MXCuBE Developer's Meeting

Whereby, June 19, 2023

Meeting Minutes

Participants

Rasmus Fogh (Global Phasing)

Marcus Oscarsson, Antonia Beteva, Daniele de Sanctis (ESRF)

Jacob Oldfield, (ANSTO)

Jose (ALBA)

Mikel Eguiraun (MAX IV)

Martin Savko (SOLEIL)

Code camp

The code camp should be over 2.5 days, with an agenda of

- Introduction to mxcubecore and how to migrate to same

- Web version and web development

- Control system integration, with quick introductions to the most common control systems.

- Two four-hour blocks of discussion and Q+A, with 'spare' time spent on documentation and integration.

Help with integrating particular equipment might be offered. It was agreed that there should be preparatory material to set up and get started ahead of time. **ACTION**: *???*

The meeting date was discussed, the existing Doodle poll not giving a clear decision. The possibility of having the code camp in connection with the ALBA meeting was discussed, but rejected as too late and too long a total meeting. ME will make a new Doodle poll between the three top dates, and the poll winner will be selected without further discussion.

In response to a question from Jose it was clarified that there was in principle no upper limit on the number of participants from any site. However the organisers reserve the right to limit the number of participants-in-person from a site to prevent the meeting capacity from being overwhelmed.

Testing and continuous integration

As agreed, the newest system bumps the minor program version on every code merge (thanks, MO!). It was agreed that this is a positive development, and that the additional clarity of having each merge with a clear identity outweighed the minor confusion of additional more-or-less pro-forma commits. At every version increase the code is pushed to PyPi whence it can be downloaded and installed.

Following a question from RF it was noted that repeated failure messages from the automatic testing referred only to the final stages of displaying test coverage completeness. The error is polymorphic and difficult to pin down, but should be easy to live with in the mean time.

JO noted that ANSTO was concentrating on getting testing completed and integrated at the abstract class level, and hoped to be able to push results to the develop branch 'before too long'. The rest of the meeting welcomed this development.

Uptake of 'develop' branch

- ESRF were working to move to github develop for all beamlines, and hoped eventually to be able to drop the use of the internal gitlab repositories for production versions – if this should prove possible. Two beamlines, including A1 (Massif-1) were on or close to github develop, and ID29 would be next to follow. The rest of the beamlines should catch up by autumn.

- ANSTO were working on getting ready to merge and push their (considerable) changes to the develop branch. After one difficult attempt, they were now concentrating on expanding testing first.

- MAX IV has the microMAX beamline up to date with the develop branch. There have been some bugs with fixes to Tango hardware Objects and Sardana, having to do with Python 3 array comparisons. MAX IV has a new sample changer, and has coded a new HardwareObject for this.

- SOLEIL is very close to full integration with the develop branch, and sees the possibility of using the newest GPhL workflows as a driver.

- ALBA is making a new beamline that will use the MXCuBE web version, MXCuBE4. The established XALOC beamline is still a way behind develop, and the work of

catching up is left to the beamline scientist. A number of ALBA developers are starting, hance the interest in several joining the code camp.

- Global Phasing reports their interest in upgrading widely to the develop branch, as the GPhL workflow is now working in this branch and so could be set up wherever the develop branch was used. Two lines of work in progress:

  ◦ Integrating the Global Phasing recentring/calibration setup with the MiniKappaCorrection recentring provided to MXCuBE by EMBL-Hamburg.

  ◦ The GPhL workflow UI has been refactored to decouple the implementation from the Qt interface, allowing the parallel integration with the web interface. As previously discussed the first step will be some (hopefully relatively minor) refactoring on the GPhL side, to better fit the system for schema-generated user interface popups with the approach of the web version.

Next meeting

The next meeting will be in July. MO will circulate a Doodle poll. To fit better with Chinese and Australian participants, future meetings will be held an hour earlier, 10:00-12:00 CET.