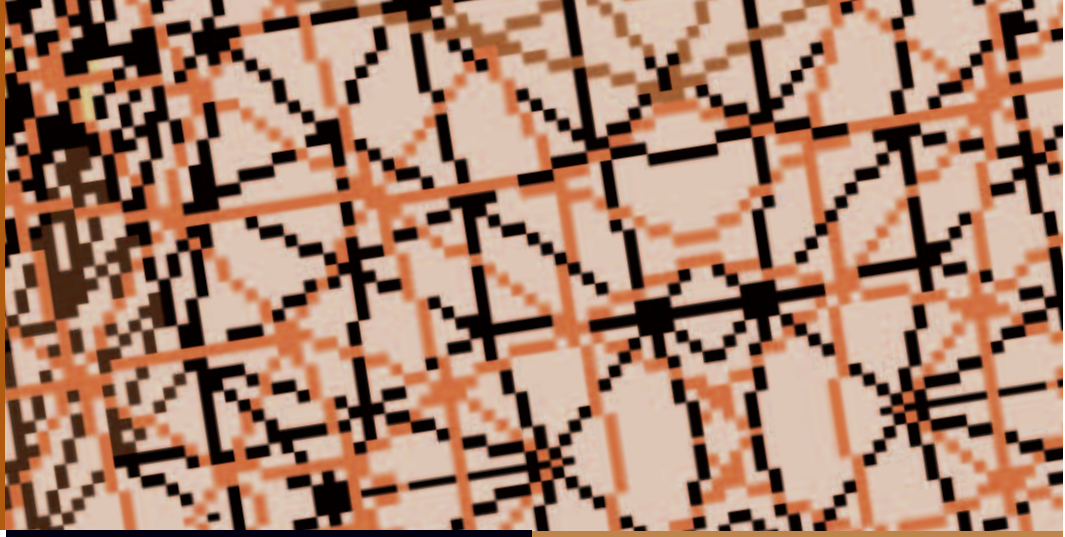
Artenum



Science & Groupware

Artenum is a company specialized in Science and Groupware. Our skills are based on our expertise in strategic fields like scientific computing and teamwork and our OpenSource experience. Founded in 2001, Artenum is an independent private SME. Artenum headquarters are settled into Paris Cyber Village, the business technopole of our town, Paris.

Artenum crew is proficient in mathematical modeling, physics, 3D visualization and collaborative community animation. Artenum masters Java/J2EE, Python/Jython and VTK technologies for both scientific and collaborative applications. Most of our products are OpenSource and compatible with usual operating systems.

Some of our partners or clients are CEA, CNES, EDF, ESA, INRIA, ObjectWeb, Observatoire Paris Meudon, ONERA, Universities Paris 6, Paris 7, and Paris Sud. Positioned at the research / industry interface, Artenum brings the most innovative OpenSource technologies to both sectors.

Collaborative work, Integrated Modeling Environment, distributed visualization: these are some of the advantages that Artenum can give to your scientific works.

contact@artenum.com
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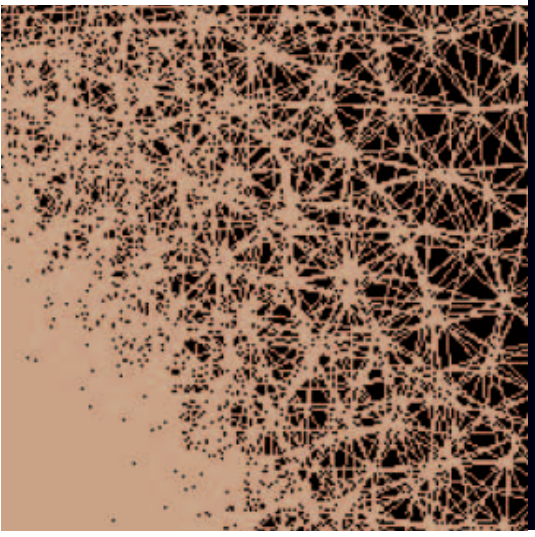
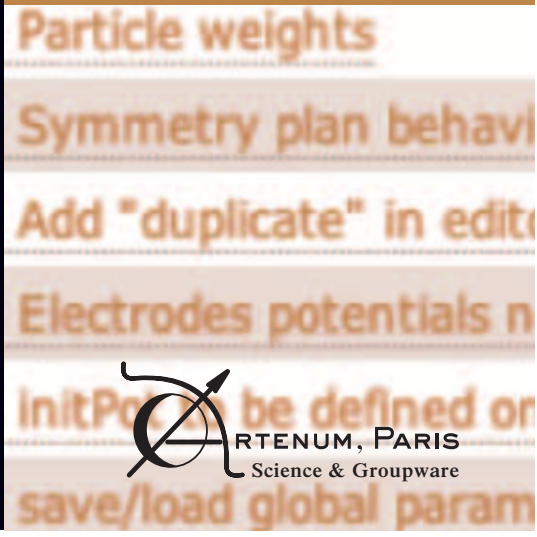
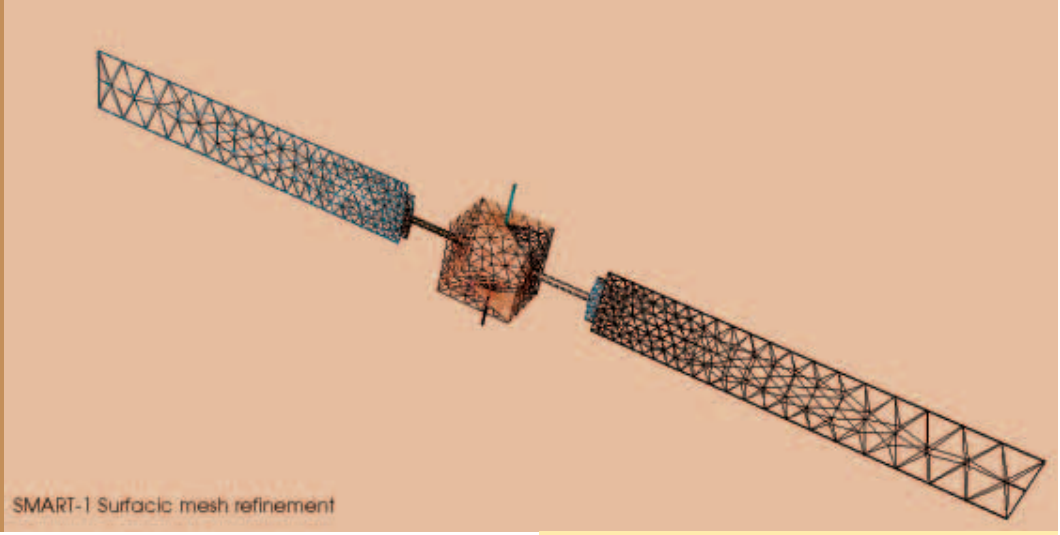




Artenum, Paris
Science & Groupware



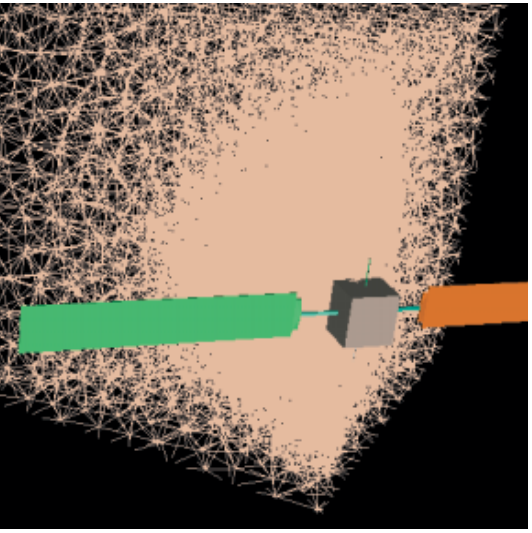
SMART-1 Surfacic mesh refinement

Science

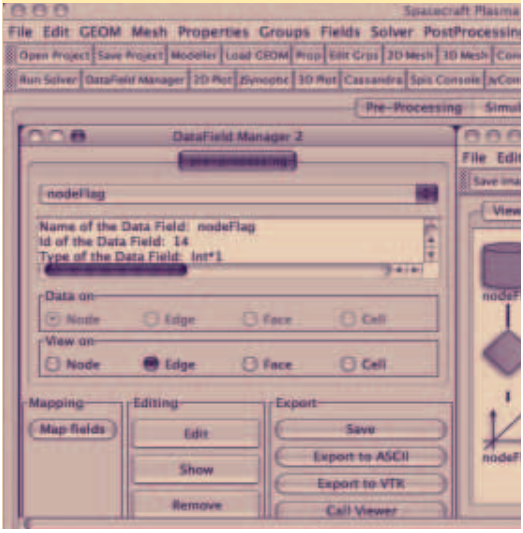
Artenum crew is proficient in scientific computing, mathematical modeling, CAD-CAM technologies, 3D visualization and space environment.

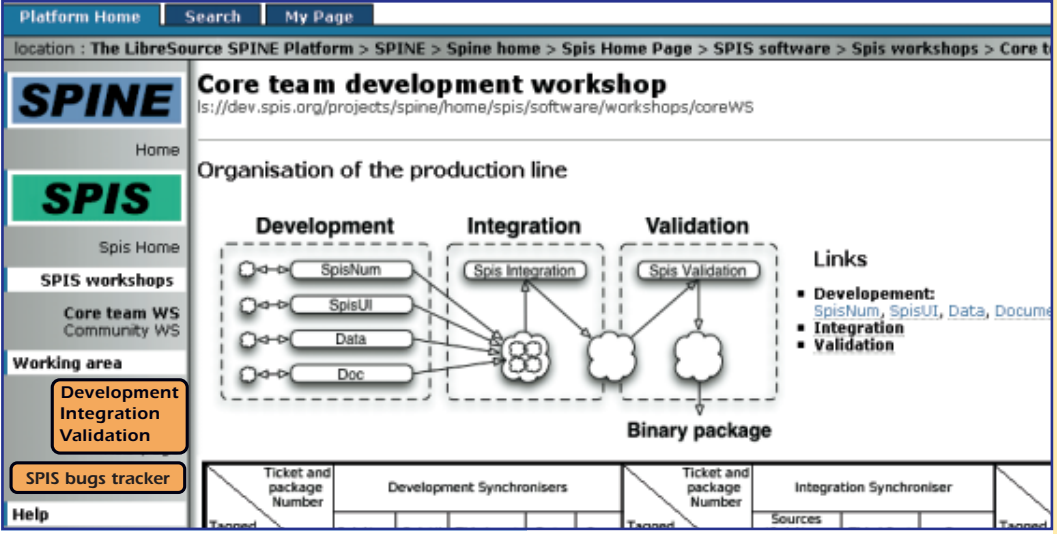
We have been involved in the design and the development of **SPIS-UI**, the user interface of the ESA's project SPIS, the state of the art in spacecraft plasma interactions modeling. SPIS-UI is a lightweight answer to the limitations of pre/post-processing frameworks of first generation. We made avant-garde choices for the technological underpinning: **Java and Jython**. SPIS-UI offers a modular approach to handle mutliphysics simulation cores and processing modules. SPIS-UI is the corner stone of a forthcoming novel **Integrated Modeling Environment, IME.**

Artenum also developed **Cassandra**, an advanced java based **3D VTK viewer** dedicated to scientific and technical data visualization. Cassandra provides a dynamic VTK pipeline manager in order to perform data processing and visualizations through an extensive set of dynamically loadable external plug-ins. The upcoming version of Cassandra opens the wide perspective of the efficient **distributed visualization.**



SPIS-UI, *the corner stone of a forthcoming Integrated Modeling Environment.*





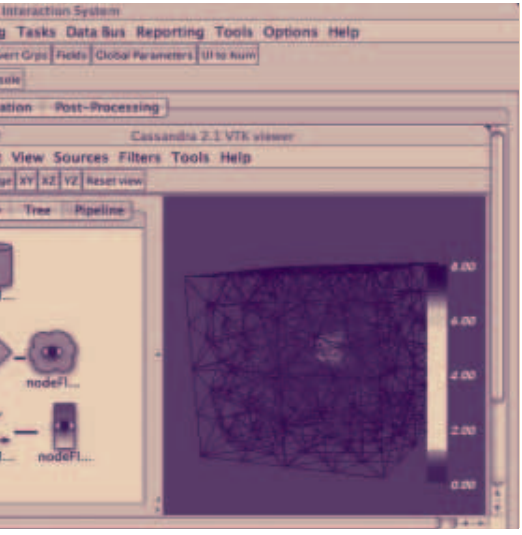
Groupware

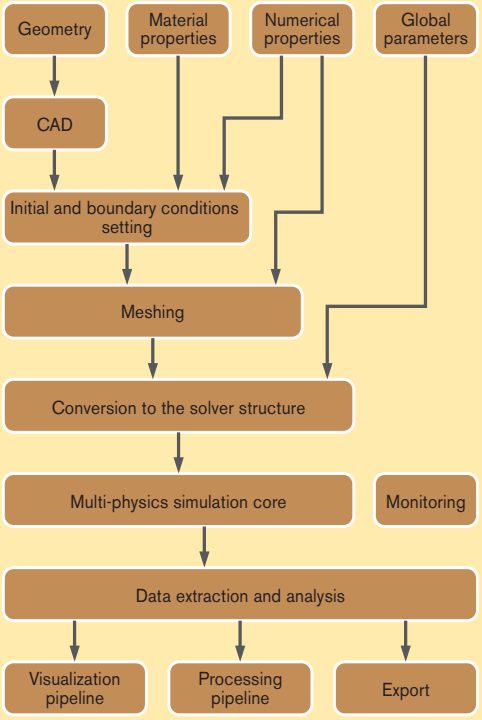
Most of industrial and scientific projects are developed in the frame of European or international networks, based on **geographically distributed teams.** The **OpenSource** approach enables a high improvement of the software quality. The community implication needs to be managed during the **project life cycle.**

In the groupware field, Artenum has developed **LibreSource Enterprise Edition**, a **J2EE collaborative platform of second generation**, in partnership with INRIA and the University Paris 7. LibreSource Enterprise Edition provides opportunity for a team geographically spread to be aware of any event and to work together efficiently. LibreSource Enterprise Edition is **the European next generation forge**.

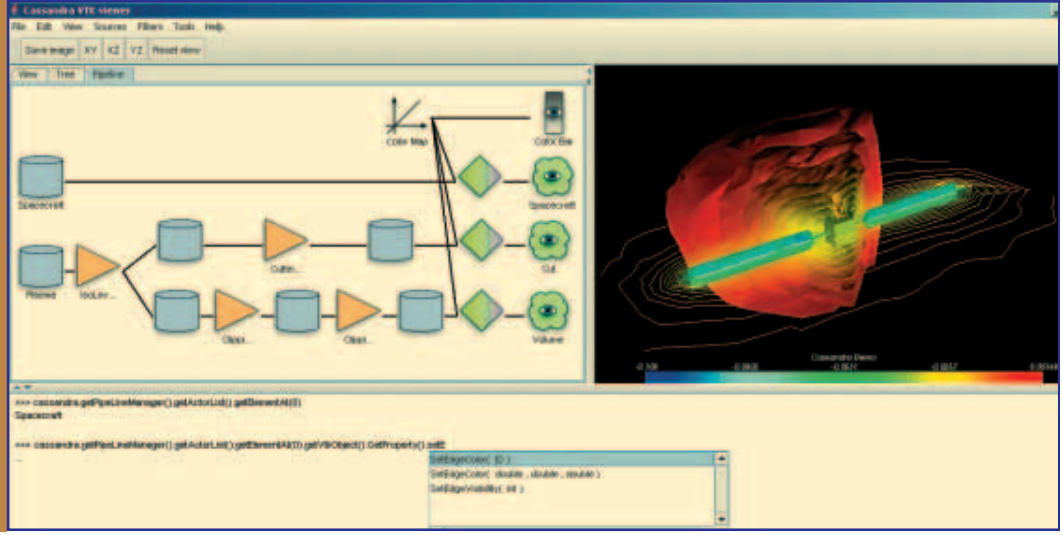
Since October 2004, Artenum hosts the development of the **SPIS** project and the **SPINE** scientific community on one of its LibreSource Enterprise Edition servers. In the same frame, Artenum is hosting various scientific projects on its servers. LibreSource Enterprise Edition is used now by many academic structures in France and Sweden.

In this context, Artenum brings its expertise in animating and managing heterogeneous communities. Artenum is on this field **one of the leaders in Europe**.





The IME *architecture of* SPIS-UI.



Cassandra, the generic VTK viewer based on Java.

Expertise, Products & Services

Thanks to our R&D, Artenum has developed products and services designed to facilitate production and animation of industrial and scientific software projects. Most of our commercial offers and developments integrate our software components. Trainings complete our commercial offers, in order the client to master and exploit our products quickly.

Scientific visualization based on ImageJ, VTK and Java3D technologies

Artenum proposes the development, the adaptation and the extension of 2D/3D visualization tools for scientific data.

Scientific software development

On demand, our engineers develop new high performance simulation kernels based on Java and C/C++, extend or modernize existing codes, or bring high level processing routines with the efficient language Jython/Python.

Simulation

The Artenum crew has already performed many mission supports and expertise in mathematical modeling and numerical simulation in space environment and multiphysics fields.

Collaborative Work & Groupware

Artenum provides tools and services in order communities to have their own space supporting interaction and a safe platform.

Training & Courses

Courses on object programming, Java, Python, and VTK, as well as courses on collaborative work within the framework of LibreSource.

Artenum proposes customized **support and development services.** Our OpenSource approach leads to a capitalization of the know-how, an optimization of research cost by mutualization and an improvement of the software quality and reliability.

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