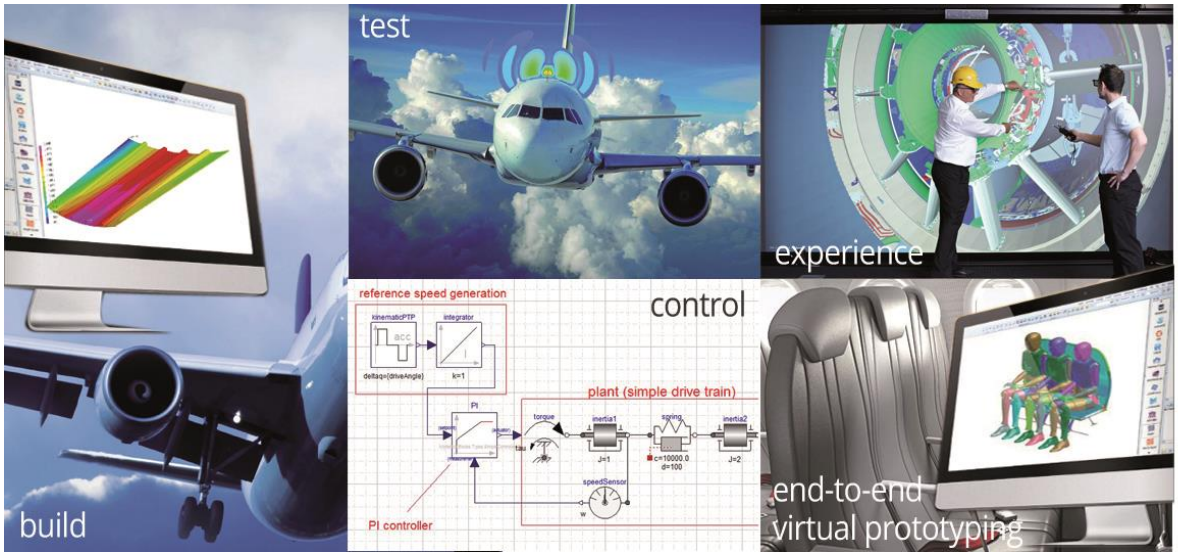
ESI showcases Virtual Prototyping software at Farnborough International Airshow 2016

Paris, France – June 3, 2016 – ESI Group, pioneer and world-leading solution provider in Virtual Prototyping for manufacturing industries, announces its participation in the Farnborough International Airshow in the UK, July 11 to 15, 2016. ESI will showcase its solutions enabling industrial manufacturers in the aerospace sector to virtually build, test and experience products, thereby reducing or eliminating the need for real prototypes. Making the most of today's digital capabilities, including High Performance Computing (HPC) and Cloud Computing, ESI's Computer-Aided Engineering (CAE) software empowers aircraft manufacturers and their suppliers to achieve disruptive innovations at a faster pace and managed cost.



Caption: With ESI's Virtual Prototyping solutions, aeronautic manufacturers and suppliers accurately model parts, systems and components from the early design stages. (Images courtesy of Boeing and Expliseat).

During the Farnborough Air Show, the ESI team will discuss and demonstrate the value of Virtual Prototyping in the development of components, parts or products: from virtual manufacturing to virtual performance testing, and to bringing the future product to life in virtual reality. ESI's solutions for virtual manufacturing encompass casting - including ESI ProCAST, sheet metal forming, welding & assembly processes, as well as the various processes involved in the manufacturing of composite parts and 3D printed parts. New materials and new manufacturing processes have become increasingly important for aerospace companies. These are essential to secure production ramp-up and to introduce the major innovations necessary for weight reduction and fuel savings, whilst meeting or exceeding aircraft performance requirements. ESI's virtual manufacturing software enables companies to evaluate new materials and manufacturing processes quickly and therefore accelerate innovation.

ESI will also present its software solutions for the virtual performance testing of future parts or products. Such testing can be achieved well before any physical prototype is available, by building and testing realistic virtual prototypes, thus enabling manufacturers to detect design

errors very early on in the product development process and avoid costly, late program design changes. Among ESI's virtual performance solutions, VA One is the all-in-one simulation software used to test the vibro-acoustic performance of products, parts or components across the full frequency range. Many aerospace companies, including NASA and AIRBUS Group, rely on ESI VA One to diagnose potential noise and vibration problems up front in the development process to improve product performance.

Also during the International Farnborough Airshow, ESI will display Virtual Seat Solution, its unique software dedicated to the end-to-end Virtual Prototyping of seats. From manufacturing to testing a seat, and to experiencing it in Virtual Reality, Virtual Seat Solution enables full virtual pre-certification. ESI customer Expliseat recently shared the story of their success with this solution: developing and certifying the lightest aircraft seat in the history of civil aviation. This significant weight reduction translates into an estimated 3 to 5 percent fuel saving – or $300,000 to $500,000 per aircraft per year.

To be presented at the show, ESI's software CEM One addresses Electromagnetic Compatibility and Interference issues (EMC/EMI) related to the on-board electronics and complex cable networks found in aircrafts and aerospace devices. With its large model-handling capacity, high operating frequencies, and sophisticated scenarios, ESI CEM One helps aerospace manufacturers take electromagnetic modelling one step further in their quest for innovation.

ESI will also showcase Pro-SiVIC™, a software introduced through a recent acquisition that addresses the interactions of an aircraft with its environment. Aeronautic applications include the simulation of airplane lighting systems when taxiing. Pilots rely on such lighting systems: they are critical for ground safety and faultless visibility must be guaranteed. Pro-SiVIC™ provides full, immersive virtual 3D dynamic tests, recreating the conditions of real tests on the ground and even during flight situations.

As Virtual Reality (VR) is increasingly used by manufacturers across all industry sectors, ESI will also demonstrate how its leading VR solution IC.IDO helps with the development of new aerospace components; supporting fully immersive 3D engineering reviews (real-scale and real-time), providing a platform for virtual maintenance training, and enabling interactive product presentations.

ESI simulation to support Airbus' 3D printing project *Aerospace Factory* in Munich

Airbus Group is making huge strides in the expansion of its research capacities at the Group's site in Ottobrunn/Taufkirchen, south of Munich, Germany. In April, the Group inaugurated its new material research laboratory and the Ludwig Bolköw Campus signed an agreement to establish a new 3D printing center, dubbed the 'Aerospace Factory.'

Caption: On far left, ESI's COO Vincent Chaillou celebrates the creation of Airbus' Aerospace Factory in Munich with the other project partners. Image courtesy of Airbus Group.

The Aerospace Factory, envisioned as a center for 3D printing, will research innovative production methods for the aerospace industry and develop them to maturity. Additive Layer Manufacturing, also known as 3D printing, can be used to manufacture components with highly complex geometries that are built up layer by layer from metallic powder heated with a laser. Time-consuming processing steps can be omitted from the traditional manufacturing process. Component shapes and designs can be calculated so that the printed parts are both light and extremely stable. The Aerospace Factory will be based on the Ludwig Bölkow Campus, an interdisciplinary venture between industry and universities at the Ottobrunn/Taufkirchen site. The signatories of the declaration of intent are made up of aerospace company Airbus Safran Launchers; engine manufacturer MTU Aero Engines; EOS GmbH, the world's leading company for technology and quality in the field of high-end AM solutions and a pioneer in the field of direct metal laser sintering; Airbus Group Innovations; the Technical University of Munich with its Institute for Machine Tools and Industrial Management (iwb); the Fraunhofer Development Center for X-ray Technology (EZRT), a division of the Fraunhofer IIS; Airbus subsidiary APWorks; Industrieanlagen-Betriebsgesellschaft mbH (IABG); the Airbus Endowed Chair for Integrative Simulation and Engineering of Materials and Processes (ISEMP) of the University of Bremen; and ESI Group, a pioneer and the world's leading provider of Virtual Prototyping solutions.

Meet ESI at Farnborough International Air Show!

ESI will be at booth 1/B70C (UK Pavilion) with other members of the ADS Group. To book a one-on-one meeting, please contact Hannah Amiss (Hannah.Amiss@esi-group.com), Marketing Manager, ESI UK.

For more information about ESI solutions, please visit www.esi-group.com/industries/aerospace-defense.

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

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ESI Group – Media Relations

Céline Gallerne
+33 1 41 73 58 46
Celine.Gallerne@esi-group.com

About ESI Group

ESI Group is a leading innovator in Virtual Prototyping software and services. Specialist in material physics, 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. Today, coupled with Virtual Reality, animated by systems models, and benefiting from data analytics, Virtual Prototyping becomes immersive and interactive: ESI's clients can bring their products to life, ensuring reliable performance, serviceability and maintainability. ESI solutions help world-leading OEM's and innovative companies in making sure that their products will pass certification tests, before any physical prototype is built, and that they will deliver competitive products to their markets. Virtual Prototyping addresses the emerging need for products to be smart and autonomous and supports industrial manufacturers in their digital transformation.

Today, ESI's customer base spans nearly every industry sector. The company employs about 1100 high-level specialists worldwide to address the needs of customers in more than 40 countries. For more information, please visit www.esi-group.com/

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