



EUROPEAN
SPALLATION
SOURCE

Open XAL Collaboration Meeting

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- **Model:**
 - Refactored `xal.sim.sync` – `RfGap` properties removed, values taken from `RfCavity` instead.
`Xal.model.elem.IdealRfCavity` methods `setCavAmp()` and `setCavPhase()` update the gaps.
 - Dummy RFQ
- New EPICS7 plugin: implements both `ChannelAccess` and `PVAccess` client and server.
- `ModelServer`: runs the model with design and live parameters and serves PVs with the results.
- `VirtualMachine`: headless application to serve machine PVs.
- Jelog logbook integration: improved performance and new interface with HTML editor.

- A first test of a simpler script environment for quick app templating
- We expect this to be useful during commissioning where speedy and agile development is often more important than rock solid code
- Code runs a web server, in principle could envisage running the applications on a separate host
 - No security in this particular framework, fine as everything is inside technical network
- <https://github.com/dddomodossola/remi/>

- Needed a format for saving data from many groups and systems and a way to search and catalogue the data saved outside the archiver
 - Problem with archiving waveforms
 - How to have synchronous data (or pseudo-synchronous data)
- Developed a format based on the NEXUS format so that we could use the SciCat to catalogue metadata.
- Developed a python API to save data in the correct format for everybody
 - For Beam Physics there is the possibility to save machine state (based on openXAL)
- http://ess-bp.pages.esss.lu.se/ess_nexus/
- Will be used by the Apps in Remi. If we see the need we will make one for Java in the future (that can also be used in CSS)

HDF5 for data saving

NXEntry: Shift ID and/or Asset ID and Timestamp (start and end)

NXUser

- Operator Name
- Affiliation
- In-Kind ID number
- role (optional)

NXInstrument

- WQe should created new classes for the equipments we use
- NXSource, NXRF, NXPbi, NXMagnets and NXTiming (new nexus classes)
- Machine Description can be here (add on NXequipment class and add attributes to describe it)

NX Parameters

- Process parameters

NXNote (optional)

- Further information needed

NXData

- Any data pertinent to the experiment/calibration or verification
- It is possible to create link between the instrument and data (should be looked into in more details)

NXLog

- Special class for time series data