Simulation for manufacturing & engineering

15 April 2014

Press release

Computación de Altas Prestaciones a su alcance – Únase a este Proyecto Europeo!

High Performance Computing at Your Fingertips – become part of an EU project!

In an Open Call from 30 April to 25 June another ten manufacturing, engineering or software companies shall be found for participation in the EU project CloudSME. Goal of the project is the implementation of a European Cloud Simulation Platform (CAE/CAM), which makes simulation affordable also for small and medium-sized companies.

Developing a new business idea or investing in new technologies and methods poses a huge challenge to companies. To simulate a process or a system, or to design a model with simulation software means to pre-test its behavior, so that it matches the real system. Simulation thus will avoid bad investments, enabling companies to detect weaknesses and failures in their workflows or products in advance.

Because simulation is still linked to high costs (for software, hardware, maintenance, etc.), small and medium-sized companies often can't afford using this technology. Thus, the EU project CloudSME supports the implementation of a cloud based simulation platform (CAE/CAM), which enables the cost-efficient use of diverse simulation applications, especially for small and medium-sized manufacturing and engineering companies.

End users use the provided software on the platform as a service (SaaS) and pay just per use (one stop shop). Developers and consultants will have access to a Platform-as-a-Service (PaaS) provision, enabling them to quickly assemble customized simulation solutions in the cloud. Offering their solution on the platform will also give them the opportunity to address a much bigger group of potential customers. At the bottom of the infrastructure there are the actual IaaS cloud resources which are either provided by beneficiaries or rented from commercial cloud offerings.

The Open Call

In addition to the current 16 project partners **another ten shall be found for participation in an Open Call from 30 April to 25 June 2014**, who will be actively involved in the implementation process of the platform, with their individual simulation use case. This means, one software vendor will form a simulation use case together with one or more end user companies. Because CloudSME

project focuses on new use cases, software vendors will be required to apply together with an end-user company. End-user companies can either apply with their special simulation need, to be matched with the right software vendor in the open call, or they apply directly for one of the existing use cases.

All use cases will be supported practically and financially by the project. Current projects on the platform cover 3D Modelling (CAD) or Discrete Event Simulation (DES) for manufacturing, supply chain optimization, maintenance planning and process optimisation.

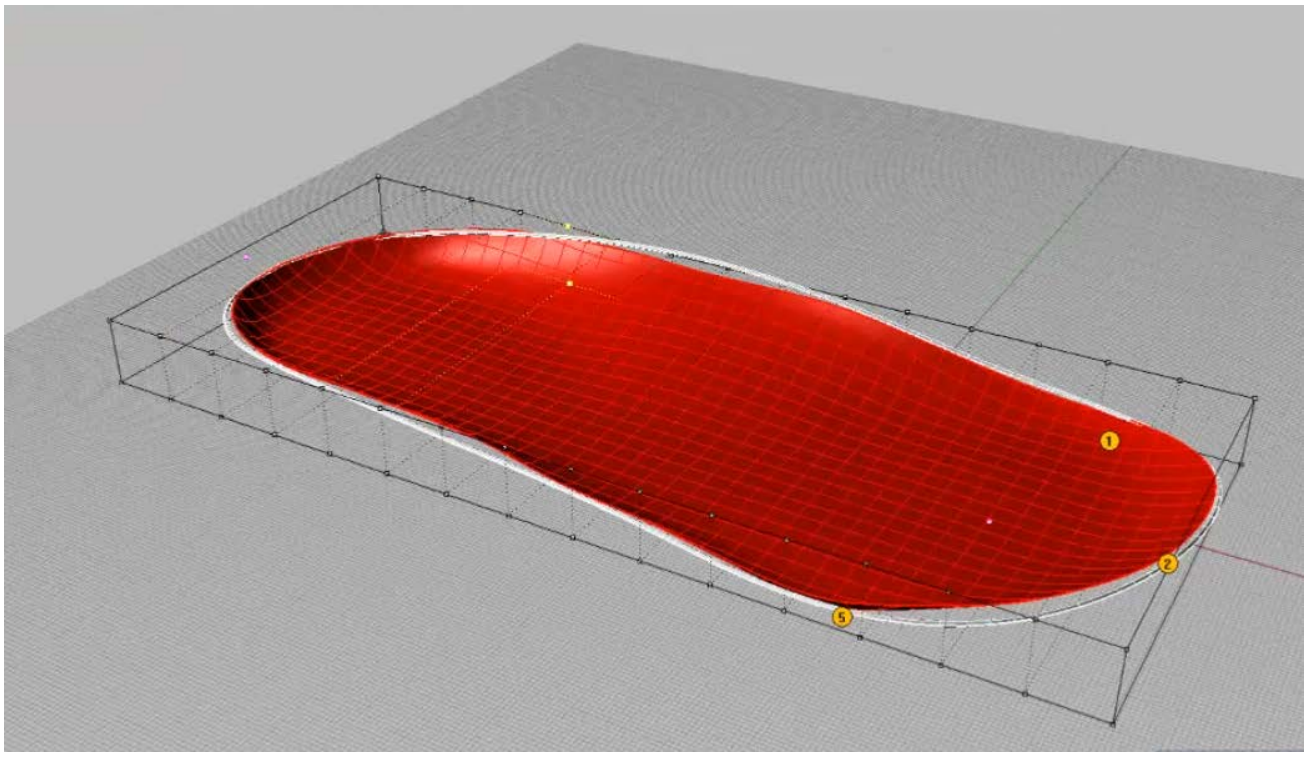

Figure 1: 3D scan/design scenario of orthopaedic insoles on the CloudSME platform

The scope of already implemented software applications makes the platform especially suitable for computing and data intensive types of simulation, like computational fluid dynamics particularly in the prediction of fluid-fluid and/or fluid-solid multiphase flows (CFD) or data big data analysis for aircraft optimization.

Thus, the platform covers the demands of a wide range of industries. CFD simulation, for example, is used in many industries, to simulate the interaction of liquids and gases (air, water, oil, blood, etc.) with surfaces and flow boundaries. Accordingly the potential users could be automotive suppliers, chemical or pharmaceutical industry, just to name a few examples.

Discrete Event Simulation, for example, can be used by companies of any branch for process optimisation. DES enables companies to map and test diverse business processes under changing conditions. The CloudSME partners SIMUL8 und Saker Solutions are currently developing different industry sector specific templates which can be easily tailored to different systems and the needs of logistics companies, oil/gas component manufacturers or even banks and breweries.

Further information about the application procedure of the Open Call from 30 April to 25 June will be available on the project website soon: www.cloudsme.eu. Interested companies can also register for

our newsletter under http://cloudsme.eu/content/register-our-newsletter to keep themselves up to date.

CloudSME project is funded by the European Commission (FP7 Grant Agreement 6088869) with 4,5 million euros and the total available funding for new use cases is 400.000 Euros. The Open Call will be closed on June 25th at 17h00, Brussels local time.

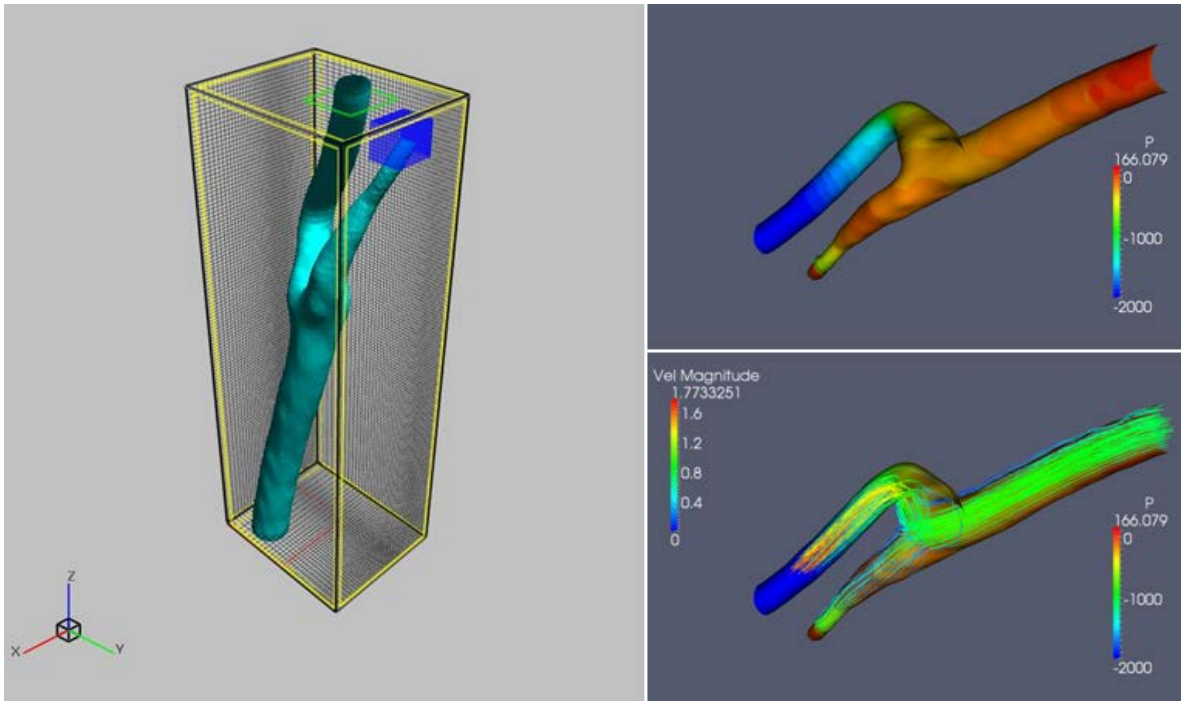

Figure 2: ASCOMP simulation scenario of blood flow in the left coronary artery

Figure 3: Official Open Call Announcement - become part of the EU project!

Figure 4: CloudSME-Team at the second project meeting in Wildhaus, Switzerland, January 2014

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This Project is funded by the European Union under grant agreement no: 608886

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