



IIIF

# NISO Training

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# About

- IIIF Technical Coordinator
  - Help with implementations
  - Work with vendors
  - A community resource
- Previously at the National Library of Wales for 12 years
  - Digitisation
    - <http://bit.ly/2zPFx8a>
  - Newspapers
    - <http://newspapers.library.wales>
  - Fedora Repository
  - Crowdsourcing



# Plan

- Why IIIF?
- IIIF APIs
  - Image API
  - Presentation API
  - Search API
  - Authentication API
- JSON-LD and Linked Data
- IIIF and Annotations
- Future APIs
  - Discovery
- Further resources





# Tools

- Follow along:
  - [https://github.com/glenrobson/iiif-demos/blob/master/NISO\\_links.md](https://github.com/glenrobson/iiif-demos/blob/master/NISO_links.md)
- JSON View plugin:
  - <https://addons.mozilla.org/en-GB/firefox/addon/jsonview/>
  - [https://chrome.google.com/webstore/detail/jsonview/chklaanhfefbnpoi  
hckbnefhakgolnmc?hl=en](https://chrome.google.com/webstore/detail/jsonview/chklaanhfefbnpoihckbnefhakgolnmc?hl=en)
- Add alternate JSON content-type for firefox:
  - application/ld+json. (Tools->Add ons->JsonView preferences)

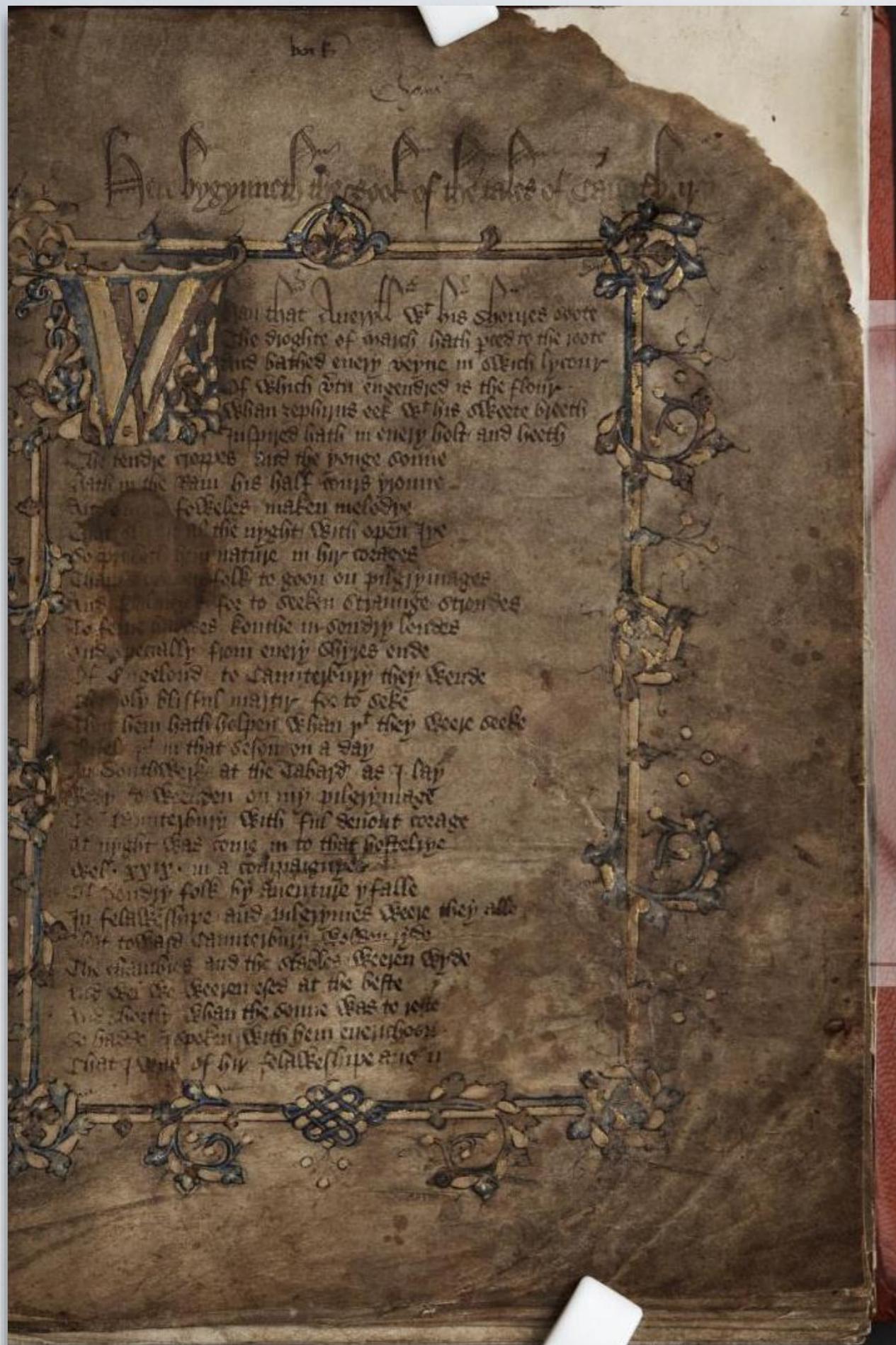


International  
Image  
Interoperabilit  
y  
Framework



# International





# Interoperable - Viewers



☰ Poems by Guillaume de Machaut, [15 cent.]

Change Layout Full Screen

front cover spine inside front... f. 1 r. f. 1 v. f. 1 v. f. 2 r. f. 2 v. f. 3 r. f. 3 v. f. 4 r. f. 4 v. f. 5 r.

This image shows a single page from a medieval manuscript. The page contains several poems written in a Gothic script. Large, ornate initials are present at the beginning of each poem. The text is arranged in two columns. The script is dark brown or black ink on aged, yellowish paper. The parchment appears slightly textured and aged.

**DETAILS:**

**LABEL:**  
Poems by Guillaume de Machaut, [15 cent.]

**DESCRIPTION:**  
Transcripts of poems by Guillaume de Machaut.

**TITLE:**  
Poems by Guillaume de Machaut, [15 cent.]

**AUTHOR:**  
Guillaume de Machaut ca. 1300-1377

**PERIOD:**  
1401 - 1500

**PERMALINK:**  
<http://hdl.handle.net/10107/4574752>

**REFERENCE:**  
NLW MS 5010C [RESTRICTED ACCESS].

**REPOSITORY:**  
This content has been digitised by The National Library of Wales

**RIGHTS:**

**LICENSE:**  
<http://hdl.handle.net/10107/PublicDomainMark>

**ATTRIBUTION:**  
Llyfrgell Genedlaethol Cymru – The National Library of Wales

**LOGO:**

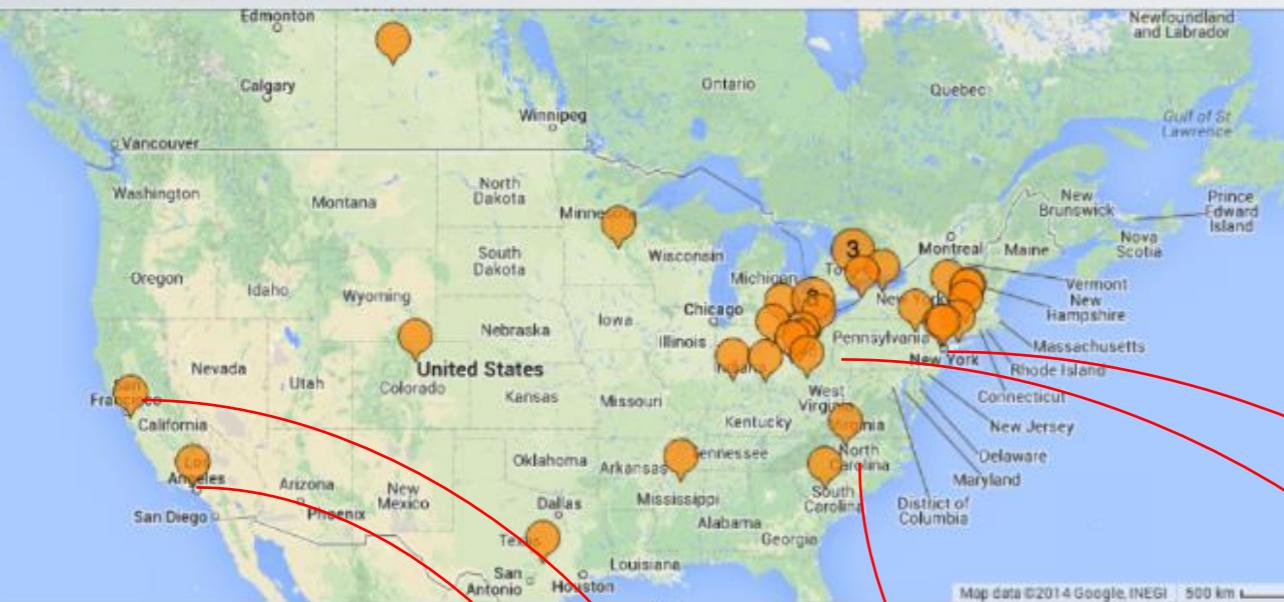
The logo of the National Library of Wales (NLW) features the letters "NLW" in a large, bold, white font, with "Llyfrgell Genedlaethol Cymru" written in a smaller, white font above it. The background is red.

**LINKS:**

Change Layout Full Screen



# Interoperable - Images



Change Layout Full Screen

Ege MS No. 1 – Reconstructed

DETAILS:

LABEL:  
Ege MS No. 1 – Reconstructed

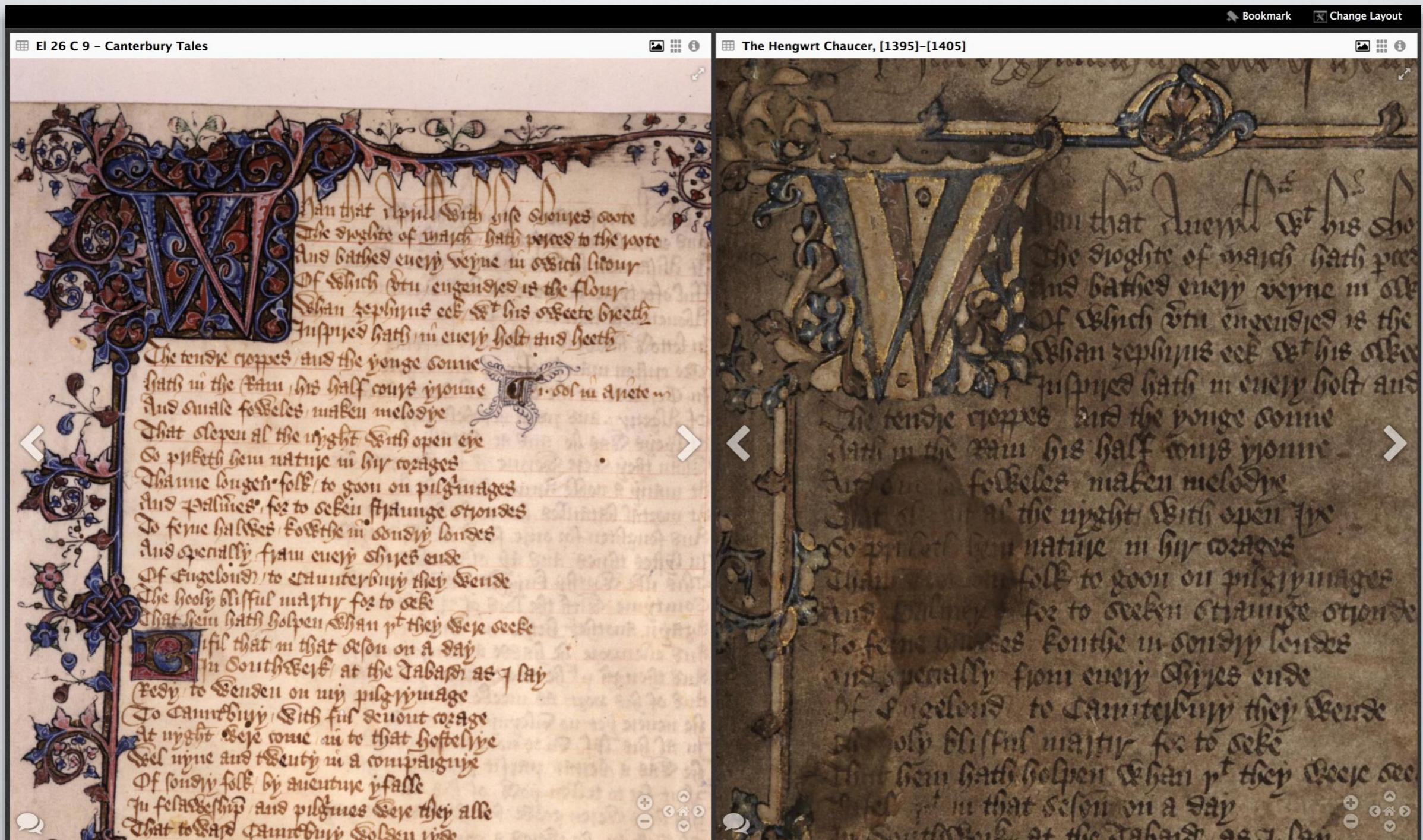
DESCRIPTION:  
Infamous biblioclast Otto Ege owned a 12th-century French glossed bible in the first half of the 20th century. During the 1940s and 1950s this manuscript was broken apart and individual leaves used in his portfolio set Fifty Original Leaves from Medieval Manuscripts. Copies of this portfolio set, of which forty are known to have existed, were sold throughout North America and were purchased by public and academic libraries. At the time of this reconstruction, 33 institutions holding leaves from this glossed bible have been identified – there are more out there, as the manuscript reconstruction is still far from complete. The current reconstruction brings these leaves together in a single viewing interface as a partially reconstructed whole in order to demonstrate the power of interoperability to make whole, once again, objects which were thought to be irreparably fragmented. In this reconstruction, Stanford's leaves have no label other than folio number. All other institutions are listed in the folio labels themselves.

RIGHTS:

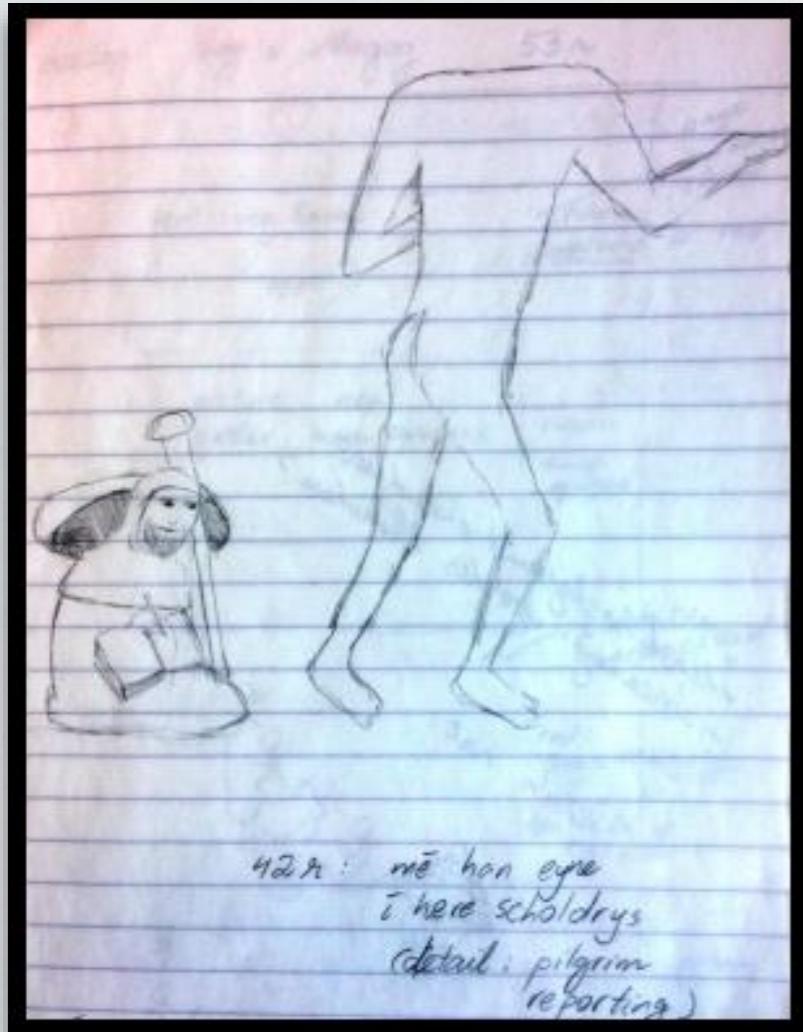
ATTRIBUTION:  
Draft reconstruction provided by Benjamin L. Albritton. Images served from Stanford, University of Mississippi, University of North Carolina, Greensboro, and University of South Carolina (the latter three through a shim to allow IIIF of contentDM objects.)

The interface displays a central image of a medieval manuscript page with text in two columns. Below it is a horizontal strip showing thumbnails of other manuscript pages, each labeled with its corresponding folio number: f. 8r, f. 8v, f. 9r, f. 9v, f. 11r, f. 11v, f. 13r, f. 13v, f. 14r, f. 14v, f. 15r, f. 15v, f. 16r, f. 16v, and f. 16bisr. Red arrows from the map above point to the thumbnails of folios f. 9r, f. 9v, f. 11r, f. 11v, f. 13r, f. 13v, f. 14r, f. 14v, f. 15r, f. 15v, f. 16r, f. 16v, and f. 16bisr.

# Interoperable - Collections

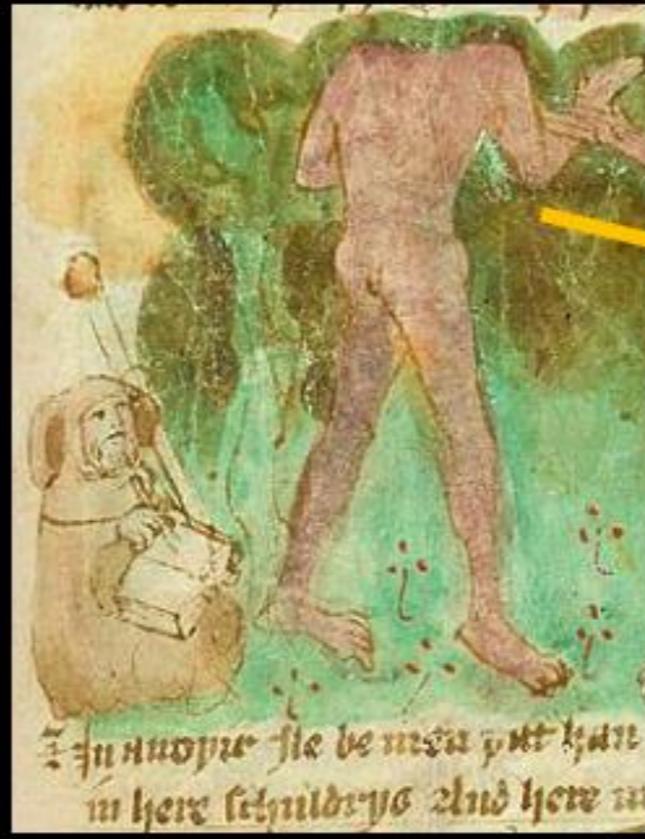


# Interoperable

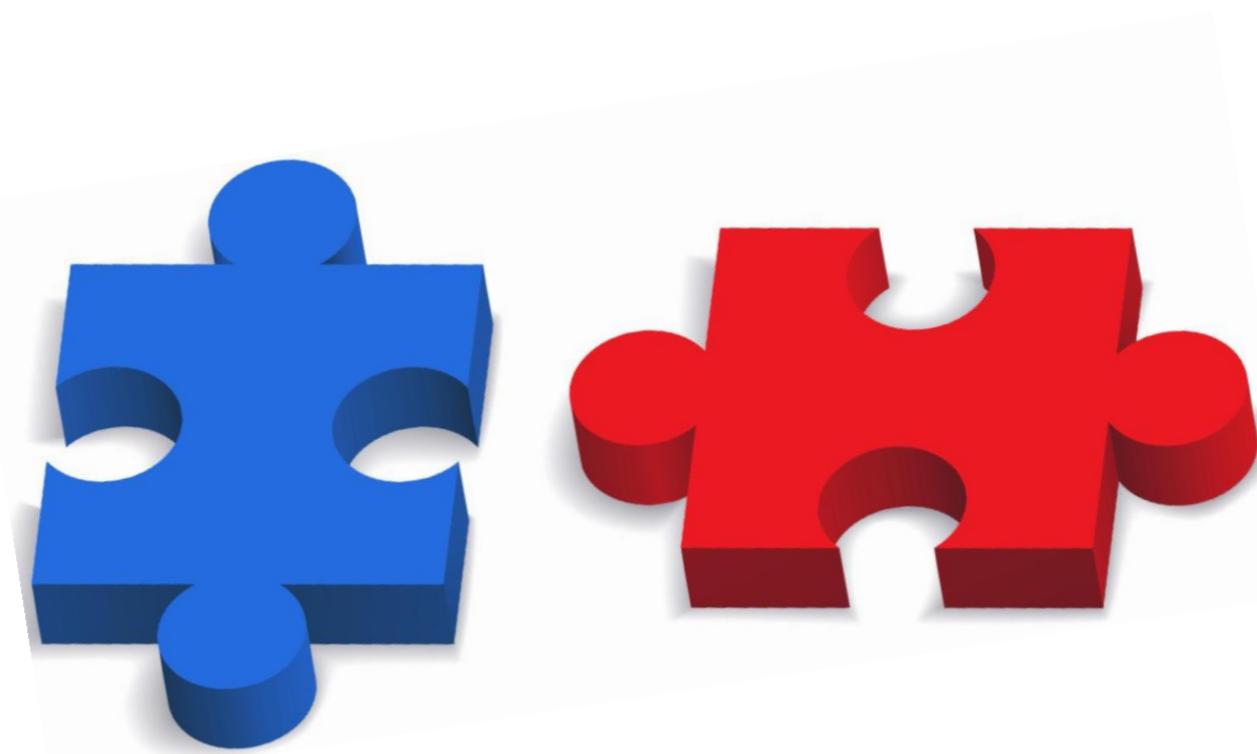


British Library, MS. Harley  
3954. The Book of John  
Mandeville.

(now.)



# Framework



## **Image API**

“get pixels” via a simple, RESTful, web service

## **Presentation API**

Just enough metadata to drive a remote viewing experience



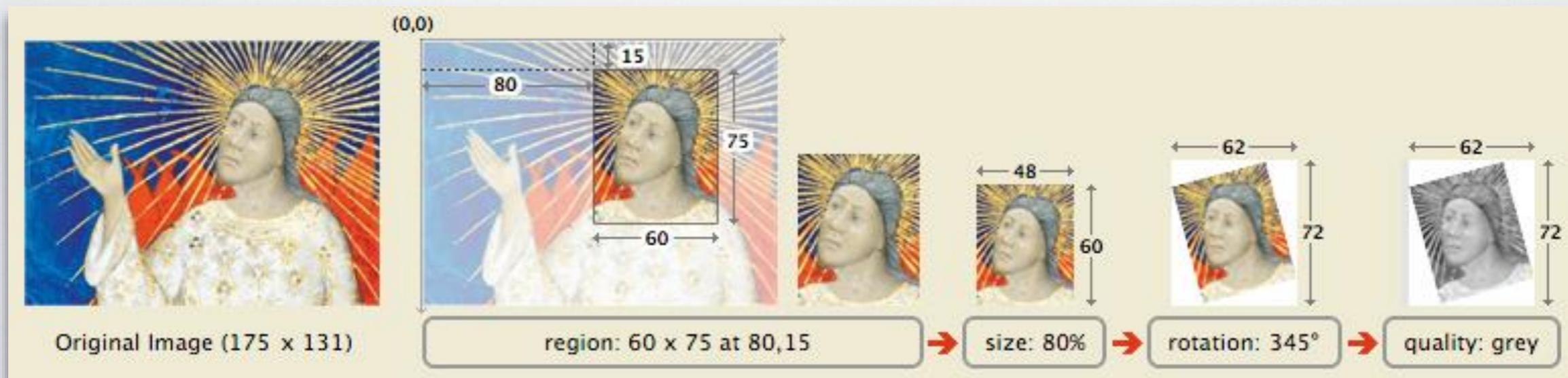
# IIIF Image API

<http://iiif.io/api/image/2.1/>

## Order of Implementation

<http://www.example.org/image-service/abcd1234/80,15,60,75/pct:80/345/grey.jpg>

region      size      quality  
rotation      format





# Example

- <https://tomcrane.github.io/the-long-iiif/image-api.html>

John Dee performing an experiment before Queen Elizabeth I.  
Oil painting by Henry Gillard Glindoni.

Welcome Library:

<http://wellcomelibrary.org/item/b14658197>



From: <http://resources.digirati.com/iiif/an-introduction-to-iiif/>

# info.json

<https://dlcs.io/iiif-img/3/2/04fbbb28-d5a7-4408-b7da-800c4e65eda3/info.json>

- **width, height**
- **Tiles**: width height
- **Scalefactors** 512x512, 1024x1024, 2048x2048 etc...
- **Sizes**: pre-generated full images
- **Profile**: what the image server supports

```
{  
  "@context": "http://iiif.io/api/image/2/context.json",  
  "@id": "https://dlcs.io/iiif-img/3/2/04fbbb28-d5a7-4408-b7da-800c4e65eda3",  
  protocol: "http://iiif.io/api/image",  
  width: 7656,  
  height: 4867,  
  tiles: [  
    {  
      width: 256,  
      height: 256,  
      scaleFactors: [  
        1,  
        2,  
        4,  
        8,  
        16,  
        32  
      ]  
    },  
    ],  
  sizes: [  
    {  
      width: 1024,  
      height: 651  
    },  
    {  
      width: 400,  
      height: 254  
    },  
    {  
      width: 200,  
      height: 127  
    },  
    {  
      width: 100,  
      height: 64  
    }  
  ],  
  profile: [  
    "http://iiif.io/api/image/2/level1.json",  
    {  
      formats: [  
        "jpg"  
      ],  
      qualities: [  
        "native",  
        "color",  
        "gray"  
      ],  
      supports: [  
        "regionByPct",  
        "sizeByForcedWh",  
        "sizeByWh",  
        "sizeAboveFull",  
        "rotationBy90s",  
        "mirroring",  
        "gray"  
      ]  
    }  
  ]  
}
```



# Zoom

<http://tomcrane.github.io/presentations/tile-exploder.html>

## Pyramids - how IIIF enables Deep Zoom

<https://dlcs.io/iiif-img/3/2/04fbbb28-d5a7-4408-b7da-800c4e65eda3/info.json>

total tiles: 807

Scale factor: 32



/full/240,0/default.jpg

Scale factor: 16



/0,0,4096,4096/256,0/default.jpg



/4096,0,3560,4096/223,0/default.jpg



/0,4096,4096,771/256,0/default.jpg



/4096,4096,3560,771/223,0/default.jpg

Scale factor: 8



/0,0,2048,2048/256,0/default.jpg



/2048,0,2048,2048/256,0/default.jpg



/4096,0,2048,2048/256,0/default.jpg



/6144,0,1512,2048/189,0/default.jpg





# Zoom

<https://tomcrane.github.io/the-long-iiif/dee-osd.html>





# Tiles

<http://puzzle.mikeapps.me/>





# Viewers & Image Servers

- IIIF Image Servers
  - Cantaloupe - Java
  - IIIP - C++
  - Loris - Python
  - RIIIIIF - Ruby
- IIIF Image API Viewers
  - OpenSeaDragon
  - Leaflet
  - IIIPViewer
- IIIF Presentation API Viewers
  - Universal Viewer
  - Mirador
  - Diva.js

Full list: <https://github.com/IIIF/awesome-iiif>



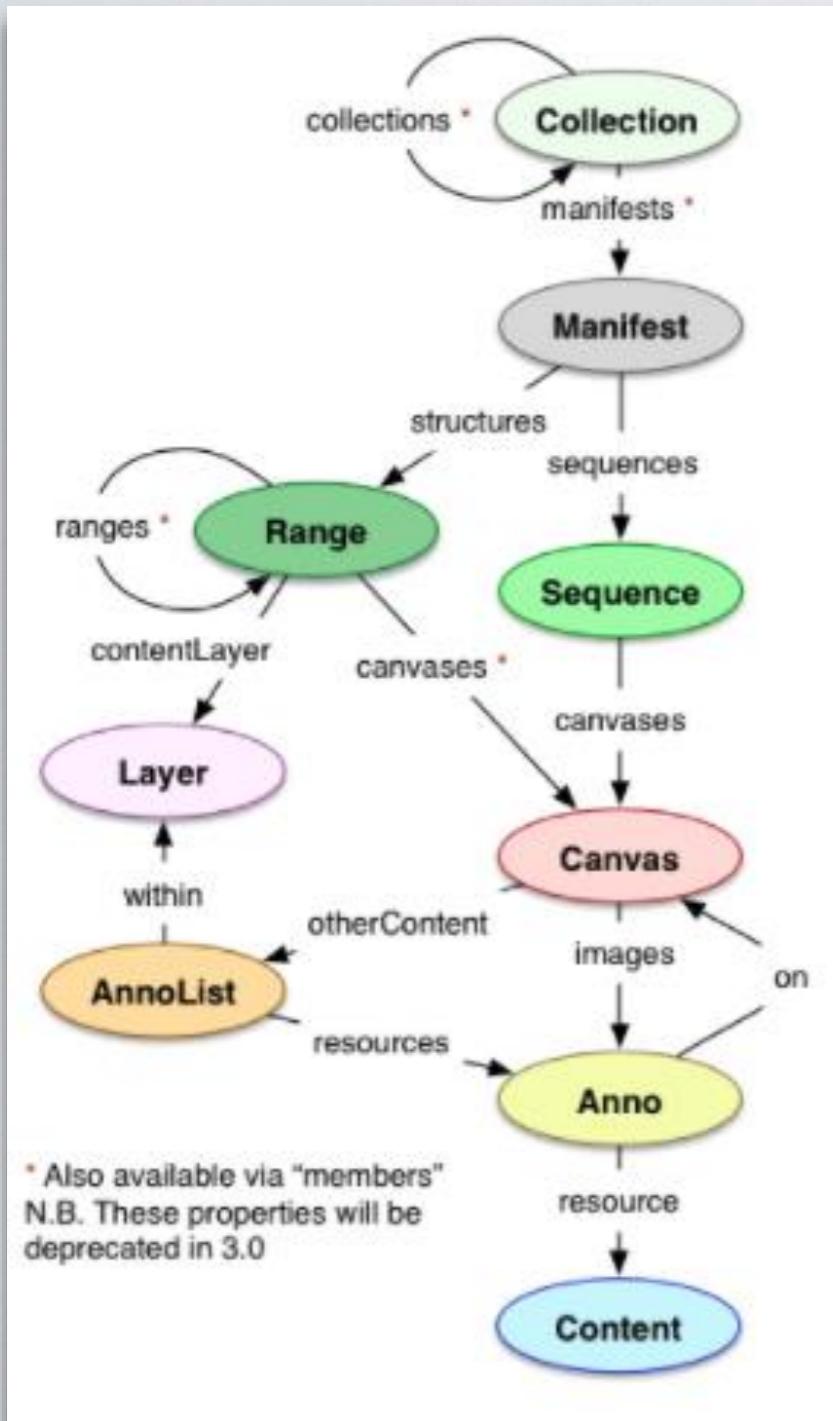
# Questions?

[scheme://host:port/prefix/identifier/region/size/rotation/quality.format](#)

- <http://dams.llgc.org.uk/iiif/2.0/image/1465309/full/512,0/default.jpg>
- **Parameters:** <https://tomcrane.github.io/the-long-iiif/image-api.html>
- **Info.json:** <https://dlcs.io/iiif-img/3/2/04fbbb28-d5a7-4408-b7da-800c4e65eda3/info.json>
- **Tiles:** <http://tomcrane.github.io/presentations/tile-exploder.html>
- **Zoom:** <https://tomcrane.github.io/the-long-iiif/dee-osd.html>



# Presentation API



<http://iiif.io/api/presentation/>

- Basic Descriptive Metadata
- Rights information
- Links
- Sequences - viewing order, etc.
- Ranges - Table of Contents etc.
- Based on Shared Canvas Model



# Manifest

**Presentation API**

- Title Label
- Structure (TOC)
- Sequence

The screenshot shows a digital manuscript viewer interface. At the top, there's a title bar with a red border containing the text "x 11 MS Richardson 7. Houghton Library, Harvard University. Heures d...". Below the title bar is a toolbar with icons for Bookmark, Options, and Switch Workspace. The main area is divided into three sections: a left sidebar with a table of contents, a central image viewer, and a bottom navigation bar.

**Table of Contents (Left Sidebar):**

- ▼ Hours of the Cross (ff. 21–35)
  - ▶ Matins (ff. 21–23v)
  - ▶ Prime (ff. 23–24v)
  - ▼ Terce (ff. 25–26v)
    - f. 25: Flagellation
    - f. 25v.
    - f. 26.  
● f. 26v.
  - ▶ Sext (ff. 27–28v)
  - ▶ None (ff. 29–30v)
  - ▶ Vespers (ff. 31–32v)
  - ▶ Compline (ff. 33–35)
  - ▶ Passion (ff. 35v–36v)
  - ▶ Hours of the Holy Spirit (ff. 37–46v)

**Image API**

- Image Data



# Manifest

<http://dams.llgc.org.uk/iiif/2.0/4642022/manifest.json>

- Service - links to search service
- Metadata - descriptive
- Logo, license and attribution
- Sequences - images
- Structures - ranges

```
{  
  "@context": http://iiif.io/api/presentation/2/context.json,  
  "@type": "sc:Manifest",  
  "@id": http://dams.llgc.org.uk/iiif/2.0/4642022/manifest.json,  
  label: "The Welsh Book of Remembrance 1928",  
  ▶ service: { ... },  
  ▶ metadata: [ ... ],  
    description: "This volume is bound in morrocan leather and has gold lettering and  
    lines on the boards and spine. The volume is made up of parchment pages sewn on 5  
    raised cords. The first page contains the Welsh text \"ER CÔF\" and the signature,  
    \"Edward P\", of Edward, Prince of Wales (later Edward VIII), and is dated \"12 Jun  
    1928\". The preface contains the following information in gold lettering: \"HEREIN  
    ARE RECORDED THE NAMES OF THE MEN AND WOMEN OF WELSH BIRTH AND PARENTAGE AND OF ALL  
    THE MEN BELONGING TO THE REGIMENT OF WALES WHO GAVE THEIR LIVES IN THE WAR OF  
    1914-1918 A:D: THEY ARE COMMEMORATED BY THEIR FELLOW COUNTRY MEN IN THE MEMORIAL  
    ERECTED NEAR BY.\" The following is noted at the end of the volume: \"The work of  
    Graily Hewitt, B.A., LL.B., of Lincoln's Inn, and his assistants Helen Hinkley, Ida  
    D. Henstock, Florence Capey, and Helen Luker. Finished Mar. 1928. Treyford,  
    Midhurst.\",  
    license: http://hdl.handle.net/10107/Copyright>AllRightsReserved,  
  ▶ logo: { ... },  
  ▶ attribution: [ ... ],  
  ▶ sequences: [ ... ],  
  ▶ structures: [ ... ]  
}
```



# Metadata

```
▼ metadata: [
  ▼ {
    label: "Date",
    value: "1888"
  },
  ▼ {
    label: "Classification",
    value: "Paintings"
  },
  ▼ {
    label: "Credit Line",
    value: "Harvard Art Museums/Fogg Museum, Bequest from the Collection of Maurice Wertheim, Class of 1906"
  },
  ▼ {
    label: "Object Number",
    value: "1951.65"
  },
  ▼ {
    label: "People",
    ▼ value: [
      "Artist: Vincent van Gogh, Dutch, 1853 – 1890"
    ]
  },
  ▼ {
    label: "Medium",
    value: "Oil on canvas"
  },
  ▼ {
    label: "Dimensions",
    value: "61.5 x 50.3 cm (24 3/16 x 19 13/16 in.)\r\nframed: 90.4 x 79.7 x 8.3 cm (35 9/16 x 31 3/8 x 3 1/4 in.)"
  },
  ▼ {
    label: "Provenance",
    value: "Vincent van Gogh, Arles, (1888,) gift; to Paul Gauguin, (1888-1897) sold. [Ambroise Vollard, Paris.] [Paul Cassirer Gallery, Berlin.] Dr. Hugo von Tschudi, Berlin, (1906-1911), by descent; to his widow, Angela von Tschudi, Munich (1911-1919), to Neue Staatsgalerie, Munich (1919-1938); removed from the collection by the National Socialist (Nazi) authorities in 1938, consigned; to [Theodor Fischer Gallery, Lucerne, Switzerland, for sale June 30, 1939, lot 45]; to Maurice Wertheim (1939-1951) bequest; to Fogg Art Museum, 1951.\r\n\r\nNotes:\r\nGauguin sold the painting for Fr 300\r\nHugo von Tschudi bought the painting for the Nationalgalerie, Berlin, with funds from sponsors, but did not submit it to the Kaiser for pre-approval. He took the painting to Munich when he assumed a post there.\r\nAccording to Stephanie Barron, the van Gogh was removed from the Neue Staatsgalerie on March 27, 1938 and stored at Schloss Niederschönhausen in August of that year. (Barron, 1990, pp. 135-146)\r\n"
  }
],
```

Change Layout Full Screen

Dedicated to Paul Gauguin

DETAILS:

LABEL: Self-Portrait Dedicated to Paul Gauguin

DATE: 1888

CLASSIFICATION: Paintings

CREDIT LINE: Harvard Art Museums/Fogg Museum, Bequest from the Collection of Maurice Wertheim, Class of 1906

OBJECT NUMBER: 1951.65

PEOPLE: Artist: Vincent van Gogh, Dutch, 1853 – 1890

MEDIUM: Oil on canvas

Navigation icons: back, forward, search, etc.

Small thumbnail images below the main image.

# Metadata - Multilingual



```
▼ metadata: [
  ▼ {
    ▼ label: [
      ▼ {
        "@value": "Title",
        "@language": "en"
      },
      ▼ {
        "@value": "Teitl",
        "@language": "cy-GB"
      }
    ],
    value: "The Welsh Book of Remembrance 1928"
  },
  ▼ {
    ▼ label: [
      ▼ {
        "@value": "Author",
        "@language": "en"
      },
      ▼ {
        "@value": "Awdur",
        "@language": "cy-GB"
      }
    ],
    value: "Windsor, Edward Duke of 1894-1972"
  },
  ▼ {
    ▼ label: [
      ▼ {
        "@value": "Physical description",
        "@language": "en"
      },
      ▼ {
        "@value": "Disgrifiad ffisegol",
        "@language": "cy-GB"
      }
    ],
    value: "1 manuscript volume, 1075 pages: parchment; 465mm x 320mm x 138mm."
  }
],
```

1 o 1083 GWELD

Book of Remembrance...

» MWY O WYBODAETH

Am yr eitem

Teitl

The Welsh Book of Remembrance  
1928

Awdur

Windsor, Edward Duke of 1894-1972

Disgrifiad ffisegol

1 manuscript volume, 1075 pages:  
parchment; 465mm x 320mm x  
138mm.

Dolen barhaol

<http://hdl.handle.net/10107/4642022>

Iaith

English;

Ystorfa

This content has been digitised by  
The National Library of Wales

Disgrifiad

This volume is bound in morrocan



# License, logo and attribution

License

Logo

Attribution

A digital image of the front cover of 'The Welsh Book of Remembrance'. The cover is dark brown leather with gold-tooled decorations. In the center is a rectangular panel containing gold lettering: 'HEREIN ARE RECORDED THE NAMES OF THE MEN AND WOMEN OF WELSH BIRTH AND PARENTAGE AND OF ALL THE MEN BELONGING TO THE REGIMENTS OF WALES WHO GAVE THEIR LIVES IN THE WAR 1914 - 1918'. Above the title, there is a small crest or emblem. The cover is shown against a black background with a navigation bar at the top and a sidebar on the right.

The Welsh Book of Remembrance...

CONTENTS

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» MORE INFORMATION

English;

Repository

This content has been digitised by  
The National Library of Wales

Description

This volume is bound in moroccan  
leather and has gold lettering and  
lines on the boards and spine. The  
volume is made up of... [MORE](#)

Attribution

Welsh Centre for International Affairs

Licence

<http://hdl.handle.net/10107>  
[/Copyright\\_AllRightsReserved](#)

Logo

**LLGC**  
**NLW**

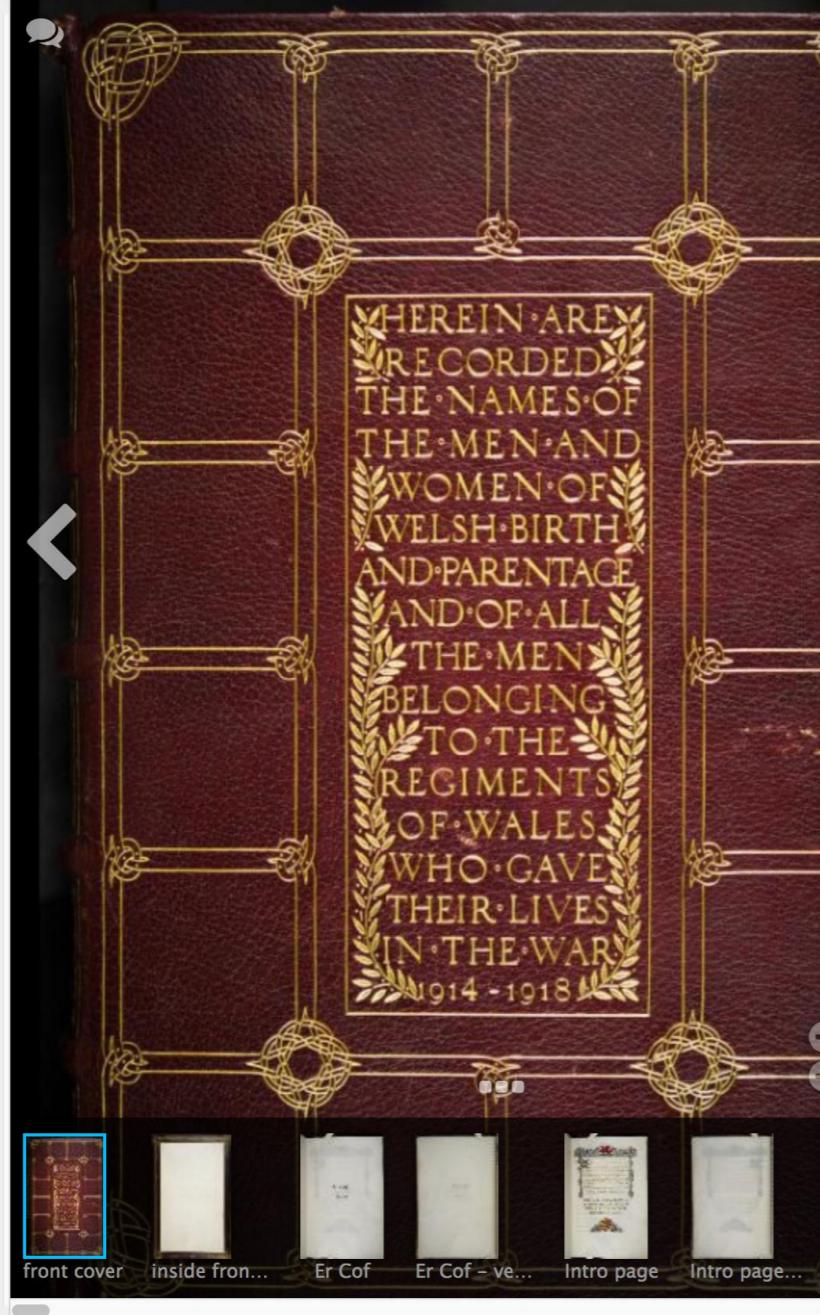
ATTRIBUTION

Welsh Centre for International Affairs

# Structures

## The Welsh Book of Remembrance 1928

- ▶ Front matter
- ▶ Royal Navy
- ▶ Royal Flying Corps
- ▶ Royal Air Force
- ▶ Cavalry
- ▶ Royal Regiment of Artillery
- ▶ Corps of Royal Engineers
- ▶ Grenadier Guards
- ▶ Coldstream Guards
- ▶ Scots Guards
- ▶ Irish Guards
- ▶ Welsh Guards
- ▶ Guards Machine Gun Regiment
- ▶ Royal Scots (Lothian Regiment)
- ▶ The Queen's (Royal West Surrey Regiment)
- ▶ The Buffs (East Kent Regiment)
- ▶ The King's Own (Royal Lancaster Regiment)
- ▶ Northumberland Fusiliers
- ▶ Royal Warwickshire Regiment
- ▶ Royal Fusiliers (City of London Regiment)
- ▶ The King's (Liverpool Regiment)



```
structures: [
  {
    "@id": "http://dams.llgc.org.uk/iiif/2.0/4642022/range/root",
    "@type": "sc:Range",
    label: "Table of Contents",
    viewingHint: "top",
    ▶ canvases: [ ... ]
  },
  {
    "@id": "http://dams.llgc.org.uk/iiif/2.0/4642022/range/-0",
    "@type": "sc:Range",
    label: "Front matter",
    within: "http://dams.llgc.org.uk/iiif/2.0/4642022/range/root",
    ▶ canvases: [
      http://dams.llgc.org.uk/iiif/2.0/4642022/canvas/4642023.json,
      http://dams.llgc.org.uk/iiif/2.0/4642022/canvas/4642024.json,
      http://dams.llgc.org.uk/iiif/2.0/4642022/canvas/4642025.json,
      http://dams.llgc.org.uk/iiif/2.0/4642022/canvas/4642026.json,
      http://dams.llgc.org.uk/iiif/2.0/4642022/canvas/4642027.json,
      http://dams.llgc.org.uk/iiif/2.0/4642022/canvas/4642028.json
    ]
  },
  {
    "@id": "http://dams.llgc.org.uk/iiif/2.0/4642022/range/-1",
    "@type": "sc:Range",
    label: "Royal Navy",
    within: "http://dams.llgc.org.uk/iiif/2.0/4642022/range/root",
    ▶ canvases: [ ... ]
  },
  {
    "@id": "http://dams.llgc.org.uk/iiif/2.0/4642022/range/-1-0",
    "@type": "sc:Range",
    label: "Officers",
    within: "http://dams.llgc.org.uk/iiif/2.0/4642022/range/-1",
    ▶ canvases: [ ... ]
  },
  {
    "@id": "http://dams.llgc.org.uk/iiif/2.0/4642022/range/-1-1",
    "@type": "sc:Range",
    label: "Personnel",
    within: "http://dams.llgc.org.uk/iiif/2.0/4642022/range/-1",
    ▶ canvases: [ ... ]
  },
  {
    "@id": "http://dams.llgc.org.uk/iiif/2.0/4642022/range/-2",
    "@type": "sc:Range",
    label: "Royal Flying Corps",
    within: "http://dams.llgc.org.uk/iiif/2.0/4642022/range/root",
    ▶ canvases: [ ... ]
  }
]
```

# Sequence

```

sequences: [
  {
    "@id": http://dams.llgc.org.uk/iiif/2.0/4642022/sequence/Physical.json,
    "@type": "sc:Sequence",
    label: "Current Page Order",
    viewingDirection: "left-to-right",
    viewingHint: "paged",
    canvases: [
      {
        "@id": http://dams.llgc.org.uk/iiif/2.0/4642022/canvas/4642023.json,
        "@type": "sc:Canvas",
        label: "front cover",
        height: 7179,
        width: 4832,
        images: [
          {
            "@id": http://dams.llgc.org.uk/iiif/2.0/4642022/annotation/4642023.json,
            "@type": "oa:Annotation",
            motivation: "sc:painting",
            resource: {
              "@id": http://dams.llgc.org.uk/iiif/2.0/4642022/res/4642023.jpg,
              "@type": "dctypes:Image",
              format: "image/jpeg",
              service: {
                "@context": http://iiif.io/api/image/2/context.json,
                "@id": http://dams.llgc.org.uk/iiif/2.0/image/4642023,
                profile: http://library.stanford.edu/iiif/image-api/compliance.html#level1
              },
              height: 7179,
              width: 4832
            },
            on: http://dams.llgc.org.uk/iiif/2.0/4642022/canvas/4642023.json
          }
        ]
      },
      {
        "@id": http://dams.llgc.org.uk/iiif/2.0/4642022/canvas/4642024.json,
        "@type": "sc:Canvas",
        label: "inside front cover",
        height: 7259,
        width: 4712,
        images: [
          {
            "@id": http://dams.llgc.org.uk/iiif/2.0/4642022/annotation/4642024.json,
            "@type": "oa:Annotation",
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```



# Canvas is King

Canvas Width



Image Height

Canvas Height

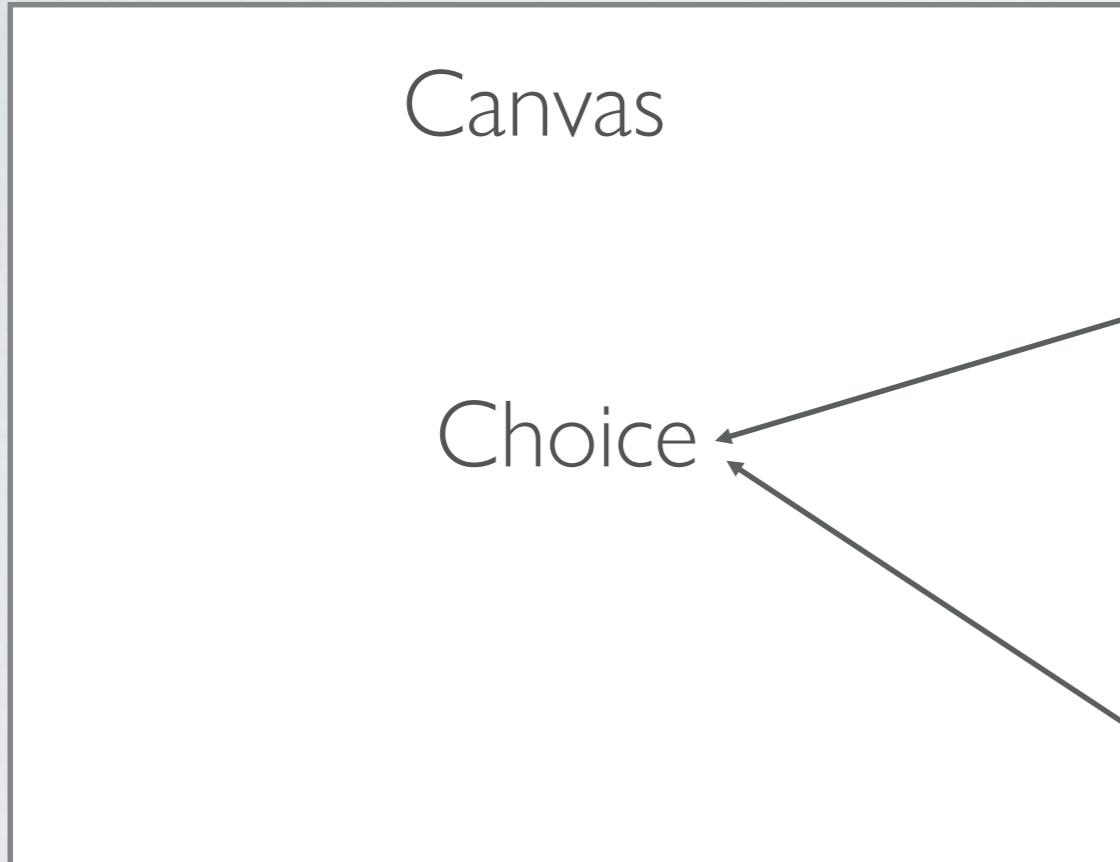
Image Width



Examples so far:

Canvas Width = Image Width,  
Canvas Height = Image Height

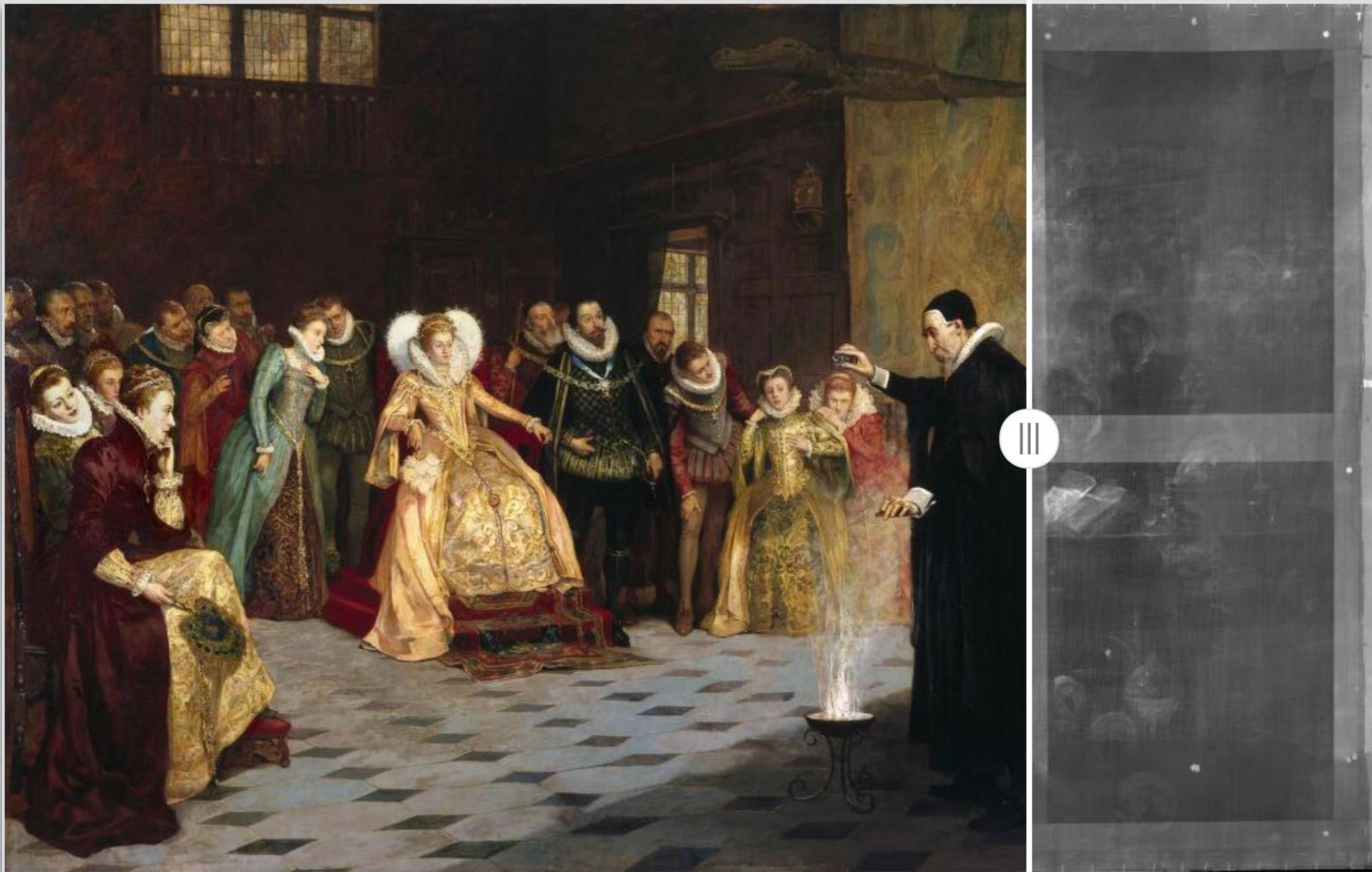
# Image Choice





# Image Choice

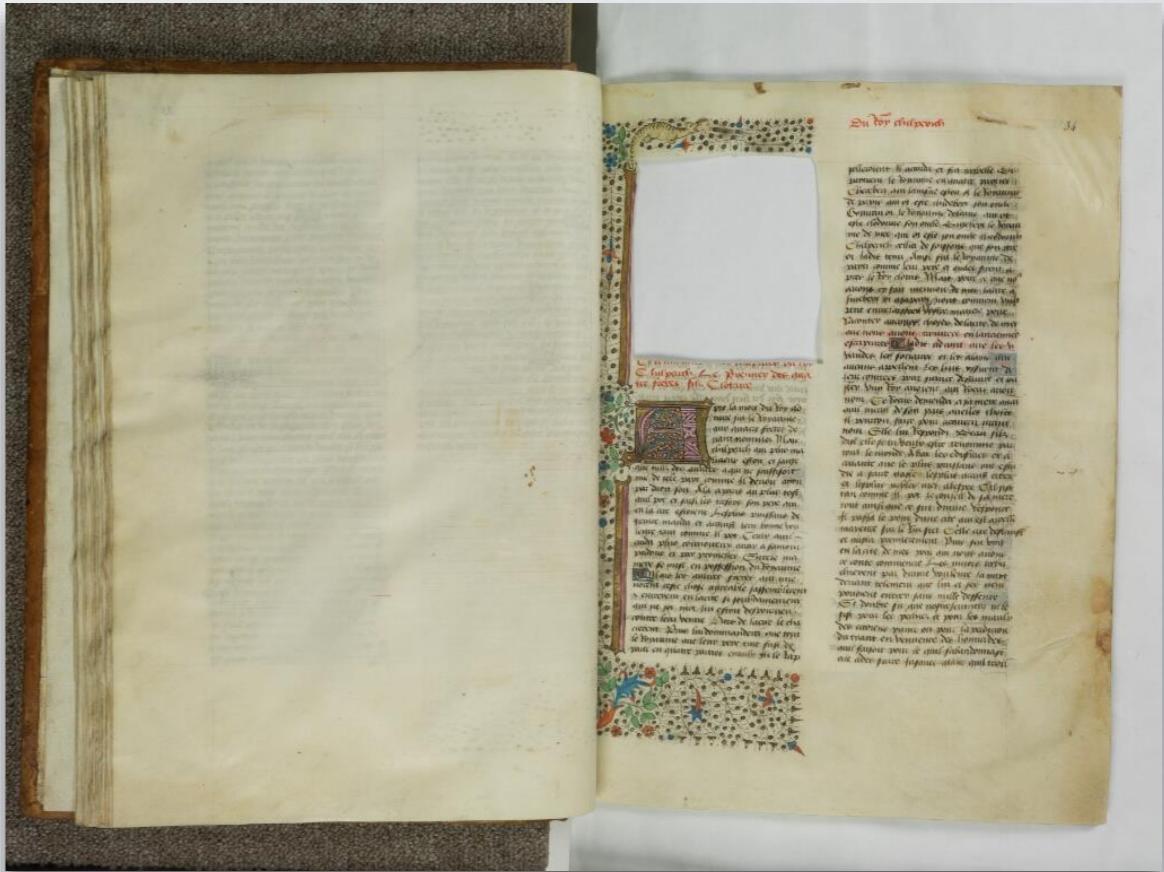
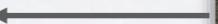
<http://resources.digitati.com/iiif/an-introduction-to-iiif/dee-sbs.html>





# Multi Images

Canvas



# BNF: Reconstructed manifest (partial): Grandes Chroniques de France (Châteauroux, BM, ms 5)

<http://demos.biblissima-condorcet.fr/chateauroux/osd-demo/>

Biblissima  PROJET  OUTILS DÉMOS DOC

f     

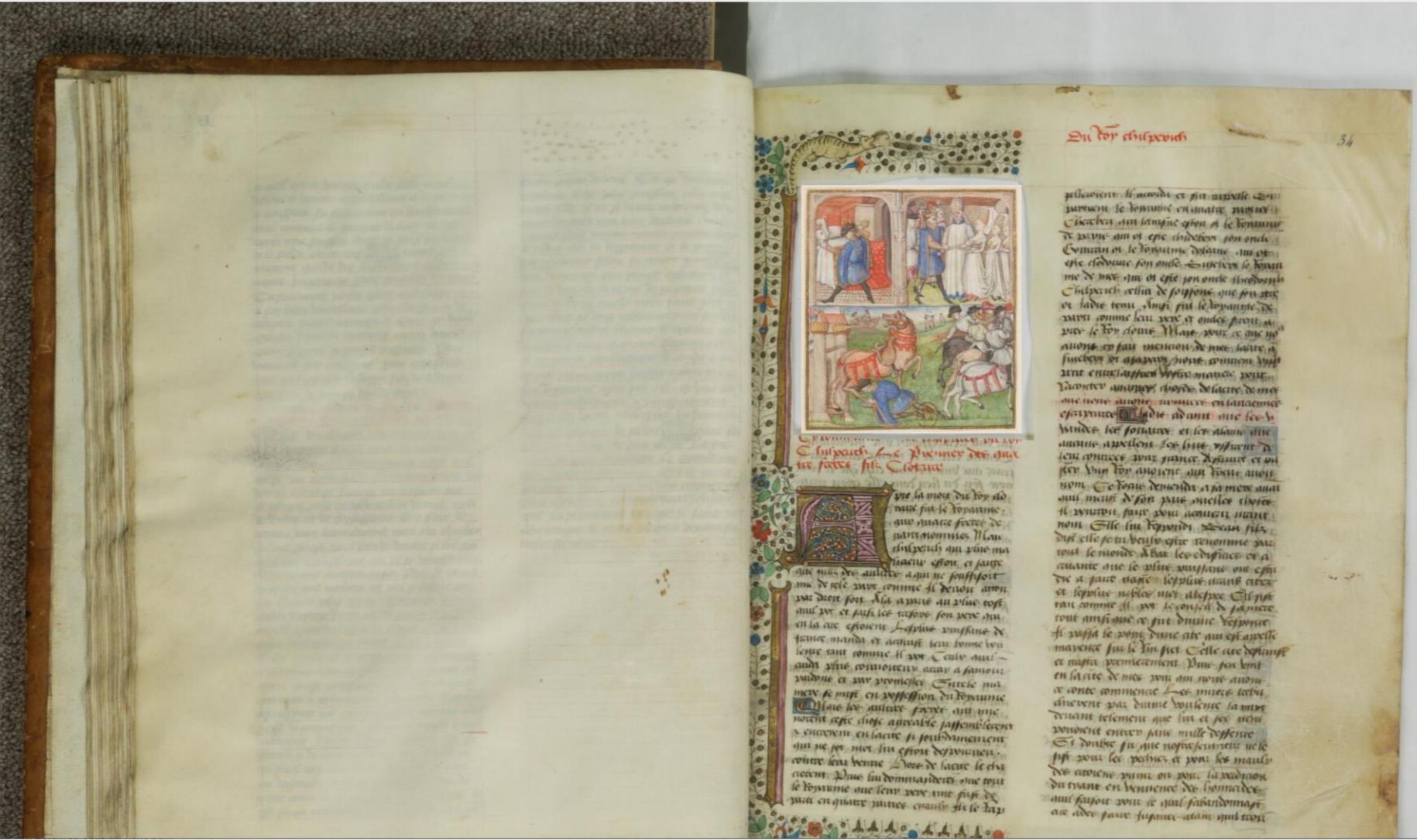
## Démos

Ovide moralisé Proto-BBMN 1713 Bibliothèque de Florus Grandes Chroniques de France Mirador Atelier RDF/SPARQL 2014

A propos Reconstitution complète (2017) Afficher les miniatures

33v-34r >

34



On l'or chaperon

C haperon le premier des que  
re force fit Clotaire

Et la mort du bon so  
nne fut le Royaume  
que force de  
parties. Mais  
chaperon qui vint ma  
tracé chose et fange  
qui n'eut autre agir ne pouvoit  
pas de tel rire comme il devoit arm  
par de tel fort. Mais apprit au vice rois  
que ce fut le Royaume  
en la vie esforçé. L'apôtre romaine de  
France maria et Auguste leur temps ven  
l'eust fait comme il vit. Cela aux  
autres armes pourvoientz assy a faire  
vaincu et par promesse. Cela po  
mette se messe en possession du Royaume  
Mais les autres force ont une  
notoit estoit chose agrable pafementement  
et chapeau en laire si pafementement  
qui ne fit mot. Mais estoit devenu  
contre leur breme. Il eust de laire le dire  
autre. Mais le Royaume me mis  
le Royaume que leur vice une force de  
vaincu en quatre parties. Mais fit le Roy

# Yale Center for British Art

☰ - ≡ John Scarlett Davis, 1804-1845, British, The Interior of the British Institution Gallery, 1829, Oil on canvas, Yale Center for British Art, B1981.25.212, Paintings and Sculpture

Index Layers

Images for Conservation overlay

after treatment, cropped to image, recto, unframed  
 visible opacity (0)

before treatment, recto, unframed  
 visible opacity (0)

before treatment, raking light, recto, unframed  
 visible opacity (100%)

before treatment, IR Peca 904, recto, unframed  
 visible opacity (100%)

before treatment, recto, unframed, UV Fluorescence  
 visible opacity (100%)

after treatment, detail  
 visible opacity (100%)

after treatment, detail  
 visible opacity (disabled)

after treatment, detail  
 visible opacity (100%)

after treatment, detail  
 visible opacity (100%)

after treatment, detail  
 visible opacity (100%)

after treatment, detail  
 visible opacity (disabled)





# Annotations

Canvas



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    }
  ]
}
```



# Annotations

Cambrian (1804-01-28)

AND

**GENERAL WEEKLY ADVERTISER FOR THE PRINCIPALITY OF WALES.**

PRINTED AND PUBLISHED BY T. JENKINS, SWANSEA, GLAMORGANSHIRE.

No. 1.] *Fac-simile Copy of First No. of THE CAMBRIAN.  
Presented with No. 3,703, Friday, January 29, 1875.*

SATURDAY, JANUARY, 28, 1804.

PUBLIC.

**TO THE PUBLIC.**

**ES AND ESTATE,  
SOUTH-WALES.**

**TO BE SOLD OR LET,**

**VERY CONSIDERABLY BELOW THEIR REAL VALUE.**

**CERTAIN COLLIERIES** on the navigable RIVER BURRY, dividing the counties of GLAMORGAN and CARMARTHEN; containing by actual survey, inclusive of certain intermixed Lands, at the command of the proprietor of these Collieries, 10,021,000 TONS of ret workable COAL, exclusive of pillars, now working upon a small scale but capable of being immediately placed upon a larger one and rendered productive to the net amount of from 10 to 15,000 per annum, at the comparatively trivial expence of from 6 to 10,000 a Colliery-surveyor of the first character for skill and integrity having made his estimates to that amount; offering to demonstrate their accuracy beyond the possibility of contradiction, and to become himself, if permitted, a sharer in the adventure.

Together with the best SHIPPING PLACE, and a situation for the erection of SMELTING-HOUSES, &c. on that river where Vessels of large burthen may lie, and take in or discharge their cargoes, with safety in all weathers, and at all times of tide.

Together also with FREEHOLD LANDS, consisting of 843 Acres, partly tythe-free, let at 7s 6d. per annum but valued at 824l. 1s. od. of all of which immediate possession may be given. The whole will be either sold or let for any term of from 50 to 100 years, upon the most moderate terms.

If any respectable coal, copper, iron, tin, or glass-house company, should be suited by this proposal, which would probably place them at once at the head of their respective concerns, from the great superiority of advantages beyond those possessed by any other company in the kingdom; the Proprietor, to evince his own sense of the undertaking, would be happy to embark largely in the adventure.

So many parties have already expressed their wishes to be admitted partners in it, that not improbably a capital of a very large amount might be raised in the country.

The present price of Coals on this river is now from six to ten shillings per ton; and as a further encouragement to iron-masters, it has been clearly ascertained, that the great range of Iron-stone, not more than ten miles distant from these premises, of the same number of veins and quality as those of Aberdare, Merthyr, Blaenavon, &c. &c. can never

**AT a MEETING** of the MERCHANTS and SHIP-OWNERS, held in the TOWN-HALL, in SWANSEA on SATURDAY, Nov. 5, 1803.

**WILLIAM JONES, Esq., in the Chair;**

A letter having been read from Major-General GASCOYNE, approving the idea of providing four light FIELD-PIECES for the DEFENCE of the HARBOUR and COAST, (as recommended by a Meeting held late the 26th ult.) and advising it to be carried into immediate effect.

This Meeting seeing the necessity of immediate and active exertion, do enter into the following resolutions:

- That they will, at their own expence, purchase FOUR BRASS SIX-POUNDERS with their Carriages and proper appendages, to be placed upon the Hills commanding the Harbour of Swansea and adjacent Coast; and to be under the care and direction of the Commander of the Sea Fencibles, and exercised by a sufficient number of his best Gunners.
- That the Most Noble the Lord Lieutenant of the County be requested to apply to the Secretary of War for permission to carry the above Resolution into effect, and to request that proper ammunition be issued for the service of such guns.
- That the following Gentlemen be requested to form a Committee for carrying the above Resolutions into effect; and for soliciting the assistance of the Copper-works, Collieries, and respectable Inhabitants of this Town; and that any three of them be sufficient to act, viz Wm Jones, Dr Wm Turton, Charles Neville, John Jones, Wm Grove, and George Haynes.
- That Mr. CHARLES NEVILLE be appointed Treasurer.
- That a copy of these Resolutions be signed by the Chairman, and transmitted to the Lord Lieutenant; and another to the Commander of the District.

**WILLIAM JONES, Chairman.**

**6. That the Thanks of this Meeting be given to the Chairman.**

*Copy of a Letter to the CHAIRMAN, from the MARQUIS of BUTE.*

SIR, Cardiff, Nov. 14, 1803.

"I have great pleasure in informing you, that HIS MAJESTY has been graciously pleased to approve of the very liberal and spirited offer of the Town of Swansea, to provide four Field-Pieces, with ammunition, for the defence of the Harbour and the adjacent Coast.

"I am Sir,

**TIMBER AND DEAL-YARD, SWANSEA.**

**THOMAS and LASCELLES**

EMBRACE the earliest opportunity of informing their Friends and the Public, that they have just imported into the Ports of SWANSEA and CARDIFF several large cargoes of PRIME BAULK TIMBER DEALS FOREIGN BAR IRON, STOCKHOLM TAR, &c. &c. which they are determined to dispose of on such terms as shall ensure approbation.

LATHS and LATHWOOD of all descriptions.

**FELL PARKER,**

**COMMISSION WINE, RUM, & BRANDY MERCHANT,**

**FULHAM, NEAR LONDON.**

BEGS leave to inform Gentlemen residing in the Country, he forwards from the West-India Docks, London, to all parts of the kingdom, JAMAICA RUM, ANTIGUA and BARBADOES SPIRITS of the first quality; they are imported in puncheons of about 110 gallons each, but they may be accommodated with any size casks they please to order.

N. B. FELL PARKER has for sale on commission a parcel of fine VIDONIA WINE, of the Madeira flavour, from the Island of Teneriffe, next island to Madeira; has been imported into this country upwards of three years. It is in half hogsheads, and in bottles packed in all size chests, from four to twelve dozen.

**BEAUTIES OF WALES.**

This Day is published in One handsome Volume, 8vo. price 10s 6d. boards.

**THE CAMBRIAN ITINERARY; for  
WELSH TOURIST; containing an Historical and  
Topographical Description of the Antiquities and  
Beauties of Wales. Also prefixed, a Welsh Vocabulary: Names  
of all the Inns; the Bardic Alphabet; and a Map of the  
Principality, with an accurate Delineation of the Roads, &c.**

By THOMAS EVANS, London: Printed for Thomas Ostell, Ave-Maria-Lane.

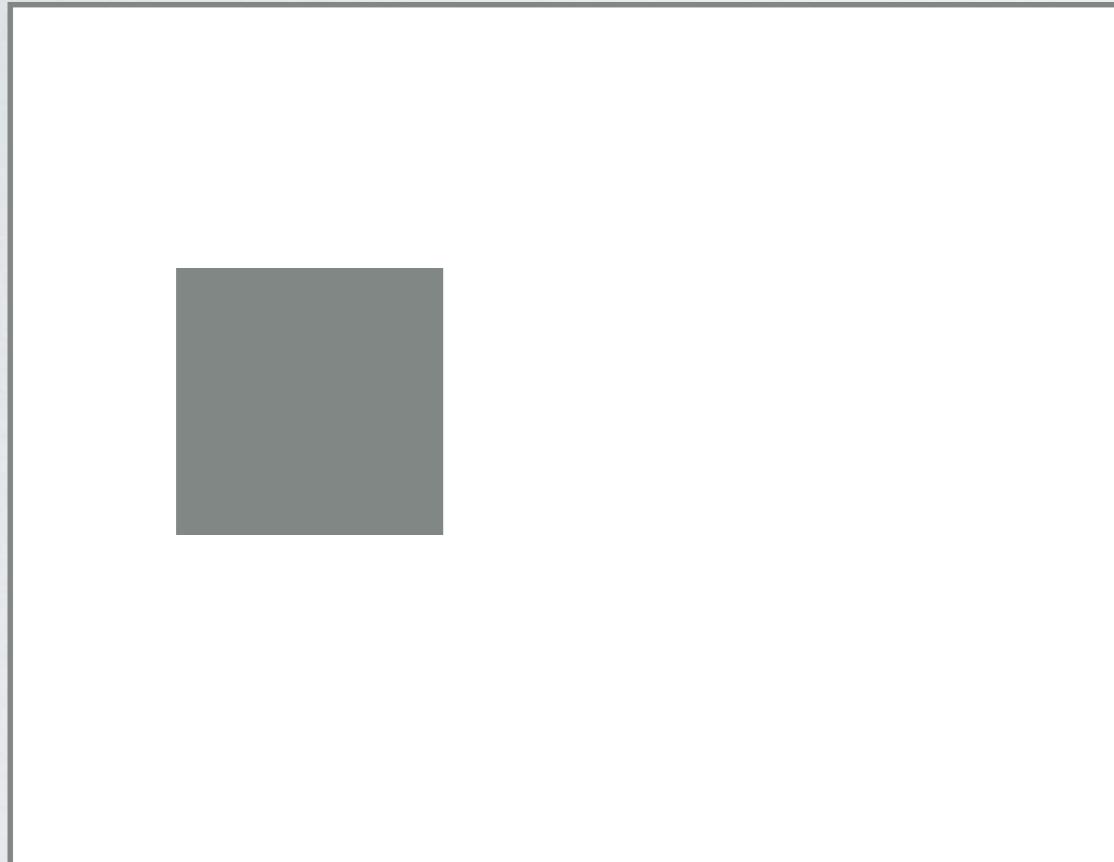
\*\* "This excellent and impartial Work is a most admirable Companion for all who are in the habit of travelling through Wales, and wish to be acquainted with its various beauties."

Union Mar. At. 1802.



# IIIF Audio + Visual

Canvas Width

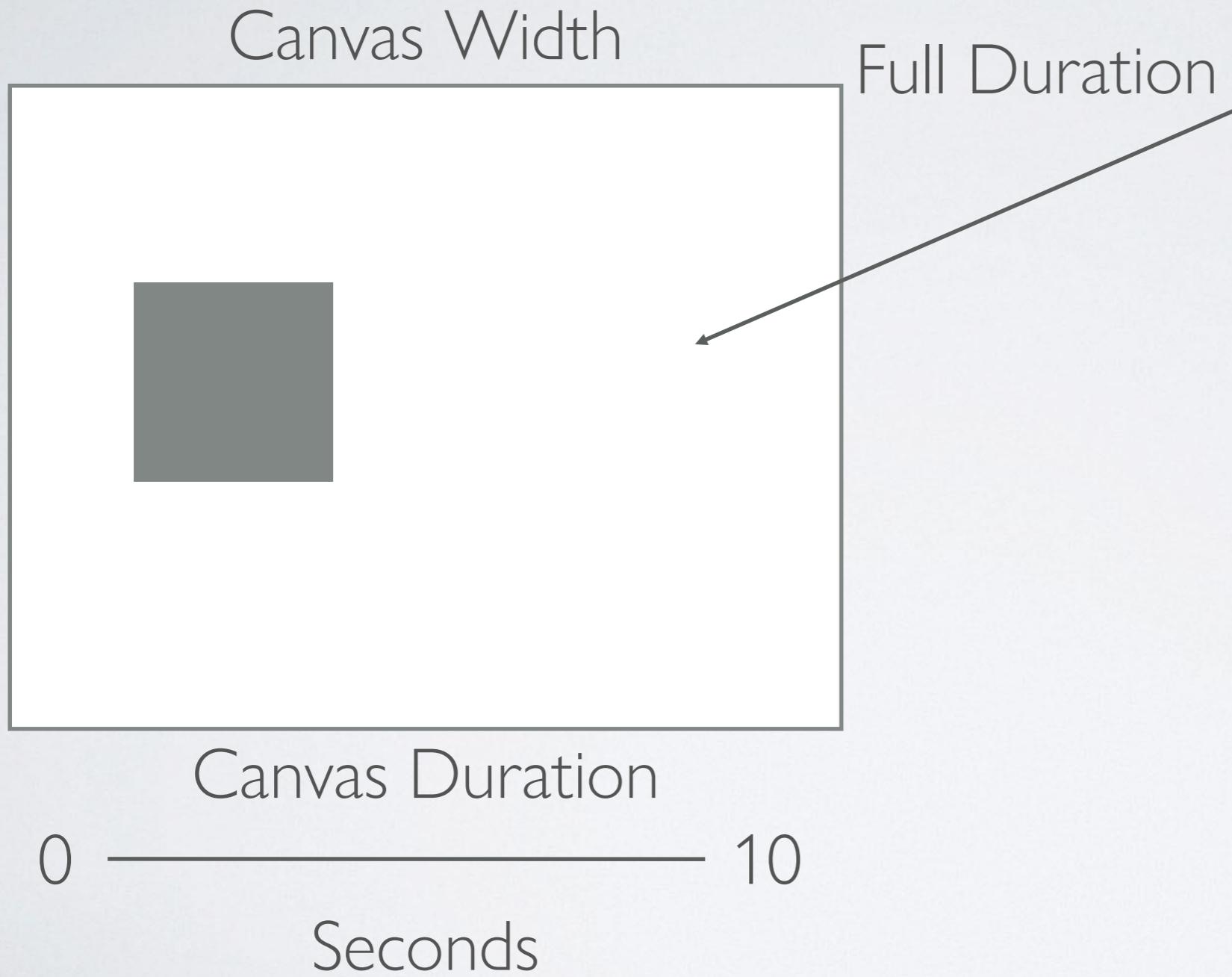


Canvas Duration

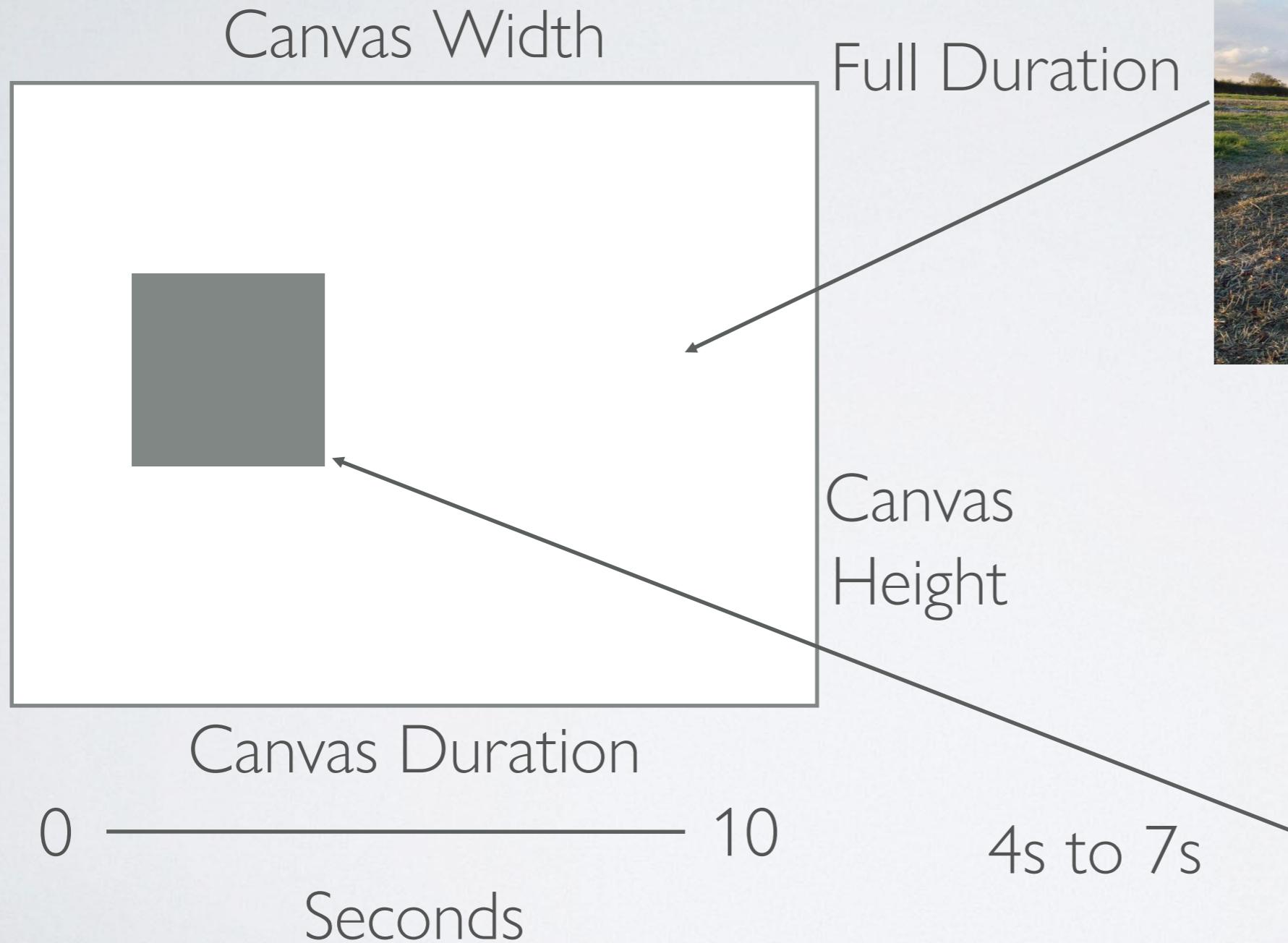
0 ————— 10

Seconds

# IIIF Audio + Visual



# IIIF Audio + Visual



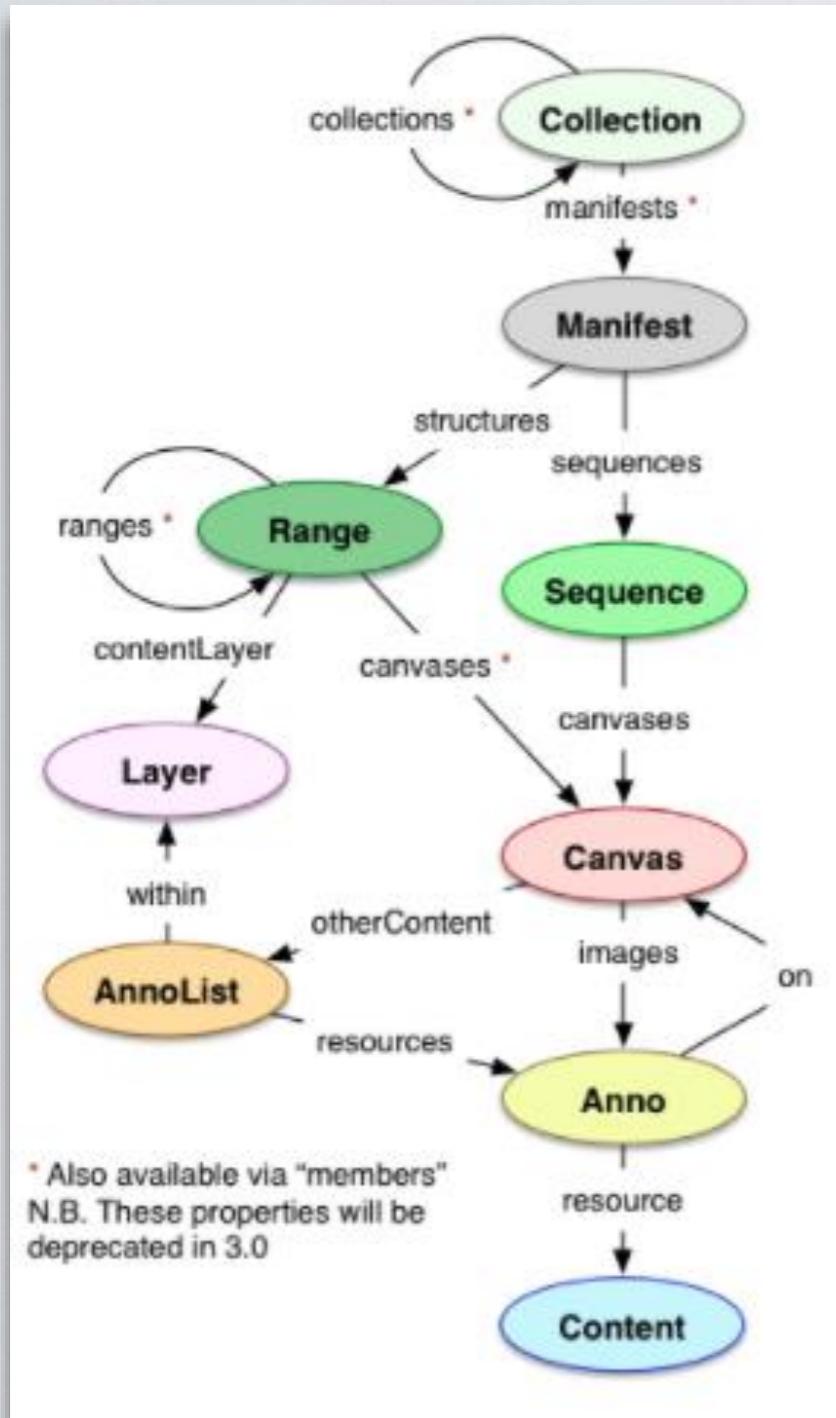


# Fire Example

<https://tomcrane.github.io/fire/>



# Questions?



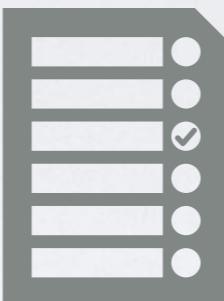
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(Collections on next slide)

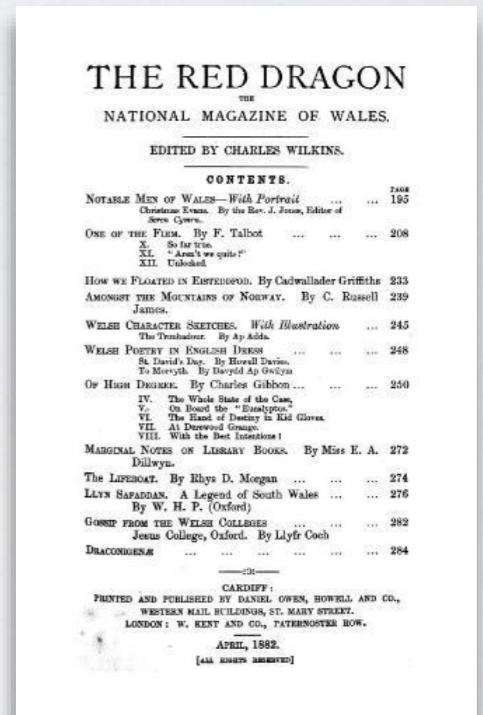
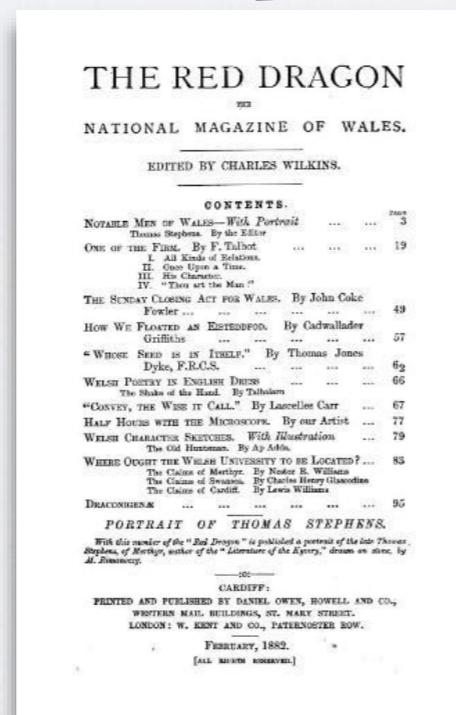
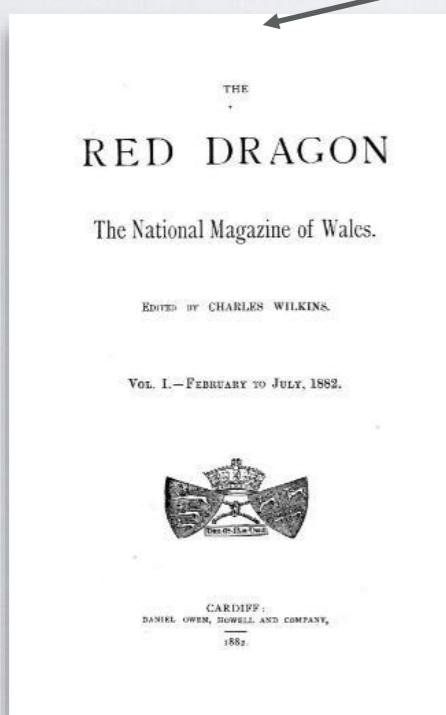


# Collections

- A collection of manifests or collections



Journal or Newspaper Title



Newspaper or Journal Issues (Manifests)



# Welsh Journals

<https://journals.library.wales>

CONTENTS << The Red dragon the national magazine of Wales << MORE INFORMATION

Index Thumbnails

Sort By: date volume

1882 - 1889

- 1882
  - January
  - February
  - March
  - April
  - May
  - June
  - July
  - August
  - September
  - October
  - November
- 1883
- 1884
- 1885
- 1886
- 1887

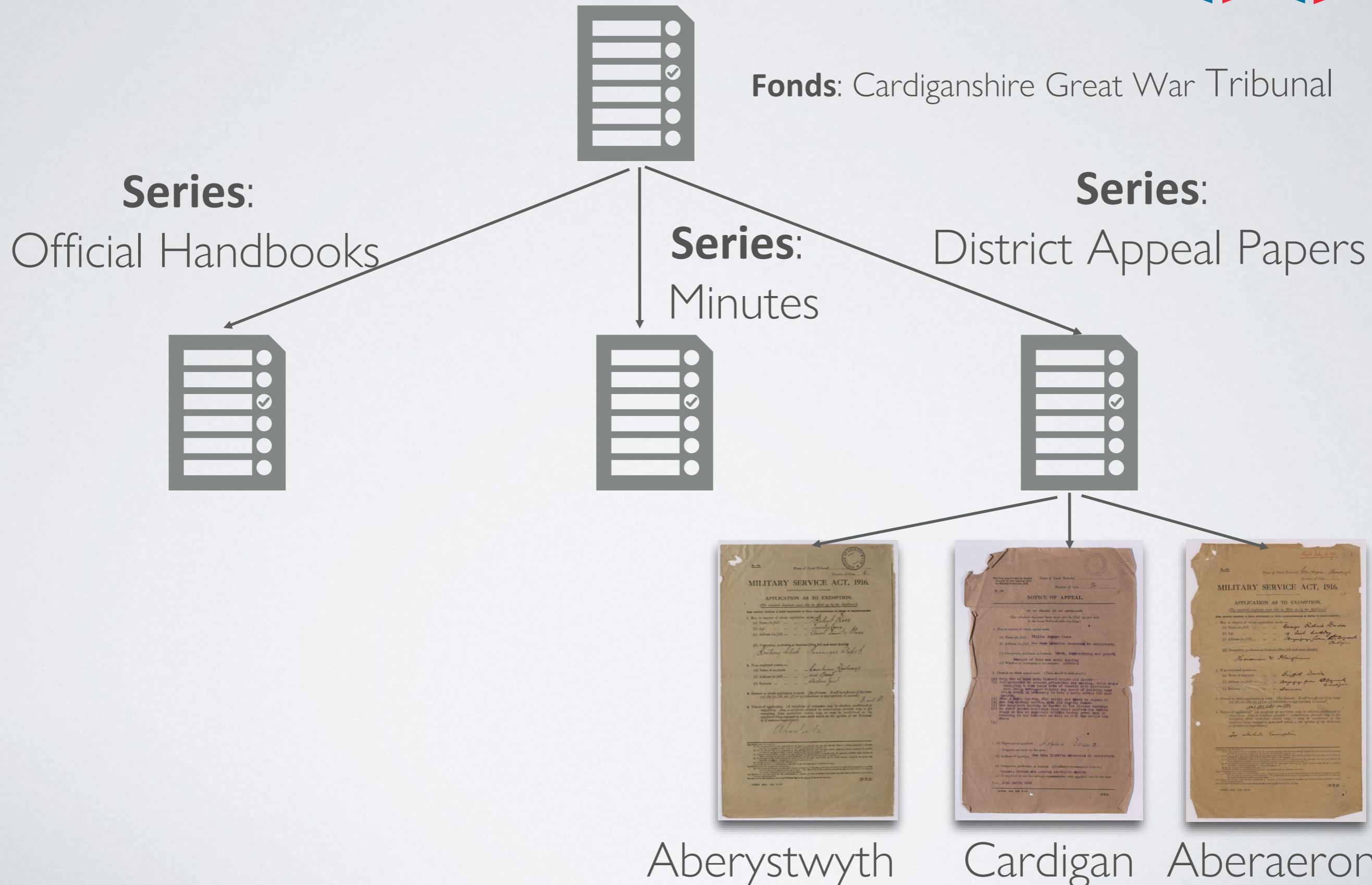
ATTRIBUTION Llyfrgell Genedlaethol Cymru – The National Library of Wales

page [CV] of 191

Search within this item: Enter Keyword

</> Embed Full Screen

# Archives





# Archives in the UV

UV

Image 1 of 33 Go

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Index Thumbnails

Copies of Military Service Acts and proclamations, 1916-18

Official Handbooks, Circulars And Statutes,

Copies of Military Service Acts and proclamations,

Group and Class Systems: Notes on Administration, Feb,

The Recruiting Guide, Jan,

The Law and Practice of Military Conscription under the Military Service Acts,

Bundle of Local Government circulars relating to the work of the Tribunals,

Bundle of Ministry of National Service circulars relating to the work of the Tribunals,

Bundle of miscellaneous government circulars associated with the tribunal's work, from the Ministry of Food, Board of Agriculture, Army Council ...

Cardiganshire Appeal Tribunal: Minutes, Correspondence, Working Papers,

District Appeal Papers,

Miscellaneous,

CTB 1/1/1

Military Service Act, 1916.

[5 & 6 Geo. 5. CH. 104.]

ARRANGEMENT OF SECTIONS. A.D. 1916.

Section.

1. Obligation of unmarried men to serve.
2. Certificates of exemption.
3. Supplemental provisions as to certificates of exemption.
4. Short title and commencement.

SCHEDULES.

[Price 1½d.] A i

ATtribution Llyfrgell Genedlaethol Cymru – The National Library of Wales

universalviewer.io/vendor/uv/app.html?isHomeDomain=true&isOnlyInstance=true&manifestUri=http://dams.llgc.org.uk/iiif/archive/397565..versalviewer.io&isLightbox=false&locale=en-GB&config=/config.json&xdm\_e=http://universalviewer.io/uv.html&xdm\_c=default684&xdm\_p=4#



# On the fly Collections

- Search results as collections:
  - <http://iiif.bodleian.ox.ac.uk/iiif/collection/map>
  - <https://digital.bodleian.ox.ac.uk/inquire/Discover/Search/#/?p=c+1,t+m+aps,rsrs+0,rsps+10,fa+,so+ox%3Asort%5Easc,scids+,pid+,vi+>
- Viewing in the Universal Viewer:
  - <http://universalviewer.io/uv.html?manifest=http://iiif.bodleian.ox.ac.uk/iiif/collection/map#?c=0&m=0&s=0&cv=0&xywh=-205%2C-48%2C1587%2C956>

# Viewing in the Universal Viewer



<http://universalviewer.io/uv.html?manifest=http://iiif.bodleian.ox.ac.uk/iiif/collection/map#?c=0&m=0&s=0&cv=0&xywh=-205%2C-48%2C1587%2C956>

UV

CONTENTS

Index Thumbnails

« (E) C17:70 Oxford (1A)

MORE INFORMATION

(E) C17:70 Oxford (1A): [Portolan chart by Baldassare Maggioli, Genoa, 1591.]

(E) C17:70 Oxford (1A): [East Anglia]

(E) B1 (1046): [Edward Wright, Chart of the World]

(E) B1 (1047): [Edward Wright, Chart of the World]

(E) C17:46 (14): Northamptoniae comitatus descriptio

(E) C17:49 (36): [Oxfordshire by Thomas Kitchen]

(E) C17:70 Oxford (12): [Loggan's map of Oxford after the Civil War]

(E) C17:70 Oxford (1A): [City of Oxford: close-up of the city centre from the west]

(E) C17:70 Oxford (1A): [City of Oxford: close-up of the city centre towards the east]

(E) C17:70 Oxford (1A): [City of Oxford: close-up of the city centre from the north] (E) C17:70 Oxford (1A): [City of Oxford: close-up of the city centre from the north]

(E) C17:70 Oxford (20): Oxfordre

(E) C17:70 Oxford (40): A Map of Port-Meadow ..., [1694-99]

(E) C17:70 Oxford (66): [Plan of the City of Oxford - western half]

Antiq. f. E.11: Barkeshire

Arch. B b.12: [Gerard Mercator, Lombardiae Alpestris pars occidentalis cum Valesia]

Auct. 6Q 5.31: Vocabula ex iure civili excerpta

Auct. K 1.17: [Corsica, Sardinia and Sicily]

Auct. K 1.17: [The Balkans]

Auct. K 1.17: [Italy]

Auct. K 1.17: [Morocco and Algeria]

Auct. K 1.17: [The Arabian peninsula and Persian Gulf]

Auct. K 1.17: [The World in late Antiquity]

Auct. K 1.17: [From Lithuania to the Caucasus]

Auct. K 1.17: [France and Belgium]

Attribution x

From: mapsxx003-aje-0001-0  
Rights: http://creativecommons.org/licenses/by-nc-sa/3.0/  
Terms of Access:



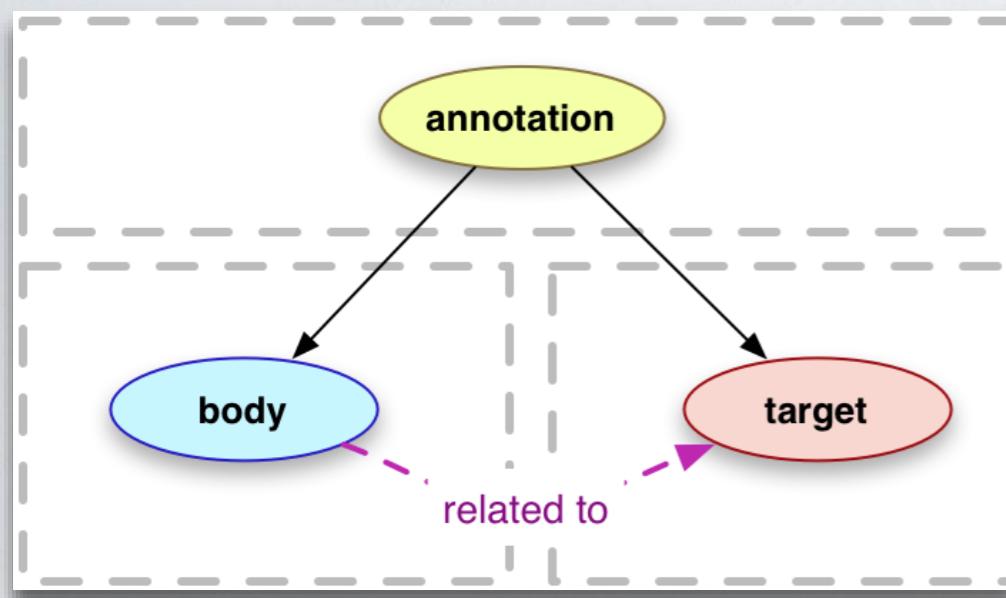
## IIIF Search API

<http://iiif.io/api/search/1.0/>

- Like PDF search within
- Searches Annotations not metadata
- Supports auto complete

# Annotation

<https://www.w3.org/TR/annotation-model/>



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# NCSU Nubian Message

<https://d.lib.ncsu.edu/collections/catalog/nubian-message-1995-04-01/manifest>

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  ▼ {
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    label: "Search within this thing",
    ▼ service: {
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      profile: http://iiif.io/api/search/0/autocomplete,
      label: "Get suggested words"
    }
  }
],
```



# Search Results

<https://ocr.lib.ncsu.edu/search/nubian-message-1995-04-01?q=warrior>

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  },
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        "urn:ocracoke:nubian-message-1995-04-01:nubian-message-1995-04-01_0001:annotation1",
        "urn:ocracoke:nubian-message-1995-04-01:nubian-message-1995-04-01_0001:annotation2"
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      ]
    }
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      resource: {
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        chars: "Warrior"
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    }
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# Auto Suggest

<https://ocr.lib.ncsu.edu/suggest/nubian-message-1995-04-01?q=war>

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    "user"
  ],
  ▼ terms: [
    ▼ {
      match: "warrior"
    }
  ]
}
```



# Search in UV

<https://d.lib.ncsu.edu/collections/catalog/nubian-message-1995-04-01/>

## Nubian Message, April 1, 1995

## The Nubian Message (LH1 .H6 N83)



# Results in UV

## Nubian Message, April 1, 1995

The Nubian Message (LH1 .H6 N83)

Image 1 of 4 Go

CONTENTS

1

2

3

THE NUBIAN MESSAGE

The Legacy of Dr. Augustus McIver Witherspoon

A Profound Warrior For Us All

ATtribution

The Nubian Message (LH1 .H6 N83), Special Collections Research Center at NCSU Libraries

Stephanie Cogdell Tells of the Experiences She Had With Dr. Witherspoon

Dawn F. Gordon Reflects on the Good Times, The Remembrances, and the Effects Dr. Witherspoon Had on

McIver Witherspoon

--Dr. Grant Remembers Dr. Witherspoon: A Profound Warrior to Us All

--Cover Story

--The Afrikan-American Cultural Center: A Center of Awareness and Education

--page 2

--Recapturing the Life of a Warrior: A Time Line Reflection Representing Dr. Witherspoon's Life

--page 3

--Chancellor Larry K. Monteith Shares With Us the Impact Dr. Witherspoon Had on Him

--page 3

College of Textiles.

Dr. Witherspoon dedicated most of his life to educating future leaders of America. After obtaining a bachelor's degree from Claflin College in Orangeburg, South Carolina, Witherspoon taught high school science in Lumberton and Rocky Mount, from 1953 to 1966.

He came to NCSU as a graduate student and received a master's degree in 1968. While helping to establish an Afrikan-American Cultural Center, he received his doctorate in 1971. Witherspoon then went from a graduate teaching assistant to a professor, Assistant Dean to

Witherspoon touched the lives of many students and will continue to serve as a living legend on the campus of North Carolina State University.

\*A Preacher and Teacher to Us All. The Words of Dr. Luther King Jr.

Chancellor Larry K. Monteith stated, "Gus Witherspoon was a trailblazer. In renaming this center, we commem-

Staff Photo

**Dr. Augustus McIver Witherspoon**

**A Profound Warrior For Us All**

by Rochelle Carlton  
Staff Writer

Dr. Augustus M. Witherspoon began his affiliation with NCSU as a graduate student. As he progressed from student, to professor, to Associate Dean, and finally Associate Provost and Coordinator of Afrikan-American Affairs, he left behind a legacy that will continue to impact the Afrikan-American students at N.C. State University for

tinued throughout his career, the long and complex process of transforming what was once a segregated institution into a place that could meet the needs of its Afrikan-American population.

One of Dr. Witherspoon's first major undertakings was the creation of a task force, the Afrikan-American Advisory Council, during the early 1970's to determine why Afrikan-American enrollment at NCSU was so low. In examining this issue, the Council asked

know, often the first step in finding solutions to a problem is proving to "the powers that be" that the problem does indeed exist.

To convey the severity of the situation, a videotape was presented to the administration so that they could hear firsthand the students' and staff members' description of a campus environment that was hostile to Afrikan-American high school students had of this university.

The Afrikan-American Advisory Council then drew up a list of recommendations to the administration to improve the environment in which Afrikan-American students could exist. The administration responded by creating the Afrikan-American Cultural Center, a center of awareness and education.

When it became apparent that there was an alarmingly large discrepancy between the number of Afrikan-American students en-

Full Screen



# Authentication API

<http://iiif.io/api/auth/1.0/>

- The authentication api doesn't reinvent the wheel and doesn't specify the mechanism for authentication but gives an interaction pattern for clients to undertake authentication to access protected resources. It supports four patterns:
  - Login - user asked to login with a username or password
  - Clickthrough - user asked to agree to terms and conditions
  - Kiosk - the kiosk has permission to access the resource
  - External - authentication happens outside of the apps control but is informed if it was successful.
- All of these use case support giving degraded access for example lower quality to public users.



# Auth Login

The screenshot shows a digital book interface for "An atlas of clinical microscopy". The top navigation bar includes icons for back, forward, search, and page number (1 of 184). On the left, there's a "CONTENTS" section with "Index" and "Images" tabs, and a "MORE INFORMATION" sidebar. The main content area displays the title "An atlas of clinical microscopy". A central modal window titled "Clinical material" contains the message: "Online access to clinical content is restricted to healthcare professionals. Please contact Wellcome Images for further information: [images@wellcome.ac.uk](mailto:images@wellcome.ac.uk). If you are a healthcare professional and already have a Wellcome Trust account, please log in." It features a "CLOSE" button with an X icon and a "LOGIN" button. At the bottom, there's a footer with "page - of 184", a search bar, and links for "Download options", "Add to bookmarks", "Embed", and "Full screen".

CONTENTS

Index Images

Image Page 1 of 184 Go

An atlas of clinical microscopy

CLOSE X

**Clinical material**

Online access to clinical content is restricted to healthcare professionals. Please contact Wellcome Images for further information: [images@wellcome.ac.uk](mailto:images@wellcome.ac.uk). If you are a healthcare professional and already have a Wellcome Trust account, please log in.

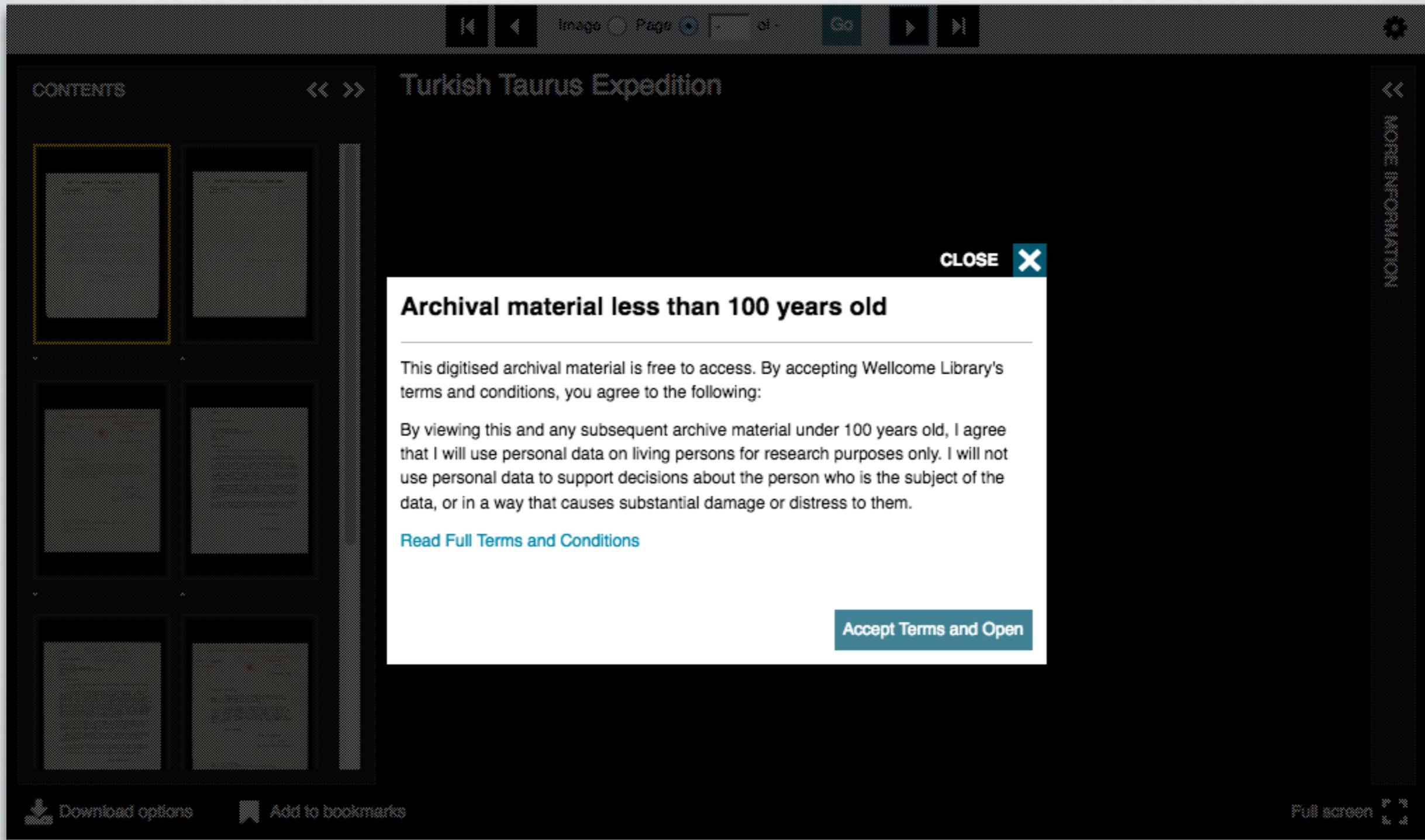
LOGIN

page - of 184

Search within this item: Enter keyword

Download options Add to bookmarks Embed Full screen

# Auth Click through



The screenshot shows a digital archive interface for the "Turkish Taurus Expedition". The main content area displays a grid of document thumbnails. A modal dialog box is overlaid on the page, titled "Archival material less than 100 years old". The dialog contains text about the terms and conditions for viewing the material. At the bottom right of the dialog is a teal button labeled "Accept Terms and Open". The interface includes standard navigation controls at the top and bottom.

CONTENTS << >>

Turkish Taurus Expedition

CLOSE X

**Archival material less than 100 years old**

This digitised archival material is free to access. By accepting Wellcome Library's terms and conditions, you agree to the following:

By viewing this and any subsequent archive material under 100 years old, I agree that I will use personal data on living persons for research purposes only. I will not use personal data to support decisions about the person who is the subject of the data, or in a way that causes substantial damage or distress to them.

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Accept Terms and Open

Download options Add to bookmarks Full screen



# Questions

- IIIF Search API: <http://iiif.io/api/search/1.0/>
  - Search within
  - Annotations only
- IIIF Authentication API: <http://iiif.io/api/auth/1.0/>
  - Interaction pattern for authorisation



# JSON-LD

- JSON-LD is a format of JSON which is also Linked Data

“In computing, **linked data** is a method of publishing structured data so that it can be interlinked and become more useful through semantic queries. It builds upon standard Web technologies such as HTTP, RDF and URIs, but rather than using them to serve web pages for human readers, it extends them to share information in a way that can be read automatically by computers. This enables data from different sources to be connected and queried.”

[https://en.wikipedia.org/wiki/Linked\\_data](https://en.wikipedia.org/wiki/Linked_data)

```
{
  "@context": "http://iiif.io/api/image/2/context.json",
  "@id": "https://dlcs.io/iiif-img/3/2/04fbbb28-d5a7-4408-b7da-800c4e65eda3",
  protocol: "http://iiif.io/api/image",
  width: 7656,
  height: 4867,
  tiles: [
    {
      width: 256,
      height: 256,
      scaleFactors: [
        1,
        2,
        4,
        8,
        16,
        32
      ]
    },
    {
      sizes: [
        {
          width: 1024,
          height: 651
        },
        {
          width: 400,
          height: 254
        },
        {
          width: 200,
          height: 127
        },
        {
          width: 100,
          height: 64
        }
      ],
      profile: [
        "http://iiif.io/api/image/2/level1.json"
      ],
      formats: [
        "jpg"
      ],
      qualities: [
        "native",
        "color",
        "gray"
      ],
      supports: [
        "regionByPct",
        "sizeByForcedWh",
        "sizeByWh",
        "sizeAboveFull",
        "rotationBy90s",
        "mirroring",
        "gray"
      ]
    }
  ]
}
```

```
{
  "@context": {
    iiif: "http://iiif.io/api/image/2#",
    xsd: "http://www.w3.org/2001/XMLSchema#",
    exif: "http://www.w3.org/2003/12/exif/ns#",
    dc: "http://purl.org/dc/elements/1.1/",
    dcterms: "http://purl.org/dc/terms/",
    doap: "http://usefulinc.com/ns/doap#",
    svcs: "http://rdfs.org/sioc/services#",
    foaf: "http://xmlns.com/foaf/0.1/",
    sc: "http://iiif.io/api/presentation/2#",
    baseUriRedirect: "...",
    cors: "...",
    regionByPct: "...",
    regionByPx: "...",
    regionSquare: "...",
    rotationArbitrary: "...",
    rotationBy90s: "...",
    mirroring: "...",
    sizeAboveFull: "...",
    sizeByForcedWh: "...",
    sizeByH: "...",
    sizeByPct: "...",
    sizeByW: "...",
    sizeByWh: "...",
    sizeByWhListed: "...",
    sizeByConfinedWh: "...",
    sizeByDistortedWh: "...",
    profileLinkHeader: "...",
    canonicalLinkHeader: "...",
    jsonldMediaType: "...",
    height: {
      "@id": "exif:height",
      "@type": "xsd:integer"
    },
    width: {
      "@id": "exif:width",
      "@type": "xsd:integer"
    },
    scaleFactors: {
      "@id": "iiif:scaleFactor",
      "@type": "xsd:integer"
    },
    formats: {
      "@id": "iiif:format",
      "@type": "xsd:string"
    },
    qualities: {
      "@id": "iiif:quality",
      "@type": "xsd:string"
    },
    sizes: {
      "@id": "iiif:hasSize",
      "@type": "@id"
    },
    ...
  }
}
```



## Info.json

```
{  
  "@context": "http://iiif.io/api/image/2/context.json",  
  "@id": "https://dlcs.io/iiif-img/3/2/04fbbb28-d5a7-4408-b7da-800c4e65eda3",  
  protocol: "http://iiif.io/api/image",  
  width: 7656,  
  height: 4867,
```

## Context.json

```
  ▼ height: {  
    "@id": "exif:height",  
    "@type": "xsd:integer"  
  },  
  ▼ width: {  
    "@id": "exif:width",  
    "@type": "xsd:integer"  
  },  
  ▼ profile: {  
    "@id": "doap:implements",  
    "@type": "@id"  
  },
```

## RDF:

```
<https://dlcs.io/iiif-img/3/2/04fbbb28-d5a7-4408-b7da-800c4e65eda3> doap:implements <http://iiif.io/api/image>,  
<https://dlcs.io/iiif-img/3/2/04fbbb28-d5a7-4408-b7da-800c4e65eda3> exif:width 7656,  
<https://dlcs.io/iiif-img/3/2/04fbbb28-d5a7-4408-b7da-800c4e65eda3> exif:height 4867
```



# JSON-LD Framing

- Once you have data in RDF how do you get it back to JSON?
- Use a JSON-LD frame

[http://iiif.io/api/presentation/2/manifest\\_frame.json](http://iiif.io/api/presentation/2/manifest_frame.json)

More details:

<http://iiif.io/api/annex/notes/jsonld/#frames>

```
{
  "@context": http://iiif.io/api/presentation/2/context.json,
  "@type": "sc:Manifest",
  ▼ startCanvas: {
    "@embed": false
  },
  ▼ sequences: [
    ▼ {
      "@type": "sc:Sequence",
      ▼ startCanvas: {
        "@embed": false
      },
      ▼ canvases: [
        ▼ {
          "@type": "sc:Canvas",
          ▼ images: [
            ▼ {
              "@type": "oa:Annotation",
              "@embed": true
            }
          ],
          ▼ otherContent: [
            ▼ {
              "@explicit": true,
              "@embed": true,
              "@type": "sc:AnnotationList",
              ▼ label: {
                "@embed": true
              }
            }
          ]
        }
      ]
    }
  ],
  ...
}
```



# Questions?

<https://json-ld.org/>



# IIIF and Annotations

- Annotations can be:
  - OCR - Optical Character Recognition
  - Transcriptions e.g. through Mirador
  - Automated image analysis e.g. google vision
  - A teaching tool
- Can be used for:
  - Searching
  - Machine learning analysis
  - Statistical Analysis



# IIIF and Annotations Example

- <https://github.com/glenrobson/SimpleAnnotationServer>
- Stores IIIF Annotations
- Supports the IIIF Search API
- Options to store annotations in Triple store

glenrobson / SimpleAnnotationServer

Code Issues 3 Pull requests 1 Projects 0 Wiki Insights Settings

Unwatch 9 Star 36 Fork 13

A simple IIIF and Mirador compatible Annotation Server

Add topics

73 commits 8 branches 0 releases 3 contributors Apache-2.0

Branch: master New Click for language details Create new file Upload files Find file Clone or download

Latest commit 0604a05 on Jul 18

Fixing link a year ago

Pushing IIIF Search docs live a year ago

Making link to annotation search relative after report links aren't w... 8 months ago

Merging changes from Book of rememberance branch a year ago

Trying to upgrade the version of java a year ago

Initial commit 2 years ago

Fixing link 3 months ago

Reflecting the change to java 1.8 a year ago

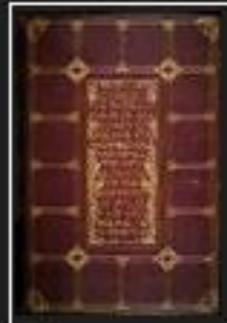
README.md

## SimpleAnnotationServer

This is an Annotation Server which is compatible with [IIIF](#) and [Mirador](#). This Annotation Server includes a copy of Mirador so you can get started creating annotations straight away. The annotations are stored as linked data in an [Apache Jena](#) triple store by default. It is also possible to store the annotations in [Sesame](#) or [SOLR](#).

CONTENTS

« »



front cover



inside front cover



Er Cof



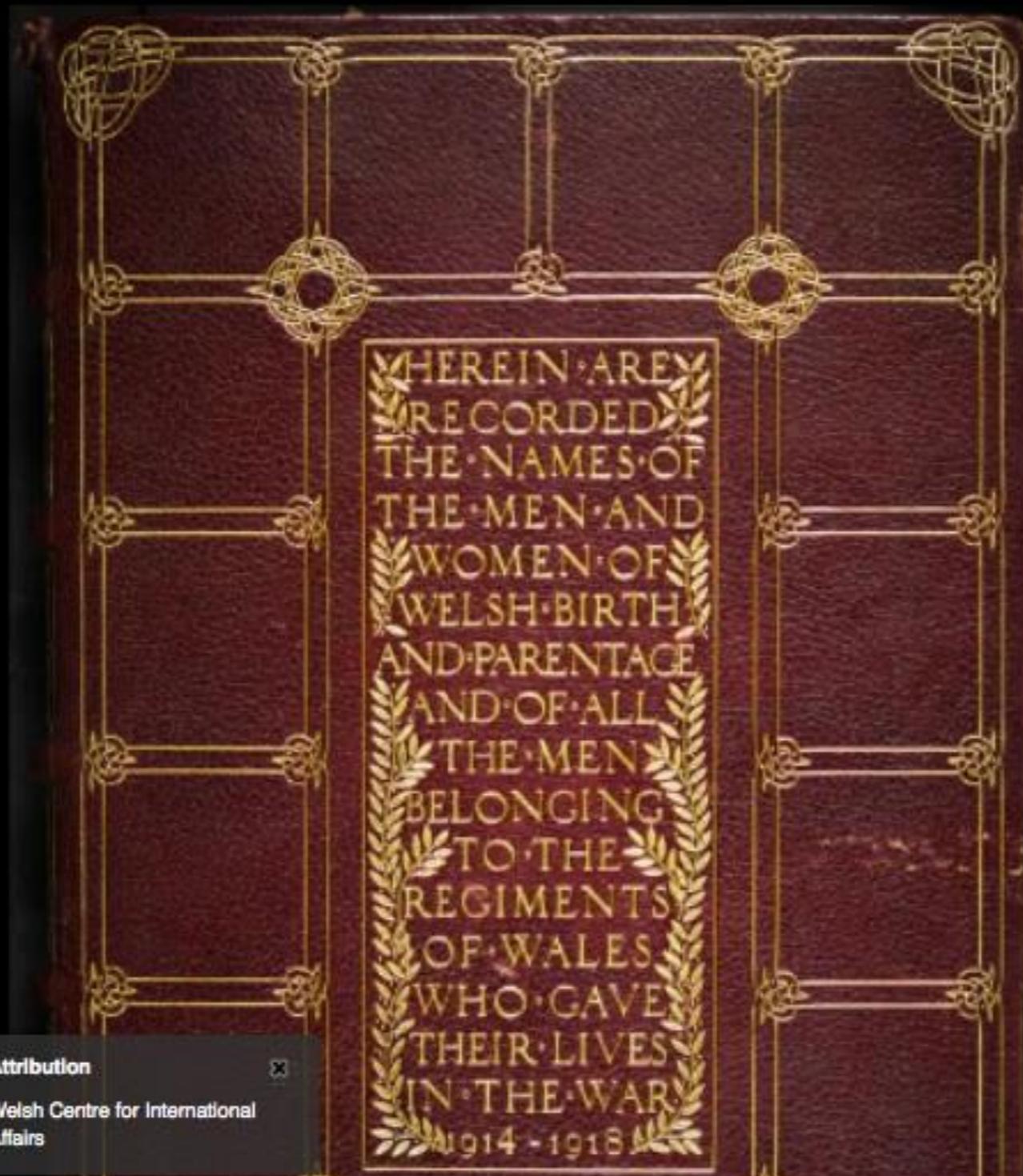
Er Cof - verso



Intro page



## The Welsh Book of Remembrance 1928



Attribution

Welsh Centre for International Affairs

» MORE INFORMATION

## LICENSE

<http://hdl.handle.net/10107/4642022>  
/Copyright\_AllRightsReserved

## ATTRIBUTION

Welsh Centre for International Affairs

## DESCRIPTION

This volume is bound in morrocan leather and has gold lettering and lines on the boards and spine. The volume is made up of parchment...

MORE

## TITLE

The Welsh Book of Remembrance  
1928

## AUTHOR

Windsor, Edward Duke of  
1894-1972

## PERIOD

## PHYSICAL DESCRIPTION

1 manuscript volume, 1075 pages:  
parchment; 465mm x 320mm x  
138mm.

## PERMALINK

<http://hdl.handle.net/10107/4642022>

## LANGUAGE

## The Welsh Book of Remembrance 1928



### Royal Navy

#### Officers

#### Personnel

### Royal Flying Corps

### Royal Air Force

### Cavalry

### Royal Regiment of Artillery

### Corps of Royal Engineers

### Grenadier Guards

### Coldstream Guards

### Scots Guards

### Irish Guards

### Welsh Guards

### Guards Machine Gun Regiment

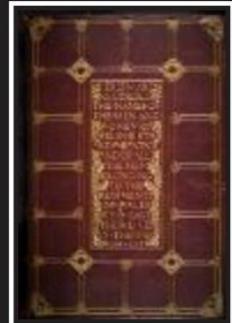
1 of 1083 Go &lt; &gt; ▶

CONTENTS



## The Welsh Book of Remembrance 1928

[» MORE INFORMATION](#)

front cover



inside fron...



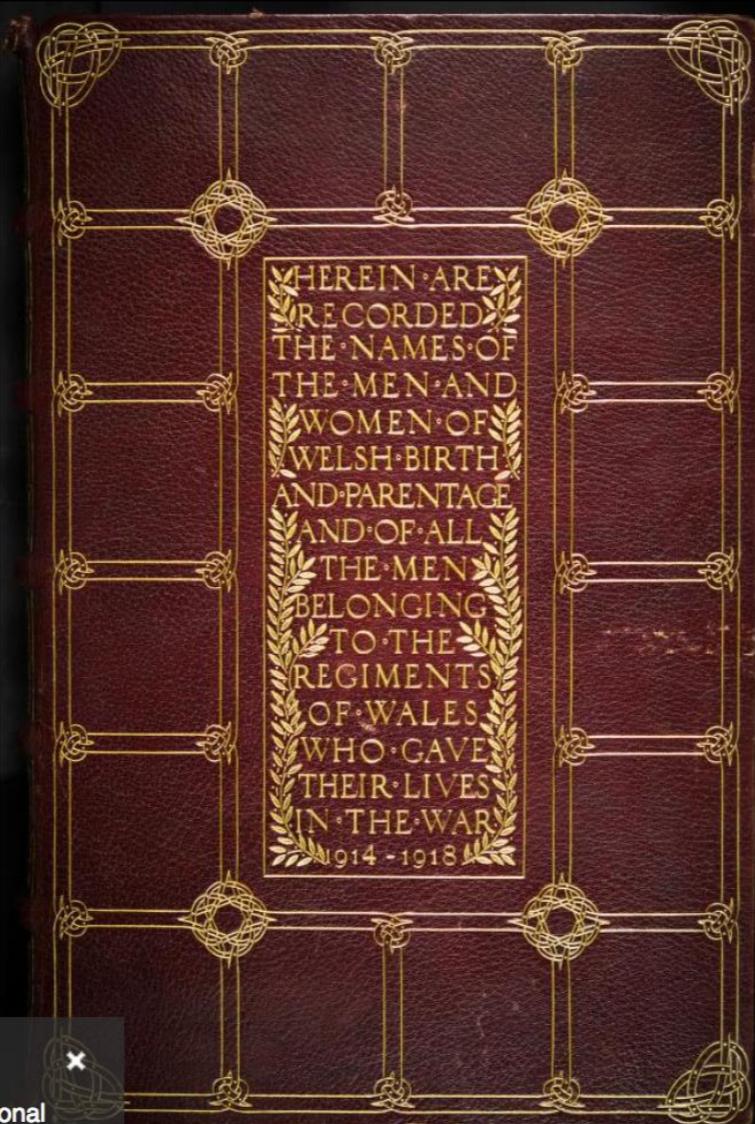
Er Cof



Er Cof - v...



Intro page



## ATTRIBUTION

Welsh Centre for International Affairs



Search within this item: jones

page front cover of spine

&lt;/&gt; Embed

Full Screen

## About the item

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1928

## Author

Windsor, Edward Duke of 1894-1972

## Physical description

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parchment; 465mm x 320mm x  
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◀ ▶ 570 of 1083 Go

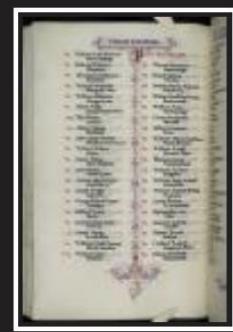


## CONTENTS



## The Welsh Book of Remembrance 1928

## » MORE INFORMATION



S.WALES ... Q 1



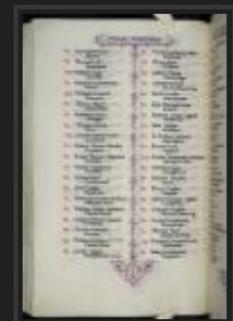
S.WALES ...



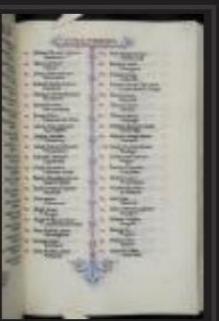
S.WALES ...



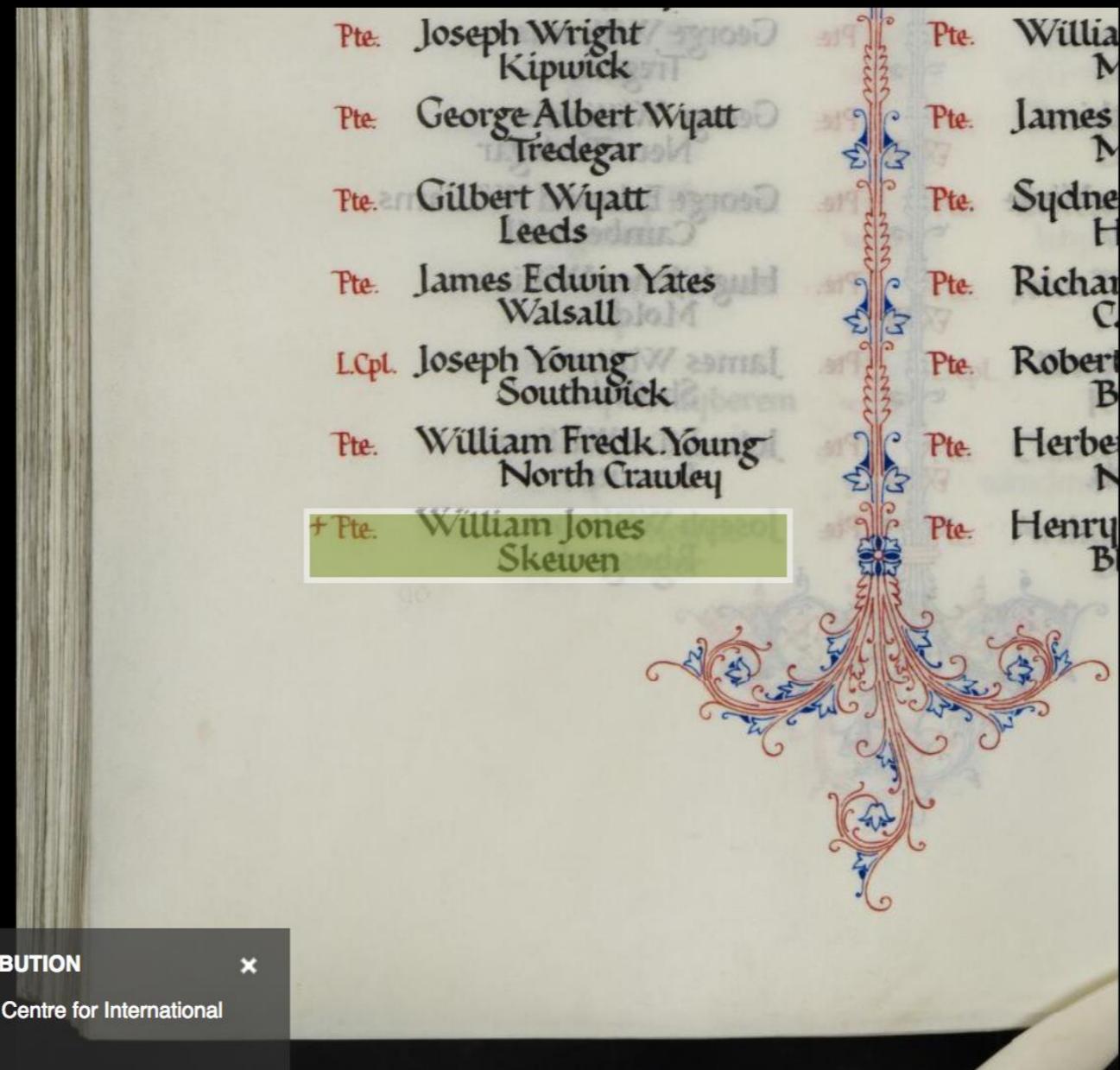
S.WALES ...



S.WALES ...



S.WALES ... Q 2



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## About the item

## Title

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1928

## Author

Windsor, Edward Duke of 1894-1972

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page S.WALES BORDERERS pg. 90 of spine

◀ Previous Result

2706 results found for 'jones' Clear

Next Result ▶

```

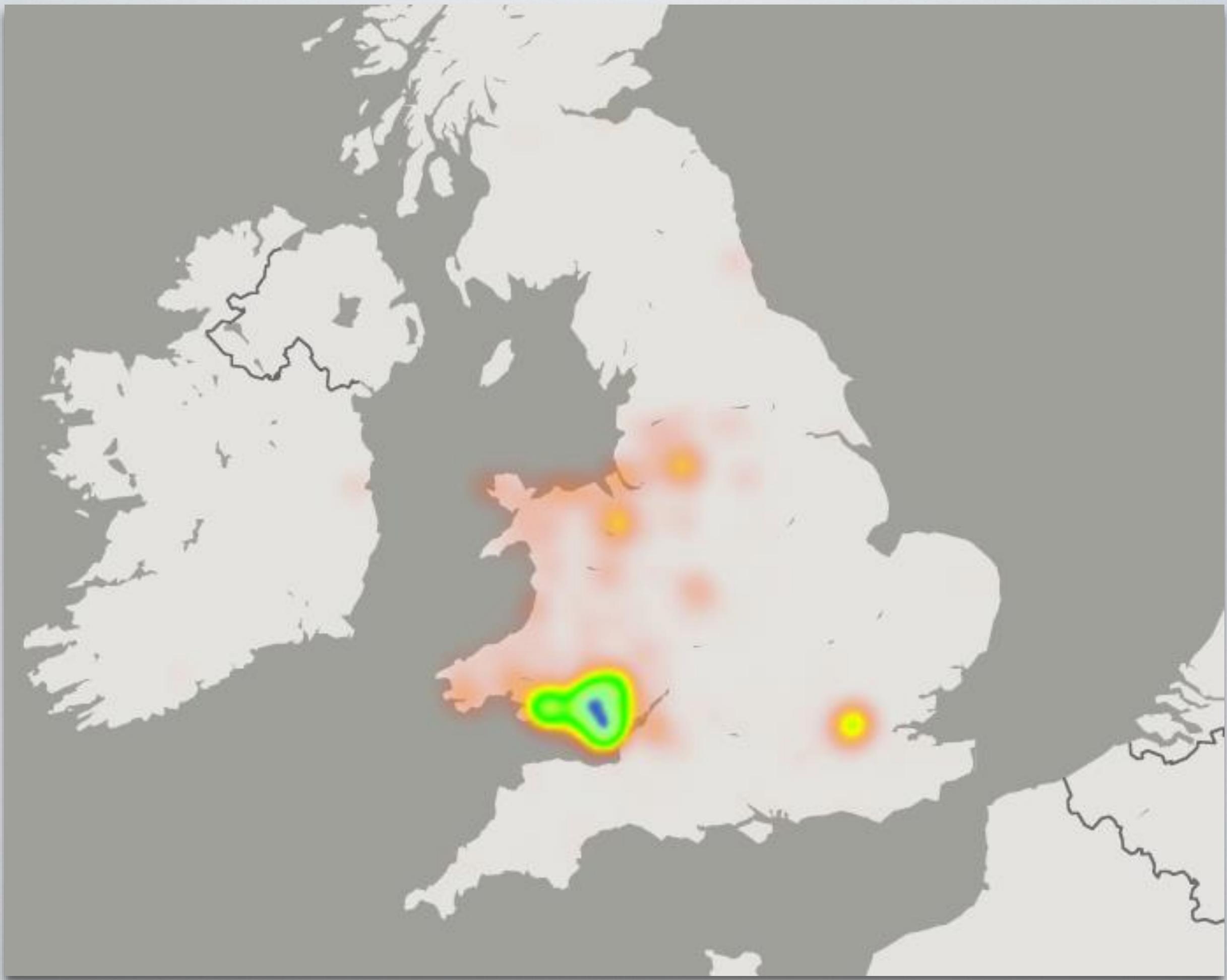
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  "@type": "oa:Annotation",
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  "dcterms:modified": "2016-10-10T01:00:33",
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      "@type": "dctypes:Text",
      "http://dev.llgc.org.uk/sas/full_text": "<span property=\"ns:rank\" class=\"rank\">Ty.Flt.Sub-Lt. <span property=\"ns:name\" class=\"name\">Harold Day <span property=\"ns:place\" class=\"place\">Abergavenny <span property=\"ns:unit\" class=\"unit\">R.N. <span property=\"ns:ship\" class=\"ship\">R.N.A.S. <span property=\"ns:medal\" class=\"medal\">D.S.C. </span>",
      "format": "text/html",
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    }
  ],
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    ▼ selector: {
      "@id": "_:b1",
      "@type": "oa:FragmentSelector",
      "value": "xywh=876,2111,2624,232"
    },
    "full": "http://dams.llgc.org.uk/iiif/2.0/4642022/canvas/4642030.json"
  },
  ▼ motivation: [
    "oa:commenting"
  ],
  "@context": "http://iiif.io/api/presentation/2/context.json"
},

```

## Analysis Method

- Load annotation lists in to BlazeGraph
- Convert bodies to Linked data
- Query data using SPARQL
- Resolve places with Google
- Manually resolve ships with Wikidata

Annotation Body:  
 Rank  
 Name  
 Place  
 Unit  
 Ship  
 Medal





# Welsh Sailors Lost

H.M.S. Indefatigable	41	<a href="https://en.wikipedia.org/wiki/HMS_Indefatigable">https://en.wikipedia.org/wiki/HMS_Indefatigable</a>	Jutland	Jutland	31 May 1916
H.M.S. Defence	36	<a href="https://en.wikipedia.org/wiki/HMS_Defence">https://en.wikipedia.org/wiki/HMS_Defence</a>	Jutland	Jutland	31 May 1916
H.M.S. Invincible	24	<a href="https://en.wikipedia.org/wiki/HMS_Invincible">https://en.wikipedia.org/wiki/HMS_Invincible</a>	Jutland	Jutland	31 May 1916
H.M.S. Goliath	20	<a href="https://en.wikipedia.org/wiki/HMS_Goliath">https://en.wikipedia.org/wiki/HMS_Goliath</a>	Torpedoed		12 May 1915
Anglia	20	<a href="https://en.wikipedia.org/wiki/HMHS_Anglia">https://en.wikipedia.org/wiki/HMHS_Anglia</a>	Mine	Hospital Ship	17 November 1915
Leinster	20	<a href="https://en.wikipedia.org/wiki/RMS_Leinster">https://en.wikipedia.org/wiki/RMS_Leinster</a>	Torpedoed		10 October 1918
H.M.S. Monmouth	17	<a href="https://en.wikipedia.org/wiki/HMS_Monmouth">https://en.wikipedia.org/wiki/HMS_Monmouth</a>	Coronel		1 November 1914
H.M.S. Queen Mary	17	<a href="https://en.wikipedia.org/wiki/HMS_Queen_Mary">https://en.wikipedia.org/wiki/HMS_Queen_Mary</a>	Jutland	Jutland	31 May 1916
H.M.S. Black Prince	12	<a href="https://en.wikipedia.org/wiki/HMS_Black_Prince">https://en.wikipedia.org/wiki/HMS_Black_Prince</a>	Jutland	Jutland	31 May 1916
Canganian	10		Mine	Merchant	17 November 1915
Don Arturo	10		Torpedoed	Merchant	28 Jun 1917
H.M.S. Bulwark	9	<a href="https://en.wikipedia.org/wiki/HMS_Bulwark">https://en.wikipedia.org/wiki/HMS_Bulwark</a>	Accident	Accident	26 November 1915
H.M.S. Hampshire	9	<a href="https://en.wikipedia.org/wiki/HMS_Hampshire">https://en.wikipedia.org/wiki/HMS_Hampshire</a>	Mine		5 June 1916
Llandovery Castle	9	<a href="https://en.wikipedia.org/wiki/HMHS_Llandovery_Castle">https://en.wikipedia.org/wiki/HMHS_Llandovery_Castle</a>	Torpedoed	Hospital Ship	27 June 1918
Ribston	9		Torpedoed	Merchant	23 Apr 1916
H.M.S. Vanguard	9	<a href="https://en.wikipedia.org/wiki/HMS_Vanguard">https://en.wikipedia.org/wiki/HMS_Vanguard</a>	Accident	Accident	9 July 1917
Isleworth	8		Torpedoed	Merchant	30 Apr 1918

## Welsh Newspapers Online

Discover 15 million articles and 1.1 million pages

## The Cambrian News and Merionethshire Standard

Q Q S X C C

18th May 1917

&lt; Previous Issue | Page 6 | Next Issue &gt;

contributions for the week, £4 13s. 0d.

**PORTMADOC CAPTAIN'S FATE.**

Leave was granted in the Probate Court on Monday to presume the death as having occurred on or since November 17th last of Evan Henry Williams, of Portmadoc, who was master of the Cardiff vessel "Canganian." He left port on date mentioned and was never heard of after except that wreckage was found, and one of the crew, David Jones of Aberayron, was picked up. The widow was the applicant.

**Experien**

Estimates give

**Jam  
FRUITED  
FISHMO  
II, Pier**

name	place	rank
E.H.Williams	Portmadoc	Master
Daniel E. Jones	Borth	1st Eng.
W.C.Jones	Chwilog	2nd Eng.
David J. Hughes	Pwllheli	O.S.
David M.Jones	Cardigan	O.S.
Thomas G. Jones	Carnarvon	Seaman
Hugh D. Owens	Nevin	Seaman
Hugh Thomas	Morfa	Carpenter
William Thomas	Morfa	Btswn.
William Williams	Anglesey	Lamp Tmr.

**David Morris Jones, Ordinary Seaman, Mercantile Marine.** David was the son of John Parry Jones, and Martha Jane Jones, of Plasnewydd, Beulah. He served with the Mercantile Marine aboard the S.S. Canganian, which was a Cardiff registered merchant steamer. On 17 November 1916, Canganian was en-route from Methil to Scapa Flow with a cargo of coal, when she struck a mine which had been laid by the German submarine UC-29, and sank with the loss of eighteen lives. David was just 16 years old when he drowned in the sinking. His body was washed ashore in Scotland, and he was originally buried in St. Cyrus Parish Churchyard. A Scottish woman was on holiday in Aberaeron at the time, and was sent a newspaper by a friend of hers. One article took her interest, and it was the story of the burial of a sailor in her home village, who could only be identified by the label of Ben Davies, Tailor, Newcastle Emlyn on his coat. She showed the newspaper to the local JP, who contacted David's father, who travelled to Scotland to identify the body. His body was duly identified, and re-interred at the request of his parents in Beulah Congregational Chapelyard on 9 December 1916.



# Questions?



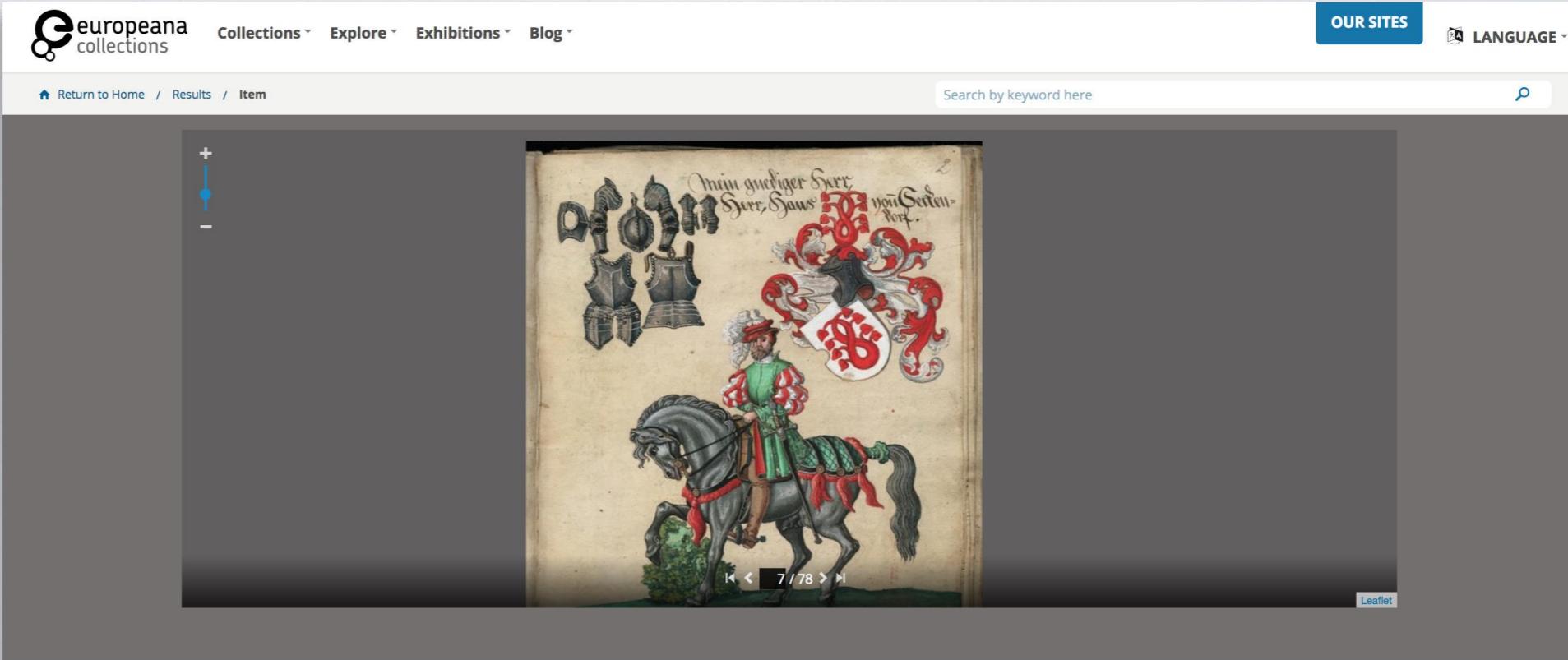
# Future APIs

- Discovery
  - How do you discover IIIF resources?
  - How do you send content to an aggregator like DPLA or Europeana?
  - How do you keep it up to date?
  - How do you take a manifest from one viewer to another?

# Plan to look at Activity Streams

<https://www.w3.org/TR/activitystreams-core/>

```
{
  "@context": http://activitystreams/context.json,
  "@id": http://localhost:8000/as/,
  ▼ first: {
    ▼ items: [
      ▼ {
        id: http://localhost:8000/activity/50da5468396341fc3555f62b60541a70,
        ▼ object: {
          id: http://dams.llgc.org.uk/iiif/2.0/1093206/manifest.json,
          label: "1951 - Vol. 1, nos. 1-2",
          type: "sc:Manifest",
          within: http://dams.llgc.org.uk/iiif/2.0/1093205/manifest.json
        },
        startTime: "2017-10-18T13:56:46.427401+00:00",
        type: "Update"
      },
      ▼ {
        id: http://localhost:8000/activity/3d5bf29c3794f4bb713dc42756d1e751,
        ▼ object: {
          id: http://dams.llgc.org.uk/iiif/2.0/1093441/manifest.json,
          label: "1955 - Vol. 2, nos. 1-4",
          type: "sc:Manifest",
          within: http://dams.llgc.org.uk/iiif/2.0/1093205/manifest.json
        },
        startTime: "2017-10-18T13:56:46.427401+00:00",
        type: "Update"
      },
      ▼ {
        id: http://localhost:8000/activity/396ffb97ae9332f39acf58b9aac356df,
        ▼ object: {
          id: http://dams.llgc.org.uk/iiif/2.0/1093764/manifest.json,
          label: "1959 - Vol. 3, nos. 1-4",
          type: "sc:Manifest",
          within: http://dams.llgc.org.uk/iiif/2.0/1093205/manifest.json
        },
        startTime: "2017-10-18T13:56:46.427401+00:00",
        type: "Update"
      }
    ]
  }
}
```



The screenshot shows a medieval manuscript page from the Heidelberg Tournament Book. The page features a central illustration of a knight in full armor riding a dark horse. Above the knight, there is a large, ornate red and black heraldic shield. To the left of the knight, several pieces of armor are displayed. The page is filled with dense, handwritten text in Gothic script. A search bar at the top right allows users to search by keyword. The URL in the address bar is <http://www.europeana.eu/portal/Item/urn:nbn:de:bsz:16-diglit-153213>.

Title	<b>Heidelberger Turnierbuch   Jost Pirckhammer</b>	FIND OUT MORE <a href="#">View at Universitätsbibliothek Heidelberg</a>
Description	Shelfmark: Heidelberg, Stadtarchiv, STAHD H Nr. 106	CAN I USE IT? Free Re-use <a href="#">CC BY-SA</a>
People	Creator: Jost Pirckhammer	SHARE <a href="#"></a> <a href="#"></a> <a href="#"></a> <a href="#"></a> <a href="#"></a>
Classifications	Type: Manuscript	
Properties	Language: de	
Time	Date: <a href="http://semium.org/time/18xx_2_half">http://semium.org/time/18xx_2_half</a> Creation Date: 1886 Period: 1886 Temporal: 19-th , 19th , 19th century	
Provenance	Provenance: Heidelberg, Stadtarchiv Identifier: urn:nbn:de:bsz:16-diglit-153213 , oai:digi.ub.uni-heidelberg.de:15321 Institution: Universitätsbibliothek Heidelberg Provider: Universitätsbibliothek Heidelberg	FEEDBACK

 Search  
 Search 67323 documents from 12 sources. >> Pitch Search (Experimental)

- + Zoom level: 2



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**Kleine Studie : für das Pianoforte : Op. 44, No. 2**

With: Brüll, Ignaz. [Impromptus, piano, op. 37, no. 1] Impromptu ... Wiener-Neustadt : Eduard Wedl, 1881. Bound together subsequent to publication. For piano. [\[+\]](#)

**title**  
Kleine Studie : für das Pianoforte : Op. 44, No. 2

**publisher**  
Leipzig : Breitkopf & Härtel

**subject**  
Piano music

**date**  
1883

**contributor**  
University of Michigan

**creator**  
Brüll, Ignaz, 1846-1907

**Other links**  
[Image manifest](#)  
[View on library website](#)  
[Additional data](#)

---

**INTERNET ARCHIVE**  
  
 The Internet Archive

# Further Resources

- Join the community!
  - Email: [iiif-discuss@google.com](mailto:iiif-discuss@google.com)
  - Slack: <http://bit.ly/iiif-slack>
  - Fortnightly telephone calls
- Join an interest group:
  - Museums
  - Manuscripts
  - Newspapers
  - Software Development
- Shape the next versions of the spec by joining a technical group:
  - Discovery
  - Audio/Visual
  - Text Granularity - modelling annotations in words, line or paragraph.

# Further learning Resources

- IIIF Guide: <http://resources.digirati.com/iiif/an-introduction-to-iiif/> from Tom Crane
- A two day workshop from Jason Ronallo:  
<http://ronallo.com/iiif-workshop/>
- Hands on workshop from Jack Reed and Drew Widget:  
<https://iiif.github.io/training/intro-to-iiif/>
- List of IIIF compatible software and projects:
  - <https://github.com/IIIF/awesome-iiif>

# Summary

- Lots of use cases for IIIF
- Demonstrated Image and Presentation API
- Discussed Search and Authentication API
- Demonstrated some possibilities with annotation.

# Final Questions

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