

Acquisition of Scilab Enterprises, publisher of Scilab open source analytical computational software

Democratization of access to “Immersive Virtual Engineering” solutions for the global engineering community

ESI Group (FR0004110310 – ESI), pioneer and leader in Virtual Prototyping solutions, today announces the acquisition of Scilab Enterprises SAS, publisher of Scilab, widely regarded as the most compelling open source alternative to MATLAB^{®1}, the commercial software for analytical numerical solutions. Scilab provides a world class powerful environment for engineering computation and scientific applications.

Commenting on this acquisition, Vincent Chaillou, ESI Group’s COO, said: “This acquisition fits perfectly with ESI Group’s technology investment strategy. It is aligned with our objective to expand our user base to include all stakeholders involved in the industrial product creation process, starting from the earliest stages of analytical modeling. It paves the way towards the more elaborate 3D-4D numerical simulations of the full Virtual Prototyping and eventually of the all-encompassing “Immersive Virtual Engineering” transformative solutions of Industry 4.0.”

Raphaël Auphan, CEO of Scilab Enterprises, said: “We are very enthusiastic about joining ESI, a numerical simulation and Virtual Prototyping global leader, to bring Scilab to a wider range of industrial, academic and research players. Our shared vision will provide the engineering community with the latest generation of analytical solutions to meet current and future numerical simulation challenges.”

¹ registered trademark of The MathWorks Inc.



A global community with more than a million engineering users

Scilab Enterprises was created in 2010 out of the Scilab Consortium, which was itself created in 2003 as part of an initiative backed by INRIA, the French National Institute for computer sciences and applied mathematics. Scilab (*SCientific LABoratory*) is an open-source multiplatform analytical numerical computation software and scientific & engineering programming language. First introduced in 1980 it is now engaging an active community of over a million engineering users and development partners in diverse industries and in education. With its wide range of mathematical functions, graphic interfaces, graphs and algorithms, Scilab enables users to build their own applications for numerical analysis, system modeling, data analytics, optimization, signal and image processing, embedded and control systems, up to test and measurement interfaces.

Beyond publishing Scilab and offering Scilab consulting services, Scilab Enterprises offers as well “Scilab Cloud” for the web deployment in Software as a Service (SaaS) mode of scientific and engineering applications. This enables organizations and individuals to publish and manage the web-based use of their own Scilab applications.

A collaborative inter-connectable platform, available in PaaS mode

Thanks to its ability to interconnect with third-party codes, technologies and applications, Scilab can also serve as a single scientific and technical computing platform. Building on that capability Scilab Enterprises now offers a scientific and technological “*Platform as a Service*” (PaaS) to enable countless numbers of public and private enterprises as well as individual engineers and scientists to monetize applications written in different programming languages by facilitating their distribution, back-up and use. Importantly, applications exploiting Scilab’s many computational functions can be accessed by an unlimited number of users as the software is open source.

A powerful vector for the democratization of ESI Group’s Virtual Prototyping and Immersive Virtual Engineering solutions

The acquisition of Scilab will help expand ESI Group’s footprint in the product pre-design stage and early analytical phase. Starting with the recent acquisition of ITI, and its SimulationX (0D-1D) system modeling software, this expansion is part of the Group’s transformative and disruptive change strategy focused on front-loading the power of computer modeling to everyone involved in the product development process. Already engineers working in the frame of conventional “*Product Lifecycle Management*” (PLM) benefit from use of mathematical analytical models, built around Scilab, to

quickly explore design options with simple (0D) models, before embarking into detailed (0D-1D to 3D-4D) modeling based design, certification and production. In ESI's PLM disruptive vision, the next step to *Virtual Prototyping* is to follow the life of the product after its development and certification phases, to cover its actual, real life in operation. Now within the new methodological approach of the "*Product Performance Lifecycle*" (PPL) innovative modeling, the '*as built*' Virtual Prototype is transformed into its "*Hybrid Virtual Twin*", with '*data driven*' updates from sensors in actual operations. Here mathematical models of the product - along with its real or virtual life sensors and control systems - are key to provide reliable predictive prototyping.

In this fully "End to End" vision of innovative product development and subsequent piloting in real life operational conditions, the acquisition of Scilab Enterprises equips ESI to address the full spectrum of early engineering needs, from simple, but physically realistic models, all the way to the "*as manufactured*" and "*as operated*" virtual products that customers build today and develop for tomorrow assisted or autonomous products.

Following ESI's recent successful acquisition and integration of OpenCFD, specializing in developments and services for OpenFOAM®, an open source software for broad band numerical simulation in the field of Fluid Mechanics, this current operation substantiates the Group's commitment to the open source business model to foster the disruptive moves that will democratize Virtual Engineering solutions "for all". It will provide beneficiaries with greater freedom to customize applications and to tailor them to their own flexible and affordable needs. In this regard, Scilab's incorporation into ESI's global eco-system is expected to be a major catalyst in easing and speeding up the digital transformation of innovative industrial product development.

Multiple technological and commercial synergies

Scilab Enterprises is naturally synergetic with ESI Group, both in technology and business opportunities. The existing ESI Cloud offering will be greatly boosted by this acquisition and by Scilab's reputation with a very large global community of users in diverse industries and academic circles. It also represents a major asset that will help to increase ESI's global visibility and eventually to unlock valuable commercial opportunities. Moreover, the dynamic presence of Scilab in the educational community worldwide will immediately expand ESI's footprint in that all important sphere.

Financial aspects of the operation

The operation is being financed mainly by the transfer of some ESI Group treasury shares to the shareholders of Scilab Enterprises. Scilab's development platform and team will be rapidly integrated into ESI's operating structure.

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Next events:

2016 annual sales:

March 14, 2017

2016 annual results:

April 19, 2017

SFAF

April 20, 2017

About Scilab Enterprises

As publisher of Scilab modeling and simulation software, Scilab Enterprises has a small expert team with a unique mix of applied mathematicians and computer science engineers. Scilab is an open source software used widely in the scientific & engineering community (100 000 downloads every month worldwide). Scilab is used for modeling & simulation and scientific post-processing in industrial companies as well as in education & research. Scilab Enterprises offers on the one hand professional services in numerical computing and on the other hand provides the Scilab Cloud platform for the cloud deployment of scientific and engineering applications.

For more information, please visit <http://scilab.io/>

About ESI

[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.

Coupled with Virtual Reality, animated by systems modeling, and benefiting from data analytics, [Virtual Prototyping](#) has become immersive, shared and interactive. ESI's customers can bring their products to life, ensuring reliable 'as built' performance, serviceability and maintainability. ESI solutions help world-leading OEMs and innovative companies anticipate and make sure that their products will pass certification tests - before any physical prototype is built - and that their new products are competitive when entering their market space.

Recently, ESI has undertaken a major transformative adaptation of its Virtual Prototyping solutions into "Hybrid Virtual Twins", to enter the new paradigm of "Product Performance Lifecycle" (PPL), which addresses, beyond the development phase, the life of the new product in its full operational cycle from launch to retirement. Riding the new age of ubiquitous sensors connected to the Internet of Things (IoT), PPL answers the emerging needs of industrial manufacturers to relentlessly create innovative products that are smart, assisted and autonomous.

ESI's customer base spans major industry sectors. The company employs more than 1200 high-level engineers, scientists and domain specialists worldwide, to address the needs of customers in more than 40 countries.

[ESI Group](#) is listed in compartment B of NYSE Euronext Paris and is granted "Entreprise Innovante" (Innovative Company) certification since 2000 by Bpifrance. ESI is eligible for inclusion in FCPI (venture capital trusts dedicated to innovation) and PEA PME.

For more information, please visit www.esi-group.com/

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