The Diff Concept of the Digital Interactive Mozart Edition

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The *Digital Interactive Mozart Edition* (DIME) provides two types of editions: *Reference Texts* (the musical text of the *Neue Mozart Ausgabe* encoded in MEI) and *Alternative Texts* (entirely new editions of selected works). In order to show the differences between editions of the same work (a *Reference Text* and one or more *Alternative Texts*), a specific workflow has been developed. It relies on three strands: the data model, the recognition of the differences, and the rendering of the results.

DATA MODEL AND DATA PREPARATION

The premise of the DIME project has an essential impact on the data model: "The digital file is complete in and of itself; it contains all information in terms of musical notation, textual criticism (editorial markup), and metadata." Therefore, an individual edition is not allowed to have any straight reference another edition of the same work (via <app/>, @corresp, etc.). However, it is possible to create a workaround by relating the MEI-elements through the morphology of their IDs. For this purpose, a copy of the *Reference Text* is generated with some 'modifications' (including the addition of a suffix to any of the IDs). Subsequently, the copied file is used as a 'base' for the edition of the *Alternative Texts*.

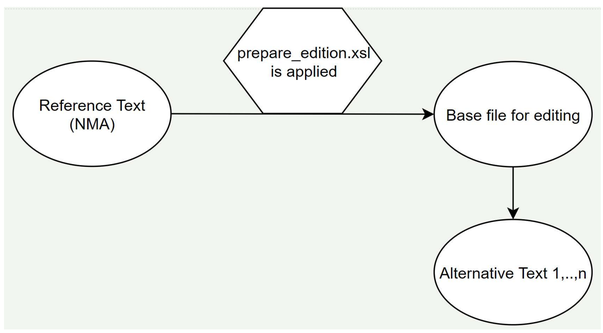

Figure 1: Creating a base file for editing.

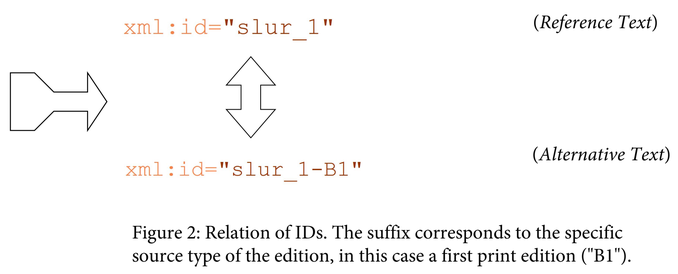

Figure 2: Relation of IDs. The suffix corresponds to the specific source type of the edition, in this case a first print edition ("B1").

RECOGNITION OF DIFFERENCES

The process of recognition of differences is semi-automatic. It is supported by the script diff-DIME.xsl which creates a list of potential differences (diff-proposals.csv). Subsequently, the core file where the differences are stored — the diff-list.csv — is edited manually. This is important in order to give the editors full control over the process and to be able to add any complicated cases which could not be recognized properly by the script. Additionally, diff-DIME checks if there are any potential errors in the diff-list made by the editor during the manual editing and creates a report (possible-errors.csv); the editor then decides whether to accept or to decline these error warnings. The whole process is iterative, i.e. changes can be made to the editions or to the diff-list at any time.

An important aspect is the definition of what should be considered a difference. Currently, the diff-DIME covers the most essential features like different note pitches, articulation, accidentals, length of slurs, dynamics, etc., and a more sophisticated case, the split / merged slurs (cf. figure 12). Child elements of <orig/>, <rdg/>, <sic/> and the elements which point to them (e.g. slurs) are excluded from comparison.

```
<elementsTOcompare>
  <note>
    <attributes>pname,dur,dots,oct</attributes>
  </note>
```

Figure 4: Configuration file; an excerpt.

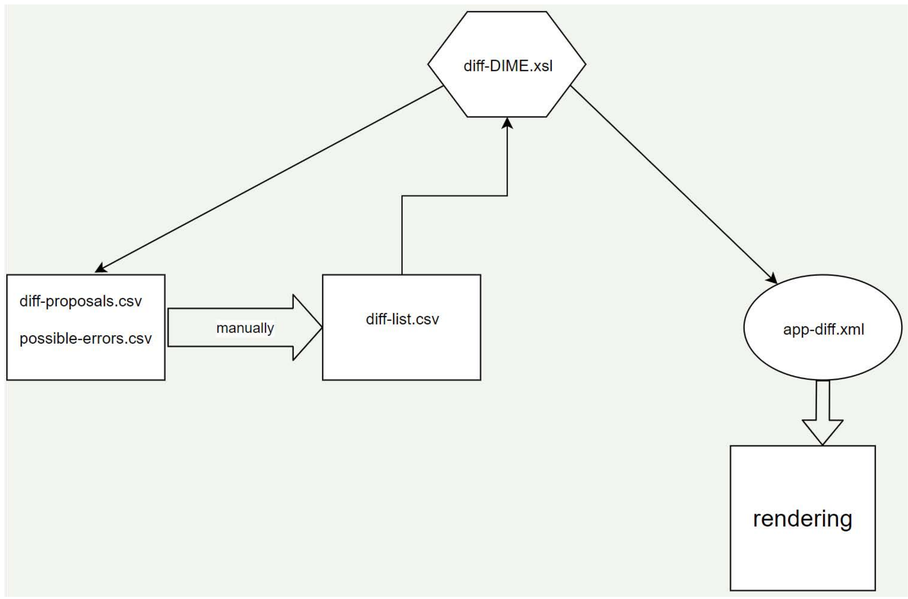

Figure 5: Recognition of differences; a workflow.

The diff-list.csv is transformed into app-diff.xml that lists the elements as alternative readings, enhanced by the information which helps to localize them. This file serves as an input for rendering in the DIME graphic interface MoVi.

1	Reference Text	Alternative Text
2	dmeref_458-002_5494.xml	dmeedtB1_458-002_5494.xml
3	note_2568	note_2568-B1
4	0	slur_1422-B1
5	trill_3114	0

Figure 6: diff-list.csv:
Row 3 contains IDs of the elements which are different in some way;
Rows 4-5 contain IDs of the elements which are present or absent.

```
<appDiff xmlns="http://www.mozarteum.at/ns/dme">
  <appGrp xml:id="ref-B1">
    <app xml:id="app_1">
      <rdg n="1" target="dmeref_458-002_5494.xml#m8_k458_002_02#note_2568"/>
      <rdg n="2" target="dmeedtB1_458-002_5494.xml#m8_k458_002_02-B1#note_2568-B1"/>
    </app>
```

Figure: 7: app-diff.xml: alternative readings.

RENDERING OF THE RESULTS IN MoVi

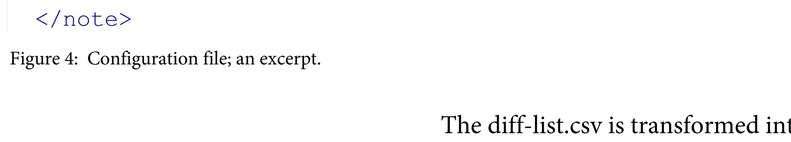

Figure: 8: The grace notes with and without slurs.

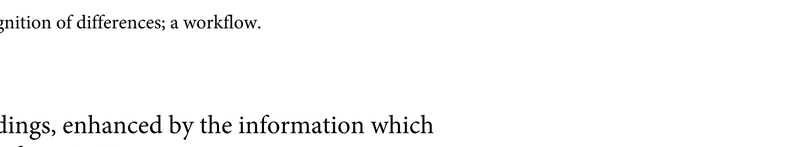

Figure: 9: Accidentals.

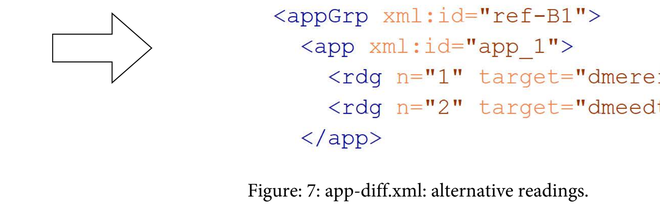

Figure: 10: Dynamics.

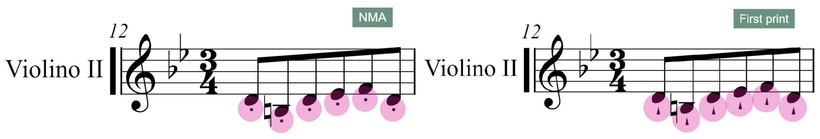

Figure: 11: Articulation.

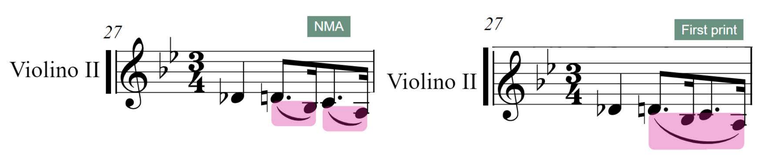

Figure 12: Split / merged slurs.

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