

Practical applications of IIF

As a building block towards a digital National Collection

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Building IIF Manifests

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What's a Manifest and why do we want to build one?

The IIF Presentation API gives us a Model for *presenting* digital objects of cultural heritage *on the web*.

Collection, **Manifest**, Canvas, Range, Annotation, Content Resource...


unit of distribution

- A sequence of one or more views
- Each view is modelled as a Canvas.

Further reading: [A Language for Digital Objects](#)

Most Manifests are built by machines

- There are 100s of millions of digital objects represented by Manifests.
- As most of these are books, there are **billions** of Canvases.

METS
MARC
CIDOC-CRM
DUBLIN CORE
Etc
Etc
Etc



EWART'S LINEN FACTORY, BELFAST, 24-08-1914



National Library of Ireland
Public Domain

Today we're more interested in **artisanal** manifests

Why would you want to make a manifest by hand?

Vanilla manifests - expect to work anywhere

- Take an existing manifest and tweak it
- Make a scrapbook
- Reconstruct a correspondence
- Argue with people about the order of movements in a symphony
- Create a new manifest from scratch, from raw media

Targeted manifests - full potential realised in specific environment

- Arrange a sequence of views to make an exhibit
- Save progress in a crowdsourcing project
- Build a digital publication
- Export from an annotation workbench

Take an existing manifest and tweak it



```
home > tomcrane > Dropbox > iiif > webinar > {} tanc-bod.json > {} 2 > value
1 {
2   "@context": "http://iiif.io/api/presentation/2/context.json",
3   "@id": "https://iiif.bodleian.ox.ac.uk/iiif/manifest/faeff7fb-f8a7-44b5-95ed-cff9a9ffd198.json",
4   "@type": "sc:Manifest",
5   "label": "Bodleian Library MS. Ashmole 1511",
6   "description": "Bestiary",
7   "metadata": [
8     {
9       "label": "Homepage",
10      "value": "<span><a href='\"https://digital.bodleian.ox.ac.uk/objects/faeff7fb-f8a7-44b5-95ed-cff9a9ffd198.json\">https://digital.bodleian.ox.ac.uk/objects/faeff7fb-f8a7-44b5-95ed-cff9a9ffd198.json</a>"
11    },
12    {
13      "label": "Catalogue Description",
14      "value": "<a href='\"https://medieval.bodleian.ox.ac.uk/catalog/manuscript_290\">Catalogue of Manuscripts</a>"
15    },
16    {
17      "label": "Title",
18      "value": "Bestiary"
19    },
20    {
21      "label": "Shelfmark",
22      "value": "MS. Ashmole 1511"
23    }
24  ]
25 }
```

```
home > tomcrane > Dropbox > iiif > webinar > {} tanc-bod.json > {} label
```

```
1 {
2   "@context": "http://iiif.io/api/presentation/2/context.json",
3   "@id": "https://iiif.bodleian.ox.ac.uk/iiif/manifest/faeff7fb-f8a7-44b5-95ed-cff9a9ffd198.json",
4   "@type": "sc:Manifest",
5   "label": "Haha! This is MINE!",
6   "description": "Bestiary",
7   "metadata": [
8     {
9       "label": "Homepage",
10      "value": "<span><a href='\"https://digital.bodleian.ox.ac.uk/objects/faeff7fb-f8a7-44b5-95ed-cff9a9ffd198.json\">https://digital.bodleian.ox.ac.uk/objects/faeff7fb-f8a7-44b5-95ed-cff9a9ffd198.json</a>"
11    },
12    {
13      "label": "Catalogue Description",
14      "value": "<a href='\"https://medieval.bodleian.ox.ac.uk/catalog/manuscript_290\">Catalogue of Manuscripts</a>"
15    },
16    {
17      "label": "Title",
18      "value": "Bestiary"
19    },
20    {
21      "label": "Shelfmark",
22      "value": "MS. Ashmole 1511"
23    }
24  ]
25 }
```

Readers have collected their favorite literary lines for centuries.
Now compiling a portable word scrapbook is easier than ever.



The screenshot displays the Harvard Mirador Viewer interface. The browser address bar shows the URL: <https://jlib.lib.harvard.edu/manifests/view/drs:1392592255f>. The viewer's navigation bar includes options for Search, View Text, Print/Save, Cite, Related Links, and Help. The main content area shows a digital manuscript page with the following text:

LOCKE, JOHN. A new method of making common-place-books. London : Printed for J. Greenwood, books...

Jump to: (seq. 1)

Table of Contents:

- [Cover Section] (seq. 1)
- [Front Matter] (seq. 2-4)
- [Title Section] (seq. 5-10)
 - (seq. 5)
 - (seq. 6)
 - (seq. 7)
 - (seq. 8)
 - (seq. 9)
 - (seq. 10)
- Monsieur Le Clercs Character of Mr. LOCKE'S Method, WITH HIS ADVICE About the USE OF Common-Places., pp. I-V (seq. 11-15)
- The INDEX., pp. VI-1 (seq. 16-17)
- Mr. Lock's Letter to Monsieur Toinard, containing a New and Easie Method of making Common-Place Books, an exact Index of which may be made in Two Pages., pp. 2-24 (seq. 18-40)
- A Letter of Doctor John Wallis to Robert Boyle, Esq; concerning the said Doctors Essay of Teaching a Person Dumb and Deaf to Speak, and to Understand a Language; together with the Success thereof made apparent to his Majesty, the Royal Society, and the University of Oxford., pp. 25-40 (seq. 41-56)
- The following Account was Writ by the late Ingenious Mr. Oldenboug, Secretary of

The central image shows the title page of the manuscript:

A
NEW METHOD
OF MAKING
Common-Place-Books ;
WRITTEN
By the late Learned Mr. John Locke,
Author of the *ESSAY concerning
Humane Understanding.*

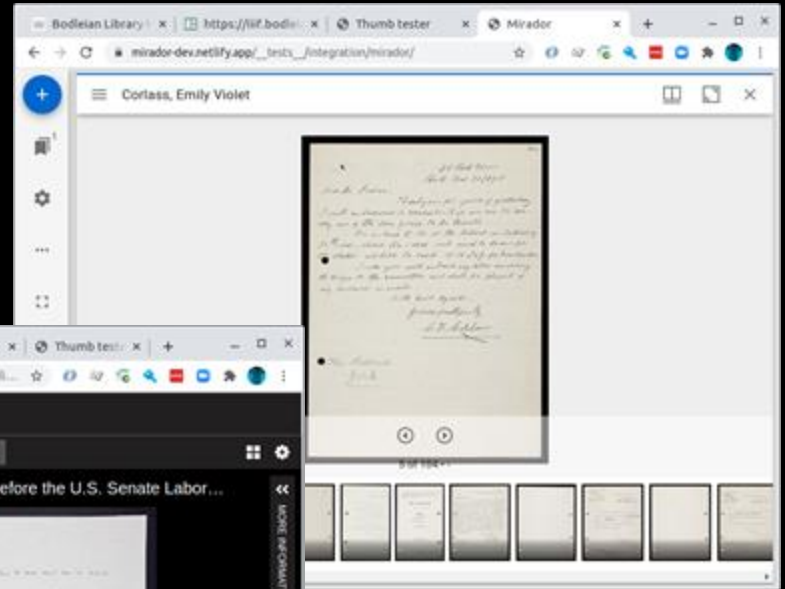
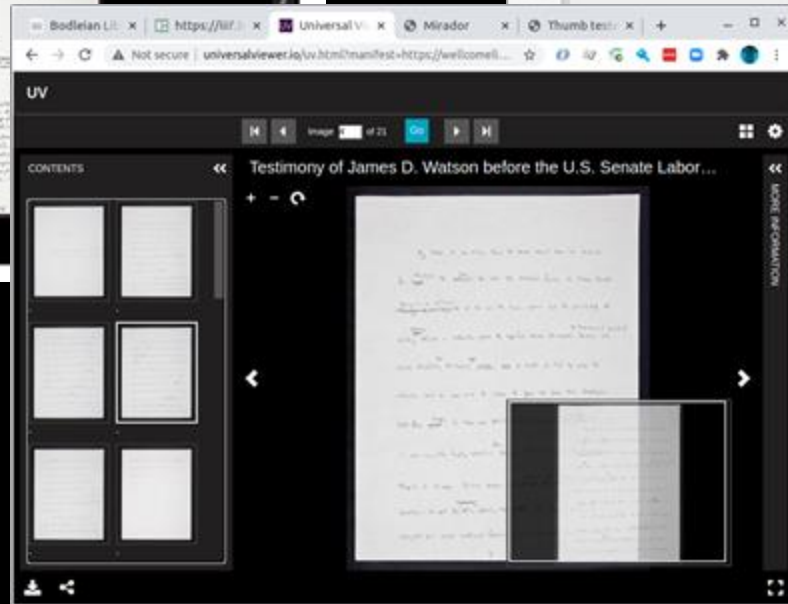
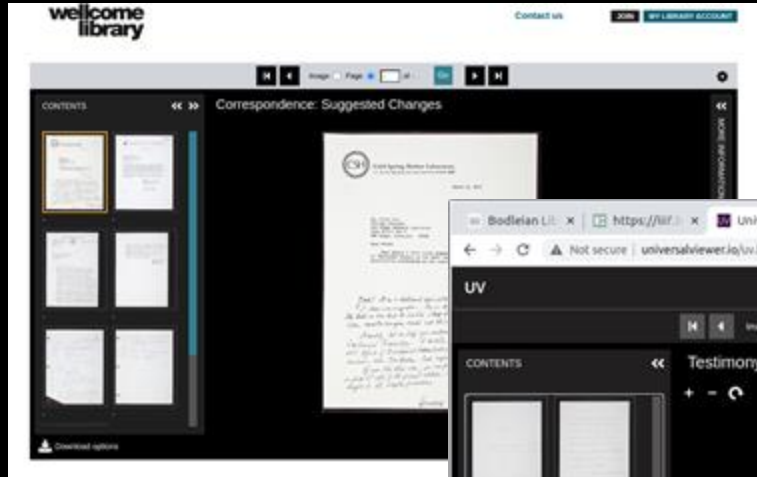
Translated from the French.

TO WHICH
Is added Something from Monsieur Le
Clerc, relating to the same Subject.

A TREATISE necessary for all Gentle-
men, especially Students of Divinity, Physick,
and Law.

There are also added Two Letters, containing a
most useful Method for instructing Persons that
are Deaf and Dumb, or that Labour under any
Impediments of Speech, to speak distinctly; writ
by the late Learned Dr. John Wallis, Geometry
Professr. Oxon, and F. R. S.

Reconstruct a correspondence



Tools

There are lots of tools, and this is not an exhaustive survey *at all*.
Keep an eye on <https://github.com/IIIF/awesome-iiif> for others.

Create a new manifest from scratch, from raw media

- Use a text editor - completely manual

Fine in moderation but painful , tedious, not scalable, not friendly.

- Write a script using a library
- e.g., in Python:

Can be quick

Tools usually part of
bigger libraries

```
from iiif_prezi.factory import ManifestFactory
import os

factory = ManifestFactory()

manifest = factory.manifest(label="my manifest")
sequence = manifest.sequence()
for filename in os.listdir("/path/to/images"):
    identifier = fn[:-4]
    title = identifier.replace("_", " ").title()
    canvas = seq.canvas(ident=identifier, label=title)
    canvas.add_image_annotation(identifier, True)

manifestToFile(compact=False)
```

<https://github.com/iiif-prezi/iiif-prezi>

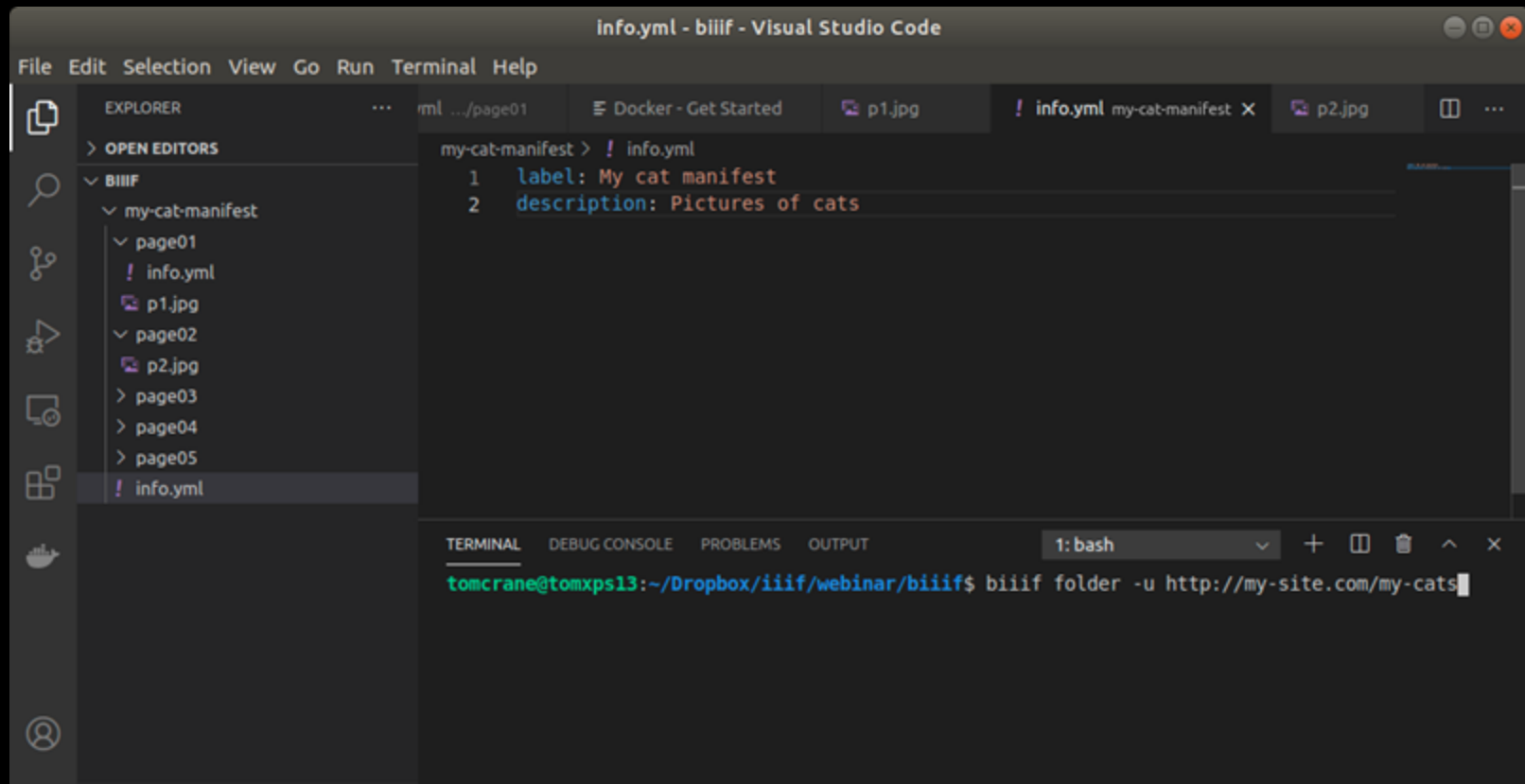
More at

<https://github.com/IIIF/awesome-iiif#presentation-api-libraries>

Presentation API Libraries

- [Manifesto](#) - IIIF Presentation API client and server utility library.
- [Manifold](#) - Wraps Manifesto to provide viewer state and related utilities.
- [O'Sullivan](#) - Ruby API for creating IIIF manifests.
- [iiif-prezi](#) - Python library providing a reference implementation.
- [iiif-apis](#) - Java IIIF API libraries.
- [IIIF Manifest Generator](#) - PHP library for generating IIIF manifests.
- [tabula-rasa](#) - npm module for creating and manipulating IIIF manifests.
- [iiif-tree-component](#) - IIIF tree menu sortable by date with multi-select capability.
- [Tripoli](#) - IIIF Presentation API 2.0+ validation library.
- [ViewDir](#) - Documentation on IIIF-related libraries and components, from an open community of designers and developers interested in creating composable and interoperable interfaces for consuming and creating online content.
- [Swiiift](#) - IIIF presentation API library for Swift.

biif



```
my-cat-manifest > ! info.yml
1  label: My cat manifest
2  description: Pictures of cats
```

TERMINAL DEBUG CONSOLE PROBLEMS OUTPUT

1: bash

```
tomcrane@tomxps13:~/Dropbox/iiif/webinar/biif$ biif folder -u http://my-site.com/my-cats
```

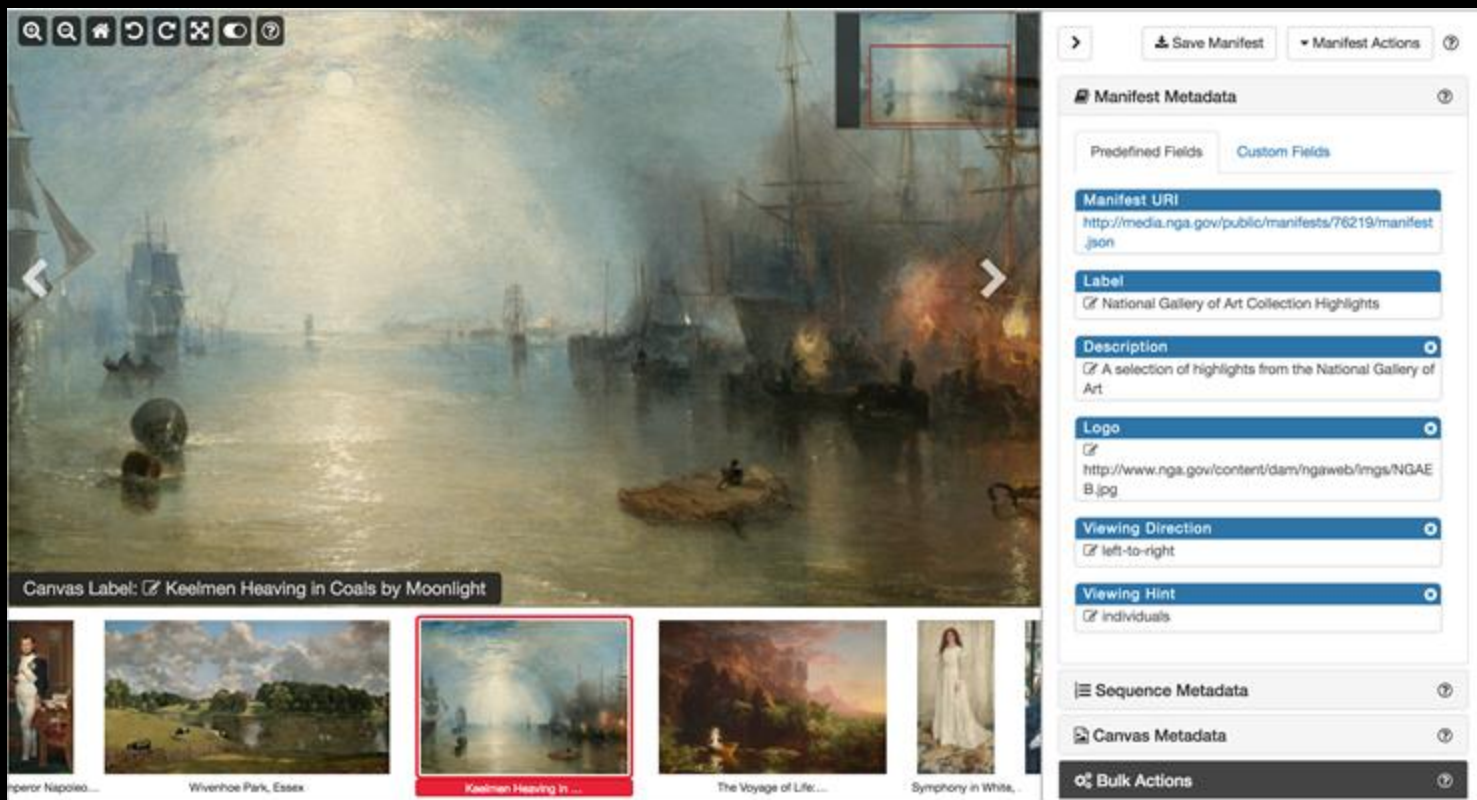
biif

Create a manifest from folders+configuration

Can be used to create complex IIF structures without writing code

<https://github.com/edsilv/biif>

Bodleian Manifest Editor



The screenshot displays the Bodleian Manifest Editor interface. The main canvas shows a large painting, "Keelmen Heaving in Coals by Moonlight," with a red box highlighting a specific area. Below the canvas, a "Canvas Label" field is checked and contains the text "Keelmen Heaving in Coals by Moonlight".

The sidebar on the right contains the following sections:

- Manifest Metadata**
 - Predefined Fields / Custom Fields
 - Manifest URI**: <http://media.nga.gov/public/manifests/76219/manifest.json>
 - Label**: National Gallery of Art Collection Highlights
 - Description**: A selection of highlights from the National Gallery of Art
 - Logo**: http://www.nga.gov/content/dam/ngaweb/imgs/NGAE_B.jpg
 - Viewing Direction**: left-to-right
 - Viewing Hint**: Individuals
- Sequence Metadata**
- Canvas Metadata**
- Bulk Actions**

At the bottom, a row of thumbnail images is visible, with the third thumbnail, "Keelmen Heaving in ...", highlighted with a red border. Other thumbnails include "Wivenhoe Park, Essex", "The Voyage of Life...", and "Symphony in White...".

Bodleian Manifest Editor

<https://digital.bodleian.ox.ac.uk/manifest-editor/>

The best bet for general purpose manifest construction

IIIF 2.1 ... but you can use other tools to upgrade to IIIF 3

Supports the full specification

A great tool for remixing ... importing canvases from other manifests.


Exhibit.

E. Exhibit | Eadweard Muybr... x +

← → ↻ exhibit.so/exhibits/DdLUGBSE.H6GRbDOb0Bju ☆ 🌐 🔍 📄 📧 📧 📧 📧 📧 📧

— ← →

It had been known for a long time that horses lifted all four feet at the same time while galloping, but it was thought that they were extended fore-and-aft. Muybridge's photographs, once he had overcome the technical difficulties of triggering multiple cameras in sequence, showed that the opposite was true.



+ - ↺ ⌂ 🔍 📄 📧 📧 📧 📧

The image shows a web browser window displaying an exhibit page. The browser's address bar shows the URL 'exhibit.so/exhibits/DdLUGBSE.H6GRbDOb0Bju'. The page content features a text block on the left and two side-by-side photographs of a man on a horse galloping. The photographs are sequential, showing the horse's legs in different positions to illustrate the timing of the gallop. A navigation bar at the bottom of the exhibit area includes a home icon, a search icon, and several document and mail icons.

Exhibit.

Easy to use, can build an exhibit online and export as a IIIF Manifest

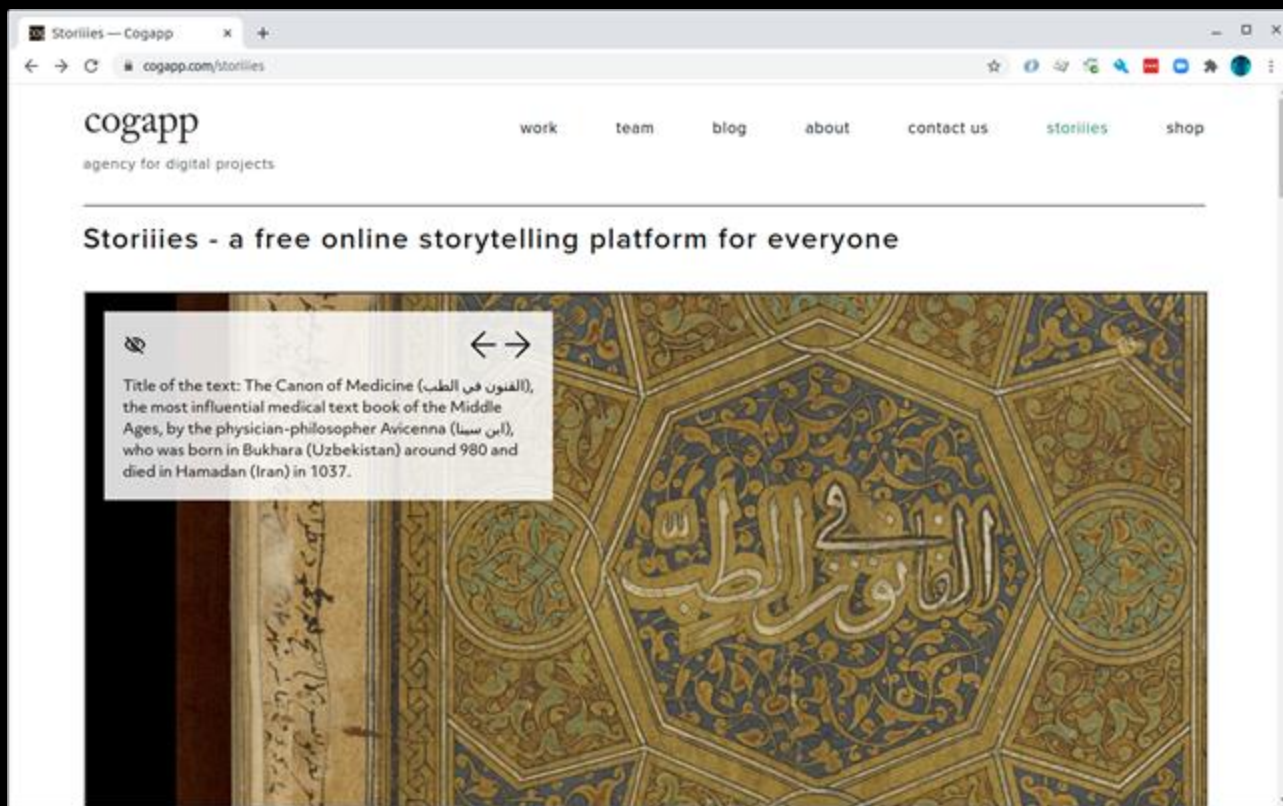
Guided tour between and within images

Supports 3D models too

Can be shared and embedded (like the Universal Viewer)

<https://exhibit.so/>

Storiies



The screenshot shows a web browser window with the URL cogapp.com/storiies. The website header includes the logo "cogapp" and the tagline "agency for digital projects". A navigation menu contains links for "work", "team", "blog", "about", "contact us", "storiies", and "shop".

Storiies - a free online storytelling platform for everyone

The main content area features a large, ornate image of a manuscript page with intricate geometric and floral patterns in gold, blue, and green. The central text is written in large, elegant Arabic calligraphy. A semi-transparent white text box is overlaid on the left side of the image, containing the following text:

← →

Title of the text: The Canon of Medicine (القانون في الطب), the most influential medical text book of the Middle Ages, by the physician-philosopher Avicenna (ابن سينا), who was born in Bukhara (Uzbekistan) around 980 and died in Hamadan (Iran) in 1037.

Storiies

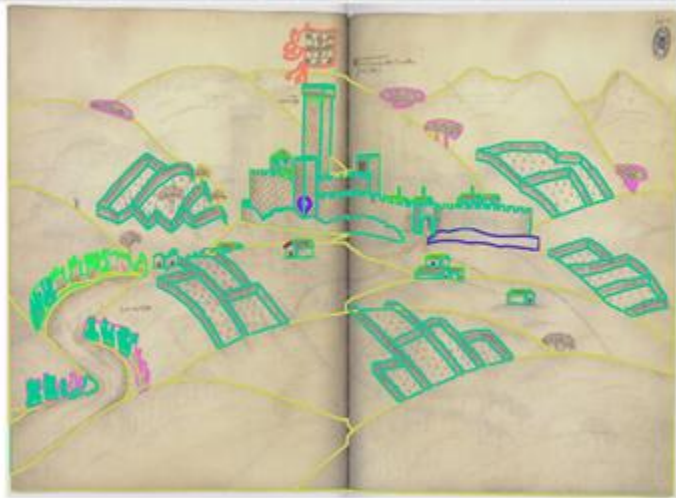
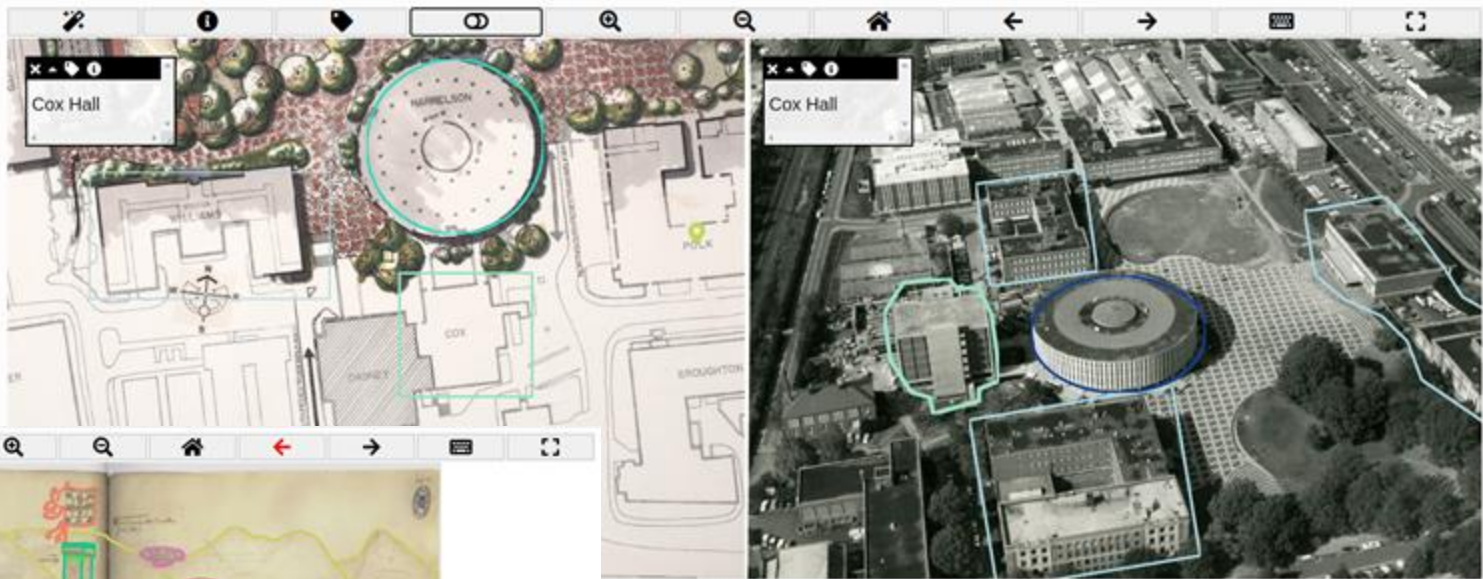
A guided tour of a single image

Also editable online

<https://www.cogapp.com/storiies>

Annona

```
<iif-multistoryboard annotationurls="https://ncsu-libraries.github.io/annona/webannotations/mc00084-001-te0159-000-001-0001-list.json;https://ncsu-libraries.github.io/annona/webannotations/ua023-015-003-bx0002-004-026-list.json" styling="matchclick: true;customid:matchclick;"></iif-multistoryboard>
```



Annona

Not a manifest builder as such... but a tool for producing complex narratives on top of existing material, using IIIF and web annotations.

Storyboard for a single image

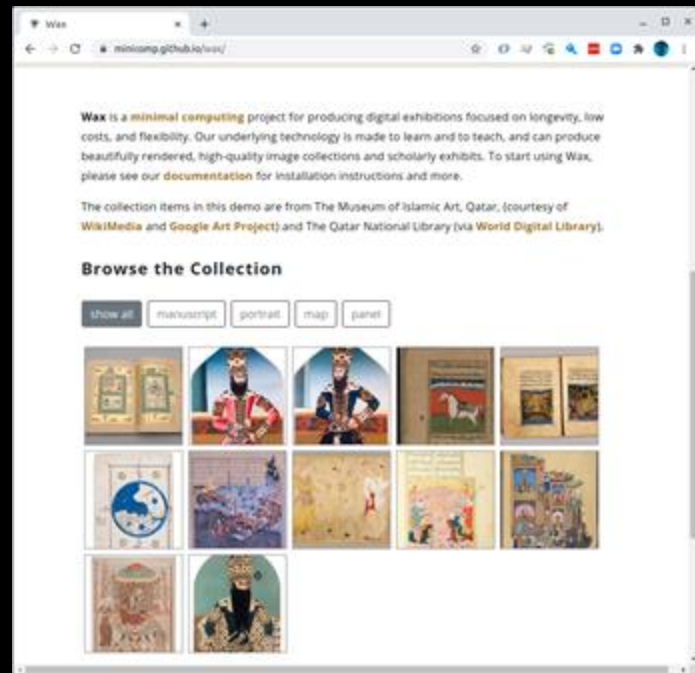
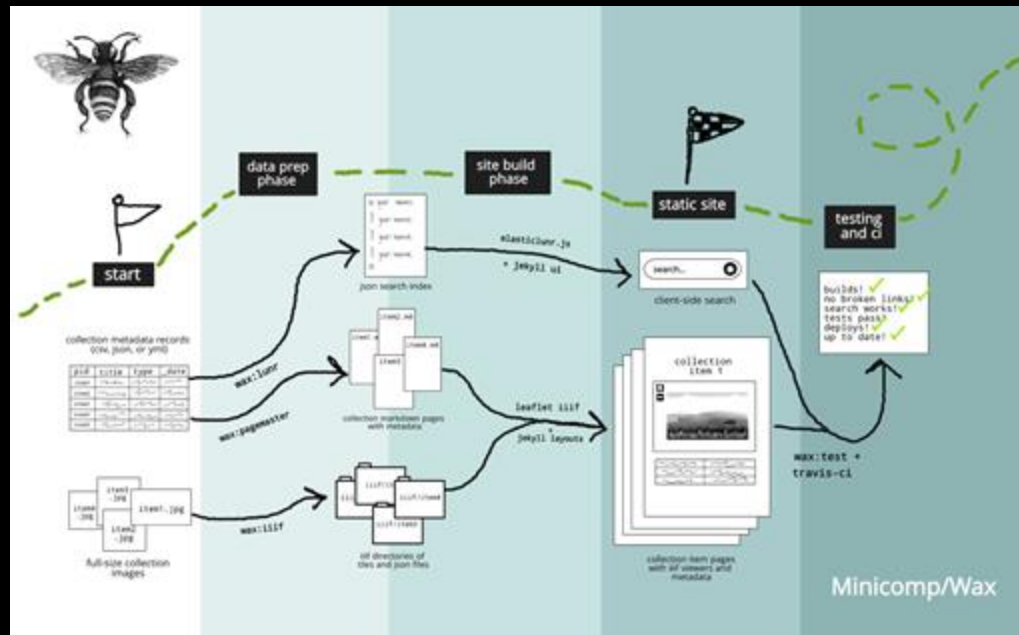
Storyboard for sequence (i.e., Manifest)

Storyboard for IIIF Ranges

Part of a larger IIIF tooling workflow that includes annotation tools and manifest builders.

<https://ncsu-libraries.github.io/annona/>

Wax



Wax

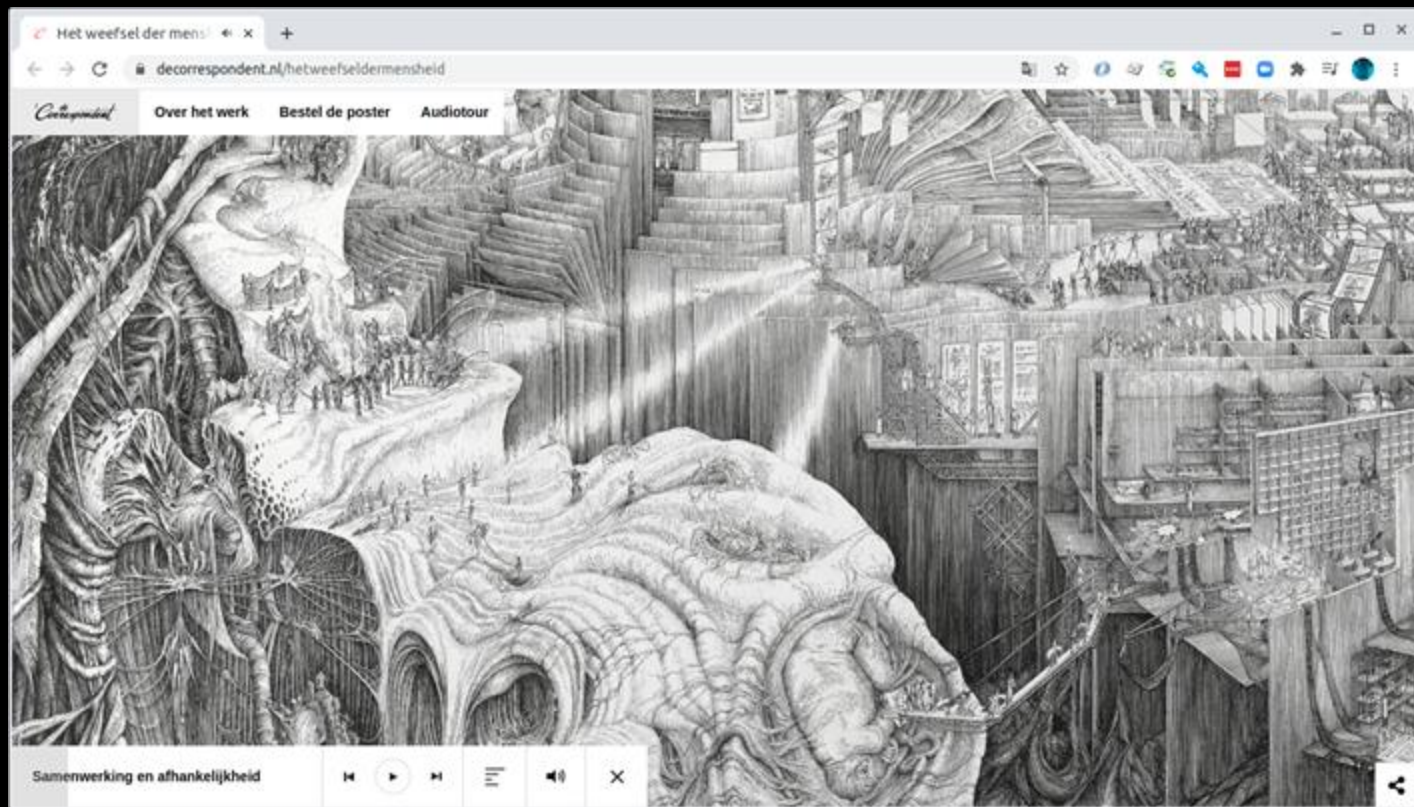
Wax generates IIF Manifests as part of generating static exhibit sites.

It also generates the HTML, CSS and JavaScript to drive a small site.

“Wax was created for individuals and groups who either don’t have or don’t want to use a lot of resources to create their scholarly exhibitions. It’s best suited for folks who are willing to take on some technical responsibility in exchange for a lot of flexibility.”

<https://minicomp.github.io/wax/>

Micrio



Micrio

Commercial subscription service

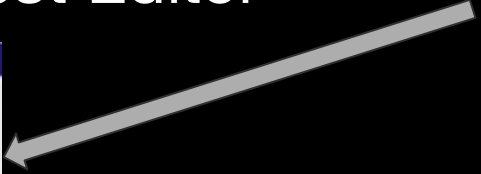
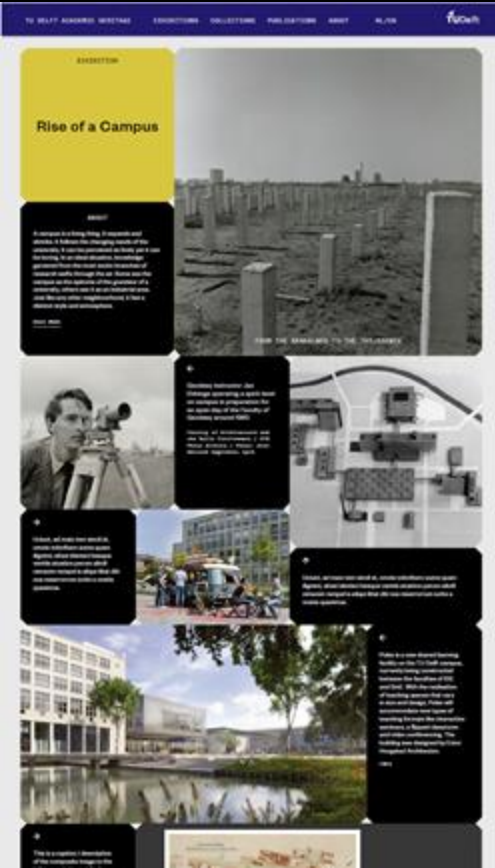
Upload images, set metadata

Allows export of HTML

Used by museums for hi-res exhibits

<https://micr.io/>

Digirati Manifest Editor



Digirati Manifest Editor

Aims to be a general purpose manifest editor,
for producing vanilla manifests

With plugins to transform it into an environment for creating bespoke targeted manifests, for guided tours, slideshows, and more complex exhibits.

[Reaching into collections to tell stories](#) (article)

[How TU Delft use the manifest editor to build online exhibitions](#) (video)

TANC - Manifest Builders ☆

File Edit View Insert Format Slides Help

Share

New

Open Ctrl+O

Import slides

Make a copy

Email

Download

Make available offline

Version history

Rename

Move

Add shortcut to Drive

Move to trash

Publish to the web

Document details

Language

Page setup

Print settings and preview

Print Ctrl+P

Save as IIF... we need more tools!

The screenshot displays a professional video editing software interface. At the top, there are two preview windows: the left one shows a grid of video thumbnails, and the right one shows a larger video preview of a person in a blue jacket sitting on a pier next to a white bucket. Below these is a video player with a progress bar and playback controls. The bottom half of the screen is dominated by a complex multi-track timeline with various colored tracks (blue, purple, green) representing different video and audio layers. The interface is dark-themed and includes various toolbars and control panels.

Thank you!

These slides: bit.ly/tanc-tc

More awesome IIF things: <https://github.com/IIF/awesome-iiif>

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cultural-heritage.digirati.com

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A bit more reading on the IIF Universe

[Beyond the Viewer: fragments and links in annotation space](#)