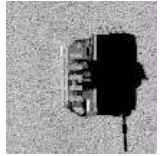# OKTAL-SE
Synthetic Environment

EO ●
AEO ●
RF ✓
GNSS ●

RAY ✓

SE-RAY-NBSAR

FAST ●

ADVANCED NARROW BEAM SAR SIMULATION TOOL
## COMPUTES REALISTIC NARROW BEAM SAR IMAGES

SE-RAY-NBSAR takes advantage of the recent improvements in the field of 3D graphics to compute very efficiently a Radar Image of a scene containing a very complex target (up to 100 GHz).

Features

- RF models validated by ONERA in France, FOI in Sweden and Fraunhofer FHR in Germany

- Very efficient computation kernel, for very detailed objects

- Can compute objects coated with dielectric layers including diffraction by edges

- Can deal with almost all popular CAD formats thanks to its associated 3ds Max® and Sketchup® plug-ins

- Easy-to-use product thanks to its dedicated GUI
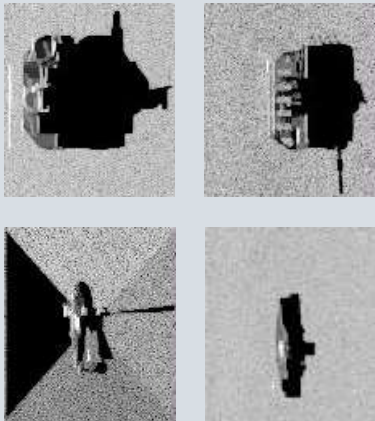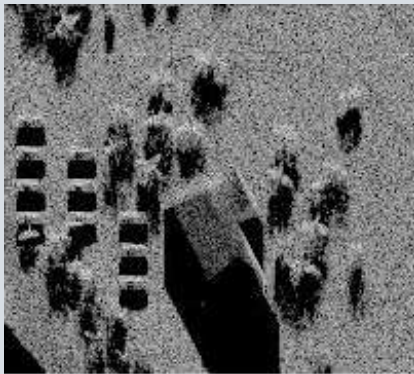
Key Advantages

- Complex 3D target management

- Robust electromagnetic models

- Dedicated user friendly GUI

- NBSAR images can also be computed on large 3D database
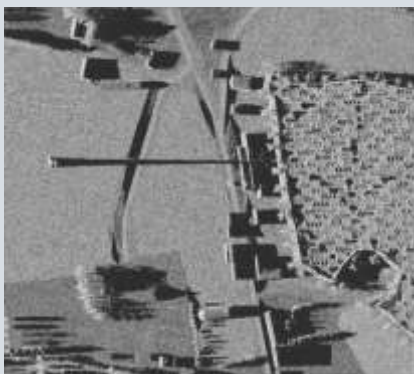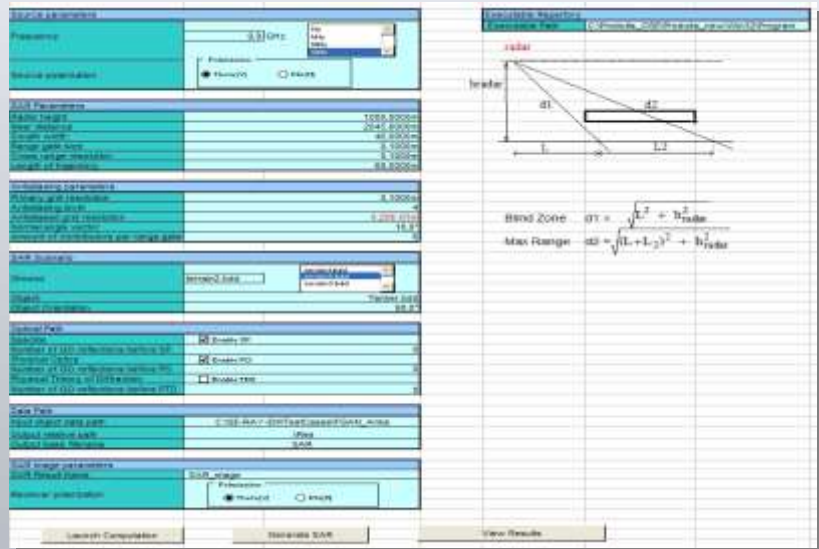
Benefits

- **An efficient tool for target radar signature analysis**

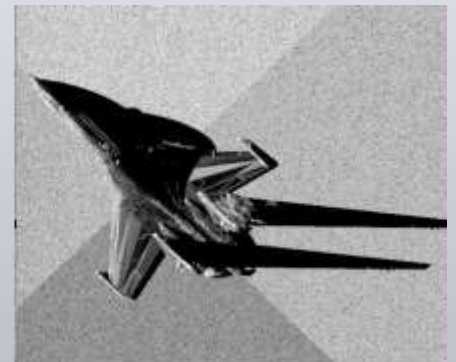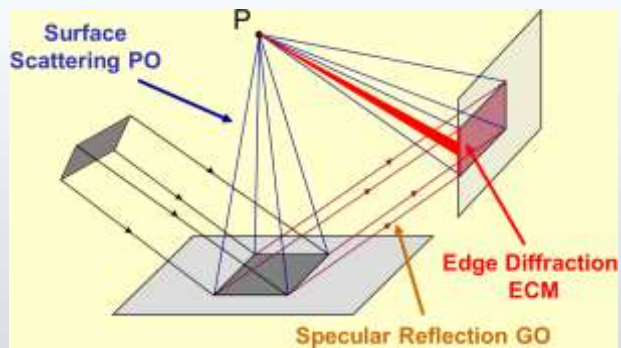- **NBSAR images of 3D targets can be computed in few seconds**

System requirements

 Windows

Physical model features

- **Association of shooting and bouncing ray technique (ray tracing) & electromagnetic asymptotic formulations**

- **Scattering computation using Physical Optics**

- **Multiple reflections computation using Geometrical Optics**

- **Edge diffraction computation using the Equivalent Current Method of Michaelli extended to targets covered by dielectric materials**

- **Reflection and scattering on multilayer dielectric materials**

- **Model dedicated to clutter materials including speckle effects**