



ASTEK

AUTOMATED GUI TESTING OF SALOME WITH SQUISH

SALOME USERS' DAY 2019

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3200 employees

in november 2018
+ 14% since 2017



182M€ sales

in 2017



12 countries

worldwide

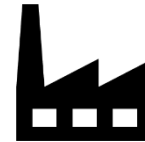
4 assets



9 sectors



16 offers



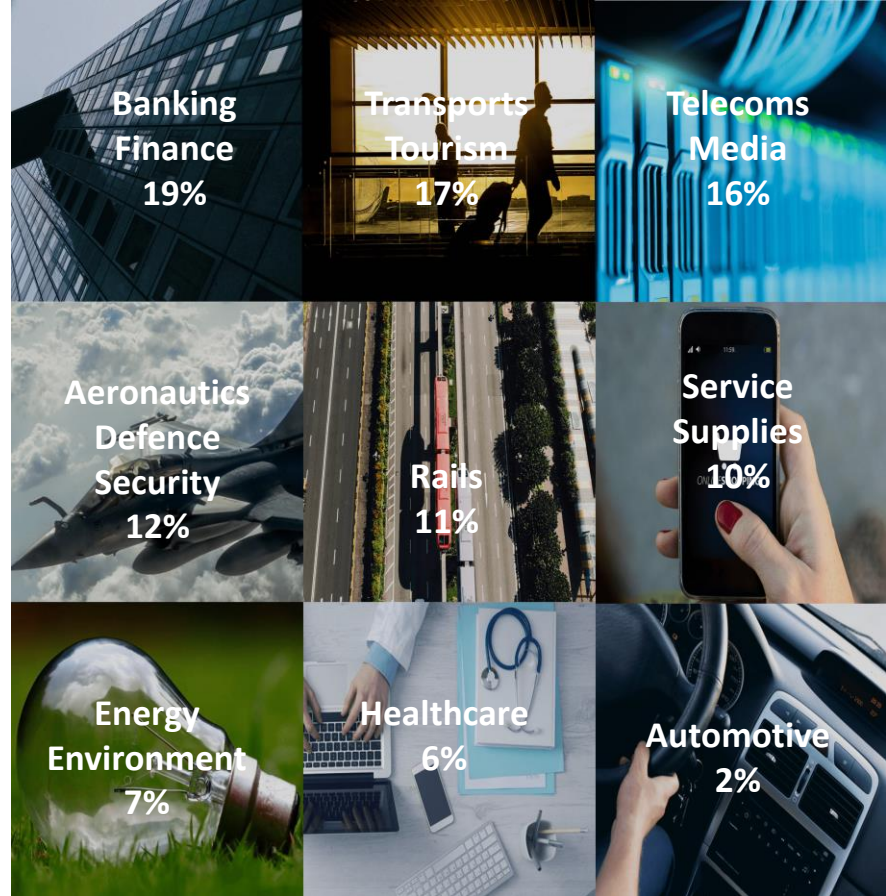
7 global delivery centers

including 3 Offshore

ASTEK : OVERVIEW



- We work with **500 companies all over the world.**
- We work in many fields of industry and we are able to :
 - **Help our clients to improve their products with top-of-the-art technologies**
 - **Grow with confidence regardless sectoral crisis**



SALOME expertise



User Support
(~ 6 years)
- SQUISH

Tools

- SAT
- MedCoupling
- ICoCo

Code Coupling

- CORPUS/SALOME
- APOLLO3, CATHARE
- + MED

Context

- Continuous Integration: daily tests
 - « Immediate » testing of recent development
 - Fast detection of anomalies
 - Maintain operational versions on various platforms
 - Improving code development
 - Quick patch releasing
- SALOME 9.2.0
 - Continuous Integration with Jenkins
 - Everyday: 8000 tests, 10 OS : CentOS, Ubuntu, Windows...
 - 200 GUI tests : automation impossible with usual scripting tools

User : 2 weeks !

QtTesting

=> No user documentation & no user support

Squish (2003)



Squish for Qt

Automated cross-platform GUI Testing for applications written with **Qt Widgets, QML, Qt Quick, Qt WebKit** and **Qt WebEngine** on Windows, Linux, Unix and macOS.

Squish for Java

Automated cross-platform GUI Testing for **AWT, SWT, RCP, Swing** and **JavaFx** applications (incl. support for embedded **Webkit** content), Java applets and Java WebStart apps on Windows, Linux, Unix and macOS.

Squish for Windows

Automated GUI Testing for native Windows applications with dedicated support for **MFC, WinForms** and **WPF controls**. Also supports automation via **MSAA** and **UIAutomation**.

Squish for Mac

Automated GUI Testing for native **macOS** applications including support for embedded **WebKit** content.

Squish for Tk

Automated GUI Testing for **Tk** applications on Windows, Linux, Unix and macOS.

Squish for Web

Automated **cross-browser** GUI testing for **Web** and **HTML5** applications on Windows, Linux, Unix and macOS.

Squish overview



■ Why Squish ?

- Efficient for Qt objects parsing
- Ability to access Qt objects properties and to take screenshots
- Produces Python / Javascript / Perl scripts
- Operating on many platforms : Windows, Linux, MacOS, Android...
- SquishIDE : Graphical Interface
- SquishServer+SquishRunner : Compatibility with scripts (shell, batch), crontabs, task scheduler and Jenkins

Operating with SALOME

■ Linux (CentOS7)

- Nothing to do
- Ready in 2 MouseClicks



Tests developments for
Salome 8.3.0, 8.5.0 & 9.2.0

■ Windows (W7 / W10)

- Windows : need to use a special SQUISH library (dllpreload.exe)
- SALOME : need to modify the batch/python interface to take into account the dllpreload.exe library.



Tests available for 8.3.0
Currently working on 9.2.0

SQUISH tests for SALOME

■ SALOME Modules Testing

Modules :

- GEOM
- SMESH
- YACS
- PARAVIS
- MED (FIELDS)
- SHAPER

± 150 specific tests on a particular behaviour

■ Formations

PARAVIS Formation

30 exercices :

- Structural Analysis
- CFD
- Neutronics
- ...

SHAPER Formation

- Online Tutorial
- 3 exercices

- Future : Help for User Modules ?

Module integration for code coupling with SALOME

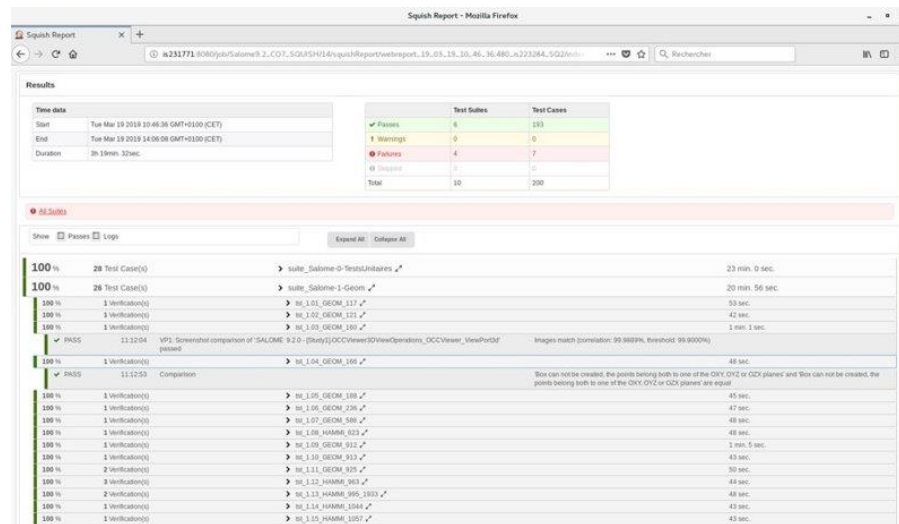
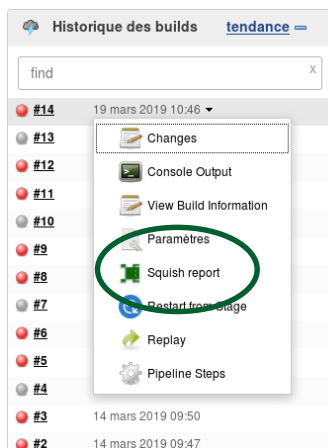


GUI testing and Integration testing with SQUISH

- Movie : SHAPER Tutorial automation

Continuous Integration with Jenkins

- Plugin from Froglogic
 - Intuitive HTML reports directly from Jenkins
 - Use of SALOME MESA

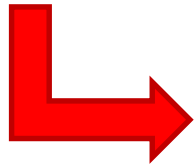


Results

- BEFORE

2 weeks of GUI testing...
... once in a while...

- ✘ Infrequent test updates
- ✘ New functions not covered



« Not-that-useful » tests

- WITH SQUISH

Every SALOME release :
test updating (screenshots !)
± 2/3 weeks for each platforms



200 tests, **3 hours** everyday,
on Linux & Windows

Reliability ++

Quality ++

Conclusion

- SQUISH : powerful software for GUI automated tests
- Cross-Platforms : Linux, Windows, MacOS
- Efficient Qt parsing and provides Python scripts
- Used with SALOME for GUI testing + formations checking
- 200 tests : manually 2 weeks... => 3 hours with SQUISH
- Naturally compatible with Jenkins (with MESA)
- Reactive support

Downside ?

First price license for 2 users 2 OS => ... 7000€ ...



ASTeK

THANK YOU FOR YOUR ATTENTION

