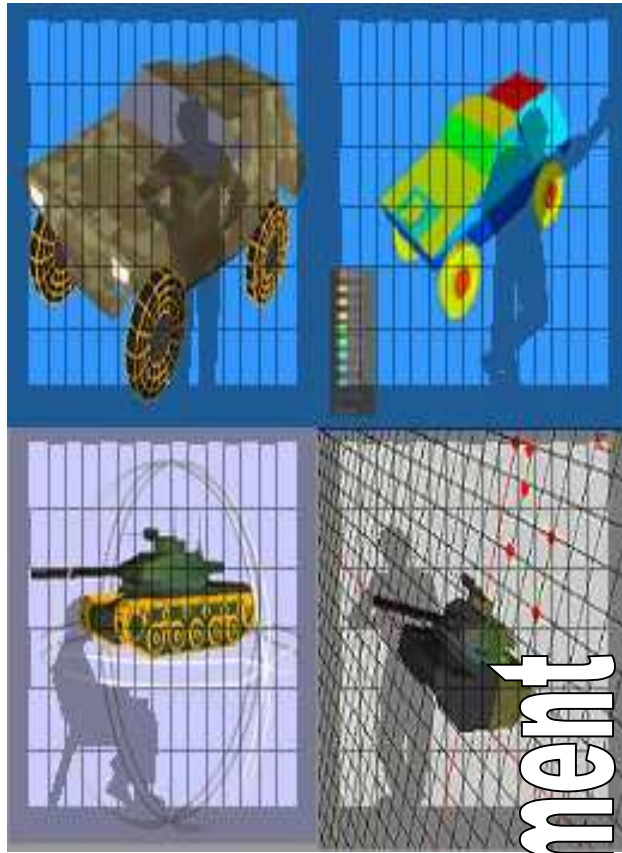


SE-PHYSICAL-MODELER

Physical

MATERIAL EDITION

Data



Edition

Enhancement

A direct access to Physical Material attributes

PHYSICAL MODELLING TOOL

SE-PHYSICAL-MODELER is designed to enhance existing geometrical databases with physical data in such a way that the **SE-WORKBENCH** scene generators are able to render the database in a specific waveband. This enhancement is made by associating physical materials to database polygons.

SE-PHYSICAL-MODELER features:

Create interactively physical synthetic environments for Real Time or Non Real Time rendering

Interactive visualisation of 3D textured databases

Direct Loading /saving 3D databases files using Open Flight 15.6 and SDM 3.0 format

Loading/saving material files using SDM material physical (EO, RF and AC) and thermal extensions

Visualisation of the database hierarchy

Visualisation of polygon temperatures

Modification of polygon temperatures

Editing of motifs palette

Editing of materials palette

Automatic and semi-automatic texturation of the 3D database polygons

Profiles creation and editing

Geometry creation and editing

Display:

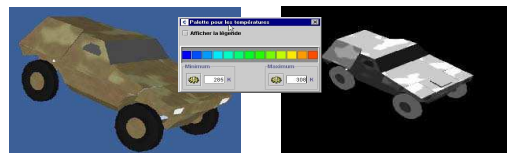
- Interactive 3D visualization window based on Coin™, updated when modifying mapping or material
- Database hierarchy window
- Texture palette editing
- Material palette editing, with EO spectral and thermal characteristics graphic display
- Physical textures display

Mapping

- Automatic mapping modes: 1 axis, 2 axes, ground mapping and X or Y projection, main slope mapping mode
- Interactive manual mapping in the 3D visualization window

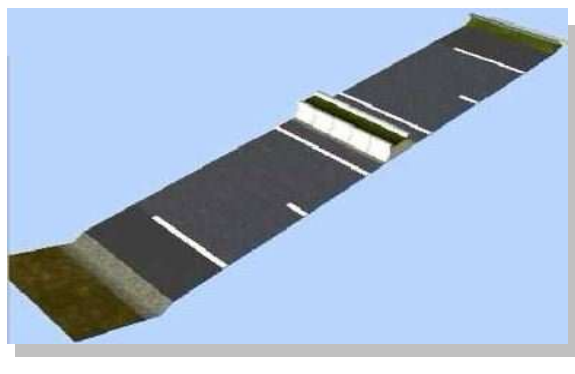
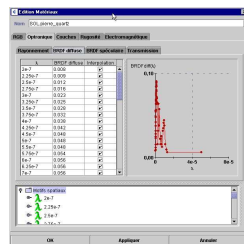
Miscellaneous

- Works with both SDM and FLT input and output format
- Many selection options: polygon picking on the visualization window, selection by material, by temperature, by object in the hierarchy



Interactive objects texturation

Infrared characterisation



Options edition

- Allows manipulating the rendering parameters and editing clipping planes of the visualisation window

Outline creation

- Allows outline creation. Outlines are objects with polygons constituted with 2 vertices. When these polygons are created, they are drawn out in the 3D view, and the mapping functions can be applied to them

Object's LOD Management

Full materials library management

Edge Management

- Possibility to mark some edges for electromagnetic simulation

Modelling

- Creation/Deletion/Modification of polygons and vertices

Temperature

- Temperature assigning on single or multiple polygons

Import formats

SDM, OpenFlight

Export formats

SDM, OpenFlight

Benefits:

Ease of use: Powerful JAVA interface

Reliability: CORBA for communications between modules

Modularity: use both for EO, RF and AC physical enhancement

System requirements :

Windows™ 2000 et XP

Linux Red Hat Enterprise 4

A graphic board with a 3D acceleration