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

#### Market Data

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## ESI releases Virtual Performance Solution 2011

### Scalable software package for end-to-end virtual prototyping across multiple domains

Paris, France – 3 October, 2011 – [ESI Group](#), pioneer and world-leading solution provider in [virtual prototyping](#) for manufacturing industries, announces the release of [Virtual Performance Solution \(VPS\) Version 2011](#). [Virtual Performance Solution](#) enables [ESI's](#) customers to shorten product development time by mastering design iterations and reducing costs while ensuring high quality standards.

The latest version of [Virtual Performance Solution](#) was developed to address today's main industrial challenges. How to cope with new safety and environmental regulations for transportation, while reducing weight? How to anticipate the impact of new materials and manufacturing processes on product performance? How to reconcile conflicting requirements and bring revolutionary changes to increasingly complex products, while cutting development costs and time drastically?

[Virtual Performance Solution 2011](#) provides numerical simulation across multiple domains: crash, impact & occupant safety; passenger comfort; linear and nonlinear statics & dynamics; strength and thermal performance; noise, vibration & harshness (NVH); and, most recently, interior acoustics.

New enhancements include a glass model to simulate head impacts on a vehicle's windscreen; required by part of the Euro NCAP car safety performance assessment program. This new model was quickly adopted at Volkswagen AG, where Project Engineer **Dr Helge Liebertz**, commented: *"At Volkswagen, we have been using Virtual Performance Solution for several years now, and recently, in collaboration with ESI, we improved head impact simulation on windscreen. Using a new non-local failure criterion for laminated glass in Virtual Performance Solution 2011, we could calibrate one criterion and evaluate its accuracy by comparing with several experimental results. We confirm its use at an industrial level as the criterion works very well for multiple load cases."*

[VPS](#) 2011 offers unique multi-physics capabilities for multi-domain optimization with a single core model. It enables collaborative and simultaneous engineering work across domains and components, taking into account coupling effects, while saving model translation tasks between domains. Not having to deal with multiple solvers and individual processes for each product part leads to a significant reduction in the workflow's complexity and hence enables faster design changes. [VPS](#) also allows customers to optimize safety margins, by improving simulation quality thanks to proper consideration of contacts, nonlinearities, and manufacturing history. Furthermore, [VPS](#) helps reduce IT costs by using one single scalable solution with fewer software installations.



[VPS 2011](#) new features for NVH engineers include an improved interior acoustics module to predict the low-medium frequency response to structural loads.

The new [VPS](#) edition also integrates [PAM-COMFORT](#), ESI's solution for virtual seat prototyping. Along with the simulation of the trimming process, [PAM-COMFORT](#) accurately predicts the behavior of the seat under numerous loading conditions and for various design changes.

All simulations are fully compatible and available as a single package in a common user environment.

*"This new release of Virtual Performance Solution includes new capabilities for improving not only vehicle crash worthiness and occupant safety, but also the passenger's experience in general. It is now possible to decrease structural vibration and improve in-car acoustics, for instance; two parameters that directly impact a car's 'quality feel'. By enabling multi-domain virtual prototyping, Version 2011 helps streamline product development processes, accelerate project development cycles, and reduce costs,"* declared **Peter Ullrich**, Virtual Performance Solution Product Manager, ESI Group.

For more information on Virtual Performance Solution, visit our website: [www.esi-group.com/vps](http://www.esi-group.com/vps)

For more ESI news, visit: [www.esi-group.com/newsroom](http://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](http://www.esi-group.com).

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