APOLLON project status

32nd Tango Collaboration Meeting
ELI-BeamLines (Dolní Břežany, Czech Republic)

Jean-Luc PAILLARD

5-7 June 2018
Staff involved in control systems

Software (since winter 2017 : ~ 4 FTE)
Jean-Luc Bruneau: Tango, Labview, synchronization system, CCD
Laurent Ennelin: Tango, Python, Labview, PLC
Stève Simond: PLC, Labview, PSS
Stephane Marchand (04/2018->): Tango, Python, GUls, DataBase, HDB++
Séverine Bouquin: DataBase, Web, HDB++
Boris Bras, Dmitry Prokofyev (left): Tango, PLC, Labview
Patrick Rommeluère (SOLEIL): PLC, vacuum systems

Hardware allover the facility (~ 4 FTE)
Daniel Cavanna: Motorized systems, drivers, control access
Christophe Godinho: Motorized systems, drivers, control access
Bruno Hirardin: cabling, integration, management of subcontractors
2 technicians from external companies
General information

- Multi PW laser facility in

- Laser-Matter interaction at very high intensity

- Underground building with heavy radiological shielding

- Budget : 37 M€

- Manpower : ~ 25 - 30 FTE

- 2 target areas : long and short focal areas
From the outside inwards

Clean rooms

180 tons door

5 m
Inside...

Amplification

Compression area

Long focal area

Short focal area
Hardware side

- Control stations
- Cameras
- Calorimeters
- Motors
- SSS (~650 I/O)
- Virtual machines
- Delay generators
- Spectrometers
Tango devices figures

Deployment of devices

- CCD
- Motion Channels
- POMPS
- VALVES
- GAUGES

- Deployed
- End of 2018
- Total Estimation
Image acquisition

- 4 VMs: 12 CCD/VM up to 10Hz
- Basler ACE & Lima
- Acquisition & computing by pair
- 2 GUIs: mosaic and detailed
- High network stream, few issues to be discussed
Tango with server API for LabVIEW

OS: Phar Lap

Device TANGO

IHM

Upgrade

Shared variable

OS: Linux

Device TANGO

supSSS

Jean-Luc PAILLARD
Vacuum system

- DS server from SOLEIL
- Sequences: DS in LabVIEW
- Binding LabVIEW
Custom GUI
Summary

- Apollon: multi PW laser facility in France
- Control System in operation
- Deployment on progress
- Tango is the “spinal column”
- Python, Lima, Labview binding, HDB++...
- Thanks SOLEIL: vacuum CS
- First experiments in 2018 at PW level
Thank you for your attention
Extra slides
Versions

- Ubuntu 14.04 LTS
- VMware Horizon Client 4.2.0
- VMware vCenter Server 6.0.0
- Tango 9
- Lima 1.4.0
- Pytango 8.1.7
- Python 2.7
- Labview 2014
- HDB++

Windows 7
Control room