



DESIGNER, INTEGRATOR & OPERATOR
OF MISSION CRITICAL SYSTEMS

VASCO

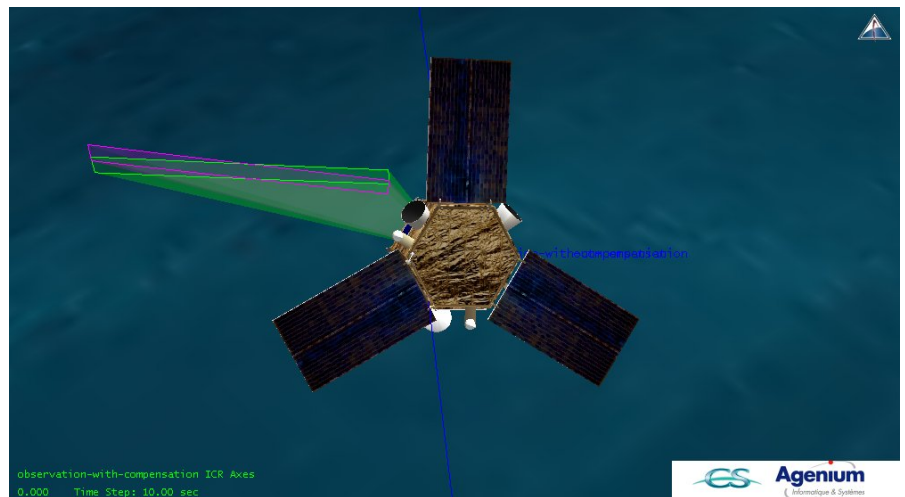
VERSATILE ATTITUDE SIMULATOR FOR CRITICAL OPERATIONS

GENERAL PRESENTATION

VASCO is a comprehensive set of tools for attitude handling integrated as an external STK module. It is a significant enhancement of STK tools for users who are not attitude experts.

VASCO allows to simulate any object attitude with a priori defined highly customizable models. It defines attitude implicitly by its user friendly high level properties (pointing, offsets, mode ...) rather than explicitly by its low level implementation meaningful only for experts (quaternions, Euler or Cardan angles ...).

VASCO is based on the fully flight proven MARMOTTES library, for which it provides easy access, multiple mission-oriented interfaces, and STK integrated GUI.



FEATURES

1 - Attitude modeling, simple user mode

VASCO provides numerous attitude models for all kinds of objects and all types of missions. These models are easily defined, highly customizable (multiple bias application, time dependent functions, models combining, etc..). Attitude is simply defined by high level attitude laws and parameters, rather than by painful description of the object's actuators and systems.

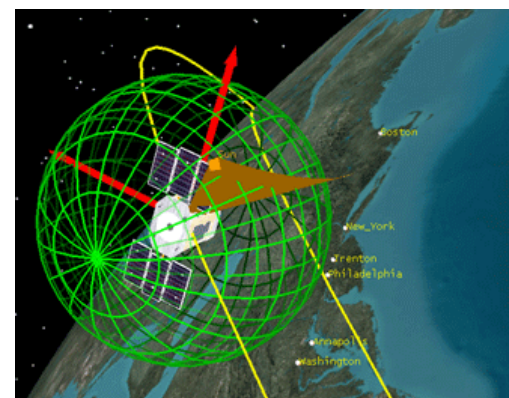
Moreover the user can define modes sequences not only with fixed time intervals, but also

with automated events description and detection.

For instance, one can easily define an automated routine attitude for an orbiting satellite with mode change on every eclipse entry and exit.

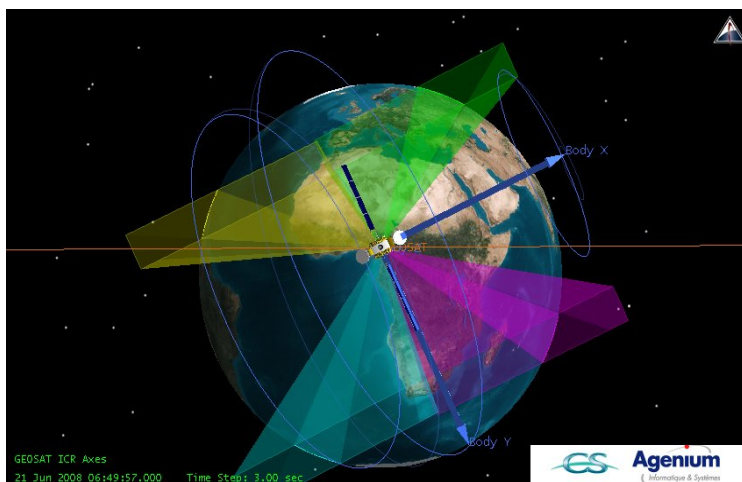
2 - Extended expert mode

In Extended expert mode, the expert user has access to low level definitions of attitude trackers and models provided by Marmottes, enabling any kind of complex attitude simulation.



3- User friendly STK integrated GUI

While providing a wide range of capabilities for modeling attitude, from easy to master level, VASCO offers an STK integrated GUI that enables rapid prototyping of attitude



TECHNICAL ENVIRONMENT

- Hardware: Any
- Operating System: Microsoft Windows
- Language: C++
- Integration: external module to the STK suite

CS OFFERING

Thanks to its unique expertise in all aspects of attitude modeling, from mission analysis to real-time flight operations, CS provides a wide range of services to complement and extend the use of **VASCO**.

A wide range of training sessions are available, from basic introduction to extended expert training and follow-on. CS provides its expertise for all levels of consultancy and support to software installation, integration, maintenance, etc...

CS proposes its development work force to provide the user with any envisioned software adaptation or evolution. **VASCO** can easily evolve to fulfill any advanced attitude oriented task or model the user may need.

SATELLITE TOOL KIT SOFTWARE OVERVIEW

STK performs complex spatial relationship analysis of land, sea, air, and space assets, and models results in one integrated solution.

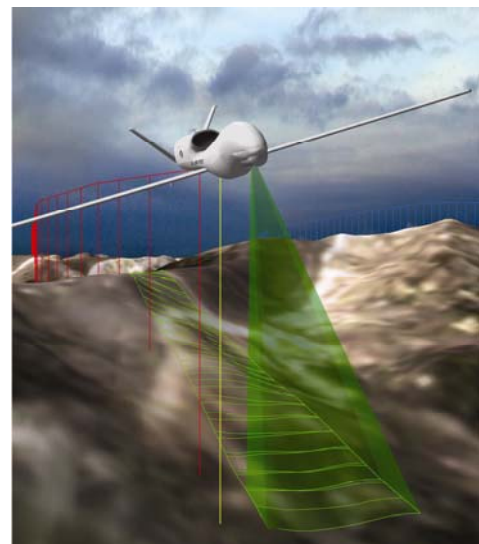
STK's core functionality enables users to:

- Calculate position and orientation
- Evaluate intervisibility times
- Determine quality of dynamic spatial relationships

Add-on modules are available to extend STK functionality for communications and radar analyses; maneuver planning; collision avoidance; cumulative coverage analyses; parametric analysis and optimization; complex mission scheduling; and missile systems design, flight, and interception.

The STK software suite also allows integration and customization through COM APIs, and incorporates real-time data integration and DIS/HLA standards.

CS and Agenium are partnership on VASCO software. Agenium is a scientific and technical company offering high-level solutions in the simulation of land, air, sea, space and defense systems, along with network simulation and real time data processing . Its flagship simulation products are based on Satellite Tool Kit (STK) and QualNet software.



ABOUT CS

As prime contractor in the design, integration and operation for innovative and high-performance turn-key systems, CS is present all along the value chain for its customers.

With a turnover of 222 M€ and 2240 employees, CS is an established supplier acknowledged by its major customers thanks to the expertise, commitment and focus service of its staff.