SALOME news

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SALOME User’s Day 2019
PRESENTATION OF THE SALOME PLATFORM

- Offers **generic functions** for numerical simulations…

![Diagram showing the workflow from geometry to visualisation through meshing and computation scheme.](image)
PRESENTATION OF THE SALOME PLATFORM

- … and the tools to construct specific applications
SHAPER
THE NEW CAO MODELER

- Interactive, variational, parametric
  - Bottom-up approach
  - Constraints solver
  - Dynamic update of shapes
  - Dynamic content of groups
  - Multi-dimensional geometry
  - Conformal meshing
  - Python scripting still possible

- Roadmap for GEOM

Shaper available in SALOME 9.3
SHAPER
THE NEW CAO MODELER

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- Now functional for industrial cases of moderate complexity
  - See Isabelle’s presentations today

Shaper available in SALOME 9.3
SHAPER ACQUIRED MODELS

Demo and poster today at coffee breaks!

2h vs. 2 days
SHAPER
A NON EXHAUSTIVE LIST OF FEATURES

- A set of primitives:
  - 3D: parallelepiped, sphere, cylinder, cone, torus
  - 0D-1D-2D: vertex, edge, 3D curve, 3D face, plane

- A set of features:
  - Union, difference, intersection, smash, partition
  - Translation, rotation, symmetries
  - Pipe, fillet
  - Group, field

- Files:
  - Save & load the building tree (XML, Python)
  - Import & export in several formats (STEP, XAO, etc.)

- Applicative Programming Interface:
  - Parametric API (C++, Python)
  - Geometric API (C++, Python)
MESHING IN SALOME 9.3.0

- Better Smesh performance

Memory consumption in SMESH (30 million hexa cells)

- Parallel meshing now possible with YACS

- Recall: Update of MeshGems from Distene to version 2.8-6
  - Go visit Distene stand today at the breaks!

- Usage of NETGEN version 5.3.1

- Update of GMSH to version 4.1.4
SCIENTIFIC VISUALISATION

- Dealing with **multi-time step fields** on fix mesh now possible for MED and Ensight format
- Compatibility with a **Z-space VR device**
- **OSPRay** for instructive visualisation
  - Demo today at coffee breaks!
- Recall: filters for your needs can be added on demand
- Go visit Kitware stand today at the breaks!
SCIENTIFIC VISUALISATION

- Dedicated filters for specific applications

Bag charts for OpenTURNS

Profiles for Salome-Hydro
ARCHITECTURE

- **Migration to Python 3**
  - SALOME 8.5 then 8.6 maintenance will be assured: only with Python 2
  - SALOME 9.x: only with Python 3
  - Migration guide available on demand from the SALOME support team
  - Specific applications based on SALOME will migrate soon

- **API change in study**
  - If you use strongly the study API in python script (and also in C++), we have to migrate the usage of this API
  - Migration guide available on demand from the SALOME support team
VERIFICATION

- **MCO SALOME qualification done by Open Cascade**
  - 827 unitary tests
  - 1835 automatic tests
  - 323 automatic tests

- **EDF qualification**
  - 392 automatic tests daily done (make tests)
  - 442 automatic tests daily done (SALOME Python tests)
  - 45 user automatic tests done at each beta phase

- **CEA qualification**
  - 457 automatic tests daily done (SALOME Python tests)
  - 197 automatic graphic tests done with the SQUISH tool
  - 204 manual graphic tests done at each beta phase

- Recall: your bugs in the trackers always lead to a test!

- See SQUISH presentation today
OS COMPATIBILITY AND ROADMAP

- **CEA:**
  - CentOS 7
  - CentOS 6
  - Fedora 29
  - Fedora 26 (native)
  - Fedora 24
  - Ubuntu 18.04
  - Ubuntu 16.04
  - Debian 8
  - Debian 9
  - Windows 10 64bits

- **EDF:**
  - Calibre 9 (Debian 8)
  - Scibian 9 (Debian 9)
  - Universal

SALOMÉ BY NUMBERS

- Traffic on [www.salome-platform.org](http://www.salome-platform.org) in 2018:
  - 200,655 visits
  - 144,523 downloads

- Development team:
  - 30 regular developers
  - CEA-EDF core team of 10 part-time contributors
Thank you!