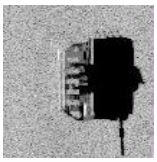
OKTAL-SE
Synthetic Environment

EO ✗
AEO ✗
RF ✓
GNSS ✗

# SE-RAY-NBSAR



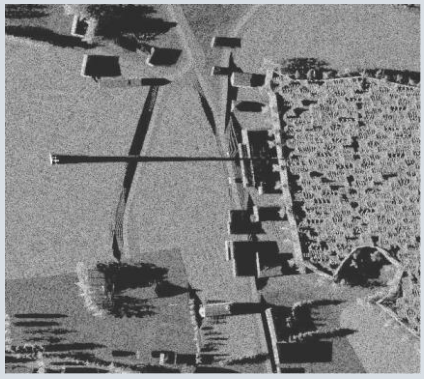
RAY ✓ FAST ✗

## 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)

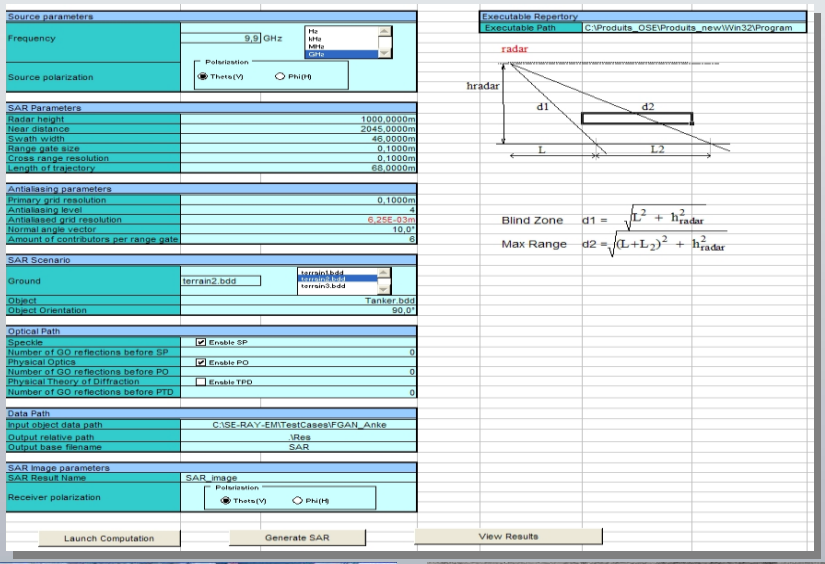
## Features

- 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

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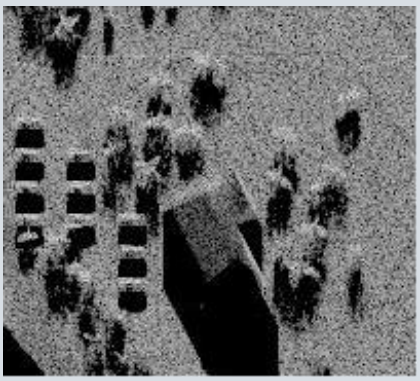
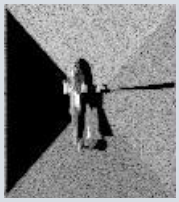
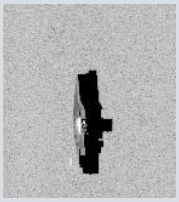
## Benefits

- An efficient tool for target radar signature analysis
- NBSAR images of 3D targets can be computed in few seconds





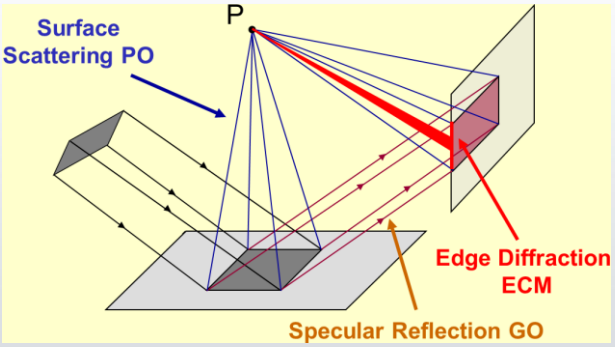


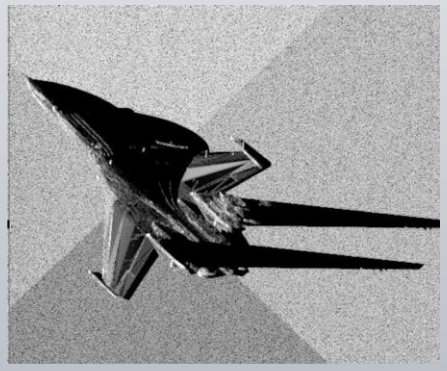
## System requirements

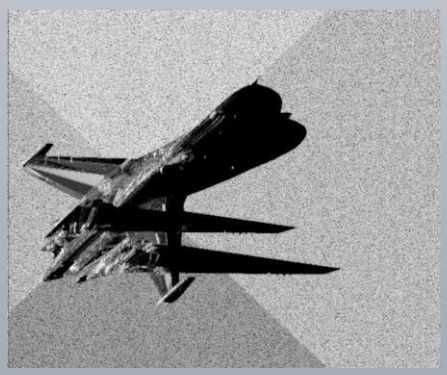
Windows

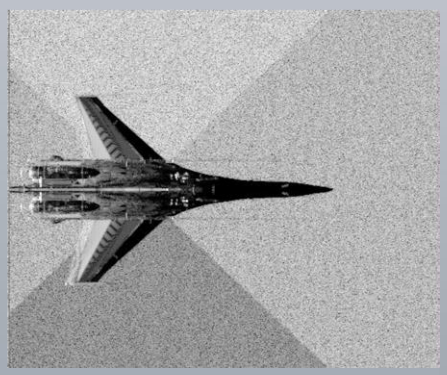
## Physical model features

- 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





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