ICAT @ ELETTRA

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Max IV – Lund, SWE – 12 March 2013

Introduction: ELETTRA

- Two facilities:

  - Elettra Synchrotron, since 1995

    - 1106 users [July '11 - June '12]

  - Fermi FEL, since 2012

    - First external users in Dec. '12

- Involvement in EU projects:

  - PaNdata-ODI, PaNdata-Europe, CALIPSO

Fermi Free Electron Laser

- Runs at 10Hz (switch to 50Hz this summer)

  - Huge amounts of data (and will increase)

- Three operating beamlines:

  - DIPROI, EIS/Timex, LDM

- 2 more beamlines planned for the next year

- **Customized HDF5 files**

  - Storage (Memory4Fermi) is organized following the proposal/dataset/datafile logical structure

Elettra Synchrotron Light Source

- 24 beamlines

  - Many of the beamlines have legacy control systems (often LabView) and handle storage (and data formats) on their own.

  - New beamlines run Tango and the data storage is handled by the IT group.

- Some of the beamlines use HDF5 data format

  - TwinMic, XRD1

- Others plan to switch to HDF5 (or NeXus):

  - X-Ray Fluorescence, XRD2, SYRMEP

HDF5 Ingestion

- We are not in position to enforce NeXus (the decision must arrive from the beamlines);

- Our ingestion tool should be generic enough to address the existing HDF5 formats;

- Architecture is defined;

- FERMI data acquisition relies on Python code and XML config files – Our ingestion code will use the same tools;

- The same ingestion code will be used for ELETTRA beamlines (two separate ICAT installations);

- Expected in July.

Ingestion Architecture Schema
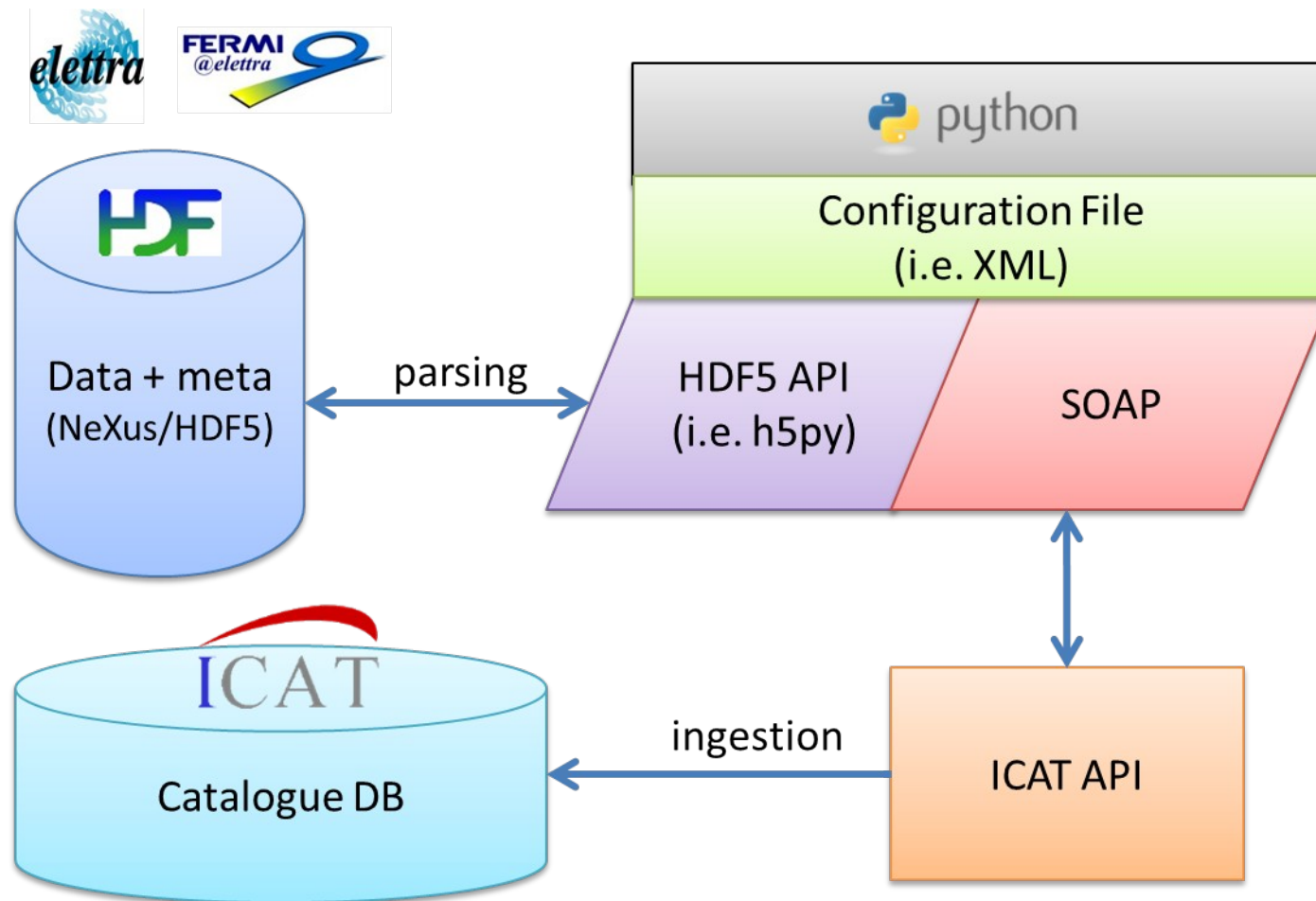
Thanks...

Sorry for not being able to attend the meeting this time.

Cheers from Trieste!