



Strategic Alliance

There has never been a better time to be an engineer.

At ni2designs, we are very much aware of the technical challenges faced by today's engineers. Accordingly, we are constantly looking at what and how we need to change to keep up with the market demands. We also realize that we too may have a few blind spots, so we are continually asking our market for suggestions on how to improve.

ni2designs has always excelled at introducing revolutionary tools and technologies in EDA industry. To keep up with this unprecedented expansion, ni2designs is incorporating the best available complementary tools and technologies.

We constantly strive to bring you more software innovations that maximize the benefits of our engineering solutions.

We are proud to announce the launch of first in-house software cum learning resource MentorDSP along with that two product launch for Asia Pacific market with tie-up for exclusive distributorship with System Crafter Ltd. and EMSS S.A. Pty. Ltd.

System Crafter joins hands with ni2designs

System Crafter Ltd has rewarded ni2designs with Asia Pacific distributorship of System Crafter software tool for Electronic System Level modeling.

“The ESL world is rapidly seeing a heave in SystemC usage not only for system modeling but also to add hardware concepts to C language”, said **Manoj Menghrajani, Manager EDA, ni2designs**. “And to facilitate the integration of SystemC and HDLs we are introducing SystemCrafter in India. This would provide industry standard means of modeling and verifying hardware and systems using standard software compilers.”

About SystemCrafter SC

SystemCrafter SC exists to bring customers the power of fourth-generation electronic design synthesis, and so to make it easier, faster and less risky to create advanced IC designs.

To fulfill this mission, they have created SystemCrafter SC. SystemC is the industry standard for describing electronic systems using the hugely popular C++ language. SystemCrafter SC is a software tool that can automatically synthesize SystemC descriptions to electronic hardware design.

SystemCrafter SC is also participating in the ESL Initiative (www.xilinx.com/esl) launched by Xilinx Inc., the worldwide leader of programmable logic solutions. This collaboration will help SystemCrafter SC to drive integration and adoption of SystemC to VHDL software as part of the ESL methodology for FPGAs, and enable the company to more rapidly develop enhanced versions in the future.

Working at the Electronic SystemLevel (ESL) is set to revolutionize the design of hardware and systems. Not only does it allow designers to work at a higher level of abstraction, improving time to market and reliability, but it also enables hardware to be designed by programmers and scientists. Combining ESL software with FPGAs enables designers to go from a conceptual C++ project to working hardware in hours.

“There is a growing interest in ESL design among FPGA designers,” said **Steve Lass, director of Software Product Marketing at Xilinx**. “The aim of our initiative is to improve awareness among the FPGA designer community, and to help our ecosystem partners expand the market for their solutions. We are working closely with SystemCrafter to enhance the value of their SystemC-to-VHDL/Verilog conversion software for programmable hardware platforms by improving the quality of results and integration with Xilinx software tools.” SystemCrafter’s software, which won an EE Times Ultimate Product award and has been nominated for a 2006 EE Times ACE award, automatically synthesizes hardware designs written in SystemC to VHDL/Verilog. The VHDL/Verilog can then be used with Xilinx FPGA design tools to target Xilinx FPGAs. This enables engineers and programmers to design, debug and simulate hardware and systems using their existing C++ development environment.

EMSS South Africa appoints ni2designs as it's Sales and Technology Partner in India Region

EMSS has appointed ni2designs as their Business Partner in India to promote their tool ‘FEKO’ for CEM and Microwave Engineering. To streamline FEKO product in Indian EM CAD market Gronum Smith, M.D., EMSS South Africa recently paid a visit to ni2designs office in India, along with their technical team. ni2designs will be responsible for distribution and provision of technical support for the tool in India. For this we have set up a very new cell comprising of technical persons in the field of CEM, RF, Microwave, Fluid dynamics, etc.

About FEKO

FEKO has distinguished itself by utilizing several computational electromagnetic techniques which are inherently more efficient than some of the other commonly used techniques. Whereas a large class of CEM problems (e.g. smaller antennas) can be solved by any of a number of techniques (e.g. MoM, FDTD or FEM) with practically the same efficiency. It is the solution of electrically large problems (e.g. antenna placement) or complex problems (e.g. cables in automobiles) that require the simulation techniques found in FEKO.

FEKO is widely used in the following industries:

Aerospace, Automotive, Naval, Mobile Phone, Intergrated Wireless Devices, Communication; for design and analysis of: Antennas, Antenna Placement, EMC (shielding, coupling.), RF components, Bioelectromagnetic analysis, Radomes, Scattering (e.g. RCS)

FEKO is based on the accurate Method of Moments (MoM) with special extensions allowing the code to be used to solve a large range of problems (e.g. thin dielectric sheets, dielectrically coated wires, planar multilayered media, dielectric volumes).

A hybridization of the accurate Method of Moments (MoM) technique with the asymptotic high frequency techniques, Physical Optics (PO) and Uniform Theory of Diffraction (UTD), brought FEKO recognition over the last 10 years, as one of the leading commercial software for the analysis of electrically large problems (e.g. antenna placement).

In 2004 FEKO was the first commercial code to offer the MLFMM technique which reduces the memory requirements by up to orders of magnitude without compromising the accuracy. This technology has been refined in FEKO over the last 2 years.

In 2005 the hybrid (Finite Element) FEM/MoM technique was released. Not only is the FEM efficient for problems containing both metallic and dielectric parts but it has the added advantage that it is ideal for highly inhomogeneous dielectric bodies, e.g. the different tissues found in human head. The FEM/MoM hybrid technique is particularly suitable for the analysis of problems where the MoM is applied to the antenna and the FEM to the dielectric region, with no need to discretise the free-space region in between (e.g. human in front of a mobile phone base station antenna).



FEKO Team visits ni2designs office:

Left to Right -
Robert Kellerman,
Manoj Menghrajani,
Bhupesh Purohit,
Gronum Smith,
Vinay Sharma

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