

Towards MerMEId 2.0

MEC 2022 BEST POSTER AWARD and PEOPLE'S CHOICE – BEST POSTER AWARD (THREE-WAY TIE)

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Background

The “Metadata Editor and Repository for MEI Data” (MerMEId) is a web-based tool to capture and enrich data in the MEI header. This tool was originally developed by Axel Teich Geertinger and Sigfrid Lundberg at the “Danish Centre for Music Editing” for their own work on the thematic-

bibliographic catalogues of works of Carl Nielsen,¹ Johann Peter Emilius Hartmann,² Johann Adolph Scheibe,³ and Niels W. Gade⁴ ([Teich Geertinger & Pugin 2011](#); [Teich Geertinger & Lundberg 2015](#)). From the beginning—around 2009—the development of the MerMEId was tightly connected to the evolvement of the MEI standard and the editor was presented at numerous occasions.⁵

Various projects such as the “Catalogue of the Works of Frederick Delius”,⁶ “Bruckner Online”,⁷ or the “Bach Repertorium”,⁸ readily picked up the MerMEId editor and created state of the art catalogues of works.

Current development

The “golden era” of the MerMEId ended in 2019, when the Danish Centre for Music Editing was closed and the core developers of the MerMEId were forced to abandon the project. Luckily, the source code of the software was already published at GitHub⁹ and made available under an Apache-2.0 open-source license. From there, the orphaned project was forked and adopted by the “*Virtueller Forschungsverbund Edirom*” (ViFE) at Paderborn and soon colleagues from the Austrian Academy of Sciences (ÖAW) stepped in. Together, we established regular MerMEId community meetings, installed a Code of Conduct, set up a CI/CD pipeline, overhauled the technical architecture, and already enhanced the editor capabilities tentatively. The current work can be monitored at the GitHub issue tracker¹⁰ and is aiming at the “Release 2.0” milestone. This will be the first community-based release, hopefully to emerge in early 2023.

The changes to the software can be divided into the following major issues:

- Streamlined installation and deployment process:

The old setup required a triad of an eXist database, an Orbeon forms server and the MerMEId together in an Apache Tomcat application server. This Apache Tomcat server then needed to be put behind an Apache reverse proxy server for various rewriting rules.¹¹

The new setup merges all the applications into one Jetty application server, thus the installation can be described and managed by a single Dockerfile. This facilitates the deployment as well, since there is only one Docker container that needs to be started.

¹ <http://www.kb.dk/dcm/cnw.html>

² <http://www.kb.dk/dcm/hartw.html>

³ <http://www.kb.dk/dcm/schw.html>

⁴ <http://www.kb.dk/dcm/nwgv.html>

⁵ E.g., various times at the Edirom Summer School, starting from 2012 (<https://ess.upb.de/2012/programm.html>), or at the first MEC at Mainz in 2013 (<https://music-encoding.org/conference/programs/2013ConferenceProgram.pdf>).

⁶ <https://delius.music.ox.ac.uk/catalogue/welcome.html>

⁷ <http://www.bruckner-online.at/>

⁸ <https://www.bach-leipzig.de/de/bach-archiv/bach-repertorium>

⁹ <https://github.com/kb-dk/MerMEId>

¹⁰ <https://github.com/Edirom/MerMEId/issues>

¹¹ See installation instructions at <https://github.com/kb-dk/MerMEId/blob/master/trunk/INSTALL.md> and https://github.com/kb-dk/MerMEId/blob/master/trunk/USING_DOCKER.md.

- Integration of the Selenium test framework:
While refactoring parts of the code base, we frequently introduced regressions that could only be spotted by trained users of the MerMEId, manually checking the various forms. This led us to integrate the Selenium test framework and to write some initial tests, which are now continuously run on every commit. Our test suite is by no means complete yet, but the way is paved and more tests can easily be added.
- Persistent data directory:
The MerMEId used to store its data inside (a sub-collection of) the application within the eXist database. Hence, an update or reinstallation of the MerMEId would wipe the data directory deleting all user data. With the new installation process in place, the MerMEId data directory is configurable and the MerMEId install script checks whether this collection is already populated before initialising it with the sample data.

The changes to the governance structure, towards a true open-source community venture, involve the following points:

- Regular community meetings:
The community meetings are held every 4 to 6 weeks via Zoom and are the central gathering place for all interested stakeholders. During these meetings the current development plans are reviewed, ideas are proposed and organisational matters are discussed.
- Slack channel:
The Music Encoding Initiative Slack features a dedicated MerMEId channel which enables the MerMEId community to quickly and efficiently exchange text messages. Since there is no dedicated mailing list, the Slack channel is the main medium for this kind of exchange.
- GitHub wiki and issue tracker:
We extensively use the GitHub issue tracker for organising (via issues, labels, milestones, etc.) the software development process. Additionally, the GitHub Wiki holds the minutes of the community meetings and some information about the software infrastructure.

The MerMEId has proven to be a useful tool and although it's a small community of enthusiasts (actively) caring about the future development of the MerMEId, we believe we set up the proper organisational and software framework to absorb the loss of the original institutional support and to manage the transition to MerMEId 2.0.

References

Teich Geertinger, A., & Pugin, L. (2011). MEI for bridging the gap between music cataloguing and digital critical edition. *Die Tonkunst*, 5(3), 289–294.

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