

Status report

SOLEIL

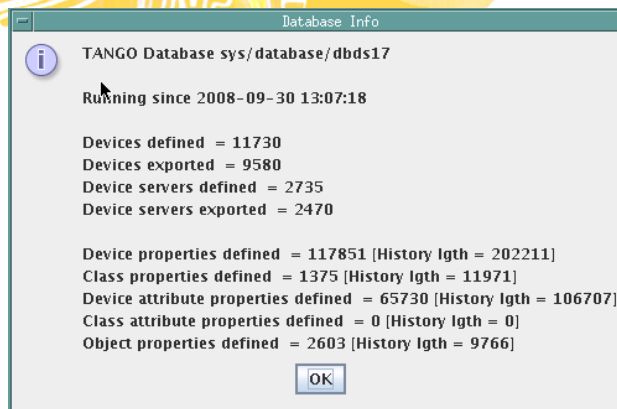
May 2009

- ✓ A reminder for new commers to the Tango meeting
- ✓ Some project management facts regarding Control software
- ✓ Machine projects
- ✓ Beamlines projects
- ✓ Collaboration facts and next steps

Tango@SOLEIL : some figures

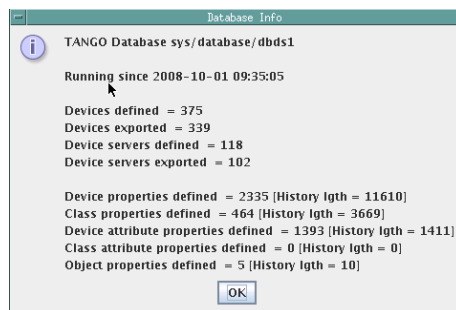
- **20 Tango Control** systems are now in operation at SOLEIL
 - 1 for Machine Control
 - 1 for each of the 18 beamlines already « in operation »
 - 1 for laboratories and for Web applications

- Machine Devices

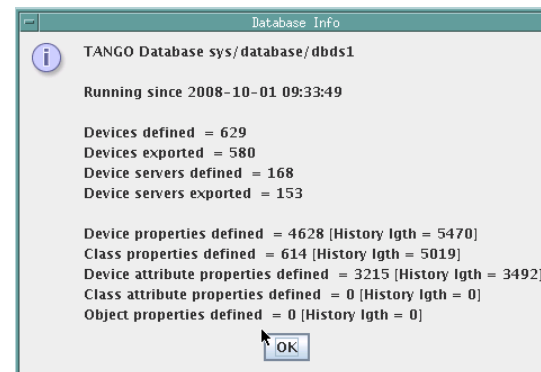


- « small » beamline

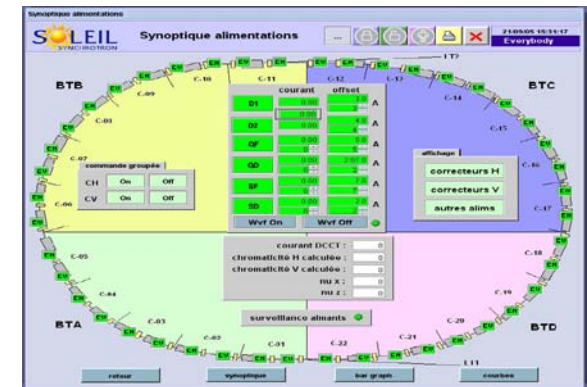
***Total Tango devices@SOLEIL:
Close to 20 000***



- « big » beamline



- About 40 GlobalSCREEN applications in production
 - At least one for each Machine group
 - 1 application per beamline



ICALEPS

A 3D wireframe rendering of a synchrotron facility, showing the circular accelerator ring and various experimental stations.

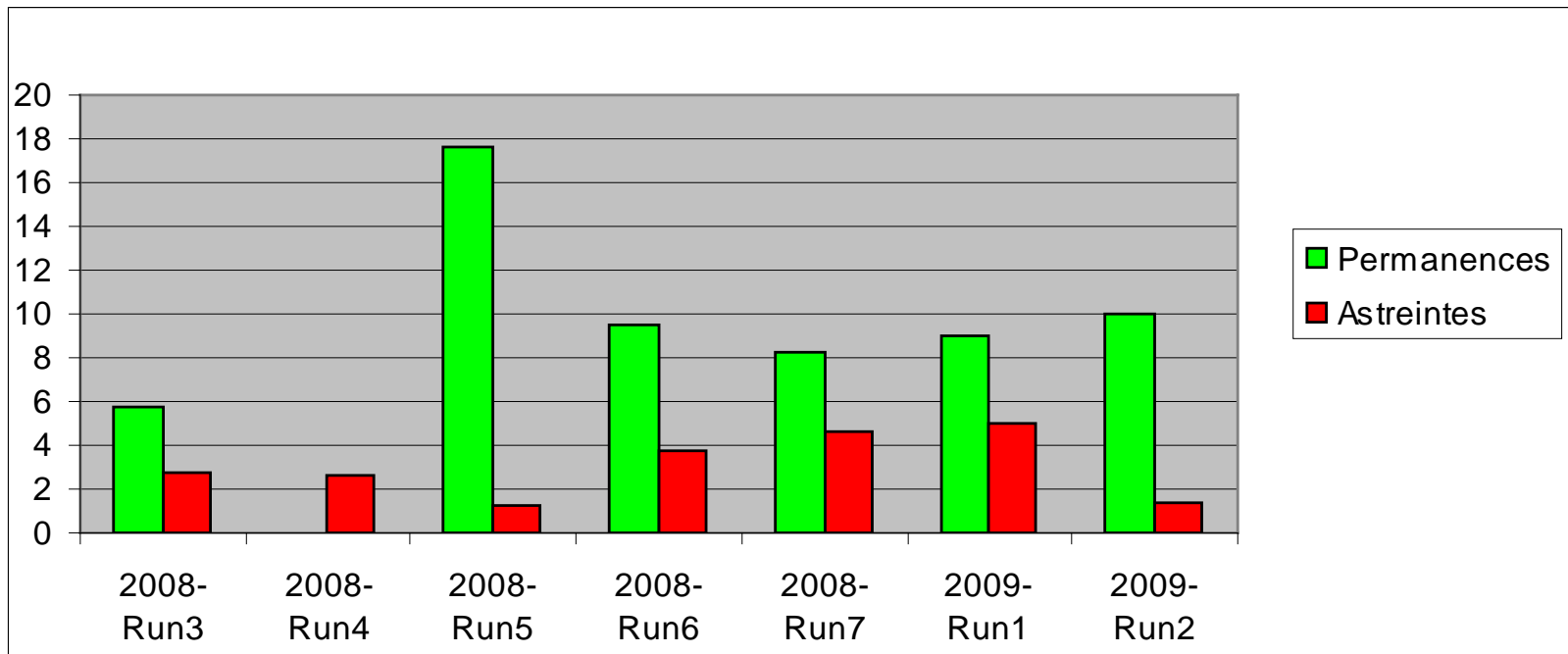
***Some project management facts
regarding our software activity***

- SOLEIL Machine and “phase 1” beamlines are now officially considered as “In Operation”
 - And not more in the “Construction” phase
- Beam time will increase in the next years
 - 2009: 4500 beam hours are planned
 - 2012 : 5500 beam hours will be planned
- As a consequence:
 - There will be less time to tests new software developments
 - Control System reliability is considered very important by our users

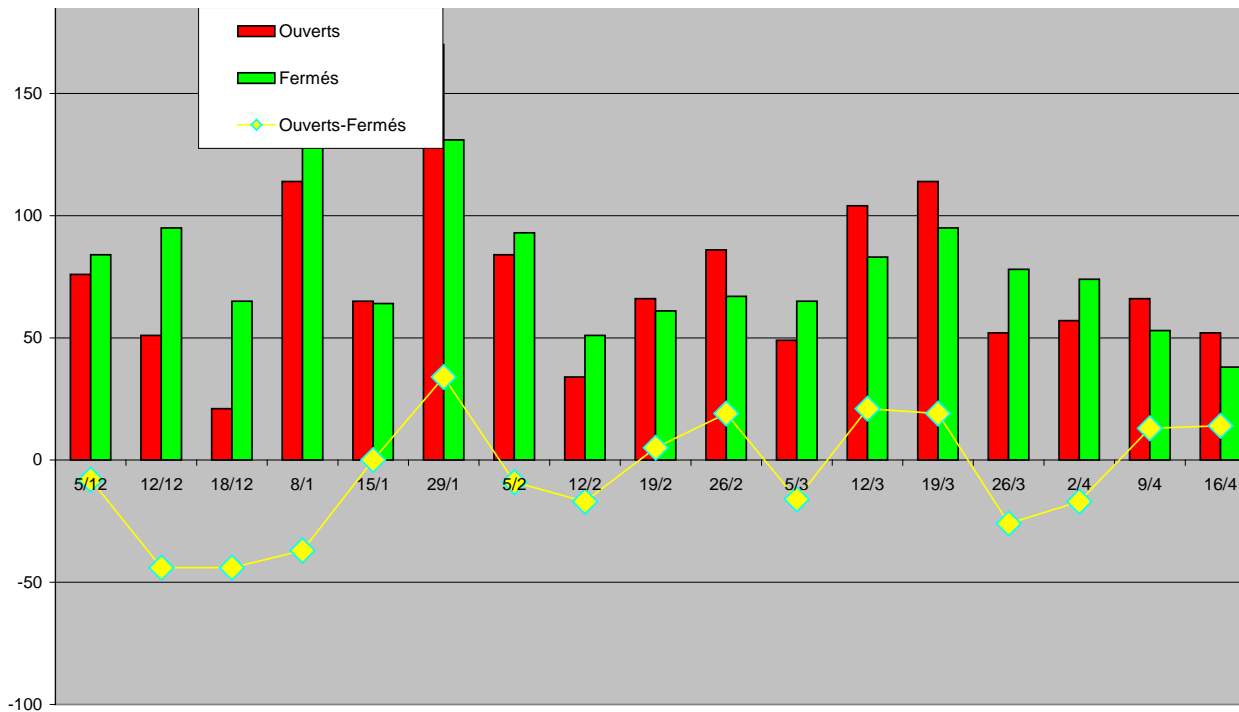
- Software quality is our challenge now
- Continuous integration is important to enhance quality of software for all SOLEIL applications
 - Rebuilding and redeploying all software packages is done at each shutdown for Machine and all beamlines
 - MAVEN/Hudson integration tools
 - Already used for java integration process
 - Will be used also for C++ builds (libraries, DeviceServers)
 - Reliability is more important for us than performances !
 - But we are happy to see you are working hard on the subject !!

ICALEPS 2005

- Make of all software layers more reliable has been a priority during the last months
 - We are still discovering bugs in the first DServers installed for the Transfert line 1 in 2004 !!
- On duty calls to the ICA group are slowly decreasing

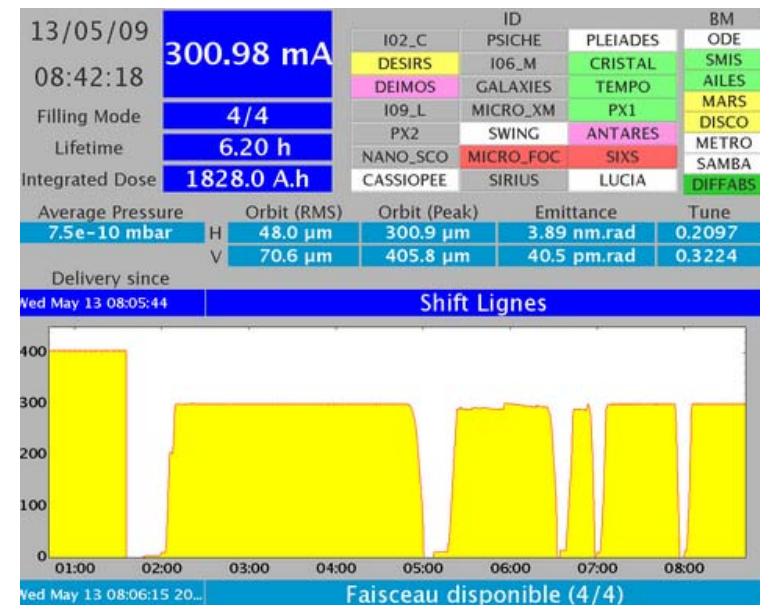


- Requests to the ICA group are still submitted at “good” rhythm
 - More than **50 requests** per week
 - Real bugs , new features demands, operation problems, etc..

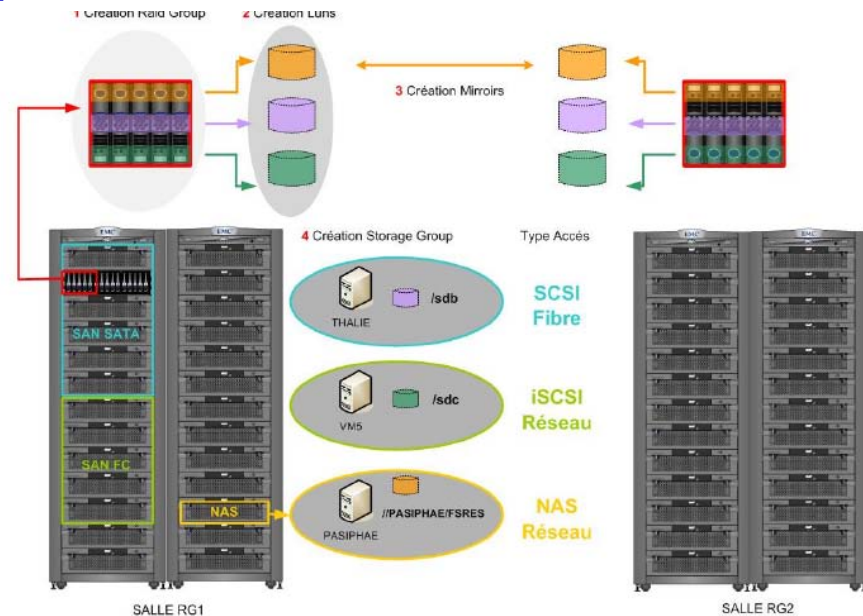


Machine projects

- SOLEIL Machine works in top up mode since march 2009
- Beam feedbacks are in routine operation
 - Fast Orbit Feedback Manager
 - Transverse feedback manager
 - Tune Feedback



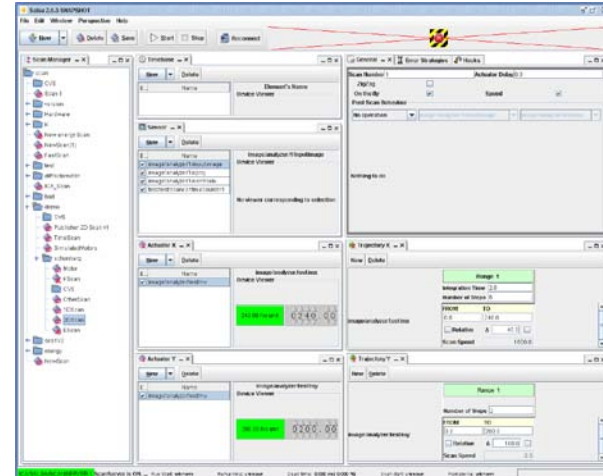
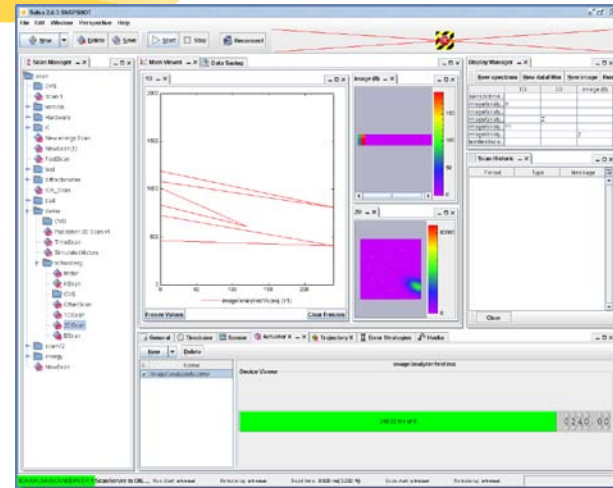
- EMC disks storage are in production for
 - The **TDB** Machine database
 - The **HDB** Machine database will be moved on this system for the run of June
 - *The goal is to reach the 20000 attributes stored in HDB for Machine*
- HDB for all beamlines is planned for this summer



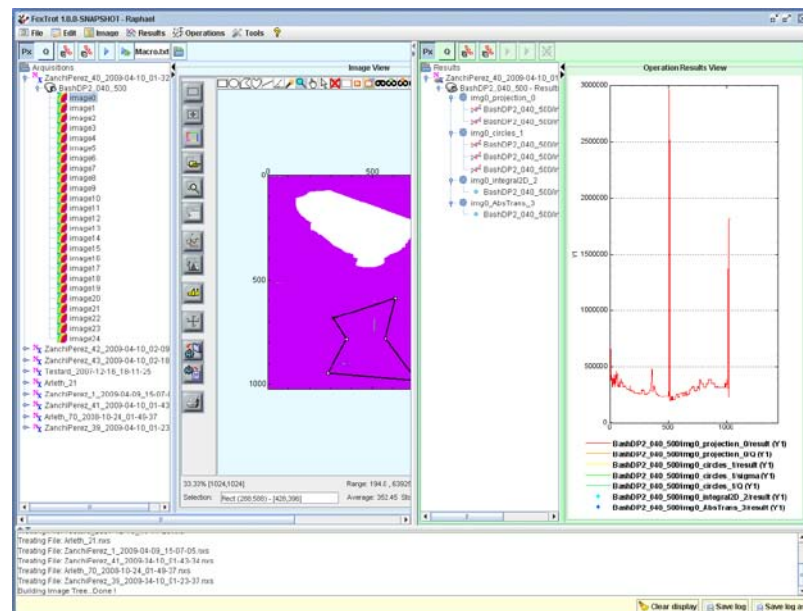
A technical diagram of a synchrotron beamline, showing a circular storage ring on the left and a series of beamline components extending to the right. The components include various magnets, bending magnets, and a detector station where a person is seated at a control console. The diagram is rendered in white lines on a yellow background.

Beamlines projects

- Development of ScanServer continued during the last months
- SALSA application has been enhanced to give access to these new features

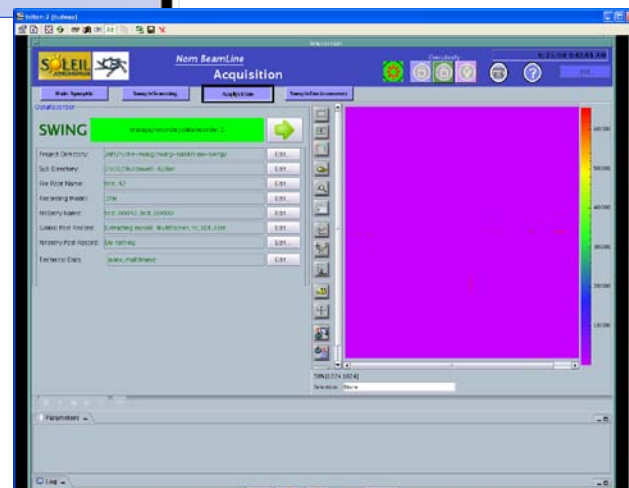
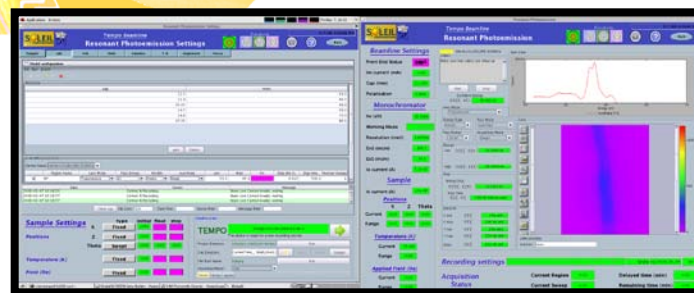


- NeXus files are now routinely used on many beamlines
- SOLEIL effort is now focused on some data pretreatment applications based on NeXus files
- For some high demanding throughput application, NeXus is now use for data streaming on disk
- Tango devices are not anymore the only source of data for the applications we develop



Foxtrot application :
Pretreatment of images
for SAXS beamlines

- ICA group works to provide java application as « java beans » for GlobalSCREEN developers
- Beamlines developers use these new components to enhance their end-users application



The title "Tango Collaboration facts" is centered within a white rectangular box with a thin blue border. The text is in a bold, italicized, blue sans-serif font.

Tango Collaboration facts

- Update of the bindings we are maintaining
 - ✓ (MATLAB, Labview, IGOR)
- ATK enhancements
 - ✓ *IJViewer :ImageViewer integrating Image Jlibrary*
- New DeviceServers on sourceforge
 - ✓ *It seems that only ESRF and SOLEIL develop DeviceServers !!*
- Java applications
 - ✓ Source code is on SourceForge for
 - SALSAS
 - Capoiera application (GUI for Diffractometer device)
 - ✓ Our MAVEN repository is published on the WEB to get jar files directly

- Migrate to **Tango 7**
 - when all bugs have been corrected by Manu
 - Probably during summer shutdown
- Make more java and GlobalSCREEN application available through **web browser**
 - Today only MAMBOWEB is heavily used by Machine experts from their office
- Use **advanced virtualisation** tools to move to the « Cloud computing »
 - To ease software deployment, load balancing, recovery procedures ,etc

