Neon2

Redesigning a web-based MEI neume editor
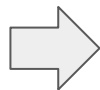
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Table of Contents

1. Neon in OMR

2. History

3. Verovio Rendering & Neon2

4. Moving Forward

Neon within OMR

- Document Analysis
- Classifier
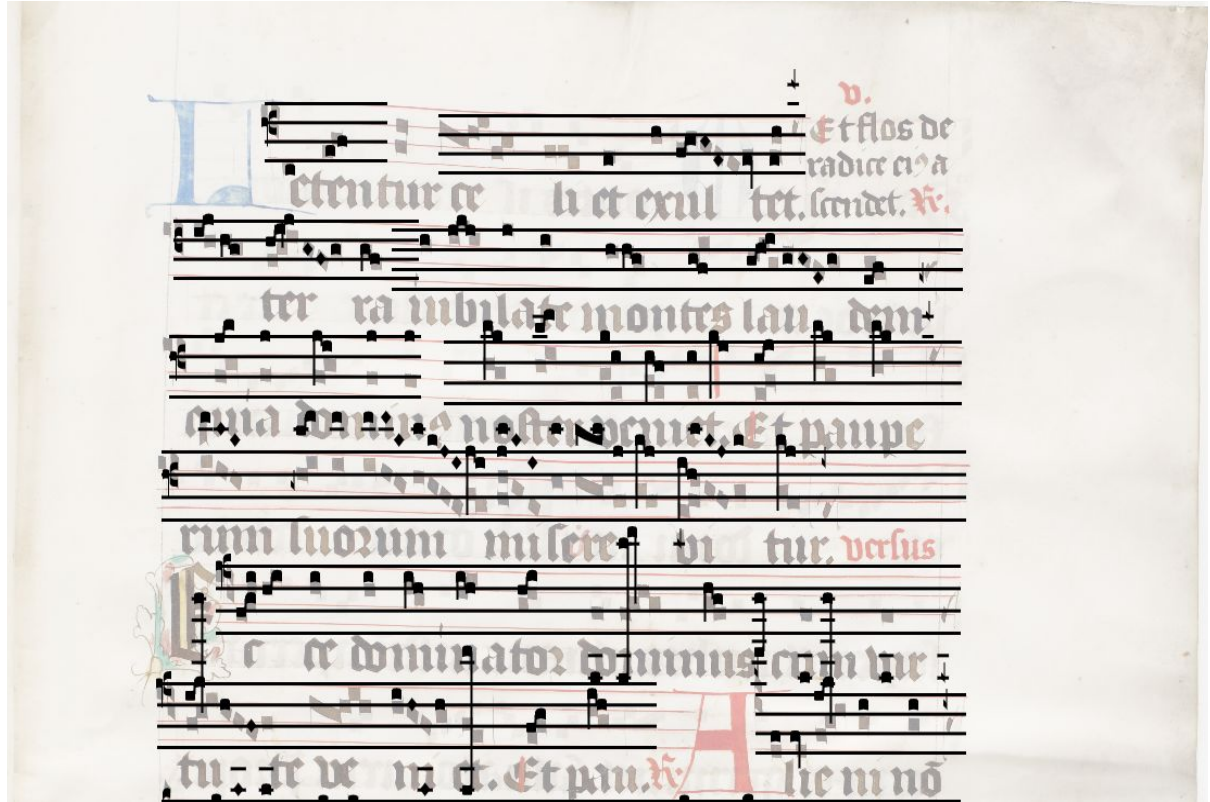- Pitch Finding

Music Encoding Initiative

Neon Versions

Neon.js	Original version developed in 2012 by Alastair Porter & Gregory Burlet, and continued by Andrew Tran and Zoé McLennan.
Neon2	A web-app for viewing MEI 4 Neume files. Focus on accurate rendering using new functionality in Verovio.
Neon3	Built upon Neon2, with features added for editing MEI files that are output by the OMR process.

Layering in Neon

- Neon takes as input an MEI file and an image file.

- Renders MEI data on top of the image

- Users can compare data against the original image and correct the MEI

- MEI file updates with every change made by the user

History

- Neon was started 6 years ago by Gregory Burlet and Alastair Porter

  - https://github.com/DDMAL/Neon.js

- This was the basis for Neon.js v1.0 released last summer

- ~Demo~

Issues and Solutions

- Fabric.js not tailored to music notation

  - ➢ Replace with Verovio

- Only compatible with a very specific and deprecated type of MEI file

  - ➢ Use incoming MEI v4.0 standard

- Possible but difficult implementation as a Rodan job
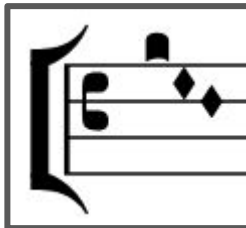
  - ➢ Keep Rodan a top priority throughout development

Neon2

MEI Versions

```
<staff n="1">
    <layer>
    <sb n="1"/>
    <clef line="3" shape="C"/>
    <neume name="climacus">
        <nc>
            <note pname="f" oct="3"/>
            <note pname="d" oct="3"/>
            <note pname="c" oct="3"/>
        </nc>
    </neume>
```

```
<staff n="1">
    <layer>
        <syllable>
            <syl>di_</syl>
            <neume>
                <nc tilt="s" oct= "3" pname="f"/>
                <nc con="g" oct= "3" pname="d"/>
                <nc con="g" oct= "3" pname="c"/>
            </neume>
        </syllable>
```

MEI-Neume Burlet
Neon.js

MEI-Neume 4.0 WIP
Neon2/3

Verovio Neume

- Renders neume groups dynamically based on **contour** of notes

- Exports in **SVG** format, integration with **web and javascript libraries** available

Neon2

- **Goal:** Focus on accurate MEI-Neume rendering before editing features

- Built upon Node.js, Express, Pug, modern web technologies

- Uses Verovio compiled to javascript to serve as the MEI renderer

- Demo

Moving Forward with Neon2

- Continuing to add relevant features that existed in Neon.js

  ➢ Work is ongoing for notifications, UI, background image, uploading, etc.

- Working with Laurent Pugin to extend Verovio features

  ➢ Reworking editing functionality & rendering with encoded bounding boxes

- Plan to complete Neon2 prototype by July, to transition to Neon3

- https://github.com/ddmal/neon2

Neon3

- Extension of Neon2 with editing support

- Ensure compatibility with Rodan

- D3.js to handle user interaction, generate editor commands

  - https://d3js.org/

- Demo

Thank you!

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