MXCuBE Developers meeting, 24/5/2018

Present (virtually): Jordi Andreu, Antonia Beteva, Gerard Bricogne, Lais do Carmo, Mikel Eguiraun, Rasmus Fogh. Ivars Karpics, Peter Keller, Marcus Oscarsson, Pavel Palau, James Piton, Milan Prica, Martin Savko, Ana Zeri, Roberto,

1. Minutes of last meeting, and matters arising

The minutes were approved.

2. MXCuBE refactoring

Discussion ranged widely. The general approach of the contributions in github UI/API were viewed positively.

- The need for defined data structures, as opposed to passing dictionaries with free contents, was supported.
- The use of the name 'Actuator' for actuators, moveables etc. was accepted. They clearly do come in different types, and names for the subtypes can be discussed.
- The draft queue interface was viewed positively, with some concerns that it ranged beyond what was needed for the UI interface.
- MS volunteered to contribute a diffractometer interface.
- IK would like some more attention to how the interface could be implemented before he could pronounce on the feasibility and resource requirements. He volunteered to to write a test brick for the sample changer, in order to try out implementations and compare efforts that did / did not use the UI interface.
- The discussion moved on to more implementation-related and component-related matters. Again there was some interest in looking into this as well, but it was reiterated that any such efforts has to take a back seat to the development of the UI interface, in order to ensure that the latter could proceed to completion in a reasonable time frame.
- The configuration xml files were discussed. The general conclusion was that separate configuration files made for better scaleability, but that it should be avoided to specify the same hardware object in multiple locations.
- A discussion on motor names concluded that while there should be a standardisation for motor names that were generally understandable and shared between beamlines, this could never be precise or comprehensive enough to cover all the needs of beamline-agnostic coding, which would have to be covered by configuration.
- It was agreed that the UI interface should be put in a separate repository.
- Error handling should be done by the signal passing mechanism.

In the final discussion, it was agreed that the developers are close to agreeing that this refactoring is indeed feasible, but less sure about the likely resource requirements. On the MXCuBE3 side the efforts are close enough to the actual code structure that feasibility seems guaranteed. On the Qt side more work is needed. It was agreed that IK would look closer into feasibility over the next two

weeks, with a view to being able to take a decision on this point at a new developers' meeting on June 7.

3. Any Other Business

Status reports from members:

- LNLS Brasil is running the UVX synchrotron up till a shutdown in December 2018. They are using a home-made mini-kappa diffractometer. For now the detector is a Pilatus 2M, but work is progressing on a new detector. The MXCuBE installation is working but missing some functionalities such as grid scan, and much work is being put into working with EPICS control software. From January the focus is on the new SIRIUS synchrotron, and LNLS is committed to change over to the MXCuBE3 (web) version for this, with JP as the contact person. Exciting times.
  Others commented that the changeover from Qt to web versions had been done at the ESRF and proved fairly simple, and ME offered himself as contact, in addition to the ESRF.
- PP (DESY) reports still being far from a full changeover to MXCuBE. Much work is happening on integrating with Sardana, and there are considerations on upgrading equipment and infrastructure.
- MS (SOLEIL) is completing the rebasing of the MXCuBE working branch to the tip of master. Some problems with latency and delays were solved by using MD2 with the exporter protocol. The result presents only small differences to master, use of abstract objects throughout, and a greatly reduced use of beamline-specific code (by 85%!). The branch is expected on github, with appropriate pull requests, within 1-2 weeks.
- MO/RB (ESRF) report that remote operation is being introduced (slowly) using MXCuBE3, and has been tested running from Lund, Portugal, and California. The full version 3.0 release is expected for end May / June. MXCuBE 3 is being introduced on other beamlines, and will be on all beamlines by the end of Summer 2018.

Next Meeting

The next meeting is planned for June seventh 1400-1530 (UK time), on appear.in/mxcube.