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ESI is the pioneer and world-leading solution provider in virtual prototyping.

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ESI releases the latest version of ACE+ Suite

The Multiphysics and Advanced CFD software improves product development processes for Automotive to Semiconductor industries

Paris, France – 5 March, 2012 – **ESI Group**, pioneer and world-leading solution provider in **virtual prototyping** for manufacturing industries, announces the release of **ACE+ Suite**'s latest version. This unique multiphysics modeling and simulation software combines tools in advanced Computational Fluid Dynamics (CFD), Electro-Magnetics (EMAG), Gas Dynamics and Finite Elements Structural Analysis, all working in a seamlessly integrated manner, helping to take decisions based on several physics involved in product manufacturing or performance, speeding up product development processes and increasing final product quality.

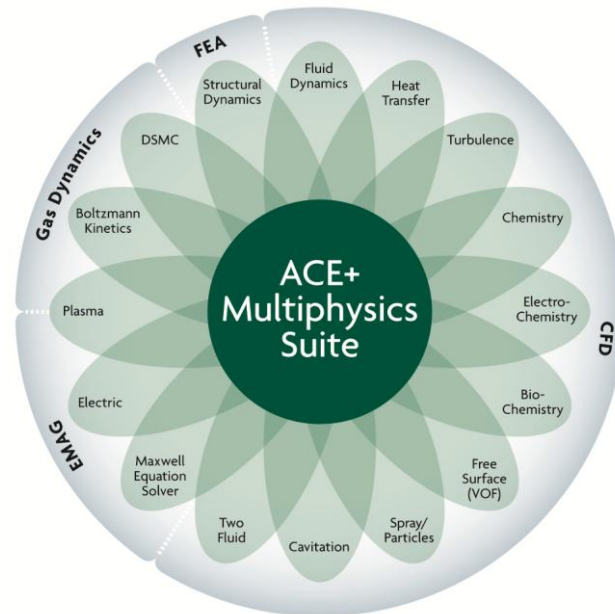


Image: ACE+ Suite's powerful code allows engineers to combine various physics into a single simulation.



[ACE+ Suite](#) addresses the increasing need of all industries to look beyond one domain of physics to the important interactions underlying the “cause and effect” relationships that drive the performance of products. The software is delivered in separate but connected modules designed for customers working on fast developing applications such as plasma and semiconductor processes, MEMS, biotechnology, microfluidics, fuel cells and battery as well those of mainstream automotive and aerospace applications.

Enhancements for the automotive sector

The latest version of [ACE+ Suite](#) comes with an advanced automatic meshing tool for creating polyhedral cells. The CFD-VisCART mesher can now process in parallel for Single Domain meshing, including boundary layer generation. This means the calculation time required to automatically create meshes for large models, with hundreds of millions of cells, can be drastically decreased!

Enhancements for the semiconductor industry

Plasma-based processes such as those used in the semiconductor and photovoltaic industries will benefit from improvements related to coupling electromagnetics (EMAG) with plasma models, essential when simulating for plasma. [ACE+ Suite](#) enables the modeling of Electromagnetic Wave Effects in large area high frequency coupled Plasma Reactors, using a new algorithm that provides more accuracy than traditional calculations based on Poisson’s equation.

Addressing specific challenges of radiative heat transfer

Designed to reduce computational costs of radiation heat transfer models, the CAFVM Discrete Ordinate Method for Radiation generates results significantly faster than comparable algorithms, which helps industries such as the semiconductor industry solve problems related to reactive flow analysis and plasma models. [ACE+ Suite](#) provides a vast range of optical and thermal conditions including grey and semi-transparent media, Fresnel interfaces and participating media.

Enhancements for applications in the aeronautic industry

Also included in [ACE+ Suite](#), CFD-FASTRAN density-based solver used to investigate supersonic speed flows in the aerospace and defense industries, has gained in accuracy with improved compressibility corrections for Turbulence models.

Other enhancements

CFD-VIEW, the software suite’s post-processor, extends support of cell-centered data visualization and supports logarithmic color maps; greatly helping visualization of large data variations. Also, [ACE+ Suite](#) offers improved linear and pre-conditioner choices for the multiphysics solver, including additional gradient calculation options. This will greatly help the users of this software in delivering results with desired precision levels and conversion settings.

*“The latest release of ACE+ Suite includes a unique combination of specialized solvers incorporating highly accurate physics for specific applications spanning automotive, aeronautics and semiconductor industries”, affirms **Anshul Gupta**, Product Manager for CFD/Multiphysics Solutions at ESI. “Its advanced features give engineers the ability to make the right decisions in the development of innovative products.”*

[ACE+ Suite](#) meets the **Intel® Cluster Ready** specifications and has passed the tests of the Intel® Cluster Checker, which means it can run smoothly on any Intel® device.



For more ESI news, visit: www.esi-group.com/newsroom

About ESI Group

[ESI](#) is a pioneer and world-leading solution provider in virtual prototyping for manufacturing industries that takes into account the physics of materials. [ESI](#) has developed an extensive suite of coherent, industry-oriented applications to realistically simulate a product's behavior during testing, to fine-tune manufacturing processes in accordance with desired product performance, and to evaluate the environment's impact on performance. [ESI's](#) solutions fit into a single collaborative and open environment for End-to-End Virtual Prototyping, thus eliminating the need for physical prototypes during product development. The company employs about 850 high-level specialists worldwide covering more than 30 countries. [ESI Group](#) is listed in compartment C of NYSE Euronext Paris. For further information, visit www.esi-group.com.

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