Edo Period Map goes Digital
The *O Edo ezu* as an Interactive Resource
Michael Kinski, Frankfurt

Project Keywords

- **creating an interactive map**
- **undergraduate classwork project**
- **implementation of IIIF functionality for an Open Access annotation and presentation tool**
- **working with *O Edo ezu* 御江戸絵図 and *Edo meisho* 江戸名所 prints**

Project Summary

- **This proposal introduces a project for creating an interactive map of Edo in the 1830s by using the *O Edo ezu* map and linking it with woodblock print illustrations of Edo. It will be realized in a teaching project for undergraduate students in cooperation and with the support of two programmers who are at the same time graduate students in the last stages of their Master's program.**

How were maps read?

- It is not easy to reconstruct how Edo period users of maps, guide books and other representations of geographical or spatial information interacted with these materials. Did they look at a map and only see it as an abstract grid of lines and strokes, names and differently coloured squares? Or did the map evoke other visual experiences and spanned the bridge between a two-dimensional reduction of space to symbols and other graphic representations of space?

How were maps read?

- Edo period consumers with an access to maps (of the whole country, of famous places, or of cities), guide books and depictions of famous spots around the country (sometimes even abroad; China mainly but even Europe), one can assume, were able to relate information as provided on a map not only with their own experiences of the represented places (if they had such)

How were maps read?

- Edo period users probably were also able to relate it with what they had read in travel guides or with what they had gleaned from illustrations in such books in addition to printed geographical representations of these places.

- With the rise of coloured woodblock prints since the middle of the 18th century the vivid impact of pictures and the traces they left in the viewer's memory and the way they shaped the world view spatially and visually increased continually.

Project aims: Interactive map

- The project uses the *O Edo ezu* (1830–43), a full scale map of Edo to be found in the ARC archive (cf. links on last slide), as point of departure. While this provides us with a basis for our creation, we will use different sets of coloured woodblock prints showing famous scenic spots of Edo to incorporate visual information on certain areas and pinpoint them on the map.

- The user will be able to steer through the map and use the mouse cursor to click on these highlighted famous spots to see how artists such as Hiroshige (cf. links on last slide) visualized these places and how Edo period consumers who had bought such prints might have visualized them before their inner eye.

- Information on these places drawn from research materials as well as internet resources or from Edo period guide books such as the *Tôto saijiki* 東都歳事記 (cf. links on last slide) will help the modern user to get an impression of how the Edo period owner of such a map might have visualized it or what he or she might have read about various spots in a travel guide.

Project aims: Teaching project

- Students of the second BA year will participate in a class introducing Edo period society and art during summer 2020.

- Work on the interactive map in the context of a teaching project will start in winter 2020/21 when the participants of the summer class take part in the follow-up course devoted to working with the *O Edo ezu* map and the other ARC resources such as *Edo meisho* prints.

- It will be the students' task not only to find their way around an Edo period city map but also to link the scenic spots shown in the woodblock sets of Edo with places on the map. They will have to devise a database that lets them easily correlate coordinates on the map with woodblock print representations of scenic places as well as modern geospatial data and information.

- Students will use the reference literature and internet resources to write short articles on the historical, religious, social, a.s.o. background of the spots they have identified. Where possible, the *Tôto saijiki* will provide further information. Side effect: this will also be an introduction to reading Edo period script.
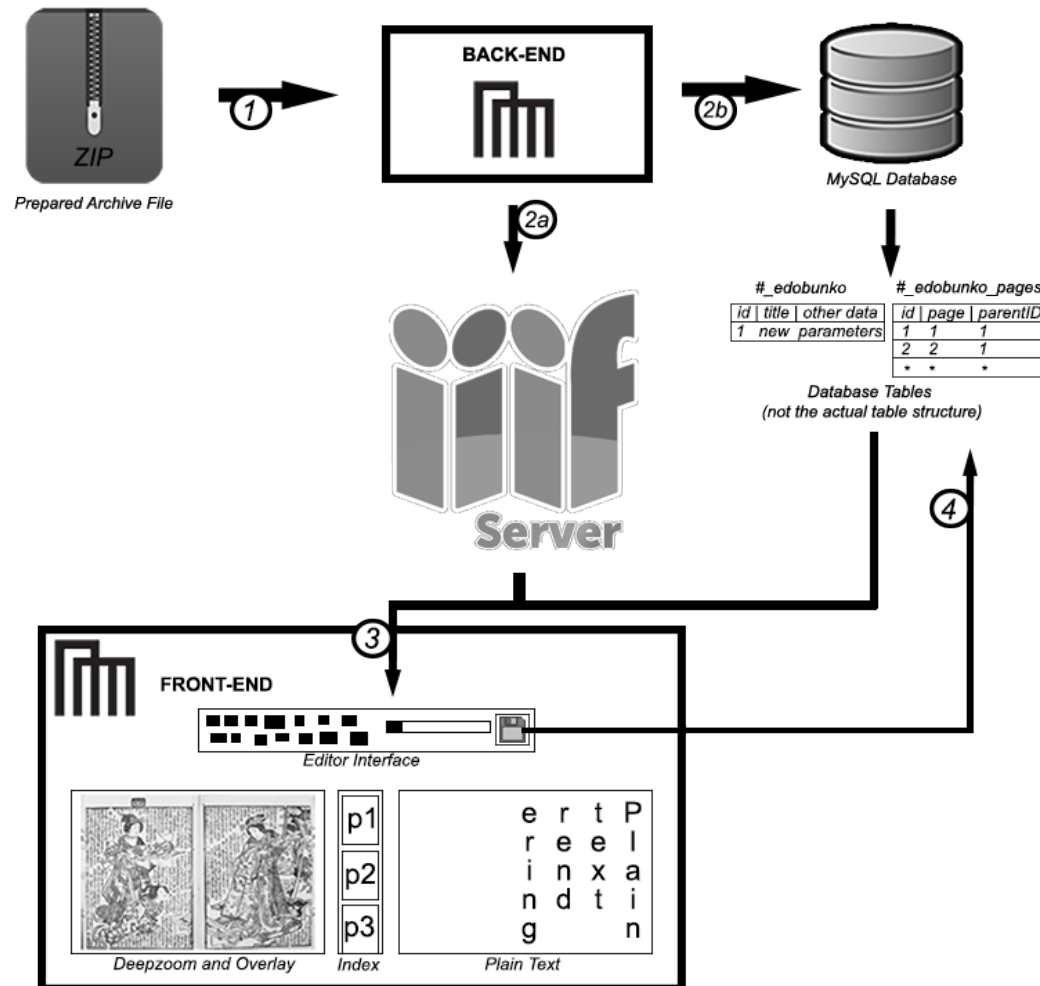
Koray Birenheide
DemiScriptの開発（プログラミング）

- **Planning and Implementation of a Digital Transcription and Annotation Software using Joomla! CMS and current Academic and Web Standards**

The Digital Corpus System: DemiScript
Utilized Web Technolgies

- Involved languages are PHP, HTML5, CSS3, XML and JavaScript

- Joomla!: Advantages of a Content Management System

- IIIF Server

- Utilized Libraries: JQuery, JQueryUI, OpenSeadragon und Fabric.js

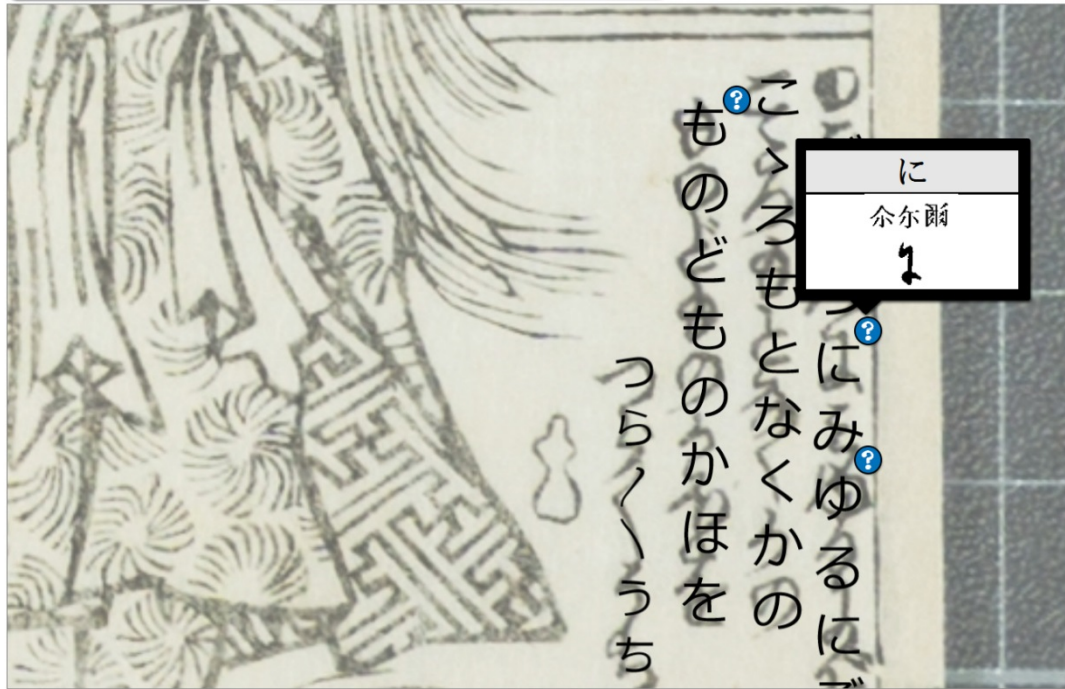# The Digital Corpus System: DemiScript Compiling and Management of Digitized Documents

BACK-END

ZIP

Prepared Archive File

(1)

(2b)

MySQL Database

(2a)

Server

#_edobunko

id	title	other data
1	new	parameters

#_edobunko_pages

id	page	parentID
1	1	1
2	2	1
*	*	*

Database Tables
(not the actual table structure)

(4)

(3)

FRONT-END

Editor Interface

| p1 |
| p2 |
| p3 |

rendering text Plain Text

Deepzoom and Overlay *Index* *Plain Text*

文字起こしとクラウドソーシング

文字起こしとクラウドソーシング

The Future of the Project
Photoshop Mock-ups
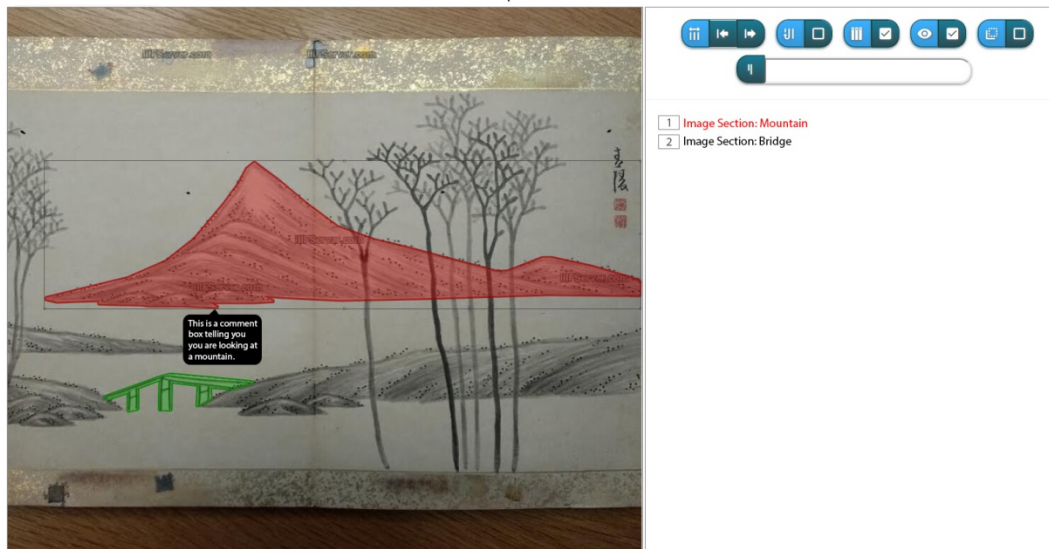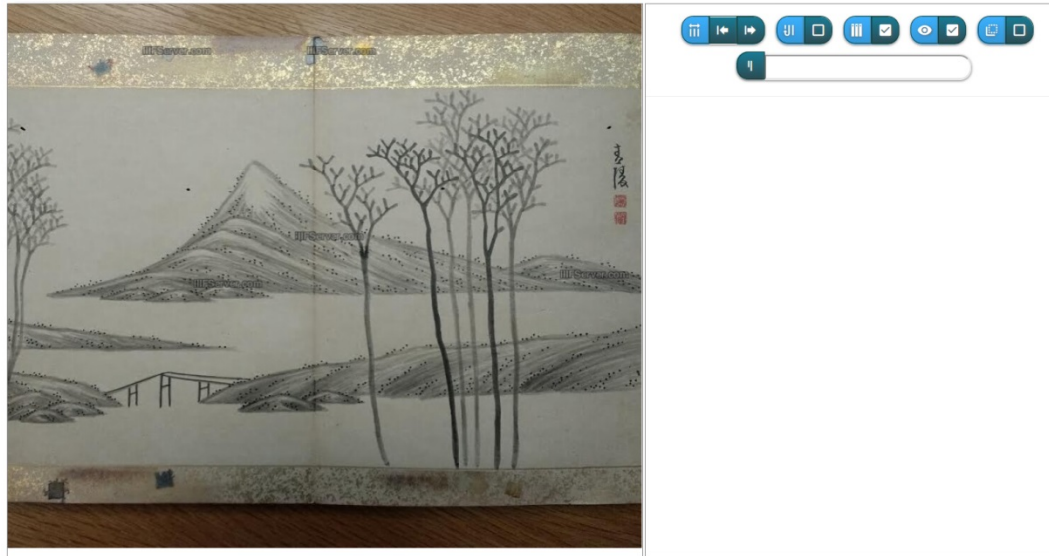
Setting up the O Edo ezu for Use in DemiScript

Programming by Koray Birenheide

Uploading to the Testserver

- After procuring usage rights and the higher resolution images of the O Edo ezu, the TIF image was converted to JPEG2000 to work on a IIIF Server

- The map was uploaded to the DemiScript Testserver's IIIF Server for further development (http://demiscript.de/iiif/oedoezu_p1/)

Adding Rotation Features

- The current Pre-Alpha Version of the DemiScript Viewer allows users to create text and poligon overlay objects on the Canvas, which renders the IIIF-image

- Due to the design of Edo period maps, the ability to rotate the image in the viewer is necessary for optimal editing

Adding Rotating Features

- Challenges: While the underlying OpenSeadragon viewer library supports canvas rotation, the Fabric.js-based overlay objects do not follow the rotation correctly

- Solution: A listener for rotation events in the OpenSeadragon viewer was added and a function created to move all fabric.js objects to the viewer's anchor point, rotate them accordingly, and then move them to their correct new locations on the canvas.

Adding Rotating Features
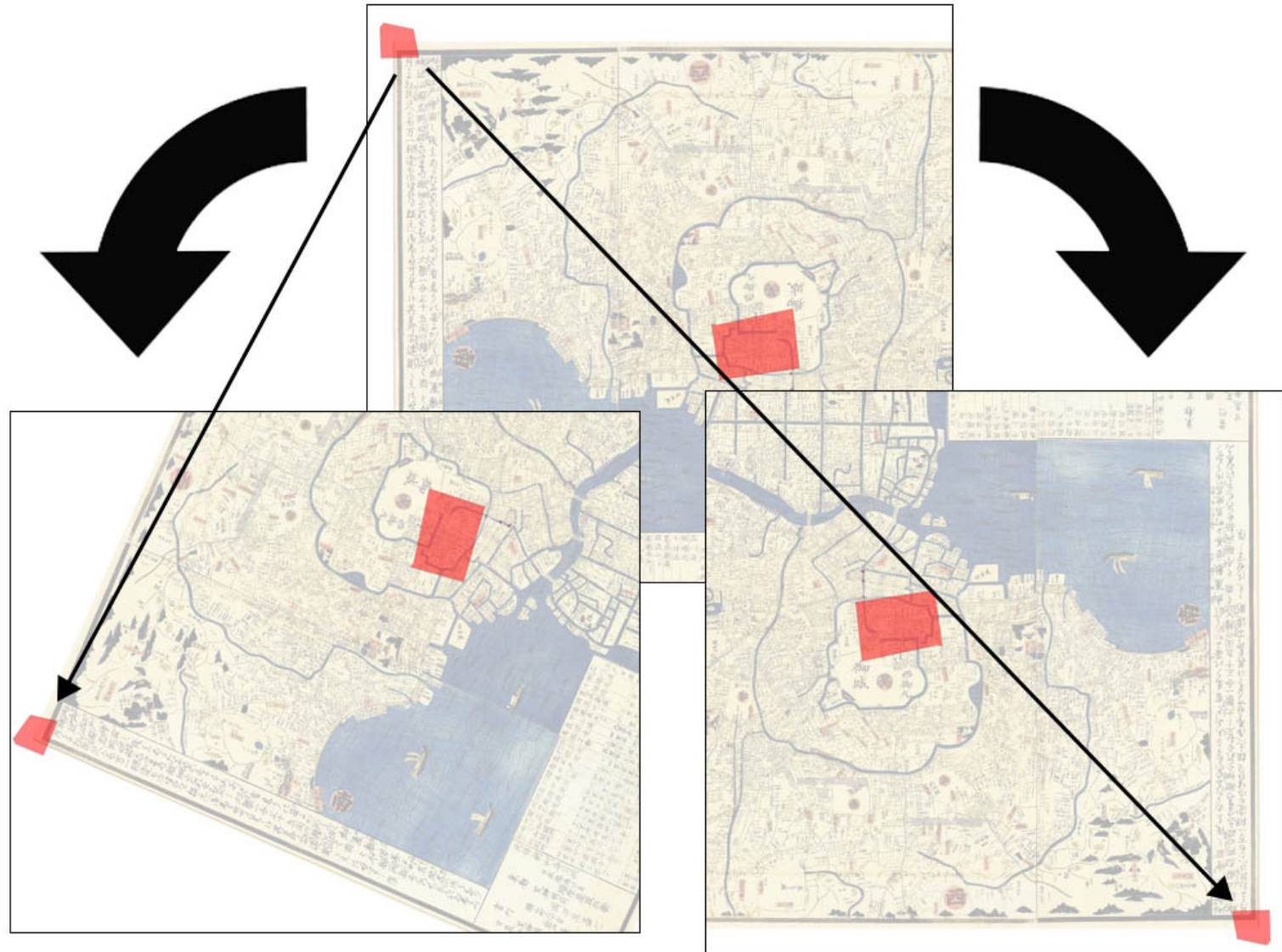
Rotating Features in DemiScript
please follow the link

- https://www.youtube.com/watch?v=Q0lCBlSzQbM&feature=youtu.be

Leo Born
Scraping ARC Database

- ARC Database already contains many woodblock prints, so we are interested in a subset of them that fit well into the context of the *O Edo ezu*

- The prints we are interested in must meet at least the following criteria:
  - Keyword: 江戸名所
  - Time span: 1830-1850 (or 天保 era)

Scraping ARC Database

- Python-based script to extract metadata of prints in ARC Database:
  - Starting on the first results page for 江戸名所, we check every image page individually
  - Scrape metadata from image page and check whether they meet criteria:
    - Does Japanese date contain 天保 or is Western date >1829 and <1851?
    - Is the image source link valid? (e.g. some images are not shown because access is denied; others might not be found under the given link)
  - If both are true, save metadata to .json file containing:
    - title
    - artist
    - date (Japanese and Western)
    - arc_link (-> ARC Database link to image page)
    - img_source (-> link to where the image file itself is hosted)
    - owner (-> who holds the rights for this image?)
  - Repeat for every results page

Scraping ARC Database

- 124 prints were found of which 112 are from 歌川広重
  - We therefore post-filter the prints to only consider ones from Hiroshige
  - This allows for narrowing the research question

- Next step is preparation of prints for inclusion in DemiScript

Scraping ARC Database

- We would like to embed the prints as IIIF next to the map (deep zoom capabilities come in handy when trying to read accompanying texts, for example)
  - However, is this legal?
- Other options include:
  1. Instead of converting and using the image file directly, we open the ARC page for the image next to the map
  2. We only provide a link to the ARC page (safest option)

- Problem: How should we proceed?

Stages & Schedule

- May 2020
  - get higher resolution image of map
  - crawl and filter *ukiyoe*
  - convert map to IIIF

- June 2020
  - get higher resolution image of map
  - crawl and filter *ukiyoe*
  - prepare and upload IIIF-compatible map for implementation with DemiScript

Stages & Schedule

- July 2020
  - get higher resolution image of map
  - prepare current DemiScript instance for annotating map later on
  - set up means for annotating metadata of *ukiyoe*

- August 2020
  - get higher resolution image of map
  - prepare current DemiScript instance for annotating map later on
  - set up means for annotating metadata of *ukiyoe*

Stages & Schedule

- September 2020
  - set up means for annotating metadata of *ukiyoe*

- October 2020
  - let students tag *ukiyoe*

- November 2020
  - let students tag Edo map
  - Project presentation at ICDH conference in Tokyo

- December 2020
  - set up new DemiScript instance for presentation

Stages & Schedule

- January 2021
  - merge two datasets on one interactive map

- February 2021
  - publish project (accessibility via DemiScript Homepage and ARC)
  - Project presentation at Sophia University DH Workshop

Problem

Influence of Covid-19 on schedule

- Joint classroom work will not be possible during winter term

- Presentation of results in February / March 2021 in Japan might not be possible

Ressources

- *O Edo ezu*:
  - https://www.dh-jac.net/db/maps/results-big.php?f37[]=江戸&-format=resultsp.htm&singleskip=4&enter=cortazzi&skip=0

- *Edo meisho:*
  - https://www.dh-jac.net/db/nishikie/results.php?f11[]=1&f85=江戸名所&-format=results-1p.htm&-max=50&enter=portal&lang=ja

- *Tôto saijiki:*
  - https://www.dh-jac.net/db1/books/results-thum.php?f1=MM0221&f12=1&-sortField1=f8&-max=40&enter=portal