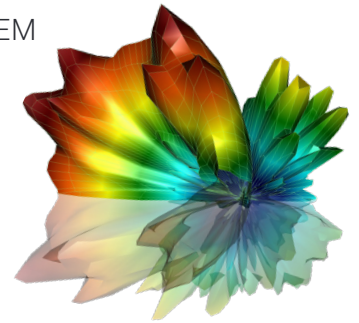


VSimEM

COMPLEX ELECTROMAGNETICS AND ELECTROSTATICS

VSimEM is an optimized FDTD solver used for simulating electromagnetics, and electrostatics in complex dielectric and metallic environments. Users of VSimEM can import existing CAD files or build their own unique geometries through the user interface, with numerous options for domain features and boundary conditions. In VSimEM, curved geometric structures are simulated by using second-order accurate algorithms, and advanced graphics capabilities display detailed field data for in-depth analysis.



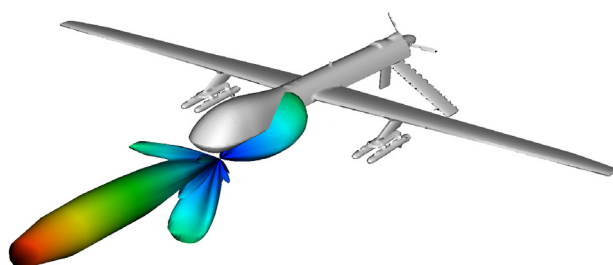
VSimEM can be used for applications including radar equipment, phased array antenna systems, and high power antennas in plasma environments. Capable of fully utilizing any computing system available to it, from laptops to National Laboratory supercomputers, VSimEM the optimal solution for complex electromagnetics and electrostatics.

“At Los Alamos we have several modeling needs for projects I’ve been working on, ranging from calculating far-field antenna patterns to the gain of dielectric traveling-wave tubes. These are complex problems and we were unable to set up accurate models of our problems with the previous numerical tools we were using. After seeing results from Tech-X’s VSim at conferences and talking to several colleagues who were using it for scientific modeling (including highly respected colleagues who work at Tech-X), we decided to try it. We were up and running within a few days and now have been using VSim for most of the past year. We have been very impressed with its broad capabilities and ability to model our specific problems. We are also pleased with its intuitive feel and ease of use. It is a great code and we anticipate using it for all our future needs.”

—Bruce Carlsten, Senior R&D Engineer, Los Alamos National Laboratory

VSimEM Advantages:

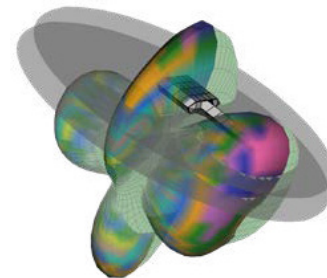
- FDTD Code for Complex Simulations
- Able to Model Large Devices with Billions of Cells
- Fastest and Most Accurate Far-Field Calculations
- Subpixel Algorithms for Metals and Dielectrics
- High Performance Computing Capable
- Powerful and Versatile Post-Processing
- Seamless Integration with All VSim Modules
- Robust Documentation and Tutorials
- Superior Customer Support



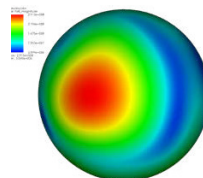
Antenna on Predator Drone



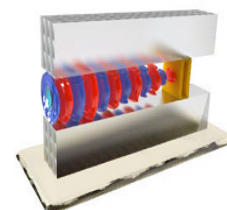
Specific Absorption Rate (SAR) of a human head.



Far fields of a patch antenna on a dielectric surface.



Far field of halfwave dipole antenna computed using Kirchoff Box.



Metal-Insulator-Metal waveguide, with Drude-model metal and a Lorentz dielectric

Applications for VSimEM



EM propagation and dispersion



Photonics



Radar Cross-Sections



Specific Absorption Rate

Technical Support

Many of our clients use our software for novel applications and our highly trained application engineers have the physics and engineering expertise to support their needs. Every Tech-X software license purchase includes support hours so that clients can fully utilize the powerful capabilities found in our simulation products.

About Tech-X Corporation

Tech-X Corporation is committed to technical excellence and innovation. Our scientists and software engineers work together to deliver quantifiable results. We combine academic research with a commercial software company sensibility to deliver high-quality, cutting-edge software that takes advantage of the latest hardware and software advances.