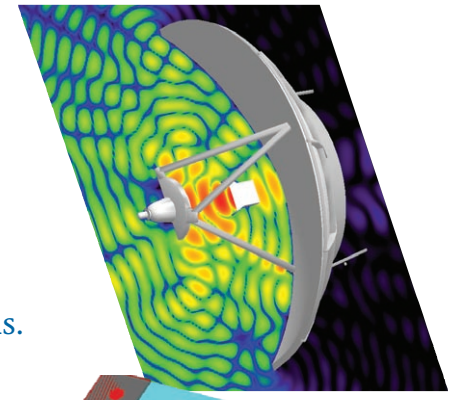
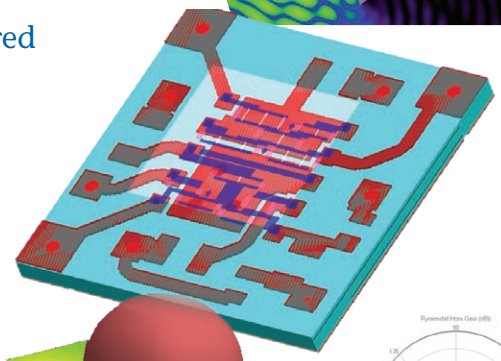
XFDTD® 6.4

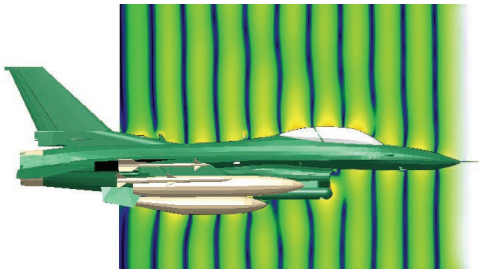
xf|dtd

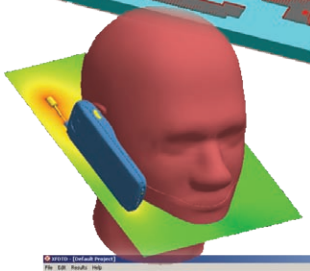
The latest technology in EM modeling.

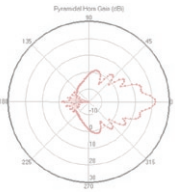
- Powerful, easy-to-use geometric modeler and postprocessor.
- Import SAT, STL, IGES, STEP, Pro/E, CATIA, Inventor and other popular CAD files.
- Use proprietary meshing algorithms to mesh in seconds, view and edit the mesh, all BEFORE making your calculation.
- Extensive versatile materials library — add your own materials.
- Multi-core and multiprocessor options available for shared memory and MPI systems.
- 32-bit and 64-bit systems supported.

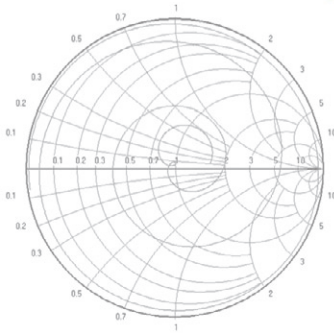


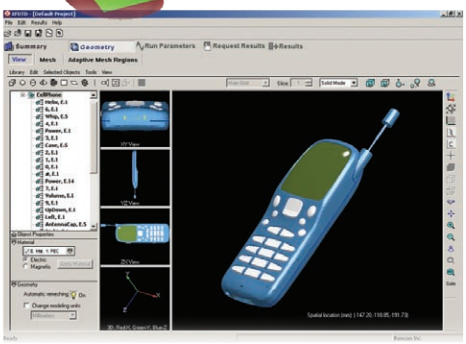


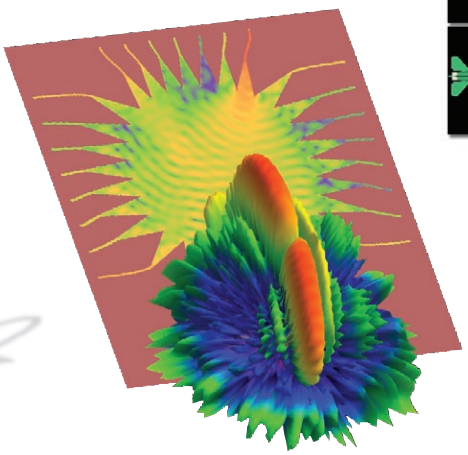












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XFDTD 6.4 Feature Table

	Pro	Bio-Pro
Materials		
User-defined Materials Library	•	•
Lossy Dielectric/Magnetic	•	•
Frequency-Dependent Dielectric/Magnetic	•	•
Anisotropic Magnetized Ferrite	•	•
Anisotropic Dielectric (Full Tensor)	•	•
Thin Wires with Different Radii	•	•
Non-linear Dielectric	•	•
Non-linear Magnetic	•	•
Sources/Loads/Ports		
Voltage/Current Sources with Series/Parallel RLC	•	•
Passive/Active Ports	•	•
Non-Linear Capacitors	•	•
Static Solver for Initial Condition Charging	•	•
Time-Controlled On-Off Switches	•	•
Multi-Port S-Parameters vs Frequency	•	•
Multi-Port S-Parameters — Steady State	•	•
Port Impedance vs. Frequency	•	•
Port Impedance — Steady State	•	•
Incident Plane Wave	•	•
Gaussian Beam	•	•
VSWR	•	•
Graphical Positioning of Parts	•	•
Far Zone Results		
Transient Far Zone — Specific Angles	•	•
Steady State Far Zone Patterns	•	•
Circular Polarization	•	•
Radar Cross Section	•	•
3D Far Zone Patterns	•	•
Advanced Antenna Pattern Analysis/Antenna Over Ground Plane	•	•
Antenna Diversity	•	•
Special Capabilities/Options		
Liao, PMC, PEC Periodic Outer Boundaries	•	•
Automatic Convergence Check for Optimum Run Times	•	•
PML Outer Boundaries with Adjustable Thickness	•	•
Threaded Multiprocessor (Shared Memory)	•	•
MPI Multiprocessor (Distributed Memory Clusters)	Optional	Optional
XSTREAM Hardware Acceleration	Optional	Optional
Biological Calculations		
Specific Absorption Rate (SAR)		•
Calculate 1 and 10 gram SAR Averages Per C95.3		•
Whole Body SAR Average		•
Location of Peak SARs		•
Adjust SAR Levels for Specified Input Power		•
Planes of SAR for Color Display		•
SAM Head CAD File		•
Pre-meshed Head/Body Meshes	Optional	Optional
Automatic Body Tissues Parameters with Frequency	Optional	Optional
Remesher to Change Cell Size/Orientation	Optional	Optional
Varipose to Reposition Body Meshes	Optional	Optional
Temperature Rise Due to SAR		Optional

XFDTD 6.4 Feature Table

	Included	Optional
Geometry Generation		
Dimension-Based 3D Solid Modeler	•	
Dimension-Based 2D Modeler	•	
Copy-Move-Scale-Rotate	•	
3D Rectangular Arrays of Objects	•	
3D Polar Arrays of Objects	•	
Shells Solid Objects	•	
Boolean Operations	•	
Mesh View/Edit	•	
Sweep/Rotate/Bodies of Revolution	•	
2D Scripting/Macros	•	
CAD Import/Export		
Import SAT/DXF/STL Files	•	
Import STEP Files		•
Import IGES Files		•
Import Pro-E Files		•
Import CATIA V4 and V5 Files		•
Import Inventor Files		•
Scale/Position Imported Objects	•	
Selective Import of Multiple Objects in CAD File	•	
Export to SAT/STL Files	•	
Export to STEP File		•
Export to IGES File		•
Export to CATIA File		•
Meshing/Viewing		
Patent-Pending Fast Meshing Algorithm (FMA)	•	
Adaptive Mesh	•	
Automatic/Manual Control of Mesh Parameters	•	
Fast 3D Mesh Viewing	•	
Visual Output		
Color Display of 2D Fields/Currents	•	
Color Display of 2D Steady State E, B Fields	•	
Color Display of 3D Steady State Surface Currents	•	
Color Display of 2D SAR Values	•	
Export Geometry/Field Display to Bitmap File	•	
“Movie Sequence” of Transient Fields vs. Time	•	
Export “Movie Sequence” to MPEG File	•	
Graphical Output		
Near Zone Fields/Currents vs. Time	•	
Impedance, S Parameters vs. Frequency	•	
Plot results from Other XFDTD Projects	•	
Export Plots to Postscript Files	•	
Polar Plot Antenna Patterns	•	
Smith Chart Impedance Plots	•	
FFT of Transient Results	•	

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