Guideline Documentation for the Digital Text Edition

Within the Project "Corpus Musicae Ottomanicae" (CMO)

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1. Introduction

This document comprises the editorial guidelines for the text edition in a comprised form as far as they are necessary and relevant for the modelling of the TEI/XML templates of the digital edition. The main focus of this document lies on the documentation of the TEI schema and structure. It is based on an internal documentation for the text editors and will continuously be enhanced if there are new requirements either stemming from the daily doing or in case of new manuscripts with their specific structure.

In general, there are two basic TEI content model and templates that originate from the source situation: 1) for manuscripts that have full block text lyrics, and 2) sources with none or underlay only lyrics. Of course, manuscripts themselves may contain a mixture of both types of lyrics represented among a piece, and within a source and between different manuscripts, the representation can be heterogeneous and must be reflected for each piece individually rather than for each manuscript or source type. Therefore, the digital text edition, represents each musical piece and its lyrics in a single TEI file. These comprise of three structural tiers: 1) a skeleton of information, i.e. elements and attribute/value pairs, common in all TEI files, 2) information typical for a specific manuscript, and 3) solutions specific to a single piece or a small group of pieces. A third type of TEI template is used for glossaries defining specific terms from poetry and music, describing the standards used in the CMO project.

The first TEI template was developed for a manuscript with the RISM identifier TR-Iüne 204-2 (CMO identifier NE204) in the source catalog[1], based on its original "printed" edition prepared in the Classical Text Editor (CTE)[2]. This software supports a TEI-styled XML output, which merely breaks up the layout structure and marks it up stylistically rather than semantically. Furthermore, all pieces were summarized in one file. To remedy this deficit, the XSL transformation OsPoT[3] was written originally by Frauke Pirk and Dr. Anna Plaksin, later enhanced and enriched with more information by Dr. Sven Gronemeyer in close collaboration with Dr. Neslihan Demirkol and support by C. Ersin Mıçı (OsPoT2). The TEI template for NE204 is therefore the basis for all other TEI templates and the validation schema, realized in RelaxNG and Schematron.

2. Visual Rendering of Information

The "printed" editions were first prepared and laid out in the CTE and later continued in Microsoft Word for other edited sources. Here, certain standards in the formatting in the Latin transcription of the original writing system (which can either be the Arabic alphabet, the Armenian alphabet, etc.) are used to represent different types of lyrics and other information. These are accordingly translated into TEI, but the visual representation will follow the original as close as possible.

The title as well as the meta information on the piece (both music and text) are regular text of varying font size, visually separated from the lyrics.

The main lyrics (see Appendix 1 for definitions) of poetry are rendered in **bold**.

Terennüm text is provided as regular text, only that in the CTE version of NE204 specifically prepared for the XSL transformation, it was given the font color blue to provide it with a `@rendition` value that the XSL could grasp to transform it.

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[1] https://corpus-musicae-ottomanicae.de/
[2] https://cte.oeaw.ac.at/
[3] https://gitlab.gwdg.de/perspectivia.net/ospot

Performance instructions and other data on the text structure and the like are provided in *italics*.

Content inferred by the editor(s), e.g. missing text or reconstructed information, is given in [square brackets].

3. The TEI Text Edition Templates

The mark-up of the digital text edition of the CMO project largely follows the TEI-P5 guidelines[4], but represents some deviations. Furthermore, as a DFG-funded project, there is a recommendation to use the German Text Archive basic format (DTABf)[5]. As this repository is for German texts from the 16th century onwards, it is largely unsuited for the critical edition of sung Ottoman poetry, but at least some mark-up in the TEI header and the body could be used. However, one must also keep in mind that the text edition is a critical edition and the TEI template is not designed to represent the original handwritten source, but more to represent the "printed" edition.

Within the TEI documents, several modules are used along certain core elements and structures:

- Verse (VE),
- Critical Apparatus (CA),
- Dictionaries (DI).

The latter is only used in relation to the glossaries and will be discussed in a separate section apart from the text edition of the sung poetry.

The structure of a TEI file will be provided in exemplary code with inline information, individual content, attributes and values in their specific use contexts will provide a more granular level of detail. In case inline comments are given, the code they refer to always follows them. The example code, if based on a real example, will always include `@source` in `tei:egXML` and indicate the source by the CMO identifier (e.g. NE204) and the piece number, e.g. `tei:egXML[@source="#NE204pc49"]`, if applicable.

3.1. Metadata

All metadata relevant to the digital text edition of a piece are recorded in `tei:teiHeader` and comprise of the following information:

- Title with information on poetic and musical parameters
- Original authors and modern editors
- Information on the digital edition and the whole series
- Related original sources with bibliographic information
- Application and version information
- Project description
- Metrical declarations

The TEI header comprises of the following child elements:

- `tei:fileDesc`
- `tei:encodingDesc`

```xml
<egXML>
   <teiHeader>
      <fileDesc>[Bibliographic information on the digital edition and the sources]
      </fileDesc>
      <encodingDesc>[Technical information, project description and declarations]
      </encodingDesc>
   </teiHeader>
</egXML>
```

3.1.1. Bibliographic Information (tei:fileDesc)

The following elements are used in this section:

- `tei:titleStmt`
- `tei:editionStmt`
- `tei:publicationStmt`
- `tei:seriesStmt`
- `tei:sourceDesc`

The basic structure of the file description is:

```xml
<egXML>
   <fileDesc>
      <titleStmt>[Title information, parameters, and authors/editors of a piece]
      </titleStmt>
      <editionStmt>[Type of edition]
      </editionStmt>
      <publicationStmt>[Specifics of edition]
      </publicationStmt >
      <seriesStmt>[Specifics of the series the edition is part of]
      </seriesStmt >
      <sourceDesc>[Information of sources related to the edited piece]
      </sourceDesc>
   </fileDesc>
</egXML>
```

3.1.1.1. General Title Information (tei:titleStmt)

The following elements are used in this section:

- `tei:title`
- `tei:note`
- `tei:idno`
- `tei:ref`
- `tei:supplied`
- `tei:author`
- `tei:editor`
- `tei:persName`

In `tei:titleStmt`, general metadata related to the title are recorded. This includes information normally written down in the original, such as the title, the *makâm*, and *usûl*; as well as other musical and lyrical parameters. This information is grouped as one title, as there may be pieces with the same title written in the original source, but with different lyrics. The author(s) of the original piece and the editor(s) having created the current (digital) edition are complementing information. Not all of the information needs to be given, as may not be written or not reconstructable.

```xml
<egXML>
  <titleStmt>
    <title type="desc">
      <title type="titleTranscription" xml:lang="[ISO_639-3]">[Title]</title>
      <note type="genreTranscription" xml:lang="[ISO_639-3]">
        <ref target="[URL]">[Genre]</ref>
      </note>
      <note type="makamTranscription" xml:lang="[ISO_639-3]">[Makâm]</note>
      <!-- Option 1: The usûl is written down in source. -->
      <note type="usulTranscription" xml:lang="[ISO_639-3]">
        <ref target="[URL]">[Usûl]</ref>
      </note>
      <!-- Option 2: The usûl is incorrect or absent from source. -->
      <note type="usulStandardized" xml:lang="[ISO_639-3]">
        <ref target="[URL]">
          <supplied reason="provided-by-editor" cert="[0-1]"
          resp="#[ID]">[Usûl]</supplied>
        </ref>
      </note>
      <!-- Deletable. -->
      <note type="poeticForm" xml:lang="[ISO_639-3]">
        <ref target="[URL]">
          <supplied reason="provided-by-editor" cert="[0-1]"
          resp="#[ID]">[Poetic form]</supplied>
        </ref>
      </note>
      <!-- Deletable. -->
      <note type="poeticGenre" xml:lang="[ISO_639-3]">
        <ref target="[URL]">
          <supplied reason="provided-by-editor" cert="[0-1]"
          resp="#[ID]">[Poetic genre]</supplied>
        </ref>
      </note>
      <!-- Repeatable together with the following element. -->
      <note type="bahir" xml:lang="[ISO_639-3]" corresp="#[ID]">
        <ref target="[URL]">
          <supplied reason="provided-by-editor" cert="[0-1]"
          resp="#[ID]">[Bahir]</supplied>
        </ref>
      </note>
      <note type="meter" xml:lang="[ISO_639-3]" corresp="#[ID{1,4}]">
        <supplied reason="provided-by-editor" cert="[0-1]"
        resp="#[ID]">[Feet, 1-4 times]</supplied>
      </note>
      <idno>[RISM ID, piece and page number]</idno>
    </title>
    <!-- Repeatable. -->
    <author role="[role]" cert="[0-1]" resp="#[ID]">
      <persName ref="[URL]">[Name]</persName>
    </author>
    <!-- Repeatable. -->
    <editor role="[role]" corresp="#[ID]">[Name]</editor>
  </titleStmt>
</egXML>
```

The title of the piece itself, as identified as such in the source, together with its other parameters, is grouped in a `tei:titleStmt/tei:title[@type="desc"]` element, as the parameters describe the title, which may not be unique in the sources.

The title itself usually precedes a piece (whether it is given in block and/or underlay lyrics) and is always provided in a transcribed form: `tei:title[@type="titleTranscription"]`. Apart from the writing system used (e.g. Ottoman Turkish in Arabic, Armenian, Greek, or Hebrew alphabets), the language is also specified by `@xml:lang` and a three-letter code following ISO 639-3 and is usually "`ota`" for "**Ot**tom**a**n Turkish", also in all other elements within `tei:title[@type="desc"]`.

```
<egXML source="#NE204pc49">
   <title type="titleTranscription" xml:lang="ota"> Beste çenber İsaḳ</title>
</egXML>
```

The musical genre is usually part of the title and is added in a transcribed form via a `tei:note[@type="genreTranscription"]` element. It includes a `tei:ref` element to provide a link to a glossary file explaining the characteristics of the musical genre as defined by the project.

```
<egXML source="#NE204pc49">
   <note type="genreTranscription" xml:lang="ota">
      <ref target="genreGlossary#beste">Beste</ref>
   </note>
</egXML>
```

The *makâm* (basic melodic mode) or at least the *makâm* group (*fasıl*) usually accompanies the title and is provided by `tei:note[@type="makamTranscription"]`. Since the *makâm* is a very fluid concept, it is not provided with a specific glossary.

```
<egXML source="#NE204pc49">
   <note type="makamTranscription" xml:lang="ota">Dil-keş Ḥāverān</note>
</egXML>
```

The *usûl* (underlying rhythmic cycle) is normally also provided within the title and can therefore be provided in transcription by `tei:note[@type="usulTranscription"]`. Although the *usûl* may have underwent changes in its beat patterns, these can be defined, hence a link to a glossary is provided by `tei:ref`.

```
<egXML source="#NE204pc49">
   <note type="usulTranscription" xml:lang="ota">
      <ref target="usulGlossary#cenber">Çenber</ref>
   </note>
</egXML>
```

In a few instances, the *usûl* noted by the scribe does not actually fit the *usûl* that has been inferred by the music editor from the notation, or it is not explicitly stated in the title. In this case, a `tei:supplied` element with `@reason="provided-by-editor"` is inserted. The confidence in the reconstruction is the value given for `@cert` (see Appendix 1), and the responsible editor is given by his/her two-letter ID with `@resp` (see the IDs in `tei:seriesStmt/tei:respStmt` below), in the current example **C**. Ersin **M**ıçı.

```
<egXML source="#NE204pc144">
   <title type="titleTranscription" xml:lang="ota">Semāʿī Ḥāfız Rifʿat</title>
   <note type="usulStandardized" xml:lang="ota">
      <ref target="usulGlossary.xml#semai">
         <supplied reason="provided-by-editor" cert="1" resp="#CM">Aksak
         semâî</supplied>
      </ref>
   </note>
</egXML>
```

The poetic form and genre can only sometimes be inferred by the text editor (in the example below **N**eslihan **D**emirkol), therefore the respective `tei:note` elements can be deleted if this is not the case and therefore the information is always marked with a `tei:supplied` element. As the poetic form and genre are based on common terms, they can be linked with `tei:ref` to a glossary. The attributes and values are the same as with the other elements of the same structure.

```
<egXML source="#NE204pc78">
   <note type="poeticForm" xml:lang="ota">
      <ref target="poeticGlossary.xml#gazel">
         <supplied reason="provided-by-editor" cert="1" resp="#ND">Gazel</supplied>
      </ref>
   </note>
</egXML>
```

Information on the prosodic structure is encoded in two `tei:note` elements with `@type="bahir"` and `@type="meter"`. The *bahir* is historically the standard prosodic meter that consists of three or four feet of one to five short or long syllables. However, especially in Ottoman classical poetry, they serve to categorize *vezin*s (fixed meter patterns). Each *vezin* is indicated here by numbers following the name of the *bahir*, e.g. *Hezec* 1, *Hezec* 2, etc. All feet are traditionally represented by mnemonic words called *tef'ile* that correlate with the distribution of short and long syllables, e.g. *fâ'ilâtün, fâ'ilün, mef'ûlü, müstef'ilün*.

Each individual *vezin* and its consisting feet are defined by `tei:metSym` elements within the `tei:encodingDesc` (see Section 3.1.2.6 below). Their canonical pattern is referred to by the value of the respective `@corresp` attribute and the corresponding text refers to the *bahir* and provides the feet structure.

```
<egXML source="#NE204pc49">
   <note type="bahir" xml:lang="ota" corresp="#remel2">
      <ref target="bahirGlossary.xml#remel">
         <supplied reason="provided-by-editor" cert="1" resp="#ND">Remel</supplied>
      </ref>
   </note>
   <note type="meter" xml:lang="ota" corresp="#feilatun #feilatun #feilatun
   #feilun">
      <supplied reason="provided-by-editor" cert="1" resp="#ND">Fe'ilâtün /
      fe'ilâtün / fe'ilâtün / fe'ilün</supplied>
   </note>
</egXML>
```

The last element in `tei:title[@type="desc"]` specifies the piece by its RISM[6] identifier, the piece number in the source, and the page number the lyrics are located on.

```
<egXML source="#NE204pc49">
   <idno>TR-Iüne 204-2, Piece no. 49, Ms. page no. 65</idno>
</egXML>
```

Following the title information, the original author(s) is/are provided. This is an optional and repeatable element. In virtually all cases, at least the composer of a piece is known, but not always the lyricist(s). Together with the `tei:author` element, the contribution of an individual is specified by the `@role` attribute, and the confidence that the person named is the one that actually created the music or the lyrics is given by `@cert` (see Appendix 1). In the example below, the lyricist has `@cert="0.5"`, because Hâmî could either refer to the individual Hâmî Ahmed Âmidî (considered as more likely) by the editor(s), or Mehmed Kâmî Efendi. The editor responsible for the attribution is again given by her/his ID as the value of `@resp`.

The standardized name itself is contained in a `tei:persName` element and in case the individual of this name has a record in the CMO source catalogue, it is linked via `@ref`. In this way, each contributor to an original piece can be represented with individual vagueness.

```xml
<egXML source="#NE204pc49">
   <author role="composer" cert="1" resp="#ND">
      <persName ref="https://corpus-musicae-ottomanicae.de/receive/
      cmo_person_00000292">Tanbûrî İsak</persName>
   </author>
   <author role="lyricist" cert="0.5" resp="#ND">
      <persName ref="https://corpus-musicae-ottomanicae.de/receive/
      cmo_person_00000081">Hâmî</persName>
   </author>
</egXML>
```

Finally, the editor(s), who created and participated in the edition of the text (not necessarily the digital edition), are provided by the `tei:editor` element with their share in the edition specified by `@role`. The list is semi-open and can be enhanced on an individual basis. Using `@corresp`, the editor(s) involved, as long as they are/were members of the project team, are referred to by their ID, linking to a more detailed record in `tei:seriesStmt/tei:respStmt`. Otherwise, third-party persons are simply provided with their kind of participation. In the example below, Saeedeh Setayesh supported this individual piece in terms of Persian lyrics only.

```xml
<egXML source="#NE204pc78">
   <editor role="author" corresp="#ND">Dr. Neslihan Demirkol</editor>
   <editor role="contributor" corresp="#MS">Dr. Malek Sharif</editor>
   <editor role="contributor">Saeedeh Setayesh</editor>
</egXML>
```

3.1.1.2. Editorial Information (tei:editionStmt)

The following elements are used in this section:

- `tei:edition`
- `tei:funder`
- `tei:sponsor`
- `tei:respStmt`
- `tei:resp`
- `tei:name`
- `tei:persName`
- `tei:affiliation`

In `tei:editionStmt`, general metadata related to the text edition itself is recorded. This includes the institutional bodies involved, the actual editors, their affiliations, and references to norm data on the persons involved. For each manuscript and edition, this is static content, unless a revised version or a new text-critical edition will be created.

```xml
<egXML>
   <editionStmt>
      <edition>[Edition]</edition>
      <!-- Repeatable. -->
      <funder ref="[URL]">[Name of body]</funder>
      <!-- Repeatable. -->
      <sponsor ref="[URL]">[Name of body]</sponsor>
      <respStmt>
         <resp key="ged">General Editor</resp>
         <!-- Repeatable. -->
         <name>
            <persName corresp="#[ID]" ref="[URL]">[Name]</persName>
            <affiliation>[Name of body]</affiliation>
         </name>
      </respStmt>
      <respStmt>
         <resp key="edi">Editors</resp>
```

```
        <!-- Repeatable. -->
        <name>
            <!-- Option 1: Current team member. -->
            <persName corresp="#[ID]" ref="[URL]">[Name]</persName>
            <!-- Option 2: Former team member. -->
            <persName xml:id="[ID]" ref="[URL]">[Name]</persName>
        </name>
    </respStmt>
  </editionStmt>
</egXML>
```

The `tei:edition` element contains information on the number of the edition, and will usually be the first one.

```
<egXML source="#NE204">
    <edition>First Edition</edition>
</egXML>
```

The next two elements name institutional bodies supporting the project with funding and providing the authority and infrastructure. Both `tei:funder` and `tei:sponsor` are linked with `@ref` to their respective websites.

```
<egXML source="#NE204">
    <funder ref="https://www.dfg.de">Deutsche Forschungsgemeinschaft</funder>
    <sponsor ref="https://www.wwu.de">Westfälische Wilhelms-Universität
    Münster</sponsor>
</egXML>
```

The first `tei:respStmt` element contains information about the general editor(s), realised by `tei:resp`. The kind of responsibility is recorded in the `@key` attribute, with a three-letter code that follows the MARC code list for relators[7] that is generally used throughout the TEI templates with `@key`. Each individual is provided with their name and affiliation, realised as `tei:name/tei:persName` and `tei:name/tei:affiliation`.

The `tei:persName` element may take two elements, `@corresp` with an ID referred to in `tei:seriesStmt/tei:respStmt`, as the general editor(s) are always current team members. Via `@ref`, linking to a norm data repository, preferably the GND, is established.

```
<egXML source="#NE204">
    <respStmt>
        <resp key="ged">General Editor</resp>
        <name>
            <persName corresp="#RJ" ref="https://explore.gnd.network/gnd/122654099">
            Prof. Dr. Ralf Martin Jäger</persName>
            <affiliation>Westfälische Wilhelms-Universität Münster</affiliation>
        </name>
    </respStmt>
</egXML>
```

The second `tei:respStmt` element contains information about the text editors who are/were involved in the present text edition. The general structure follows the first `tei:respStmt` element, except that the editors are not given with their affiliation here. Current team members are still referred to with `@corresp` and their ID to detailed information in `tei:seriesStmt/tei:respStmt`. A former team member who cannot be part of the `tei:seriesStmt`, will have their ID related to `@xml:id` here as the end point of referencing from other elements (e.g. `tei:editor[@corresp]`).

```
<egXML source="#NE204">
    <respStmt>
        <resp key="edi">Editors</resp>
```

---

[7] https://www.loc.gov/marc/relators/relaterm.html

```
        <name>
            <persName corresp="#ND" ref="https://orcid.org/0000-0002-8602-1704">
            Dr. Neslihan Demirkol</persName>
        </name>
        <name>
            <persName xml:id="MS" ref="https://explore.gnd.network/gnd/106049969X">
            Dr. Malek Sharif</persName>
        </name>
    </respStmt>
</egXML>
```

3.1.1.3. Publication Information (tei:publicationStmt)

The following elements are used in this section:

- `tei:publisher`
- `tei:distributor`
- `tei:date`
- `tei:pubPlace`
- `tei:availability`
- `tei:licence`

In `tei:publicationStmt`, information about the institutional bodies involved in the publication and the dissemination of the digital edition as well as its license and year and place of publication are recorded. For each manuscript and edition, this is static content.

```
<egXML>
    <publicationStmt>
        <!-- Repeatable. -->
        <publisher>[Publisher]</publisher>
        <!-- Repeatable. -->
        <distributor>[Website]</distributor>
        <date>[Year]</date>
        <pubPlace>[Place]</pubPlace>
        <availability>
            <licence target="[URL]">[Licence]</licence>
        </availability>
    </publicationStmt>
</egXML>
```

Except for `tei:date`, all information in this section is likely to be the same for all editions, although policies may change for the licensing.

```
<egXML source="#NE204">
    <publicationStmt>
        <publisher>Corpus Musicae Ottomanicae</publisher>
        <distributor>perspectivia.net – Die Publikationsplattform der Max Weber
        Stiftung</distributor>
        <date>2021</date>
        <pubPlace>online</pubPlace>
        <availability>
            <licence target=" http://creativecommons.org/licenses/by-nc-sa/4.0/
            deed.en"> Licence: Attribution-NonCommercial-ShareAlike 4.0 International
            (CC BY-NC-SA 4.0)</licence>
        </availability>
    </publicationStmt>
</egXML>
```

3.1.1.4. Series Information (tei:seriesStmt)

The following elements are used in this section:

- `tei.title`
- `tei:respStmt`
- `tei:resp`
- `tei:name`
- `tei:orgName`
- `tei:persName`
- `tei:affiliation`
- `tei:idno`

In the `tei:seriesStmt`, all institutional bodies and the individuals belonging to them that are responsible for the digital editions as a whole are listed. The whole series receives a title and an institutional editor, and persons in certain roles. The project includes every current team member at the point of creation, independent from the role or organisational affiliation or the individual contribution to the series as a whole.

```xml
<egXML>
   <seriesStmt>
      <title>Corpus Musicae Ottomanicae</title>
      <respStmt>
         <resp key="edc">Editor of Digital Corpus</resp>
         <name xml:id="CMO">
            <orgName xml:lang="en">Corpus Musicae Ottomanicae, Research Center of
            the German Research Foundation at the University of Münster, Institute
            of Musicology.</orgName>
         </name>
      </respStmt>
      <respStmt>
         <resp key="oth">Cooperation Partners</resp>
         <!-- Repeatable. -->
         <name xml:id="[ID]">
            <orgName>[Name]</orgName>
            <!-- Repeatable or deletable. -->
            <idno xml:base="[URL]" type="[Repository]">[ID]</idno>
         </name>
      </respStmt>
      <respStmt>
         <resp key="pdr">Project Director</resp>
         <!-- Repeatable. -->
         <name xml:id="[ID]">
            <persName>[Name]</persName>
            <affiliation corresp="#CMO"/>
            <!-- Repeatable or deletable. -->
            <affiliation>[Name]</affiliation>
            <!-- Deletable. -->
            <idno xml:base="[URL]" type="[Repository]">[ID]</idno>
         </name>
      </respStmt>
      <respStmt>
         <resp key="[MARC_Relator_Code]">[Role]</resp>
         <name xml:id="[ID]">
            <persName>[Name]</persName>
            <affiliation corresp="#[ID]"/>
            <!-- Repeatable or deletable. -->
            <affiliation>[Name]</affiliation>
            <!-- Repeatable or deletable. -->
            <idno xml:base="[URL]" type="[Repository]">[ID]</idno>
         </name>
      </respStmt>
   </seriesStmt>
</egXML>
```

The `tei:title` and first `tei:respStmt` with all its children will remain stable throughout the editions, as will the respective `tei:resp[@key]` and content in the next two `tei:respStmt`.

With the current cooperation partners and project director, an edition looks like the following example. Institutional bodies will also receive their own `@xml:id` with a three-letter value, so team members can be attributed to their respective institutions. Whenever an organization or individual has a record of norm data, it is linked with the `tei:idno` element, where the base URL is provided by `@xml:base` and the name of the repository, preferably the GND and/or ORCID, in abbreviated form with `@type`. The ID of the norm data is provided as content.

```xml
<egXML source="#NE204">
   <respStmt>
      <resp key="oth">Cooperation Partners</resp>
      <name xml:id="MWS">
         <orgName>Max Weber Stiftung</orgName>
         <idno xml:base="https://explore.gnd.network/gnd/" type="GND">
         1028661126</idno>
      </name>
      <name xml:id="OII">
         <orgName>Orient-Institut Istanbul</orgName>
      </name>
   </respStmt>
   <respStmt>
      <resp key="pdr">Project Director</resp>
      <name xml:id="RJ">
         <persName>Ralf Martin Jäger</persName>
         <affiliation corresp="#CMO"/>
         <idno xml:base="https://explore.gnd.network/gnd/" type="GND">
         122654099</idno>
      </name>
   </respStmt>
</egXML>
```

A multitude of different elements with a name looks for example like the following entry.

```xml
<egXML source="#NE204">
   <name xml:id="SG">
      <persName>Sven Gronemeyer</persName>
      <affiliation corresp="#MWS"/>
      <affiliation>La Trobe University, Melbourne</affiliation>
      <idno xml:base="https://explore.gnd.network/gnd/" type="GND">
      1155600487</idno>
      <idno xml:base="https://orcid.org/" type="ORCID">0000-0002-9066-0461</idno>
   </name>
</egXML>
```

3.1.1.5. Related Sources (tei:sourceDesc)

The following elements are used in this section:

- `tei:listWit`
- `tei:witness`
- `tei:idno`
- `tei:biblFull`
- `tei:fileDesc`
- `tei:titleStmt`
- `tei:title`
- `tei:respStmt`
- `tei:resp`
- `tei:orgName`
- `tei:author`
- `tei:editor`

- `tei:persName`
- `tei:publicationStmt`
- `tei:ab`
- `tei:publisher`
- `tei:pubPlace`
- `tei:geogName`
- `tei:date`
- `tei:notesStmt`
- `tei:note`
- `tei:sourceDesc`
- `tei:bibl`
- `tei:ref`
- `tei:profileDesc`
- `tei:creation`
- `tei:textClass`
- `tei:keywords`
- `tei:term`
- `tei:langUsage`
- `tei:language`
- `tei:msDesc`
- `tei:msIdentifier`
- `tei:country`
- `tei:settlement`
- `tei:repository`
- `tei:collection`
- `tei:msContents`
- `tei:summary`
- `tei:history`
- `tei:p`

In the `tei:sourceDesc` section, all individual sources related to the piece are listed with their bibliographic information. The first in `tei:sourceDesc` is always dedicated to the source where the current piece appears. Then all other sources mentioned in the critical apparatus are listed. The information is congruent with those stored in the CMO source catalogue and originates from it. For manuscript TR-Iüne 204-2, the information is automatically retrieved by the OsPoT2 framework from the source catalogue and is mapped from the FRBR module in MEI to TEI. Not all information is always given with any source (e.g. a manuscript has no publisher), so a hypothetic full record would have the following structure.

```xml
<egXML>
  <sourceDesc>
    <listWit>
      <!-- Repeatable. -->
      <witness xml:id="[ID]">
        <!-- Repeatable. -->
        <idno type="[Code]">[Siglum]</idno>
        <biblFull>
          <fileDesc>
            <titleStmt>
              <!-- May be empty. -->
              <title type="[Value]" xml:lang="[ISO_639]">[Title]</title>
              <!-- Repeatable or deletable. -->
```

```xml
            <respStmt>
               <resp>[Printer, Sponsor, or Funder]</resp>
               <!-- Option1: Individual. -->
               <persName>[Name]</persName>
               <!-- Option 2: Institutional body. -->
               <orgName>[Name]</orgName>
            </respStmt>
            <!-- Deletable. -->
            <editor>
               <persName key="[ID]" ref="[URL]">[Name]</persName>
            </editor>
            <!-- May be empty. -->
            <author/>
         </titleStmt>
         <!-- May be void, with the use of empty tei:ab instead. -->
         <publicationStmt>
            <!-- May be empty. -->
            <publisher>[Name]</publisher>
            <pubPlace>
               <geogName>[Name]</geogName>
            </pubPlace>
            <!-- Option 1: Precise data range. -->
            <date from="[Date]" to="[Date]"
            calendar="#[Type]">[Date]</date>
            <!-- Option 2: Vague data range. -->
            <date notBefore="[Date]" notAfter="[Date]"
            calendar="#[Type]">[Date]</date>
         </publicationStmt>
         <notesStmt>
            <note type="[Value]">[Text]</note>
         </notesStmt>
         <sourceDesc>
            <bibl>Source description originates from CMO Source Catalogue:
               <ref type="uri">[URL]</ref>.
            </bibl>
         </sourceDesc>
      </fileDesc>
      <profileDesc>
         <!-- Deletable. -->
         <creation>
            <date from="[Date]" to="[Date]"
            calendar="#[Type]">[Date]</date>
         </creation>
         <textClass>
            <keywords>
               <!-- Repeatable or deletable. -->
               <term target="[URL]" type="[Data_Type]">[Term]</term>
            </keywords>
         </textClass>
         <langUsage>
            <!-- Repeatable. -->
            <language ident="[ISO_639-3-ISO_15924]">[Language
            description]</language>
         </langUsage>
      </profileDesc>
   </biblFull>
   <!-- Deletable. -->
   <msDesc>
      <msIdentifier>
         <country>[Name]</country>
         <!-- Deletable. -->
         <settlement>[Name]</settlement>
         <!-- Deletable. -->
         <repository>[Name]</repository>
         <!-- Deletable. -->
         <collection>[Name]</collection>
         <!-- Deletable. -->
         <idno>[Shelfmark]</idno>
      </msIdentifier>
      <msContents>
```

```
                <summary>[Text]</summary>
            </msContents>
            <history>
                <p>[Origination, Creation]<geogName>[Name]</geogName>
                    <date from="[Date]" to="[Date]"
                    calendar="#[Type]">[Date]</date>
                </p>
            </history>
        </msDesc>
    </witness>
    </listWit>
    </sourceDesc>
</egXML>
```

In the `tei:listWit` element, there can be as many individual `tei:witness` elements as required for the critical apparatus, at least one representing the source of the edited piece itself. Each source represented by `tei:witness` has an entry in the source catalogue, of which the unique identifier from the URL is used as the value of `@xml:id`. Each source also has at least one denominator, realized by `tei:idno[@type]`: the one given by the CMO project itself, and eventually the one provided by RISM, otherwise, there will be an empty element `<idno type="RISM"/>`.

```
<egXML source="#NE204">
    <witness xml:id="cmo_source_00000030">
        <idno type="CMO">NE204</idno>
        <idno type="RISM">TR-Iüne 204-2</idno>
        <biblFull>
            <fileDesc>
                <titleStmt>
                    <title/>
                </titleStmt>
                <publicationStmt>
                    <ab/>
                </publicationStmt>
                <sourceDesc>
                    <bibl/>
                </sourceDesc>
            </fileDesc>
            <profileDesc/>
        </biblFull>
    </witness>
</egXML>
```

The bibliographic information in `tei:bibFull` follow the structure known from the TEI header with `tei:fileDesc` and `tei:titleStmt`, `tei:publicationStmt`, and `tei:sourceDesc` included.

The `tei:titleStmt` lists all information about the titles of a source and the responsible individuals or institutional bodies involved in their creation. For the text edition of NE204, no sources have yet been included for which a funding or sponsoring person is named or known. A source usually has a main title, with alternative titles or sub-titles possible, realized by `tei:title[@type]`, written in a specific language, realized either by the ISO 639-1 two-letter or ISO 639-3 three-letter code, with `@xml:lang` being optional.

```
<egXML source="#TMKlii">
    <title xml:lang="ota" type="main">Dārüʾl-elḥān küllīyātı</title>
    <title xml:lang="tr" type="sub">Türk Musikisinin klasikleri</title>
</egXML>
```

In case a printed source is referred to, the printer(s) may be provided by a `tei:respStmt` element, if known.

```
<egXML source="#TMKlii">
    <respStmt>
        <resp>Printer</resp>
```

```
        <orgName>Maṭbaʿa-yı ʿOs̠mānīye</orgName>
    </respStmt>
</egXML>
```

A printed source may also name the editor who compiled a song collection. The personal name is enclosed by `tei:persName` with `@key` identifying the person by its identifier in the source catalogue and linking to the record by `@ref`.

```
<egXML source="#HB1">
    <editor>
        <persName key="cmo_person_00000137"
        ref="https://corpus-musicae-ottomanicae.de/receive/
        cmo_person_00000137">Hâşim Bey
        </persName>
    </editor>
</egXML>
```

The following `tei:publicationStmt` is only in use for printed sources and names the publishing house with `tei:publisher` and/or the place of publication with `tei:pubPlace` and identifies it as a geographical entity by `tei:geogName`.

```
<egXML source="#TMKlii">
    <publicationStmt>
        <publisher>İstanbul Konservatuvarı Neşriyatı</publisher>
            <pubPlace>
                <geogName>Istanbul</geogName>
            </pubPlace>
    </publicationStmt>
<egXML>
```

In case no information on the publisher can be given, whether it is unknown or not applicable in the case of a handwritten source (as `tei:publicationStmt` is mandatory within `tei:fileDesc`), it is provided empty.

```
<egXML source="#NE204">
    <publicationStmt>
        <ab/>
    </publicationStmt>
<egXML>
```

Additional information on the publication itself is summarized in the `tei:notesStmt` element. Here may be contained additional or explanatory information on the publication itself, its dating, or the people involved in the publication process, realized and specified by `tei:note[@type]`.

```
<egXML source="#TMKlii">
    <notesStmt>
        <note type="publicationInformation">Published in 180 fascicles. No publisher
        given for fascicles 1-120 [...]</note>
        <note type="persons-institutions">Fascicles 1-120 are edited under the
        supervision of a Scientific Committee from the Dārü l-elḥān [...]</note>
    </notesStmt>
<egXML>
<egXML source="#B1578">
    <notesStmt>
        <note type="other">The title is transcribed mistakenly as 'Maǧmūʿa-i mūsiqī'
        in the online catalogue of the holding library.</note>
        <note type="date">The date is given as 19th century by the holding
        library.</note>
    </notesStmt>
<egXML>
```

In `tei:sourceDesc`, there are only two nested elements that provide bibliographical information on where the information originates from (the source catalogue) and where the original information is located, providing the link.

```xml
<egXML source="#NE204">
   <sourceDesc>
      <bibl>Source description originates from CMO Source Catalogue:
         <ref type="uri">https://corpus-musicae-ottomanicae.de/receive/
         cmo_source_00000030</ref>.
      </bibl>
   </sourceDesc>
<egXML>
```

3.1.2. Encoding Information (tei:encodingDesc)

The following elements are used in this section:

- `tei:variantEncoding`
- `tei:appInfo`
- `tei:projectDesc`
- `tei:editorialDecl`
- `tei:tagsDecl`
- `tei:metDecl`

The basic structure of the encoding description is:

```xml
<egXML>
   <encodingDesc>
      <variantEncoding>[Information on type and structure of critical apparatus]
      </variantEncoding>
      <!-- Repeatable. -->
      <appInfo>[Multilingual information on the creation of the TEI source]
      </appInfo>
      <!-- Repeatable. -->
      <projectDesc>[Multilingual information on the project's scope]
      </projectDesc>
      <!-- Repeatable. -->
      <editorialDecl>[Multilingual reference to the editorial guidelines]
      </editorialDecl>
      <tagsDecl>[Information on custom elements]
      </tagsDecl>
      <!-- Repeatable. -->
      <metDecl>[Information on metrical patterns]
      </metDecl>
   </encodingDesc>
</egXML>
```

3.1.2.1. Type of Critical Apparatus (tei:variantEncoding)

The following elements are used in this section: none. No further elements are used within `tei:variantEncoding`, as this is a single self-closed element.

```xml
<egXML>
   <variantEncoding method="double-end-point" location="external"/>
<egXML>
```

Per default, the critical apparatus is encoded with `@method="double-end-point"` which means that the "apparatus indicates the precise locations of the beginning and ending of each lemma relative to a base text."[8] Therefore, the apparatus will always be separated from the base text, as indicated by `@location="external"`.

---

[8] https://tei-c.org/release/doc/tei-p5-doc/en/html/ref-variantEncoding.html.

3.1.2.2. Application Usage to Create TEI files (tei:appInfo)

The following elements are used in this section:

- `tei:application`
- `tei:label`
- `tei:p`
- `tei:ref`
- `tei:persName`

The `tei:appInfo` sections detail information about the application(s) involved in the creation, the editing of the individual TEI document, and the persons and institutions involved. Each piece of information is repeated in one of the three project languages, English, German, and Turkish by the `@xml:lang` attribute.

```xml
<egXML>
   <appInfo xml:lang="[ISO_639-1]">
      <application version="[Integer]" ident="[String]" when="[ISO_8601]">
         <label>[Short explanation on application]</label>
         <!-- Repeatable. -->
         <p>[Detailed information on application with tei:ref and tei:persName]
         </p>
      </application>
   </appInfo>
<egXML>
```

The `tei:application` element has three attributes. With `@version`, the versioning of the current TEI document using the named application is provided as an integer. The `@ident` attribute contains information on the creation of the current document and finally, the creation point of time following the ISO 8601 format is recorded with `@when="yyyy-mm-ddThh:mm:ss.000+02:00"`. Nested are `tei:label` to provide a concise summary of how the current document was created and the software involved, and `tei:p` provides detailed information and can appear 1+n times, containing `tei:ref` and `tei:persName`, when needed.

```xml
<egXML source="#NE204">
   <appInfo xml:lang="en">
      <application version="1" ident="splitted"
      when="2022-10-18T10:42:35.367+02:00">
         <label>Splitted document created by the OsPoT transformation routine
         from CTE to TEI.
         </label>
         <p>This file is the result of a TEI transformation from XML output of the
            <ref target="https://cte.oeaw.ac.at/">Classical Text Editor</ref>
         (CTE) created by the
            <ref target="https://gitlab.gwdg.de/perspectivia.net/ospot">OsPoT
            Framework</ref>.
          The modelling is based on the
             <ref target="https://www.tei-c.org/release/doc/tei-p5-doc/en/html/
             VE.html">verse section of the TEI Guidelines</ref>.
         </p>
         <p>The transformation was created by
            <persName ref="https://explore.gnd.network/gnd/1229022201">Dr. Anna
            Plaksin</persName>
         and
            <persName ref="https://orcid.org/0000-0001-8640-0213">Frauke
            Pirk</persName>
         and was enhanced by
            <persName corresp="#SG">Dr. Sven Gronemeyer</persName>.
         </p>
         <p>Further information on the transformation is available in the
            <ref target="https://www.uni-muenster.de/CMO-Edition/en/publikationen/
            publikationen.html">editorial commentary</ref>.
```

```
        </p>
        <p>The metadata was retrieved from the project´s own
            <ref target="https://corpus-musicae-ottomanicae.de/content/
            index.xml">source catalogue and publication platform</ref>.
        </p>
    </application>
  </appInfo>
<egXML>
```

The above information is the standard `tei:appInfo` content for the digital edition of manuscript NE204. As stated in the introduction, the individual TEI documents are the result of an XSL transformation from a TEI-styled XML output from the Classical Text Editor with the lyrics for all pieces in one file. The transformation to produce the final TEI documents was run once, hence the version number is always `@version="1"`. As the individual document creation was done by extracting individual pieces from a single file, there is always `@ident="splitted"`. The timestamp for `@when` is automatically created based on the time settings of the computer where the OsPoT2 framework was executed. In general, seconds and milliseconds will always be recoded with "0" values, while the time zone is either "+02:00" for CEST or "+01:00" for CET.

The rest of the information concerns the availability of the OsPoT framework with a link to the Git repository, the people involved in its development (with norm data), and also references to the CMO project website, especially to indicate the source of the metadata given in the `tei:sourceDesc` section.

3.1.2.3. Description of the Project (tei:projectDesc)

The following elements are used in this section:

- `tei:p`
- `tei:ref`

The `tei:projectDesc` sections elaborate in brief on the CMO structure, objectives, and details links for further information. Each piece of information is repeated in one of the three project languages, English, German, and Turkish by the `@xml:lang` attribute.

```
<egXML>
    <projectDesc xml:lang="[ISO_639-1]">
        <!-- Repeatable. -->
        <p>[Detailed information on project with tei:ref]
        </p>
    </projectDesc>
<egXML>
```

The `tei:p` element provides detailed information on the project and can appear 1+n times, containing `tei:ref` when needed.

```
<egXML source="#NE204">
    <projectDesc xml:lang="en">
        <p>Corpus Musicae Ottomanicae (CMO) is a project funded by the
            <ref target="https://www.dfg.de">Deutsche Forschungsgemeinschaft</ref>
        (DFG, German Research Foundation). The CMO project is carried out
        collaboratively across three locations: Münster and Bonn (both in Germany)
        and Istanbul (Turkey). Each center deals with a specific aspect of the
        project. The central research task – the transcription and critical editing
        of nineteenth-century sources of Ottoman music – is carried out at the
            <ref target="https://www.uni-muenster.de/Musikwissenschaft/">Institute for
            Musicology</ref>
        at the
            <ref target="https://www.wwu.de">Westfälische Wilhelms-Universität</ref>
        in Münster. Critical editions of the accompanying texts of vocal pieces are
```

```
            prepared in collaboration with
                <ref target="https://www.uni-muenster.de/ArabistikIslam/">Institute of
            Arabic and Islamic Studies</ref>,
            also at the
                <ref target="https://www.wwu.de">Westfälische Wilhelms-Universität</ref>
            in Münster. The project support and digital publication of the edition are
            undertaken jointly by associates based at the
                <ref target="https://www.maxweberstiftung.de/en/">Max Weber Foundation
                </ref>
            in Bonn and the
                <ref target="https://www.oiist.org/en/">Orient-Institut Istanbul</ref>.
        </p>
        <p>For further information on the project, please visit the following page:
                <ref target="https://www.uni-muenster.de/CMO-Edition/en/cmo/
                beschreibung.html">Project Description</ref>.
        </p>
        <p>For an overview of the staff involved, please visit the following page:
                <ref target="https://corpus-musicae-ottomanicae.de/content/below/
                contributors.xml">Contributors</ref>.
        </p>
    </projectDesc>
<egXML>
```

The above is the standard information for NE204 and other manuscripts, reflecting the current information by the time of the creation of version 1.0 of this documentation.

3.1.2.4. Reference to the Editorial Guidelines (tei:editorialDecl)

The following elements are used in this section:

- `tei:p`
- `tei:ref`

The `tei:editorialDecl` sections provide background on the editorial principles used in the critical edition, the transliteration of non-Latin letters in Latin characters, standard terms, etc. Each piece of information is repeated in one of the three project languages, English, German, and Turkish by the `@xml:lang` attribute.

```
<egXML>
    <editorialDecl xml:lang="[ISO_639-1]">
        <!-- Repeatable. -->
        <p>[Detailed information on editorial guidelines with tei:ref]
        </p>
    </ediorialDecl>
<egXML>
```

The `tei:p` element provides detailed information on the project and can appear 1+n times, containing `tei:ref` when needed.

```
<egXML source="#NE204">
    <editorialDecl xml:lang="en">
        <p>An explanation of the editorial process can be found in the
                <ref target="https://corpus-musicae-ottomanicae.de/content/help/
                user_guide.xml">editorial guidelines</ref>
            and the
                <ref target="https://www.uni-muenster.de/CMO-Edition/en/publikationen/
                publikationen.html">commentary</ref>.
        </p>
        <p>An explanation of the transcription process of Ottoman lyrics from Arabic
        letters into Latin characters can be found in the
                <ref target="https://www.uni-muenster.de/imperia/md/content/cmo-
                edition/publikationen/guidelines_for_transcription_ver002.pdf">
                transcription guidelines</ref>.
        </p>
        <p>A summary of the standardized terms of Ottoman music can be found in the
```

```
            <ref target="https://www.uni-muenster.de/imperia/md/content/cmo-
            edition/publikationen/standard_list_of_musical_terms_revised_edition.pdf">
            list of musical terms</ref>.
        </p>
    </ediorialDecl>
<egXML>
```

The above is the standard information for NE204 and other manuscripts, reflecting the current information by the time of the creation of version 1.0 of this documentation

3.1.2.5. Custom Elements (tei:tagsDecl)
This element is empty, as no custom elements are defined.

3.1.2.6. Definition of Metrical Symbols and Patterns (tei:metDecl)
The following element is used in this section:

- `tei:metSym`

The `tei:metDecl` sections detail several levels of encoding metrical units and patterns that are referenced in different elements within `tei:div[@type="blockLyricsTranscription"]` for the lyrics and also in `tei:titleStmt/tei:title/tei:note[@type="bahir"]` and `tei:titleStmt/tei:title/tei:note[@type="meter"]` for the metadata.

```
<egXML>
    <!-- Option 1: Definition of basic metrical symbols. -->
    <metDecl xml:id="[ID]" pattern="[RegEx]">
        <!-- Repeatable. -->
        <metSym xml:id="[ID]" value="[Name]">[Definition]
        </metSym>
    </metDecl>
    <!-- Option 2: Definition of metrical patterns. -->
    <metDecl xml:id="[ID]" corresp="#[ID]" type="[Type]">
        <!-- Repeatable. -->
        <metSym xml:id="[ID]" value="[Name]" terminal="[Boolean]">[Definition]
        </metSym>
    </metDecl>
<egXML>
```

The definition of the basic metrical units and their corresponding symbols is the foundation for any further mark-up of metrical information in the digital edition of Ottoman poetry. It is a standard set of symbols for syllable length, processes changing any higher syllabic structure and a structural sign to indicate a division in higher syllabic structures.

```
<egXML>
    <metDecl xml:id="symbols" pattern="((u|-|x|U|Z|I|M){1,5}[|]){1,4}">
        <metSym xml:id="u" value="u">short syllable which can be in the form of cv
        or v</metSym>
        <metSym xml:id="-" value="-">long syllable which can be in the form of cV,
        cVc, cvc, cVcc, cvcc, vc, or V</metSym>
        <metSym xml:id="x" value="x">anceps, the position in the metrical pattern can
        either be short or long</metSym>
        <metSym xml:id="U" value="U">merge (ulama/vasl)</metSym>
        <metSym xml:id="Z" value="Z">shortening (zihâf/kısaltma)</metSym>
        <metSym xml:id="I" value="I">lengthening (imâle/uzatma)</metSym>
        <metSym xml:id="M" value="M">insertion (med)</metSym>
        <metSym xml:id="|" value="|">foot division</metSym>
    </metDecl>
<egXML>
```

The `tei:metDecl[@xml:id="symbols"]` defines the basic symbols related to scansion. The value for `@pattern` is a regular expression. It is kept in the most basic form to be applicable to all higher metrical structures. It defines that each basic symbol except the foot division may appear 1 to 5 times before a foot division to constitute the foot as the higher metrical unit and that each foot (including the division sign) may appear 1 to 4 times in the next higher metrical unit, the *vezin*.

Apart from higher metrical units defined as canonical structures in additional `tei:metDecl[@corresp="#symbols"]` (see below), these values are only referenced in `tei:l[@real]`, if the actual structure is deviant from the standard structure in any lyrics line of sung poetry (see Section 3.2.1.2 below).

Next follow the declarations for the 18 known feet consisting of 1 to 5 individual syllables, short or long. They reference the standard symbols by `@corresp="#symbols"` and identify the feet structure as the standard forms by `@type="met"`. Only the feet actually in use in a specific piece of sung poetry are included in this section.

```
<egXML source="#NE204pc49">
   <metDecl xml:id="feet" corresp="#symbols" type="met">
      <metSym xml:id="feilatun" value="fe'ilâtün" terminal="false">uu--|</metSym>
      <metSym xml:id="feilun" value="fe'ilün" terminal="false">uu-|</metSym>
   </metDecl>
<egXML>
```

The `tei:metSym[@xml:id]` provides an ASCII-compliant identifier for the name of the individual foot, while `tei:metSym[@value]` gives the name in modern Turkish. The former is used in `tei:titleStmt/tei:title/tei:note[@type="meter"]` to refer the metadata to the feet (see section 3.1.1 above).

Finally, the declarations of the hitherto 31 identified *vezin* follow. They reference the standard symbols by `@corresp="#symbols"` and identify them as the standard forms by `@type="met"`. Only those *vezin*s actually in use in a specific piece of sung poetry is/are included in this section.

```
<egXML source="#NE204pc78">
   <metDecl xml:id="vezin" corresp="#symbols" type="met">
      <metSym xml:id="hezec4" value="Hezec 4" terminal="false">u---|u--|u---|u--|
      </metSym>
      <metSym xml:id="muzari2" value="Muzâri 2" terminal="false">--u|-u-u|--u|-u--|
      </metSym>
      <metSym xml:id="remel1" value="Remel 1" terminal="false">-u--|-u--|-u--|-u-|
      </metSym>
   </metDecl>
<egXML>
```

The `tei:metSym[@xml:id]` provides an ASCII-compliant identifier for the name of the individual foot, originating from Arabic, while `tei:metSym[@value]` gives the name in scientific transliteration; in both cases an integer is added as an internal identifier to identify each *vezin* of a *bahir*. While `tei:titleStmt/tei:title/tei:note[@type="bahir"]` (see above Section 3.1.1) only provides the name of the *bahir*, the element's `@corresp` links to the *vezin* defined in this `tei:metDecl`.

3. Critical Edition

A critical digital edition is recorded in the `tei:text` part and comprises of the following information:

- Information on identifying the manuscript and the individual piece

- The edited text of block lyrics transcribed and/or reconstructed from an Ottoman Turkish source in the Arabic alphabet
- Structural information of the lyrics in terms of their text type
- Notes on the lyricist(s)
- Inline text anchors to the critical apparatus
- Information in which sources the lyrics are found
- Reading alterations
- General notes on the lyrics and their author(s)

The TEI text part comprises the following child elements:

- `tei:body`
- `tei:back`

```
<egXML>
   <text>
      <body>[Information on manuscript, piece, and text edition of block lyrics]
      </body>
      <back>[Critical apparatus with provenance, reading variants, and annotations]
      </back>
   </text>
<egXML>
```

3.2.1. Edited Text of Block Lyrics (tei:body)

The following elements are used in this section:

- `tei:div`
- `tei:note`

The basic structure of the text body is:

```
<egXML>
   <body>
      <!-- Repeatable. -->
      <div>[Manuscript and piece information, text edition of block lyrics]
      </div>
      <!-- Deletable. -->
      <note>[Information on lyricist(s)]
      </note>
   </body>
</egXML>
```

To differentiate the different elements within `tei:body` in terms of their function and content, each one is specified with a certain `@type` attribute and possibly other, sometimes mandatory, attributes. The general structure in any individual TEI file is:

```
<egXML source="#NE204 #NE208">
   <body>
      <div type="newPieceStart">[Information and identifiers on the piece preceding
      its music/lyrics]
      </div>
      <!-- Option 1: Block lyrics are present. -->
      <div type="blockLyricsTranscription" xml:lang="ota" style="direction:ltr;">
      [The lyrics as transcribed from source]
      </div>
      <!-- Option 2: Block lyrics are absent. -->
      <div type="blockLyricsReconstructed" xml:lang="ota" style="direction:ltr;">
      [The lyrics as reconstructed from other source(s)]
      </div>
      <note type="lyricist">[Information on lyricist(s)]
```

```
        </note>
    </body>
</egXML>
```

For the `tei:div` element containing the block lyrics, two additional elements are applied. The main language of the piece (usually "ota") is provided by the `@xml:lang` attribute, and if it is a language that was originally written with right-to-left characters, `@style="direction:ltr;"` is provided for a left-aligned rendering. This is necessary because transcriptions into Latin letters are used in the critical edition, but some software interprets `@xml:lang="ota"` for example automatically as right-to-left, independent of the writing system used.

3.2.1.1. Page / Piece Header (tei:div)

The following elements are used in this section:

- `tei:milestone`
- `tei:msDesc`
- `tei:msIdentifier`
- `tei:idno`
- `tei:msContents`
- `tei:msItem`
- `tei:locus`
- `tei:rubric`
- `tei:incipit`
- `tei:supplied`

In this `tei:div[@type="newPieceStart"]`, all information that is relevant to locate and identify a single piece in any given manuscript is recorded. The contents of this section deal with a certain bias: to provide information as close as possible as in the original manuscript, but also to harmonize differences between individual sources in one TEI template. This will not always be possible, but generally, many manuscripts follow a generic structure. So, besides a general structure, there is room for an optional, individual arrangement of elements.

```xml
<egXML>
    <div type="newPieceStart">
        <milestone unit="cite" type="[ID]"/>
        <msDesc>
            <msIdentifier>
                <idno>[RISM ID]
                </idno>
            </msIdentifier>
            <msContents>
                <msItem n="[PieceNumber]">
                    <!-- Optional elements nested here. -->
                </msItem>
            </msContents>
        </msDesc>
    </div>
</egXML>
```

In the `tei:milestone` element, used in this place to reinforce the separation of any manuscript into different pieces, the mandatory `@unit` to indicate the range of the element always has the value "cite" to refer to the printed critical edition which is likewise divided into individual PDF files for each piece. Accordingly, the value of `@source` refers to the URL part with the unique identifier pointing to the document.

```
<egXML source="#NE204pc49">
   <milestone unit="cite" type="#cmo_mods_00000758"/>
</egXML>
```

The following information refers to a specific part of the manuscript, i.e. an individual piece, marked up by the `tei:msItem` element, and identified by an integer in `@n`. Following the TEI guidelines, this element needs to be contained within `tei:msDesc/tei:msContents`, paired with a preceding `tei:msDesc/msIdentifier`. The latter element contains `tei:idno` to provide an identifier of the source itself, given here by its RISM identifier, as in the same element in `tei:titleStmt/tei:title` in the header section.

```
<egXML source="#NE204pc49">
   <msDesc>
      <msIdentifier>
         <idno>TR-Iüne 204-2</idno>
      </msIdentifier>
      <msContents>
         <msItem n="49">
            <!-- Optional elements nested here. -->
         </msItem>
      </msContents>
   </msDesc>
</egXML>
```

Within the `tei:msItem` element, specifics for an individual piece are noted. The most common or typical elements in use at this place are `tei:locus`, `tei:rubric`, and `tei:incipit`. The physical placement of a piece is described with `tei:locus`, providing a page number, as in the header in `tei:titleStmt/tei:title/tei:idno`. The exact page range (especially for pieces spanning across two or more pages) is given in `@from` and `@to`. The `tei:rubric` can be used in a variety of ways, specified by `@type` and `@subtype`, depending on the information actually written in any source, or with any piece, being designed to cover versatile information.

A piece cannot be distinguished from another solely by written captions, such as the title or *usûl*, as other distinguishing marks might be unwritten in any given source, such as the *makâm* or the incipit. For example, in TR-Iüne 204-2, there are two pieces entitled "Beste çenber İsaḳ", both attributed to the same composer, both with the same *ûsul*. However, the two have different *makâm*, and different lyrics. While TR-Iüne 204-2 provides the *makâm*, the incipit is not deliberately written, as TR-Iüne 204-2 contains block lyrics, where the incipit can easily be inferred from the first or first two lines of lyrics (so one hemistich is provided). In such cases, a `tei:supplied` element with appropriate attributes is provided within `tei:incipit`, given the source of the incipit with `@reason`, the plausibility with `@cert` and the initials of the editor with `@resp`. The below example is typical for TR-Iüne 204-2.

```
<egXML source="#NE204pc78">
   <msItem n="78">
      <locus from="101" to="102">p. 101</locus>
      <rubric type="pieceNumber" subtype="red-pencil">78</rubric>
      <incipit>
         <supplied reason="derived-from-lyrics" cert="1" resp="#ND">
         Güẕeşt ārzū ez-ḫad be-pāy-ı būs-i tū mā-rā</supplied>
      </incipit>
   </msItem>
</egXML>
```

Here, `tei:rubric` indicates that the piece number is written out with a red pencil (in other manuscripts, `@subtype` might be absent, but `tei:supplied` added). The incipit of the piece is provided with absolute certainty (as written out in the block lyrics), hence also the value of `@reason`, the "derivation" is even more true in this case, as the first two lines read "āh **Güẕeşt ārzū ez-ḫad** āhā āhā serv-i nāz **be-pāy-ı būs-i tū mā-rā** cānım", one case, where sung poetry (bold) is mixed with *terennüm*, not part of the lyrics and therefore the incipit.

### 3.2.1.2. Transcribed / Reconstructed Block Lyrics (tei:div)

The following elements are used in this section:

- `tei:head`
- `tei:lg`
- `tei:l`
- `tei:seg`
- `tei:stage`
- `tei:note`
- `tei:supplied`
- `tei:anchor`

In this `tei:div[@type="blockLyricsTranscription"]` or `tei:div[@type="blockLyricsReconstructed"]`, respectively, all information about the (block) lyrics of a specific piece are marked up. The descriptive role model is the existence of block lyrics with `@type="blockLyricsTranscription"`, the differences in the absence of block lyrics and their reconstruction will be detailed hereafter.

At this point, it must be emphasised once again that the TEI documents do not describe the primary sources subject to critical edition, but are the representation of a critical edition that has already taken place. This naturally has an impact on the modelling and rendition of the text structure, as it has already been interpreted by an editor.

In manuscript TR-Iüne 204-2 (NE204), for example, the most basic pieces have an original layout like this, following the one of piece 49:
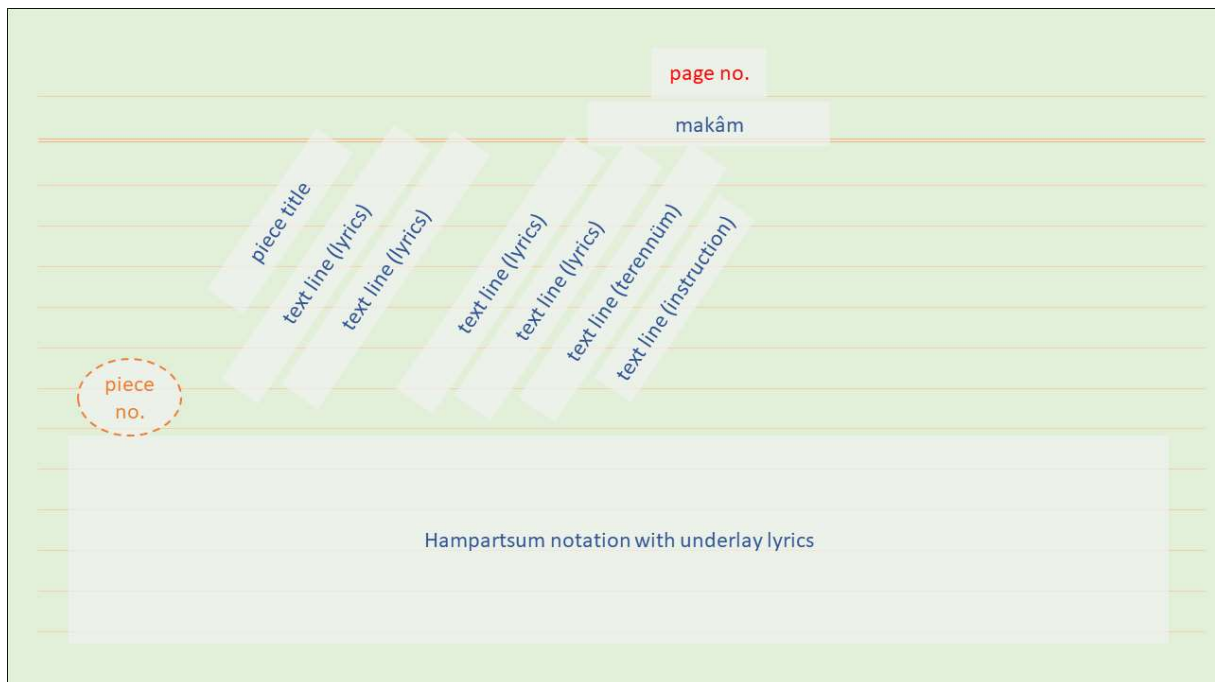
The page number, piece number and the first lyrics line are part of the `tei:div[@type="pieceNewStart"]`, while *makâm* and piece title are part of the `tei:header`. The text lines can be distinguished by their content (lyrics, *terennüm* and performance instructions), and can be grouped, and, as in the above example, one poem may be visually separated into two distiches with a larger space between the lines. A few pieces may have more than one

hemistich, so the lyrics can formally be divided into more than one line group of lyrics with "attached" *terennüm* parts, although these are not part of the lyrics from a literary studies point of view, as demonstrated by the example of piece 99:
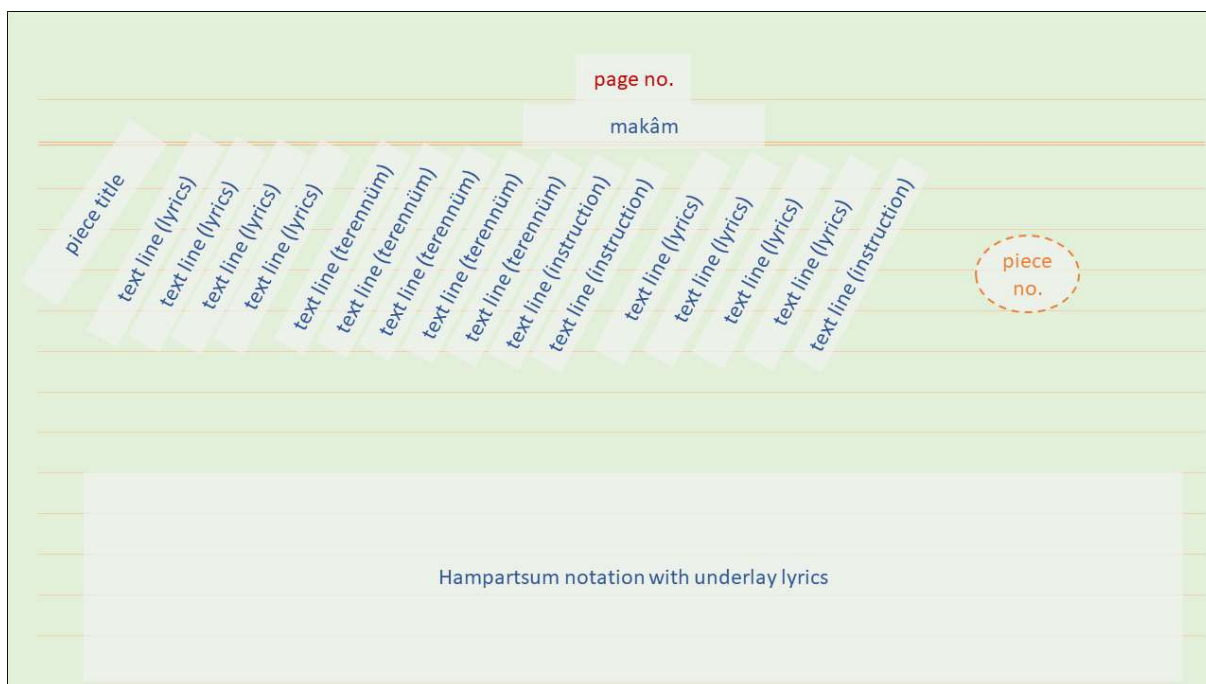
This leads to the following general structure that also includes the lyricist regularly not mentioned in a piece.

```xml
<egXML>
   <div type="blockLyricsTranscription" xml:lang="ota" style="direction:ltr;">
      <!-- Repeatable. -->
      <head n="[1-n]">[Piece title]
      </head>
      <!-- Repeatable. -->
      <lg n="[1-n]" decls="[ID]" rhyme="[Pattern]">
         <!-- Repeatable. -->
         <l n="[1-n]">
            <!-- Combinable and repeatable. -->
            <!-- Option 1: Sung text. -->
            <seg type="vocal" ana="[Text_type]">[Written line of text]
            </seg>
            <!-- Option 2: Instructive / informative text. -->
            <stage type="[Non_verbal]" ana="[Specifier]">
               <seg type="[Type]" ana="terennüm">[Written line of text]
               </seg>
            </stage>
         </l>
      </lg>
      <!-- Deletable. -->
      <note type="lyricist">
         <!-- Standard (otherwise deletable). -->
         <supplied reason="provided-by-editor" cert="[0-1]" resp="#[ID]">
            <anchor xml:id="w[ID]s"/>[Lyricist]<anchor xml:id="w[ID]e"/>
         </supplied>
      </note>
   </div>
</egXML>
```

The piece title is given in `tei:head`, and a mandatory `@n` identifies the number of lines (commonly just one).

```
<egXML source="#NE204pc106">
   <head n="1">Beste devri kebīr</head>
   <head n="2">Sermüʾeẕẕin Saʿdullāh Efendi</head>
</egXML>
```

In the following, all text lines that contain lyrics (poetry or *terennüm*) and any kind of information regarding the lyrics themselves (such as the indication of the *miyanhâne*, the beginning of the third hemistich in a poem) or any performative information or instruction are included in one or more `tei:lg` elements, according to the internal structure of a written block text and the sung parts and instructions and information pertaining to it.

The text structure of a vocal piece can be quite complex, and taking into account performance instructions, the actual act of singing can become even more complex. For example, one poem of a certain *bahir* (plus any possible *terennüm* lines or performance instructions) may be nested into another poem or distiches of two poems of a different *bahir* may alternate (for example as in piece 78 of NE204), which again may have its own *terennüm* and performance instructions. As this is a <u>critical text edition</u>, such dependencies for the act of vocal performance are not considered in the TEI structure.

Therefore, the following definition and implementation of a line group are used: A new `tei:lg` element begins with a new poem (if consecutive) or parts of a poem (in case of nested lyrics), whether the *bahir* is the same or not. Any other text, to be performed or to indicate any instruction or information that follows the preceding poetic lyrics (i.e. before another poem starts) belongs to the same `tei:lg` element. All @n values are incremented consecutively and it is a mandatory attribute. According to the definitions in Appendix 1, a poem or poetic lyrics are those texts that follow a syntactic structure of the underlying language, whereas other sung lyrics (*terennüm*) consist of stand-alone lyrics with no syntactic structure. Poetic and other sung lyrics may mix in one line (especially along Persian pieces), but are usually distinct lines of text (see below).

With the definition for `tei:lg`, two additional mandatory attributes are used. The value of @decls refers directly to the value of `tei:metDecl[@xml:id="vezin"]/tei:metSym[@xml:id]` in the TEI header and identifies the specific *bahir* subtype. With @rhyme, the four lines of a poem are analyzed by their rhyme scheme, with four lowercase letters separated by minus characters, e.g. @rhyme="a-a-b-a".

```
<egXML source="#NE204pc78">
   <lg n="1" decls="hezec4" rhyme="a-a-b-a">[Text lines]
   </lg>
   <lg n="2" decls="remel5" rhyme="a-a-b-a">[Text lines]
   </lg>
   <lg n="3" decls="hezec4" rhyme="a-a-b-a">[Text lines]
   </lg>
   <lg n="4" decls="remel5" rhyme="a-a-b-a">[Text lines]
   </lg>
   <lg n="5" decls="muzari2" rhyme="a-a-b-a">[Text lines]
   </lg>
</egXML>
```

In the above example, we have hemistiches from three different poems among five line groups. The first two distichs with the *vezin* "Hezec 4" and "Remel 5" are intermittent (i.e. one hemistich of each follows the other). While the third distich is in the *vezin* "Muzâri 2" and followed by interspersed *terennüm*.

The `tei:lg` element may also have a @xml:lang attribute with an ISO-639-3 value, if the entire content of this line group is in a different language than the default Ottoman Turkish, e.g. Persian or Arabic.

Independent of the count of the `tei:lg` element, each `tei:l` element therein for each text line in the original source has a mandatory `@n` with a consecutively incrementing value. While the prosodic structure of each `tei:l` that contains poetic lyrics is determined by `tei:lg[@decls]` in its standard pattern, deviations from it can be directly indicated by an optional `@real` that "overwrites" the inherited pattern from the `tei:lg`.

Likewise, the `tei:l` element may also have a `@xml:lang` attribute with an ISO-639-3 value, if the entire content of this line is in a different language than the ancestral `tei:lg` or `tei:div[@type="blockLyricsTranscription"]`, e.g. Persian or Arabic.

```
<egXML source="#NE204pc78">
   <lg n="4" decls="remel5" rhyme="a-a-b-a">
      <l n="16" real="-uII|-u--|IZI-|Iu--|">
      [Instead of the standard Remel 5 "-u--|-u--|-u--|-u--|".]
      </l>
   </lg>
</egXML>
```

The identification of the type of sung text itself takes place in the `tei:l` element by one or more `tei:seg` elements which must begin directly following the parent `tei:l` element. If the text written in a line is of informative or instructive character, its `tei:seg` element is contained in `tei:stage`, which also may directly follow `tei:l`, but not necessarily (depending on the position of this type of text in a line). Detailed information on the text type and content is provided by `@type` and `@ana`, while the combination of the values of both attributes is constrained:

@type	@ana
vocal	mainPartLyrics
	terennüm
instruction	terennüm
information	terennüm

In most cases, each line only contains one type of lyrics.

```
<egXML source="#NE204pc50">
   <l n="1">
      <seg type="vocal" ana="mainPartLyrics">
      Şükūfezār-ı ʿiẓārıñ gülüñ naẓīresidir</seg>
   </l>
   <l n="2">
      <seg type="vocal" ana="mainPartLyrics">
      Bahāra ḳarşu hezārıñ o bir mesīresidir</seg>
   </l>
   <l n="3" real="u-u-|uu-I|u-u-|--|">
      <seg type="vocal" ana="mainPartLyrics">
      Şorulsa Vāṣıf-ı zāre lebān-ı bostānıñ</seg>
   </l>
   <l n="4" real="u-u-|uuI-|u-u-|uu-|">
      <seg type="vocal" ana="mainPartLyrics">
      Çilek şekerlemesi yāsemen ḥamīresidir</seg>
   </l>
   <l n="5">
      <seg type="vocal" ana="terennüm">
      ʿömrüm yālā yele lel lel le le lel lī mīrim yālā yele</seg>
   </l>
   <l n="6">
      <seg type="vocal" ana="terennüm">
      le le le le le le lī yār gülüñ naẓīresidir</seg>
   </l>
</egXML>
```

But especially in Persian pieces, poetic lyrics and *terennüm* may be intertwined.

```xml
<egXML source="#NE204pc78">
   <l n="1" real="u---|Z-I|ZI-I|Z--|">
      <seg type="vocal" ana="terennüm">āh</seg>
      <seg type="vocal" ana="mainPartLyrics">Güzeşt ārzū ez-ḥad</seg>
      <seg type="vocal" ana="terennüm">āhā āhā</seg>
   </l>
   <l n="2">
      <seg type="vocal" ana="terennüm">serv-i nāz</seg>
      <seg type="vocal" ana="mainPartLyrics">be-pāy-I būs-i tū mā-rā</seg>
      <seg type="vocal" ana="terennüm">cānım</seg>
   </l>
</egXML>
```

Lines containing `tei:stage` may have this at the beginning or somewhere else in the text.

```xml
<egXML source="#NE204pc49">
   <l n="6">
      <stage type="stop" ana="temme">
         <seg type="instruction" ana="terennüm">
            <supplied reason="omitted-in-original" cert="1" resp="#ND">
            tem</supplied>me
         </seg>
      </stage>
   </l>
</egXML>
<egXML source="#NE204pc78">
   <l n="23">
      <seg type="vocal" ana="terennüm">dillī ney</seg>
      <stage type="repetition" ana="mükerrer">
         <seg type="instruction" ana="terennüm">(mükerrer)</seg>
      </stage>
      <seg type="vocal" ana="terennüm">dillere diller ler dir ten nen</seg>
   </l>
</egXML>
```

The `tei:stage` element must also directly be followed by `tei:seg` indicating that the text contain within is indicating a performance instruction. The type of performance instruction is marked up in the `@type` and `@ana` attributes of `tei:stage`, where again constraints of the combination of values come into effect.

@type	@ana
stop	temme
repetition	ilaAhirihi mükerrer terennümKelevvel
pointer	eyzan miyanHane bendiSani bendiSalis haneiSani
music	usul

The combination of `tei:stage` and `tei:seg` covers two different layers in the text information and differentiates them in the TEI structure. While `tei:stage` indicates <u>what</u> and <u>possibly</u> how something in the sung poetry is performed (with the possible exception of `@type="music"` with `@ana="usul"` in piece 133 only, where changes in the rhythmic cycle might be indicated), the content of `tei:seg` only identifies that the text written is for a performance instruction. The difference between the two becomes clear when looking at the above example from NE204 piece 49 with `@ana="temme"`. The instruction to terminate a vocal performance is often just written with the Arabic letter "م" <m> and the abbreviation needs interpretation and is to be reconstructed by the editor (with `tei:supplied` and the mandatory attributes `@reason`, `@cert`, and `@resp`, as

previously explained) to the word *[tem]me*, because of the implicit character of a performance instruction.

Again, any `tei:seg` element may also have a `@xml:lang` attribute with an ISO-639-3 value, if the entire content of this line is in a different language than the ancestral one.

References to the critical apparatus are indicated in the block text mark-up by two empty `tei:anchor` elements. Their `@xml:id` values consist of a prefix "`w`" (for "witness"), a unique and incrementing numerical value, and a closing "`s`" (for start) or "`e`" (for end). These values are later referenced by `tei:app` in the apparatus.

```
<egXML source="#NE204pc104">
   <head n="1">
      <anchor xml:id="w4469s"/>Semāʿī İmām-ı Şehriyārī ʿAlī Efendi
      <anchor xml:id="w4469e"/>
   </head>
</egXML>
<egXML source="#NE204pc49">
   <l n="4">
      <seg type="vocal" ana="mainPartLyrics">
         <anchor xml:id="w32s"/>Ḫām
            <supplied reason="omitted-in-original" cert="1" resp="#ND">ī
            </supplied>
         'niñ
         <anchor xml:id="w32e"/>
         <anchor xml:id="w33s"/>ʿaḳlıñ<anchor xml:id="w33e"/>
         <anchor xml:id="w34s"/>alır<anchor xml:id="w34e"/>
         <anchor xml:id="w35s"/>böyle<anchor xml:id="w35e"/>
         levendāne
         <anchor xml:id="w37s"/>geliş<anchor xml:id="w37e"/>
      </seg>
   </l>
</egXML>
```

The `tei:anchor` in `tei:head` always refers to `tei:div[@type="provenance"]` in the apparatus, where other text witnesses containing this piece are listed (see below, Section 3.2.2.1). Within the sung lyrics, `tei:anchor` is set to bracket a specific text passage that is different in any other source or sources, and refers to `tei:div[@type="readings"]` in the apparatus (see below, Section 3.2.2.2). As the example from NE204 piece 49 shows, `tei:anchor` can also contain other elements, such as `tei:supplied` that indicates the omission of a letter in the word "Ḫām[ī]'niñ".

3.2.1.3. Lyricist(s) (tei:note)
The following elements are used in this section:

- `tei:note`
- `tei:supplied`
- `tei:anchor`

To relate information on the lyricist (otherwise only mentioned in `tei:titleStmt/tei:author` in the header) to the critical apparatus and rectify the attribution and certainty, a `tei:note` element is provided following the lyrics. As the lyricist is not mentioned, the information on the authorship is provided with `tei:supplied`, stating the reconstruction by `@reason="provided-by-editor"`, and replicating the values of `@cert` and `@resp` from `tei:titleStmt/tei:author`.

```
<egXML source="#NE204pc78">
   <note type="lyricist">
      <supplied reason="provided-by-editor" cert="1" resp="#ND">
```

```xml
            <anchor xml:id="w2239s"/>Lyricist: Emîr Hüsrev-i Dihlevî
            <anchor xml:id="w2239e"/>
        </supplied>
        <supplied reason="provided-by-editor" cert="1" resp="#ND">
            <anchor xml:id="w2240s"/>Lyricist: Hâfız-ı Şîrazî
            <anchor xml:id="w2240e"/>
        </supplied>
    </note>
</egXML>
```

Within the `tei:supplied`, reference to the critical apparatus is again given by two empty `tei:anchor` elements. They refer to `tei:div[@type="annotations"]` in the apparatus (see below, Section 3.2.2.3). In case the lyricist is unknown, the `tei:note` element with all child nodes can be deleted.

```xml
<egXML source="#NE204pc106">
    <body>
        <div type="blockLyricsTranscription">
            <note type="lyricist">
                <supplied reason="provided-by-editor" cert="1" resp="#ND">
                    <anchor xml:id="w4640s"/>Lyricist: unknown
                    <anchor xml:id="w4640e"/>
                </supplied>
            </note>
        </div>
    </body>
    <back>
        <div type="annotations">
            <app from="#w4640s" to="#w4640e">
                <lem>Lyricist unknown</lem>
                <note>Öztuna (2006, vol. 2, 247) states concisely that the lyrics are
                derived from a encomium (medhiye) to Selim III. He does not specify by
                whom. The lyricist remains unknown.</note>
            </app>
        </div>
    </back>
</egXML>
```

However, if there is additional information to be stated on an unknown lyricist, `tei:note` will be retained to provide linkage to the critical apparatus, as with NE204 piece 106 (see below, Section 3.2.2.3).

3.2.2. Critical Apparatus (tei:back)

The following element is used in this section:

- `tei:div`

The basic structure of the back matter containing the apparatuses is:

```xml
<egXML>
    <back>
        <!-- Repeatable or deletable. -->
        <div>[Part of the critical apparatus]
        </div>
    </back>
</egXML>
```

To differentiate the different apparatuses, each `tei:div` is specified by `@type` to indicate the purpose of this specific part of the critical apparatus. There are three distinct `tei:div` elements of the following structure:

```
<egXML>
   <back>
      <div type="provenance">[List of other witnesses containing the piece]
      </div>
      <div type="readings">[Text passages with other wording in a specific source]
      </div>
      <div type="annotations">[Information on the lyricist]
      </div>
   </back>
</egXML>
```

Sections without information can be deleted or appear as an empty element. Note that a specific pair of `tei:anchor` may be referenced by `tei:app` in any of these sections at the same time – while the link remains the same, different types of information can be linked to the base text.

3.2.2.1. Other Sources with Related Lyrics (tei:div)

The following elements are used in this section:

- `tei:app`
- `tei:lem`
- `tei:note`
- `tei:ref`

The first apparatus with `@type="provenance"` is always related to `tei:anchor` elements in `tei:head` of the text body. It enumerates all other witnesses with the same piece, as documented in `tei:sourceDesc` (see Section 3.1.1.5). The general structure is as follows.

```
<egXML>
   <div type="provenance">
      <app from="#[ID]" to="#[ID]">
         <lem>[Lemma: Repetition of the piece title]
         </lem>
         <note>[List of sources with referenced
            <!-- Repeatable. -->
            <ref target="#[ID]">siglum
            </ref>and folio/page number]
         </note>
      </app>
   </div>
</egXML>
```

The apparatus entry with `tei:app` refers back to the respective two `tei:anchor` elements noted in `tei:head` and picks up their `@xml:id` values as those for `@from` (the starting one with the format "`w[Integer]s`") and `@to` (the closing one with "`w[Integer]e`"). The use of these attributes is concordant with the use of the double-end point apparatus not embedded in-line in the text, as indicated by `tei:variantEncoding` (see Section 3.1.2.1). The necessary `tei:lem` element repeats the base text bracketed by `tei:anchor`, while `tei:note` encloses the text that refers to the different witnesses. This element is chosen instead of `tei:rdg`, because this text is originating from editorial research.

```
<egXML source="#NE204pc49">
   <app from="#w2s" to="#w2e">
      <lem>Beste çenber İsaḳ</lem>
      <note>The lyrics appear in
         <ref target="#cmo_source_00000091">NE3466</ref>, fol. 252v;
         <ref target="#cmo_source_00000075">HB1</ref>, page 406;
         <ref target="#cmo_source_00000023">HB2</ref>, page 408 and
         <ref target="#cmo_source_00000092">Ha</ref>, page 621.
```

```
        </note>
    </app>
</egXML>
```

Each witness is given with its siglum (same text as in `tei:idno[@type="CMO"]`) and referenced by `tei:ref[@target]`, with the value corresponding to an entry in the source catalogue, of which the unique identifier from the URL is used, and which is the same of `tei:witness[@xml:id]` in `tei:sourceDesc` (see Section 3.1.1.5).

3.2.2.2. Reading Alterations in Other Sources (tei:div)

The following elements are used in this section:

- `tei:app`
- `tei:lem`
- `tei:rdg`
- `tei:ref`

The second apparatus with `@type="readings"` is always related to `tei:anchor` elements within `tei:l` elements. The general structure is as follows:

```
<egXML>
    <div type="readings">
        <!-- Repeatable. -->
        <app from="#[ID]" to="#[ID]">
            <lem>[Lemma: Repetition of the base text]
            </lem>
            <!-- Repeatable. -->
            <rdg wit="#[ID]" type="[Value]">[Word(s) from respective source and
                <!-- Repeatable. -->
                <ref target="#[ID]">siglum]
                </ref>
            </note>
        </app>
    </div>
</egXML>
```

As this apparatus lists all spelling variations of a specific text passage (including omission), the proper `tei:rdg` element is used. Its number and actual configuration depend on whether one or more (or all) different witnesses feature the same variation, or any source a different one. The actual type of variation is given in `@type`, e.g. a misspelt word, an orthographic variation, synonymy, etc. The use of this attribute not only provides an additional asset for indicating the editorial decision but also e.g. facilitates statistical queries.

In the first case, the same variation in several different sources, the unique identifiers from the source catalogue URLs (the same as in `tei:witness[@xml:id]`) are listed in `@wit` separated by a blank space. The references for the individual siglum are displayed as usual with separate `tei:ref` elements.

```
<egXML source="#NE204pc49">
    <app from="#w20s" to="#w20e">
        <lem>cezbe-i</lem>
        <rdg wit="#cmo_source_00000091 #cmo_source_00000075 #cmo_source_00000023"
        type="misspelled">cezbe-i
            <ref target="#cmo_source_00000091">NE3466</ref>,
            <ref target="#cmo_source_00000075">HB1</ref>,
            <ref target="#cmo_source_00000023">HB2</ref>
        </rdg>
    </app>
    <app from="#w25s" to="#w25e">
```

```
            <lem>revīş</lem>
            <rdg wit="#cmo_source_00000092" type="misspelled">reviş
                <ref target="#cmo_source_00000092">Ha</ref>
            </rdg>
            <rdg wit="#cmo_source_00000091" type="variant-reading">rīş
                <ref target="#cmo_source_00000091">NE3466</ref>
            </rdg>
        </app>
</egXML>
```

Likewise, all different spellings in other witnesses are listed individually, as the type of variation may also vary. The spelling variations given here only concern those in other musical sources. See 3.2.2.3 below for variations appearing in a divan of a poet.

3.2.2.3. General Notes on the Lyrics and their Author(s) (tei:div)

The following elements are used in this section:

- `tei:app`
- `tei:lem`
- `tei:note`
- `tei:ref`

The last apparatus with `@type="annotations"` can be related to any `tei:anchor` elements in `tei:body`. It provides a variety of information on the actual piece, its critical edition, or the lyricist(s). The general structure is as follows.

```
<egXML>
    <div type="annotations">
        <app from="#[ID]" to="#[ID]">
            <lem>[Lemma: Repetition of any block text]
            </lem>
            <note>[Text providing any additional information with
                <!-- Repeatable. -->
                <ref target="#[URL]">citations
                </ref>of secondary literature.]
            </note>
        </app>
    </div>
</egXML>
```

The pointers in `tei:head` (with the piece title as a proxy for the entire piece) can be referenced here for additional information on the piece:

```
<egXML source="#NE204pc78">
    <app from="#w2032s" to="#w2032e">
        <lem>Kār devr-i Hindī Ḫāce'niñ</lem>
        <note>TMKlii no. 105 has the text with vowel points. The editors followed
        this manuscript for vocalisation of terennüm in the transcription.
        </note>
    </app>
</egXML>
```

As noted in the previous section, textual variations appearing in a divan of a poet can be pointed out in this section. Therefore, the text editor makes a clear separation between two different types of textual variations: 1. The text variants that appear in a compilation of musical sources (lyrics or notation miscellanies), and 2. those that appear in a literary source (a divan of a poet or miscellanies of poetry).

```
<egXML source="#NE204pc78">
    <app from="#w2189s" to="#w2189e">
        <lem>medār-ı tū ey dil</lem>
```

```
        <note>medār ey dōst (Hâfız-ı Şîrâzî 1983)</note>
    </app>
</egXML>
```

This section can also (as shown above in Section 3.2.1.3) detail any consideration of the lyricist(s) of a piece and provide a textual explanation about the degree of certainty given in @cert in different elements.

```
<egXML source="#NE204pc49">
    <app from="#w47s" to="#w47e">
        <lem>Lyricist Hâmî</lem>
        <note>The lyrics are by a poet with the pen name (mahlas) Hâmî, indicated in
        the last line of the lyrics. It is possible that the poet is in fact Hâmî
        Ahmed Âmidî (d. 1747), though the editors could not locate the lyrics in his
        dîvân; see
            <ref target="https://www.zotero.org/neslihandemirkol/items/Q2HCUPQQ">
            Hâmî Ahmed Âmidî 1885</ref>
        and
            <ref target="https://www.zotero.org/neslihandemirkol/items/7UDKRYQU">
            Yılmaz 2017</ref>.
            <ref target="https://www.zotero.org/neslihandemirkol/items/XHEPKTYF">
            Öztuna (2006, vol. 1, 426)</ref>
        and
            <ref target="https://www.zotero.org/neslihandemirkol/items/F58H6YW9">
            Aksüt (1983, vol. 1, 148)</ref>
        attribute the lyrics to Mehmed Kâmî Efendi (d. 1724). However, the editors
        could not locate the poem in his dîvân either; see
            <ref target="https://www.zotero.org/neslihandemirkol/items/2LYLMGGG">
            Erişen Yazıcı 2017</ref>
        and
            <ref target="https://www.zotero.org/neslihandemirkol/items/IWPP8RKS">
            Özyılmaz 1994</ref>.
        </note>
    </app>
</egXML>
```

With `tei:ref`, a link to a secondary source cited can be given to a persistent identifier of a bibliographic record stored in Zotero[9]. This solution was applied because there is already an existent CMO Zotero database for both musical and literary secondary literature. Thus, the mirroring of bibliographic data and their additional modelling in a TEI template with `tei:bibl` and `tei:cit` can also be avoided since e.g. the use of `tei:quote` and `tei:q` with indirect quotes is somewhat problematic. This method of external reference keeps the TEI slim and also contributes to linking open data.

4. The TEI Glossary Templates

The modeling of the glossaries is – as of the current version of this document – still work in progress and therefore this section is still preliminary.

4.1. Musical Genre Glossary

Content is yet to be determined.

---

[9] https://www.zotero.org/.

4.2. Usûl Glossary

This glossary is likely deprecated.

4.3. Poetic Glossary

Content is yet to be determined.

Appendix 1: The TEI Customization for CMO

The following tables provide an overview of the elements, attributes and values customized and developed during the TEI schema definition and revisions. The information summarized here was first for internal use during the development of the schema and the validation.

1. Header

Element	Custom	Attribute	Custom	Required	Value	List Type	Custom	Definition (for use in validation)
`tei:title`	no	`@type`	no	no	`desc`	closed		Title header section with the descriptive parameters of an individual piece.
					`titleTranscription`		X	Title of the musical piece the lyrics belong to in academic transcription from the script originally used in the source.
					`main`		X	Main title of a source as noted in the CMO source catalogue.
					`alt`		X	Main alternative title of a source as noted in the CMO source catalogue.
					`sub`		X	Subtitle of a source as noted in the CMO source catalogue.
`tei:note`	no	`@type`	no	no	`makamTranscription`	closed	X	Type of the makâm in academic transcription from the script originally used in the source.
					`usulTranscription`		X	Type of the usûl in academic transcription from the script originally used in the source.
					`usulStandardized`		X	Type of the usûl in standardized modern spelling.
					`genreTranscription`		X	Type of the musical genre in academic transcription from the script originally used in the source.
					`poeticForm`		X	Type of the poetic form.
					`poeticGenre`		X	Type of the poetic genre.
					`bahir`		X	Type of the bahir.
					`meter`		X	A fixed type of meter pattern consisting of 2-5 feet.
					`publicationInformation`		X	Information on a publication as noted in the CMO source catalogue.
					`persons-institutions`		X	Information on persons or institutions as noted in the CMO source catalogue.

Element	Custom	Attribute	Custom	Required	Value	List Type	Custom	Definition (for use in validation)
					other		X	Information on any other observation as noted in the CMO source catalogue.
					date		X	Information on the dating of a source as noted in the CMO source catalogue.
tei:supplied	no	@reason	no	yes	provided-by-editor	closed	X	Indicates additional information on a piece of text inferred from other analyses, conducted by an editor.
tei:supplied	no	@cert	no	yes	0	closed		No attribution to a piece of specific information is given or can be made.
					0.5			The attribution is made by the editor on implicit evidence with more than one possible choice.
					0.75			The attribution is made by the editor on implicit evidence for a piece of specific information.
					1			The information is either clearly named in the text or is identifiable without a doubt.
tei:supplied		@resp	no	yes		open		See tei:name[@xml:id] set in tei:seriesStmt.
tei:idno		@type	no	yes	CMO	semi-open	X	Identifies a piece of information following the definitions or structure of CMO.
					RISM		X	Identifies a piece of information following the definitions or structure of RISM.
					GND		X	Identifies a piece of information following the standards of the GND.
					ORCID		X	Identifies a piece of information following the standards of ORCID.
tei:author	no	@role	no	no	lyricist	closed	X	Name of the person to whom the lyrics are attributed.
					composer		X	Name of the person to whom the music is attributed.
tei:author	no	@cert	no	no	0	closed		No attribution to a piece of specific information is given or can be made.
					0.5			The attribution is made by the editor on implicit evidence with more than one possible choice.
					0.75			The attribution is made by the editor on implicit evidence for a piece of specific information.
					1			The information is clearly named in the text and is identifiable without a doubt.

Element	Custom	Attribute	Custom	Required	Value	List Type	Custom	Definition (for use in validation)
tei:author	no	@resp	no	no		open		See tei:name[@xml:id] set in tei:seriesStmt.
tei:editor (attribute for use within tei:titleStmt)	no	@role	no	no	author	open	X	The author responsible for the edition.
					contributor		X	Any other person responsible for the scientific contents of the edition.
					proofreader		X	Any individual that proofread the edition.
					compiler		X	An individual that compiled an original song text collection.
tei:date	no	@calendar	no	yes	hijri	closed	X	The date provided is in the Arabic Hijri lunar calendar.
					rumi		X	The date provided is in the Ottoman Rumi solar calendar.
					gregorian		X	The date provided is in the Gregorian solar calendar.

2. Body

Element	Custom	Attribute	Custom	Required	Value	List Type	Custom	Definition (for use in validation)
tei:div		@type	no	yes	newPieceStart	closed	X	Text area collating the page number and piece number, usually written at the top of a page / beginning of a piece.
					blockLyricsTranscription		X	Text area containing Latin transcription from original Ottoman Turkish in Arabic letters.
tei:milestone		@unit	no	yes	cite	closed		Reference to the printed text edition in PDF format.
tei:milestone		@source	no	yes	#cmo_mods_########	open	X	The 8-digit code refers to the unique identifier that links to the page with the original PDF text edition of the piece.
tei:msItem		@n	no	yes		open		The identifier of the manuscript part containing the block lyrics according to the piece number.
tei:locus		@from @to	no	yes		open		The identifier on which page the block lyrics appear based on the page number in the manuscript.
tei:rubric		@type	no	yes	pieceNumber	closed	X	Indicates the notation of the piece number in incrementing counting.
tei:rubric		@subtype	no	yes	red-pencil	closed	X	Indicates the notation of the piece number with a red pencil in the manuscript.

Element	Custom	Attribute	Custom	Required	Value	List Type	Custom	Definition (for use in validation)
tei:incipit								First hemistich of a piece.
tei:term		@type	no	no	genre	closed	X	Defines a word/words in the headline as the genre.
(attribute for use within tei:head)					usul		X	Defines a word/words in the headline as the usûl.
tei:lg		@decls	no	yes		closed	X	Reference to the tei:metSym[@xml:id] of a specific sub-meter under tei:metDecl[@xml:id="vezin"]
tei:lg		@rhyme	no	yes		open		Indication of the rhyme structure of hemistichs in small letters, separated by hyphens, e.g. "a-a-b-a".
tei:seg		@type	no	yes	vocal	closed	X	Text for any act of creating musical sounds with the voice.
					instruction		X	Text that provides information on how to execute the vocal performance.
					information		X	Text that provides additional information by the editor.
tei:seg		@ana	no	yes	mainPartLyrics	closed	X	Text for the main lyrics that consist of a proper sentence following the syntax of the underlying language in the form of a distich. Only with @type "vocal".
					terennüm		X	Text for other intermittent or stand-alone lyrics, either isolated words or syllables that make up no syntactic structure; or indication of performance instructions. With either @type "vocal" or "instruction".
tei:stage		@type	no	yes	stop		X	Instruction to terminate a vocal performance. With @ana "temme".
					repetition		X	Instruction to repeat a vocal performance. With @ana "ilaAhirihi", "mükerrer", "eyzan", "terennümKelevvel".
					pointer		X	Any non-verbal text highlighting the internal structure of the text to be performed. With @ana "eyzan", "miyanHane", "bendiSani", "bendiSalis", "haneiSani".

Element	Custom	Attribute	Custom	Required	Value	List Type	Custom	Definition (for use in validation)
					music		X	Non-verbal text not in relation to vocal performance but in reference to music. With @ana "usul".
tei:stage		@ana	no	yes	temme	closed	X	Termination of a vocal performance.
					ilaAhirihi		X	Text fragment that replicates a part of a hemistich written out in full earlier in the text to repeat its performance in full again, indicated by either "ilā-āḫirihi" or its abbreviated form "ilaḫ".
					mükerrer		X	Repetition of the performance of a preceding text part or line.
					eyzan		X	Pointing out the following text to be performed next.
					terennümKelevvel		X	Repetition of the preceding entire terennüm.
					bendiSani		X	Indication of the second distich (2nd couplet) in a poem.
					bendiSalis		X	Indication of the third distich (3rd couplet) in a poem.
					haneiSani		X	Indication of the second distich in a poem.
					miyanHane		X	Indicates the third hemistich in a poem that may involve different music, indicated by either "miyānḫāne" or abbreviated as "miyān".
					usul		X	Indication of a specific usûl within the text for vocal performance.
tei:note		@type	no	no	lyricist	closed	X	Name of the lyricist of the text, assured or reconstructed, according to the information in the header section.
tei:supplied		@reason	no	yes	derived-from-lyrics	closed	X	Indicates the incipit as derived from the first line of the main part lyrics of a piece added by an editor.
					omitted-in-original			Indicates one or more letters absent in the source in Ottoman Turkish in Arabic letters, reconstructed by an editor.
					provided-by-editor		X	Indicates additional information on a piece of text inferred from other analyses, conducted by an editor.

Element	Custom	Attribute	Custom	Required	Value	List Type	Custom	Definition (for use in validation)
tei:supplied		@cert	no	yes	0	closed		No attribution to a piece of specific information is given or can be made.
					0.5			The attribution is made by the editor on implicit evidence with more than one possible choice.
					0.75			The attribution is made by the editor on implicit evidence for a piece of specific information.
					1			The information is clearly named in the text and is identifiable without a doubt.
tei:supplied		@resp	no	yes		open		See tei:name[@xml:id] set in tei:seriesStmt.

3. Back

Element	Custom	Attribute	Custom	Required	Value	List Type	Custom	Definition (for use in validation)
tei:div		@type	no	yes	provenance			Text area in the critical apparatus that indicates the different sources of these lyrics.
					readings			Text area in the critical apparatus that indicates different spellings or words in other sources.
					annotations			Text area in the critical apparatus with editorial notes.
tei:rdg		@type	no	no	orthographic-variant	closed	X	The word(s) in the referred source is/are an orthographic variant, e.g. būse and pūse.
					omission		X	The word(s) is/are not represented in the referred source.
					misspelled		X	The word(s) in the referred source is/are clearly a misspelling, e.g. ḥafīf.
					addition		X	The word(s) in the referred source is/are absent in the current piece.
					variant-reading		X	The word(s) in the referred source is/are a variant in terms of grammar, synonymy, etc.
tei:note (for use within tei:div@type= "annotations")		@type	no		divan-variant	Closed	X	A variant reading to the original source that appears in another musical source, but in a divan of a poet, either in the form of a manuscript, a printed and/or edited book.