

SPACECRAFT DESIGN TOOL



SDT3.0

STAR TECHNOLOGIES has developed the Spacecraft Design Tool (SDT), a state-of-the-art high fidelity dynamic simulation tool that provides both simulation and real-time data display capabilities.

SDT is the first product developed on Star Technologies' open framework platform for dynamic simulations. Built using the Microsoft® .Net Framework, SDT enables users to rapidly design a complete spacecraft, including sensors, actuators, and attitude determination and control systems (ADACS). Customers will never feel "locked-in" by a proprietary scripting language again.

SDT provides a true software Plug-&-Play (PnP) environment where the user can seamlessly inherit properties from within SDT as well as add their own component or subsystem capabilities such as complex propulsion or electrical power subsystems. All facets of 6DoF spacecraft dynamics are considered, including environmental impacts on performance.

SDT is in all test cells of AFRL's Responsive Space Testbed simulating TacSat2 and PnPSat1.

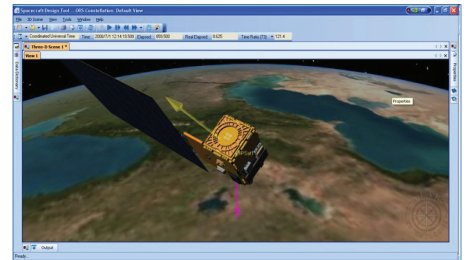
PRICING:

Retail Price: \$21,594
(includes first year of annual maintenance)
Annual Maintenance Contracts: \$3,599 per year (after the first year) to keep your SDT software updated with the latest release

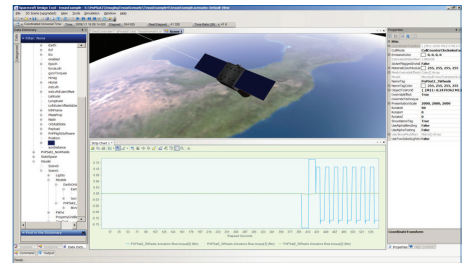
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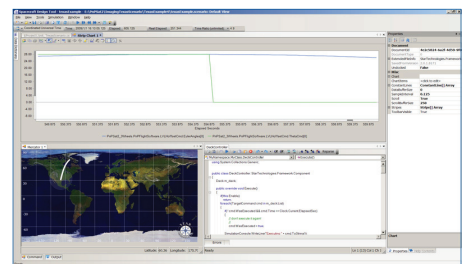
Star Technologies Corporation
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High Performance 3D Visualization



Plotting



Scripting in C#

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TECHNICAL FEATURES:

ATTITUDE

SDT natively provides high fidelity 6DoF spacecraft attitude dynamics in its standard package.

VISUALIZATION

3D visualization is rendered using Microsoft® XNA technology.

SCRIPTING

Utilizing the Microsoft® .Net Framework allows for over 40 standard programming languages to be used to communicate with SDT, including: C#, C++, FORTRAN, ADA, Javascript. No more proprietary scripting languages!

PNP COMPONENTS

SDT is a component-based architecture which can load component models such as actuators, sensors, electrical, propulsion, and others to dynamically configure the spacecraft at runtime.

COMPATIBILITY

SDT can integrate with virtually any external program; thermal, structural, and optics modeling tools, including connectivity to MATLAB® right out of the box.

EASE OF USE

The entire SDT interface is drag-and-drop. Work with the Data Dictionary, insert a strip chart, develop a customized instrumentation panel, create spacecraft and physics objects all using our intuitive drag-and-drop interface.

REAL-TIME I/O

SDT includes a Real-time messaging manager which supports any type of communications input, including bi-directional telemetry and ground station support. Even more exciting, SDT interacts in real-time with hardware-in-the-loop (HWIL).

TRAINING

Thanks to SDT's flexibility, compatibility, and ease of use combined with communications links to real hardware, trainers finally have everything they need.

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