

- PRESS RELEASE -

CST Introduces New Filter Synthesis Tool

Darmstadt, Germany 26 September, 2014 – Computer Simulation Technology (CST) announces the addition of Filter Designer 2D to CST STUDIO SUITE®, allowing the synthesis, electromagnetic simulation, optimization and multiphysics analysis of filters in one single environment.

Planar filters are widely used by engineers developing low-cost or compact printed electronics for applications such as networking, communication and signal processing. For these filters, the design process typically has two stages. The first step is selecting an appropriate filter topology from a synthesis tool or textbook and calculating the filter coefficients that match the specification. The second step is analyzing and fine-tuning the filter through simulation or prototyping to ensure that it operates correctly when installed.

Built on Nuhertz Technologies' well-reputed and mature technology, Filter Designer 2D's integration into CST STUDIO SUITE means the full workflow can now be carried out with a single tool.

Filter Designer 2D includes a database with a wide variety of filter types, including both lumped element and distributed element implementations. Users input the specifications of the filter – including both the frequency response and any physical limitations, such as the maximum size of the filter and the properties of the substrate – and Filter Designer 2D will automatically suggest a design. With a single button click, fully parametric models of this design can be created for either circuit simulation or full-wave 3D simulation.

“Nuhertz has long been a market leader for filter synthesis tools, and we're proud that our technology has been incorporated into CST STUDIO SUITE,” said Jeff Kahler, President, Nuhertz Technologies. *“Through this partnership, we intend to make our technology available to an even wider market of filter designers and engineers.”*

With System Assembly and Modeling (SAM), CST's design automation framework, these models can be simulated and optimized to tune their performance and take into account the unforeseen coupling between elements. SAM can also be used to integrate these filter models into larger

systems, and also allows the integration of electromagnetic, thermal and structural simulation for a multiphysics analysis of filter detuning.

“Filter Designer 2D is a major advance in our planar filter design offering,” commented Dr Bernhard Wagner, Managing Director, CST. *“By automating the filter design process wherever possible, we want to free engineers to focus on the bigger picture.”*

About CST

Founded in 1992, CST offers the market’s widest range of 3D electromagnetic field simulation tools through a global network of sales and support staff and representatives. CST develops CST STUDIO SUITE, a package of high-performance software for the simulation of electromagnetic fields in all frequency bands, and also sells and supports complementary third-party products. Its success is based on a combination of leading edge technology, a user-friendly interface and knowledgeable support staff. CST’s customers are market leaders in industries as diverse as telecommunications, defense, automotive, electronics and healthcare. Today, the company enjoys a leading position in the high-frequency 3D EM simulation market and employs 240 sales, development, and support personnel around the world.

CST STUDIO SUITE is the culmination of many years of research and development into the most accurate and efficient computational solutions for electromagnetic designs. From static to optical, and from the nanoscale to the electrically large, CST STUDIO SUITE includes tools for the design, simulation and optimization of a wide range of devices. Analysis is not limited to pure EM, but can also include thermal and mechanical effects and circuit simulation. CST STUDIO SUITE can offer considerable product to market advantages such as shorter development cycles, virtual prototyping before physical trials, and optimization instead of experimentation.

Further information about CST is available on the web at <https://www.cst.com>.

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Downloads

- Graphics are available to download from
https://www.cst.com/Content/News/news_item_208/2014-CST-FD2D-Combined.zip

“A band-pass filter with ring resonator topology synthesized with Filter Designer 2D.”