

Edirom Summer School 2012

Track A

Einführung in die Codierung von Notentexten mit MEI

Dozenten:

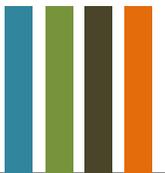
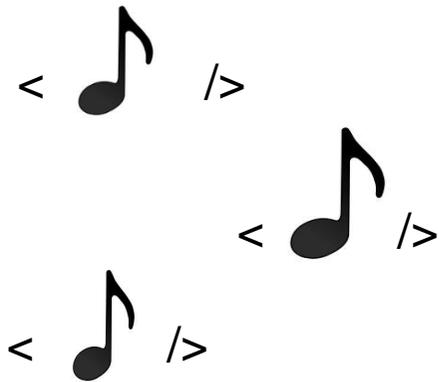
Maja Hartwig, Kristina Richts



- Einführung in XML
- Einführung in Oxygen
- Einführung in die Musikcodierung
- Einführung in MEI
- Codierung von Notentexten mit MEI
- Metadatenkodierung in MEI
- Tools



Was ist Musikcodierung?



- Erstes Datenformat für Musikcodierung: DARMS (1960er)
- Weitere Codierungsformate: Humdrum, MuseData, GUIDO, MPEG SMR, MusicXML
- Unterschiedliche Zielsetzungen
- 1997: 1. Versuch, die verschiedenen Formate vorzustellen und zu dokumentieren
→ Eleanor Selfridge-Field: Beyond MIDI
- 1998: Entstehung MusicXML und MEI



Welche Informationen sind in diesem Ausschnitt enthalten?

The image shows a musical score for two voices: Soprano and Alto. Both parts are in the key of D major (two sharps) and 4/4 time. The Soprano part begins with a rest followed by a series of eighth notes: D4, E4, F4, G4, A4, B4, C5, D5. The Alto part begins with a half note D4, followed by a half note E4, and then a series of half notes: F4, G4, A4, B4. The lyrics are: Soprano: "Freu - de, schö - ner Göt - ter - fun - ken,"; Alto: "Seid um - - - schlun - gen". A dynamic marking of *f* (forte) is present above the first note of both parts.



- Seit 1998
- Entwickler: Perry Roland
- Gemeinschaftsprojekt
- Community besteht derzeit aus ca. 30 internationalen Experten
- Datenformat zur strukturierten Beschreibung von Musiknotation
- Angelehnt an TEI
- Basiert auf internationalen Standards



- Seit 2009 gibt es das MEI Council, das für weitere Entwicklungen verantwortlich ist
- Technische Weiterentwicklung des Formats obliegt dem sog. Technical Team
- Anbindung an andere Datenformate (z.B. MusicXML, Score) und bibliothekarisch-archivarische Schemata (z.B. METS, MODS, EAD) ist möglich
- MEI richtet sich ausdrücklich an eine (musik)wissenschaftliche Nutzung



Vier Einstiegspunkte in MEI:

`<meiCorpus>`

Mit meiCorpus ist es möglich, mehrere MEI-Dateien mit einem gemeinsamen Header zu bündeln.

`<mei>`

Dies ist der Standardfall; enthält einen Kopfbereich sowie musikalische Inhalte.

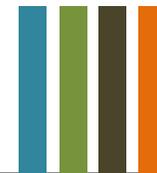
`<meiHead>`

Damit ist es möglich, ausschließlich Metadaten ohne musikalische Inhalte zu erfassen.

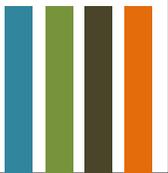
`<music>`

Hier lassen sich musikalische Inhalte ohne eigene Metadaten erfassen.

```
<music> enthält den musikalischen Inhalt der Datei
  <body> Hauptteil
    <mdiv> Musical division (Sätze, Auftakte, Aufzüge, ...)
      <score> zeigt Inhalte in Partiturform
        <section> Container zur Untergliederung der Inhalte
          <measure> ein Takt
            <staff> ein System der Partitur
              <layer> eine Stimme
                <note/> eine Note
              </layer>
            </staff>
          </measure>
        </section>
      </score>
    </mdiv>
  </body>
</music>
```

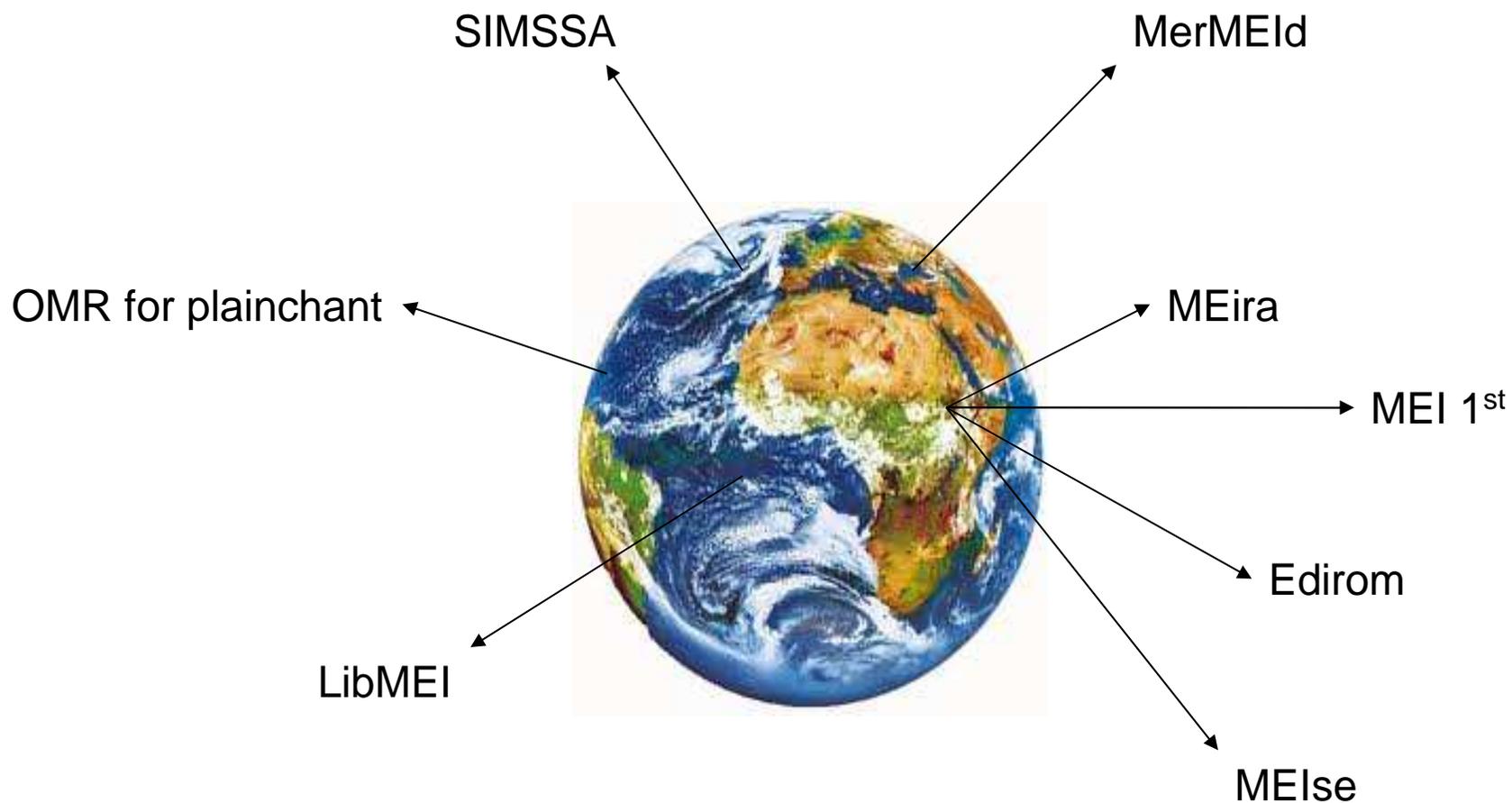


- Codierungsmöglichkeiten von Varianten, Texteingriffen und Mehrdeutigkeiten
- Verschiedene Lesarten, Handschriften, Schreibmittel, Textschichten etc. können nachvollzogen und einzelnen Quellen bzw. Schreibern zugeordnet werden
- Mit MEI können vollständige Quellenbeschreibungen und diplomatische Transkriptionen in formalisierter Form abgefasst werden



- MEI-Guidelines: seit Ende August online verfügbar
- MEI 1st: Tutorials zum eigenständigen Erlernen von MEI, die derzeit entwickelt werden
- MEI-Beispielsammlung: Ziel des DFG/NEH-Projektes *Digital Music Notation Data Model and Prototype Delivery System* ist u.a. der Aufbau einer umfassenden Beispielsammlung an MEI-Codierungen
- FRBR-Implementierung: Umsetzung ist für das nächste Release geplant





Was ist eine Note?



Halsrichtung

Tonhöhe



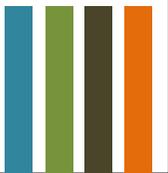
Notenkopf

Tonlänge

Tonlage



```
<note pname="c" oct="4" dur="4"/>
```





```
<note pname="c" oct="4" dur="4" dots="1"/>
```

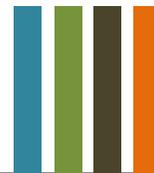




```
<note pname="e" accid="f" oct="4" dur="4"/>
```



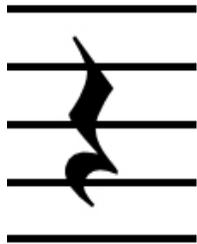
```
<note pname="c" oct="5" dur="2">  
  <accid accid="s"/>  
</note>
```



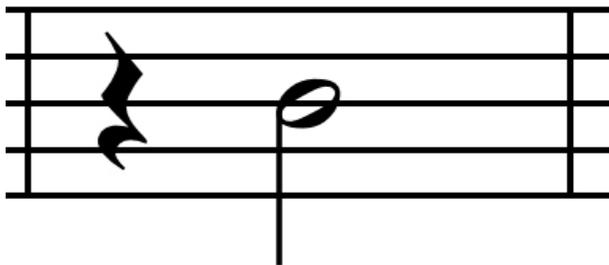


```
<beam>  
  <note pname="f" oct="4" dur="8"/>  
  <note pname="e" oct="4" dur="8"/>  
</beam>  
<beam>  
  <note pname="b" oct="4" dur="8"/>  
  <note pname="c" oct="5" dur="8"/>  
</beam>  
<beam>  
  <note pname="a" oct="4" dur="8"/>  
  <note pname="f" oct="4" dur="8"/>  
</beam>
```





`<rest dur="4"/>`



`<rest dur="4"/>`

`<note pname="b" oct="4" dur="2"/>`





Bitte codieren Sie das Beispiel innerhalb eines layers!



```
<layer>
```

```
<note pname="c" oct="4" dur="4" stem.dir="up"/>
```

```
<note pname="d" oct="4" dur="4" stem.dir="up"/>
```

```
<note pname="e" oct="4" dur="4" stem.dir="up"/>
```

```
<note pname="f" oct="4" dur="4" stem.dir="up"/>
```

```
</layer>
```





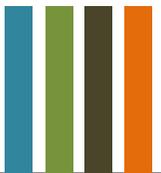
Al - le mei - ne

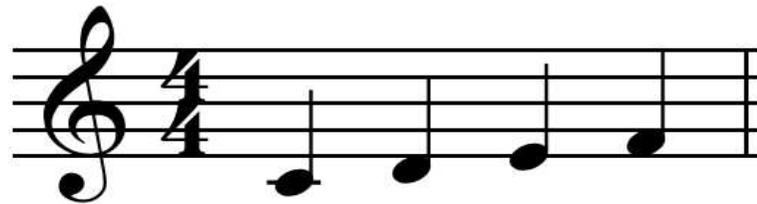


<layer>

```
<note pname="c" oct="4" dur="4" stem.dir="up" syl="Al-"/>  
  <note pname="d" oct="4" dur="4" stem.dir="up" syl="le"/>  
  <note pname="e" oct="4" dur="4" stem.dir="up" syl="mei-"/>  
  <note pname="f" oct="4" dur="4" stem.dir="up" syl="ne"/>
```

</layer>



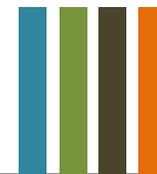


Al -le mei -ne

```
<measure n="1">  
  <staff>  
    <layer>  
      <note pname="c" oct="4" dur="4" stem.dir="up" syl="Al-"/>  
      <note pname="d" oct="4" dur="4" stem.dir="up" syl="le"/>  
      <note pname="e" oct="4" dur="4" stem.dir="up" syl="mei-"/>  
      <note pname="f" oct="4" dur="4" stem.dir="up" syl="ne"/>  
    </layer>  
  </staff>  
</measure>
```



Beispiel mit zwei Stimmen (layer)

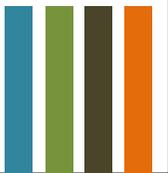


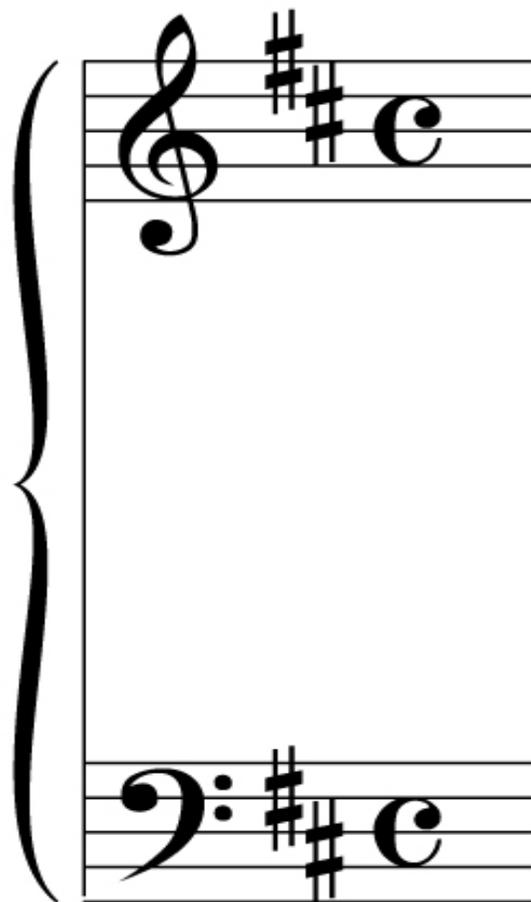
```
<layer n="1">  
  <note pname="d" oct="5" dur="4" stem.dir="up"/>  
  <note pname="d" oct="5" dur="4" stem.dir="up"/>  
  <beam>  
    <note/>  
    <note/>  
  </beam>  
  <note/>  
</layer>  
<layer n="2">  
  <note pname="d" oct="4" dur="4" stem.dir="down"/>  
  <beam>  
    <note/>  
  </beam>  
  <note/>  
  <note/>  
</layer>
```





```
<staffDef n="1" lines="5" clef.line="2" clef.shape="G"  
meter.count="4" meter.unit="4" key.sig="1s"/>
```





```
<scoreDef meter.count="4" meter.unit="4"  
  meter.sym="common" key.sig="2s">  
  <staffGrp symbol="brace">  
    <staffDef n="1" lines="5"  
      clef.line="2" clef.shape="G"/>  
    <staffDef n="2" clef.shape="F"  
      clef.line="4" lines="5"/>  
  </staffGrp>  
</scoreDef>
```

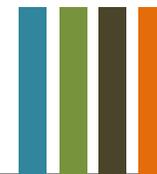


Alle meine Entchen III



Al - le mei - ne

Fügen Sie die scoreDef ein, sodass Sie eine vollständige Codierung erhalten!



Al - le mei_ne Ent - chen schwim-men auf dem See

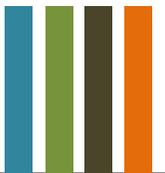


```
<mei xmlns:xlink="http://www.w3.org/1999/xlink"
  xmlns="http://www.music-encoding.org/ns/mei"
  meiversion="2012">
  <meiHead>
    <fileDesc>
      <titleStmt>
        <title></title>
      </titleStmt>
      <pubStmt/>
    </fileDesc>
  </meiHead>
  <music/>
</mei>
```

Root Element

Container für Metadaten

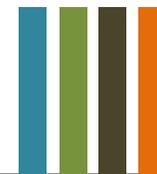
Container für musical texts



```
<music>
  <body>
    <mdiv>
      <parts>
        <part/>
      </parts>
    </mdiv>
  </body>
</music>
```

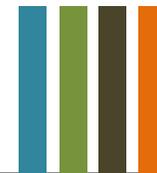
```
<music>
  <body>
    <mdiv>
      <score/>
    </mdiv>
  </body>
</music>
```

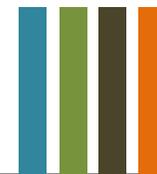
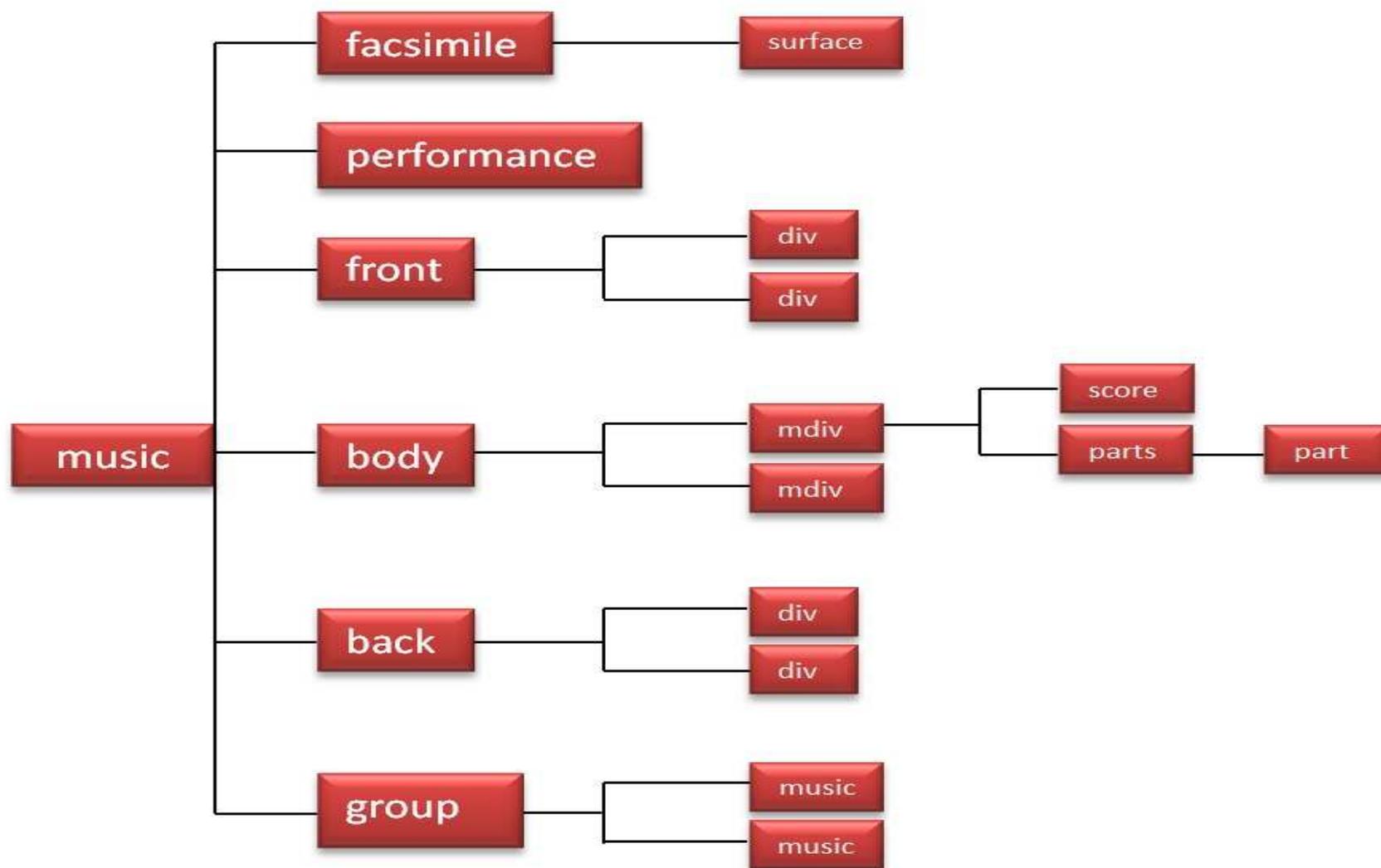
```
<music n="opera">
  <body>
    <mdiv n="act_1">
      <mdiv n="scene_1">
        <score/>
      </mdiv>
    </mdiv>
    <mdiv n="act_2"/>
    <mdiv n="act_3"/>
  </body>
</music>
```



```
<music>  
  <group>  
    <music n="song_1">  
      <body>  
        <mdiv/>  
      </body>  
    </music>  
    <music n="song_2">  
      <body>  
        <mdiv/>  
      </body>  
    </music>  
  </group>  
</music>
```

```
<music>  
  <performance>  
    <recording>  
      (...)  
    </recording>  
  </performance>  
</music>
```

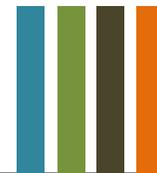


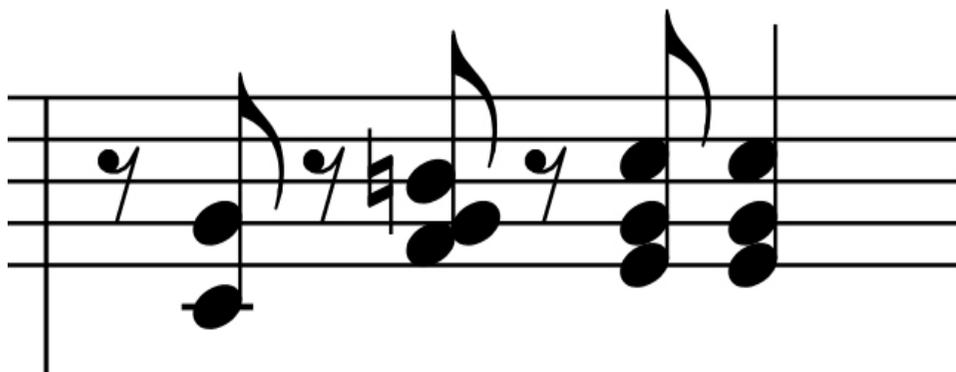




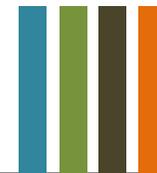


```
<chord dur="8" stem.dir="up">  
  <note pname="c" oct="4"/>  
  <note pname="g" oct="4"/>  
</chord>
```





```
<layer>  
  <rest dur="8"/>  
  <chord dur="8" stem.dir="up">  
    <note pname="c" oct="4"/>  
    <note pname="g" oct="4"/>  
  </chord>  
  <rest dur="8"/>  
  <chord dur="8" stem.dir="up">  
    <!-- etc. -->  
  </chord>  
</layer>
```



A musical score snippet for the piece 'Frisch und munter'. The title is circled in red. The score consists of two staves: a treble clef staff and a bass clef staff. The treble staff begins with a fermata, followed by two measures of chords. The bass staff begins with a fermata, followed by two measures of notes. A dynamic marking 'f' is present in the first measure of the bass staff. A red oval highlights the title 'Frisch und munter' above the first measure of the treble staff.

```
<measure>
```

```
<!-- Inhalt der staves -->
```

```
</measure>
```

```
<measure>
```

```
<!-- Inhalt der staves -->
```

```
<dir place="above" staff="1" tstamp="0.5">Frisch und munter</dir>
```

```
<dynami place="above" staff="2" tstamp="4.5">f</dynami>
```

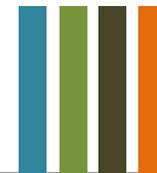
```
</measure>
```





Mögliche Codierungen:

1. `<note artic="acc"/>`
2. `<note>`
 `<artic artic="acc"/>`
 `</note>`



Waf - fen.
trof - fen.

The image shows a musical score for violin and viola. The violin part is on the top staff and the viola part is on the bottom staff. Both parts play a melody consisting of quarter notes: G4, A4, B4, C5. The lyrics 'Waf - fen.' and 'trof - fen.' are written below the notes, with a horizontal line under each word. A slur is placed over the notes G4, A4, and B4 in both parts. The piece ends with a fermata over the final note C5.

One-pass-encoding und standoff-markup

The image shows a musical score illustrating one-pass-encoding and standoff-markup. It features a single staff with a melody of quarter notes: G4, A4, B4, C5. A slur is placed over the notes G4, A4, and B4. A vertical bar line is placed between the notes B4 and C5. The notes G4, A4, and B4 are marked with a dot above them, indicating a one-pass-encoding. The notes C5 and B4 are marked with a vertical line above them, indicating a standoff-markup.

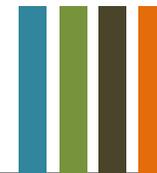


- One-pass-encoding (slur as Attribute)

Waf _____ - fen.
trof _____ - fen.

The image shows two staves of musical notation. The first staff has a slur over the first two notes (E4 and D4). The second staff has a slur over the first two notes (C4 and D4). The lyrics 'Waf' and 'trof' are aligned with the first notes, and 'fen.' is aligned with the second notes.

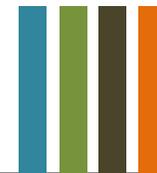
```
<layer>  
  <note pname="e" oct="4" dur="8"  
    stem.dir="down" tie="i"/>  
  <note pname="d" oct="4" dur="4"  
    stem.dir="down"/>  
  <note pname="c" oct="4" dur="8"  
    stem.dir="down" tie="t"/>  
</layer>
```



- Standoff-markup (slur as Element)

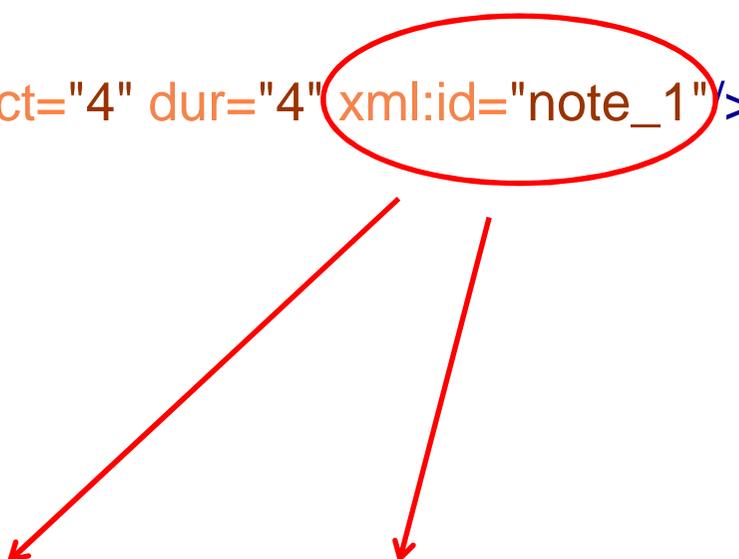
Waf — - fen.
trof — - fen.

```
<staff>  
  <layer>  
    <note pname="e" oct="3"  
      dur="8" xml:id="note_1"/>  
    <note pname="a" oct="3"  
      dur="4" xml:id="note_2"/>  
    <note pname="g" oct="3"  
      dur="8" xml:id="note_3"/>  
  </layer>  
</staff>  
<slur staff="2" curvedir="above"  
  startid="#note_1" endid="#note_3"/>
```

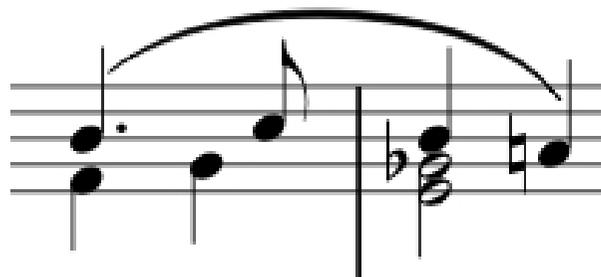


```
<staff>  
  <layer>  
    <note pname="a" oct="4" dur="4" xml:id="note_1"/>  
  </layer>  
</staff>  
<!-- etc. -->
```

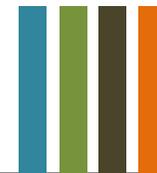
```
<dynam startid="#note_1" endid="#note_1">f</dynam>
```



```
<measure>  
  <staff>  
    <layer>  
      <note/>  
      <note/>  
    </layer>  
  </staff>
```



```
</measure>  
<measure>  
  <staff>  
    <layer>  
      <note/>  
      <note/>  
    </layer>  
  </staff>  
  <slur staff="1" layer="1" dur="1m+2" curvedir="above"/>  
</measure>
```



Ein' fe - ste Burg ist un - ser Gott, ein'
Er hilft uns frei aus al - ler Not, die

The image shows a musical score for a hymn. It consists of two staves of music. The top staff is a vocal line, and the bottom staff is a piano accompaniment. The lyrics are in German and are written below the notes. The music is in a key with one sharp (F#) and a common time signature. The lyrics are: 'Ein' fe - ste Burg ist un - ser Gott, ein' Er hilft uns frei aus al - ler Not, die'. The score is divided into two systems by a vertical line. The first system contains the first two measures, and the second system contains the next two measures. The lyrics are aligned with the notes in the vocal line.

Zwei Verse: Was nun?



```
<layer n="1">  
  <note pname="d" oct="5" dur="4" stem.dir="up">  
  
    <verse n="1">  
      <syl>Ein´ </syl>  
    </verse>  
    <verse n="2">  
      <syl>Er</syl>  
    </verse>  
  </note>  
</layer>
```





<arpeg/>



<note grace="unacc" size="cue"/>



<hairpin/>





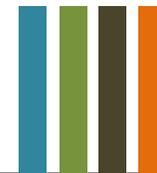
<arpeg/>



<note grace="unacc" size="cue"/>



<hairpin/>



<Viel Spaß!/>

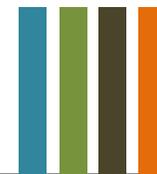


```
<section>
  <measure>
    <staff>
      <note pname="e" oct="4" dur="4"/>
      <note pname="d" oct="4" dur="4"/>
      <note pname="f" accid="s" oct="4" dur="4"/>
      <note pname="a" oct="4" dur="4"/>
    </staff>
  </measure>
</section>
```

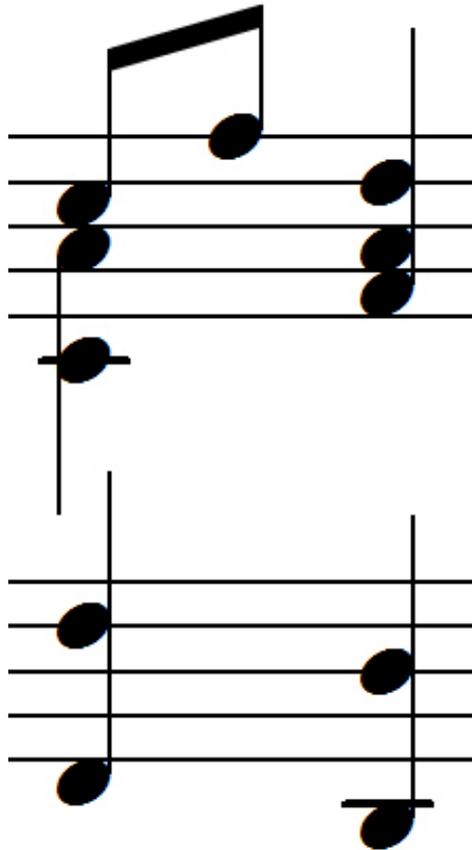


- Wie codieren Sie einen Taktartwechsel?

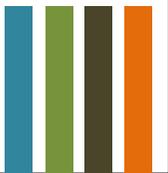
The image displays a musical score for piano, consisting of two staves: a treble clef staff on top and a bass clef staff on the bottom. The key signature is one flat (B-flat). The score is divided into two measures by a vertical bar line. The first measure is in 5/4 time, and the second measure is in 6/4 time. The time signature change is indicated by the numbers '5' and '6' above the '4' in the respective measures. The music features chords and melodic lines in both hands, with some notes beamed together and some notes marked with a fermata.



Chord oder layer?



Tipp: Es gibt kein „richtig“
oder „falsch“!



Welche Codierung ist richtig?

- a) `<accid accid="s">`
 `<note pname="a" dur="1" oct="4"/>`
 `</accid>`
- b) `<note pname="a" dur="1" oct="4">`
 `</note>`
 `<accid accid="s"/>`
- c) `<note pname="a" dur="1" oct="4" accid="s"/>`



Allegretto

Piano

p

1. Wie codieren Sie den Auftakt?
2. Welches Element wählen Sie, um „Allegretto“ zu codieren??
3. Welche Lösung haben Sie für die Bögen gefunden?
4. Wie werden die Vorschlagnoten codiert?



Schnell. ♩ = 152.

Singstimme.

Pianoforte.

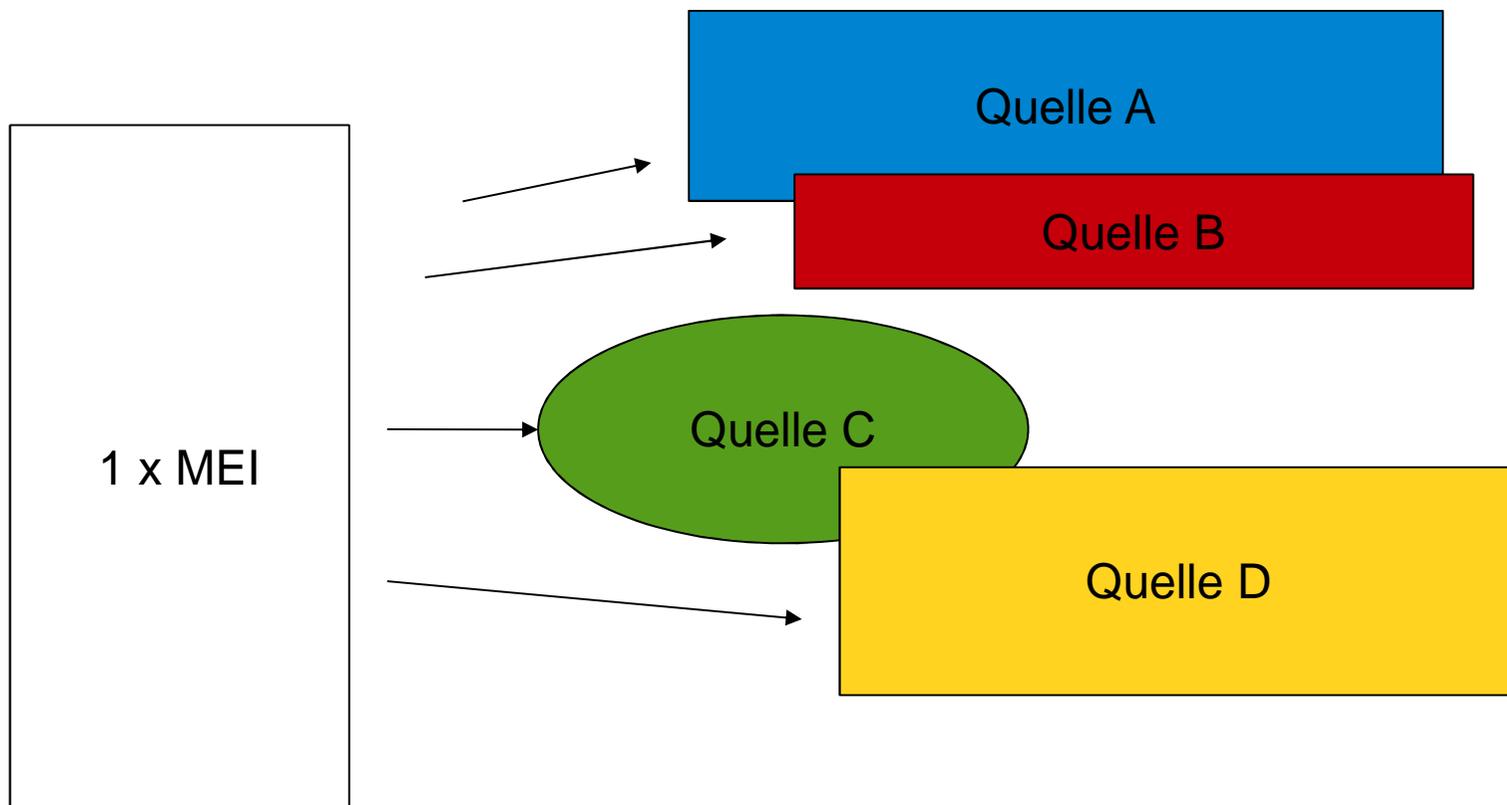
1. Definieren Sie drei staves
2. Finden Sie eine Lösung zur Codierung der Triolen
3. Wie codieren Sie die Tremolos?
4. Wie codieren Sie die „Beschriftungen“?

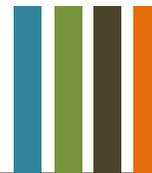
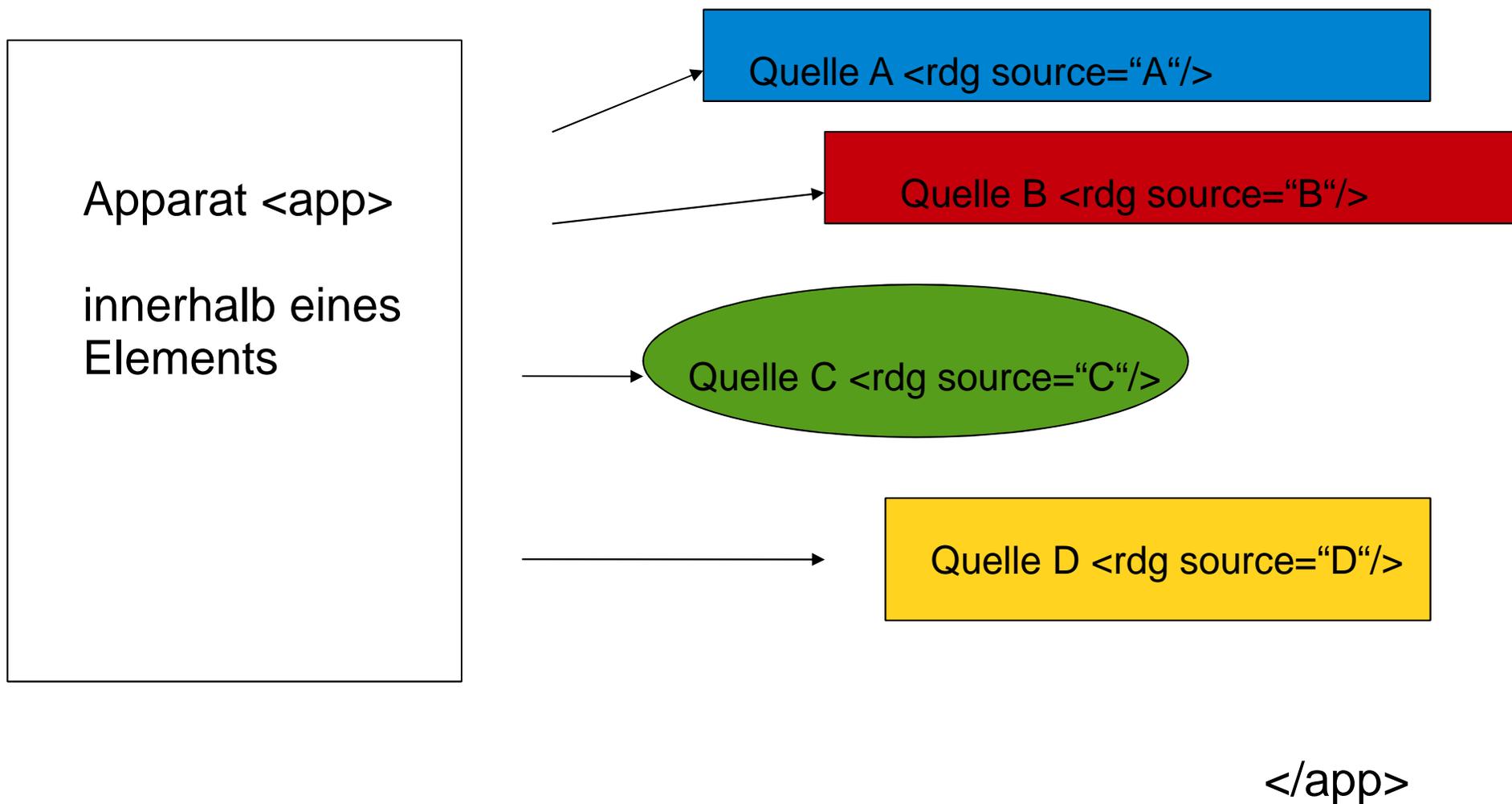


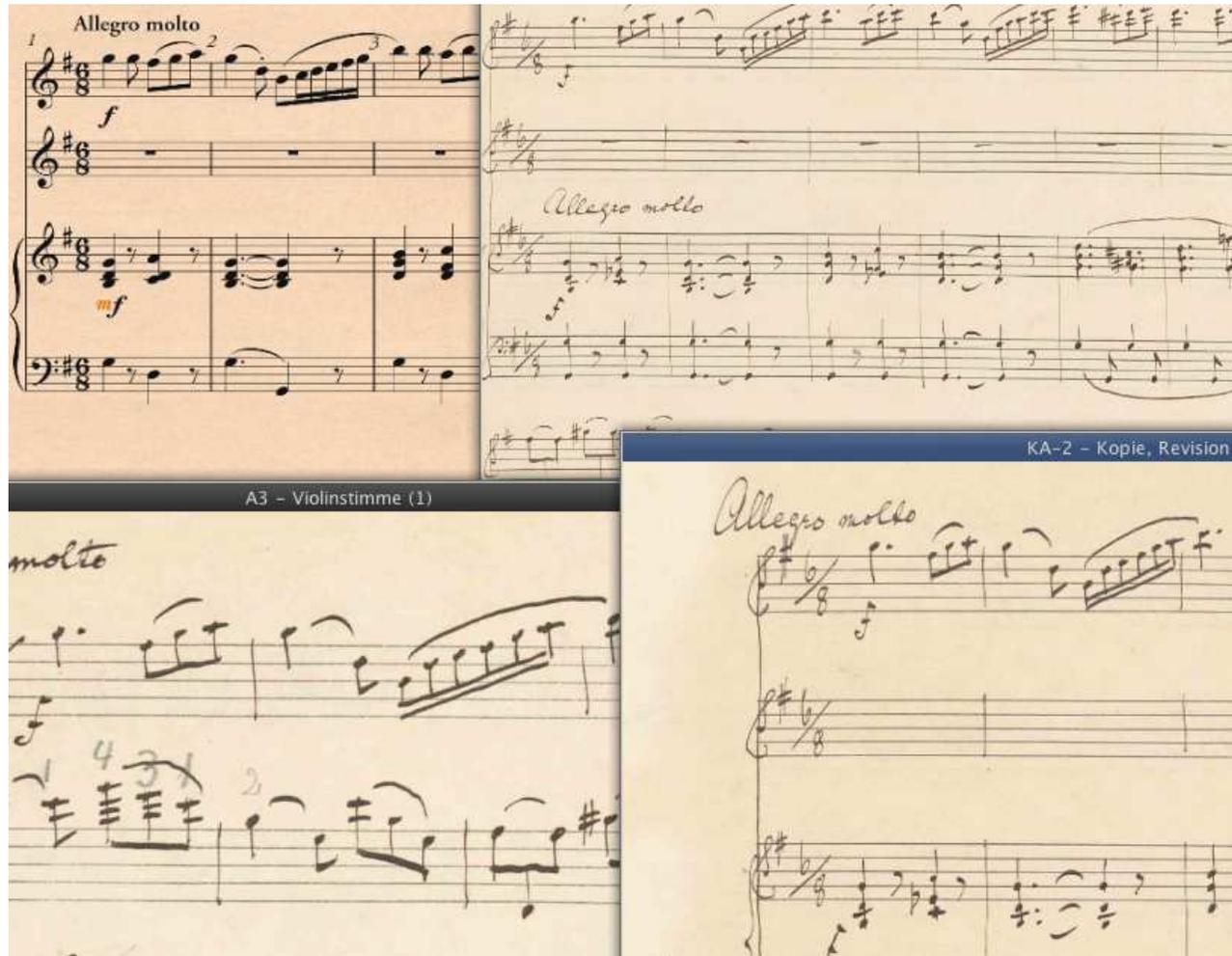
The image shows a musical score for voice and piano. The voice part is on a single staff with a treble clef, marked 'Zart'. The piano part is on two staves (treble and bass clefs) with a grand staff, marked 'p sempre dolce'. The lyrics are 'Wie Me.lo . di . en — zieht es mir lei . se durch den'. The key signature has two sharps (F# and C#) and the time signature is 7/8. The piano part features a melodic line in the right hand and a bass line in the left hand, with various articulations and dynamics.

1. Viel Glück mit den Balken!
2. Wie codieren Sie den Schlüssel im zweiten System?
3. Tipp: Nutzen Sie die Guidelines oder fragen Sie uns!









```
<app>  
  <rdg source="#source_A">  
    <note pname="a" oct="5" dur="2"/>  
  </rdg>  
  <rdg source="#source_B">  
    <note pname="b" oct="5" dur="2"/>  
  </rdg>  
  <rdg source="#source_c">  
    <note pname="a" oct="5" dur="4"/>  
  </rdg>  
  <rdg source="#source_D">  
    <note pname="b" oct="5" dur="4"/>  
  </rdg>  
</app>
```



MEI-Header

```
<meiHead></meiHead>
```



Struktur eines minimalen Headers:

```
<meiHead>  
  <fileDesc>  
    <titleStmt>  
      <title></title>  
    </titleStmt>  
    <pubStmt></pubStmt>  
  </fileDesc>  
</meiHead>
```



Bestandteile des Headers:

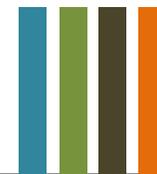


Bestandteile des Headers:



Titel der elektronischen Datei – ein Beispiel

```
<fileDesc>  
  <titleStmt>  
    <title>Schmetterling</title>  
  </titleStmt>  
  <pubStmt />  
</fileDesc>
```



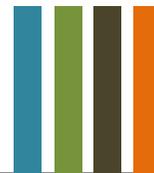
Titel der elektronischen Datei – ein Beispiel

```
<fileDesc>
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    <title>Schmetterling : eine
      elektronische Transkription</title>
  </titleStmt>
  <pubStmt />
</fileDesc>
```



Angabe beteiligter Personen – ein Beispiel

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<fileDesc>
  <titleStmt>
    <title>Schmetterling : eine
      elektronische Transkription</title>
    <respStmt>
      <resp></resp>
      <persName></persName>
    </respStmt>
  </titleStmt>
  <pubStmt />
</fileDesc
```



Funktionsbezeichnungen von Personen

```
<titleStmt>
  <title>Schmetterling : eine elektronische
    Transkription</title>
  <respStmt>
    <resp role="composer">Komponiert
      von:</resp>
    <persName>Robert Schumann</persName>
    <resp role="encoder">Maschinenlesbare
      Transkription von:</resp>
    <persName>Max Mustermann</persName>
  </respStmt>
</titleStmt>
```

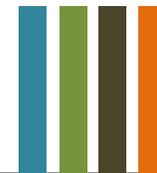
Terminologie der Funktionsbezeichnung: MARC Code List for Relators



Standardisierte Angabe von Personennamen

```
<persName role="composer" authority="GND"  
  authURI="http://d-nb.info/gnd"  
  dbkey="118611666">Robert Schumann</persName>
```

Verwendete Normdatei: Gemeinsame Normdatei (GND)



Status der Publikation

```
<fileDesc>
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    <title>Schmetterling : eine elektronische
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    <respStmt>
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    </respStmt>
  </titleStmt>
  <pubStmt>
    <unpub/>
  </pubStmt>
</fileDesc>
```



Erfassung von Quellen

```
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    Transkription</title>
    <respStmt>
      ...
    </respStmt>
  </titleStmt>
  <pubStmt>
    <unpub/>
  </pubStmt>
  <sourceDesc></sourceDesc>
</fileDesc>
```



Titel einer Quelle

```
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  <sourceDesc>
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      <titleStmt>
        <title type="main">Lieder-Album für
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        <title type="subtitle">für
          Singstimme(n) und Klavier</title>
        <title type="uniform">Lieder für die
          Jugend</title>
      </titleStmt>
    </source>
  </sourceDesc>
</fileDesc>
```



Beteiligte Personen

```
<fileDesc>
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  <sourceDesc>
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        <title type="main"/>
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          <persName/>
        </respStmt>
      </titleStmt>
    </source>
  </sourceDesc>
</fileDesc>
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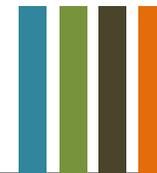
Vermerk einer bestimmten Ausgabe

```
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        ...
      </titleStmt>
      <editionStmt>
        <edition>Reprint der Erstausgabe
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      </editionStmt>
    </source>
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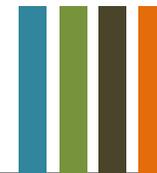
Publikationsangaben: Verlag und Verlagsort

```
<sourceDesc>
  <source n="1" xml:id="RS_op79_Mahlert">
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      <respStmt>
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          Härtel</corpName>
      </respStmt>
      <address>
        <addrLine>Wiesbaden</addrLine>
        <addrLine>Deutschland</addrLine>
      </address>
    </pubStmt>
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```



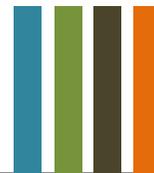
Publikationsangaben: Bestellnummer

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    <editionStmt/>
    <pubStmt>
      ...
      <identifier
        type="ordernumber">Breitkopf &
        Härtel 8307</identifier>
    </pubStmt>
  </source>
</sourceDesc>
```



Copyright-Vermerk

```
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    <titleStmt/>
    <editionStmt/>
    <pubStmt>
      ...
      <identifier/>
      <availability>
        <useRestrict>© 1991 by Breitkopf
          & Härtel,
          Wiesbaden</useRestrict>
      </availability>
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```



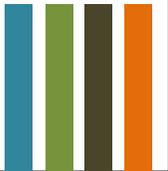
Physische Beschreibung einer Quelle

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```



Inhalt

```
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    <classification>
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    </classification>
    <contents>
      <contentItem>1. Der Abendstern</contentItem>
      <contentItem>2. Schmetterling</contentItem>
      ...
    </contents>
  </source>
</sourceDesc>
```



Work Description: Erschließung des Werkes, das
Sie codieren möchten

```
<meiHead>  
  <fileDesc>  
    <titleStmt>  
      <title/>  
    </titleStmt>  
    <pubStmt />  
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  </fileDesc>  
  <workDesc></workDesc>  
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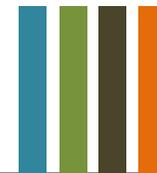
Container für einzelne Werke

```
<workDesc>  
  <work xml:id="op.79_2"></work>  
</workDesc>
```



Tonart, Taktart, Tempoangabe

```
<workDesc>  
  <work xml:id="op.79_2">  
    <titleStmt>  
      <title/>  
      <respStmt/>  
    </titleStmt>  
    <key>D major</key>  
    <tempo>Schnell.</tempo>  
    <meter count="3" unit="8"/>  
  </work>  
</workDesc>
```



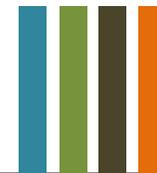
Angaben zur Besetzung

```
<workDesc>
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    ...
    <key/>
    <tempo/>
    <meter/>
    <perfMedium>
      <instrumentation>
        <instrVoice n="1">Singstimme.</instrVoice>
        <instrVoice n="2">Pianoforte.</instrVoice>
      </instrumentation>
    </perfMedium>
  </work>
</workDesc>
```



Incipit

```
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    <perfMedium>
      ...
    </perfMedium>
    <incip>
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      <incipCode></incipCode>
      <score></score>
    </incip>
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```



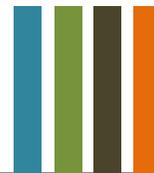
Revision Description: Vermerk von Änderungen,
die an der Datei vorgenommen werden

```
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  </fileDesc>  
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  <revisionDesc>  
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      <respStmt></respStmt>  
      <changeDesc>  
        <p></p>  
      </changeDesc>  
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    </change>  
  </revisionDesc>  
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```



Container für Änderungen: <change>-Element

```
<meiHead>
  ...
  <revisionDesc>
    <change n="1">
      <respStmt>
        <persName>Max Mustermann</persName>
      </respStmt>
      <changeDesc>
        <p>Anlegen der Datei und Codierung des
          Headers</p>
      </changeDesc>
      <date isoDate="2012-09-25" />
    </change>
  </revisionDesc>
</meiHead>
```



Identification

Work

Sources

Music

Performances

Bibliography

File Revision



● Editing: CNW 25

Titles and originators

Main title <HTML>
 ↑ ↓ ↻ + ✕

Alternative title <HTML>
 ↑ ↓ ↻ + ✕

Subtitle <HTML>
 ↑ ↓ ↻ + ✕

Composer

Dedicattee

Text (author or title) ?

Work identification

List name ? No. ? + ✕

List name ? No. ? + ✕

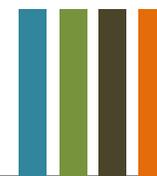
File contexts

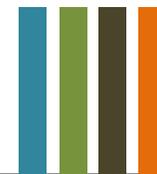
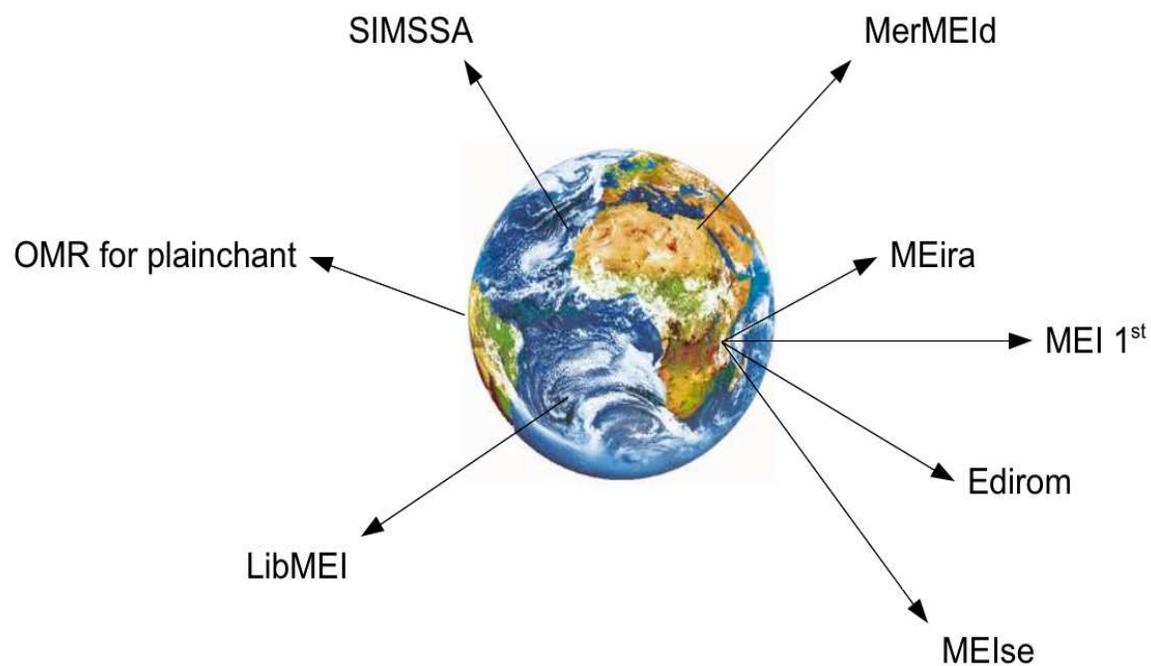
File context ? + ✕

File Publication

Publisher ? Date Status ? ●

MerMEId







Für weitere Fragen und Diskussionen stehen wir
Ihnen gerne zur Verfügung!



Maja Hartwig: hartwig@music-encoding.org

Kristina Richts: richts@music-encoding.org

Außerdem sind Sie herzlich eingeladen, auf der MEI-Mailingliste **mei-I** (URL: <https://lists.uni-paderborn.de/mailman/listinfo/mei-I>)

Themen und Fragen rund um MEI zu verfolgen und zu diskutieren!

</workshop>

Vielen Dank für die Aufmerksamkeit!

