



New Features in XGtd version 2.5

This document describes the following new features in XGtd v2.5:

Performance Enhancements

1. Improved run times for complex scenes
2. New 64-bit version
3. Multi-process tokens included in base price

New Capabilities for Transmitters, Receivers, and Antenna Radiation

4. Trajectory transmitter/receiver sets
5. Spherical transmitter/receiver sets
6. New support for user defined 2-cut plane antennas
7. New support for antenna arrays

Improvements to Graphical Displays

8. Create multiple material plots in one step
9. Partition values displayed on scale bars

Performance Enhancements

1. Improved run times for complex scenes

The XGtd ray model now uses an enhanced ray tracing engine to speed up path searches. Tests have demonstrated significant run time improvements for complex scenes with very large objects.

2. New 64-bit version

This new version of XGtd takes advantage of 64-bit systems, providing modest increases in run-time and allowing for larger problem sizes.

3. Multi-process tokens included in base price

Multi-process token licenses will now be offered, with support for up to 8 provided in the base price.

New Capabilities for Transmitters, Receivers, and Antenna Radiation

4. Trajectory transmitter/receiver sets

Users can now model transmitters or receivers along a trajectory using the new trajectory transmitter/receiver set type. Unlike other set types, the antenna orientation is relative to the orientation of each individual point in the set.

5. Spherical transmitter/receiver sets

Transmitters or receivers can now be placed along the surface of a sphere allowing for spherical displays of field results around objects.

6. New support for user defined 2-cut plane antennas

Users can now specify antenna radiation patterns using two perpendicular cut planes (nominally vertical and horizontal), which is the typical format provide by antenna vendors.

7. New support for antenna arrays

An antenna array can now be created from the built-in antenna models by specifying the amplitude, phase, and xyz offsets for each element of the array.

Improvements to Graphical Displays

8. Create multiple material plots in one step

All reflection and transmission coefficient plots in both vertical and horizontal polarization can be added to a single graph at the same time.

9. Partition values displayed on scale bars

The scale bar has been improved to add information about the range of values that each color covers.

10. Save 2D antenna cut plane plots in project graphs

2D cut plane plots created from 3D far-zone calculations and built-in antenna models can be added to graphs that are saved along with the project. Graphs will automatically update as new calculations are made.