

SE-RAY-RCS computation used in STK simulations

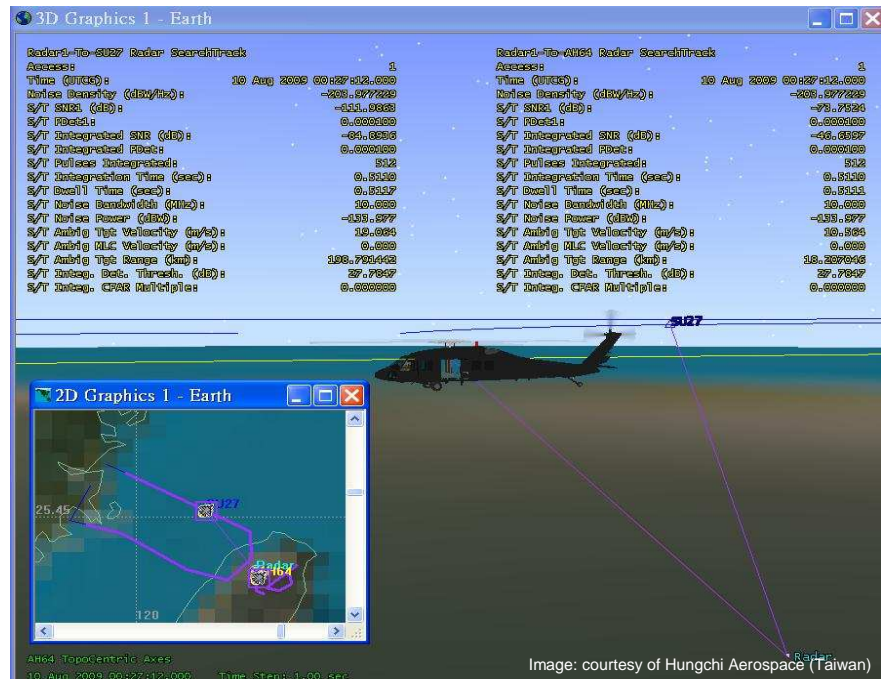
A first test integration

The software SE-RAY-RCS is now able to produce RCS (Radar Cross Section) data ready to be used in the context of STK scenarios. The software SE-RAY-RCS therefore offers to the Radar module of STK a very high fidelity RCS computation capability. This enables to enhance the realism and the confidence level of the tracking scenarios performed in STK.

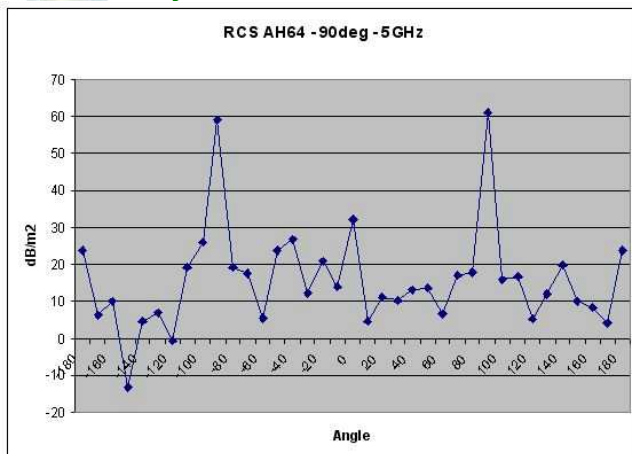
A typical exercise

In this context, a Sukkoi-27 and a helicopter are involved in a Detection, Recognition and Identification exercise performed by a radar located on the coast line.

The RCS of each player of the scenario is pre-computed by the SE-RAY-RCS software from OKTAL-SE and the output formatted to the STK input format. Then, depending on the attitude of the aircraft or helicopter relative to the radar, a given value of RCS is taken into account for the detection estimation.



The flexibility of SE-RAY-RCS



The SE-RAY-RCS results from the combination of a very high fidelity electromagnetic computation kernel and a very flexible user interface.

The electromagnetic computation kernel is developed together with ONERA in France and implements Geometrical Optics, Physical Optics and Unified Theory of Diffraction. It enables to compute RCS of very complex objects (several thousand of polygons) at high frequencies (300MHz to 300GHz).

The user interface based on Excel™ enables the user to customize the output format to its own needs (in that case an STK format).

About STK

The STK software from the company AGI (www.agi.com) provides extended analytical capabilities highlighted by 3D visualization. This edition includes databases for advanced orbit propagators, attitude profiles, complex sensor modeling, custom coordinate types and systems, and custom reports.