

# Fitting Manuscripts into the Browser with Diva.js



Building an Easy-to-Learn Interface for Exploring Virtual Documents

CIRMMT Research Axis 2 Workshop  
25 September 2015

Evan Magoni

1. Features of Book Viewing Interfaces
2. Features of Diva.js
3. Challenges Designing Diva.js

# 1. Features of Book Viewing Interfaces

Early English Books Online

Qatar Digital Library (OpenSeadragon)

Internet Archive Book Reader

e-codices

# Important features in a book viewer

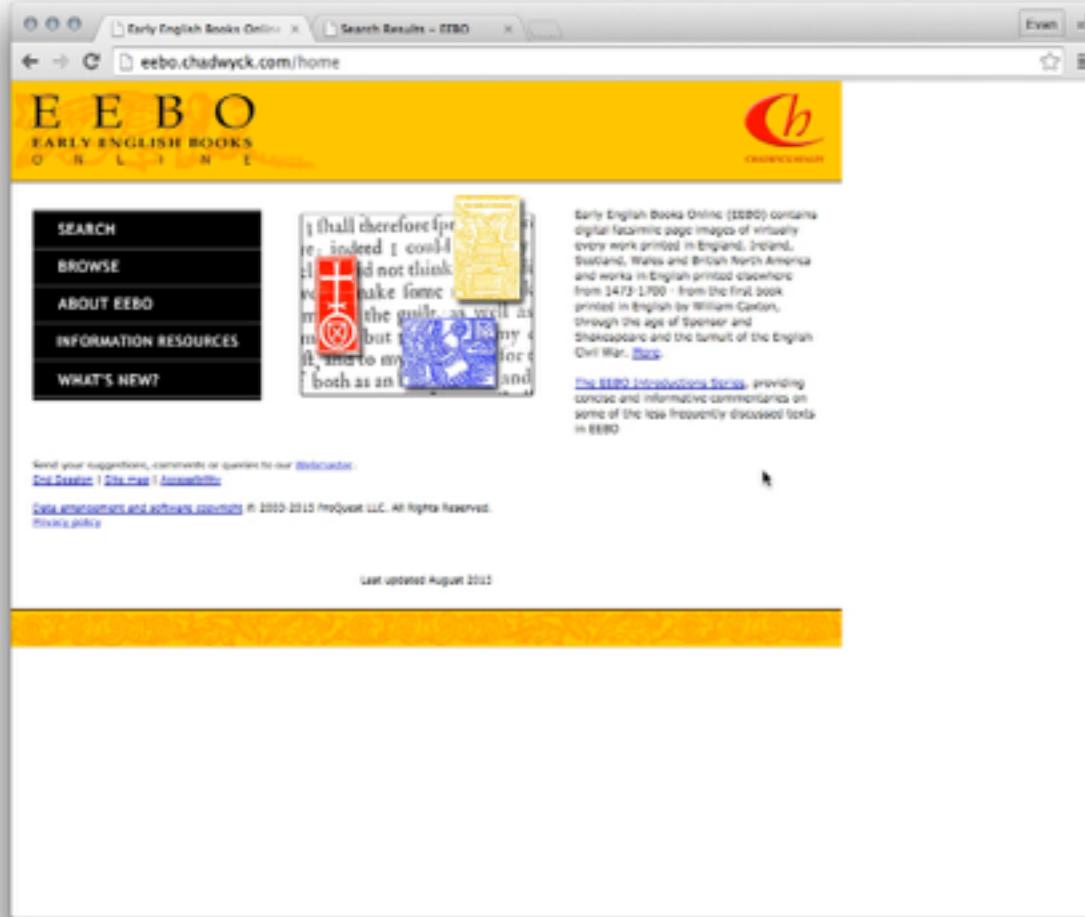
**Page switching** – speed, continuity

**Zooming** – fast, streaming, smooth

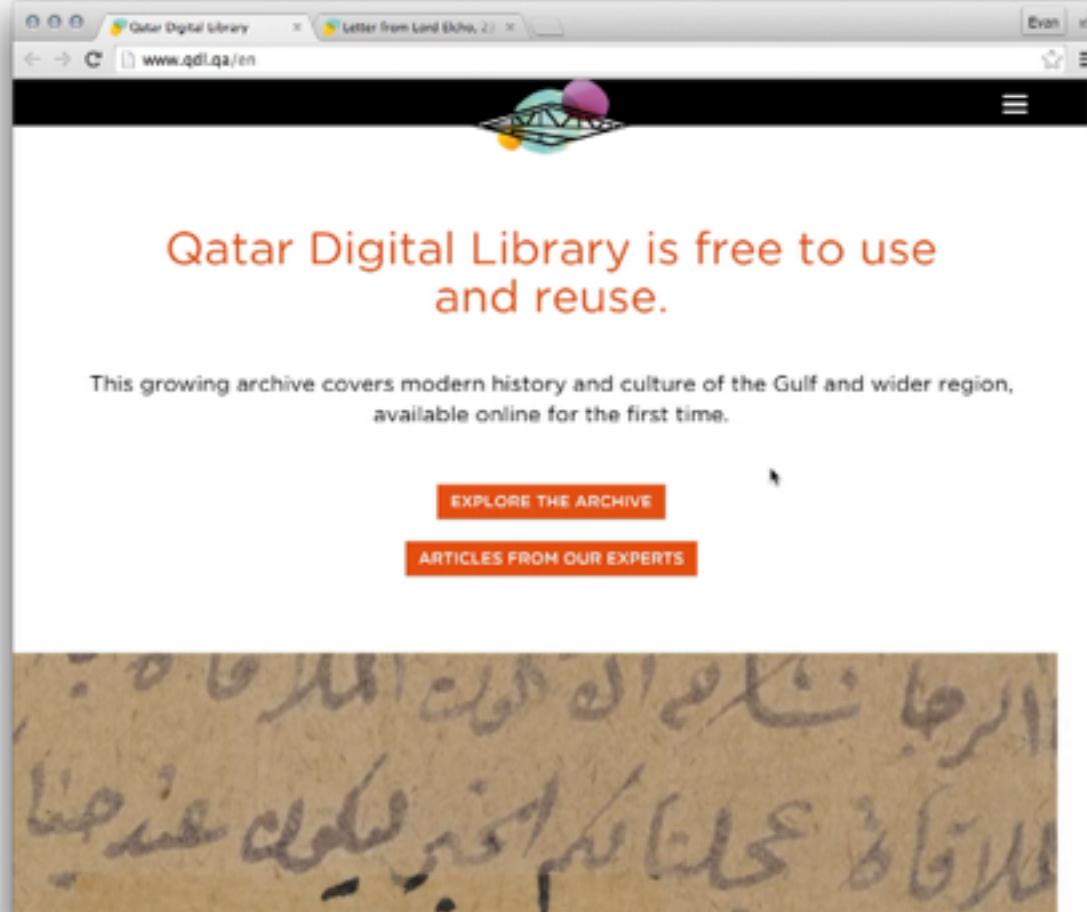
**Viewing modes** – useful, easy to use

# Page Switching

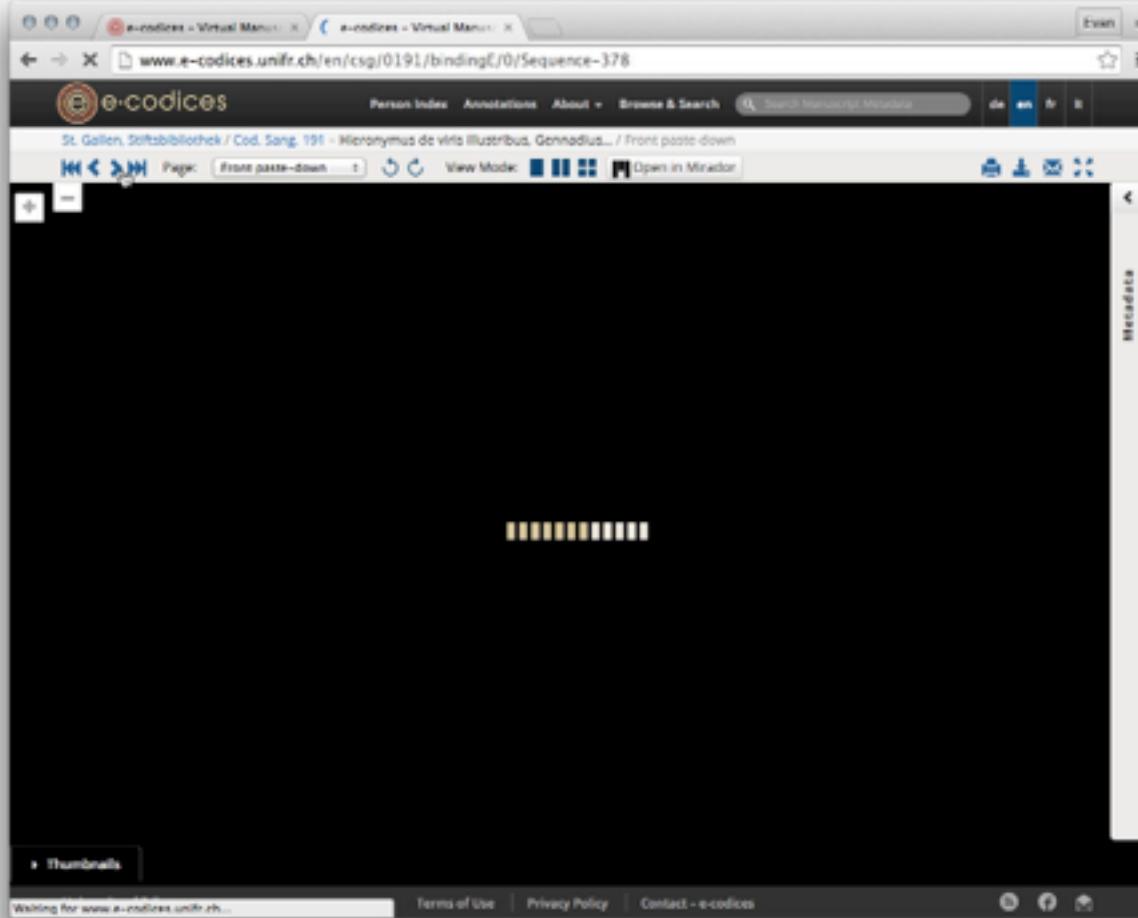
# Page Switching - Early English Books Online



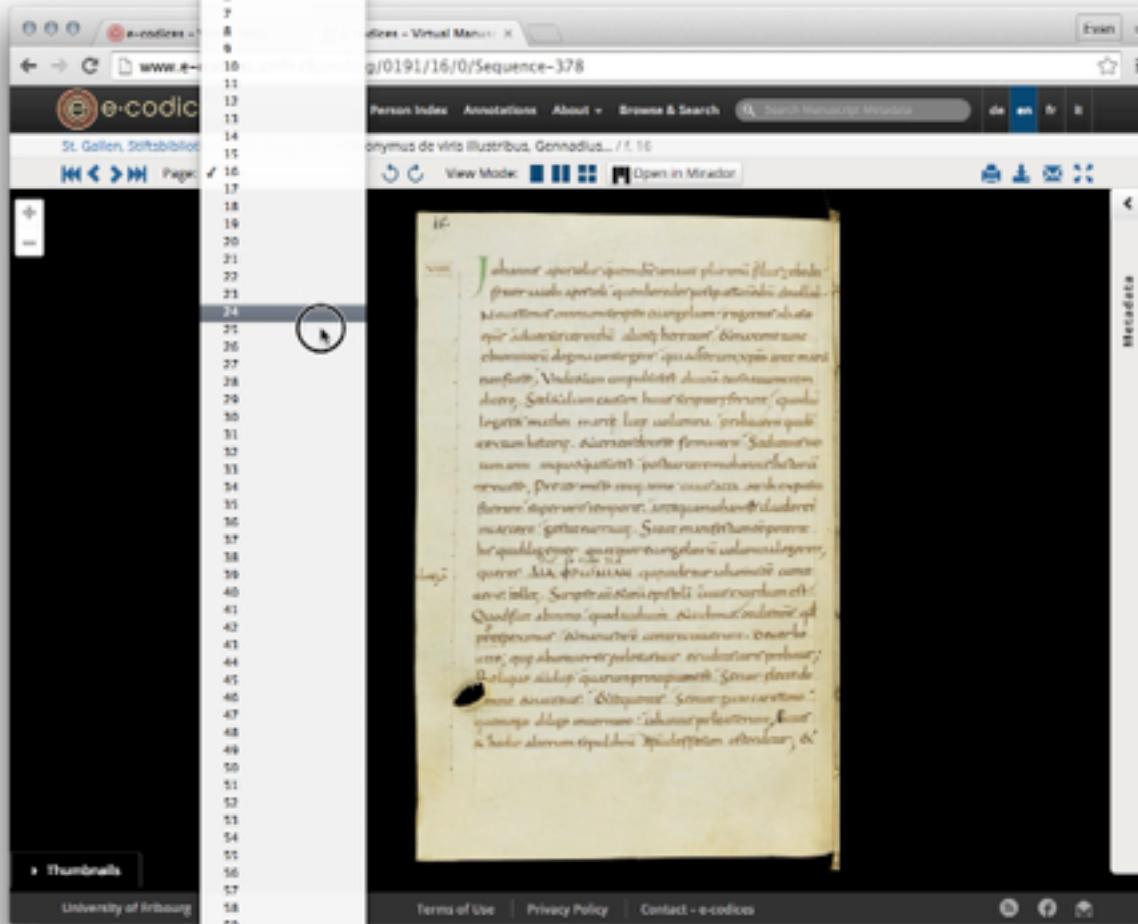
# Page Switching - Qatar Digital Library



# Page Switching - e-codices



# Page Switching - e-codices



# Page Switching - Internet Archive



# Zooming

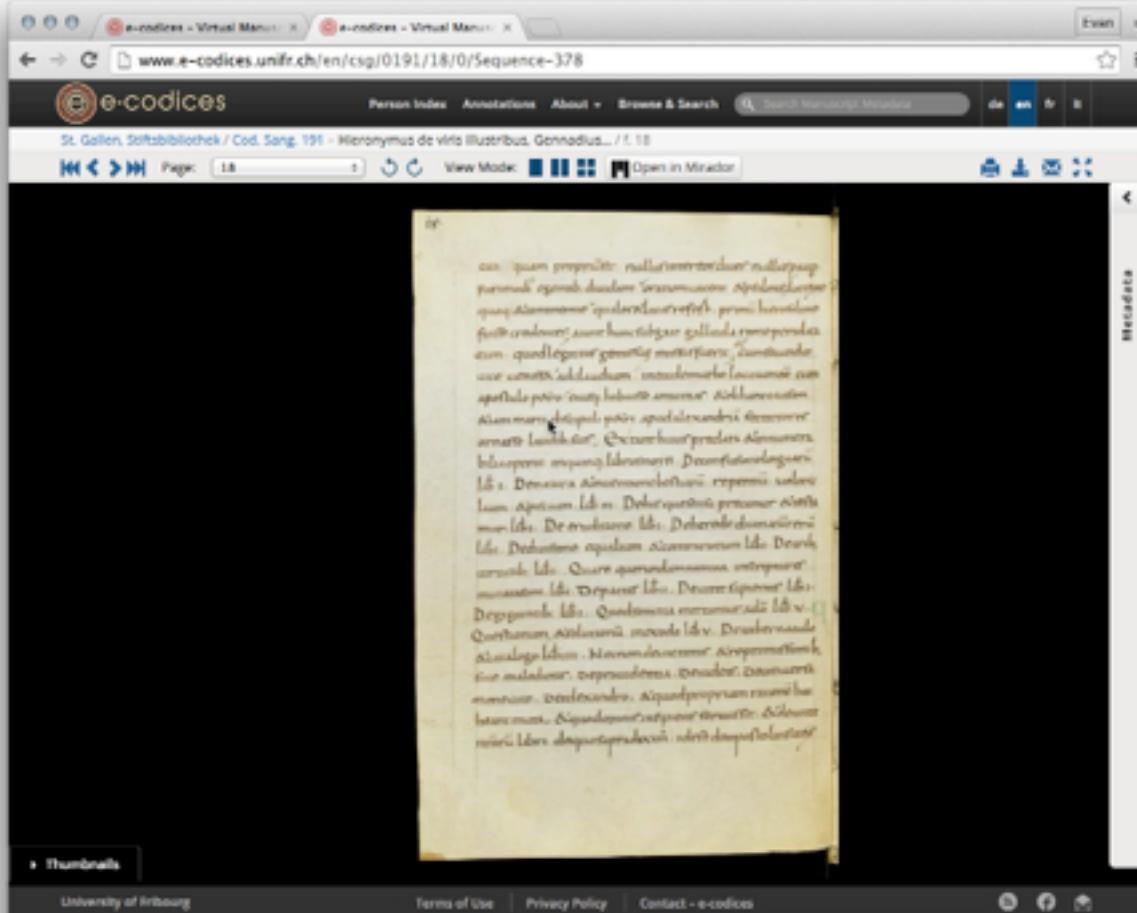
# Zooming - Early English Books Online



# Zooming - Qatar Digital Library



# Zooming - e-codices



# Viewing Modes

# Viewing Modes - Early English Books Online



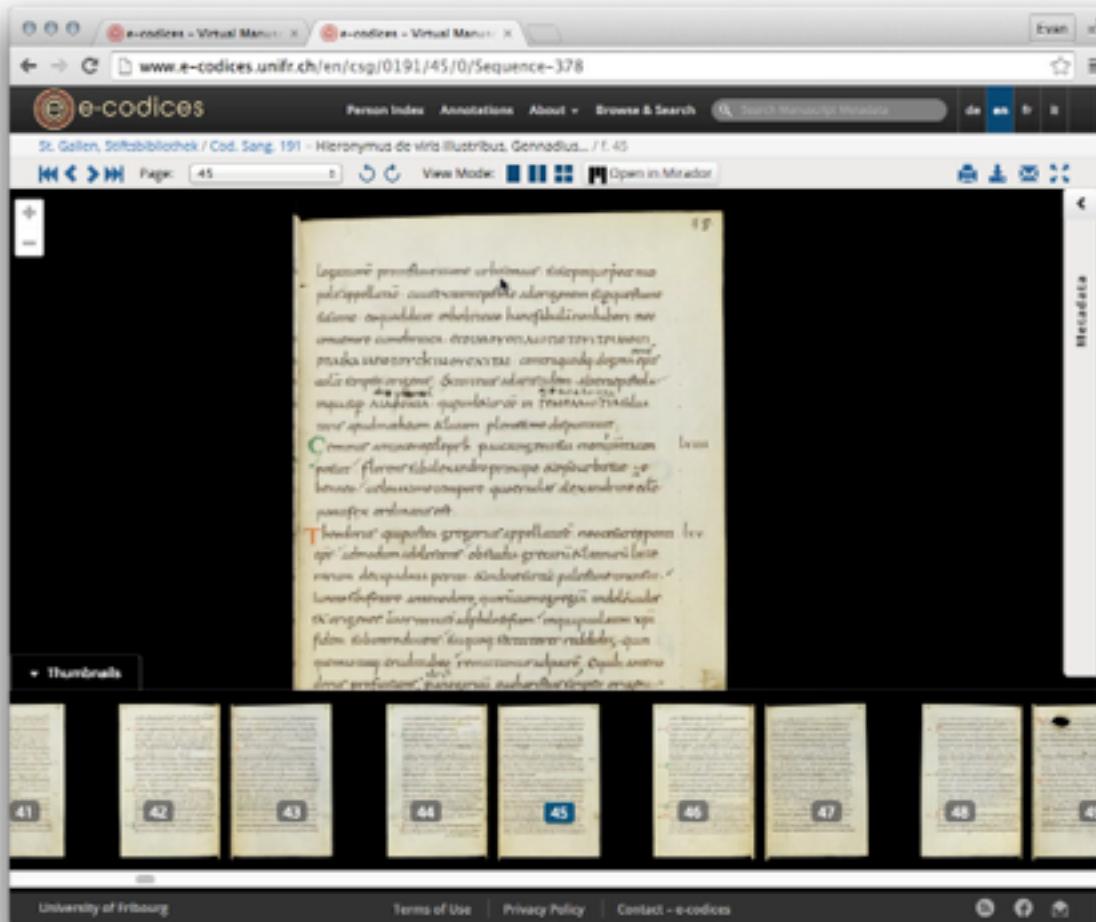
# Viewing Modes - Early English Books Online

The screenshot shows a web browser window displaying the Early English Books Online (EEBO) digital library. The title bar reads "Early English Books Online X Thumbnails of All Pages X". The main header features the EEBO logo and a red "ch" logo for Chadwyck-Healey. The navigation menu includes links for HOME, MARKED LIST, SEARCH HISTORY, HELP ?, and various search and browse options like SEARCH Basic, Advanced, Periodicals, BROWSE Authors, Thomson Tracts, and Periodicals. Below the menu, there are buttons for KEYWORD, DOCUMENT IMAGE, ILLUSTRATION, FULL TEXT, and THUMBNAIL. A message "View this document as:" with icons for document, image, and list follows. To the right is a "Back to results" link. The author is listed as "Author: A. C. 1588-1666." and the title as "Title: Jesus, Maria, Joseph, or, The devout pilgrim Date: 1657". A horizontal line separates this from the thumbnail grid. Below the grid, there are links for "View thumbnails: 1-100 | 101-200 | 201-300 | 301-371". The thumbnail grid itself consists of four rows of four images each, labeled "Image 1 of 371" through "Image 16 of 371". The images are small versions of the book pages, showing text and illustrations.

# Viewing Modes - Internet Archive



# Viewing Modes - e-codices



# Viewing Modes - Internet Archive

The screenshot shows a web browser displaying a page from the Internet Archive's digital library. The page title is "Virgil's Aeneid, books I-VI: the original text with a literal interlinear". The main content area displays a block of Latin text with English translations in a grid format. Below this, a smaller box contains the book's title and page number. The bottom of the screen features a toolbar with various navigation and search icons.

BOOK II      *The Tale of Troy.*      57

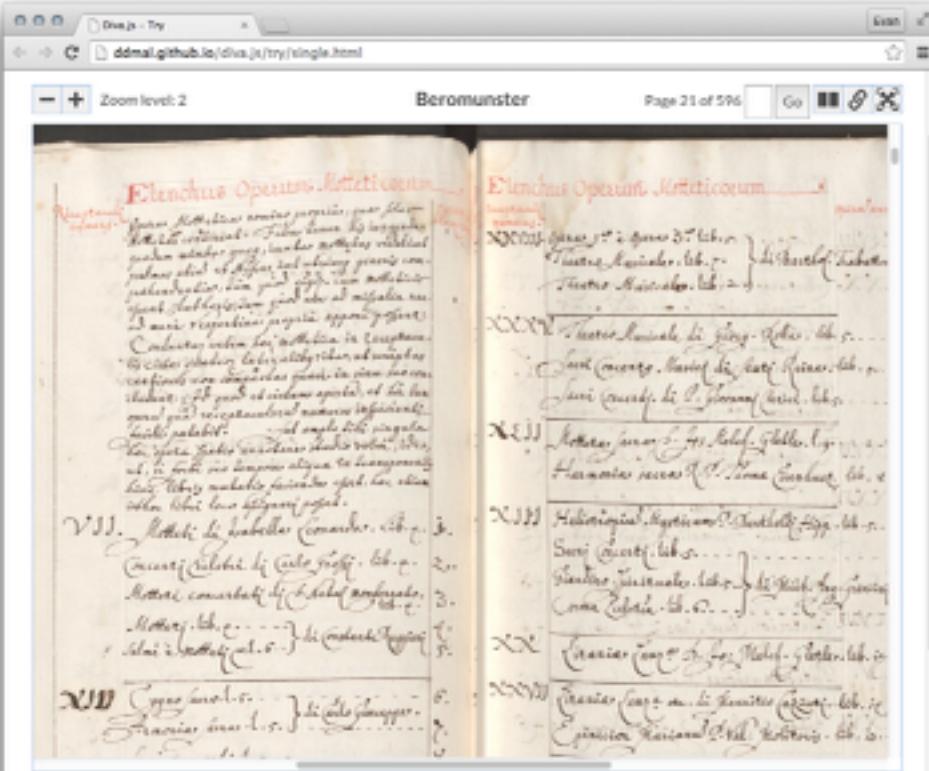
propinguisus consanguinstate, pauper pater  
nearly related by kindred, (not) impoverished father  
missit me huc in arms ab priuilegiis armis.

## 2. Features of Diva.js

# Our Goals for a Document Viewer

- Make it **quick and easy** to navigate a document
- Preserve the document as a **cohesive entity**

We design **page switching**, **zooming**, and **views** around these concerns



# Features

**Continuous scrolling  
layout**

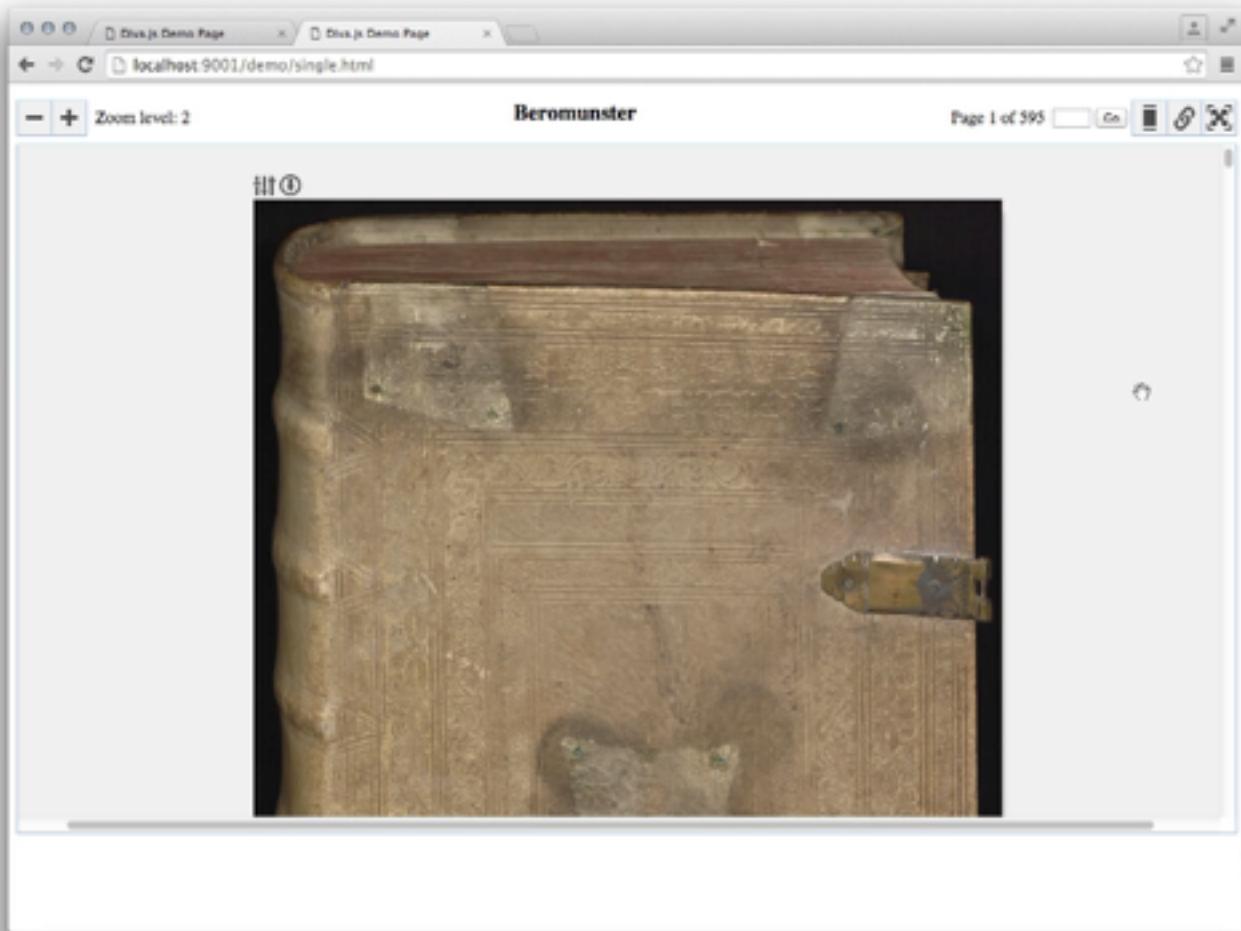
Zooming

Tiling

Jump to page

Single, Book, Grid  
views

Future: Smooth  
zooming



# Features

Continuous scrolling  
layout

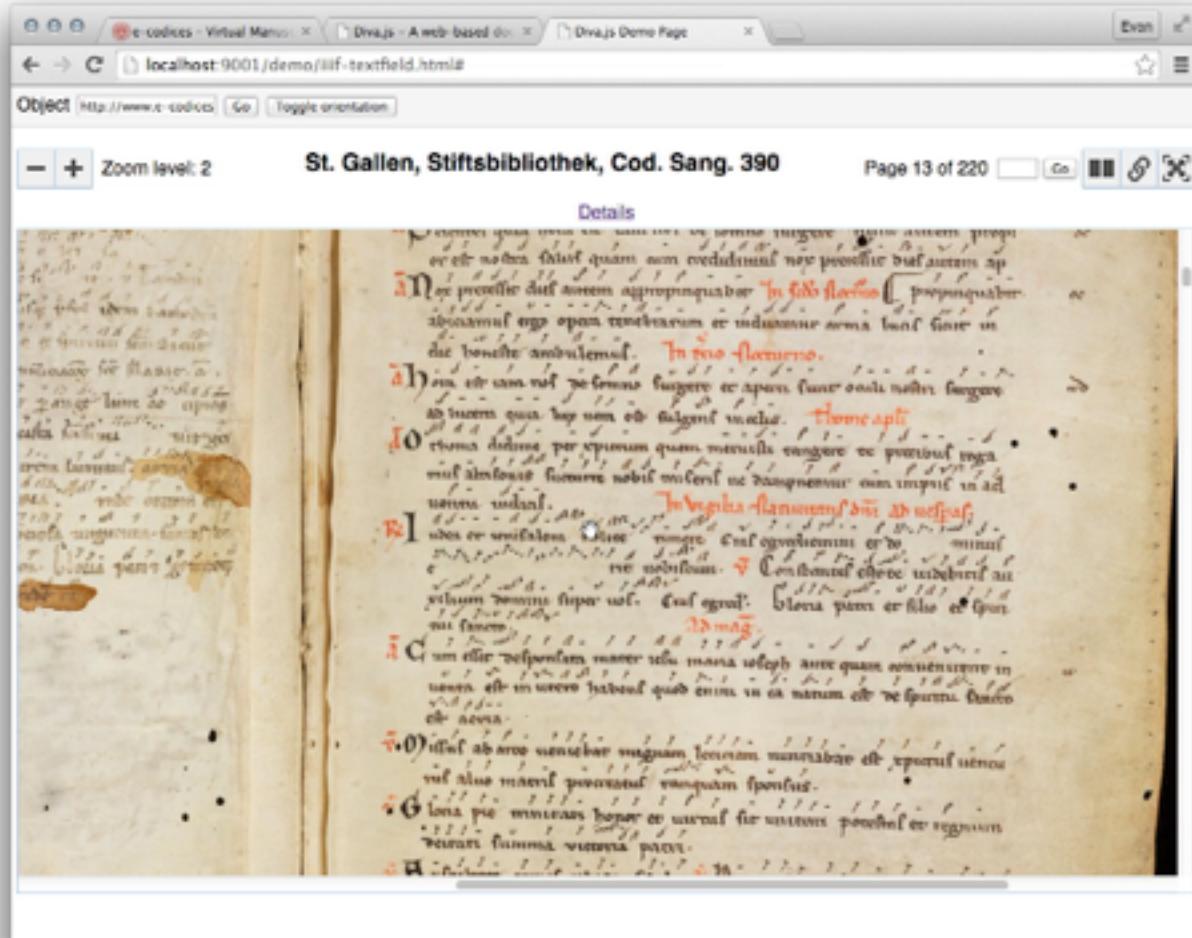
Zooming

Tiling

Jump to page

Single, Book, Grid  
views

Future: Smooth  
zooming



# Features

Continuous scrolling  
layout

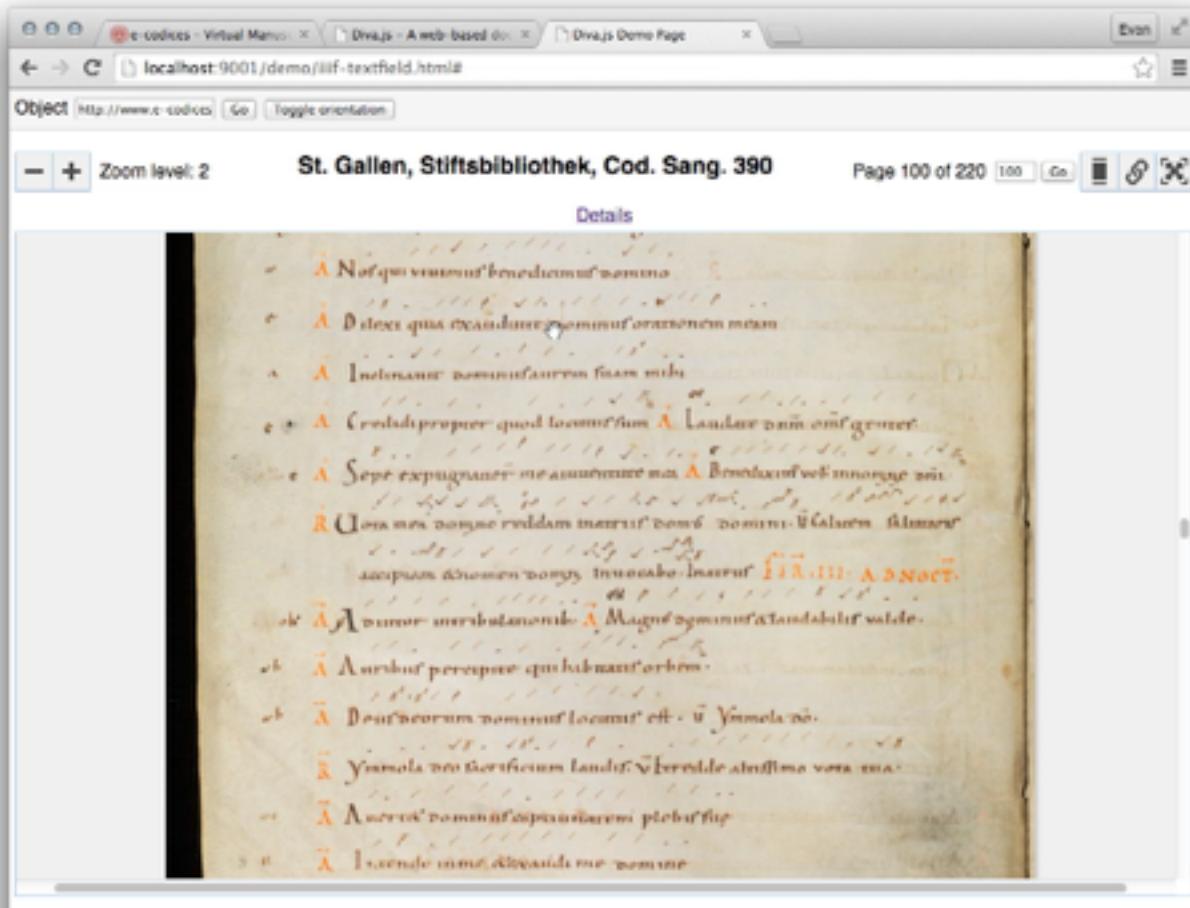
Zooming

Tiling

**Jump to page**

Single, Book, Grid  
views

Future: Smooth  
zooming



# Features

Continuous scrolling  
layout

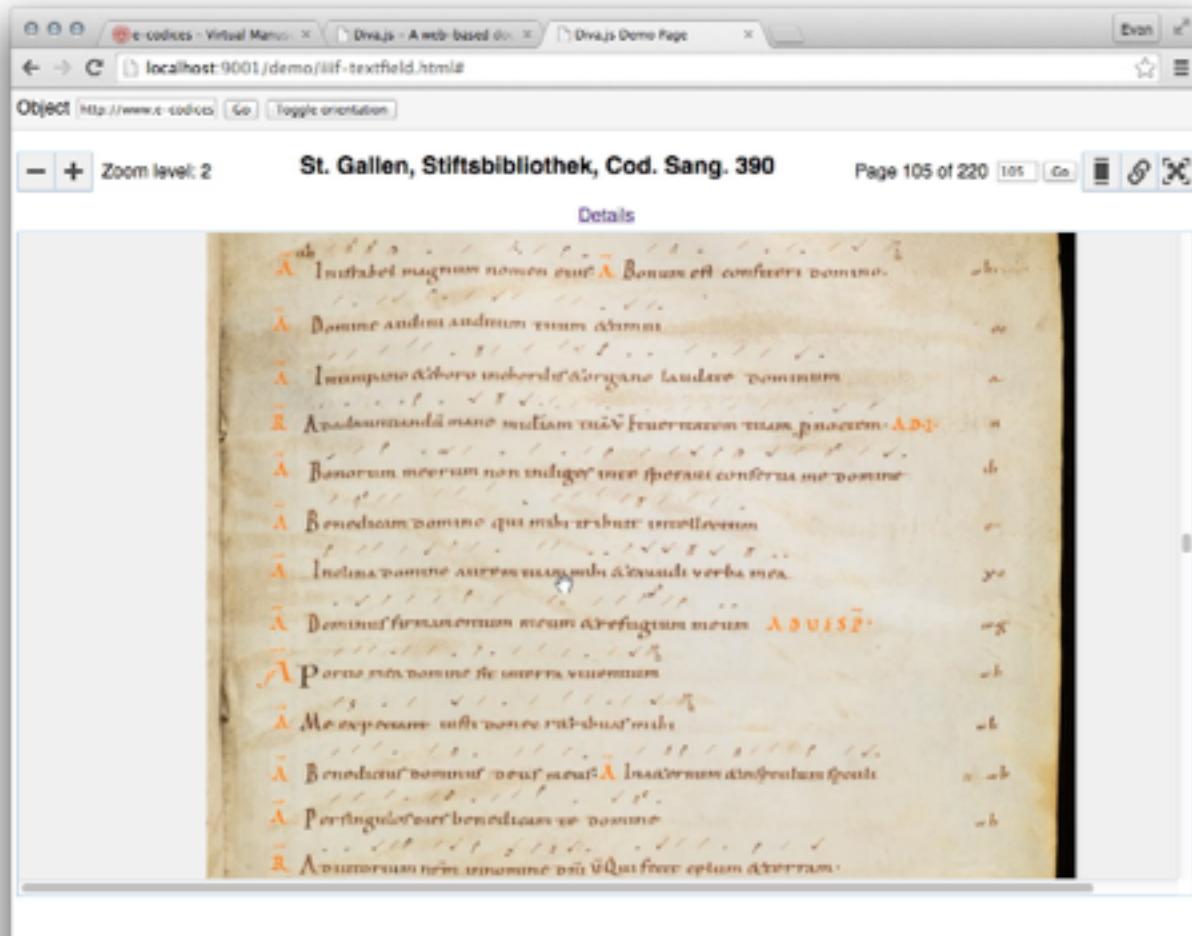
Zooming

Tiling

Jump to page

**Single**, Book, Grid  
views

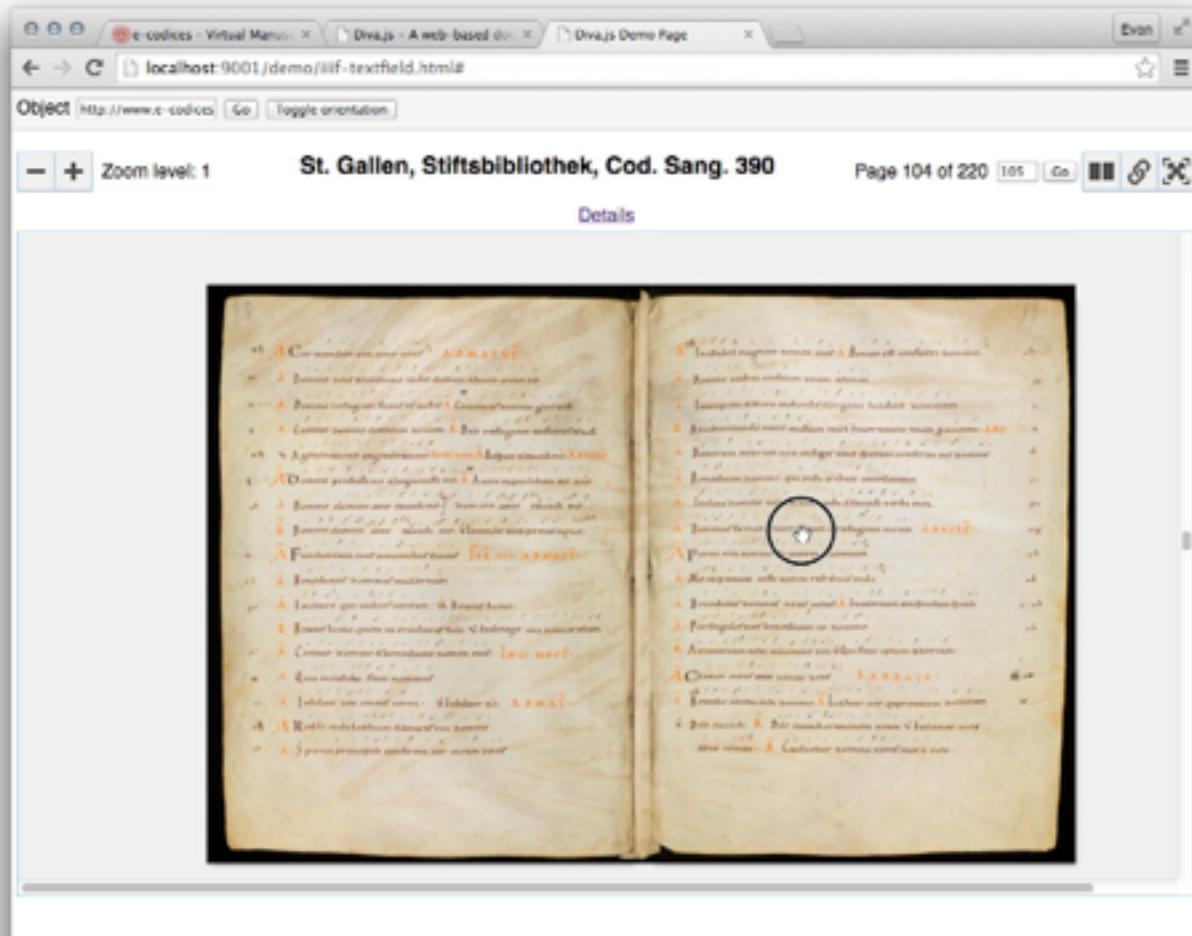
Future: Smooth  
zooming



# Features

Continuous scrolling  
layout  
Zooming  
Tiling  
Jump to page  
Single, **Book**, Grid  
views

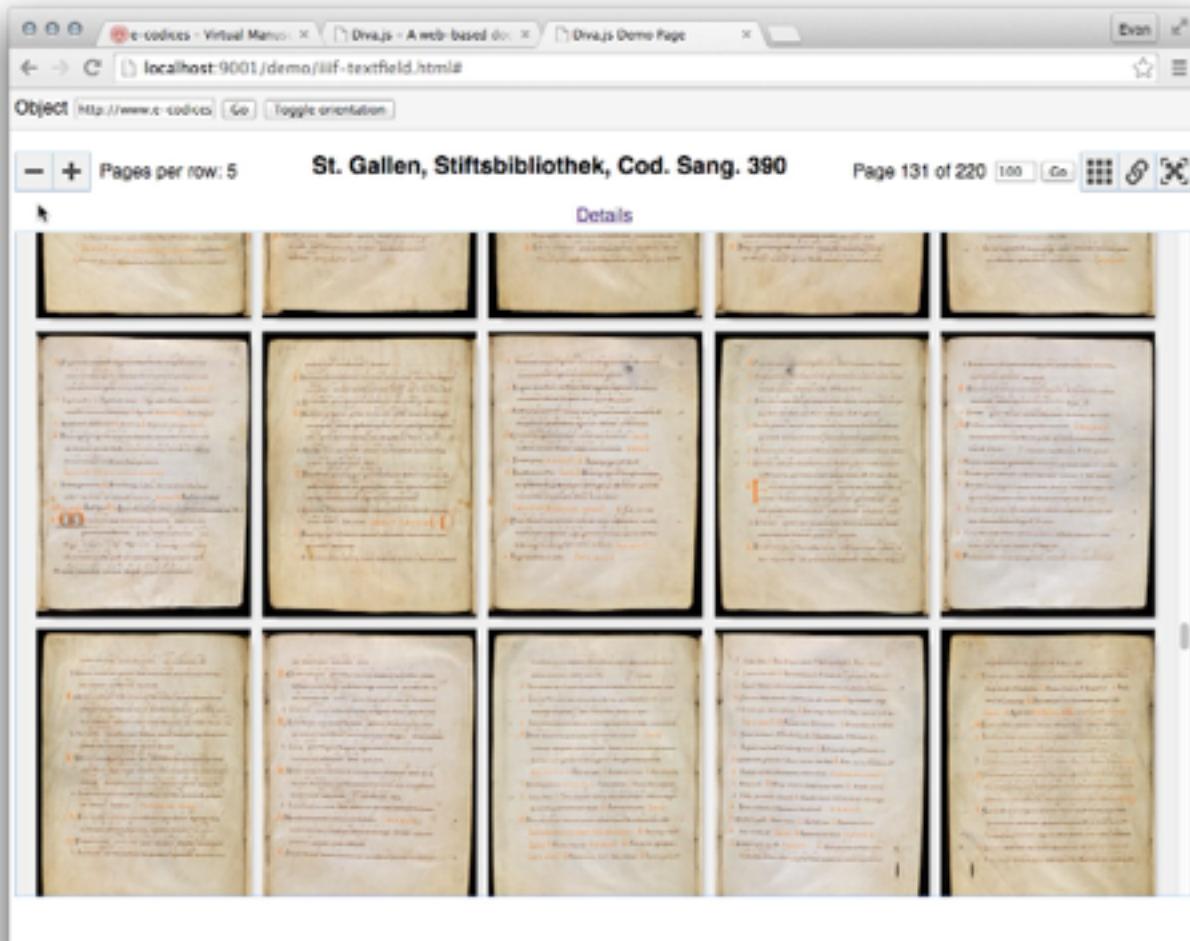
Future: Smooth  
zooming



# Features

Continuous scrolling  
layout  
Zooming  
Tiling  
Jump to page  
Single, Book, Grid  
views

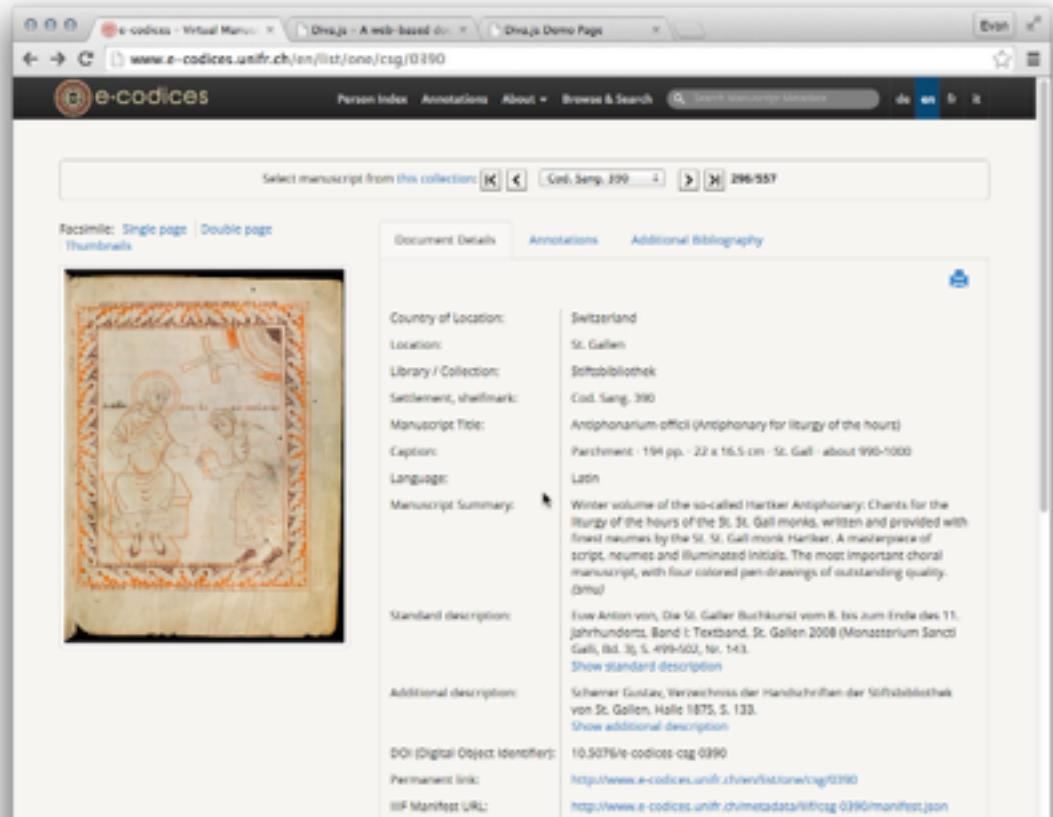
Future: Smooth  
zooming



# Support for the International Image Interoperability Framework (IIIF)

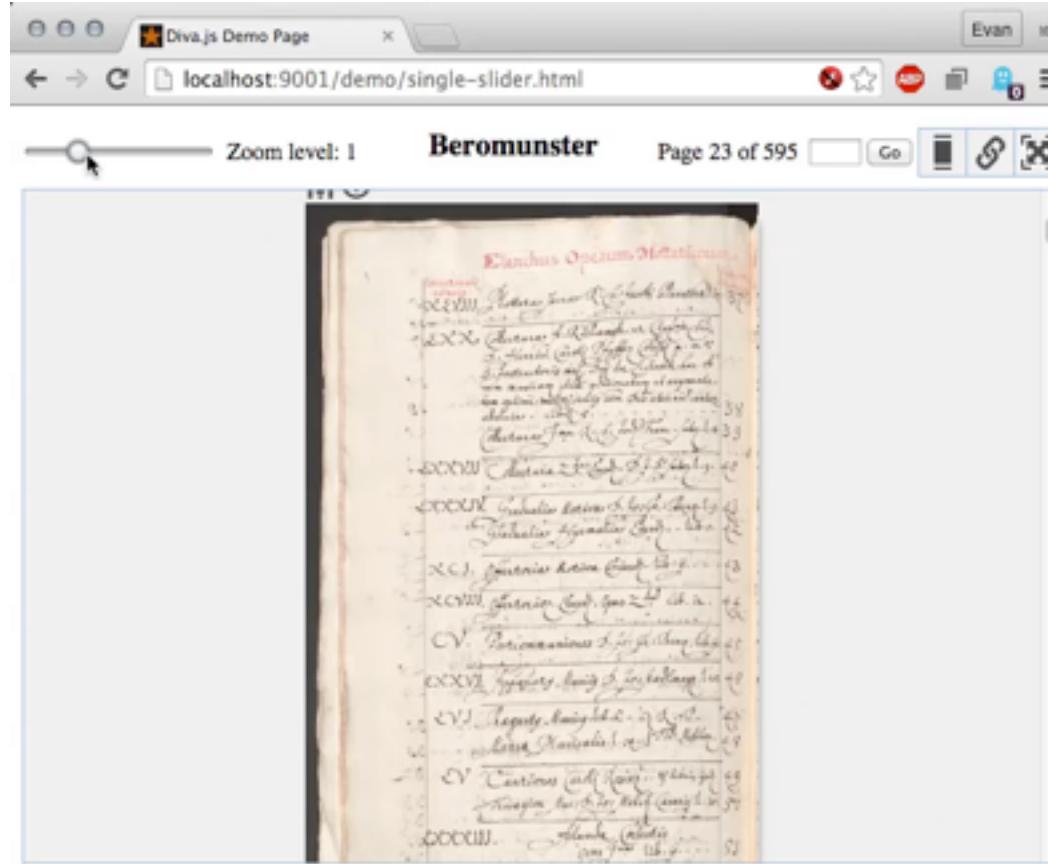
Given a IIIF-compliant image collection, users can choose viewing software that meets their needs

Of the surveyed viewers, Mirador, Internet Archive Book Reader, and Qatar (OSD) have IIIF support

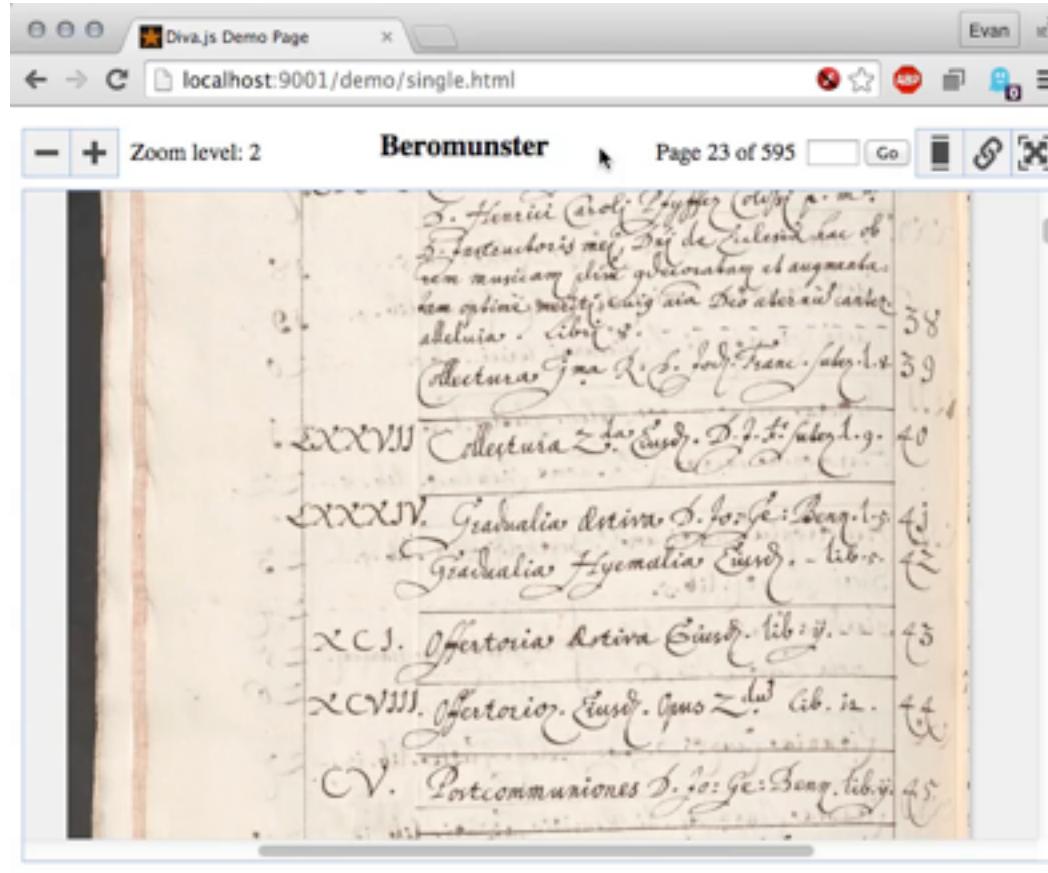


### 3. Design Challenges in Diva.js

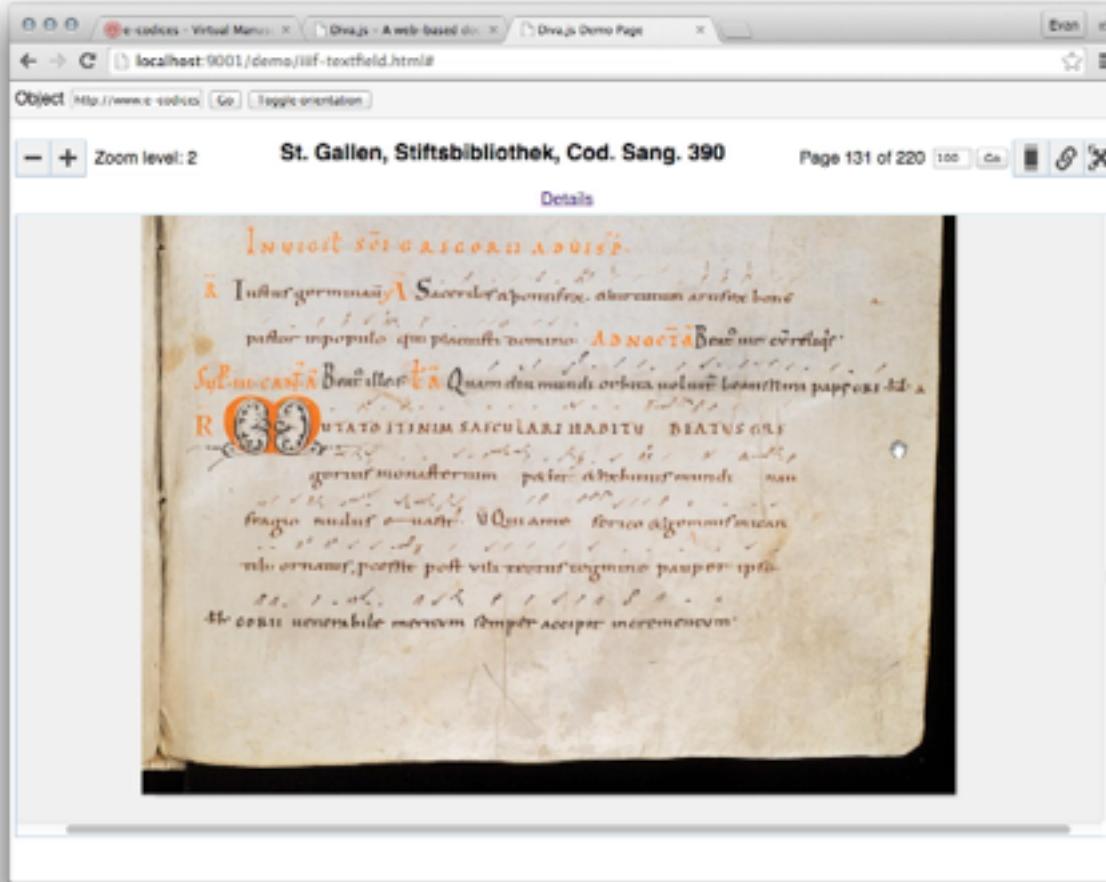
# Smooth zooming versus discrete zoom levels



# Smooth zooming versus discrete zoom levels



# Grid view buttons



# Other issues

Page titles - presenting page numbers consistent with the original manuscripts ("folio 1 recto [1r]" as opposed to "0, 1, 2")

Manuscripts   Search

Folio 001r (1 of 479)  Go

J.  
Dominica aduenitus Ad vs.  
viss est gabriel v. Reorat  
iant iustū. Imperiat terra  
m. Ad magnificat Antiph.  
omen domini ve int

# Review: Presenting Virtual Documents

## 1. Features (paging, zooming, views) of existing document viewing solutions

Early English Books Online

Qatar Digital Library (OpenSeadragon)

Internet Archive Book Reader

e-codices

## 2. Features of Diva.js

Quick and easy document navigation

Preserving the document as a cohesive entity

## 3. Design Challenges of Diva.js

Zooming

Grid View buttons

Page numbering

# Thank you!

<http://ddmal.github.io/diva.js>  
evan.magoni@mail.mcgill.ca

**SIMSSA** | Single Interface for Music  
Score Searching and Analysis



Social Sciences and Humanities  
Research Council of Canada

Conseil de recherches en  
sciences humaines du Canada



Schulich School of Music  
École de musique Schulich

**DDMAL**

DISTRIBUTED DIGITAL MUSIC  
ARCHIVES & LIBRARIES LAB



Centre for Interdisciplinary Research  
in Music Media and Technology

*Fonds de recherche  
Société et culture*

Québec The logo consists of the word "Québec" in a stylized font next to a graphic of four blue squares arranged in a cross pattern.