

Extending the DSE: LOD support and TEI/IIIF integration in EVT



Outline

- Introduction
 - The birth and development of EVT
 - Expanding the DSE: The distributed edition
- LOD (Linked Open Data)
 - LOD support in EVT, current and forthcoming
 - TEI/LOD integration
- IIIF (International Image Interoperability Framework)
 - IIIF support in EVT, current and forthcoming
 - TEI/IIIF integration
- The distributed edition via Zenodo and GitHub

The birth and development of EVT

- EVT ([Edition Visualization Technology](#)) was born as the edition viewer component of the Digital Vercelli Book project
- Developed to be a general purpose tool, many new features implemented thanks to collaboration with other projects
 - **EVT 1:** a diplomatic edition / single-witness critical edition viewer based on XSLT 2 and Web technologies [final version EVT 1.3 released December 2019]
 - **EVT 2:** a “reboot” of the project based on the MVC design pattern and the AngularJS framework [beta 2 due Spring 2020]
 - **EVT 2+:** porting to Angular 8 under way [don’t ask]
- Modular design to improve flexibility and power
- UI/X designed (and tested) to maximize ease of use

Expanding the DSE

- A DSE is a **dynamic object**, a research tool which assists the scholar in data interpretation and analysis
- This also means that it can engage in dialogue and interaction with other Internet-based resources by
 - taking advantage of **semantic web** technologies and **Linked Open Data** to enrich the edition content
 - **text/image** linking, pointing to digital collections of images of manuscripts maintained by external repositories
 - modelling **intertextual relationships** through canonical text services
 - becoming itself a **source** of shareable, reusable data

The distributed edition

- This is an EVT goal dating back quite some time
- It is only recently that all the necessary technologies seems to be falling into place
 - LOD repositories
 - IIIF framework for images
 - CTS and DTS protocols for text
 - Zenodo as a safe, long term general purpose repository
 - GitHub as a server of live pages
- To use those effectively we need to work both on the general methodology and to experiment with the existing tools
- Great opportunities, but also some risks and complications



LOD

Linked Open Data

LOD

Guido da Velate

is a

archbishop

LOD

Guido da Velate

http://dbpedia.org/resource/Guido_da_Velate

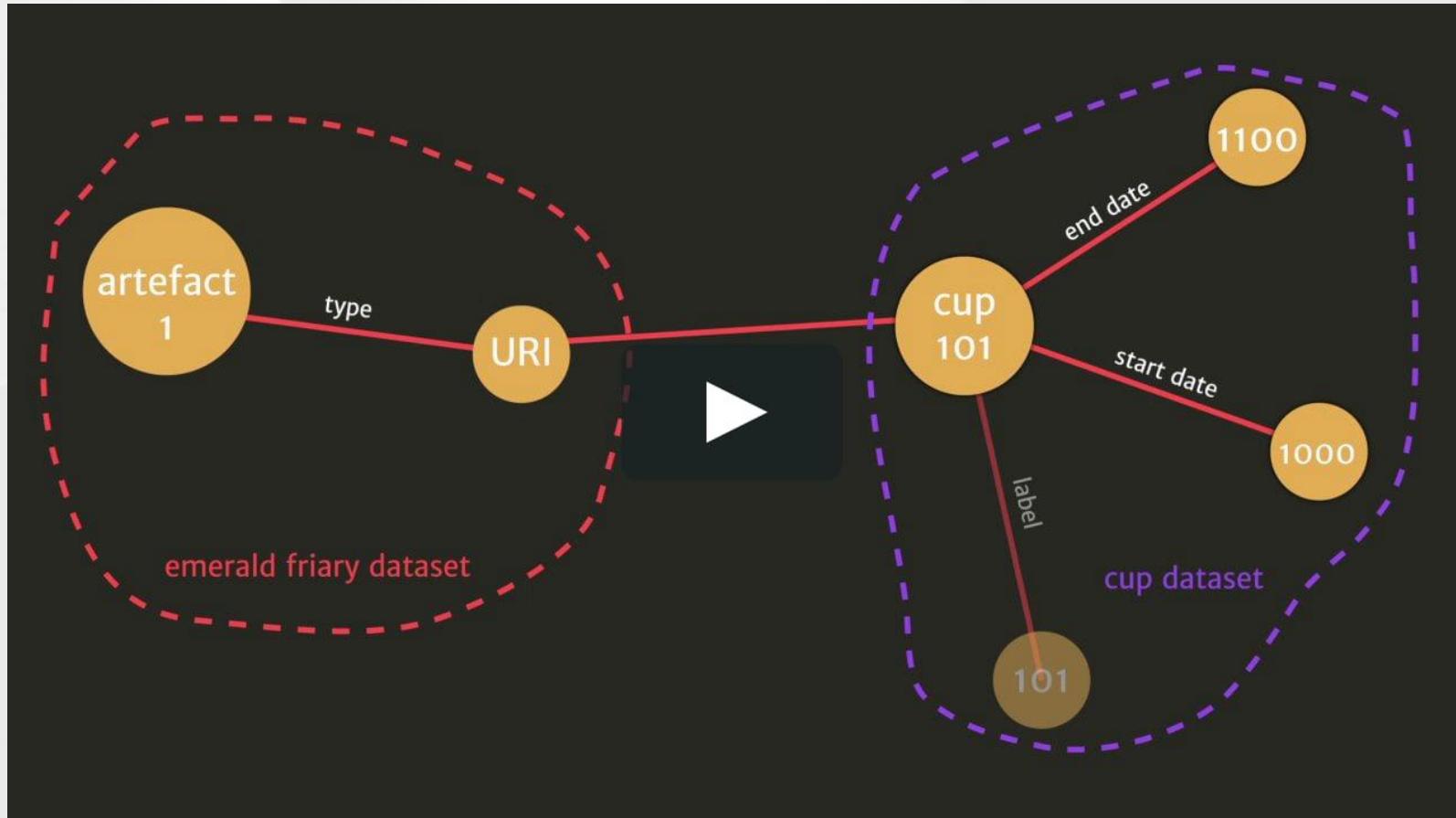
is a

<http://purl.org/linguistics/gold/hypernym>

archbishop

<http://dbpedia.org/resource/Archbishop>

LOD



F. Lynam, from Vimeo video [Linked Open Data in practice](#)

Using LOD / Creating LOD

- Using (referencing) external resources

```
<persName  
ref="http://dbpedia.org/resource/Guido\_da\_Velate">  
Guidonem</persName>
```



Guido da Velate

http://dbpedia.org/resource/Guido_da_Velate

<http://dbpedia.org/ontology/deathDate>

1071-8-23

<http://dbpedia.org/ontology/deathPlace>

<http://dbpedia.org/resource/Alessandria>

<www.w3.org/1999/02/22-rdf-syntax-ns#type>

http://yago-knowledge.org/resource/clergyman_109927451

Using LOD / Creating LOD

- **Creating** new LOD resources

```
<persName  
ref="http://dbpedia.org/resource/Guido\_da\_Velate">  
Guidonem</persName>
```

The work I published
<http://myproject.it/myeditionuri>

refers to

www.ancientwisdoms.ac.uk/media/ontology/sawsOntology.owl#refersTo

Guido da Velate

http://dbpedia.org/resource/Guido_da_Velate

Using LOD / Creating LOD

- **Creating** new LOD resources

```
<persName  
ref="http://dbpedia.org/resource/Guido\_da\_Velate">  
Guidonem</persName>
```

“Guidonem”

is an attested name for
<http://xmlns.com/foaf/0.1/name>

Guido da Velate

http://dbpedia.org/resource/Guido_da_Velate

Using LOD / Creating LOD

- **Using** (referencing) LOD resources
- **Creating** new LOD resources

EVT support

Using LOD: EVT support 1 (via local list)

<teiHeader>

```
<listPerson>
    <person xml:id="Rothari">
        <persName>Rotari</persName>
        <sex>M</sex>
        <birth>606</birth>
        <death>652</death> [...]
    </person>
</listPerson>
```

<body>

```
<persName ref="#Rothari">
    <w>rothari</w></persName>
```

Using LOD: EVT support 1 (via local list)

<teiHeader>

<listPerson>

<person>

<pe>

<se>

<bi>

<de>

</person>

</listPerson>

<body>

<persName re

<w>roth

- 1 IN NOMINE **DñI** INCIPIT
- 2 EDICTVM QVEM RE
- 3 NOVAUIT **DOṄ** ROTHA
- 4 RI UIR **EXCELLENTISSIMO**
- 5 **REX GENTI LANGOBAR**
- 6 DORVM CVM PRIMA
- 7 TOS IUDICES SVOS

8 **INCIṄ PROLOGVS**

9

Ego in **dī** nomine **rothari**

Rotari

More Info Occurrences

M

606

652

636-652

Rex Langobardorum et Italiae 636-652

Duca longobardo di Brescia, nato agli inizi del VII secolo, nel 636 venne eletto re dei Longobardi dopo la morte del predecessore Arioaldo. V. anche la voce corrispondente su [DBpedia](#).

vir **exell** rex

10 & septimo **decimū** rex gentis **langobar**

11 **dorū** annuente **dō** propitiante regni **mer**

Using LOD: EVT support 1 (via local list)

<teiHeader>

```
<listPerson>
  <person xml:id="Rothari">
    <persName>Rotari</persName>
    <sex>M</sex>
    <birth>606</birth>
    <death>652</death>
    <note>V. anche la voce corrispondente su
      <ref target="http://dbpedia.org/resource/Rothari">
        DBpedia</ref>.
    </note>
  </person>
</listPerson>
```

<body>

```
<persName ref="#Rothari">
  <w>rothari</w>
</persName>
```

Using LOD: EVT support 1 (via local list)

<teiHeader>

```
<listPerson>
  <person xml:id="Rothari">
    <persName>Rotari</persName>
    <sex>M</sex>
    <birth>606</birth>
    <death>652</death>
    <note>V. anche la voce corrispondente su
      <ref target="http://dbpedia.org/resource/Rothari">
        DBpedia</ref>.
    </note>
  </person>
</listPerson>
```

Partial EVT support
(showing URL)

<body>

```
<persName ref="#Rothari">
  <w>rothari</w></persName>
```

The screenshot shows a user interface for managing LOD data. A central card displays the name 'Rothari' with a person icon. Below the card are two tabs: 'Informazioni aggiuntive' (Additional information) and 'Occorrenze' (Occurrences). The 'Informazioni aggiuntive' tab is active, showing a link to the DBpedia resource: <HTTP://DBPEDIA.ORG/RESOURCE/ROTHARI>. There are also icons for sharing and more options.

Using LOD: EVT support 1 (via local list)

<teiHeader>

<listPerson>

<person xml:id="Rothari">

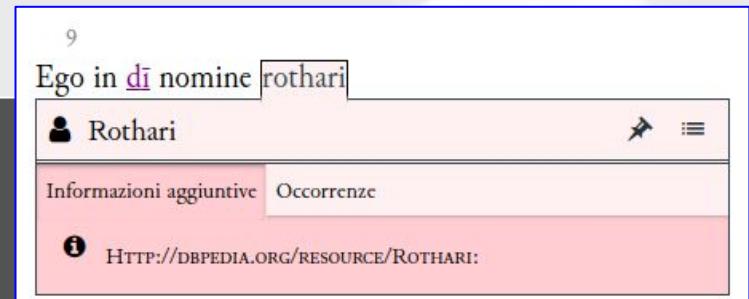
<note>See

<ref target="<http://dbpedia.org/resource/Rothari>">
DBpedia</ref> for further information.</note>

</person>

</listPerson>

Partial EVT support
(showing URL)



<body>

<persName ref="#Rothari">
<w>rothari</w></persName>

Using LOD: EVT support 1 (via local list)

<teiHeader>

```
<person xml:id="Rothari">  
    <ptr target="http://dbpedia.org/resource/Rothari" />  
    <note>  
        <ref  
            target="http://dbpedia.org/resource/Rothari">  
                DBpedia</ref></note>  
    <note>See  
        <ref  
            target="http://dbpedia.org/resource/Rothari">  
                DBpedia</ref> for further information.</note>  
</person>
```

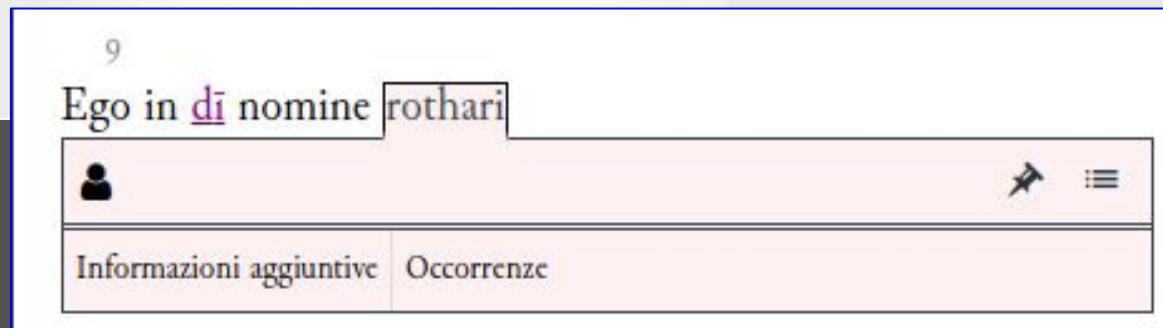
Partial EVT support
(showing URL)

<body>

```
<persName ref="#Rothari">  
    <w>rothari</w></persName>
```

Using LOD: EVT support 2 (direct link)

EVT support
forthcoming
(currently showing
empty info box)



The screenshot shows a user interface for managing LOD data. At the top, there is a search bar containing the text "Ego in di nomine rothari". Below the search bar is a small profile icon. To the right of the profile icon are two icons: a bird-like symbol and a three-dot menu. At the bottom of the interface, there are two tabs: "Informazioni aggiuntive" and "Occorrenze".

<body>

```
<persName ref="http://dbpedia.org/resource/Rothari">  
  <w>rothari</w></persName>
```

Using LOD: EVT support 2 (direct link)

<teiHeader>

```
<interpGrp type="rhetoric">  
  <interp  
    sameAs="https://www.wikidata.org/entity/Q486050">  
    Anafora  
  </interp> [...]  
</interpGrp>
```

EVT support
forthcoming

<body>

```
<seg type="r" ana="#anafora">Quotiens</seg>
```

Using LOD: EVT support 1 (local list) vs 2 (direct link)

	Distributed (LOD)	Durable	Oxygen support	EVT support
Local list <code><listPerson> /</code> <code><person></code>	(redundant) 	(dead URLs ahead?) 	(suggested values → persName @ref) 	(info box popping up) 
Direct link to LOD only <code><persName ref="http:// dbpedia..."></code>				

Creating LOD

- **Creating** new LOD resources (triples) → External SW needed

Edictum Rothari

<http://leges.labcd.unipi.it>

refers to

[www.ancientwisdoms.ac.uk/media/ontology/
sawsOntology.owl#refersTo](http://www.ancientwisdoms.ac.uk/media/ontology/sawsOntology.owl#refersTo)

Rothari

<http://dbpedia.org/page/Rothari>

LOD support in EVT

- **Current**
 - Encoder creates **local list** (e.g. <listPerson>)
 - Encoder **links** local element **to LOD**
(<person><ref="http://dbpedia.org/resource/Rothari">)
 - EVT visualizes **info box from <person>**
 - EVT shows **clickable link** to LOD resource
- Project's **own software can extract** RDF triples from XML
- **Forthcoming**
 - Support **direct link**: text → LOD resource (no local list)
 - **Import info from LOD** resource and visualize in info box
 - **Extract** RDF triples from XML (?)

TEI/LOD Integration

- Current TEI/LOD integration
 - Linking from TEI to LOD resources
 - **Via local data structure** (<listPerson>, <listPlace>, etc.): minimal overhead
 - Or **directly from the text** (e.g. <persName>): closer to LOD philosophy, but burdensome if the same link occurs multiple times
- Issues in TEI/LOD integration
 - TEI is flexible, but it currently is document-oriented more than LOD-oriented
 - Re-orienting the TEI **Guidelines and Schema** ([Chiarcos-Ionov 2019](#))
 - E.g.: allowing for (LOD) **external URIs** in some attributes
 - Tools needed:
 - **Editing:** Oxygen and other authoring tools could facilitate LOD linking
 - **Visualization:** EVT could retrieve and show information retrieved directly from DBpedia displaying it (in part or fully) in a dedicated container
 - Tools to **extract** and expose semantic information (LOD triples) from TEI

IIIF

International Image Interoperability Framework

IIIF: what and why

- IIIF: International Image Interoperability Framework
 - Exchange and integrate image-based resources in Web-based systems
- Use cases:
 - IIIF image server ([e-codices](#), [Biblioteca Vaticana](#), [Biblioteca Ambrosiana](#))
 - IIIF collection (MS images: [Sang. 730](#), Edictum Rothari)
 - IIIF canvas (each image / MS page: [folio 20](#))
 - TEI linking to the URI of the external IIIF image (e.g. <pb facs="IIIF_URL_here">)

IIIF metadata

- Whole collection / MS ([Sang. 730](#))
 - <https://www.e-codices.unifr.ch/metadata/iiif/csg-0730/manifest.json>
 - [Presentation API](#)
- Individual image / page ([folio 20](#))
 - https://www.e-codices.unifr.ch/metadata/iiif/csg-0730/canvas/csg-0730_020.json
 - [Image API](#)
- JSON metadata files reference actual image files:

[manifest.json](#)

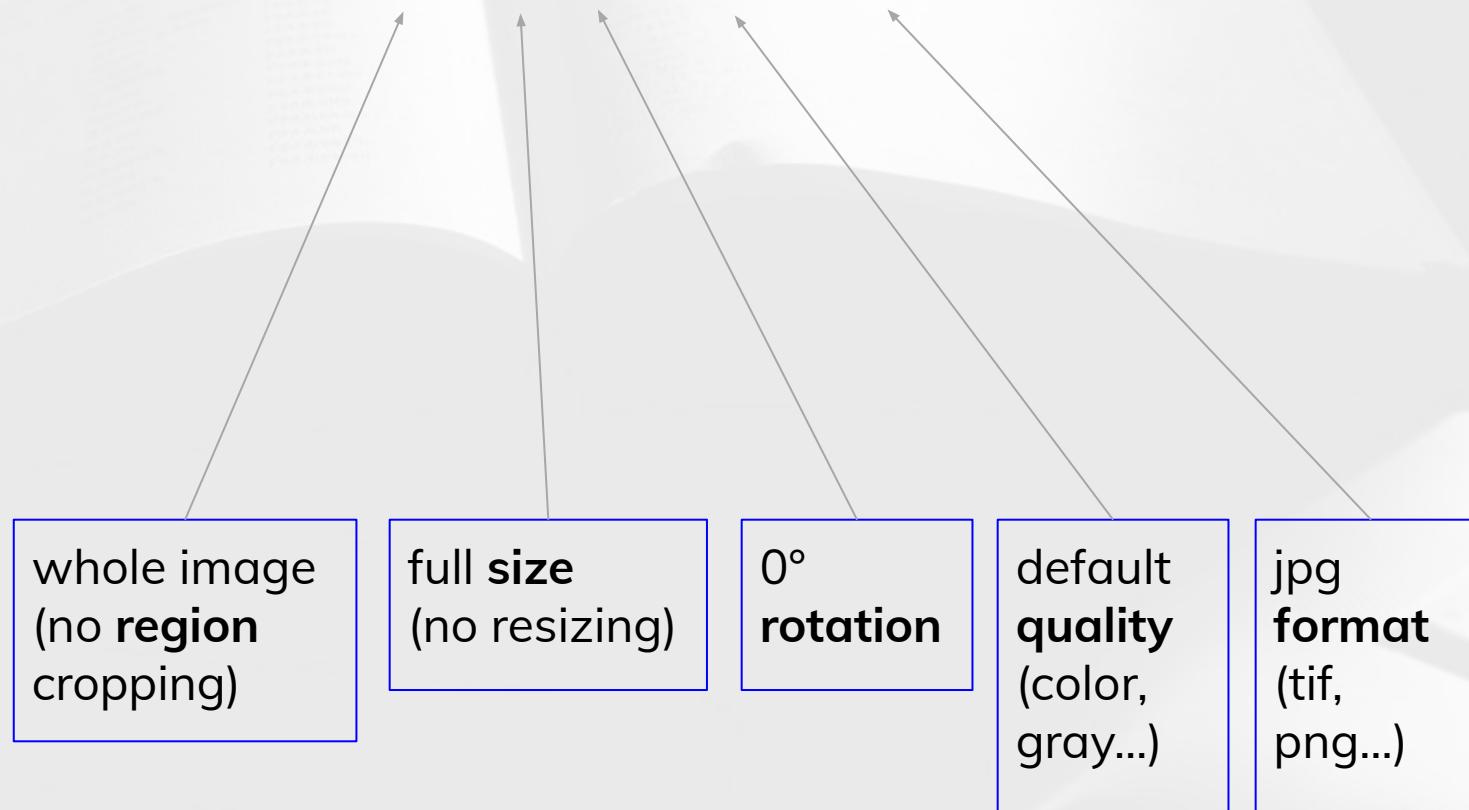
```
▼ service:  
    @context: "http://iiif.io/api/image/2/context.json"  
    ▼ @id: "https://www.e-codices.unifr.ch/loris/csg/csg-0730a/csg-0730a_020.jp2"  
    profile: "http://iiif.io/api/image/2/level2.json"
```

IIIF Image API by examples

- <https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730-020.jp2>
Image file URI

IIIF Image API by examples

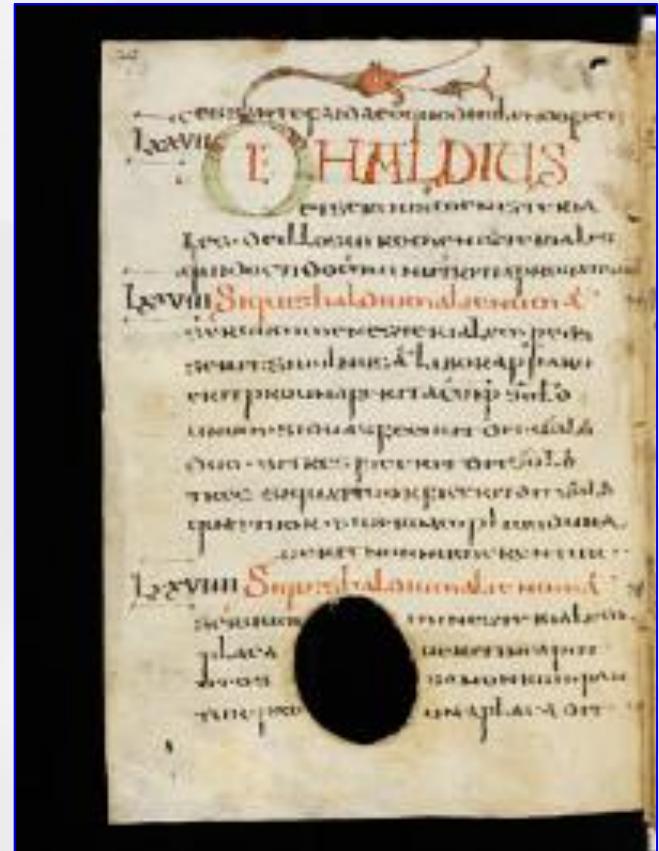
- [https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730_020.jp2/**full**/full/0/default/jpg](https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730_020.jp2/full/full/0/default/jpg)



IIIF Image API by examples

- [https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730-020.jp2/**full**/full/0/default/jpg](https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730-020.jp2/full/full/0/default/jpg)

whole image
(no **region**
cropping)



IIIF Image API by examples

- [https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730_020.jp2/**full**/full/0/default/jpg](https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730_020.jp2/full/full/0/default/jpg)
- [https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730_020.jp2/**1400,880,2850,600**/full/0/default/jpg](https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730_020.jp2/1400,880,2850,600/full/0/default/jpg)



region
cropping

Two directions for TEI/IIIF integration

1. IIIF → TEI: adding a transcription to an IIIF-based digital facsimile
[IIIF manifest.json](#) → [TEI XML transcription file \(details\)](#)
2. TEI XML → IIIF URI: embedding IIIF URIs in a TEI-based diplomatic transcription

```
<pb  
facs="https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730\_020.jp2/full/full/0/default/jpg">
```



EVT support

Two directions for TEI/IIIF integration

1. IIIF → TEI

IIIF manifest.json → TEI XML transcription file (details)

Manifest

```
▶ 34:          {...}
▼ 35:
  @id:      "http://213.21.172.53/canvas/c09002711800e8073"
  @type:    "sc:Canvas"
  label:    "036_D23sup_c.13v"
  height:   2000
  width:    1480
  ▶ images:  [...]
  ▼ otherContent:
    ▼ 0:
      ▶ @id:      "http://213.21.172.53/manifests/public/list/0b002711800e7d6d
                   /c09002711800e8073.json"
      @type:    "sc:AnnotationList"
      ▶ thumbnail: {...}
    ▶ 36:      {...}
    ▶ 37:      {...}
    ▶ 38:      {...}
```

TEI XML

annotationList

```
"resource": {
  "@id": "http://www1.unipa.it/paolo.monella/reires2019/code/d23sup13r/transcription.xml",
  "@type": "dctypes:Text",
  "format": "application/tei+xml"}
```

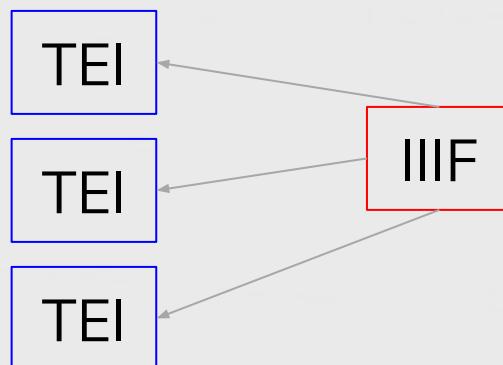
Two directions for TEI/IIIF integration

1. IIIF → TEI

IIIF manifest.json → TEI XML transcription file (details)

2. TEI XML file → IIIF URI

<pb
facs="https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730_020.jp2/full/full/0/default/jpg">



Two directions for TEI/IIIF integration

1. IIIF → TEI

IIIF manifest.json → TEI XML transcription file (details)

2. TEI XML file → IIIF URI

```
<pb  
facs="https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730_020.jp2/full/full/0/default/jpg">
```



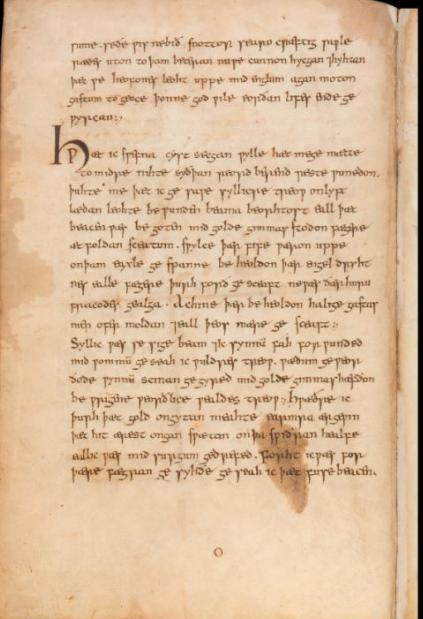
IIIF support in EVT

Page → Local image

<pb facs="data/images/single/VB_fol_104v.jpg"/>

The Dream of the Rood [Digital Vercelli Book] 

104v    MS Desc



Piume prede pif neblis fuetcorum rauco epactis pule
pawd' iron to sum brighian nifre cumon hycan flobhan
het he hengom lehte upp' mid ðingam agan moton
gafum to gice. homm god pifl' vñðan lipp' bðe⁵
ppican.

Hat ic hfrana c̄te s̄cigan tolle hat mæg mette
comida n̄dra s̄fstan pñndi bñhnd pñcto pñmdon.
hulce' me hæc x̄ ge pñro yllique qñap onlyc
leoden lehðr be pendin bruna bñhþrce' till het
bræca pif be gred mid golde gimmer fedon pagas
at poldan fæcam. fræla hæf fræs pagas upp'
on þam exle se sparrne. be hildon hæf engel dyrhæ
nif alle pagas þurh pñnd græcipe ne pagas dñhimp
præcodi. gñlga. Aclimis hæf be hildon halige gefor
mid orpi mædan gull hæf manc se scipe.
Sylle pif se ylfe bñam se prymi pif se ylfe pñndo
mid pñmni se sach ic poldapf epactis. pñmni se pñm
Seðo prymi serian gægymed mid golde gimmer hæfdon
be prymi poldapf poldes tñp. hysðra ic
þurh hæf gold ongyean mædhef ñmpum aþgym
het hic aþer organ fñrean onþi fñðian hulpe
allic pif mid rauzum god pñfæd. Poldapf neper pag
þurh pagum se ylde se ylde ic hæf fñra bæcian.

The Dream of the Rood  104v  Diplomatic 

7 **D**Wat ic swefna c̄t seccan wylle **hat**
8 to midre nihte syðjan reste wunedon.
9 þuhte me þat ic yllicre treow
10 ledan lehðr beama beorhtoþ eall þat
11 beacen wæt mid golde gimmer stodon fægere
12 at foldan fæcam. swylice þær fife waron upp
13 þær engel dryht
14 neq; calle fægere þurh
15 fræder gealg. þær beheldon halige gaſtaſ
16 men ofer moldan þeƿ marc ;
17 Sylic wæf je **wynnū** fah
18 mid **womma** ic wuldref treow. wædum geweor
19 dode **wynnū** scinan mid golde gimmer hæfdon
20 weordlice **wealdes** treow ; hwaðre ic
21 þurh þæt gold ongytan meahte carmra ærgewin
22 þæt hit aрест ongan fwætan on þa swiðran healfse
23 wæf mid **rurgum** gedrefed. Forht for
24 þære fægran ic þæt fufe beacen.

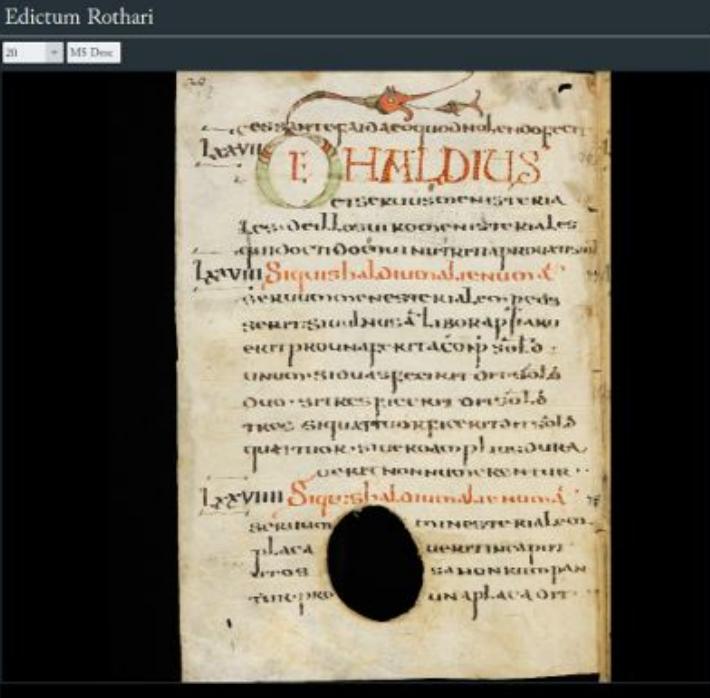
Search Q Create index  104v       

IIIF support in EVT

Page → IIIF full image



<pb facs="https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730_020.jp2/full/full/0/default/jpg"/>



The screenshot shows a page from the *Edictum Rothari* manuscript. The left panel displays the original manuscript page with two columns of Latin text in a Gothic script. A large, ornate red initial 'E' is visible at the top of the first column. The right panel shows the same text as a IIIF full image, with numbered annotations appearing next to specific words or lines. The annotations include:

- 01 cessante fidia eo quod nolendo fecit.
- 02 LXXVII
- 03 De haldius
- 04 et seruus ministeria
- 05 les de illos uiro ministeriales
- 06 qui docti doceui nutriti prouati sunt
- 07 LXXVIII Si quis haldium alienum 25
- 08 seruum ministerialem pausa
- 09 tit; si ualens à liber appare
- 10 erit pro una ferita comp ei sol
- 11 unim; si duas dit tit
- 12 das; si tres dit tit
- 13 trei; si quatuor det tit
- 14 quatuor si uero amplus dura
- 15 uerit non noncerne
- 16 LXXVIII Si quis haldium alienum 25
- 17 seruum
- 18 plagueserit in caput
- 19 ut ossa non rumpas
- 20 tur pro una placa dit

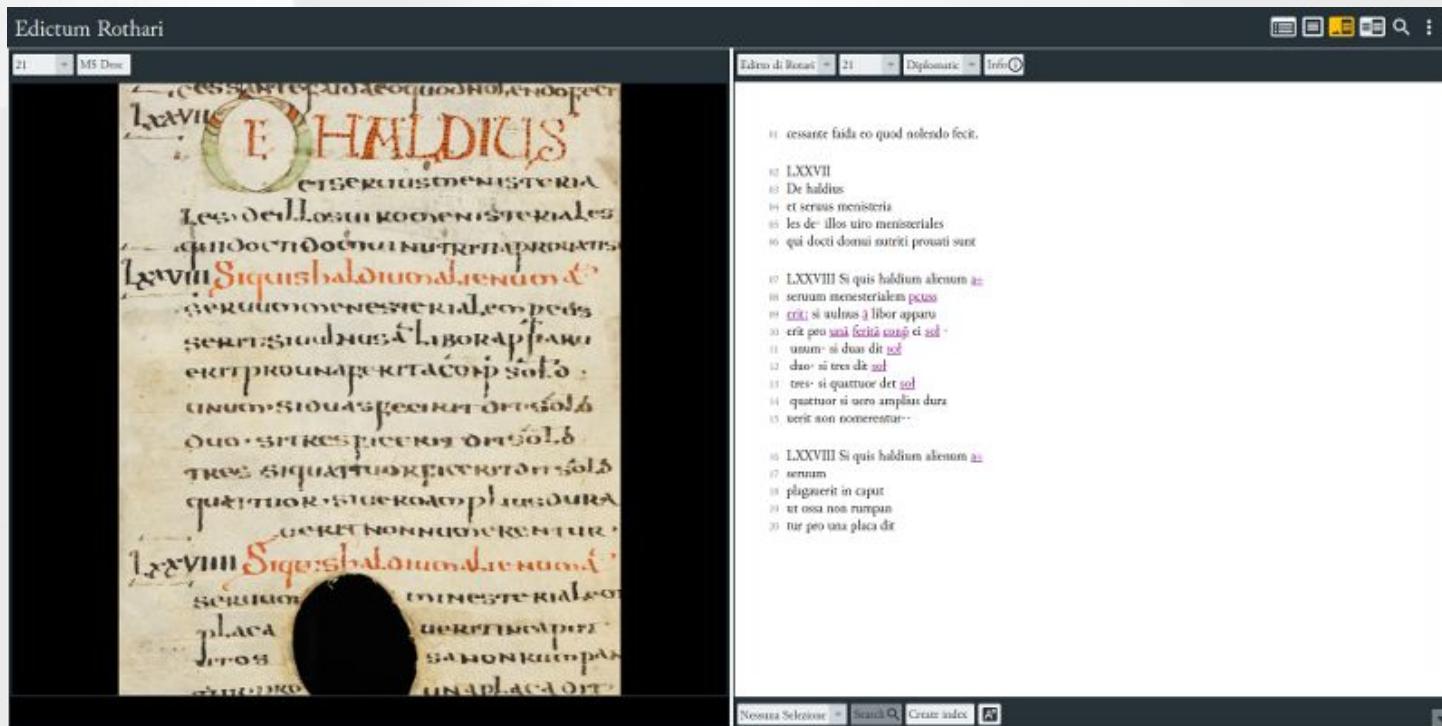
At the bottom of the right panel, there are buttons for 'Nesina Selector', 'Search', 'Create index', and a magnifying glass icon.

IIIF support in EVT

Page → IIIF image region



<pb facs="https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730_020.jp2/800,600,3800,5000/full/0/default/jpg" />



The screenshot displays a page from the *Edictum Rothari*. On the left, the main image shows a page of Latin text in a medieval script, with a large initial 'E' in red and gold. The text discusses legal matters, mentioning 'fida' (fidelity), 'laldus' (a type of tax), and 'seruum ministeriale'. On the right, a sidebar provides a diplomatic transcription of the text, which includes several numbered notes explaining specific terms or legal concepts. The notes range from LXXVII to LXXXVIII, with some notes referring back to previous entries. The sidebar also includes a small icon of a person's head.

Notes from the sidebar:

- 61 cessante fida co quod nolendo fecit.
- 62 LXXVII
- 63 De laldus
- 64 et seruum ministeriale
- 65 les de illos uiro ministeriales
- 66 qui docti domini nutriti prouati sunt
- 67 LXXVIII Si quis laldum alienum [az](#)
- 68 seruum ministerialem [pazza](#)
- 69 [az](#); si vulna à liber apparu
- 70 erit pro [zaz](#) ferita [zaz](#) ci [az](#) -
- 71 usum; si duo dicit [az](#)
- 72 duo; si tres dicit [az](#)
- 73 tres; si quatuor dicit [az](#)
- 74 quatuor si uero amplius dura
- 75 uerit non numerentur-
- 76 LXXVIII Si quis laldum alienum [az](#)
- 77 seruum
- 78 plagerit in caput
- 79 ut ossa non rumpant
- 80 tur pro una glacia dicit

Bottom navigation bar:

- Nessuna Selezione
- Search
- Creat index
- 

IIIF support in EVT

Region (<lb>, <p>, <div>...) → <zone> (region) → IIIF full image

```
<surface>
  <zone lrx="1200" lry="423" ulx="360" uly="180"
        xml:id="SG730_hs_20_01"/>
</surface>
```

```
<pb facs="https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730\_020.jp2/full/full/0/default/jpg">
<div facs="#SG730_hs_20_01">
```

IIIF support in EVT

Region (<lb>, <p>, <div>...) → <zone> (region) → IIIF full image

```
<surface>
  <zone lrx="1200" lry="423" ulx="360" uly="180"
        xml:id="SG730_hs_20_01"/>
</surface>
```

Issue: Tool needed to draw rectangles and get coordinates

- Local image: Ch. Sparks, TEI zoner (see [1](#), [2](#), [3](#))
- Local and IIIF image: Oxygen [Image Maps in TEI](#)
- IIIF image (under development): T. Mancinelli, [Barberino generator](#)

IIIF/EVT future development

Page → <surface> → IIIF full image

```
<surface xml:id="image-p2">
  <graphic url="https://www.e-codices.unifr.chloris/csg/csg-0730/csg-0730\_020.jp2/full/full/0/default/jpg"/>
</surface>
```

```
<pb facs="#image-p2"/>
```

IIIF/EVT future development

Region → IIIF image region



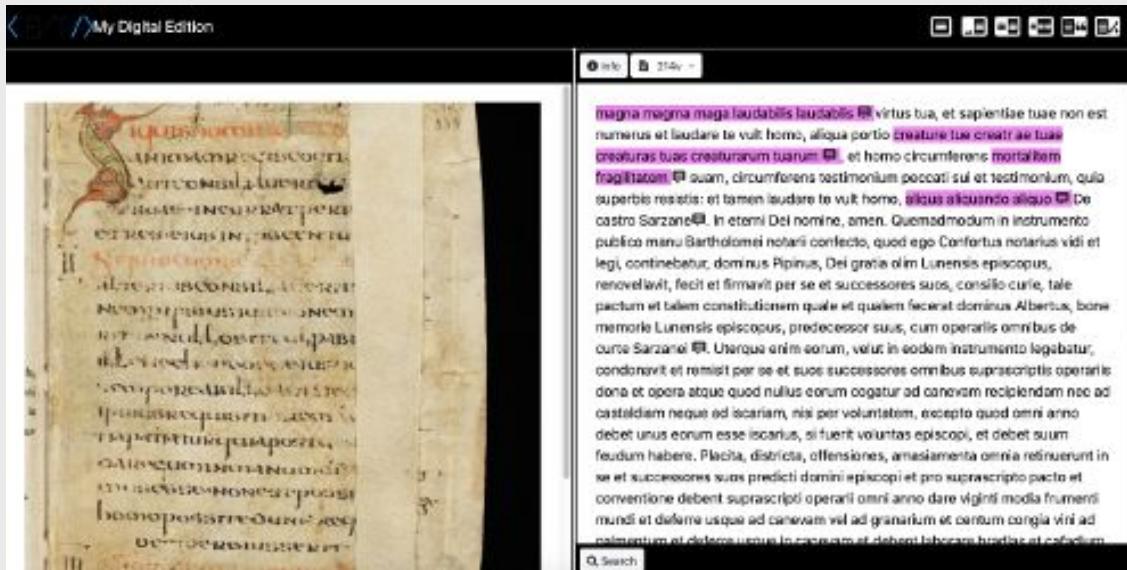
```
<lb facs="https://www.e-codices.unifr.ch/loris/csg/csg-0730/csg-0730\_020.jp2/1400,880,2850,600/full/0/default/jpg">
```

- EVT can already import image regions through IIIF Image API URIs like this
- However, visualization strategies must be implemented to show them (hotspot, pop-up window within text, text-embedded image, etc.)

IIIF/EVT future development

- EVT2+ (Angular 8 version, in development)
- Presentation API support
- EVT config.json configuration file

{"title": "My Digital Edition",
"manifestURL": "[https://www.e-codices.unifr.ch/metadata/
iiif/csg-0730/manifest.json](https://www.e-codices.unifr.ch/metadata/iiif/csg-0730/manifest.json)" }



TEI/IIIF integration

- Tool needed to define area coordinates in IIIF-served images
 - A variant of [TEI Zoner](#) (T. Mancinelli's [Barberino generator](#))
 - Oxygen in Author mode ([Image Map Editor](#))
- Concurrent mechanisms to define image portions
 - TEI <zone lrx="1200" lry="423" ulx="360" uly="180"/>
 - IIIF Image API URI https://www.e-codices.unifr.ch/loris/csq/csq-0730/csq-0730_020.jp2/1400,880,2850,600/full/0/default/jpg
- IIIF calculates coords differently than TEI
 - TEI: both rectangles (coords for upper left and lower right, ulx, uly, lrx, lry attributes) and polygons (points attribute)
 - IIIF: only rectangles (coords for upper left vertex, then rectangle dimensions)
- Tool needed to convert from IIIF format into TEI



The distributed edition

The distributed edition

- A concept dating back to the end of the ‘90s
 - Ore, Espen S. “Monkey Business—or What Is an Edition?” *Literary and Linguistic Computing* 19, no. 1 (2004): 35–44.
- A view of DSEs not only taking advantage of LOD, but becoming resources on their own
- To do this several requisites must be met
 - suitable repositories
 - long term sustainability
 - data sharing methodology
 - clear editorial responsibility
- We now have suitable frameworks ([Zenodo](#), [OpenAIRE](#), [GitHub](#)) and sensible dissemination criteria ([FAIR Principles](#))

“Good things come in small packages”

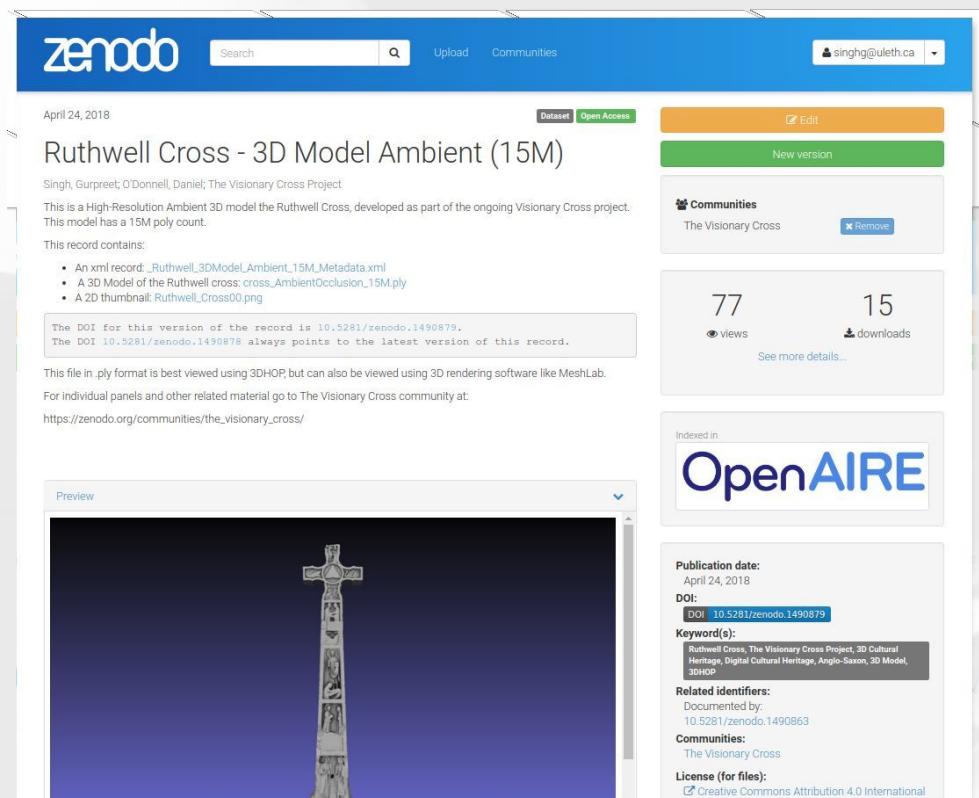
- A spin-off of the Visionary Cross project and a consequence of its “data-first” approach
 - The Visionary Cross project on Zenodo:
https://zenodo.org/communities/the_visionary_cross/
 - O'Donnell et al. (2019) ‘Publishing (and Forgetting) the Small or Medium-sized Scholarly Edition or Cultural Heritage Collection as Linked Open Data’ <https://zenodo.org/record/3586007>
- General plan: making all the edition data available for other researchers to use as they see fit (no intermediation)
- Not a LOD approach, strictly speaking, but one that fits well with the open, distributed edition concept
- It will require work and experimentation (also to make EVT suitable for the task)

Project approach

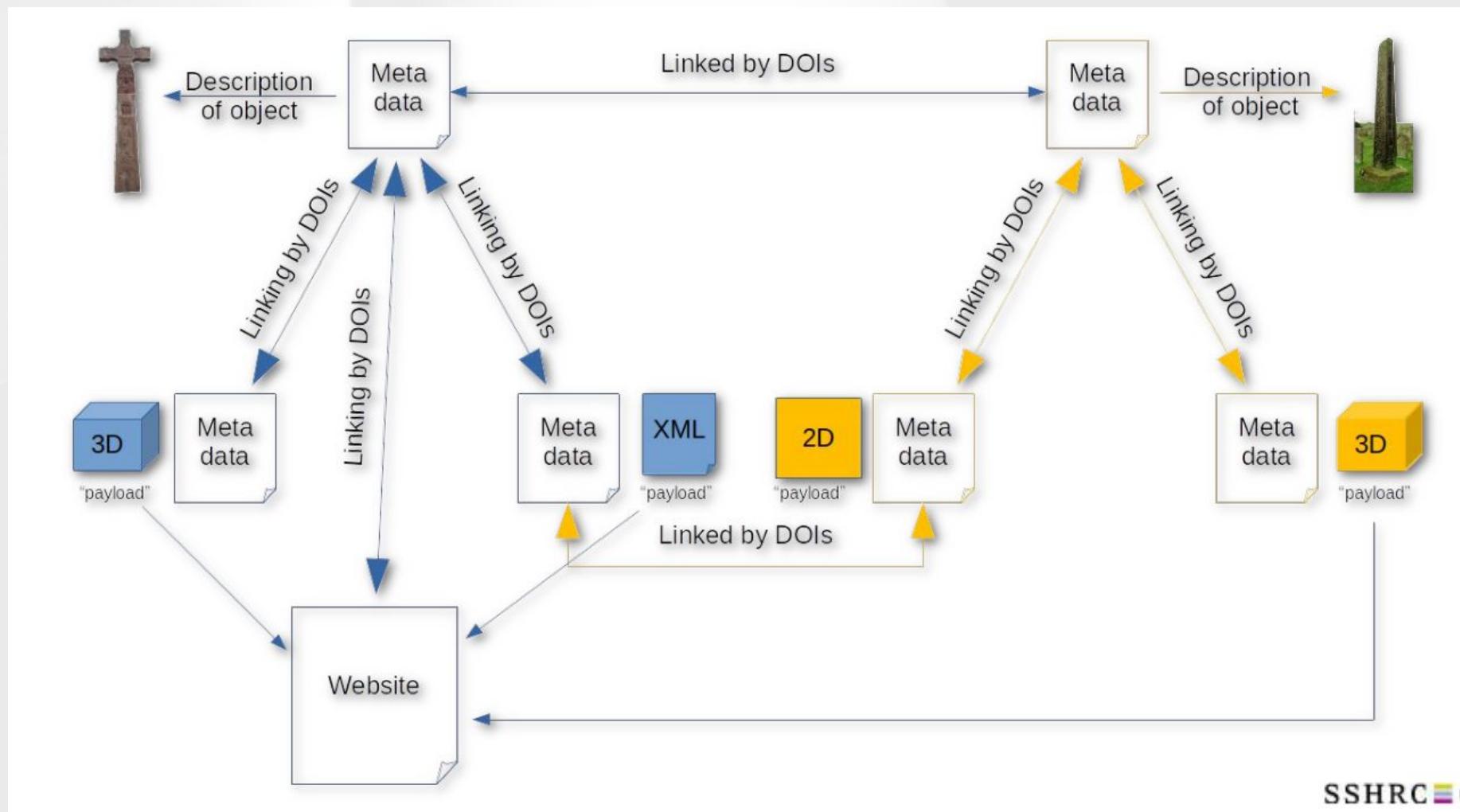
- **Flexible**
 - direct access to data (also thanks to descriptive metadata)
 - access single / group of objects
- **Extensible**
 - add, rearrange, or reuse material without negotiation
- **Authoritative**
 - preserve credit/responsibility for all contributions
- **Durable**
 - permanently discoverable and available
 - low/no maintenance

Zenodo record

- Metadata record + file(s)
- RDF (internal and external relations)
- Two kinds of DOIs:
 - “Conceptual” (latest)
 - “Version” (current)
- RESTful files URLs
 - No link rot



An edition is built around records





Conclusion

Conclusion

- Our approach
 - having a look at standards, frameworks, protocols currently available (LOD, IIIF) and see how they are supposed to work
 - direct experimentation with available tools (TEI, EVT)
- The good
 - the networked / distributed DSE is nearly there
 - current frameworks are sound and work well
- The bad
 - got to be careful in choosing the best methodological approach
- The ugly
 - when TEI and IIIF/LOD speak different languages a “translator” is needed (i.e. new tools must be implemented)

Credits

- **EVT2js** is being developed by
 - Giulia Cacioli Angelo Mario Del Grosso
 - Chiara Di Pietro Federica Spinelli
- The porting to Angular8 (**EVT2+**) is being done by
 - Giulia Cacioli Giacomo Cerretini
 - Chiara Di Pietro Guglielmo Lischi
 - Federica Spinelli Simone Zenzaro
- Project directed by R. Rosselli Del Turco and Chiara Di Pietro
- Thanks to all former developers!
 - Chiara De Martin Julia Kenny Raffaele Masotti
 - Greta Musu Jacopo Pugliese
 - Rocco Russo Ilaria Tiezzi



Thank you for your attention!