



ESI releases Virtual Seat Solution, a unique software solution dedicated to seat prototyping

Helping develop safe, lightweight and comfortable seats at first try-out

Paris, France – January 27, 2014 – [ESI Group](#), pioneer and world-leading provider of [Virtual Prototyping](#) software and services for manufacturing industries, announces the launch of [Virtual Seat Solution](#), the only solution on the market dedicated to the virtual prototyping of seats. It empowers OEMs and seat suppliers to design, test, improve and pre-certify their seat prototypes, fully and virtually, without the need for costly physical prototypes. Not only do industrial clients save cost and time, they can also deliver highly innovative seats while ensuring all aspects of their performance.

The gains provided by Virtual Prototyping are best expressed in the words of **Dr. Vincent Tejedor**, Chief Technical Officer of the French company Expliseat, which recently launched the lightest economy class airline seat in history. With their Titanium seat, Expliseat realized the incredible achievement of reducing seat weight to 4kg – over 50% lighter than a regular seat. **Tejedor** explains: *“Virtual Prototyping is a proven industrial approach to pre-certify the manufacturing process and performance of an innovative product, such as our Titanium seat. Our experience working with ESI’s Virtual Seat Solution confirms the efficiency of this solution in speeding up innovation. Virtual Seat Solution has helped us reduce drastically the development time usually required to design an innovative product, and has allowed us to increase the business value of our company in record time!”*

In the automotive sector, major OEMs, including Hyundai Motor Company, and seat suppliers, already use the solution. Hyundai uses [Virtual Seat Solution](#) to test H-Point, posture, pressure mapping, hardness, and the dynamic comfort of their seats. Thanks to Virtual Prototyping, Hyundai’s research for reducing seat vibration has enabled them to deliver best-in-class comfort to all car occupants, helping reduce muscular fatigue and long-term effects on the spine. **Han Ji Won**, Engineer in the Body & Trim development team at [Hyundai Motor Company](#), comments: *“Since seats contain lots of components, it’s very difficult to find the factors that influence dynamic comfort. We tried to figure this out using ESI’s Virtual Seat Solution and reached our goal. This new way of working will help us save money and time effectively.”*

Expanding on the capacities of ESI’s seat comfort software previously known as PAM-COMFORT, [Virtual Seat Solution](#) not only covers trim manufacturing, postural, static and dynamic comfort, it also enables the assessment of thermal comfort and whiplash testing.

Clients can easily test the performance of their future products, including the whiplash performance addressed in EuroNCAP or JNCAP protocols, and comfort performance according to the SAEJ826 standard. For the first time, these tests are fully integrated into [Virtual Seat Solution](#), and automated from beginning to end.

In addition, as [Virtual Seat Solution](#) takes into account the effects of manufacturing, it ensures extremely accurate prediction of the seat performance. Thanks to case-specific dummies and human models, users can evaluate performance, precisely predicting the interaction between seat and passengers.

All of these applications can be assessed using a single model common to all domains of performance, allowing seat designers, seat engineers and seat specialists to work concurrently and efficiently. Using a single model, they can quickly assess trade-offs between different design options and enhance their prototypes.

Virtual Seat Solution is supported by [Visual-Environment](#), ESI's multi-domain platform, providing a perfect environment to support all CAE needs – from CAD import, to easy model set-up, pre- and post-processing.

For more information on Virtual Seat Solution, please visit: www.esi-group.com/virtual-seat



Image: ESI's Virtual Seat Solution allows industrial seat manufacturers to build, test and improve virtual seat prototypes that take into account the materials used and the manufacturing history.

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

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About ESI Group

[ESI](#) is a world-leading provider of Virtual Prototyping software and services with a strong foundation in the physics of materials and Virtual Manufacturing.

Founded over 40 years ago, [ESI](#) has developed a unique proficiency in helping industrial manufacturers replace physical prototypes by virtually replicating the fabrication, assembly and testing of products in different environments. [Virtual Prototyping](#) enables [ESI](#)'s clients to evaluate the performance of their product and the consequences of its manufacturing history, under normal or accidental conditions. By benefiting from this information early in the process, enterprises know whether a product can be built, and whether it will meet its performance and certification objectives, before any physical prototype is built. To enable customer innovation, [ESI](#)'s solutions integrate the latest technologies in high performance computing and immersive Virtual Reality, allowing companies to bring products to life before they even exist.

Today, [ESI](#)'s customer base spans nearly every industry sector. The company employs about 1000 high-level specialists worldwide to address the needs of customers in more than 40 countries. For further information, visit www.esi-group.com.

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