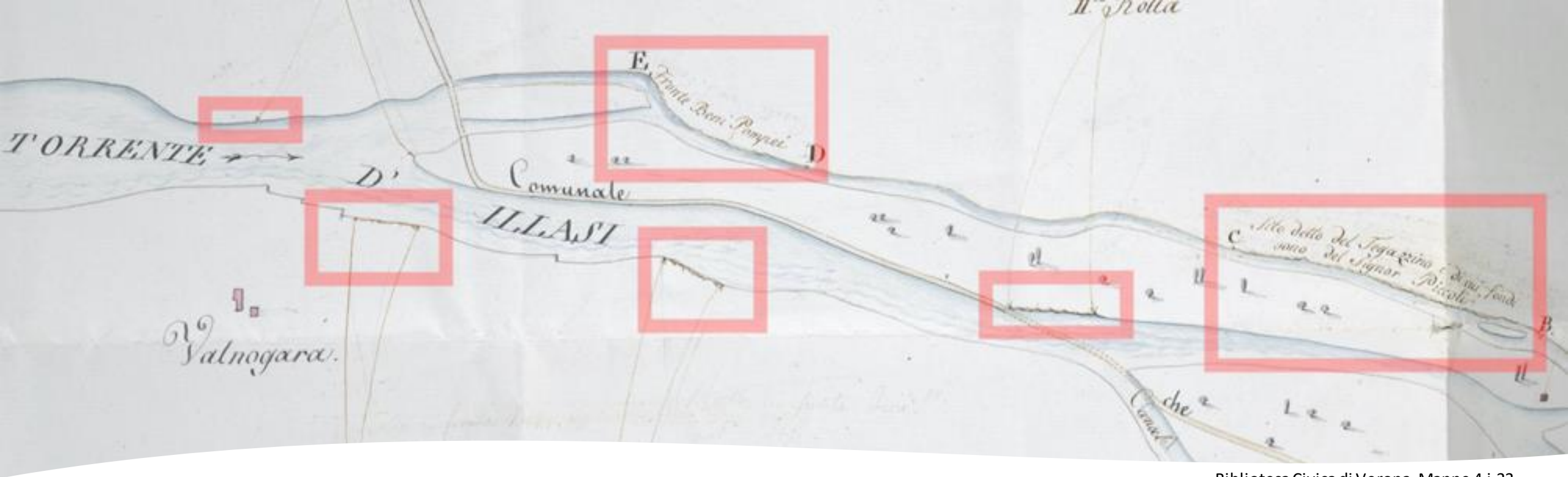




Biblioteca Civica di Verona, Mappe 4.i.33

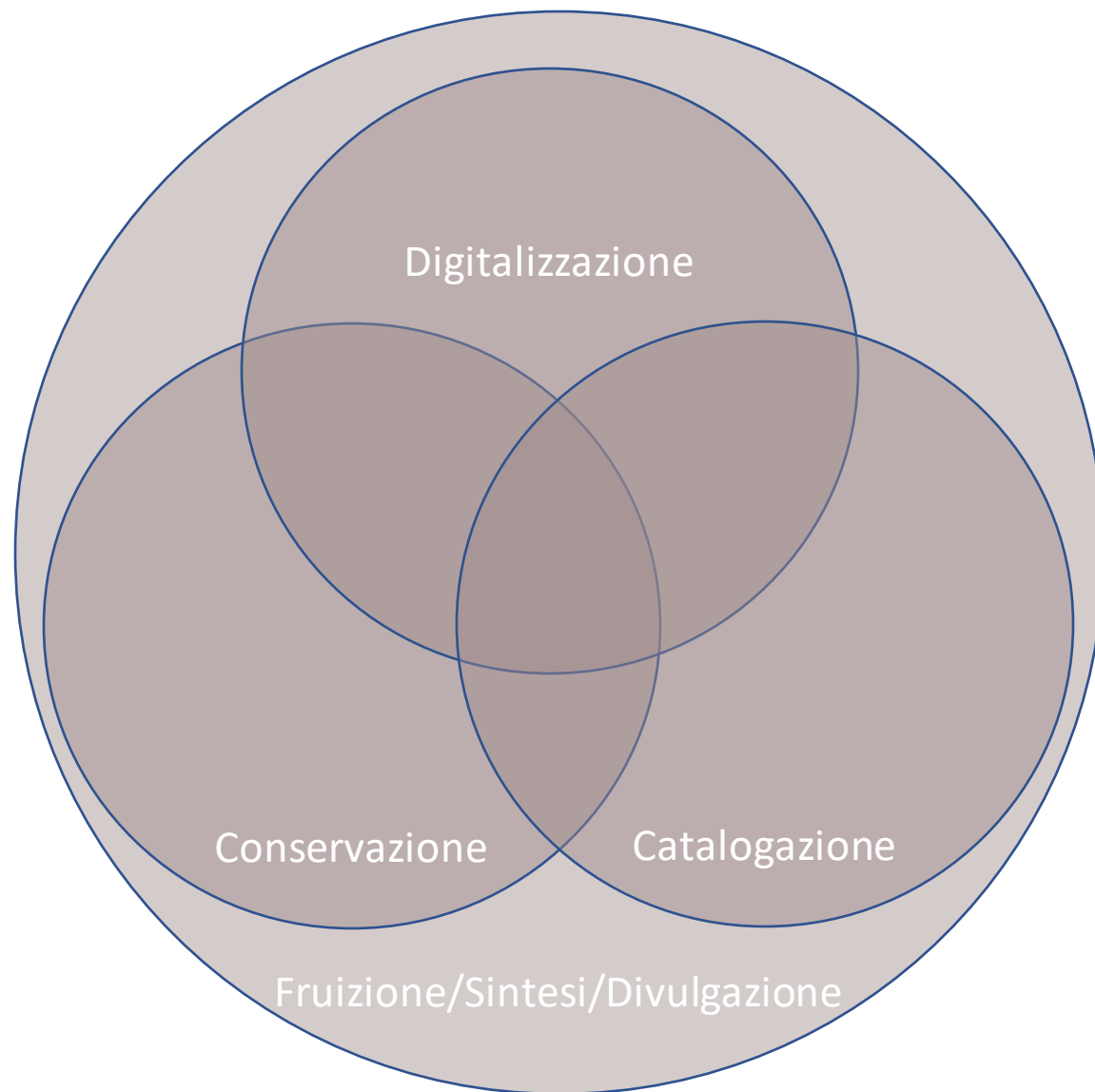
Strumenti e metodi per l'analisi e la condivisione di fonti geoiconografiche e letterarie:
il caso studio del laboratorio LaMeDan

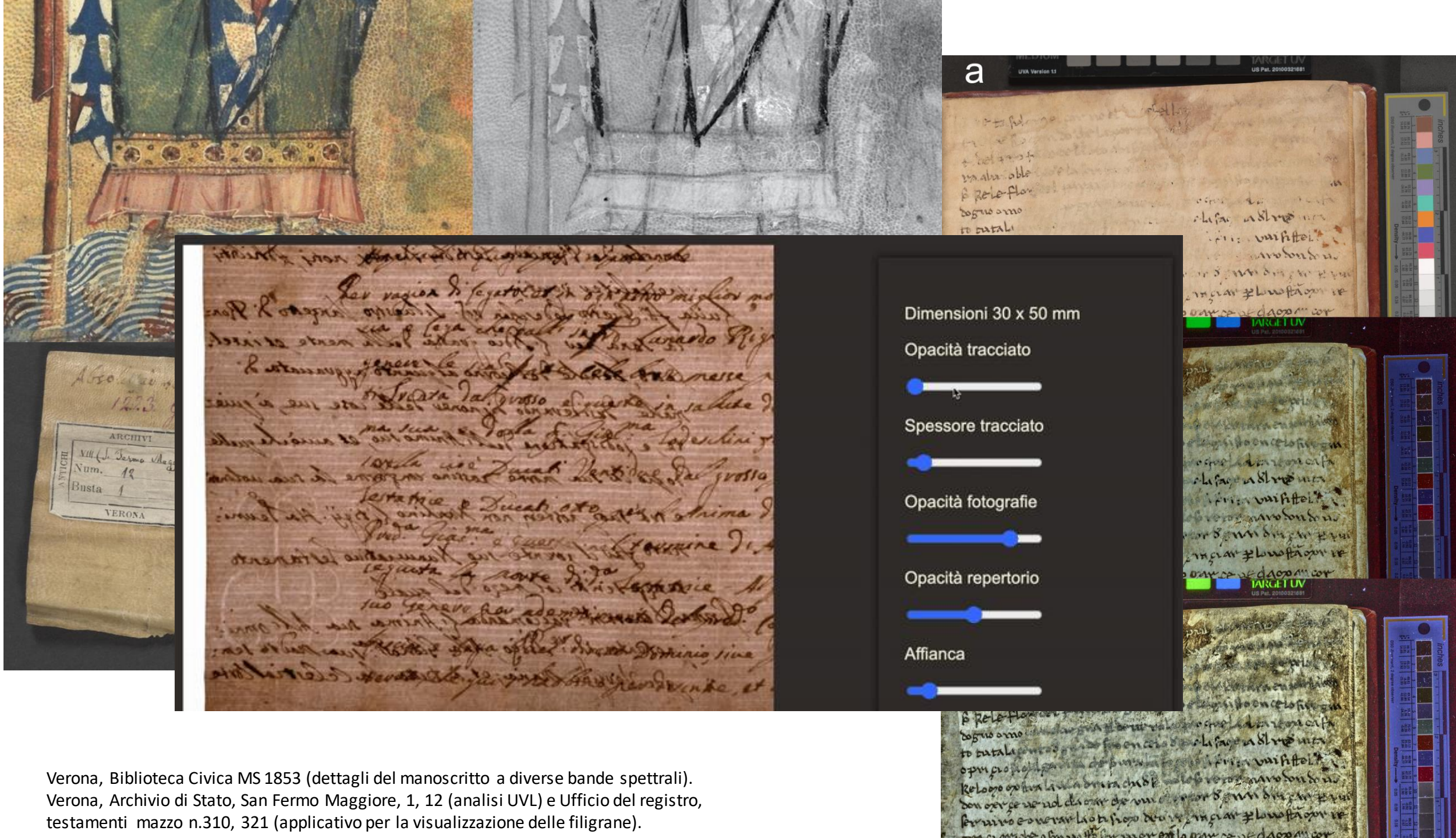
Andrea Brugnoli, Giacomo Marchioro

Sommario

- Introduzione al LaMeDan, Laboratorio di Studi Medievali e Danteschi.
- Utilizzo standard per l'annotazione di immagini: alcuni approcci per annotare fonti geo-iconografiche attraverso l'International Image Interoperability Framework e il Web Annotation Data Model

- ♦ **2014** Comitato cittadino *Dante a Verona 2015-2021.*
I Centenari danteschi
- ♦ **2016** Progetto **DascabiDa**
Dallo scriptorium carolingio alla biblioteca di Dante
/ From the Carolingian scriptorium to Dante's Library
- ♦ **2018** Fondazione del
LaMeDan - Laboratorio di Studi Medievali e Danteschi
 - ♦ **2019** Accordo di collaborazione con la Biblioteca Capitolare di Verona
 - ♦ **2021** Accordo di collaborazione con l'Archivio di Stato di Verona
 - ♦ **2022** Accordo di collaborazione con la Biblioteca Civica di Verona





Verona, Biblioteca Civica MS 1853 (dettagli del manoscritto a diverse bande spettrali).
Verona, Archivio di Stato, San Fermo Maggiore, 1, 12 (analisi UVL) e Ufficio del registro,
testamenti mazzo n.310, 321 (applicativo per la visualizzazione delle filigrane).

CONVENZIONI STANDARDS E LINEE GUIDA

I LIVELLI "TECNICI" DELLA DIGITALIZZAZIONE

SOFTWARE

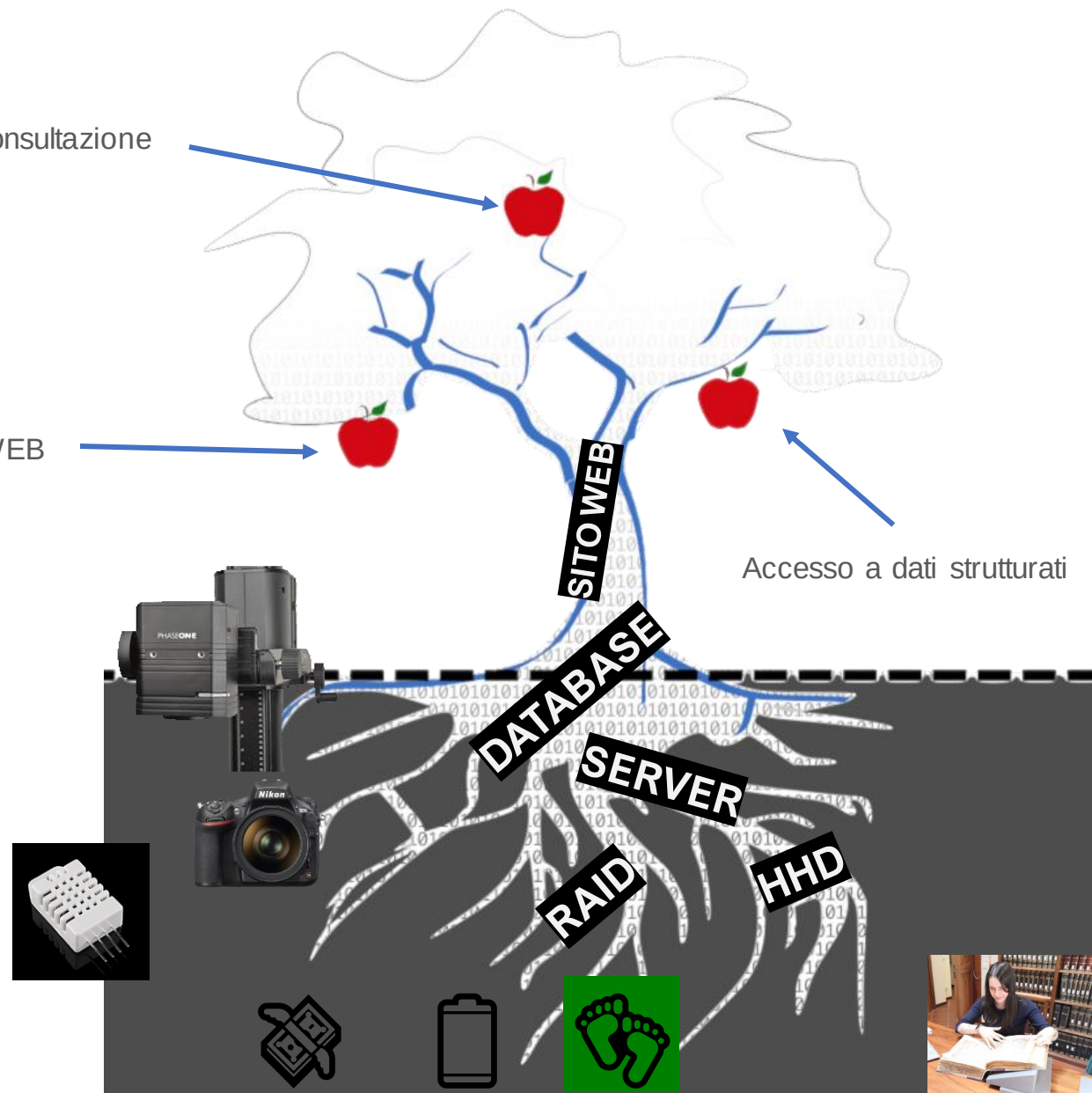
HARDWARE

RISORSE

Visualizzazione e consultazione
online

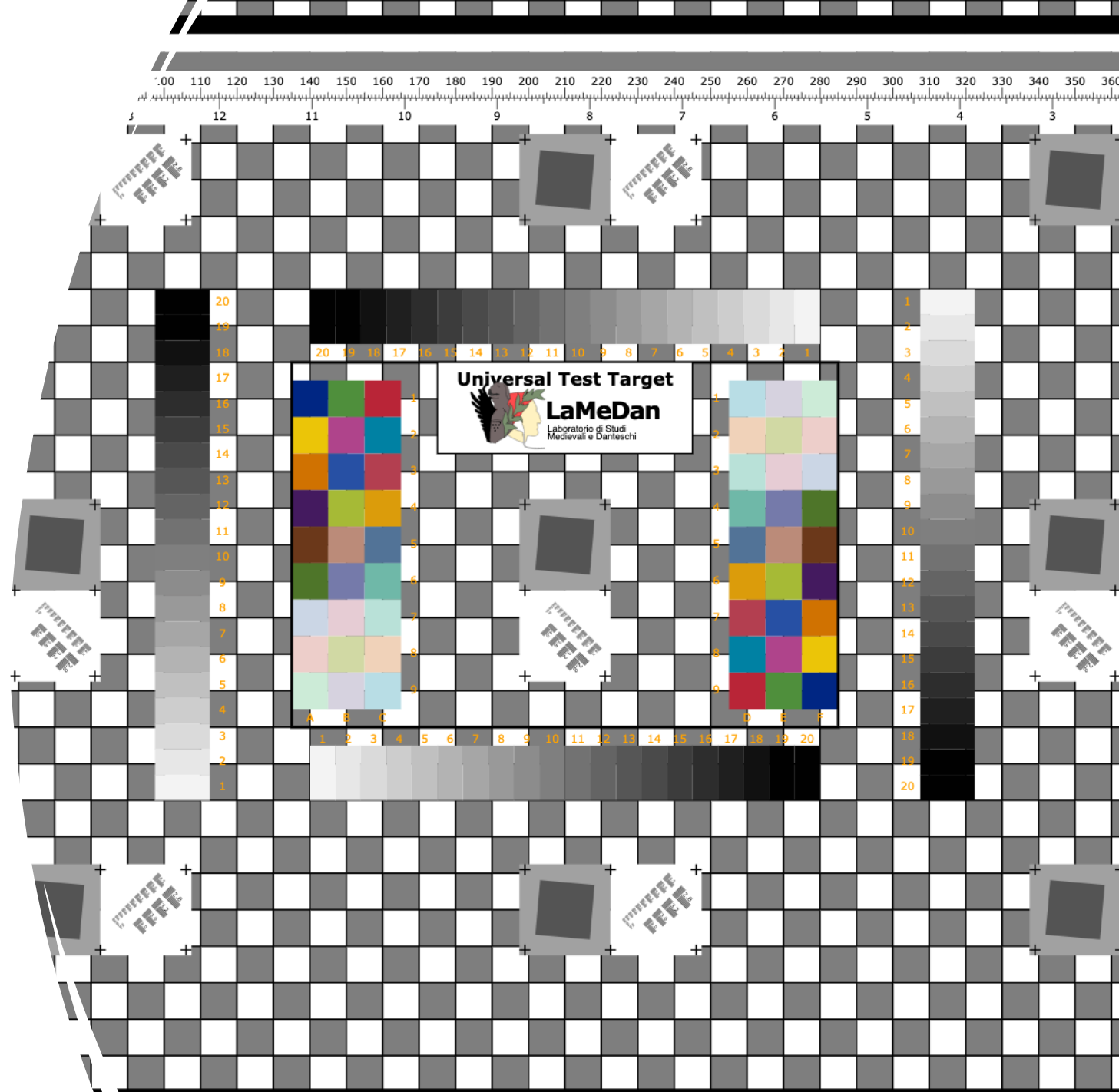
Nuovi contenuti su pagine WEB

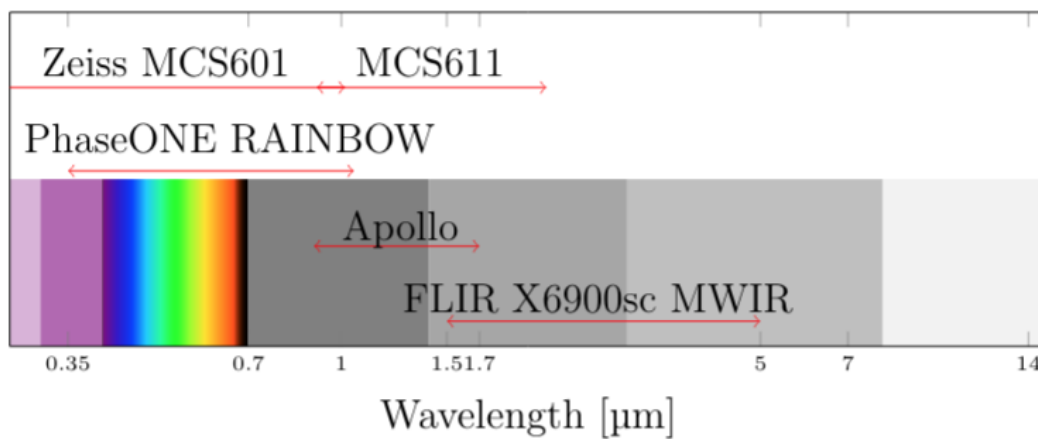
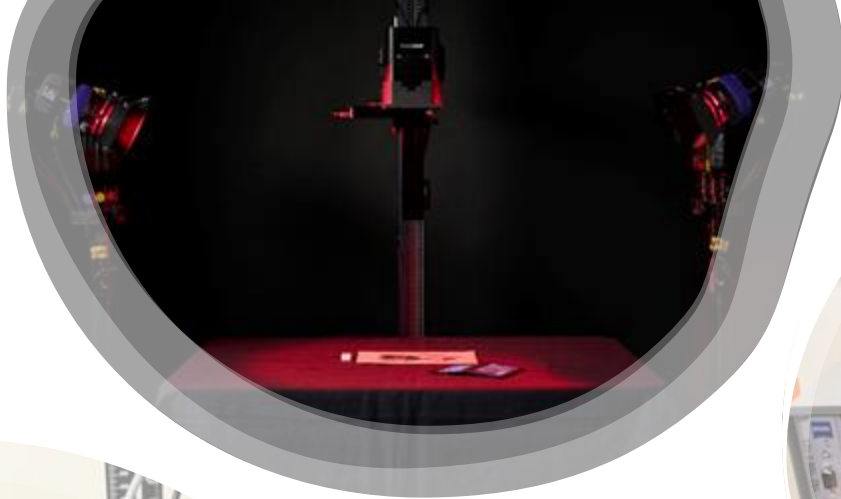
Accesso a dati strutturati



Qualità dell'immagine

- Spesso non viene posta molta attenzione alla qualità dell'immagine.
- Studiare e adottare le linee guida internazionali (ISO 19264, FADGI, Metamorphoze ...) per raggiungere la massima fedeltà dell'immagine acquisita.





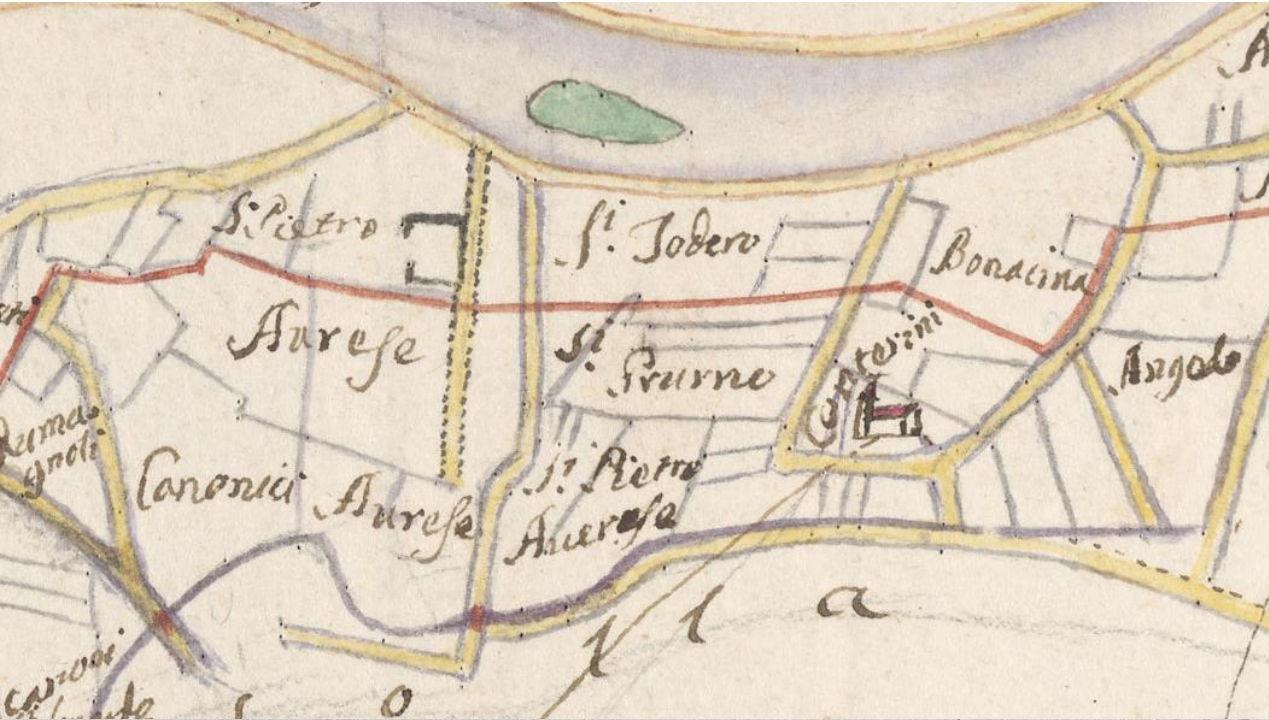
- Ultraviolet (UVB)
- Ultraviolet (UVA)
- Visible light
- NIR
- SWIR
- MWIR
- LWIR



OpDATECH

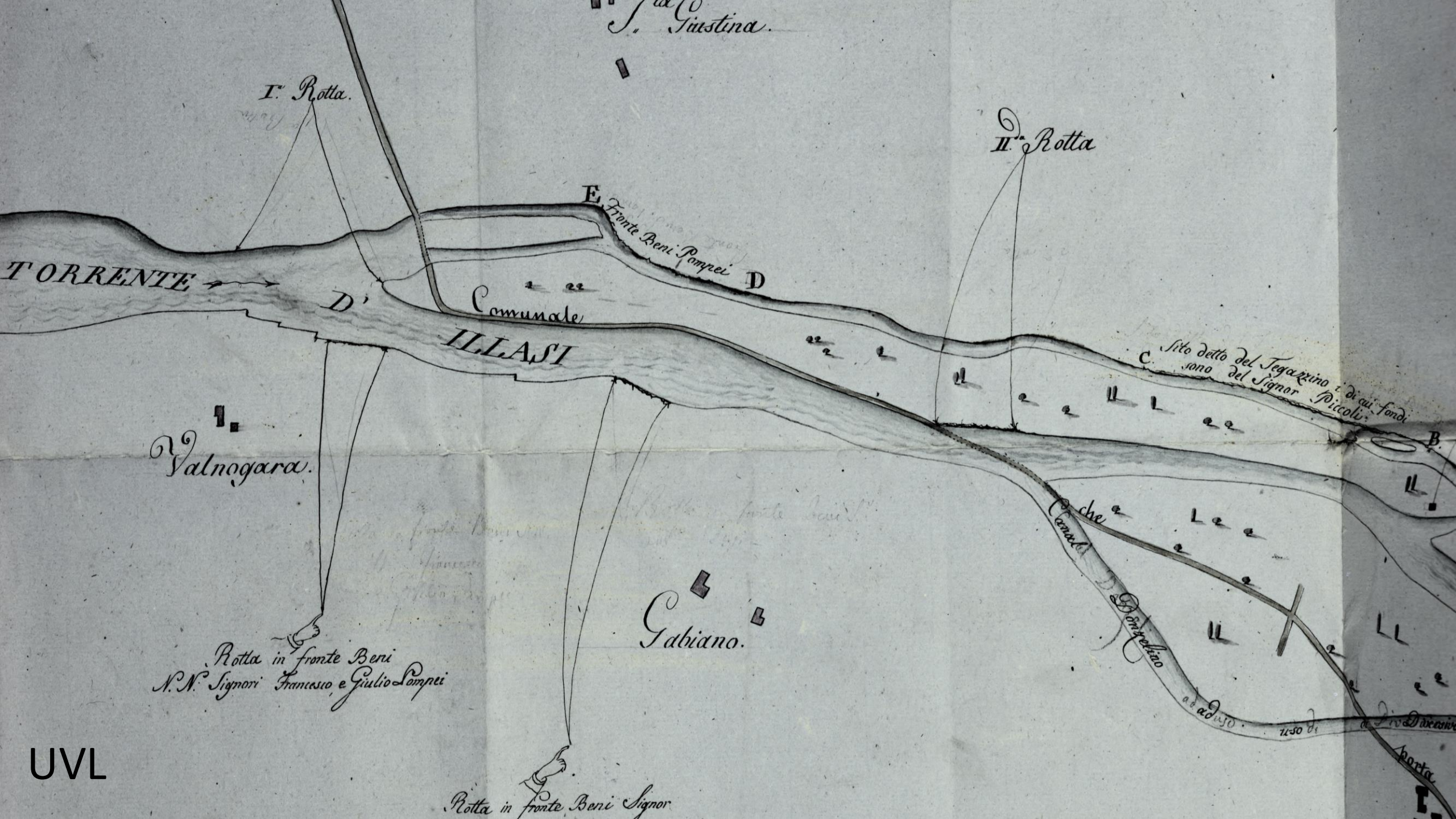
In collaborazione con:

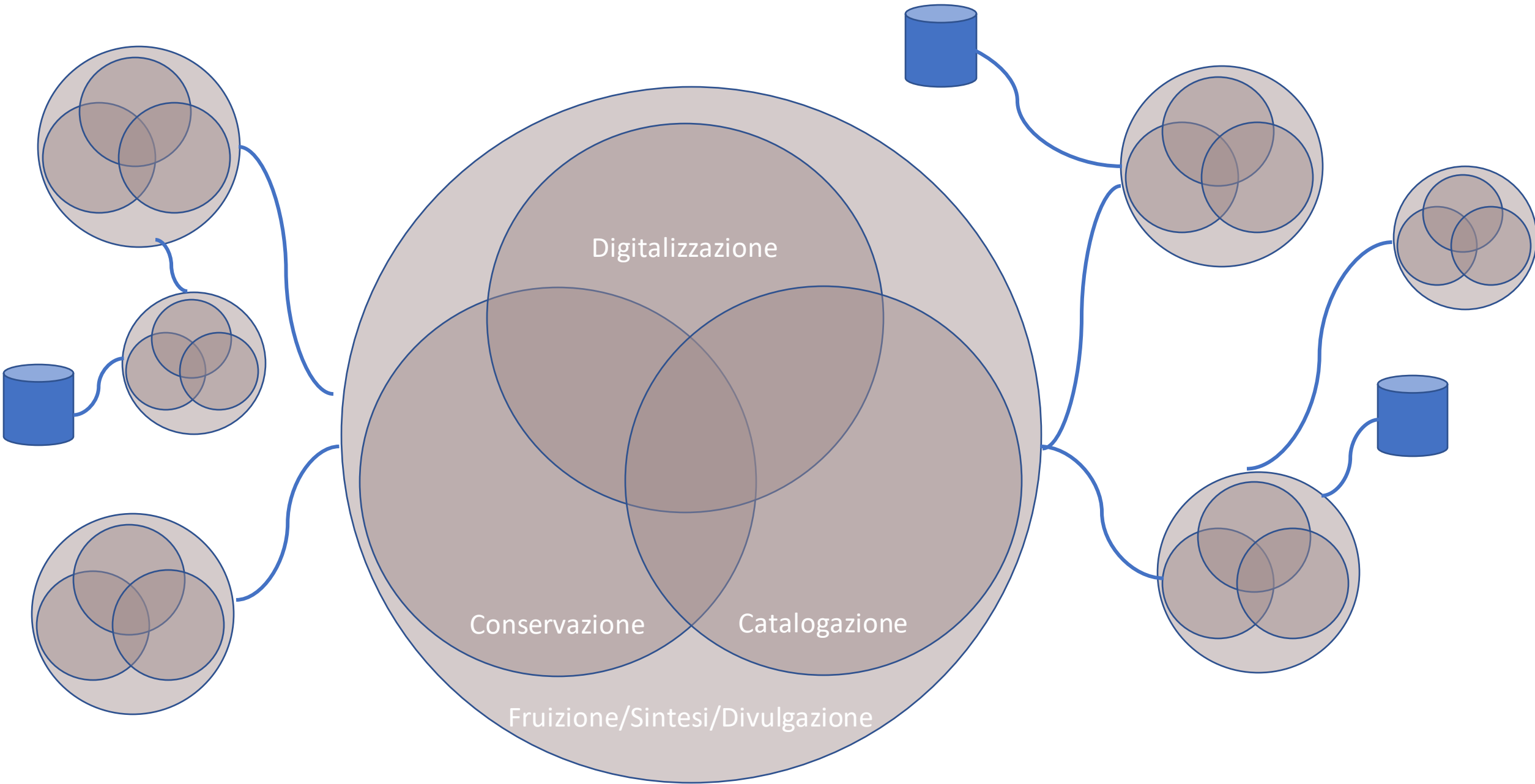
Optical Devices and Advanced Techniques for Cultural Heritage
Università di Verona











CONVENZIONI STANDARDS E LINEE GUIDA

I LIVELLI "TECNICI" DELLA DIGITAL LIBRARY

SOFTWARE

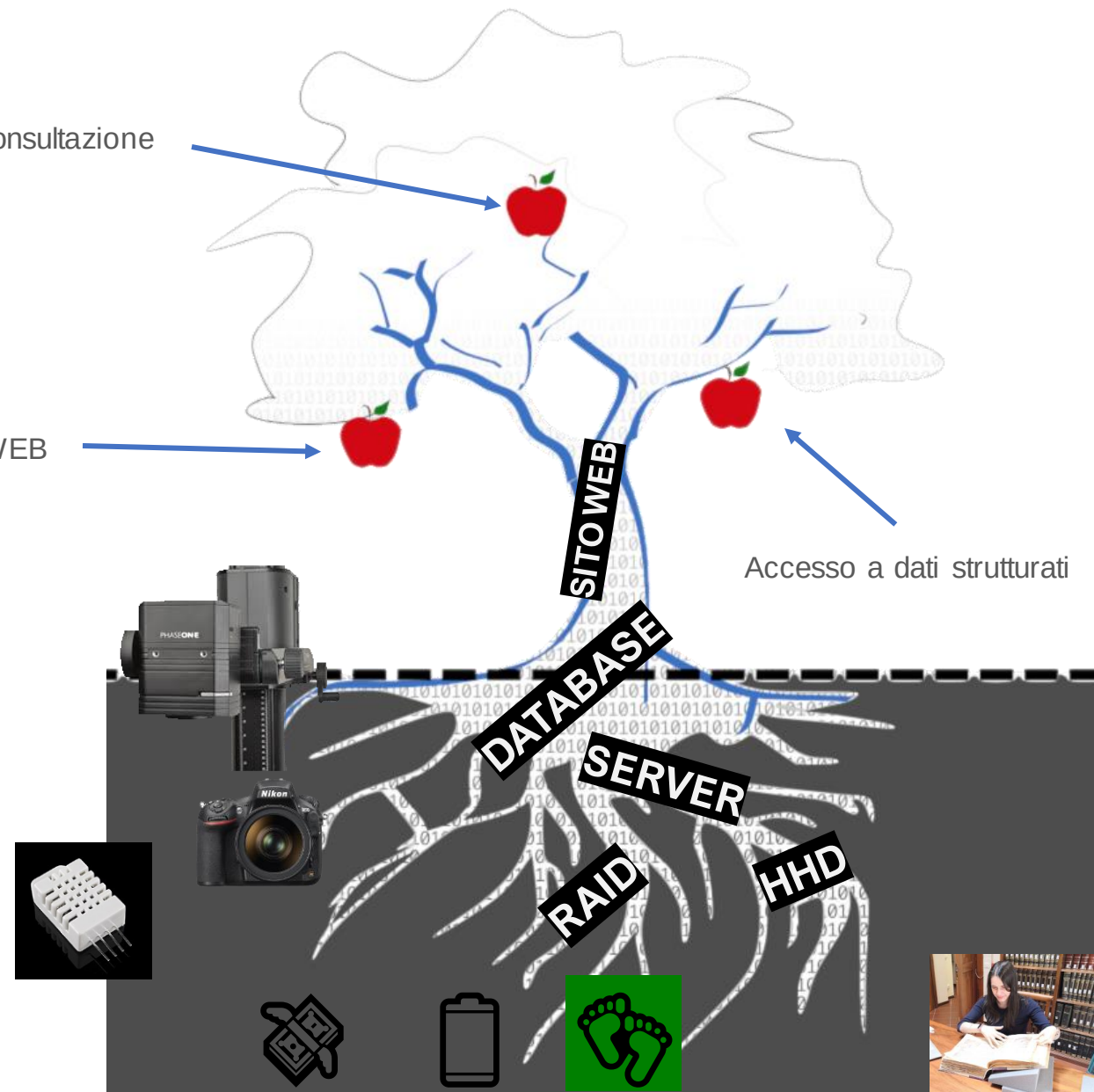
HARDWARE

RISORSE

Visualizzazione e consultazione
online

Nuovi contenuti su pagine WEB

Accesso a dati strutturati



Sviluppo di linee guida e standard

- Collaborazione nello sviluppo di standard e applicativi per l'interoperabilità e la visualizzazione dei dati (ringraziamento Glen Robson coordinatore tecnico IIIF, Trip Kirkpatrick, Yale University e Robert Casties, Max Planck Institute).
- International Image Interoperability Framework (IIIF) <https://iiif.io/>



Use Case

You want to keep a resolvable link between annotations (contained in an external Annotation Page) and the Manifest containing the Canvases they are pointing at.

Usually, annotations in an external Annotation Page point to a Canvas or a Canvas fragment. This can cause problems for annotation consuming viewers as the Canvas identifier doesn't have to resolve. To get the information from a Canvas a viewer needs access to the containing Manifest.



Use Case

An Annotation might be specific to a single image or a part of an image rather than the whole Canvas. For instance, you might want to annotate a painting detail that is only visible on a specific image of a multi-spectral set of images.

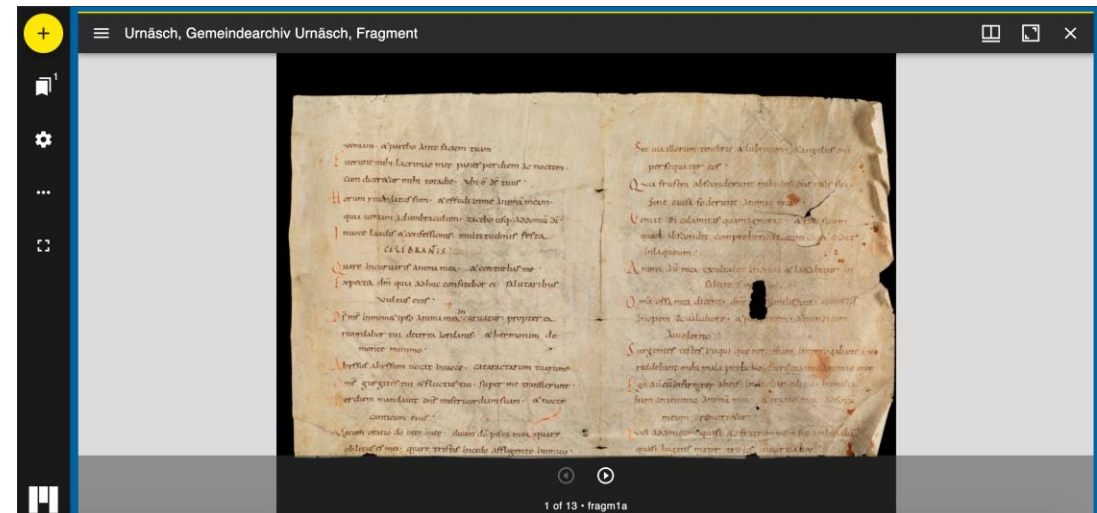


International Image Interoperability Framework (IIIF)



Consorzio formato da Università, biblioteche, aziende e centri di ricerca che sviluppa degli standard aperti per:

- Richiedere e manipolare immagini di grandi dimensioni attraverso gli image servers (image API)
- Presentare ed annotare le immagini in strutture complesse (presentation API)
- Ricercare (search API), limitare l'accesso (Authentication API) etc. Etc.



International Image Interoperability Framework: il manifest



Per permettere agli applicativi di visualizzare le informazioni e la struttura dell'opera IIIF adotta il formato JSON con cui vengono codificate le informazioni per permettere la visualizzazione della risorsa da parte di software.

Nella presentation API 3.0 si utilizzano diversi modelli di dati tra cui il WEB Annotation Data model uno standard del consorzio World Wide Web Consortium (W3C).

```
{
  "@context": "http://iiif.io/api/presentation/3/context.json",
  "id": "https://iiif.io/api/cookbook/recipe/0021-tagging/manifest.json",
  "type": "Manifest",
  "label": {
    "en": [
      "Picture of Göttingen taken during the 2019 IIIF Conference"
    ]
  },
  "items": [
    {
      "id": "https://iiif.io/api/cookbook/recipe/0021-tagging/canvas/pl1",
      "type": "Canvas",
      "height": 3024,
      "width": 4032,
      "items": [
        {
          "id": "https://iiif.io/api/cookbook/recipe/0021-tagging/page/p1/1",
          "type": "AnnotationPage",
          "items": [
            {
              "id": "https://iiif.io/api/cookbook/recipe/0021-tagging/annotation/p0001-image",
              "type": "Annotation",
              "motivation": "painting",
              "body": {
                "id": "https://iiif.io/api/image/3.0/example/reference/918ecd18c2592080851777620de9bcb5-göttingen/full/max/0/default.jpg",
                "type": "Image",
                "format": "image/jpeg",
                "height": 3024,
                "width": 4032,
                "service": [
                  {
                    "id": "https://iiif.io/api/image/3.0/example/reference/918ecd18c2592080851777620de9bcb5-göttingen",
                    "profile": "level1",
                    "type": "ImageService3"
                  }
                ]
              }
            }
          ]
        }
      ]
    }
  ]
}
```

Un esempio di utilizzo usando l'iconografia rateriana della Biblioteca Capitolare di Verona



ms. CXIV (106)
Biblioteca
Capitolare di
Verona

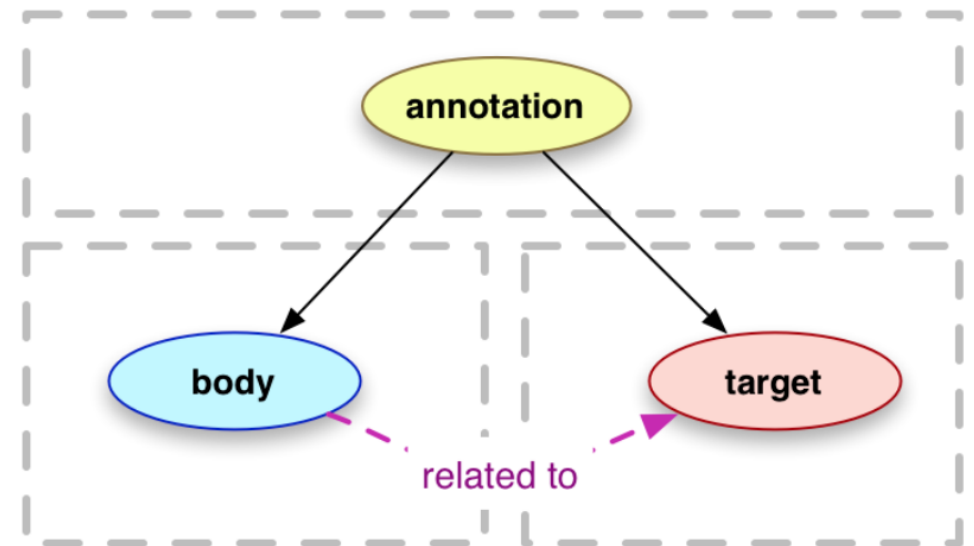
Annotare contenuti web usando il Web Annotation Data model e IIF

- “The Web Annotation Data Model specification describes a structured model and format to enable annotations to be shared and reused across different hardware and software platforms. Common use cases can be modeled in a manner that is simple and convenient, while at the same time enabling more complex requirements, including linking arbitrary content to a particular data point or to segments of timed multimedia resources.”
- <https://www.w3.org/TR/annotation-model/>

(Robert Sanderson, J. Paul Getty Trust, rsanderson@getty.edu,

Paolo Ciccarese, Massachusetts General Hospital,
paolo.ciccarese@gmail.com

Benjamin Young, John Wiley & Sons, Inc.,
byoung@bigbluehat.com)

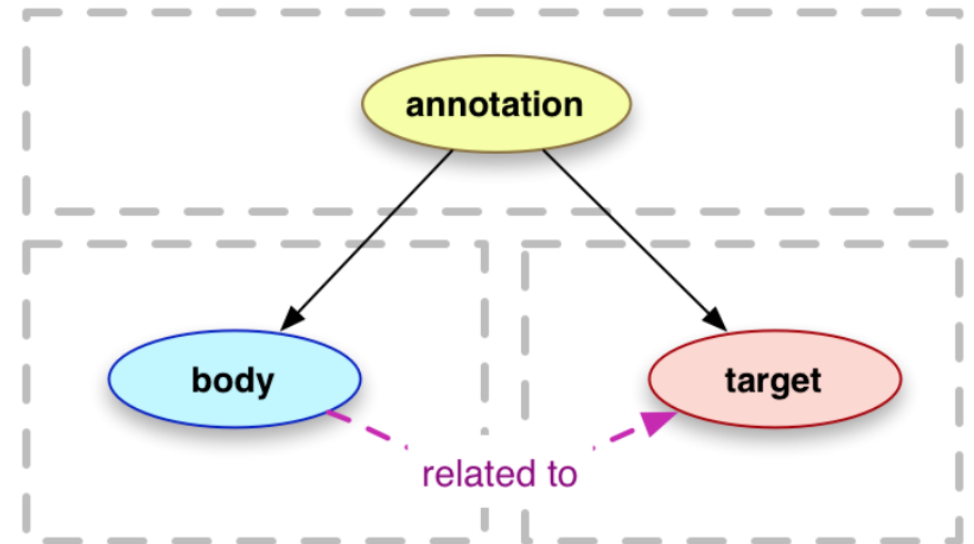


Annotare contenuti web usando il Web Annotation Data model e IIF

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

EXAMPLE 1: Basic Annotation Model

```
{  
  "@context": "http://www.w3.org/ns/anno.jsonld",  
  "id": "http://example.org/anno1",  
  "type": "Annotation",  
  "body": "http://example.org/post1",  
  "target": "http://example.com/page1"  
}
```

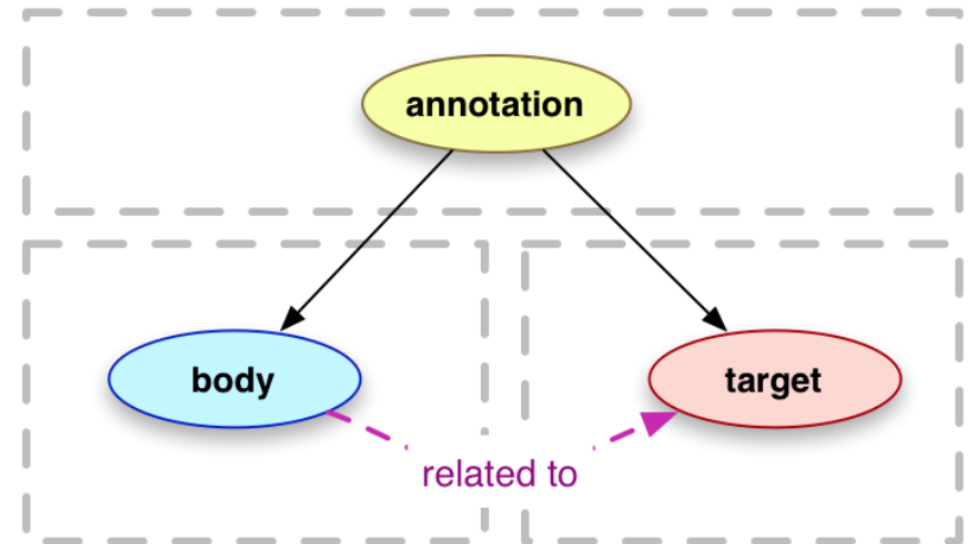


Annotare contenuti web usando il Web Annotation Data model e IIIF

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

EXAMPLE 7: Equivalent Textual Body (rielaborato)

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno7",
  "type": "Annotation",
  "body": {
    "type": "TextualBody",
    "value": "Arena di Verona",
    "format": "text/plain"
  },
  "target":
    "http://example.org/rateriana.jpeg#xywh=1452,550,917,939"
```



Annotare contenuti web usando il Web Annotation Data model e IIF

The screenshot displays a digital viewer interface for a manuscript. The main content is a manuscript page featuring a detailed illustration of a city, likely Verona, with a large amphitheater (the Arena di Verona) in the foreground. The illustration is rendered in a historical style with various buildings, towers, and a river. The text on the page includes "T. In Summo Montis Castrum Prospektat in u" and "Dealea factum arte viisque terris." A purple rectangular annotation box highlights the arena, with the word "THEATRUM" visible within it. The interface includes a sidebar on the left with a yellow plus icon, a list of annotations, and a search bar. The top right corner shows window controls (maximize, zoom, close). The bottom right corner displays a color calibration bar and the text "1 of 1 • 1".

Iconografia rateriana

Annotations

Showing 2 annotations

ITEM: [1]

Arena di Verona

Personificazione dell'Adige

THEATRUM

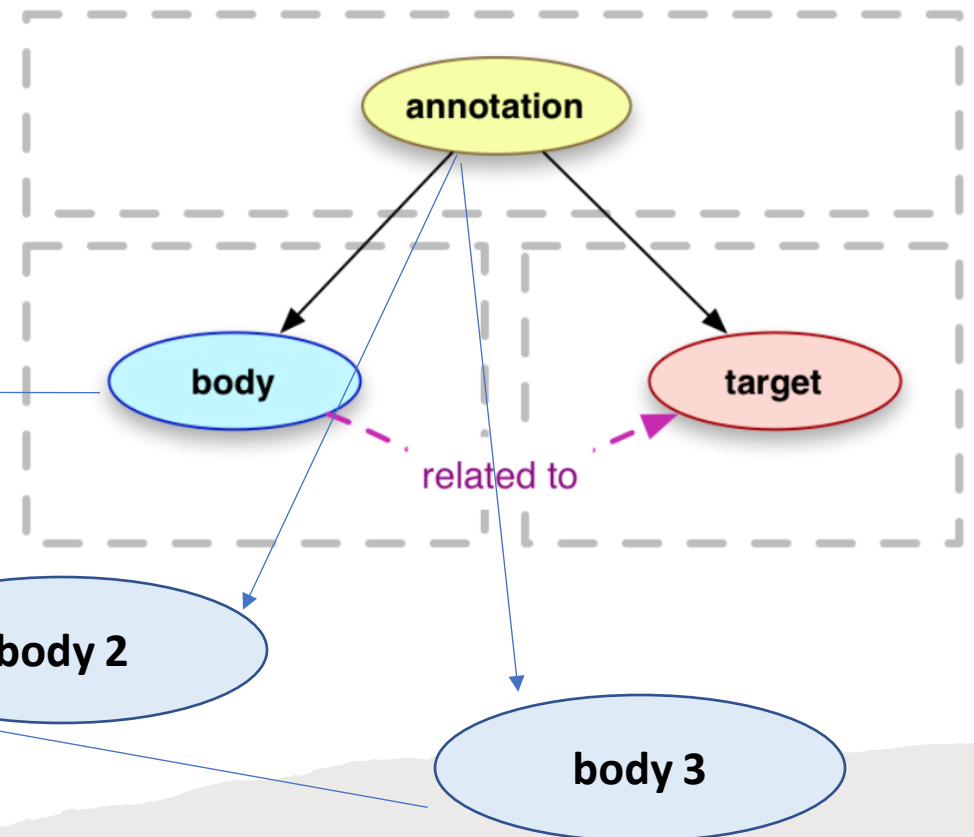
1 of 1 • 1

Annotare contenuti web usando il Web Annotation Data model e IIIF: uso di name authority database (per esempio geonames, wikidata)

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

EXAMPLE 7: Equivalent Textual Body (rielaborato)

```
{ "@context": "http://www.w3.org/ns/anno.jsonld",  
  "id": "http://example.org/anno7",  
  "type": "Annotation",  
  "body": [  
    { "type": "TextualBody",  
      "value": "Arena di Verona",  
      "format": "text/plain",  
      "source": "https://www.geonames.org/7303230", },  
    { "type": "SpecificResource",  
      "source": "https://www.wikidata.org/wiki/Q641556" },  
    { "type": "SpecificResource",  
      "source": "https://www.wikidata.org/wiki/Q641556" },  
  ],  
  "target": "http://example.org/rateriana.jpeg#xywh=1452,550,917,939"
```



Annotare contenuti web usando il Web Annotation Data model e IIIF

The screenshot displays a web application interface for viewing and annotating a historical manuscript. The interface is divided into a sidebar on the left and a main viewing area on the right.

Sidebar:

- Top: A yellow circle with a plus sign (+).
- Navigation icons: A book icon with a '1', a gear icon, and a list icon.
- Section: "Iconografia rateriana" (with a hamburger menu icon).
- Annotations section: A blue bar with "Annotations" and a link icon. Below it, a toggle switch is turned off.
- Status: "Showing 2 annotations".
- Item list: "ITEM: [1]" followed by two items: "Arena di Verona" and "Personificazione dell'Adige".

Main Viewing Area:

- Top right: Window control icons (maximize, zoom in, zoom out, close).
- Manuscript page: A historical manuscript page showing a cityscape illustration. The illustration depicts a fortified city with a river flowing through it. The word "THEATRUM" is visible on a circular structure in the foreground. Latin text is written in red ink at the top and bottom of the page. A yellow box highlights a specific part of the illustration, likely the figure of Adige personified as a river.
- Bottom: A color calibration bar and a page indicator "1 of 1".

Iconclass

ICONCLASS [Browse & Search](#) [Documentation](#) [News](#)

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Feedback

Forum

Browse

[Search](#)

- ▶ 25G · plants; vegetation
- ▶ 25GG · fantastic plants, fabulous vegetation
- ▶ 25H · landscapes
 - ▶ 25H1 · landscapes in the temperate zone
 - ▶ 25H2 · landscapes with waters, waterscapes, seascapes (in the temperate zone)
 - ▶ 25H21 · water course
 - ▶ 25H211 · spring, source of river or stream
 - ▶ 25H212 · brook
 - ▶ 25H213 · river
 - ▶ 25H2130 · river personified, 'Fiumi' (Ripa)
 - ▶ 25H2130(...) · river personified (with NAME)
 - ▼ 25H2130(ADIGE) · personification of river Adige; 'Adige' (Ripa)
 - 25HH2130(ADIGE) · personification of river Adige; 'Adige' (Ripa) - HH - ideal landscapes
 - ▶ 25H2130(ARNO) · personification of river Arno; 'Arno' (Ripa)
 - ▶ 25H2130(CLAMOR) · river personified: Clamor
 - ▶ 25H2130(DANUBE) · personification of river Danube; 'Danubio' (Ripa)
 - ▶ 25H2130(GANGES) · personification of river Ganges; 'Gange', 'Gange Fiume' (Ripa)
 - ▶ 25H2130(INDUS) · personification of river Indus; 'Indo' (Ripa)
 - ▶ 25H2130(JORDAN) · river personified: Jordan
 - ▶ 25H2130(MEANDER) · personification of river Meander; 'Historia' (Ripa)
 - ▶ 25H2130(NIGER) · personification of river Niger; 'Niger' (Ripa)

2 · Nature

25 · earth, world as celestial body

25H · landscapes

25H2 · landscapes with waters, waterscapes, seascapes (in the temperate zone)

25H21 · water course

25H213 · river

25H2130 · river personified, 'Fiumi' (Ripa)

25H2130(...) · river personified (with NAME)

📄 **25H2130(ADIGE)** 📄 personification of river Adige;
'Adige' (Ripa)

Search with these related keywords:

Adige (river), Fiumi, Ripa, earth, ideal landscape, landscape, nature, personification, river, river-god, water course, waters, waterscape, world

Add more detail:

25HH2130(ADIGE) · personification of river Adige; 'Adige' (Ripa) - HH - ideal landscapes

25H2130(ADIGE)(+0) · personification of river Adige; 'Adige' (Ripa) (+ variant)

25H2130(ADIGE)(+1) · personification of river Adige; 'Adige' (Ripa) (+ landscape with figures, staffage)

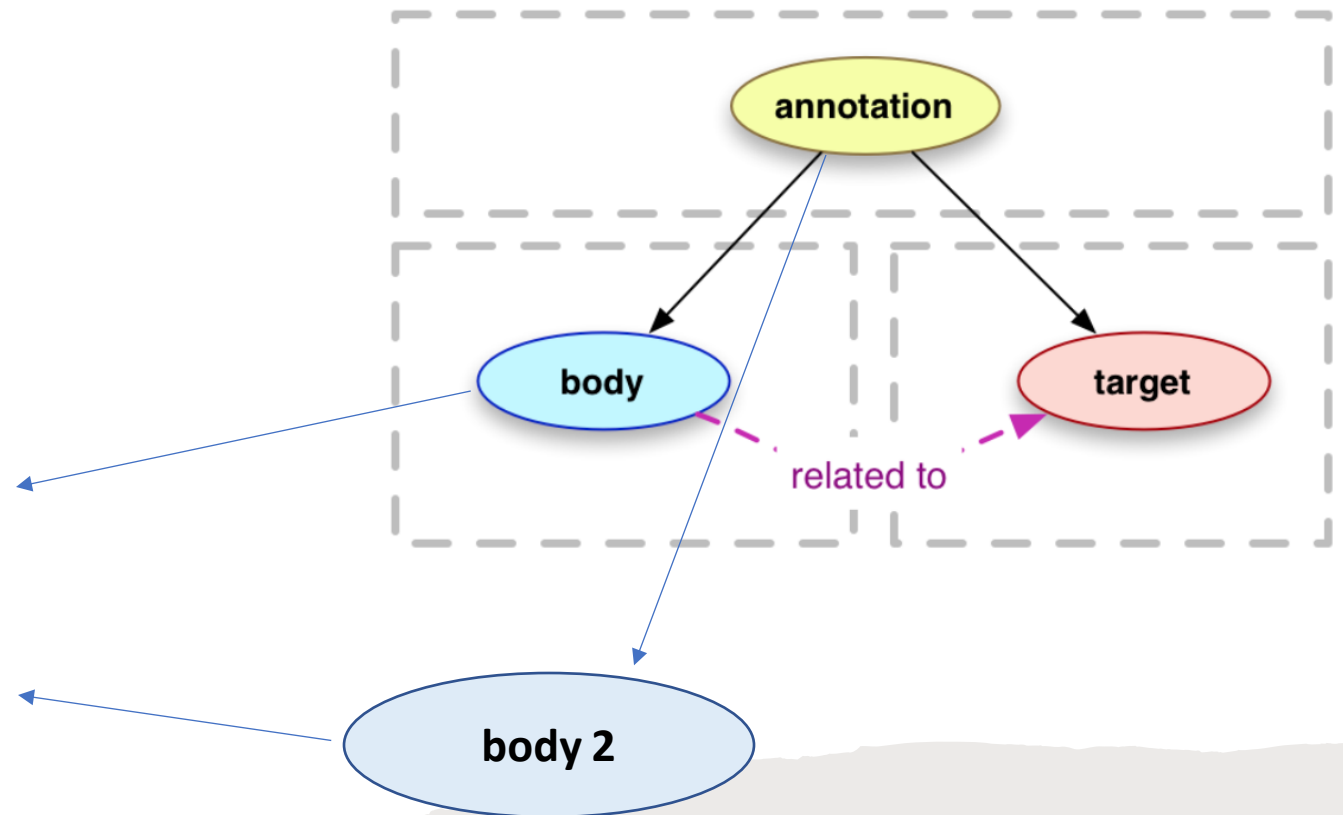
For more features, [you need to log in](#).

Annotare contenuti web usando il Web Annotation Data model e IIF: uso di name authority database (per esempio ICONCLASS)

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

EXAMPLE 7: Equivalent Textual Body (rielaborato)

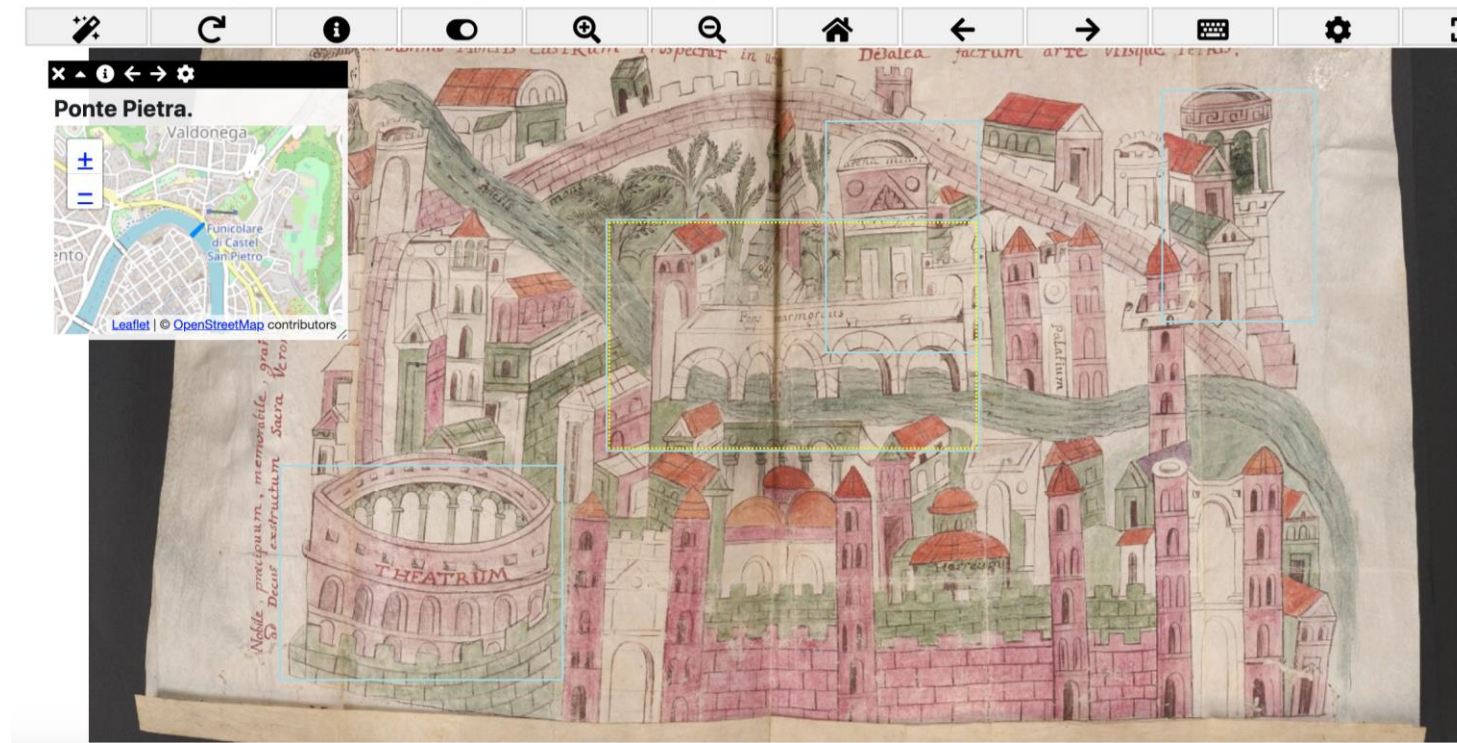
```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno7",
  "type": "Annotation",
  "body": [
    {
      "type": "TextualBody",
      "value": "Personificazione fiume Adige",
      "format": "text/plain"
    },
    {
      "type": "SpecificResource",
      "source": "https://iconclass.org/25H2130\(ADIGE\)",
      "target": "http://example.org/target1"
    }
  ]
}
```

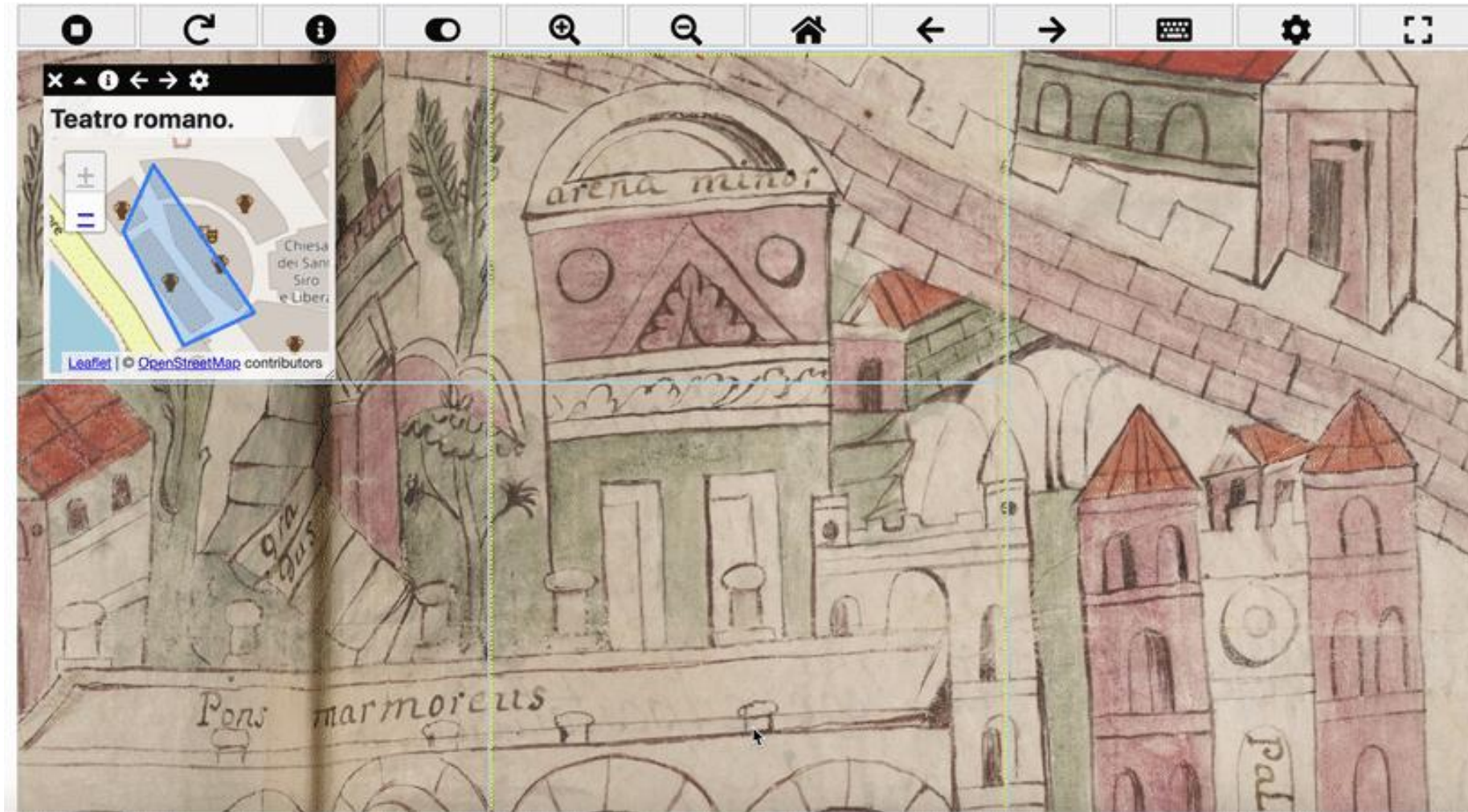


Annotare contenuti web usando il Web Annotation Data model e IIIF: assegnare aree dell'immagine a regioni della cartografia moderna

Alcune applicazioni di cartografia più convenzionali sono gestite da gruppi specifici.

<https://iiif.io/community/groups/maps/>





Riflessioni conclusive

Un approccio integrato (conservazione, studio e standardizzazione) permette uno studio più completo e maggiori prospettivi di riuso del dato.

Sono disponibili alcune tecnologie che permettono di annotare immagini e fonti iconografiche (Il Web Annotation Data Model combinato con IIIF offre diverse possibilità per la visualizzazione e la codifica di fonti geo-iconografiche.) , si deve forse valutare la loro efficacia su casi concreti.

L'introduzione di name authority (WIKIDATA, GEONAMES e ICONCLASS) e l'aggregazione dei dati aumenterebbe notevolmente le possibilità di ricerca.