

SE-Workbench-EOS: Electro-Optics Signature software package description

The SE-Workbench-EOS solution allows experimented users to compute highly realistic infrared signatures of targets including aircraft plumes.



Import capabilities are provided in order to work on existing 3D terrain databases or 3D objects (geometry & texture). A plug-in to 3DSmax™ and SketchUp™ is delivered. The user is able to assign physical materials to geometries via textures from a provided library of physical data. Advanced tools are provided to work on 3D objects and to enhance the set of physical materials.

Various atmospheric conditions and thermal states have been pre-computed and are delivered in the package.

SE-PLUME is used for the prediction of the IR signature of the plume of an aircraft from the modeling of its engine, the thermo-kinetic modeling of the expansion of chemical species in the atmosphere and from the computation of the radiative transfer through the plume coupled with the atmospheric radiative transfer.

The Application Programming Interface (API), based on a static scenario definition, enables to connect the image rendering process to a customer application.

The documentation package includes the User Manuals, the internal Format description, the Developer Manual as well as Physical Models documentation and Tutorials.

This edition is delivered for  (Windows™) operating system (also compatible with Linux system ) in its English version. A USB dongle controls the license.

The SE-Workbench-EOS solution can be covered by a support and maintenance contract.

SE-Workbench-EOS

Synthetic environment modeling:

Import capability:

SE-FFT
SE-PHYSICAL-EDITOR

+library of EO generic textures
+library of EO physical materials
samples of 3D objects
library of .atmospheric files
library of thermal files

3D objects:

Atmospheric modeling:

Thermal state modeling:

Integration and signal rendering:

Scenario edition:

Plume computation

Advanced rendering:

Sensor modeling:

Signal visualization:

SE-SCENARIO

SE-PLUME

SE-RAY-IR

SE-IR-SENSOR

SE-SIGNAL-VIEWER

Software integration:

Signal manipulation:

SE-TOOLKIT

SE-TK-FORM-SPS

Documentation:

Software:

User Manuals

Format description

Integration developer manual

Physical Models:

Physical Models documentation

Validation Dossier documentation

Tutorials:

SE-TOOLKIT tutorials

SE-IR-SENSOR tutorials

SE-TK-FORM-SPS tutorial

SE-PLUME tutorials

SE-PLUME methodological guide