

# An introduction to EVT - Edition Visualization Technology

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EVT GitHub: <https://github.com/evt-project>  
DISH: <https://www.dish.unito.it/>



UNIVERSITÀ  
DI TORINO

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# The EVT project - Edition Visualization Technology

- EVT ([home page](#)) was born as the browser component of the Digital Vercelli Book edition project
  - the software tools then available were too limited or complicated, or proprietary, or tied to a specific OS, or a mix of all these things
- basic needs:
  - a viewer for ms images with TEI diplomatic transcription, image-text linking, two edition levels, text search
  - simple to use and deploy, Web standards-compliant
- designed from the start to be a modular tool, so that it could evolve in a general purpose tool useful for other projects
- this has proved to be a good idea since new features have been implemented thanks to many collaborations

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## EVT main features

- distributed as **open source** software: you're free to use and modify it
- aiming at covering the most common needs for TEI XML-based editions
  - digital facsimile
  - diplomatic / interpretative edition together with manuscript scans
  - critical edition
- rich functionality
  - image zoom, miniature navigation, manuscript quire structure etc.
  - text search, named entities support, lists of specific elements etc.
- using Web standards (HTML 5, CSS, JavaScript) for **long term access**
- **modular design** to increase ease of adding / modifying features
  - a prêt-a-porter tool, but highly **flexible** and **configurable**

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# User-friendly by design

- easy to use for the editor:
  - conceptual **separation** between data and software: you work on the encoding without having to worry about the viewer
  - **configurable layout**: the editor decides which functionality will be visible and available in the published edition
  - **automatic operation**: once configured and data is in the appropriate folders, EVT produces the Web edition automatically
  - **client only**: no need to install (and maintain!) server side software, just copy the EVT folder on the Web and the edition is ready
- easy to use for the reader:
  - **clean layout**, effective handling of the available screen space
  - **easy navigation** by means of the available views

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# Current development status

- over time (2013 → 2025) three versions of EVT have been developed:
  - **EVT 1:** diplomatic editions (or single witness critical editions) support, based on XSLT 2 and web technologies [2013 → December 2019 final EVT 1.3 version published]
  - **EVT 2:** a complete “reboot” of the source code based on the MVC design pattern and on the **AngularJS** framework [beta 2 published June 2020]
  - **EVT 3:** new version based on the **Angular** framework [first beta released October 2024]
- why rewriting the source code periodically? we do not want to, but:
  - the initial XSLT 2-based framework was only suitable for the basic needs of a digital facsimile with corresponding diplomatic / interpretative edition → code rewrite
  - the move from AngularJS to Angular was dictated by Google → code migration
  - we need flexibility but also long term maintenance, therefore a suitable development framework: the MVC design pattern is perfect under this regard



# EVT 1: the initial version

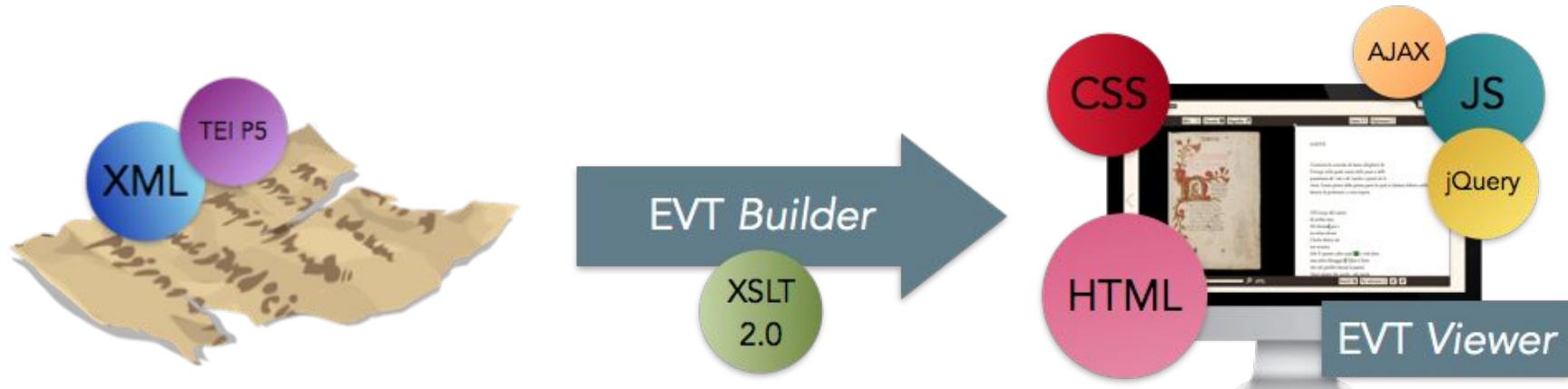


# EVT 1: based on an XSLT 2 framework

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- Two main units:
  - **EVT Builder:** chain of XSLT 2.0 transformations
  - **EVT Viewer:** web application (HTML, CSS etc.) to visualize in a browser the results of the transformations as a Web edition



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# Main features

- Support for diplomatic and/or interpretative editions (TEI Transcription of Primary Sources module)
  - multiple edition levels
  - handling of special characters (TEI Gaiji module)
  - text-image linking (hotspot, line-to-line thanks to the TEI digital facsimile)
  - prefatory matter (support for <msDesc>)
  - internal search engine with support for special characters
  - named entities
- More features added in the final version (v. 1.3):
  - translations
  - verses displayed as prose
  - visualization of the fascicular structure of the manuscript thanks to [VisColl](#)

The screenshot shows a digital manuscript viewer for the Vercelli Book. On the left is a photograph of a folio from the manuscript. To its right is a transcription of the text in Old Norse. The transcription includes several lines of text with some words highlighted in blue or red, likely indicating specific features like names or titles. The viewer interface includes standard controls for navigating through the pages and zooming.

## Digital Vercelli Book

A Vital-DH@Vital-IT project. The images are property of the Marciana Library, all rights reserved.

This screenshot displays a manuscript page from the Tarsian collection, viewed through the HumaRec software. The page contains dense handwritten text in a dark ink. To the right of the page, there is a diplomatic transcription of the text, where each line of the original is followed by a modernized version in a different color. The transcription is in Arabic script. The viewer includes a search function and various navigation tools.

## Tarsian / HumaRec

The screenshot shows a digital manuscript viewer for the Codice Pelavicino. It features a photograph of a folio on the left and its corresponding transcription on the right. The transcription is in Latin and includes several lines of text with some words highlighted in blue or red. The viewer interface includes standard controls for navigating through the pages and zooming.

## Codice Pelavicino Digitale

This screenshot shows a digital document viewer for a file named 'vo-C\_63\_1...'. The left side of the screen displays a scanned page of a document with a light blue background. The right side shows the transcription of the text, which appears to be a formal letter or report. The transcription is in French and includes several lines of text with some words highlighted in blue or red. The viewer interface includes standard controls for navigating through the pages and zooming.

## CVCE

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# Development problems

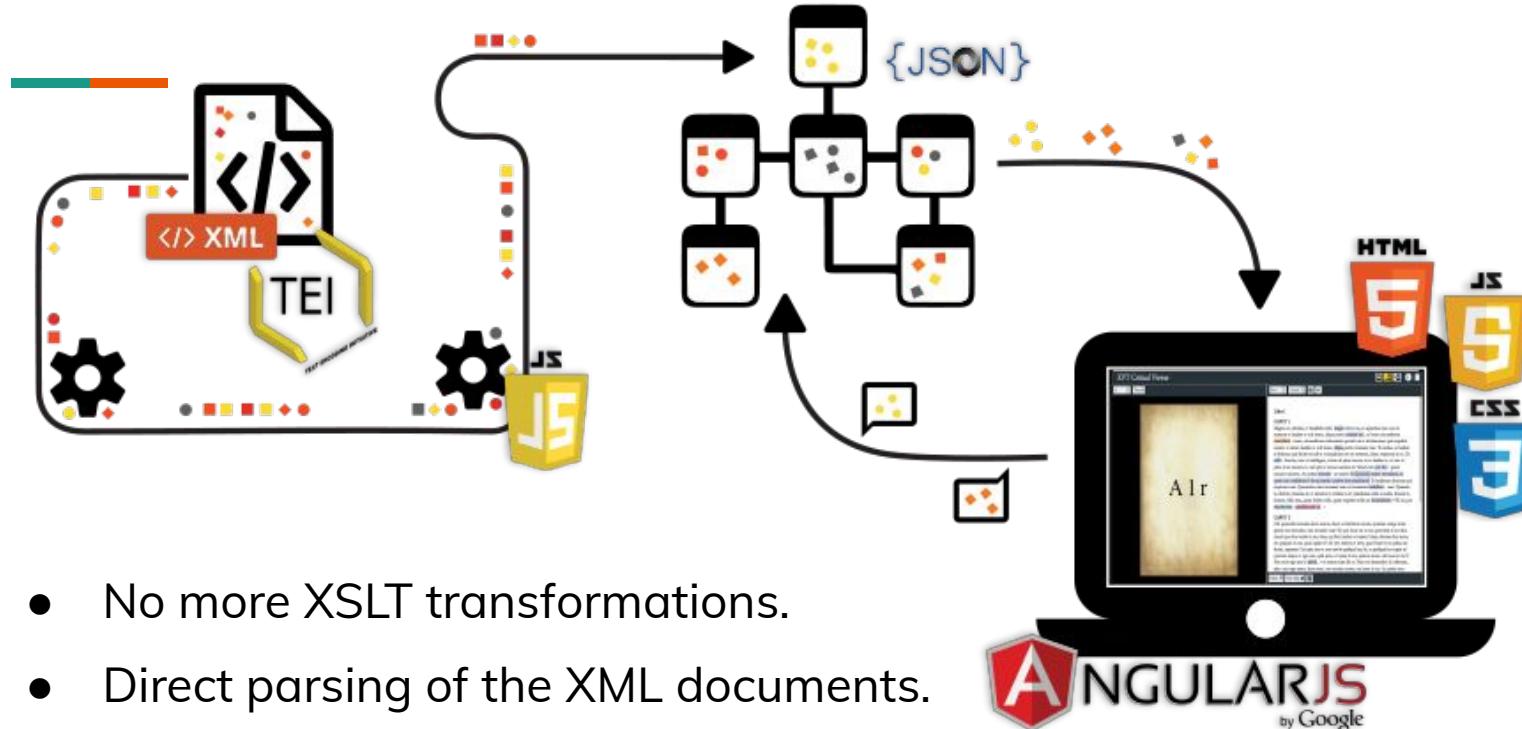
- just when we were going to design the support for critical editions we noticed that the existing development framework was unfit to implement this important functionality
  - the XSLT 2 code base had increased remarkably, becoming complicated and difficult to edit, especially for newcomers
  - the number of UI elements had likewise increased, so that the general layout of the application had become difficult to configure and handle
  - adding new modules was going to put at risk the stability of the tool
  - researchers with advanced programming skills in XSLT 2 development are hard to find



# EVT 2: the quantum leap



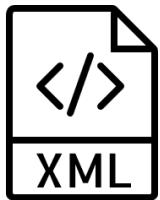
# EVT 2: a new framework and a new architecture



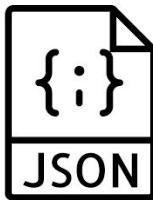
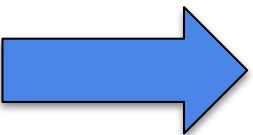
- No more XSLT transformations.
- Direct parsing of the XML documents.
- Data are stored in a JSON model organized in a way that allows a very quick access to the information needed.
- MVC (Model View Controller) approach.



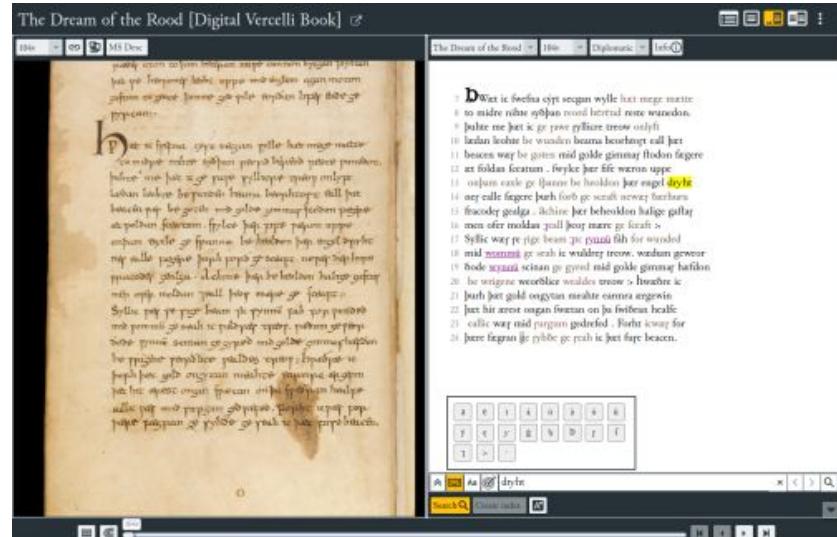
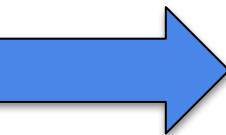
# EVT data management (EVT 2 and 3)



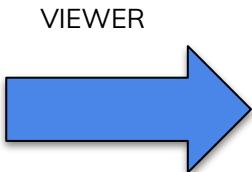
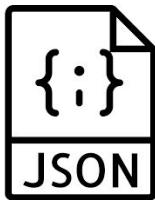
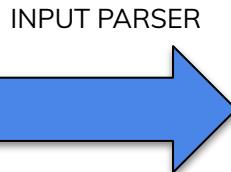
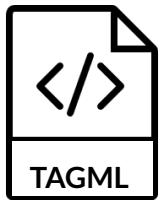
INPUT PARSER



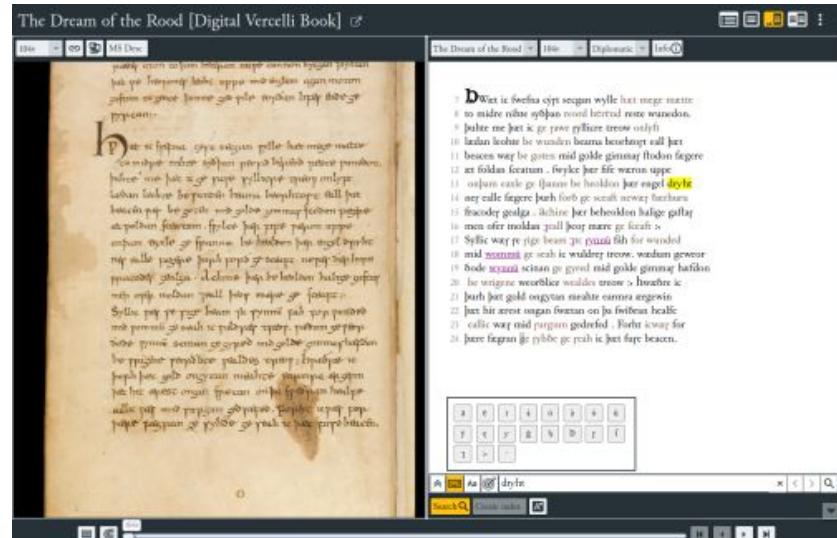
VIEWER



# EVT data management (EVT 2 and 3)



In order to add support for formats other than TEI it is possible to write a new parser for the input data, the display module does not change.



# The first alpha version (July 2016)

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- Support for critical editions (TEI Critical Apparatus module)
  - witness list
  - critical text based on
    - accepted variants **<lem>** and
    - rejected variants **<rdg>**
    - within critical apparatus entries **<app>**
  - critical notes **<note>** inside **<app>**s
- Main features:
  - direct visualization of text variance
  - dynamic critical apparatus
  - automatic generation of the witnesses' text and collation view
  - filters on variants and more
  - bookmark facility to easily share specific edition points

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# New features of the first beta (October 2017)

## UI solutions for “traditional” edition components

- After a reflection on the UI aspects of a DSE (see Di Pietro & Rosselli Del Turco 2018) we decided to recover “traditional” components such as the critical apparatus
  - in the first beta it is accessible in a separate frame beside the text
- Support for sources and analogs
- Handling of variant groups
- Support for multiple recensions

## Innovative features

- Initial named entities support, bibliography formatting
- Dedicated area (pin frame) to “save” critical entries, named entities, etc.



# The second beta (June 2020)

- New features in beta 2:
  - diplomatic edition support with an IIIF-compliant image viewer
  - full support for named entities
  - table of contents added to the general menu
  - [VisColl](#) integration to show a manuscript quire structure
  - initial support for the TEI double-end-point attached method to link the apparatus to the critical text
  - initial support for georeferencing
  - initial support for 3DHOP (3D visualization software)
  - new search engine
- bug fixes and general user experience / interface improvements

## The Dream of the Rood [Digital Vercelli Book]

This screenshot shows a digital edition of the 'Dream of the Rood' from the 'Digital Vercelli Book'. The main window displays a page from a medieval manuscript with dense Gothic script. Below the manuscript, a diplomatic edition transcription is provided, showing the Latin text in a grid format where each square contains a single letter or symbol. At the bottom of the screen, there is a toolbar with various icons for navigating the digital edition.

## Diplomatic edition

## Codice Pelavicino Digital [short extract]

This screenshot shows a digital edition of the Codice Pelavicino. It features a manuscript page with Gothic script and several large red initials. A sidebar on the right side of the page lists 'Named entities' found in the text, such as 'Epitome Laurentii' and 'Godefridus II'. The interface includes a toolbar at the top and bottom for navigating the digital edition.

## Named entities

## The Dream of the Rood [Digital Vercelli Book]

This screenshot illustrates the 'Fascicular structure of the manuscript' for the 'Dream of the Rood'. It shows two columns of manuscript pages, labeled 'FASCICOLO n. 14' and 'FASCICOLO n. 15', each with a small icon of a book. Below each column is a row of four manuscript pages, labeled 'Dati manoscritti' and numbered '104e', '105e', '105e', and '105e'. The interface includes a toolbar at the top and bottom.

## Fascicular structure of the manuscript

## The Ruthwell Cross

This screenshot shows a 3D Model View (3DHOP) of the Ruthwell Cross. The central part of the image is a 3D rendering of the cross, which is a tall, decorated stone cross. To the left of the cross is a navigation interface with icons for zooming and rotating. To the right of the cross is a legend titled 'The Ruthwell point\*' with labels for 'North', 'East', 'South', and 'West'. Below the cross, there is a detailed description of the cross's features and history. The interface includes a toolbar at the top and bottom.

## 3D Model View (3DHOP)

Div 2 Critical ⓘ ⓘ

## Liber I

## CAPUT 1

Magnus es, domine, et laudabilis valde: magna<sup>a</sup> virtus tua, et sapientiae tuae non est numerus et laudare te vult homo, aliqua portio creature tue<sup>b</sup>, et homo circumferens mortalitem<sup>c</sup> suam, circumferens testimonium peccati sui et testimonium, quia superbis resistis: et tamen laudare te vult homo, aliqua<sup>d</sup> portio creature tuae. Tu excitas, ut laudare te delectet, quia fecisti nos ad te et inquietum est cor nostrum, donec requiescat in te. Da mihi<sup>e</sup> domine, scire et intellegere, utrum sit prius invocare te an laudare te, et scire te prius sit an invocare te. sed quis te invocat nesciens te? Aliud enim pro alio<sup>f</sup> potest invocare nesciens. An potius invocaris<sup>g</sup> ut sciaris?

<sup>h</sup> Quomodo C] Qui B Qua D  
Nota critica Varianti ortografiche autem invocabunt, in quem non credent sine praedicante? Et eum. Quaerentes enim inveniunt eum. Quaeram te, domine, in te: praedicatus enim es nobis. dedisti mihi, quam inspirasti per ministerium<sup>i</sup> praedicatoris tui<sup>m</sup>.

## CAPUT 2

<sup>n</sup> Et quomodo invoco deum meum, deum et dominum meum, quoniam utique in me ipsum eum invoco, cum invoco eum? Et

A 1r Div 2 ⓘ

## Liber I

## CAPUT 1

Magnus es, domine, et laudabilis valde: magna<sup>a</sup> virtus tua, et sapientiae tuae non est numerus et laudare te vult homo, aliqua portio creatae tuae<sup>b</sup>, et homo circumferens mortalitem<sup>c</sup> suam, circumferens testimonium peccati sui et testimonium, quia superbis resistis: et tamen laudare te vult homo, aliquando<sup>d</sup> portio creature tuae. Tu excitas, ut laudare te delectet, quia fecisti nos ad te et inquietum est cor nostrum, donec requiescat in te. Da mihi<sup>e</sup> domine, scire et intellegere, utrum sit prius invocare te an laudare te, et scire te prius sit an invocare te. sed quis te invocat nesciens te? Aliud enim pro alio<sup>f</sup> potest invocare nesciens. An potius invocaris<sup>g</sup> ut sciaris? In Quando<sup>h</sup> autem invocabunt, in

HAND  
ANY  
USER1  
TYPE  
ANY  
ORTHOGRAPHIC  
LESSICOGRAPHIC  
OMISS  
CAUSE  
ANY  
UNKNOWN

int? Aut quomodo credent sine praedicante? i um qui requirunt eum. Quaerentes enim venientes laudabunt<sup>j</sup> eum. Quaeram te, et invocem te credens in te: praedicatus enim domine, fides mea, quam dedisti mihi, quam humilitatem<sup>k</sup> filii tui, per ministerium<sup>l</sup>

Filtri ⓘ A°

C 254r Div 2 ⓘ

## Liber I

## CAPUT 1

Magnus es, domine, et laudabilis valde: laudabilis<sup>a</sup> virtus tua, et sapientiae tuae non est numerus et laudare te vult homo, aliqua portio creaturarum tuarum<sup>b</sup>, et homo circumferens mortalitem<sup>c</sup> suam, circumferens testimonium peccati sui et testimonium, quia superbis resistis: et tamen laudare te vult homo, aliquando<sup>d</sup> portio creature tuae. Tu excitas, ut laudare te delectet, quia fecisti nos ad te et inquietum est cor nostrum, donec requiescat

— 254v —  
in te. Da nobis<sup>e</sup> domine, scire et intellegere, utrum sit prius invocare te an laudare te, et scire te prius sit an invocare te. sed quis te invocat nesciens te? Aliud enim *[om.]*<sup>f</sup> potest invocare nesciens. An potius invocaris<sup>g</sup> ut sciaris? In Quomodo<sup>h</sup> autem invocabunt, in quem non crediderunt? Aut quomodo credent sine praedicante? i Et laudabunt dominum qui requirunt eum. Quaerentes enim inveniunt eum et invenientes laudabunt<sup>j</sup> eum. Quaeram te, domine, invocans te, et invocem te credens in te: praedicatus enim es nobis. Invocat te, domine, fides mea, quam dedisti mihi, quam inspirasti mihi per

[LACUNA]

Non enim

Filtri ⓘ A°

— 255r —

ego iam in inferis<sup>q</sup> et tamen etiam ibi es. Nam etsi

# Edizione Logica Avicennae [experimental encoding]



Div 1 Critical Info ⓘ

ideo convenientius est prius cognoscere simplices quam compositos.

Cognitio autem **ay** simplicium **az** fit duobus modis, quia aut cognoscuntur secundum **ba** hoc **bb** quod **apti sunt** **bc** **bd** **be** ut ex eis fiat **bf** **compositio** **bg** **praedicta** **bh**, aut cognoscuntur secundum **bi** hoc **quod sunt** **bj** naturae et **res** **bk** quibus accedit hic intellectus, ad similitudinem domus, quea componitur ex lignis et aliis, compositori cuius opus est cognoscere simplicia domus, scilicet ligna et lateres et lutum, sed ligna et lateres et lutum habent dispositiones **bl** propter quas **bm** fiunt apta domui, et eius constructioni, et alias dispositiones praeter has, sicut hoc quod ligna sunt haec **bn** substantiae in qua fuit anima vegetabilis aut quod natura eorum est calida aut frigida, aut quod comparatio eorum inter ea quae sunt est talis vel talis. Hoc autem scire non est necesse artifici domorum, sed an trabes sit mollis vel dura, aut **bo** sit **bp** **bq** sana vel putrida aut huiusmodi, necesse est scire domorum artifici. Similiter est doctrina logica: non enim considerat incomplexa harum **terum** **br** secundum quod sunt aliius duorum modorum esse, scilicet quod est in his **sensibilibus** **bs** aut in intellectu, nec etiam in essentia harum rerum ex hoc quod sunt essentiae, sed secundum quod sunt praedicta aut subiecta, et universalia aut particularia, aut huiusmodi quae non accidentur his **intellectibus** **bt** nisi ex hoc quod diximus in praemissis.

Ad considerationem autem dictionum dicit nos necessitas: logicus enim, ex hoc quod est logicus, non habet primo occupari circa verba prima, nisi quantum ad loquendum et agendum. Si enim possibile esset logicam discere solo intellectu, ita ut non **A** considerentur aliqua eius nisi soli intellectus, tunc sufficeret. **bu** Si etiam **bv** **bw** **doctor artis posset** **bx** **a** **revelare id quod est in animo eius alio modo, supersederet semper** “ **bx** **a** **verbis,** **by** sed quia necessitas dicit nos ad agendum cum verbis praecipue” - non enim potest ratio componere intellectus quin cum illis preferat verba, immo quia cogitatio quasi locutio est inter ipsum hominem et cogitatum suum verbi imaginatis - sequitur ut verba habeant diversas dispositiones propter quas differentia dispositiones intentionum quae comitantur eas in

**causam F G M N P R V]**

- **GROUP 1:** causam **G M N P R V**
- **GROUP 2:** causam **F causa U B**

**an intelligi F G M N P R V]**

- **GROUP 1:** intelligi **G M N P R V**
- **GROUP 2:** intelligi **F intelligere B U**

**ay Cognitio autem B F G M N P R U V]**

- **GROUP 1:** Cognitio autem **G M N P R V** autem cognitio **C**
- **GROUP 2:** Cognitio autem **B F U**

Apparato Critico	Fonti	Passi paralleli
<p><b>doctor artis posset revelare id quod est in animo eius alio modo, supersederet semper</b></p> <p>PASSO PARALLELO IN</p> <ul style="list-style-type: none"> <li>• <i>Avicenna, Burhān</i></li> </ul> <p>Riferimento Bibliografico XML</p>		
<p><b>Dicemus quod verbum grece significans intentionem generis, prius apud eos, secundum primam impositionem, significabat aliud, et deinde, per impositionem secundam, translatum est ad significandam intentionem quae apud logicos vocatur «genus».</b></p> <p>PASSO PARALLELO IN</p> <ul style="list-style-type: none"> <li>• <i>Avicenna, Burhān</i></li> </ul> <p>Riferimento Bibliografico XML</p>		
<p><b>Multi reprehenderunt,</b></p> <p>PASSO PARALLELO IN</p> <ul style="list-style-type: none"> <li>• <i>Avicenna, Burhān</i></li> </ul> <p>Riferimento Bibliografico XML</p>		
<p><b>ut «canis» cum dicitur pro «latribili», et haec est eius significatio, deinde imponat ad significandum aliud, sicut «pisci»</b></p> <p>PASSO PARALLELO IN</p> <ul style="list-style-type: none"> <li>• <i>Boethius, In Porph. Isag.</i></li> </ul> <p>Testo Riferimento Bibliografico XML</p>		



## TABLE OF CONTENTS

## ► NAMED ENTITIES

📍 LISTA DEI LUOGHI

👤 LISTA PERSONE

ארגוני RELIGIOSI

☰ ST

## BIBLIOGRAPHY

## ► PROJECT INFO

A B C D E F G H I L M N O P R S T U V W Y Z Ç

► Albertus de Buiano

► Albertus de Calvo

► Albertus

► Albertus

► Albertus de Cruce

▼ Albertus

More Info Occurrences

ⓘ Albertus

∅ M

─ 1: Episcopus Lunensis

─ Alberto, vescovo di Luni, di cui non esistono testimonianze dirette; viene detto successore di Gottifredo II (1129-1156) in un documento del 1181 e predecessore di Pictro (1178-1190) in un documento del 1212; viene poi citato in un documento del 1230. Il Podestà (PODESTÀ 1895, pp. 38-42) lo pone tra l'ultima attestazione di Gottifredo II (1156) e la prima di Andrea II (1160), ma quest'ultima indicazione non è certa in quanto il prelato vi è indicato dalla sola cifra iniziale.

► Albertus quondam Ferri de Lacala

► Albertus de Formicoso

► Albertus filio Frederici de Carraria

► Albertus quondam Gandulphini / de Gandulfino

► Albertus quondam Gerardi

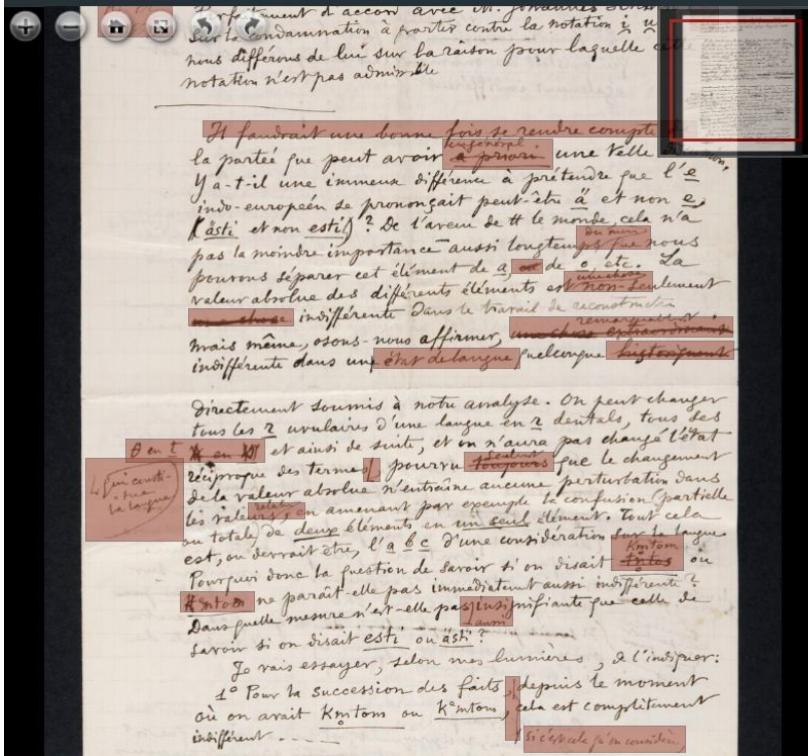
► Albertus filius Gerardi de Carraria

► Albertus quondam domini Guidonis

► Albertus

► Albertus

70r Thumbs Schema MS Desc



Fr. 3955/1 70r Diplomatic Info

1 Parfaitement d'accord avec M. Johannes Schmidt  
2 sur la condamnation à porter contre la notation i u  
3 nous différons de lui sur la raison pour laquelle cette  
4 notation n'est pas admissible

5 -----

6 Il faudrait une bonne fois se rendre compte de  
7 la portée que peut avoir en général une telle discussion.  
8 Y a-t-il une immense différence à prétendre que l'  
9 indo-européen se prononçait peut-être ä et non e  
10 (ästi et non estij)? De l'aveu de tout le monde, cela n'a  
11 pas la moindre importance aussi longtemps du moins que nous  
12 pouvons séparer cet élément de a, de o, etc. La  
13 valeur absolue des différents éléments est une chose non-seulement  
14 indifférente dans le travail de reconstruction  
15 mais même, osons-nous affirmer, remarquablement  
16 indifférente dans un état de langue quelconque

17  
18 directement soumis à notre analyse. On peut changer  
19 tous les r uvulaires d'une langue en r dentals, tous ses  
20 θ en t et ainsi de suite, et on n'aura pas changé l'état  
21 réciproque des termes qui constituent la langue, pourvu seulement que le  
22 changement de la valeur absolue n'entraîne aucune perturbation dans  
23 les valeurs relatives, en amenant par exemple la confusion (partielle  
24 ou totale) de deux éléments en un seul élément. Tout cela

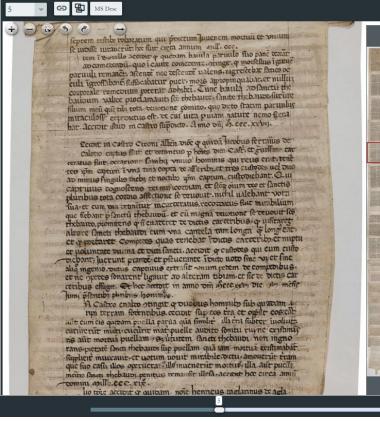
No Selection Search Create index

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## EVT 2-based projects

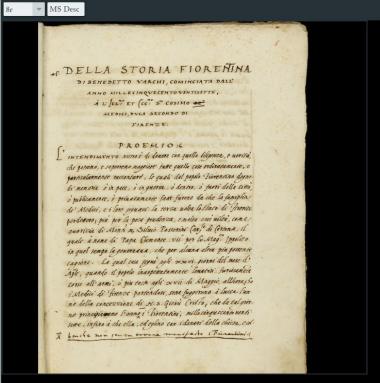
- although at the moment this tool is clearly labeled as beta (therefore incomplete), EVT 2 has been adopted by several edition projects
  - TEI documents are portable between EVT versions
- as in the past, this is an excellent stimulus for the development of new features and the improvement of existing ones
- a new feature that has been requested is support for **genetic editions**
- another interesting research field is the **processing of semi-structured data** (see below the workshop about digital medieval archives)
- parallel research such as **printing** from TEI documents

## Edizione della vita di San Teobaldo



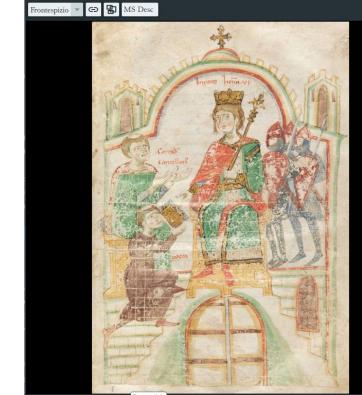
## Scroll of the [Vita di San Teobaldo](#)

### Progetto VaSto



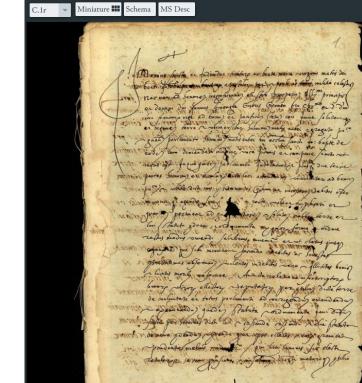
## Progetto VaSto

## Petri de Ebulo De rebus Siculis Carmen



## Petrus de Ebulo [De rebus Siculis Carmen](#)

### Edizione Digitale Statuto di Monterosso



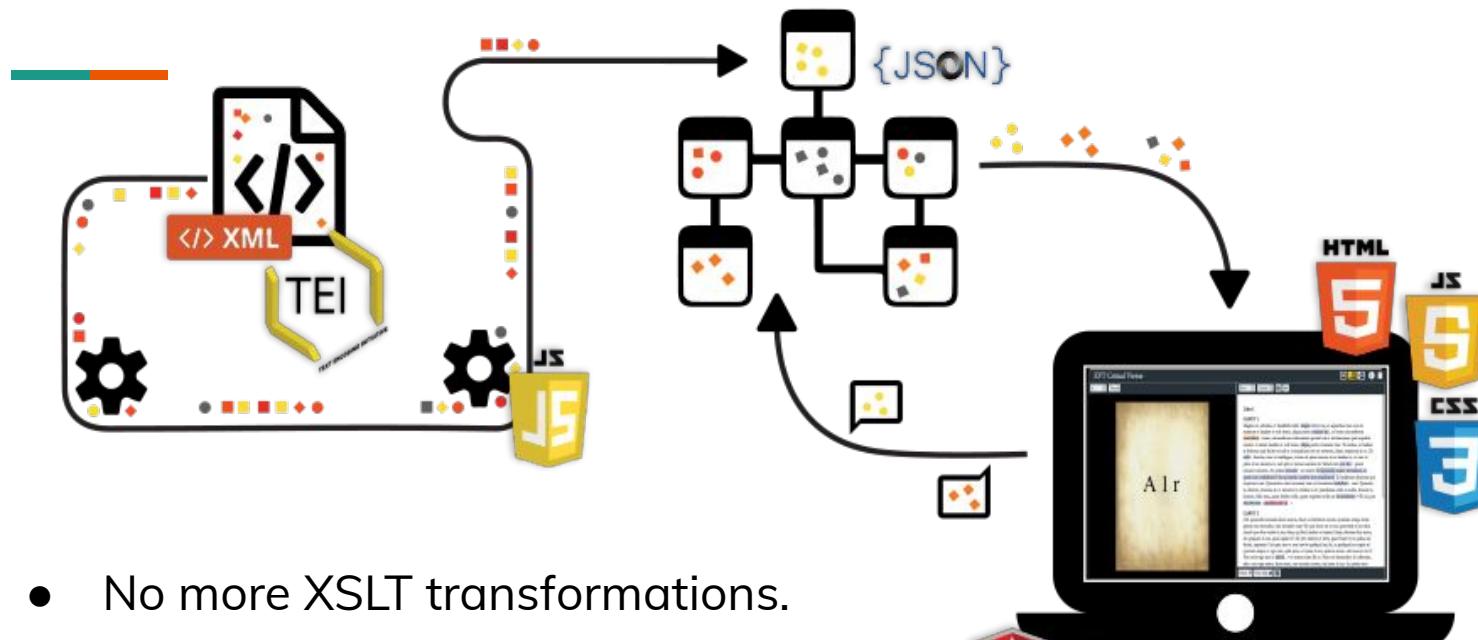
## Statuto di Monterosso



# EVT 3: the next generation



# EVT 3: a new framework, same design pattern



- No more XSLT transformations.
- Direct parsing of the XML documents.
- Data are stored in a JSON model organized in a way that allows a very quick access to the information needed.
- MVC (Model View Controller) approach.

# EVT 3: a new framework, same design pattern

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- as for the transition from the first to the second version, the initial goal is to achieve **feature parity** with the previous versions → priority to:
  - critical edition
  - digital facsimile and diplomatic edition with multiple edition levels
  - named entities support and an advanced search engine
- **new** features planned for the first stable version:
  - **marginalia** in diplomatic editions
  - **integrated edition, genetic criticism/authorial philology** support
  - **editorial conventions** configuration and customization

# Improving critical edition support in EVT 3

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- after implementing the collation view, we are currently working on catching up with EVT 2 wrt filters and heat map features
- same branch where support for the **double end-point attachment** method by TEI is being added, improvements:
  - nested and **overlapping** variants
  - handling **complex witness families** in the <listWit>
  - handling the **witness list** in the collation view
- considering further visualization improvements:
  - alignment/segmented table, variant graph, alignment ribbon
- together with the integrated edition functionality this is a critical feature for the Leges Langobardorum PRIN project

---

## Double-end-point-attached method

- the most powerful method since it offers all the advantages of PS and more:
  - can also handle overlapping variants
  - allows an external apparatus (stand-off markup)
  - which means that the text is free to be annotated with a different markup layer
- however DEPA is very cumbersome in practice:
  - especially when using it as stand-off markup
  - in fact the TEI editors were thinking of some kind of authoring software to use it

# DEPA markup: the TEI standard method



— <l n="16"><anchor xml:id="lem3.16a"/>O factum male! <anchor xml:id="lem3.16b"/>O miselle <anchor xml:id="lem3.16c"/> passer!<anchor xml:id="lem3.16d"/></l>

```
<!-- l.16 -->
<back>
<div type="apparatus">
<app from="#lem3.16b" to="#lem3.16d">
<lem>o miselle</lem>
<rdg
    wit="#O #G #R #ms.1 #ms.2 #ms.3 #ms.8 #ms.9 #ms.11 #ms.12 #ms.13 #ms.15 #ms.16 #ms.16a #ms.18 #ms.19 #ms.19a #ms.20 #ms.21 #ms.22 #ms.23 #ms.27
#ms.28 #ms.29 #ms.30 #ms.31 #ms.33 #ms.34 #ms.35 #ms.37 #ms.39 #ms. #ms.40 #ms.41 #ms.42 #ms.45 #ms.48 #ms.49 #ms. #ms.51 #ms. #ms.54 #ms.56 #ms.57
#ms.58 #ms.59 #ms.60 #ms.64 #ms.67 #ms.68 #ms.71 #ms.72 #ms.73 #ms.75 #ms.76 #ms.77 #ms.78 #ms.83 #ms.84 #ms.88 #ms.90 #ms.97 #ms.99 #ms.102 #ms.103
#ms.104 #ms.105 #ms.107 #ms.109 #ms.112 #ms.114 #ms.117 #ms.118 #ms.123 #ms.124 #ms.128 #ms.25 #ms.43 #ms.47">
<app from="#lem3.16c" to="#lem3.16d">
<rdg
    wit="#O #G #R #ms.1 #ms.2 #ms.3 #ms.8 #ms.9 #ms.11 #ms.12 #ms.13 #ms.15 #ms.16 #ms.16a #ms.18 #ms.19 #ms.19a #ms.20 #ms.21 #ms.22 #ms.23
#ms.27 #ms.28 #ms.29 #ms.30 #ms.31 #ms.33 #ms.34 #ms.35 #ms.37 #ms.39 #ms. #ms.40 #ms.41 #ms.42 #ms.45 #ms.48 #ms.49 #ms. #ms.51 #ms. #ms.54 #ms.56
#ms.57 #ms.58 #ms.59 #ms.60 #ms.64 #ms.67 #ms.68 #ms.71 #ms.72 #ms.73 #ms.75 #ms.76 #ms.77 #ms.78 #ms.83 #ms.84 #ms.88 #ms.90 #ms.97 #ms.99 #ms.102
#ms.103 #ms.104 #ms.105 #ms.107 #ms.109 #ms.112 #ms.114 #ms.117 #ms.118 #ms.123 #ms.124 #ms.128"
    >bonus</rdg>
    <rdg wit="#ms.25 #ms.43 #ms.47">bellus</rdg>
    </app> ille </rdg>
</app>
<app from="#lem3.16b" to="#lem3.16e">
<rdg wit="#ms.6 #ms.14 #ms.17" type="transposition">passer o miselle</rdg>
<rdg wit="#ms.10" type="transposition">bonus passer ille</rdg>
</app>
</div>
</back>
```

# DEPA markup: the <w> + xml:id method



```
<div type="book" n="2">
  <p n="1-3"><seg n="1" xml:id="Luc-001">
    <w xml:id="Luc-001-1">Magnum</w>
    <w xml:id="Luc-001-2">ingenium</w>
    <w xml:id="Luc-001-3">L.</w>
    <w xml:id="Luc-001-4">Luculli</w>
    <w xml:id="Luc-001-5">magnumque</w>
    <w xml:id="Luc-001-6">optimarum</w>
    <w xml:id="Luc-001-7">artium</w>
    <w xml:id="Luc-001-8">studium</w><pc>,</pc> <w xml:id="Luc-001-9">tum</w>
    <w xml:id="Luc-001-10">omnis</w>
    <w xml:id="Luc-001-11">liberalis</w>
    <w xml:id="Luc-001-12">et</w>
    <w xml:id="Luc-001-13">digna</w>
    <w xml:id="Luc-001-14">homine</w>
    <w xml:id="Luc-001-15">nobili</w>
```

From Marcus Tullius Cicero, *Lucullus*, XML/TEI encoding by Federica Lazzerini,  
PRIN RETI project

# DEPA markup: the <w> + xml:id method

```
<app from="#Luc-001-11">
  <rdg type="lectio.sing" cause="palaeographicConfusion" wit="#Mon3">liberatis</rdg>
</app>

<app from="#Luc-001-13">
  <rdgGrp type="lectio.sing">
    <rdg cause="omission" wit="#Glas"><add hand="#Glas.hand.2" place="margin">
      digna</add>
    <note resp="#FLa">add. mrg. Glas2</note></rdg>
    <rdg cause="multiple" wit="#Par9">dignationem</rdg>
  </rdgGrp>
</app>

<app from="#Luc-001-17">
  <rdg type="lectio.sing" cause="contextInduced" wit="#Par9">ea</rdg>
</app>

<app from="#Luc-001-16" to="#Luc-001-17">
  <rdg type="lectio.sing" cause="palaeographicConfusion" wit="#Parm">habeo</rdg>
</app>
```

From Marcus Tullius Cicero, *Lucullus*, XML/TEI encoding by Federica Lazzerini,  
PRIN RETI project

# DEPA markup: the <w> + xml:id method

---



- advantages of the <w> + xml:id method:
  - no need to add < milestone /> elements to the encoded text
  - adding **xml:id** attributes to <w> elements is easily done f.i. by means of a script
  - no need to use both **@from** and **@to** if the apparatus entry is only one word in the critical text
- disadvantages:
  - you may want to also encode punctuation using <pc>, and adding xml:id attributes to it
  - in some cases (lacunas) punctuation is not rendered correctly

# The current DEPA prototype



The screenshot displays the DEPA prototype interface for a Latin text from Lucullus. The main text area shows a dense Latin passage with various redaction marks (red squares). Below the text are search and selection tools: a search bar, a 'Select items' dropdown, and a 'Prose' button.

The interface features a top navigation bar with tabs for 'Critical Apparatus', 'Sources', 'Analogues', and 'Notes'. The 'Critical Apparatus' tab is active, showing three detailed apparatus entries:

- a ingenium ]**  
ingenuum Glas  
More info XML  

```
<app
  xmlns="http://www.tei-c.org/ns/1.0" from="#Luc-001-2" xml:id="evt-f
  <rdg type="lectio.sing" cause="palaeographicConfusion" wit="#Glas"
    <add hand="#Glas.hand.c" xml:id="evt-330f9dd2-7356-4b96-93a6-cd
  </rdg>
</app>
```
- b L. ]**  
L.. Bes Cant3 Cas Harl3 Laur1 Linc Ott Pal6 Pan Vat6 Ven Ven1 ed. Rom. Vict.  
luci Ω F M Halm Reid  
lucii V2 v ε Ambr1 Cas Bert Erl Gadd Harl Harl3 Laur1 Linc Magl<sup>2</sup> Mon2 Ott Pal6 Pan  
Parm Pat Reg Vat6 Ven Ven1 ed. Ven Pen. Bev. Baz. Min. Asc.1 Ald. Asc.2 Asc.3 Crat.  
Asc.4 Herw. Sturm ed. Rom. Vict. Man. Tal. Lamb. Dav. Ern. Goer. Bait. Plas1  
lutii Mon3 Par6  
Lucilli Reg  
More info XML
- c optimarum ]**  
optumarum N Ven1 Dav.  
More info XML

# The current DEPA prototype

The screenshot shows the DEPA prototype software interface. At the top, there's a navigation bar with tabs for 'Info' (selected), '1' (document count), and 'Critical' (error level). The main content area displays a Latin text fragment:

Magnum ingenium<sup>a</sup> L.<sup>b</sup> Luculli mag  
omnis<sup>f</sup> liberalis<sup>g</sup> et digna<sup>h</sup> homine n  
florere in foro maxime<sup>m</sup> potuit<sup>n</sup> ca  
admodum<sup>s</sup> adulescens<sup>t</sup> cum fratre p  
inimicitias<sup>aa</sup> magna cum<sup>ab</sup> gloria<sup>ac</sup> ad  
ibi<sup>ag</sup> permultos<sup>ah</sup> annos<sup>ai</sup> admirabili  
absens<sup>ao</sup> factus<sup>ap</sup> aedilis<sup>aq</sup>, continuo<sup>ar</sup>  
praemio<sup>aw</sup>), post in Africam<sup>ax</sup>, inde<sup>ay</sup>  
diligentiam<sup>be</sup> admirarentur<sup>bf</sup> omnes<sup>bi</sup>  
Mithridaticum<sup>bl</sup> bellum missus<sup>bm</sup> a  
omnium<sup>br</sup> quae de virtute eius erat<sup>bu</sup>

A modal dialog titled 'Errors' is open, stating: 'The source document have the following errors:'

- ① No element found with xml:id Luc-06-99
- ① Duplicated witness found in intersecting elements: #μ, #Chis1

Below each error message is a snippet of XML code:

```
<app xmlns="http://www.tei-c.org/ns/1.0" from="#Luc-06-99" xml:id="evt-1742109c-122b-46e7-tk"><rdg type="lectio.sing" cause="intentional" wit="#Mon3" xml:id="evt-3ff1503c-6602-4d89-903f-ef517841-9431-42ce-ac6b-35678a044365" wit="Mon3" from="Luc-06-99" to="#Luc-001-2" xml:id="evt-f"><lacunaEnd xml:id="evt-ef517841-9431-42ce-ac6b-35678a044365" wit="Mon3" from="Luc-06-99" to="#Luc-001-2" xml:id="evt-f"></rdg></app>
```

```
<app xmlns="http://www.tei-c.org/ns/1.0" from="#Luc-001-22" to="#Luc-001-26" xml:id="evt-e7cf0504-510b-489e-8c45-bd51502feff8"><rdgGrp cause="transposition" xml:id="evt-064699dd-55a9-4640-8566-7d253722479b"><rdgGrp type="family-distinctive" xml:id="evt-db63fee8-6c92-41ec-b43a-2b6230fb629c"><rdg wit="#μ" xml:id="evt-e7cf0504-510b-489e-8c45-bd51502feff8">florere maxime<rdg wit="#Chis1 #Reg" xml:id="evt-5e02d6ae-b4ea-41b8-b0a3-416c500d68e0">florere</rdgGrp><rdg type="lectio.sing" wit="#Cant3" xml:id="evt-e69a5b2f-1cab-469e-beed-3130fd4b5"></rdgGrp></app>
```

At the bottom of the dialog, there are 'Dismiss All' and 'Dismiss' buttons.

The footer of the interface includes buttons for 'Search', 'Select items', 'Prose', 'More info', and 'XML'. There are also icons for 'Analogues' and 'Notes'.

# The current DEPA prototype

The screenshot displays the current prototype of the DEPA system, featuring three main panels:

- Witness Glas**: Shows a Latin text passage with several words highlighted in blue, indicating they have been selected or processed by the system. The highlighted words include "Magnum", "ingenium", "a", "ingenium", "]", "ingenium", "Glas", "L.", "Luculli", "magnumque", "optimarum", "artium", "studium", "tum", "omnis", "liberalis", "et", "digna", "homine", "nobili", "ab", "eo", "percepta", "doctrina", "quibus", "temporibus", "florere", "in", "foro", "maxume", "potuit", "caruit", "omnino", "rebus", "urbanis", "Ut", "enim", "admodum", "adulescens", "cum", "fratre", "pari", "pietate", "et", "industria", "praedito", "paternas", "inimicitias", "magna", "cum", "gloria", "est", "persecutus", "in", "Asiam", "quaestor", "profectus", "ibi", "permultos", "annos", "admirabili", "quadam", "laude", "provinciae", "praefuit", "deinde", "absens", "factus", "aeditis", "continuo", "praetor", "(licebat", "enim", "celerius", "legis", "praemio"), "post", "in", "Africam", "inde", "ad", "azba", "consulatum", "quem", "ita", "b", "gessit", "ut", "bd", "diligentiam", "admirarentur", "omnes", "bg", "ingenium", "bh", "agnoscerent", "bi", "Post", "bj", "ad", "bk", "Mithridaticum", "bellum", "missus", "bm", "a", "senatu", "non", "modo", "opinionem", "bp", "vicit", "bq", "omnium", "br", "quaed", "de", "virtute", "eius", "erat", "bs", "sed", "bt", "etiam", "bub", "gloriam", "superiorum", "bw";
- Witness Ball\_B**: Shows the same Latin text passage with different words highlighted in blue, suggesting a different analysis or context. The highlighted words include "Magnum", "ingenium", "L.", "Luculli", "magnumque", "optimarum", "artium", "studium", "tum", "omnis", "liberalis", "et", "digna", "homine", "nobili", "ab", "eo", "percepta", "doctrina", "quibus", "temporibus", "florere", "in", "foro", "maxume", "potuit", "caruit", "omnino", "rebus", "humanis", "Ut", "enim", "urbanus", "admodum", "adolescens", "cum", "fratre", "pari", "pietate", "et", "industria", "praedito", "paternas", "inimicitias", "magna", "cum", "gloria", "est", "persecutus", "in", "Asiam", "quaestor", "profectus", "ibi", "permultos", "annos", "admirabili", "quadam", "laude", "provinciae", "praefuit", "deinde", "absens", "factus", "aeditis", "continuo", "praetor", "(licebat", "enim", "celerius", "legis", "praemio"), "post", "in", "Africam", "inde", "ad", "azba", "consulatum", "quem", "ita", "b", "gessit", "ut", "bd", "diligentiam", "admirarentur", "omnes", "bg", "ingenium", "bh", "agnoscerent", "bi", "Post", "bj", "ad", "bk", "Mithridaticum", "bellum", "missus", "bm", "a", "senatu", "non", "modo", "opinionem", "bp", "vicit", "bq", "omnium", "br", "quaed", "de", "virtute", "eius", "erat", "bs", "sed", "bt", "etiam", "bub", "gloriam", "superiorum", "bw";
- Search Bar**: Located at the bottom left, it includes a search icon, a dropdown menu labeled "Select items", and a "Prose" button.

# The current DEPA prototype

The screenshot shows a digital edition interface for a Latin text. A modal window titled "Add witness" is open in the center. The window contains a search bar labeled "Search Witnesses" and a list of names with "Add" buttons next to them. The names listed are: Ω, F, φ, π, μ, ν, ρ, γ, ε, ζ, ρ, Ang, Bern, Cant3, and Cas. The background shows the main text area with Latin text and some red highlights. The top navigation bar includes "EVT /> Lucullus", "DEPA BETA", "Info", "1", "Errors", and a menu icon.

Magnum ingenium<sup>a</sup> L.<sup>b</sup> Luculli magnumque optimarum omnis<sup>f</sup> liberalis<sup>g</sup> et digna<sup>h</sup> homine nobili ab eo<sup>j</sup> percepta florere in foro<sup>l</sup> maxime<sup>m</sup> potuit<sup>n</sup> caruit<sup>o</sup> omnino<sup>p</sup> rebus admodum<sup>s</sup> adulescens<sup>t</sup> cum fratre pari<sup>v</sup> pietate<sup>w</sup> et<sup>x</sup> indi inimicitias<sup>aa</sup> magna cum<sup>ab</sup> gloria<sup>ac</sup> est persecutus<sup>ae</sup>, in ibi<sup>ig</sup> permultos<sup>ah</sup> annos<sup>ai</sup> admirabili quadam<sup>aj</sup> laude<sup>ak</sup> pro absens<sup>ao</sup> factus<sup>ap</sup> aedilis<sup>aq</sup>, continuo<sup>ar</sup> praetor<sup>as</sup> (licebat<sup>at</sup> e praemio<sup>aw</sup>), post in Africam<sup>ax</sup>, inde<sup>ay</sup> ad<sup>azba</sup> consulatum; diligentiam<sup>be</sup> admirarentur<sup>bf</sup> omnes<sup>bg</sup> ingenium<sup>bh</sup> agnos Mithridaticum<sup>bl</sup> bellum missus<sup>bm</sup> a senatu<sup>bn</sup> non modo<sup>h</sup> omnium<sup>br</sup> quae de virtute eius erat<sup>bs</sup> sed<sup>bt</sup> etiam<sup>bubv</sup> glo i magnumque optimarum artium studium, **cum** liberalis operaccepta doctrina quibus temporibus florere in foro rebus humanis. Ut enim admodum **adolescens** cum praedito paternas inimicitias magna cum gloria est prefectus ibi permultos annos admirabili **quodam** laude sens factus aedilis, continuo **praecor** (licebat enim in Africam, inde ad consulatum; quem ita gessit ut es ingenium agnoscerent. ad mitridaticum bellum inionem vicit omnium quae de virtute eius erat sed

Add witness

Search Witnesses

Ω

F

φ

π

μ

ν

ρ

γ

ε

ζ

ρ

Ang

Bern

Cant3

Cas

+

Q Search Select items Prose

# Editorial conventions

---



- editorial conventions vary in different philological traditions
  - one could use the traditional notation directly in the text, but that'd be awkward when doing semantic annotation
  - visualization programs tend to impose their specific solutions (EVT does), or leave you with the first option
  - alternatively, you could use CSS rules
- a different approach already implemented in EVT 3:
  - a configuration file where you can specify the desired output on the basis of the actual markup used
  - no need to reinvent the wheel every time, conventions can be shared, EVT will be offering presets

# Editorial conventions



```
<l n="113"><choice>
  <orig><g ref="#sins"/>eðe</orig>
  <reg>se ðe</reg>
</choice> for <choice>
  <orig><w>dr<g ref="#yrgmainstrok"/>
    ht<lb facs="#VB_line_106r_06" n="6" xml:id="VB_lb_106r_06_orig"/>
  <reg><w>dryht<lb facs="#VB_line_106r_06" n="6" xml:id="VB_lb_106r_06_1">
</choice> naman deaðe<g ref="#sins"/>
<gap extent="3char" reason="rasure"/>

<choice>
  <orig>wo<add place="below">, </add><add place="above">l</add>de</orig>
  <reg>wo<add place="above">l</add>de</reg>
</choice>

</l>
```

Encoded text

Rules for added text

```
{
  "additionAbove": {
    "markup": {
      "element": "add",
      "attributes": {
        "place": "above"
      }
    },
    "layouts": {
      "diplomatic": {
        "style": {
          "top": "-10px",
          "position": "relative",
          "background-color": "#ccffcc"
        }
      },
      "interpretative": {
        "pre": "\\",
        "post": "/",
        "style": {
          "background-color": "#ffcc00"
        }
      }
    }
  },
  "additionBelow": {
    "markup": {
      "element": "add",
      "attributes": {
        "place": "below"
      }
    },
    "layouts": {
      "diplomatic": {
        "style": {
          "bottom": "-10px",
          "position": "relative",
          "background-color": "#ffcc00"
        }
      },
      "interpretative": {
        "pre": "\\",
        "post": "/",
        "style": {
          "background-color": "#ffcc00"
        }
      }
    }
  }
},
```

# Editorial conventions



Info 106r Diplomatic

ælmihtig god *þ*hir englaſ mid .  
þæt he þonne wile deman je ah domeſ geweald  
anra ge hwylcū fwa he him ærur her  
onþyſſum lænum life ge earnaþ .  
110 ne mæg þær ænig unforht weſan .  
forþam worde . þe je wealdend cwyð.  
frineð he forþære mæniſe hwær je man je  
reðe for dry htneſ naman deaðeſ [3char] wo\de  
bitereſ onbyrigan fwa he ær on ðam beame dyde .  
115 ac hie þonne forhtiað . *þ*fea þencaþ  
hwæt hieto criste cweðan onginnen .  
Ne þearf ðær þonne ænig unforht weſan  
þe him ær inbreorþū bereð beacna ſeleſt .  
Ac ðurh ða rode ſceal rice gerecan  
120 of eorð wege æg hwylc sawl

Info 106r Interpretative

ælmihtig God *and* his englas mid .  
þæt he þonne wile deman se ah domes geweald  
anra gehwylcum swa he him ærur her  
on þyſſum lænum life geearnāþ .  
110 ne mæg þær ænig unforht wesan .  
for þam worde . þe se wealdend cwyð.  
frineð he for þære mæniſe hwær se man sie  
se ðe for dryhtnes naman deaðes [3char] wo\l/de  
biteres onbyrigan swa he ær on ðam beame dyde .  
115 ac hie þonne forhtiað . fea þencaþ  
hwæt hie to Criste cweðan onginnen .  
Ne þearf ðær þonne ænig unforht wesan  
þe him ær in breostum bereð beacna ſeleſt .  
Ac ðurh ða rode ſceal rice gesecan  
120 of eorðwege æghwylc sawl

---

# TEI and genetic criticism / authorial philology

- TEI/XML only partly suitable for describing authorial changes
  - very limited encoding tools wrt introduction of time into an apparatus, less flexible than needed
  - no dedicated module, *transcr* still the base for encoding
- people experimented with new strategies, but this resulted in a heterogeneity of markup modeling
  - Pierazzo's *Proust Prototype* very document-oriented, but the TEI work explicitly mentions text evolution across several mss
- general reflection on a standard for digital author philology

---

## Main goals of the Saba 2021 project

- defining a general purpose schema for authorial philology
- encoding all the texts in the manuscript
- adding EVT 3 support for the schema
  - new dedicated parser
- developing a dedicated authorial philology view in EVT 3
  - integration with the existing views, search for effective UI
- final goal: creating an **innovative digital edition** of Saba's *Canzoniere 1921*



## Our approach

- integration of multiple critical encoding methods:
  - digital documentary publishing
  - critical apparatus and parallel segmentation method
  - phase-based apparatus
- for the **philologist**: a single edited TEI document, ‘single source’ model to generate more than one edition level
- for the **user**: choice to explore the edition through two separate views or one interconnected view

Della più dura pena,<sup>a</sup>~~dura pena~~ dura pena avversa pena,  
 della miseria più dura e nascosta,  
 anima, noi faremo ivi un poema.

C19, c. 102, from *Verso casa*

Printed apparatus:

<sup>1A</sup>dura pena, > <sup>2A</sup>assidua pena, >

<sup>3B</sup>dura (*prima lun~~ga~~*) pena >

<sup>4B</sup>**avversa pena**

```

<1 n="20">Della più <app>
  <lem varSeq="3">
    <mod change="#strato-2">
      <add>avversa pena,</add>
    </mod>
  </lem>
  <rdg varSeq="2">
    <mod change="#strato-2">
      <del>
        <subst>
          <del instant="true">lun<supplied>ga</supplied></del>
          <add instant="true">dura</add></subst> pena
        </del>
      </mod>
    </rdg>
    <rdg varSeq="1">
      <mod change="#strato-2">
        <del>
          <mod change="#strato-0">
            <subst>
              <del seq="1">dura</del>
              <add seq="2">assidua</add>
            </subst></mod> pena
          </del>
        </mod>
      </rdg>
    </app></1>
  
```

3B

1A e 2A

4B

# La progettazione dell'interfaccia utente



di tue dita il lavoro.

Ma spesso su sedevi grave in volto,  
all' studio sonoro; in me raccolto,  
ed io in un canto udivo il tuo "lavoro"  
rendevar  
Le tue dita rendevar la canzone  
dell'amor, della vita;  
e s'accendeva i me la visione  
d'una pace infinita.  
O uno strano presagio il cor m'empiva,  
un'ebbrezza profonda;  
ed ecco sorridendo a noi veniva  
una signora bionda;  
una bella signora, di cui gli anni  
già volgevano a sera;  
ch'era buona e severa,  
che li celava del suo cor gli affanni;  
ch'era tua madre!... Allo, ~~è al tuo cor vicina~~  
~~quella signora?~~  
~~d'April, nei sogni di primavera, mattina~~  
~~e notte con le campane nella mente~~  
~~t'ammoni quella ancora?~~  
(ella)  
Come tutto mutò! come la vita  
diversa oggi m'appare!

di tue dita il lavoro<sup>3</sup>] < il tuo dolce lavoro<sup>2</sup> < di tue dita lavoro<sup>1</sup>

Nota critica Sequenza correzioni XML

1] Strato 0: di tue dita lavoro

2] Strato 2: di tue dita il tuo dolce lavoro

3] Strato 5: il tuo dolce lavoro di tue dita il lavoro

di tue dita il lavoro<sup>3</sup>] < il tuo dolce lavoro<sup>2</sup> < di tue dita lavoro<sup>1</sup>

Nota critica Sequenza correzioni XML

```
<app>
  <lem varSeq="3">
    <mod change="#strato-5">
      <del rend="strikethrough">il tuo dolce lavoro.</del>
      <add place="margin-left">di tue dita il lavoro.</add>
    </mod>
  </lem>
```

Mockup del box di apparato critico

# The current EVT 3 prototype

The screenshot displays the EVT 3 prototype interface, showing a handwritten manuscript of a poem by Ugo Saba and its digital transcription.

**Left Panel (Manuscript):**

Poesie dell'adolescenza

Ma spesso tu sedevi ~~pensiero~~ grave in volto,  
all'studio sonoro; in me raccolto,  
ed io in un canto udivo ~~l'animosa~~ la canzone  
dell'amor, della vita;  
e s'accendeva i me la visiōne  
d'una pace infinita.

O uno strano presagio il cor m'empiva,  
un'ebbrezza profonda;  
ed ecco sorridendo a noi veniva  
una signora bionda;  
una bella signora, di cui gli anni  
già volgevano a sera;  
ch'era buona e severa,  
che ti celava del suo cor gli affanni;  
ch'era tua madre!... Aldo, ~~quel giorno~~ quella signora  
d'April, ~~nel sonno di primavera mattina~~  
~~l'animosa~~ ~~ella ancora?~~  
(ella).

Come tutto mutò! come la vita  
diversa oggi m'appare!  
Quante immagini care  
m'hanno, fuggendo, l'anima impraurita;  
quanta dol'cessa, quanta ingenuo fede  
l'ha in brev'ora lasciata;

**Right Panel (Transcription):**

Info 13

strato-5  
strato-0  
strato-1  
strato-2  
strato-3  
strato-4  
strato-5

Poesie dell'adolescenza

1 Ma spesso tu sedevo ~~pensiero~~ grave in volto,  
2 al 0 tuo > 0 tuo  
3 ed io in un canto raccolto,  
4 0 di tue ditta lavori  
5 Le tue dit 0<sup>a</sup> e 0 rendevan > 1 rendevan varianva > 5 variavan rendevan la canzone  
6 dell'amor, della vita;  
7 e s'accendeva i me la visiōne  
8 d'una pace infinita.  
9 O uno strano presagio il cor m'empiva,  
10 un'ebbrezza profonda:  
11 ed ecco sorridendo a noi veniva  
12 una signora bionda;  
13 una bella signora, di cui gli anni  
14 già volgevano a sera;  
15 ch'era buona e severa,  
16 che ti celava del suo cor gli affanni,  
17 ch'era tua madre!... Aldo, 0 l'hai tu presente > 2 l'hai tu presente è al tuo cor vicina  
18 quella 0 dolce > 2 dolce bionda signora 0: > 2 :  
19 0 e nel sonno, o con gli occhi della mente > 2 e nel sonno, o con gli occhi della

Search Select items Show deletions

202

# Accessibility and inclusivity

---



- EVT developed with a focus on usability and UI/UX issues
- next logical step: looking into accessibility issues
  - adding support for people with disabilities (e.g. visually or hearing-impaired people)
  - based on the latest version of the WCAG - Web Content Accessibility Guidelines <https://www.w3.org/TR/WCAG22/>
- the current approach
  - using a web browser extension to determine EVT performance
  - looking to provide alternative text for images, keyboard-based navigation, text reader
  - modifying themes (new EVT 3 feature) to create a better environment for people with visually impairments

# Accessibility and inclusivity

The screenshot shows the EVT 3 application interface. On the left, there is a sidebar titled "Color blindness simulator" with various sliders for different types of color vision deficiencies. The main area displays a handwritten poem titled "Poesie dell'adolescenza". The poem is written in cursive and includes some redacted text. The right side of the interface shows a list of numbered items, likely related to the poem or a task list.

Color blindness affects 8% of all men and about 0.5% of women. [Read more](#)

Color greatly reduced  
1 in 1,000,000

Green appears weak  
1 in 20

Green greatly reduced  
1 in 100

Red appears weak  
1 in 100

Red greatly reduced  
1 in 100

Blue appears weak  
1 in 100,000

Blue greatly reduced  
1 in 100,000

Color appears weak  
1 in 10,000,000

**EVT /> Progetto Saba1919 ALPHA**

13 Select MsDesc

Poesie dell'adolescenza 13

1 Ma spesso tu sedevi pensieroso > grazioso grave in volto,  
2 al tuo > nuovo studio sonoro;

3 ed io in un canto udivo il difetto il > grazioso dilettato, > in grazioso, in me raccolto,

4 di tue dita lavoro. > di tue dita il tuo dolce lavoro. > il tuo dolce lavori tue dita lavoro,

5 Le tue dita e rendevan > rendevan variava, > variavano rendevan la canzone

6 dell'amor, della vita;  
7 e s'accendeva i me la visione  
8 d'una pace infinita.

9 O uno strano presagio il cor m'empiva,  
10 un'ebbrezza profonda:  
11 ed ecco sorridendo a noi veniva  
12 una signora bionda;

13 una bella signora, di cui gli anni  
14 già volgevano a sera;  
15 che le celava del suo cor gli affanni,  
16 ch'era buona e severa,

17 che ti celava del suo cor gli affanni,  
18 ch'era tua madre!... Aldo, di tuo cor vicina.

19 quella dolce bionda signora > la ^

20 nel sonno, o con gli occhi della mente > e nel sonno, o con gli occhi della mente d'April, nei sogni di prima mattina

21 la rivedi talora? > la rivedi talora? l'ammonisce ella ancora?

22 Come tutto mutò! Come la vita  
23 diversa oggi m'appare!  
Quante immagini care  
m'ha visto, fuggendo, l'anima impaurita;

24 Quante dolcezza, quanta ingenua fede  
25 m'hanno, fuggendo, l'anima impaurita;

26 quanta dolcezza, quanta ingenua fede  
27 l'ha in brev'ora lasciata;

28 come talvolta con stupor > talvolta con stupor spezzarsi, dileguar > spazzarsi, dileguar talvolta con stupor si vede

29 nube in cielo rosata o, > o.

Search Select items Show deletions

Checking the performance of EVT 3 in relation to visual impairment

# Accessibility and inclusivity



The screenshot shows the EVT 3 theme interface. On the left, there is a color contrast checker tool with a green 'Pass ✓' result for a 21.00:1 ratio. It includes sections for Foreground and Background colors (#000000 and #FFFFFF) and text sizes (Normal Text, Large Text, Graphics). On the right, a handwritten manuscript page from a book is displayed. The text is in Italian and discusses adolescence. A vertical sidebar on the right contains a list of numbered items, likely annotations or corrections, with some words highlighted in orange. The bottom of the screen features a toolbar with icons for search, selection, and other functions.

The EVT 3 theme to improve visualisation for people suffering from colour blindness

# EVT as a service



- thinking about taking collation software output as an input for EVT (same for HTR software)
- not anymore thanks to **DPhD**, which also integrates EVT
- “EVT as a service” feature: the client-only architecture has its limitations
  - no fast database to acquire data
  - no powerful search engine
  - no collaborative tools
- assuming you have a server-based software, however, you can now use EVT 3 as a powerful DSE browser
  - TEI documents might be stored in/produced from a database
  - instead of having multiple EVT instances, each document can be “passed” to EVT to display it together with a config file



Prato, a cura di Luciana Frangioni, Firenze, Opus Libri, 1994, vol. I,  
pp. 190-191, n. 263.

CITA EDIZIONE

## Trascrizione fornita da Opera del Vocabolario Italiano

Al nome di Dio, amen. Dì 20 dicembre 1394. Per Giovani di Domenicho vi scrissi quanto fe' di bisongno, aute l'arete, rispondete. E da voi ò poi a dì 17 una vostra de dì 5 e inteso quanto dite rispondo. Ebi in essa una a Francescho di Basciano quale ò letta e visto quanto li scrivete e sta bene e ben tochate tutte parti che s'anno bisongno: àgliele data e anchora no l'à tutta letta. E infine dicie vuole questi conti s'achoncino e rimanere vostro amicho chom'era il padre e ritenersi dove avete a fare chon voi e fare di merchantantia chome usato, a di che Idio ne li presti la grazia. Tornnò detto Francescho da Vinegia a di 11 e chome s'abi fatto non so: à chonprati chotoni e altri chose per qui. Detto v'ò in altre chome abian chomincato a rischontrare: non siamo anchora troppo inanzi per questi ànno auto a fare a Pavia e per queste robe venute da Vinegia. Solecitansi quanto si può che abino fine e 'nsino a qui non s'è potuto fare più, diròvi chome seguiremo. Vegio fatte le feste mandate Cristofano a Vingnone per questo chamino, sia chon Dio. Informeretelo di tutto a bocha di quelo s'è a fare qui e chredo manderete i chonti di Pisa se nno fatelo come prima si può. Atendo abiate auta le peli per foderi e detto chome ve ne tenete serviti. De' f. 250 ch'è l'dibatito tra voi e questi vegio bene quanto dite. Quando saremo a cciò vedren che voranno dire, i' so quelo ò a rispondere. In questa ora ò auto lettera da Vingnone e dicomi chome la lana è lavata e 'nsachata e tosto l'atendevano i d'Arly sì che qui dovrà tosto chonparire, Idio la mandi, e tosto quando qui sarà vi dirò sopr'essa. E ò riceuto insino insino dì 18 le 6 balle di soatti chonce in Vingnone. Per anchora no l'ò finite perché siamo sotto le feste ed èci pochi si voglino charichare, vedrò finirle chol più utile si potrà e diròlovi. Centomila salute per parte di tutte queste donne e simile a monna Margherita vostra. Né altro per ora vi dicho. Cristo vi ghuardi per Tommaxo vostro vi si rachomanda. Francescho di Marcho. in Firenze. Propio.

Per approfondire accedi a [Edition Visualization Technology](#)

[Progetto OVI Restore](#)

# EVT as a service



## Bellini Digital Correspondence: ottimizzazione della fruizione web mediante EVT ed utilizzo delle tecnologie XML-based Saxon-JS2, XQuery ed eXist-db

### Metadati

<b>Descrizione</b>	Repository della tesi di laurea in informatica umanistica per l'ottimizzazione della fruizione web mediante EVT ed utilizzo delle tecnologie XML-based Saxon-JS2, XQuery ed eXist-db relativamente al progetto Bellini Digital Correspondence.
<b>Parole chiave</b>	archivio digitale, Catania, Codifica XML-TEI, Digital Scholarly Edition, filologia digitale, lettere, ottocento, Sicilia, Vincenzo Bellini, ESD, RM
<b>Lingua</b>	eng, it
<b>Istituzione o autore</b>	Pellino Santa
<b>Collegamento alla fonte originale</b>	<a href="http://bellinicorrespondence.cnr.it/">http://bellinicorrespondence.cnr.it/</a> <a href="https://raw.githubusercontent.com/santapellino/Progetto-tesi-Santa-Pellino/main/BelliniCorrespondence.xml">https://raw.githubusercontent.com/santapellino/Progetto-tesi-Santa-Pellino/main/BelliniCorrespondence.xml</a> <a href="https://github.com/santapellino/Progetto-tesi-Santa-Pellino">https://github.com/santapellino/Progetto-tesi-Santa-Pellino</a>

[Progetto "Bellini Correspondence" su piattaforma CHIt](#)

# EVT as a service



Digital Philology for Dummies

Roberto Rosselli D...

+ New Project

My Projects

## Projects

Project Id	Project Name	Actions
3	VBD	<button>Search</button> <button>Search by Tag</button> <button>Edit</button> <button>Delete</button>

#	Name	Actions
8	Vercelli CXVII	<button>Edit</button> <button>Export Tei</button> <button>View in EVT</button> <button>Delete</button>
19	Maier's transcription	<button>Edit</button> <button>Export Tei</button> <button>View in EVT</button> <button>Delete</button>

Project Id	Project Name	Actions
17	Marco Polo	<button>Search</button> <button>Search by Tag</button> <button>Edit</button> <button>Delete</button>

#	Name	Actions
23	V	<button>Edit</button> <button>Export Tei</button> <button>View in EVT</button> <button>Delete</button>
24	TB	<button>Edit</button> <button>Export Tei</button> <button>View in EVT</button> <button>Delete</button>
25	F	<button>Edit</button> <button>Export Tei</button> <button>View in EVT</button> <button>Delete</button>

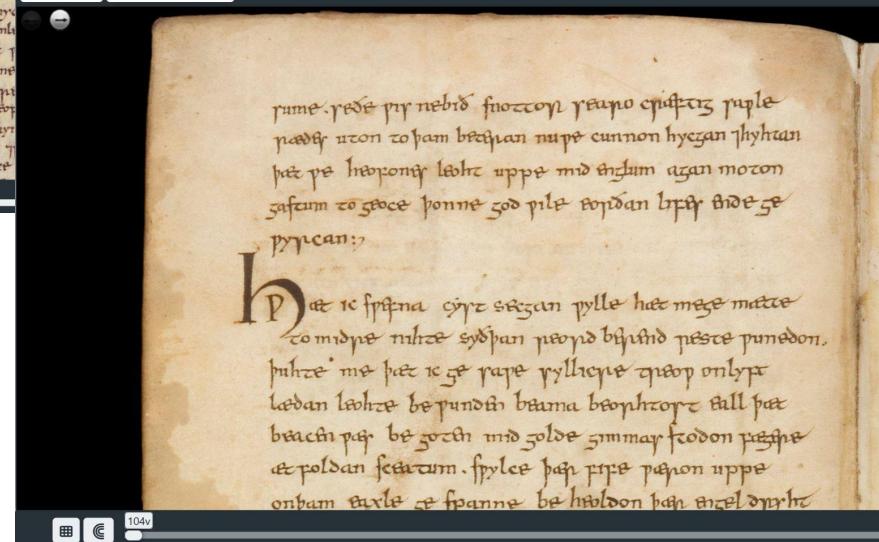
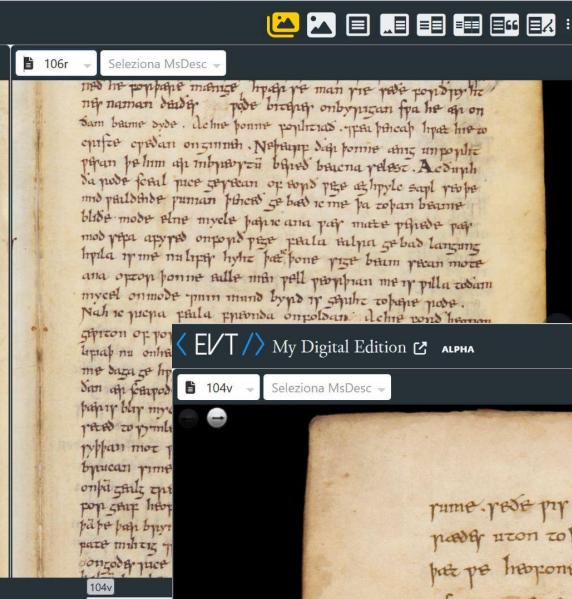
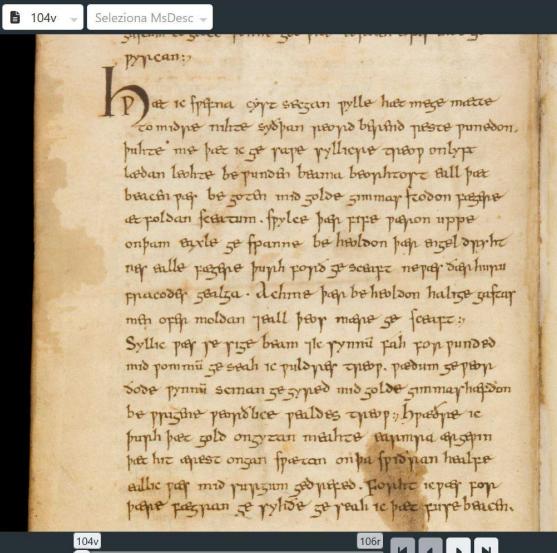
«

EVT integration in DPhD

# New image-image and image-only views



EVT / My Digital Edition ALPHA



106r

# Glossary visualization



► **anstallin** sost. f. in -i. ‘Tradimento, fuga o abbandono dei compagni in battaglia’.

Descrizione	Allografi	Etimologia	Bibliografia	Occorrenze	XML	
‘Tradimento, fuga o abbandono dei compagni in battaglia.’ Probabilmente un’espressione desueta già nell’ER.						

*Si quis contra inimicūs pugnando collegam suum dimiserit aut **anstallin** fecerit, id est si eum diceperit et cum eum non laboraverit, animae suae incurrat periculum. (ER 7)*

FORME FLESSE

**anstalin** acc. sing. *Si quis contra inimicūs pugnando collegam suum dimiserit aut **anstalin** fecerit, id est si eum diceperit et cum eum non laboraverit, animae suae incurrat periculum. (ER 7)*

[altre forme flesse]

OCCORRENZE IN ALTRI TIPI DI DOCUMENTO

*Astalin. Id est decipere. (Glossa) ...*

```
<sense>
  <def>Tradimento, fuga o abbandono dei compagni in battaglia.</def>
  Probabilmente un’espressione desueta già nell’ER.
</sense>

<form>
  <orth>anstallin</orth>
  <gramGrp>
    <case value="nominative"/>
    <number value="singular"/>
  </gramGrp>
  <cit type="lemma">
    <quote>Si quis contra inimicūs pugnando collegam suum dimiserit aut
      anstallin fecerit, id est si eum diceperit et cum eum non
      Laboraverit, animae suae incurrat periculum.</quote><!-- NB in realtà
      è un accusativo, cercare es. al nominativo -->
    <ref target="#ER_term_anstallin_07">ER 7</ref>
  </cit>
</form>
```

From mockup ...

16 VII Si *quis* contra inimicos pugnando *collegam* suum  
17 dimiserit aut *anstallim*

▼ **anstalin**

Info Occurrences Relations XMLSource

❶ FORM: anstalin  
❷ TYPE: lemma

❶ GRAMGRP:

❶ FORM: anstalin Si quis contra inimicūs pugnando collegam suum dimiserit aut astalin fecerit, id est si eum diceperit et cum eum non laboraverit, animae suae incurrat periculum. id est si eum diceperit et cum eum non laboraverit

❶ FORM: anstalin Si quis contra inimicūs pugnando collegam suum dimiserit aut astalin fecerit, id est si eum diceperit et cum eum non laboraverit, animae suae incurrat periculum. id est si eum diceperit et cum eum non laboraverit

❷ TYPE: inflected

❶ CIT: Astalin. Id est decipere

❶ FORM: astalin MSS 1, 5, 8, 9, 10, 11; Gloss. Matr. anstallin MS 2 anstallim MS 3 astalium MS 12

❷ TYPE: variants

❶ SENSE: Tradimento, fuga o abbandono dei compagni in battaglia.  
Probabilmente una parola antica, tale da necessitare una spiegazione nella glossa

... to visualization in EVT 3

# Configuration files



```
{  
  "editionTitle": "The Dream of the Rood",  
  "badge": "beta",  
  "editionHome": "http://vbd.humnet.unipi.it/beta2/",  
  "availableEditionLevels": [  
    {  
      "id": "diplomatic",  
      "label": "diplomatic",  
      "enable": true,  
      "hidden": false  
    },  
    {  
      "id": "interpretative",  
      "label": "interpretative",  
      "enable": true,  
      "hidden": false  
    },  
    {  
      "id": "critical",  
      "label": "critical",  
      "enable": true,  
      "hidden": false  
    },  
  ],  
}
```

```
#Edition Main Information  
#Choose a title for your edition. If you left it blank the default  
'EVT Viewer' will be shown. If you specify an external web site there  
will be a link pointing to it.  
#You can also add a custom logo that will appear before the edition  
title: just indicate the path to it; it can be a URL or a relative  
path: we suggest you to put it into data and point to it (es. data/  
myLogo.jpg).  
editionTitle: "My Digital Edition"  
badge: "beta"  
editionHome: "http://evt.labcd.unipi.it/"  
  
#Edition data  
editionUrls:  
  type: "main"  
  value: "assets/data/IRT0002.xml"  
  enable: true  
editionImagesSource:  
  manifest:  
    value: "https://www.e-codices.unifr.ch/metadata/iiif/csg-0730/manifest.json"  
    enable: false  
  graphics:
```

From 3-4 JSON files ...

... to only one YAML file

---

## The roadmap the 1st half of 2025

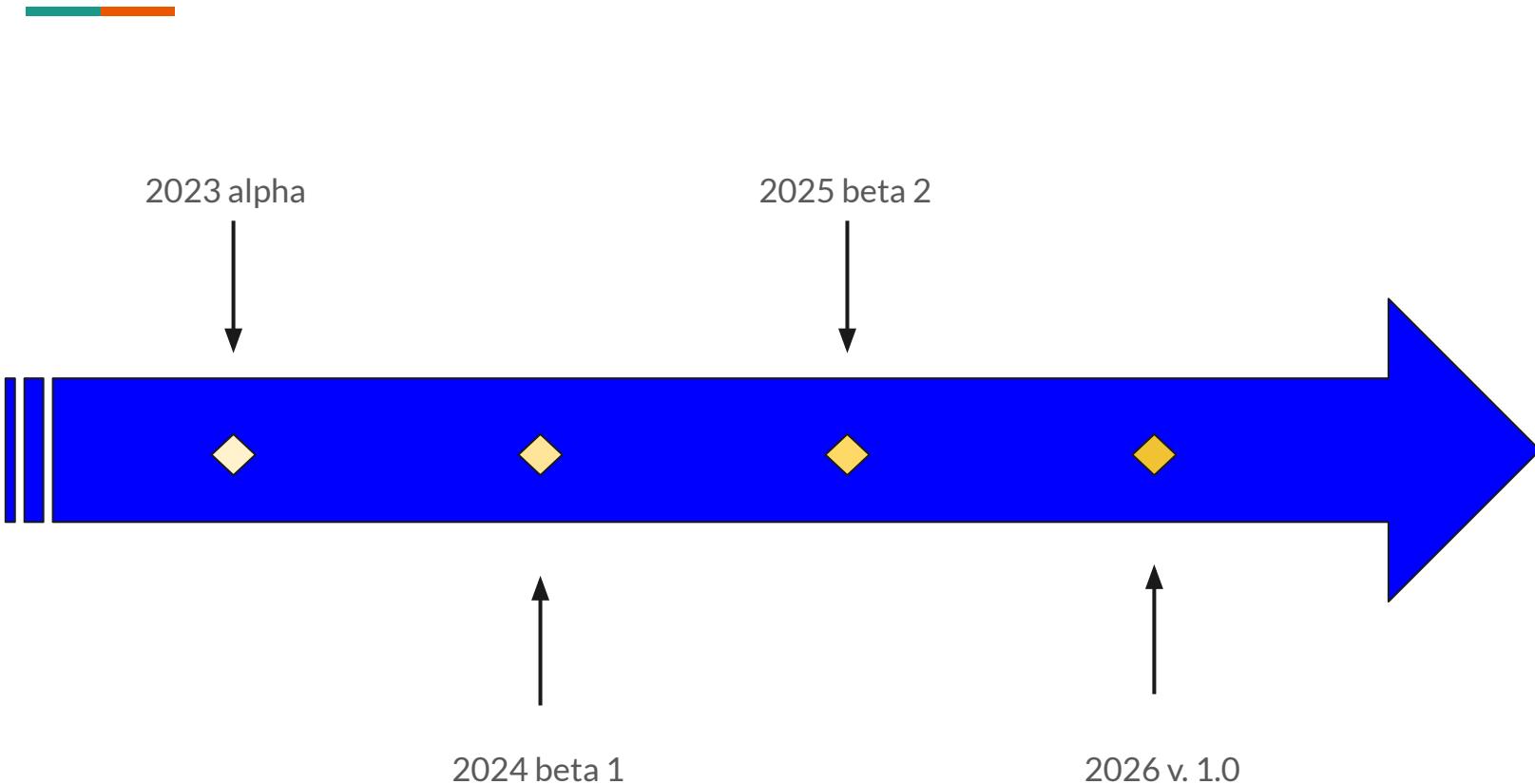
- first important step: merging accessibility, DEPA and EVT as a service branches on develop
- second step: improving support for digital facsimile and diplomatic editions then merge these branches on develop
  - this will improve the feature set that will be available on the old parser
- third and fourth steps: migrating EVT 3 on the new parser **and** on Angular 18/19 at the same time
  - this will make it possible to have synoptic editions and depa at the same time, paving the way for the integrated edition
  - updating Angular will grant structural and performance gains



# The roadmap for the 2nd half of 2025

- refining existing features
  - digital facsimile: image annotation, IIIF support
  - critical edition: refining of the apparatus frame
  - introduction of the editorial conventions configuration file
  - authorial philology: new critical view with “custom” collation view
- introducing new important features:
  - text search engine + advanced TEI document query
  - support for glossaries and dictionaries
  - user annotation (?)
  - georeferencing (?) + timeline (?)
- the final goal: **a 1.0 version** at some point in 2026

# General EVT 3 roadmap



---

# The EVT team

- Current members
  - Roberto Rosselli Del Turco project founder, funding hunter, documentation
  - Chiara Di Pietro EVT 2 and 3 designer
  - Renato Caenaro (SilentWave) general coordination, new parser, depa support etc.
  - Davide Cucurnia genetic criticism, accessibility improvements
  - Chiara Martignano critical edition support, MEI support
  - Federica Spinelli EVT as a service, OVI collaboration
- Development partner: SilentWave (<https://www.silentwave.eu/>)
- Former developers / collaborators
  - Raffaele Masotti
  - Giulia Cacioli
  - Jacopo Pugliese
  - Julia Kenny
  - Giacomo Cerretini
  - Simone Zenzaro

---

## ● References

- Di Pietro, Chiara, e Roberto Rosselli Del Turco. 2018. «Between Innovation and Conservation: The Narrow Path of User Interface Design for Digital Scholarly Editions». In *Digital Scholarly Editions as Interfaces*, 12:133–63. Schriften Des Instituts Für Dokumentologie Und Editorik. Norderstedt: BoD. <https://kups.ub.uni-koeln.de/9085/>.
- Rosselli Del Turco, Roberto. 2019. «Designing an Advanced Software Tool for Digital Scholarly Editions». *Textual Cultures* 12 (2): 91–111. <https://doi.org/10.14434/textual.v12i2.27690>.
- Monella, Paolo, e Roberto Rosselli Del Turco. 2020. ‘Extending the DSE: LOD Support and TEI/IIIF Integration in EVT’. In *Atti Del IX Convegno Annuale AIUCD*. Available online: <http://www1.unipa.it/paolo.monella/aiucd2020/index.html>

## ● EVT resources on the web

- Home page: <http://evt.labcd.unipi.it/>
- Project page on GitHub: <https://github.com/evt-project/>
- GitHub repository for EVT 2: <https://github.com/evt-project/evt-viewer/>
- GitHub repository for EVT 3: <https://github.com/evt-project/evt-viewer-angular/>



**Thank you for your attention!**