

# MXCuBE Developer's Meeting

Whereby, January 24, 2023

## Meeting Minutes

### Participants

Rasmus Fogh (Global Phasing)

Marcus Oscarsson, Antonia Beteva (ESRF)

Jean-Baptiste Florial (EMBL-Gr)

Martin Savko (SOLEIL)

Michael Hellmig (HZB)

Andrey Gruzinov (DESY)

Jacob Oldfield (ANSTO)

### Agenda

- Versioning and release procedures
- PyQt licenses
- Roadmap for upcoming work

### Versioning and release procedures

The reorganisation of versioning and release procedures was thoroughly discussed at an ad-hoc meeting at the 2022 ESRF Grenoble meeting. The current meeting (open to the entire developers' group) aims to finalise and agree on decisions. The main outcomes of the ad-hoc meeting was a decision:

- To bump the version for all merged pull requests on the develop branch, to give a well-defined identity for any version that might serve as a starting point.
- To make bug fixes in master, but ensure that these were merged back to develop

- To synchronise the master branch to the develop branch regularly.
- To encourage pushing changes locally made at beamlines to develop regularly
- To encourage beamlines to keep up with newer versions.

The meeting supports these decisions and agreed on the following:

### **The develop branch**

Each pull request to the develop branch should cause a bump of the patch level, e.g. from 1.5.7 to 1.5.8. As part of every merge the changelog should be updated whenever a sensible log message could be made. The git procedures should be changed so a warning is generated if the changelog file is not changed as part of a merge.

The agreement to rebase local versions on develop before they are made into pull requests was not discussed, but remains in force from earlier decisions.

### **The Master branch**

The master branch should serve as the release branch, to the extent that this concept makes sense in the context of MXCuBE, where branches tend to have a fairly long life with development locally at synchrotrons. Bug fixes made to the master branch (e.g. to 1.5.1) should immediately be merged into the develop branch as well (where the new version might be called 1.5.9); such bug fixes may not be common in practice. At regular intervals the master branch should be synchronised to the development branch, corresponding to 'making a release'. When this happens, the minor version of both develop and master branch will be increased, going to e.g. 1.6.0 on both branches. This is not strictly compliant with semantic versioning, but it is expected that there will in practice always be at least some feature change when the master branch is updated ('new release').

Updating the master branch will be accompanied by testing, and people are generally expected to install (and develop from) these releases rather than from the develop branch.

The release frequency will be finally decided once the system is working. As a starting point there will be a release every six months, which matches both the cadence of MXCuBE meetings, and the (most common) half-yearly synchrotron shutdowns.

### **Relation to local versions**

It is hoped that under the new system it will be easier, and so more frequent, to update beamlines to the newest release, in particular now the big refactoring is coming to an end. Beamlines are strongly encouraged to make pull requests of local changes to develop. This will serve to inform the collaboration of what is going on, will help to keep the distance

between develop and local beamline versions short, and will share the work of merging more widely. It is encouraged (but not mandatory) for beamlines to use a local versioning scheme compatible with semantic versioning. It seems that the correct version for a local development of release version 1.6.1 would be e.g. 1.6.post1.dev3. **ACTION:** JO will check if this can be simplified.

## Web and Qt repositories

The rules agreed above will apply not only to mxcubeqcore, but also to mxcubeqwb and mxcubeqqt

## Long term support

It was discussed whether to make a long term support version of mxcubeqcore (only), and what guarantees this should come with. A minimum would be to promise bug fixes. AB proposed that long term support should guarantee keeping the same API, but RF wondered exactly what this would mean, given that all active development is at the tip anyway. Would it put a limit on what changes could be made at the tip? Also the duration was unsure, one proposal was five years. JO thought that promising long term support might serve as a confidence-building measure for synchrotrons that have not yet decided to adopt MXCuBE. In the end it was decided to postpone the decision, and ask potential adopters if they were interested in an LTS version, and what guarantees they would want to see.

## PyQt Licenses

Global phasing is raising the need to buy PyQt developers' licenses, and has sent a number of mails to that effect; the meeting thanks Peter Keller for an excellent presentation of the situation. Both AG (DESY) and MS (SOLEIL) note that they will need such a license. MO understands that it should not be necessary for synchrotrons to acquire commercial releases, as long as no commercial-related work is done at the synchrotrons, where as RF believes that MXCuBE (Qt interface) plus the GPhL workflow effectively form a combined work, and anyone who develops on the Qt interface (pushes to the mxcubeqqt repository with any regularity) would have to have a PyQt license to comply with the license conditions. You need one license per developer working on MXCuBEQt, but the license is not tied to a particular person (or computer). The license gives you access to all products from Riverbank Computing (including PyQt4, PyQt5, and PyQt6) for a year, but only current versions. As of January 2023 a license costs \$550 (not including VAT) and can be bought on the web site of Riverbank computing. Subsequently your software can freely be linked to those versions (but only those) in perpetuity. Users are free to combine with GPL-licensed PyQt versions, but the program must check at runtime that only the one of the allowed versions are used. The sense of the meeting was

- All relevant sites (including ESRF, though they are not actively developing mxcubeqt now) would want to comply with the licensing conditions.
- MO is not convinced that the license does require all these licenses, and will enquire further (**ACTION** MO).
- One way or the other the decision should be passed to the steering committee.

## Road map

Previous discussions have highlighted testing, documentation, and linting as the next area to focus on, now that big refactoring is finishing. The reorganisation of the queue would also be important. The meeting having gone on for too long, this point is postponed to the next developers' meeting. Participants are encouraged to come prepared and think about these things ahead of time.

## Any Other Business

JO: ANSTO has been building a test system with e.g. simulators for detectors and goniostats. It is close to the point where he can (and will) share parts of it for testing MXCuBE

## Next Meeting

Next meeting will be mid/late February. MO will make a Doodle poll (**ACTION: MO**).