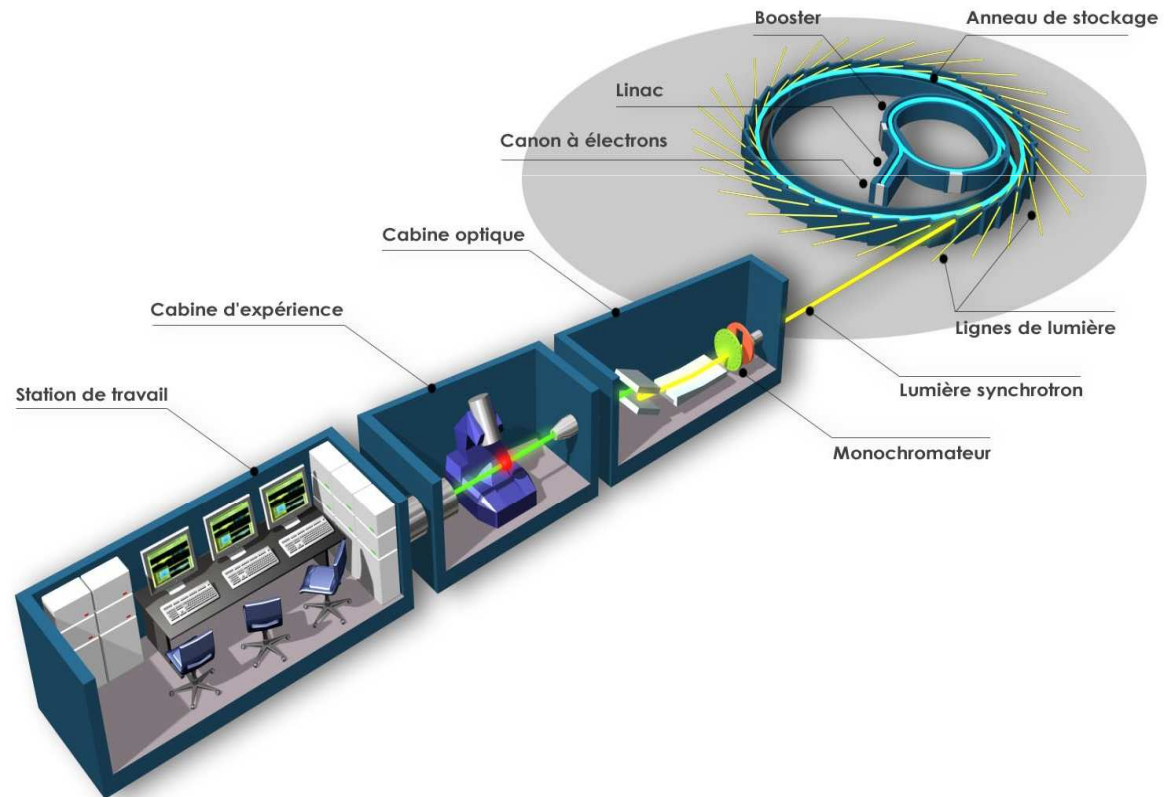


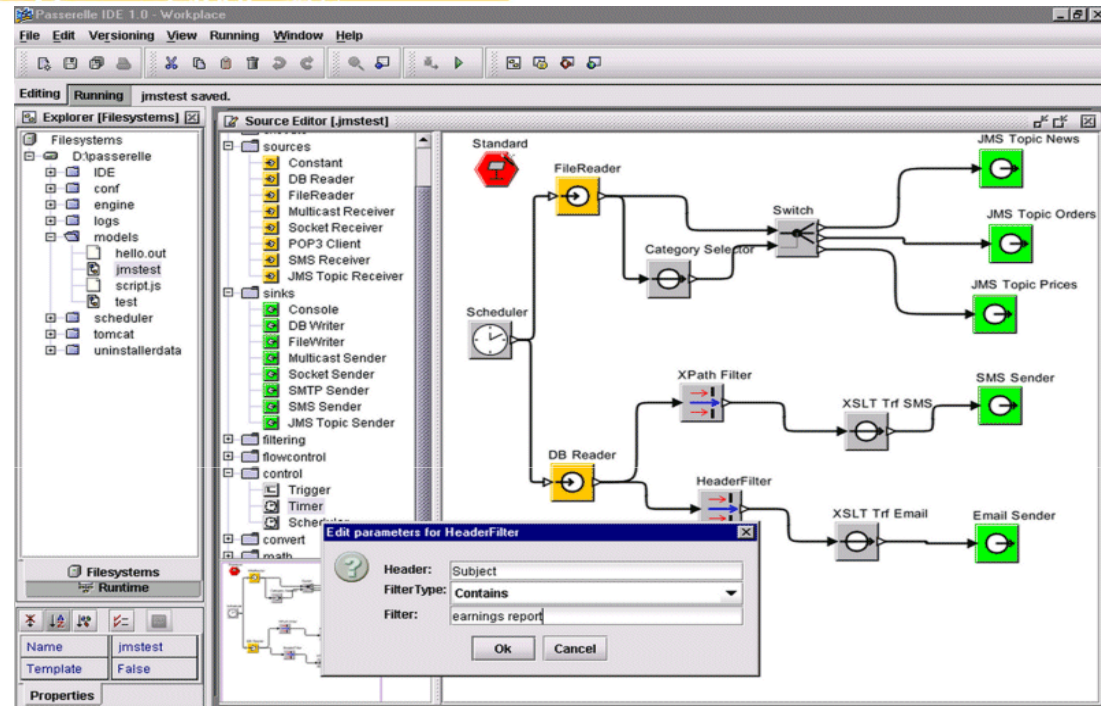
Feedback on Soleil usage of Passerelle as a sequencer

*Majid Ounsy
January 2011*



- Passerelle
- Usage at Soleil
- The current status
- Next Step
- Conclusion

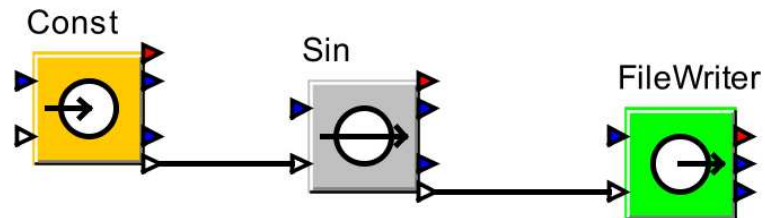
PASSERELLE
allow to
graphically
design
sequences by drag
and drop
and execute them



- PASSERELLE is provided by a company called ISENCIA
 - ✓ That realized process driving for industrial companies.
- PASSERELLE is based on an environment for scientific modelisation and simulation: PTOLEMY (developed by the Berkeley University)

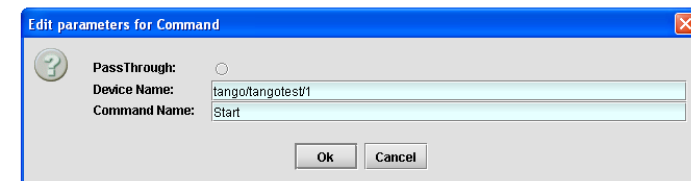
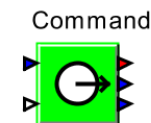
<http://ptolemy.eecs.berkeley.edu/ptolemyII/>

- We connect « boxes » and « wires »:
 - ✓ The « boxes » are called **ACTORS**, they execute an action.
 - ✓ The « wires » are called **MESSAGES**, they transfer data.



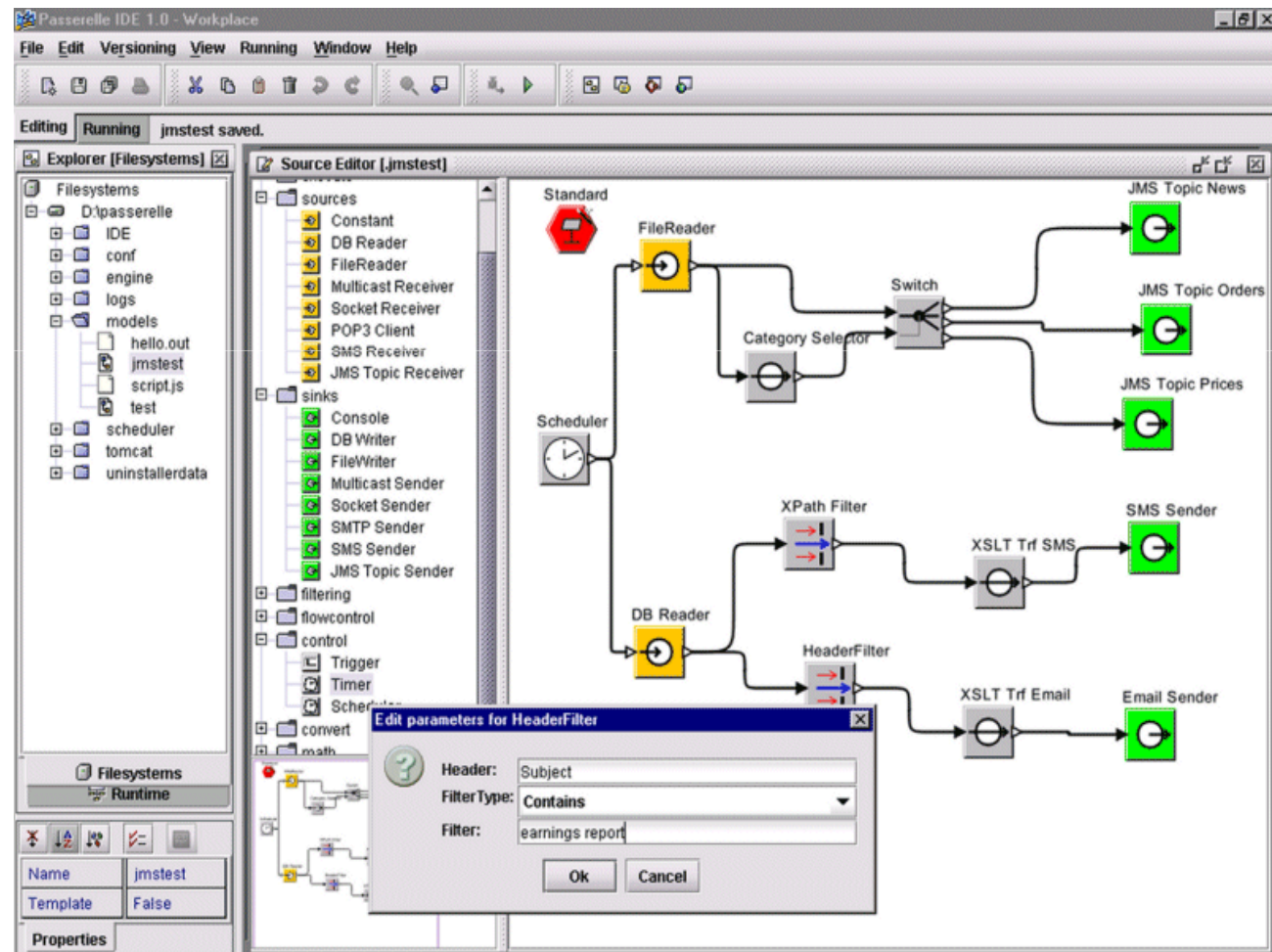
- The graphic language for editing sequences provided all functionalities to build complex logics:

- ✓ Loops
- ✓ Comparison
- ✓ Error management
- ✓ Parameterization



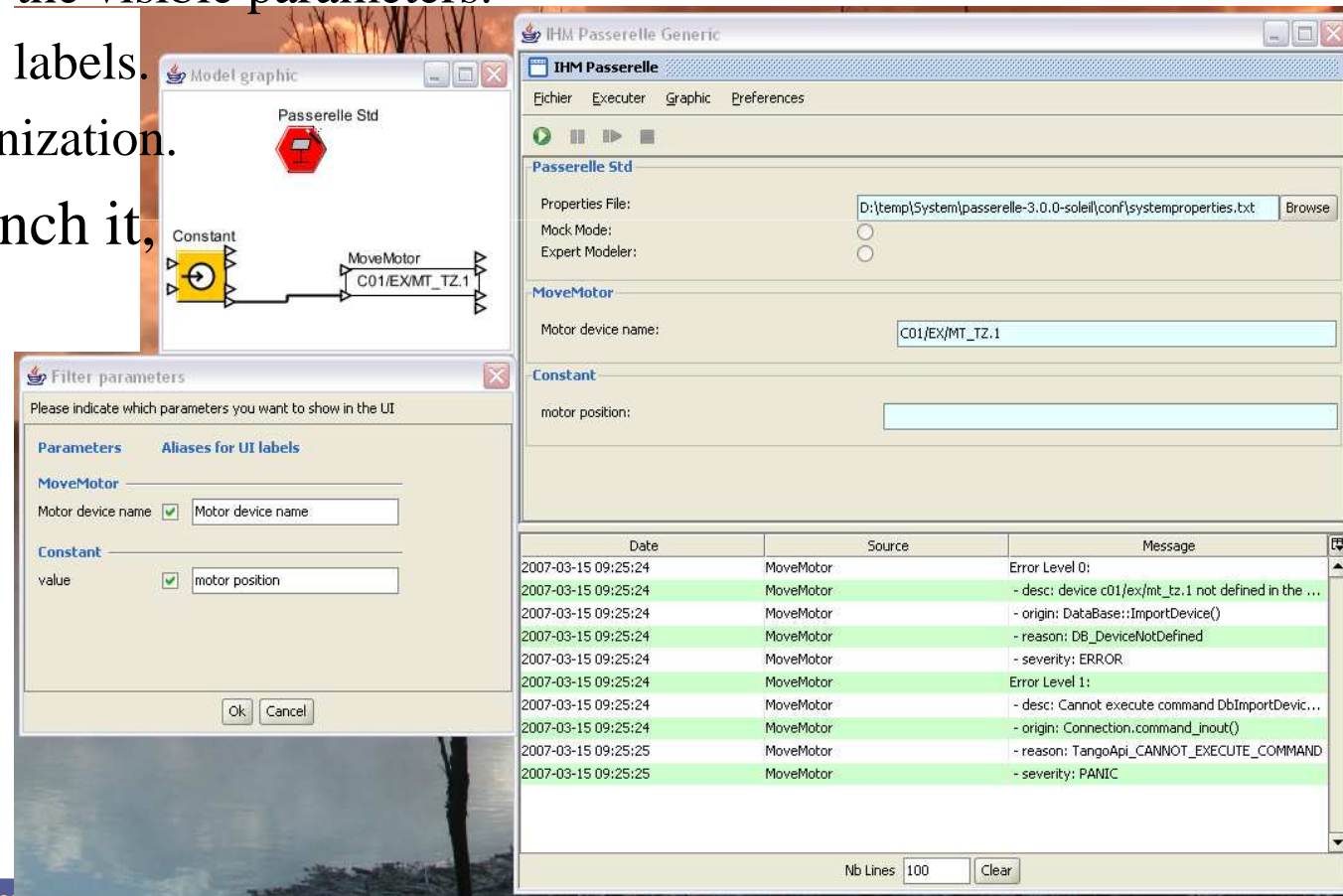
- Every actor is configurable with parameters.
- Our team is developing actors that control Tango devices.

➤ *IDE: development, configuration, execution, debugging:*



ICALEPS 2005

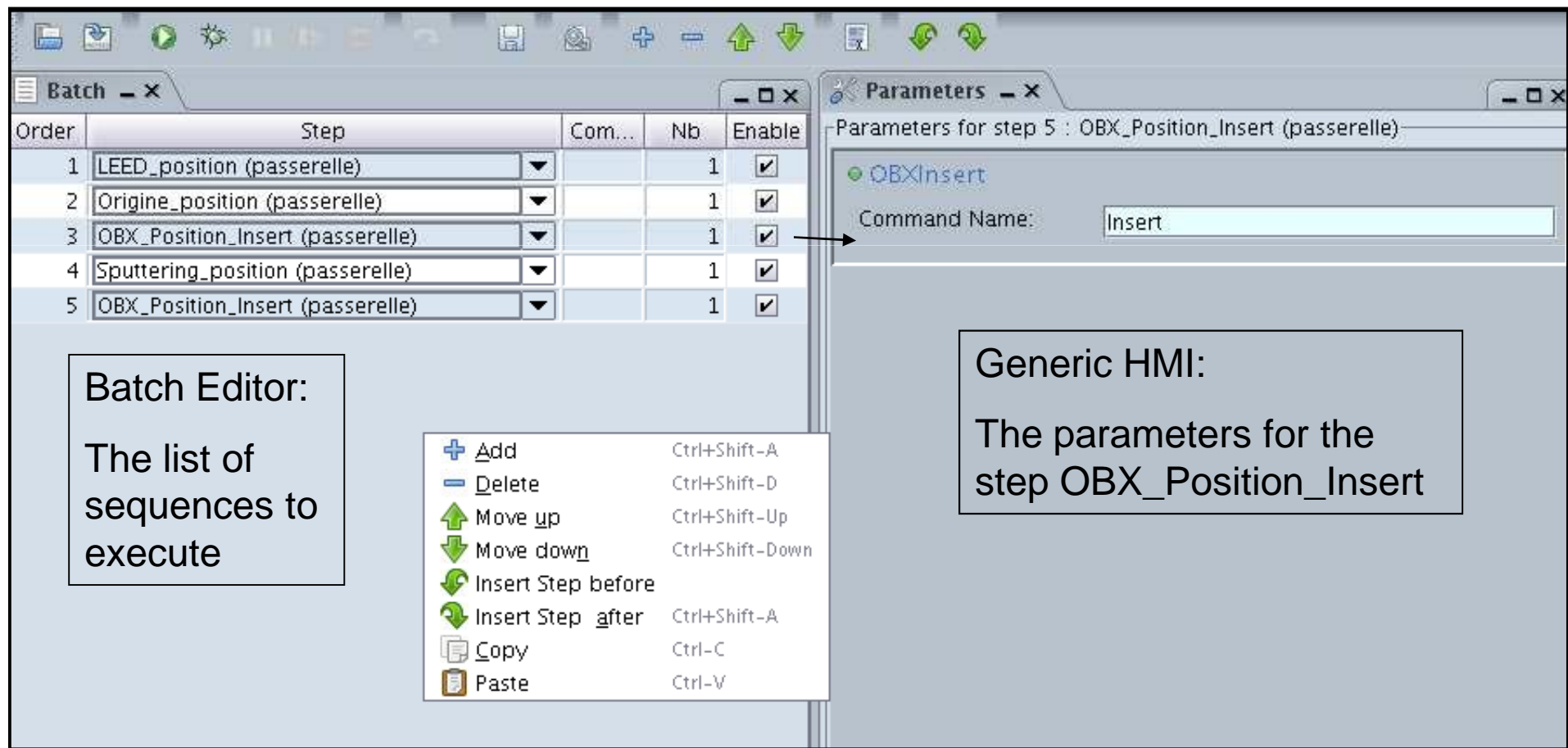
- Graphical panel on top of *any* Passerelle sequence.
- Possibility for users to customize the configuration panel :
 - ✓ Selection of the visible parameters.
 - ✓ Parameters' labels.
 - ✓ Panels organization.
- Allow to launch it, and visualize User logs



The screenshot displays the IHM Passerelle Generic interface. It includes a 'Model graphic' window showing a sequence diagram with a 'Constant' block and a 'MoveMotor' block (C01/EX/MT_TZ.1). A 'Filter parameters' dialog box is open, allowing users to select which parameters to show in the UI. The 'MoveMotor' block has 'Motor device name' and 'motor position' selected. The main 'IHM Passerelle' window shows configuration fields for 'Properties File', 'Mock Mode', 'Expert Modeler', and 'Motor device name'. At the bottom, a log window displays error messages from the 'MoveMotor' block.

Date	Source	Message
2007-03-15 09:25:24	MoveMotor	Error Level 0:
2007-03-15 09:25:24	MoveMotor	- desc: device c01/ex/mt_tz.1 not defined in the ...
2007-03-15 09:25:24	MoveMotor	- origin: DataBase::ImportDevice()
2007-03-15 09:25:24	MoveMotor	- reason: DB_DeviceNotDefined
2007-03-15 09:25:24	MoveMotor	- severity: ERROR
2007-03-15 09:25:24	MoveMotor	Error Level 1:
2007-03-15 09:25:24	MoveMotor	- desc: Cannot execute command DbImportDevic...
2007-03-15 09:25:24	MoveMotor	- origin: Connection.command_inout()
2007-03-15 09:25:25	MoveMotor	- reason: TangoApi_CANNOT_EXECUTE_COMMAND
2007-03-15 09:25:25	MoveMotor	- severity: PANIC

- Is a batch editor:
 - ✓ Can be batch several Passerelle sequences



Order	Step	Com...	Nb	Enable
1	LEED_position (passerelle)		1	<input checked="" type="checkbox"/>
2	Origine_position (passerelle)		1	<input checked="" type="checkbox"/>
3	OBX_Position_Insert (passerelle)		1	<input checked="" type="checkbox"/>
4	Sputtering_position (passerelle)		1	<input checked="" type="checkbox"/>
5	OBX_Position_Insert (passerelle)		1	<input checked="" type="checkbox"/>

Batch Editor:
The list of sequences to execute

Generic HMI:
The parameters for the step OBX_Position_Insert

The screenshot shows the Passerelle Manager web interface. At the top, there is a navigation bar with 'Passerelle Manager' and 'Job Definition'. Below this, there are buttons for 'Update' and 'Cancel'. The main form contains the following fields:

- Name:** My passerelle model
- Group:** Default
- Description:** (empty text area)
- Job Type:** Passerelle Model
- Passerelle Model:** exampleModelForWebFormEditor.moml
- Model Parameters:** A table with one row:

Name	Value
sampleModelParameter	Hello from model parameter
- Director Parameters:** A table with several rows:

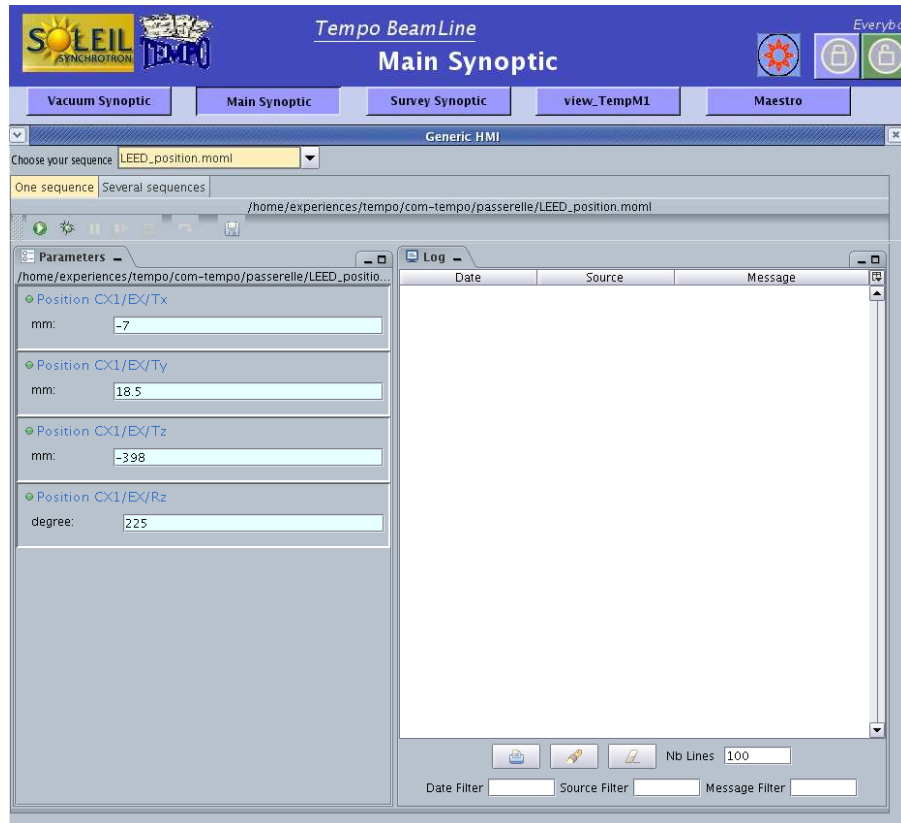
Name	Value
timeResolution	1E-10
Properties File	
Mock Mode	<input type="checkbox"/>
Expert Modeler	<input type="checkbox"/>
Validate Initialization	<input checked="" type="checkbox"/>
Validate Iteration	<input type="checkbox"/>
- Actors Parameters:** A table with several rows:

Name	Value
Constant	
value	sampleModelParameter
Console	
PassThrough	<input type="checkbox"/>
Chop output at #chars	90
Regular Expression Filter	
Expression	Hello.*

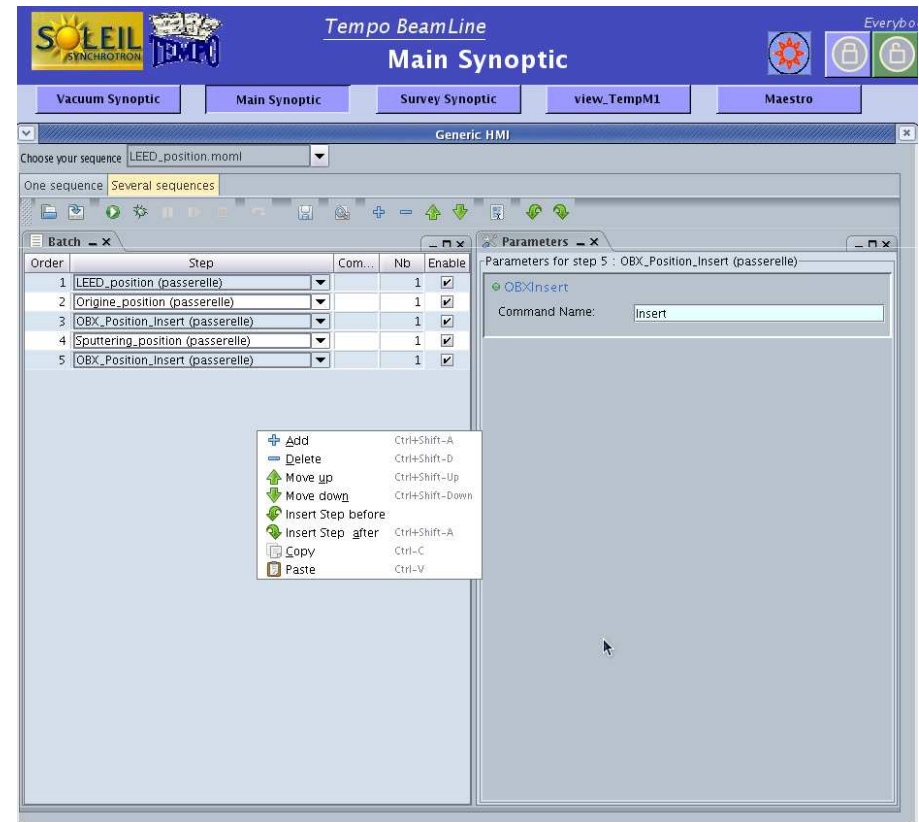
- A web server to remotely:
 - ✓ Configure/launch /stop sequences
 - ✓ Monitor all running sequences
 - ✓ Search for history in logs

- Do also versioning management of the sequences

GenericHMIBean



BossanovaBean



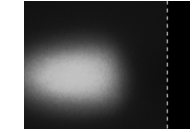
- Transparent access to Nexus Data Storage service
- Configurable Error Strategy handling
- Configurable take care of beamline status
- Parameter Validation
- Logging

➤ Beamline initialisation:

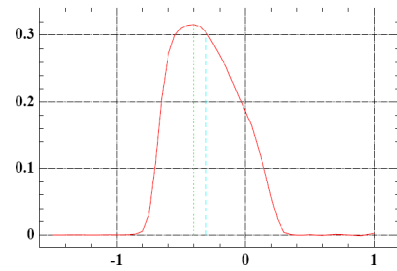
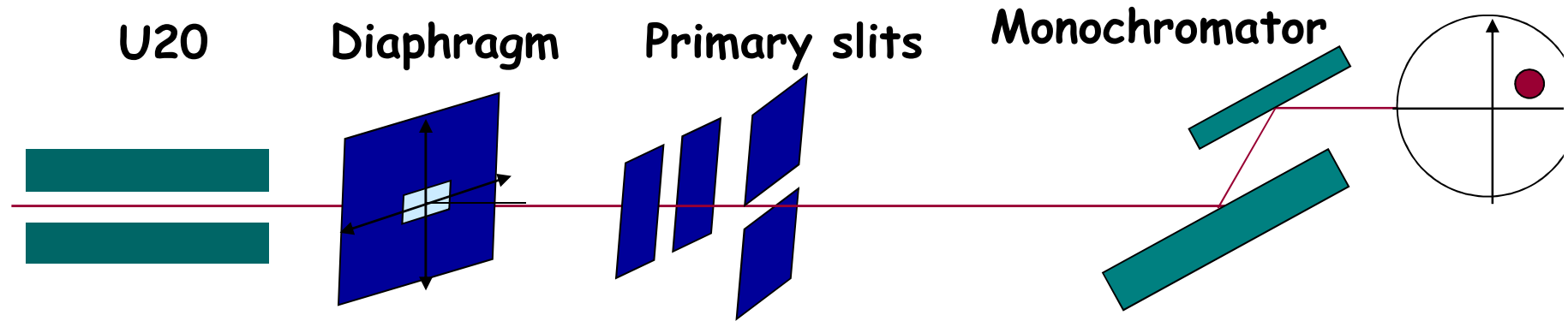
- ✓ E.g. set all motors in reference position
- ✓ Reset Optical devices to a given Beamline setup
- ✓ Check Machin beam position

➤ Beamline alignment

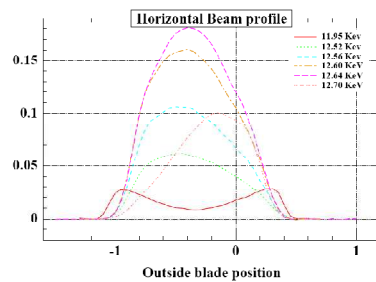
- ✓ E.g. find the good position of the beamline depending of the position of the beam



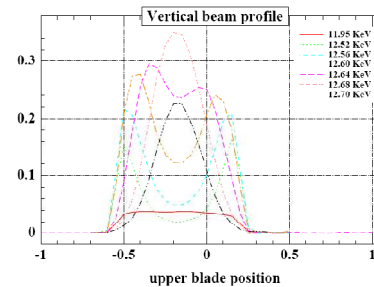
XBPM
or imager



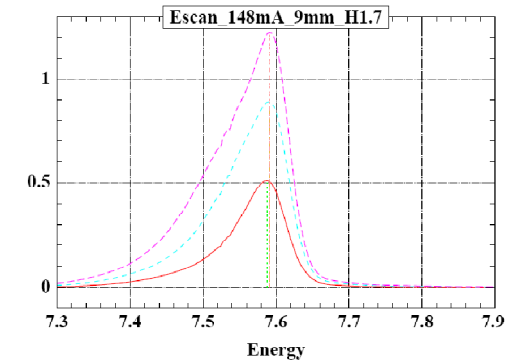
Routine to find peak, centroid and values for standard slit opening – P. Gourhant and O. Rudenko.



Horizontal beam scans, 5th harmonic 9 mm gap

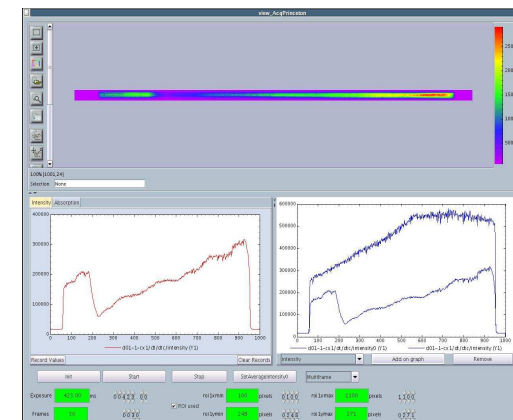
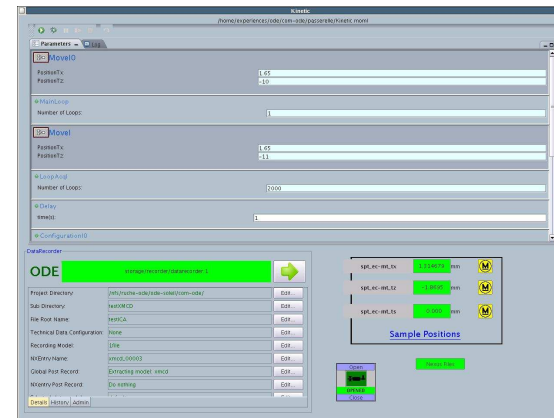


Vertical beam scans, 5th harmonic, 9mm gap



➤ Acquisition

- ✓ CCD acquisitions,
- ✓ Scans
- ✓ EXAFS
- ✓ SAXS



Beamline	Used by beamline stuff	Used in daily operation	Convinced by the product	To be cnvinced
AILES				
SMIS				
CASSIOPEE			0	1
CRISTAL	1	1	0,5	0,5
DIFFABS	1	1	1	
DESIRS				
ODE	1	1	1	
PROXIMA1	1	1	1	
SAMBA				
SWING	1	1	1	
TEMPO	1	1	1	
METROLOGIE			0	1
ANTARES	1	1	1	0
PLEIADES	0,5		0	1
LUCIA			0	1
MARS	1	1	1	0
SIXS	1	1	0,5	1
DISCO			0	1
DEIMOS			0	1
MICROFOCUS			0	1

- Towards working with ESRF on a common Passerelle Repository : To be planned
 - ✓ First Find an agreement between Soleil/Esrif/Isencia on a common Project Definition for the Codehouse source code
 - ✓ Migrate Soleil Passerelle V5 svn source code to the Passerelle V6 Codehouse source Code
 - ✓ Join Data Analysis Workbench project from ESRF

➤ Use of Passerelle/EDNA for On line Data Analysis:

- ✓ with CDM integration
- ✓ Find Collaboration on Passerelle Extensions
- ✓ Share Passerelle Actors Library

➤ THANKS FOR ATTENTION

✓ Questions ?