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

Market Data

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ESI releases the latest version of Virtual Performance Solution

Empowering industrial customers to assess all domains of product performance virtually using a common simulation model

Paris, France – January 30, 2014 – [ESI Group](#), pioneer and world-leading solution provider in [Virtual Prototyping](#) for manufacturing industries, announces the latest release of [Virtual Performance Solution](#). Delivering faster results in crash simulation, the new version also offers new approaches for modeling product assembly, for assessing Noise, Vibration & Harshness (NVH), and for predicting airbag opening behavior more accurately. [Virtual Performance Solution](#) brings industrial clients a decisive competitive advantage, especially when facing the numerous challenges brought by lightweight engineering and the consequent need for numerous design iterations, trade-offs between performance domains, and less conservative safety margins.

[Virtual Performance Solution](#) provides automotive manufacturers with a viable solution to improve passenger safety without slowing down new car developments. As exemplified by the Vehicle Safety Simulation department at [Audi](#), real prototypes can be drastically reduced or eliminated completely.

Using a common core model for their simulations, engineering teams from various departments and from different geographical sites can collaborate efficiently towards the creation of [virtual prototypes](#) that can be used to predict the future behavior of parts or products in all domains of performance.

By taking account of manufacturing effects and the coupling between different physics, even at very early stages of the design process, manufacturers significantly improve their process efficiency; decreases the number of real prototypes built and tested and, thereby reduce product development costs and time-to-market.

[Virtual Performance Solution](#) has been developed to greatly facilitate and accelerate multi-domain optimization and to offer manufacturing companies



in all industries the capacity to test and improve their future products. Depending on the industry, domains of application may include [structural stiffness and strength](#), [crash](#), [occupant safety](#), [NVH & interior acoustics](#), [comfort](#), [durability](#), and [high velocity impact](#).

Thanks to a new execution scheme that supports Multi-Model Coupling, the new version of [Virtual Performance Solution](#) is simpler to set-up, offers easier task submission, and delivers significantly faster calculations. [Distributed Memory Processing](#) (DMP) has been complemented by an alternating job execution per model, reducing processing time by 20 to 30%.

[Virtual Performance Solution](#) offers a new approach for modeling adhesive bonding by introducing special 3D connection elements. These enable a more precise modeling of assembled parts so engineers can more accurately predict behavior in all performance domains, including crash, NVH, stiffness and strength.

The latest release includes an enhanced [Finite Pointset Method \(FPM\)](#) module including turbulence models for gas flow. The module enables increased precision in the simulation of even the most complex airbag systems, notably curtain airbags.

[Virtual Performance Solution](#) also comes with improvements for NVH assessment. A new method to evaluate Random Response enables vehicle engineers to achieve a more consistent vehicle by providing more precise prediction of how different road loads and other conditions influence the performance of parts or products. Furthermore, a new scheme for non-linear transient implicit calculations is added to improve the accuracy of durability and strength predictions.

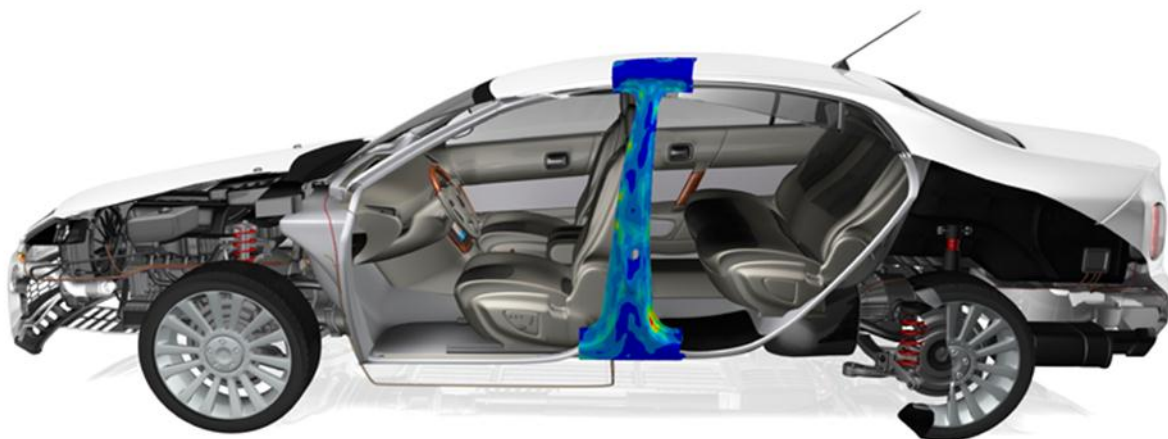


Image: VPS enables an accurate and efficient durability assessment process, by applying actual loading conditions while considering manufacturing history. This leads to more reliable results for development and lower warranty costs.

For more news or information about Virtual Performance Solution, please visit www.esi-group.com/VPS



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About ESI Group

[ESI](#) is a pioneer and world-leading provider in Virtual Prototyping that takes into account the physics of materials. [ESI](#) boasts a unique know-how in Virtual Product Engineering, based on an integrated suite of coherent, industry-oriented applications. Addressing manufacturing industries, Virtual Product Engineering aims to replace physical prototypes by realistically simulating a product's behavior during testing, to fine-tune fabrication and assembly processes in accordance with desired product performance, and to evaluate the impact on product use under normal or accidental conditions. [ESI's](#) solutions fit into a single collaborative and open environment for End-to-End Virtual Prototyping. These solutions are delivered using the latest technologies, including immersive Virtual Reality, to bring products to life in 3D; helping customers make the right decisions throughout product development. The company employs about 1000 high-level specialists worldwide covering more than 40 countries. [ESI Group](#) is listed in compartment C of NYSE Euronext Paris.

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