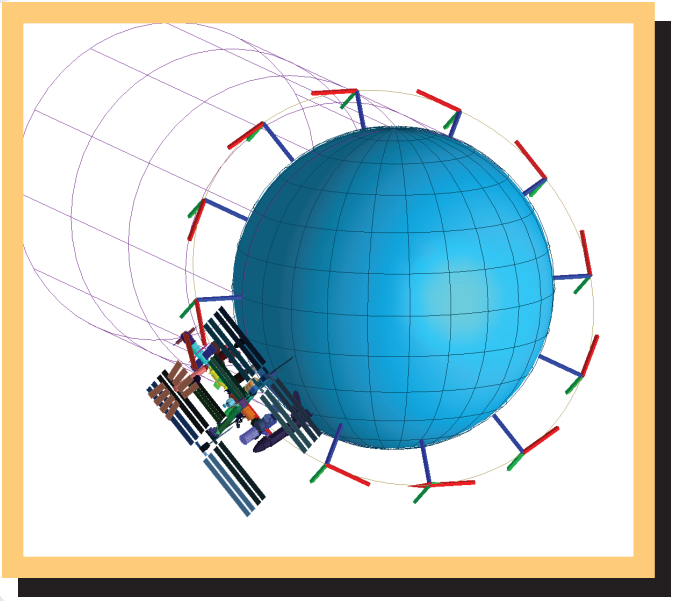
C&R TECHNOLOGIES®



RadCAD® custom surfaces stretch with the mouse, accurately represent the true geometry, snap on to CAD drawings, and are rapidly solved



Full orbit definition and viewing

RadCAD® is an optional module of CRTech's Thermal Desktop®. RadCAD® calculates form factors or thermal radiation exchange factors ("RADKs") for input to C&R Technologies' SINDA/FLUINT and similar thermal network analyzers. It also calculates absorbed direct and indirect environment fluxes.

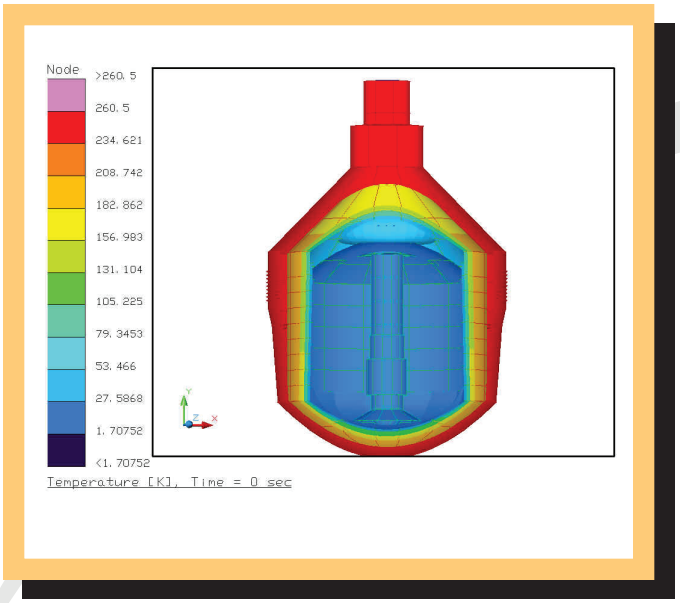
FEATURES

- Performs calculations using either Monte Carlo raytracing or advanced radiosity methods with extensive customization of control parameters.
- Runs amazingly fast due to proprietary advances in ray-tracing methods along with other innovations.
- Enables concurrent engineering for thermal analysts by providing full access to CAD-based geometry and CAD model building without sacrificing good thermal modeling practices.
- Imports and exports IGES and STEP CAD geometry.
- Meshes CAD geometry directly, or snap thermal surfaces to CAD surfaces.
- Stretch and reshape surfaces directly on the screen in addition to traditional form-based inputs.
- Facilitates model verification by graphically displaying active side and surface property information.
- Provides true curved geometric surfaces for speed and accuracy: spheres, cones, etc., avoiding thousands of tiny facets.
- Handles specular and diffuse transmissive and reflective surfaces.
- Accepts angle-dependent and temperature dependent optical properties.
- Easy incorporation of variable model geometry and rotating parts via the use of programmable articulators and trackers.

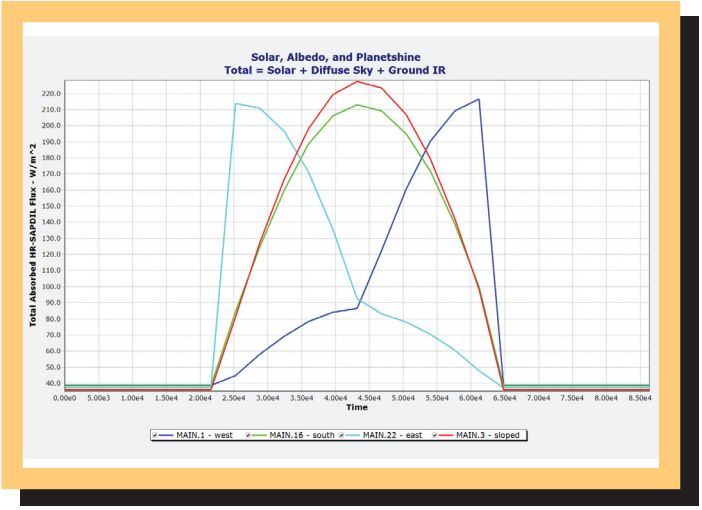
RadCAD®

RadCAD®

- Fast techniques for spinning surfaces.
- Arbitrary symmetries using mirrors.
- Full orbit plotting package includes definition and visualization of: basic (beta orientation) • Keplerian orbit • vector-based trajectory.
- Planetary surface sky direct solar, diffuse, and IR heating.
- Parallel Processing and Batch Mode
- Automatic restart determination.
- Imports and exports TRASYS and TSS geometric and optical property data.
- Imports Nevada™ files.
- Postprocesses RADKs, heat rates and fluxes, and SINDA temperatures for fast interpretation and impressive presentations including animations.
- Innovative analysis groups offer speed savings and easy model manipulation.
- Optical property aliases help in database management and design comparisons.
- User-defined symbols and expressions for spreadsheet-like parametric modeling.
- Dynamic link to SINDA/FLUINT for on-the-fly recalculations and access to logic, parametrics, optimization, statistical design.
- Extensive CAD functions make model building fast and effective: • Boolean, revolved, extruded surfaces • layer management • multiple port views with store/recall • snap-on entity building • drag and drop model editing • user-defined light sources • wireframe, hidden, and rendered views.
- Exploits inexpensive PC platforms.
- Also available: FloCAD® for convection and flow network models.



Easily model thermal radiation-dominated systems



Planetary surface heating for ground based systems and solar energy applications.

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