In the project "Freischütz Digital", musicologists and computer scientists explore possibilities for new ways of analyzing, comparing and presenting music related data in critical editions using computer-based tools. The opera "Der Freischütz" by Carl Maria von Weber, a work of high relevance for opera studies, was chosen as object of study because of the large number of historical sources available — including different versions and representations of the musical score, the libretto, reference texts, and audio recordings.

One goal of the project is to create an archive of relevant digitized objects, including symbolic representations of the autograph score and other musical sources (encoded in MEI), transcriptions and facsimiles of libretti and other textual sources (encoded in TEI) as well as (multi-channel) audio recordings of the opera. Parts of this collection will be released under the terms of an Open Access license for research purposes. We adapt existing synchronization and segmentation techniques for generating various linking structures across the different versions and representations in the archive. Furthermore, we develop various tools that help users to annotate, access and compare different data sources. Another goal of the project is to investigate the kind of challenges arising in such complex and inhomogeneous settings. Which steps can be automated and which steps require interaction? Is automation useful and reliable enough? How can critical music editions be supported by means of digital tools?

Various research groups from different disciplines are involved in the project. Musicologists work on a digital edition of the musical work and the libretto of the opera, while computer scientists develop techniques and tools for processing, comparing and presenting the data. The contribution at hand deals with the progress and the experiences made in this interdisciplinary project up to this point.