

- EO ⊗
- AEO ⊗
- RF ⊙
- GNSS ⊗
- RAY ⊙

SE-RAY-RADAR



FAST ⊗

EXPERT SOFTWARE FOR RELIABLE REAL BEAM GROUND MAPPING RADAR SIMULATION

SE-RAY-RADAR is a dedicated application for simulating Real Beam Ground Mapping Radar signals. Based on the SE-RAY-EM-GPU computation kernel, it is both efficient and scientifically validated with realistic EM propagation simulation. A single GUI is used to define the emitter characteristics, tune the scanning properties, launch the computation and view the outputs. The scene entities and scenarios are assigned through SE-SCENARIO.

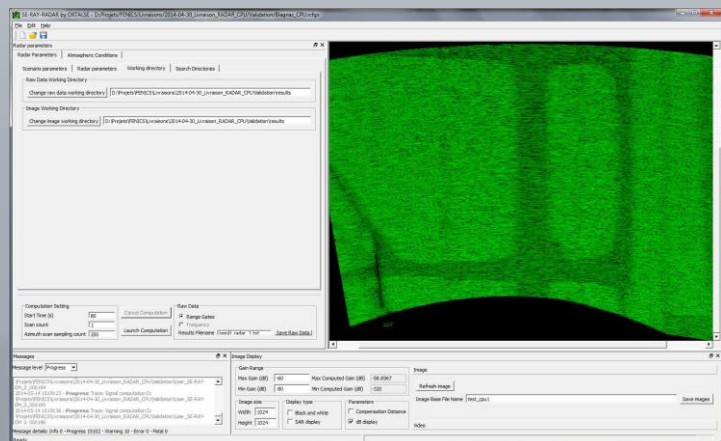
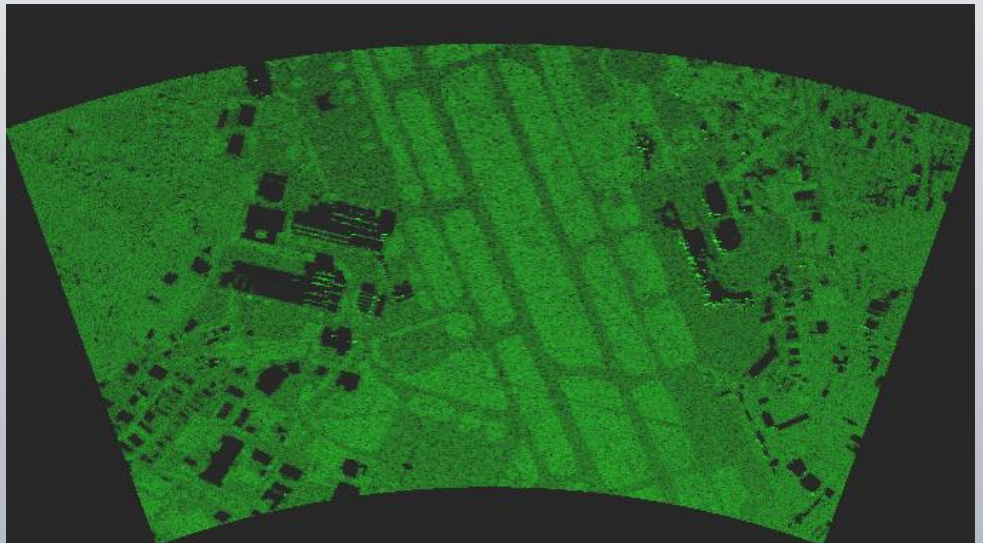
Features

- RF models validated by ONERA in France, FOI in Sweden and Fraunhofer FHR in Germany
- Ready-to-use, PPI B&W video output of RBGM data
- GPU computation (CUDA)
- Atmospheric models
- Single, dedicated GUI
- Asymptotic method
- Geometrical Optics
- Physical Optics
- Equivalent Current Method
- Emitted signal: pulse or FMCW
- Scanning modelling
- Gain control
- Range resolution
- Frequency control

SE-RAY-RADAR simulates RBGM radar on a virtual 3D mock-up.

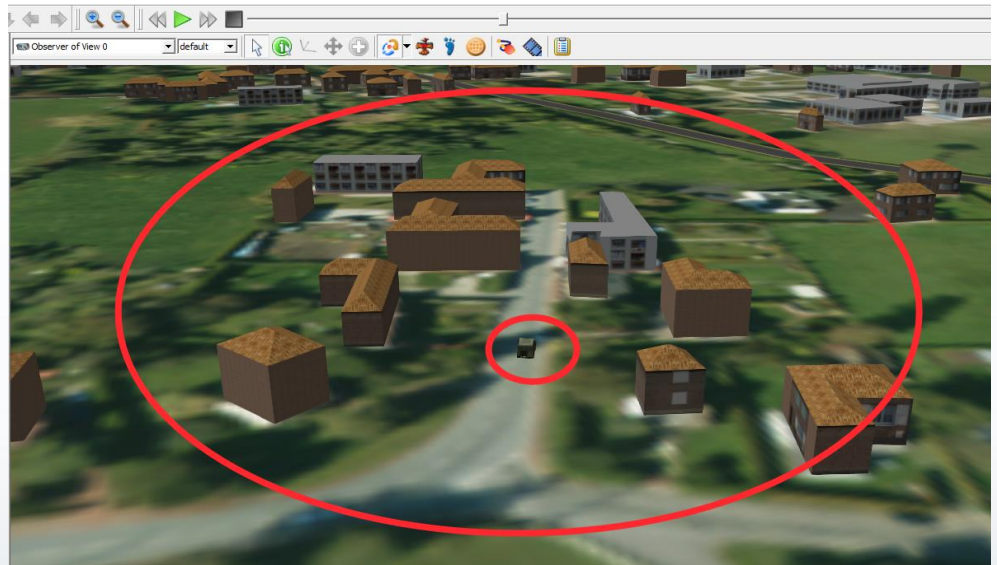
Several radar features are simulated:

- Frequency of the radar
- Radar scanning parameters
- Trajectory embedding
- Several visualisation modes
- Weather conditions

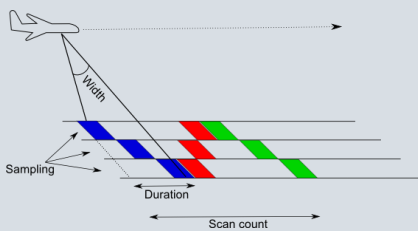


Benefits

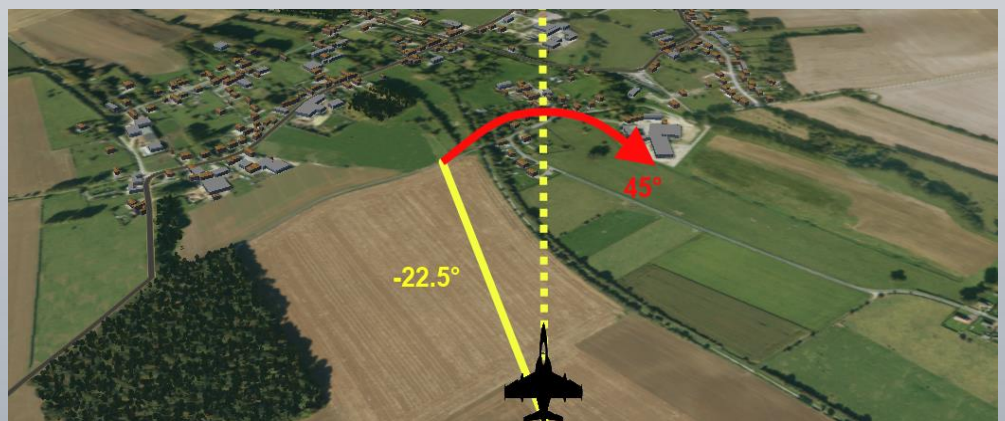
- Realistic rendering of EM mechanisms (no shortcuts)
- Time-computation efficiency in GPU mode
- Possibility of detailed-modelling of the scene (material, geometry, weather)
- Full compatibility with the other SE-WORKBENCH scenarios



SE-RAY-RADAR enables to parameterise the RBGM radar configuration, e.g. the antenna scanning and range gating.



Radar Scanning			
Aiming Offset			
Azimuth offset (°)	-22.5	Tilt offset (°)	0
Scanning Parameters			
Azimuth parameters			
Width (°)	45	Duration (s)	0.1
			<input type="checkbox"/> Fixed radar during scanning



System requirements

 Windows

 Linux

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