

MEI

THE MUSIC ENCODING INITIATIVE

ROLAND MAIR-GRUBER

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01 —



```
<measure n="5">
  <staff n="1">
    <layer n="1">
      <note pname="c" oct="5" dur="8" dots="1" stem.dir="down" accid.ges="s">
        <verse n="1">
          <syl wordpos="i" con="d">wun</syl>
        </verse>
      </note>
      <note pname="b" oct="4" dur="16" stem.dir="down">
        <verse n="1">
          <syl wordpos="m" con="d">der</syl>
        </verse>
      </note>
      <note pname="b" oct="4" dur="16" stem.dir="up">
        <verse n="1">
          <syl wordpos="m" con="d">schö</syl>
        </verse>
      </note>
      <note pname="d" oct="5" dur="16" stem.dir="up">
        <verse n="1">
          <syl wordpos="t">nen</syl>
        </verse>
      </note>
    </layer>
  </staff>
</measure>
```

MUSIC ENCODING INITIATIVE (MEI)

Website: <https://music-encoding.org/>

GitHub: <https://github.com/music-encoding/>

MEI-Guidelines: <https://music-encoding.org/guidelines/v4/content/>

The Music Encoding Initiative (MEI) is a community-driven, open-source effort to define a system for encoding musical documents in a machine-readable structure.



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WAS IST <MEI>?



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- Basiert auf **XML** (eXtensible Markup Language)
 - Textbasiert
 - Maschinenlesbar
 - Repräsentiert strukturelle Information
 - One Document Does-it-all (ODD)
- open source
- community driven
- MEI ermöglicht die Verknüpfung von Metadaten, Musiknotation, Quellenkritik

DATEISTRUKTUR



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- Dateiformat: .xml oder .mei
- 1 Namespace und Schema: Definiert die Sprache der Datei
 - 2 <mei>: beinhaltet den Code
 - 3 <meiHead>: beinhaltet Metadaten
 - 4 <music>: beinhaltet den Notentext

```
1 1 <?xml version="1.0" encoding="UTF-8"?>
2 2 <?xml-model href="../../../schemas/mei-DME-4.0.rng" type="application/xml" schematypens="http://relaxng.org/ns/structure/1.0"?>
3 3 <?xml-model href="../../../schemas/mei-DME-4.0.rng" type="application/xml" schematypens="http://purl.oclc.org/dsdl/schematron"?>
4 4 <mei mei:version="4.0.1" xmlns="http://www.music-encoding.org/ns/mei">
5 5 3 <meiHead>
309 4 <music>
5302 </mei>
```



DIE STRUKTURELLE LOGIK VON MEI/XML

- MEI besteht aus **Elementen**, die nach einer hierarchischen Logik verschachtelt werden können und **Attribute**, die den Elementen zugeordnet werden.
- **Elemente** werden mit „<>“ umschlossen z.B. **<note>**
- **Attribute** werden ins Element geschrieben z.B. **<note dur= “4”>**
- Verschachtelung:
 - Jedes Element kann weitere Elemente beinhalten. Dabei muss das Element geöffnet (**<>**) und wieder geschlossen (**</>**) werden:
<element attribute> ... Inhalt ... </element>
 - Ein Element ohne Inhalt wird durch einen Schrägstrich am Ende geschlossen:
<note dur=“4” pname=“d” oct=“3”/>

- Hierarchische Ordnung: von großen zu kleinen Sinneinheiten:

- Takt 1

- System 1

- System 2

- Stimme 1 (layer)

- Balken (Notengruppierung)

- Note 1

- Note 2

- ...

- Balken

- Noten ...

- Stimme 2

- System 3

- ...

- Takt 2

- ...

Allegro moderato

The image shows a musical score for a piece titled "Allegro moderato". The score is written for a piano (p) and features a treble and bass staff. The tempo is marked "Allegro moderato". The score is annotated with a red box highlighting the first measure of the first system. Within this red box, there are two green boxes: one around the first measure of the first system (treble staff) and another around the first measure of the second system (bass staff). The green boxes are further divided into blue boxes, which are then divided into purple boxes. The purple boxes highlight specific notes or groups of notes. The notes are color-coded: yellow for the first note of a group, orange for the second, and green for the third. The notes are also labeled with "fp" (fortissimo piano) and "f" (forte). The score is written in a 2/4 time signature and features a key signature of one flat (B-flat).

- Hierarchische Ordnung: von großen zu kleinen Sinneinheiten:

<measure n="1">

<staff n="1"/>

<staff n="2">

<layer n="1">

<beam n="1">

<note n="1"/>

<note n="2"/>

...

</beam>

<beam n="2">

<note/>

</beam>

</layer>

</staff>

<staff n="3">

... Inhalt drittes System ...

</staff>

</measure n="2">

... usw ...

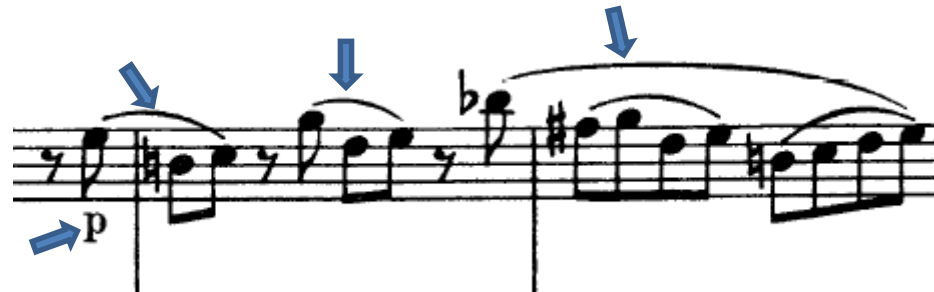
Allegro moderato

The image shows a musical score for piano with three staves. The first staff is a treble clef with a key signature of two flats (Bb, Eb) and a common time signature (C). It contains a single whole note G4. The second and third staves are also treble clefs with the same key signature and time signature. They contain eighth-note patterns. A red box highlights the first two staves, a green box highlights the first staff, and a purple box highlights the first two eighth notes of the second staff. Dynamics include 'f' (forte) and 'fp' (fortissimo piano). The tempo is marked 'Allegro moderato'.

ZWEI ARTEN VON ELEMENTEN:

- MEI differentiates between two essential aspects of music notation: *Events* and *ControlEvents*.

In MEI, elements describing the basic musical text are referred to as *Events*. They are the building blocks for the stream of music [*Noten, Pausen, Akkorde etc.*]. In contrast, *ControlEvents* make no independent contribution to that flow of music. Instead, they provide additional information about the encoded Events, they control their performance [*Bögen, Dynamik, Tempo, Spielanweisungen etc.*].



ControlEvents können über den Takt hinaus gehen und werden daher gesammelt am Ende des Taktes kodiert.

ATTRIBUTE ALS ELEMENT:



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Beispiel Vorzeichen:

```
<note accid="n" dur="32" oct="5" pname="e" xml:id="note_2538"/>
```

```
<note dur="32" oct="5" pname="e" xml:id="note_2538">
```

```
  <accid accid="n" xml:id="accid_2538"/>
```

```
</note>
```

EDITORISCHE EINGRIFFE <SUPPLIED>:



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KV 174/1, T. 155

- 1) Hinzugefügte Vorzeichen = eckige Klammer
- 2) Hinzugefügte Bögen = gestrichelt
- 3) Hinzugefügte Artikulationen = kleiner
- 4) Hinzugefügte Dynamik/Text = kursiv





BEISPIELKODIERUNGEN <SUPPLIED>:

Hinzugefügte Vorzeichen

```
<note dur="32" oct="5" pname="e" xml:id="note_2538">  
  <supplied resp="#NMA-editors" xml:id="supplied_2538">  
    <accid accid="n" xml:id="accid_2538"/>  
  </supplied>  
</note>
```

Hinzugefügte Bögen

```
<supplied resp="#NMA-editors" xml:id="supplied_2538">  
  <slur xml:id="slur_2538"/>  
</supplied>
```



BEISPIELKODIERUNGEN <SUPPLIED>:

Hinzugefügte Artikulationen

```
<note dur="32" oct="5" pname="e" xml:id="note_2538">  
  <supplied resp="#NMA-editors" xml:id="supplied_2538">  
    <artic artic="stacc" xml:id="artic_2538"/>  
  </supplied>  
</note>
```

Hinzugefügte Dynamik/Text

```
<supplied resp="#NMA-editors" xml:id="supplied_2538">  
  <dynam xml:id="dynam_2538">f</dynam>  
</supplied>
```



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KONTAKT

Roland Mair-Gruber

roland.mair-gruber@mozarteum.at

www.mozarteum.at

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