

- PRESS RELEASE -

CST Acquires CoupleFil Software

Darmstadt, Germany, 5 October 2015: CST – Computer Simulation Technology (CST®) announces that it has acquired all intellectual property of the CoupleFil software developed by InnoDev GmbH. CoupleFil is a synthesis tool for designing cross-coupled bandpass filters, and will complement and extend CST’s workflows for simulating and optimizing filters.

Cross-coupled filters are commonly used for high-frequency, high-performance applications where narrow passbands and steep roll-off are required, for example in telecom base stations and satellites. Cross-couplings (couplings between non-adjacent resonators) can be used to modify the filter transfer function. They are mostly employed for improving the filter selectivity by producing transmission zeroes. Depending on their sign, they can also be employed for improving filter phase linearity.

In traditional filter design, the tuning of the filter and placement of the transmission zeroes required both considerable analytic work to calculate filter coefficients and manual fine-tuning. CoupleFil simplifies the process substantially by automatically calculating the necessary coupling matrix and suggesting filter topologies that match the user’s requirements. These requirements can include multiple pass-bands and arbitrary transmission and reflection zeroes.

Once CoupleFil has synthesized a filter, it can generate a 3D model of the design which can be exported directly into the 3D EM simulation tool CST STUDIO SUITE®. A full 3D simulation can then be carried out to optimize the filter and to allow its performance to be calculated as constructed using a virtual prototype. By combining synthesis and simulations, users can get from specifications to tuned design more quickly, saving both time and money.

“Many of InnoDev’s customers are also CST customers, and will benefit from the integration of CoupleFil into CST’s software range,” said Rony Füglistaller, co-founder of InnoDev GmbH. “We look forward to working as part of the CST team in the future development of CoupleFil, and will continue to offer customer-specific software and hardware solutions.”

CST has traditionally been strong in the microwave and RF market, and CST STUDIO SUITE is used by engineers to design and analyze a very wide range of high-frequency components and systems. In recent years, CST has focused on strengthening its offering for filters in particular, with the introduction of optimization techniques especially well-suited to filter tuning and the integration of FilterDesigner 2D into CST STUDIO SUITE. The addition of CoupleFil to CST's portfolio further increases their presence in this application area.

“Our customers demand strong synergy between synthesis and simulation tools,” said Peter Thoma, Managing Director R&D at CST. “We’ve had very positive feedback about our design tools for antennas, arrays and planar filters, and the integration of CoupleFil into CST STUDIO SUITE workflows is sure to give customers working on cross-coupled filters the same advantage.”

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 280 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_229/2015-09-CoupleFil-web.png
- “The CoupleFil interface, showing the design of a three-resonator band-pass filter with one cross-coupling, with the 3D CST STUDIO SUITE model inset.”

Trademarks

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