



Paris, France – October 28, 2010

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

Market Data

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ESI Releases PAM-CEM Simulation Suite 2010

Electromagnetic package for full virtual testing

ESI's [PAM-CEM](#) Simulation Suite addresses realistic models in their early “electromagnetic” design stage thanks to unique coupling capabilities allowing multi-scale electromagnetic phenomena to be assessed in the middle and high frequency ranges. End-users thus benefit from [PAM-CEM's](#) ability to handle fully equipped 3D models, featuring on-board complex antennas as well as sophisticated cable networks.

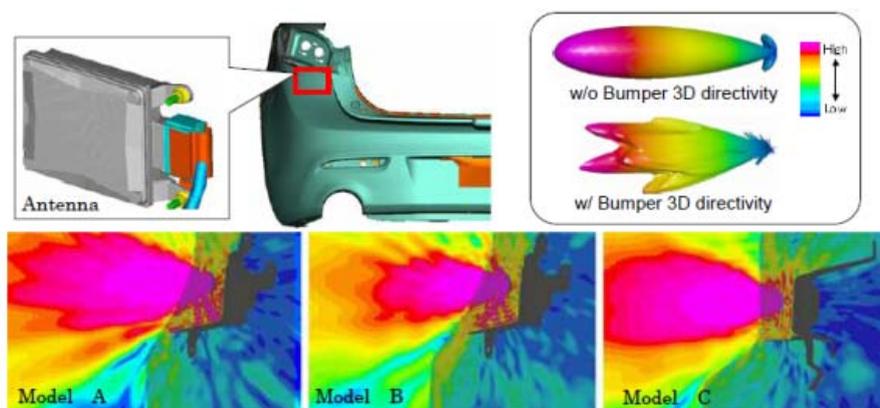
The 2010 version of [PAM-CEM](#) Simulation Suite includes several key enhancements of significant benefit for industrial users, among which there are two major enhancements of special interest to the Automotive and Marine sectors:

- Direct access to the complete electromagnetic environment, beyond the usual computational area, taking into account additional reflecting vehicles and/or obstacles, if any.
- Dedicated High Frequency software tool, relying on Physical Optics combined with Equivalent Edge Diffraction and dealing with aeronautics RADAR applications or Antenna Radiation on-board large sized naval ships.

Near radiated fields for Automotive RADAR

The previous version of [PAM-CEM](#) offered a dedicated upgrade to access electromagnetic fields radiated in the so-called “near zone”, i.e. outside the 3D computational domain but not yet in the far zone. With the brand new 2010 upgrade, additional reflecting obstacles or vehicles can be taken into account together. Also, very thin paint bumper coatings that interfere with automotive RADAR devices are treated.

“The introduction of PAM-CEM has allowed us to conduct very precise electromagnetic wave simulations. We believe electronic control systems will be increasingly important in the development of the cars of the future”, declared **Yasushi Hamada**, Manager of the Electronic Testing and Research Group at MAZDA Motor Corporation.



Electromagnetic bumper design for optimized RADAR performances

High Frequency Electromagnetics

[PAM-CEM](#) Simulation Suite 2010 includes an additional product, named PAM-CEM/HF, which relies on the Physical Theory of Diffraction (PTD) combining Physical Optics and Equivalent Edge Currents. Specific applications can be found in Aeronautics with high frequency RADAR scattering or in the Navy with the radiation of integrated antennas.



Near Radiated Fields of an Antenna on a Navy Cruiser

“Together with Visual-CEM 6.5 and the forthcoming Special Version also presenting some new capabilities such as 3D/3D coupling for advanced source modeling, PAM-CEM Simulation Suite 2010 is clearly user-oriented and targets industrial modeling”, said Dr. **Jean-Claude Kedzia**, PAM-CEM Product Manager at ESI Group.

For more information about ESI PAM-CEM Simulation Suite, please go to www.esi-group.com/electromagnetics

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

About ESI Group

[ESI](http://www.esi-group.com) is a pioneer and world-leading solution provider in virtual prototyping that takes into account the physics of materials. [ESI](http://www.esi-group.com) 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](http://www.esi-group.com)'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 over 750 high-level specialists worldwide covering more than 30 countries. [ESI Group](http://www.esi-group.com) is listed in compartment C of NYSE Euronext Paris. For further information, visit www.esi-group.com.