

EM Software & Systems-S.A. (Pty) Ltd announces the release of FEKO Suite 6.1 (July 2011)

This release is packed with new features and comes with a completely revised version of CADFEKO. The main revision was aimed at improving the usability of the feature-packed user interface. This was done through the introduction of a ribbon style menu which reduces clutter and represents the typical workflow. Many CAD and meshing features have been added or extended.

The latest version of POSTFEKO will also allow users to export results directly to Microsoft Word, PowerPoint and PDF (Portable Document Format) files. Advanced result-data manipulation can be done by means of a very powerful scripting language that has been integrated with the application.

The Numerical Green's Function domain decomposition will drastically decrease the run times for simulations where certain parts remain static while other parts move (e.g. rotating blades of a helicopter or the movement for optimal placement of an antenna on a large platform).

For certain applications the Method of Moments (MoM) based Volume Equivalence Principle (VEP) is the preferred method to handle dielectric structures. This method has now been extended to use tetrahedral mesh elements making it much more generally applicable.

The most significant and unique feature of Suite 6.1 is the introduction of a method to analyse cable bundles in a complex environment. With the common MTL method the cables need to run parallel and close to a continuous ground plane. With the new combined MoM/MTL method this restriction has been removed, allowing an arbitrary cable path and no restrictions on or need for a ground plane. This will extend the current capabilities of EMC engineers to solve general complex cable problems.

Special extensions have been introduced to solve electromagnetic problems where the structure or the mesh elements are very small compared to the wavelength e.g. at extremely low frequencies. This will open new opportunities and applications for FEKO.

A comprehensive material library, catering for frequency dependence and several dielectric models (e.g. Debye, Cole-Cole) is available. Users can also add their own materials to a local library.

Summary of the Highlights of Suite 6.1

- New ribbon-style CADFEKO graphical user interface
- Report generation in POSTFEKO
- Advanced post-processing in POSTFEKO using the Lua (<http://www.lua.org/>) scripting language
- Numerical Green's Function domain decomposition for re-using the solution of static parts
- Tetrahedral mesh elements for Volume Equivalence Principle (VEP) solution of dielectrics
- Major extensions to integrated cable modelling, including a new combined MoM/MTL method
- Low frequency analysis extension
- A material library.

Availability

FEKO Suite 6.1 is immediately available for existing FEKO customers. A FREE 45 day evaluation, including technical support, can also be arranged.

About FEKO and EMSS - EM Software & Systems-S.A. (Pty) Ltd.

FEKO® (www.feko.info) is a comprehensive computational electromagnetics code (CEM code) that is used widely in the telecommunications-, automobile- , space- and defence-industries. FEKO® offers several solution techniques (MoM, MLFMM, PO, GO Ray Launching, UTD and FEM) under a single licence. Hybridisation of these techniques enables the efficient analysis of a very broad spectrum of EM problems e.g. 3D antenna design, antenna placement on electrically large structures, microstrip-antennas, microstrip-circuits, EMC, biomedical and scattering. With the MLFMM, and the true hybridisation of the solvers, FEKO® is considered the global market leader for antenna placement analysis. FEKO® has a well-established global distribution and technical support network with subsidiary companies in North America, Europe, China and representatives in 8 other countries. EMSS (www.emss.co.za) was started in 1994 as an engineering company consulting in general electromagnetic problems.

Press Kit with Graphics

A press kit with graphics is available on request.

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