An introduction to EVT - Edition Visualization Technology

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EVT Home: http://evt.labcd.unipi.it/
EVT GitHub: https://github.com/evt-project

DISH: https://www.dish.unito.it/

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

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**

3

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

Current development status

- over time (2013 → 2025) three version 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

- 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
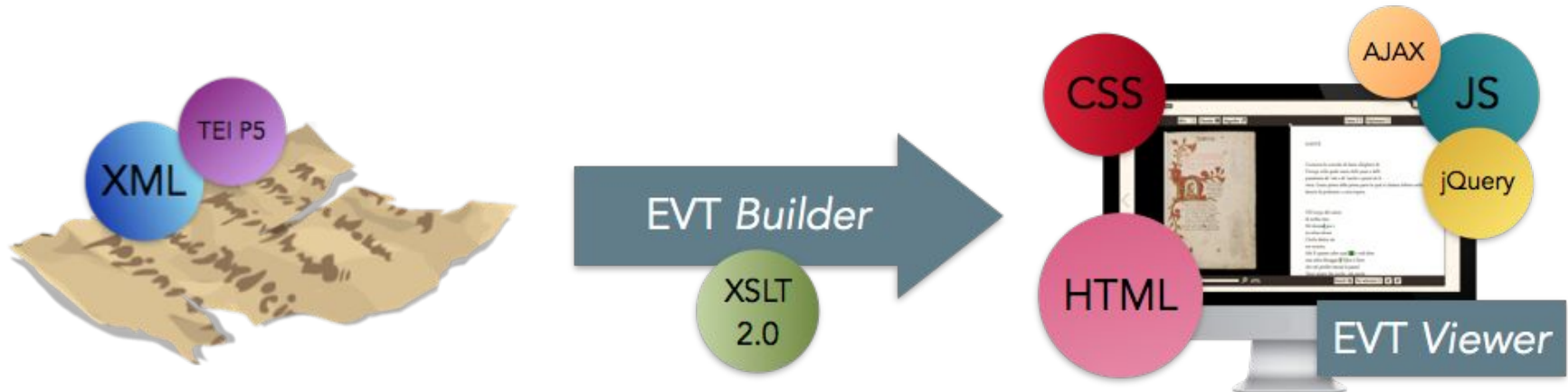
Main features

- 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
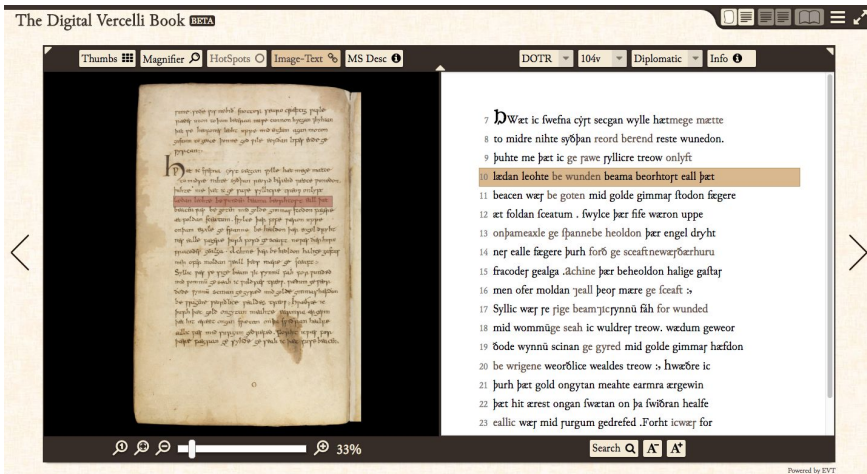
Digital Vercelli Book
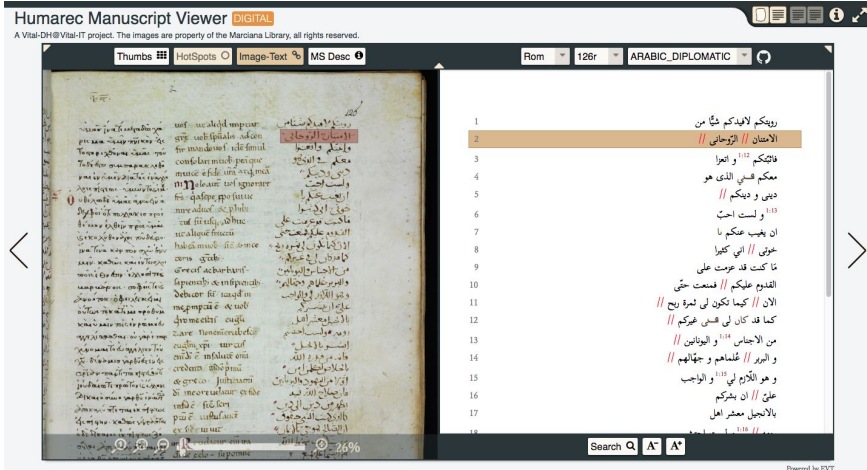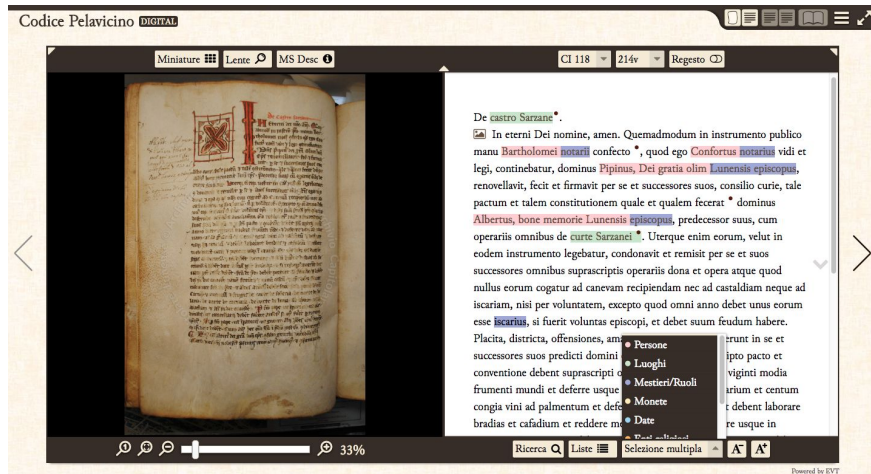
Codice Pelavicino Digitale

Tarsian / HumaRec
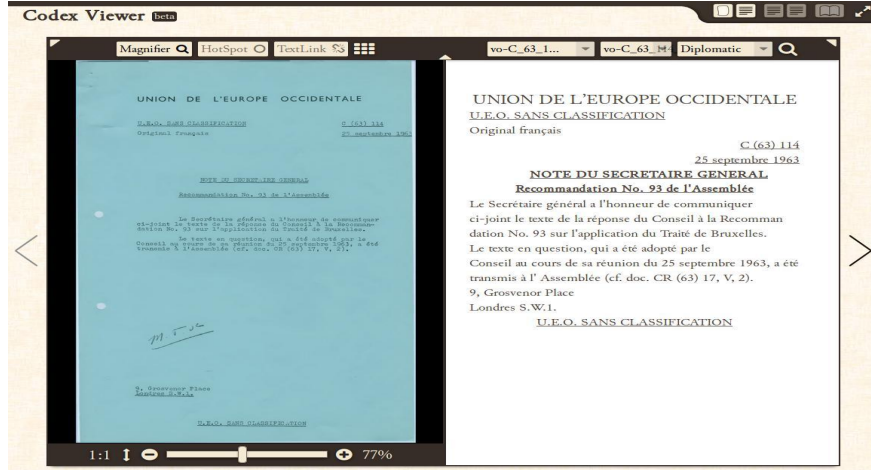
CVCE

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
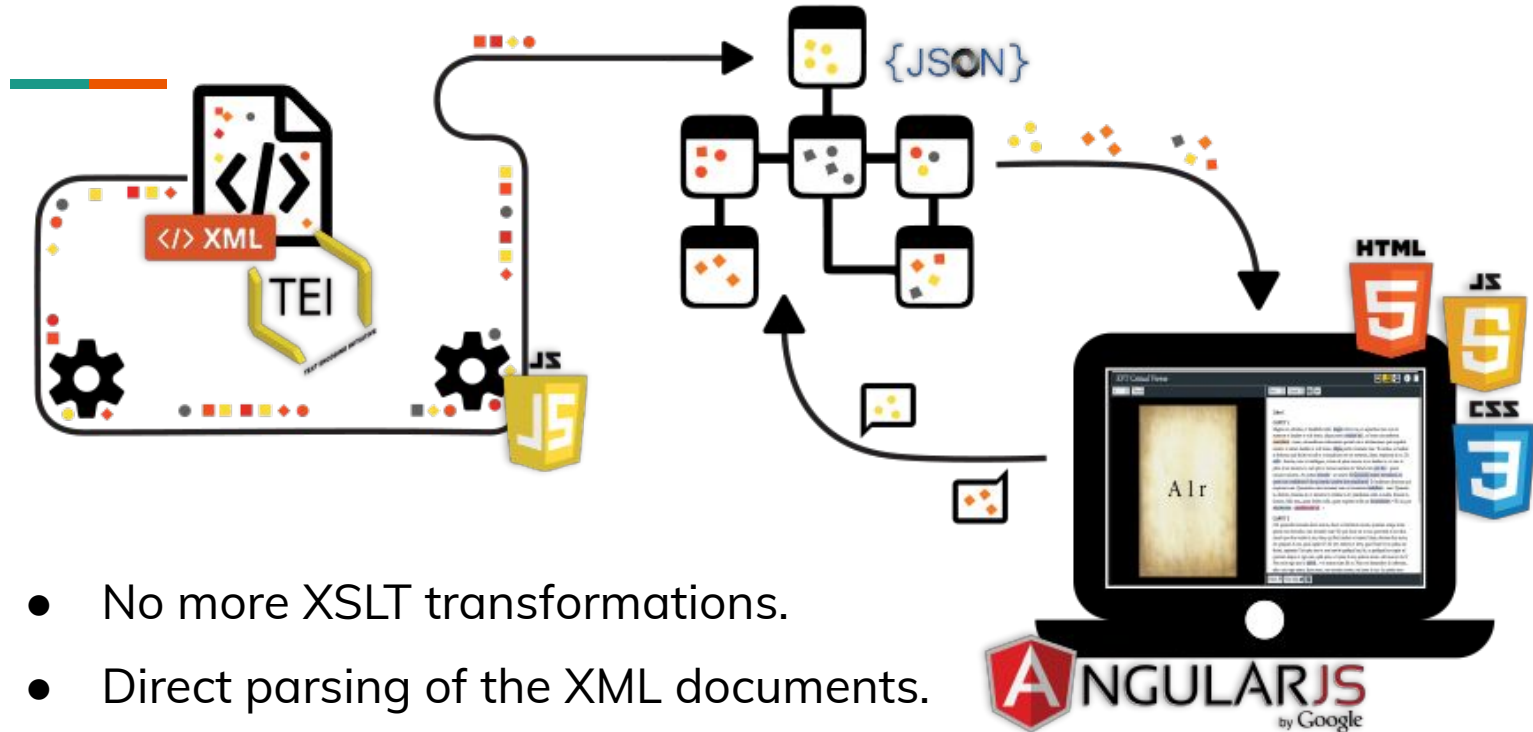
- No more XSLT transformations.

- 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.
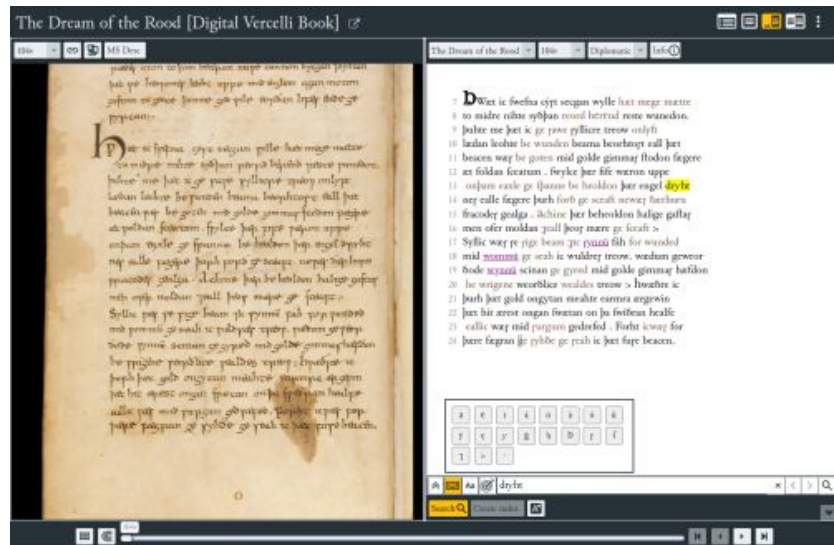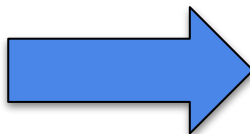
- MVC (Model View Controller) approach.
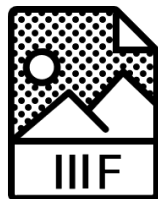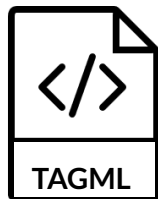
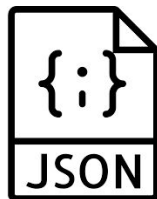# EVT data management (EVT 2 and 3)

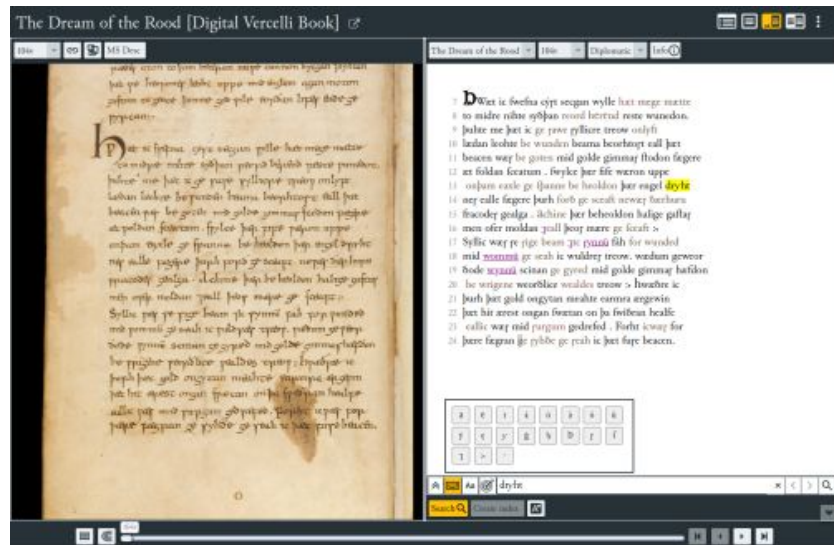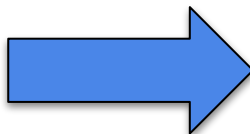

JPG

XML → INPUT PARSER → {;} JSON → VIEWER → [viewer screenshot]

IIIF
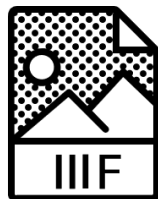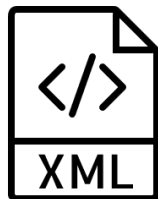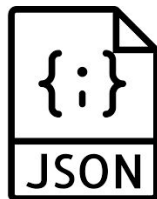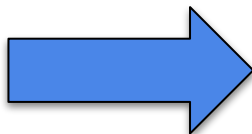
EVT data management (EVT 2 and 3)
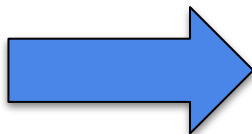
In order to add support for formats other than TEI it is possible to write a new parser for the input data, the display module does not change.

The first alpha version (July 2016)

- 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

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
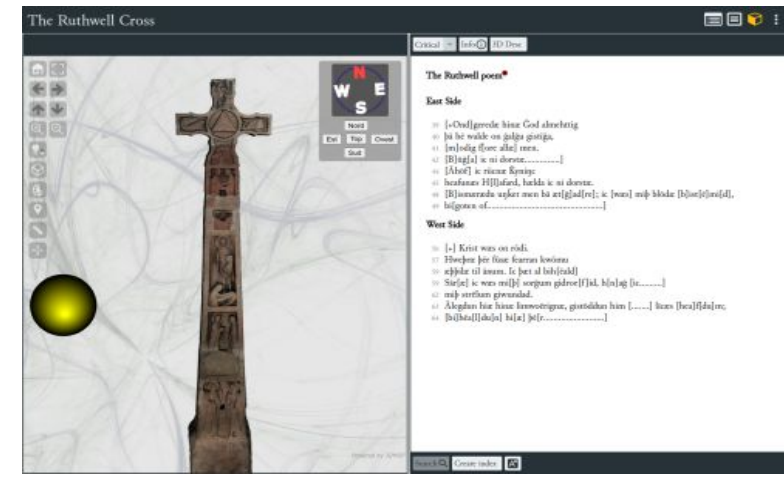- bug fixes and general user experience / interface improvements
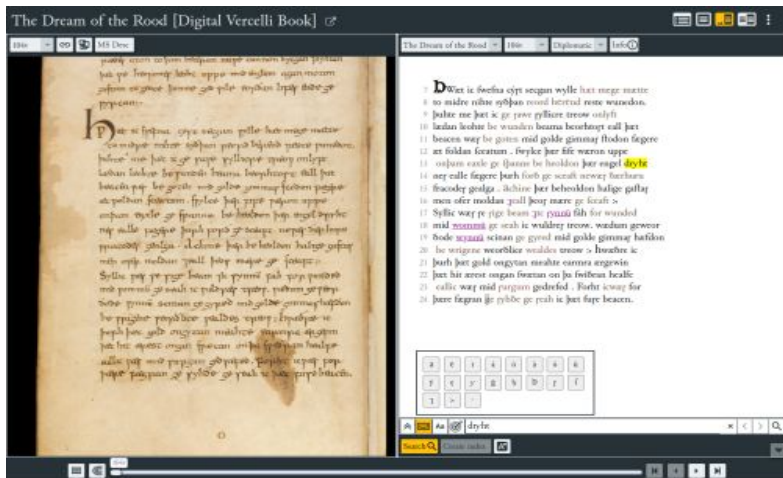
Diplomatic edition
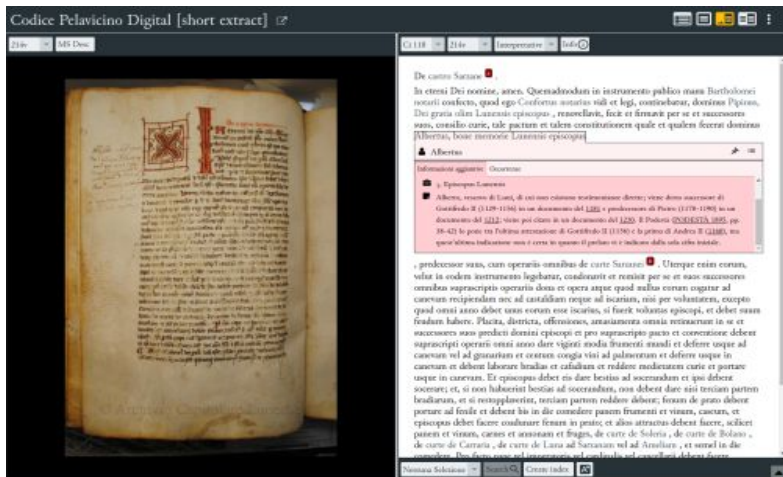
Fascicular structure of the manuscript

Named entities

3D Model View (3DHOP)

Panel 1 (Div 2 | Critical | Info)

Liber I

CAPUT 1

Magnus es, *domine*, et laudabilis valde: magna [a] virtus tua, et sapientiae tuae non est numerus et laudare te vult homo, aliqua portio creature tue [b] , et homo circumferens mortalitem [c] suam, circumferens testimonium peccati sui et testimonium, quia superbis resistis: et tamen laudare te vult homo, aliqua [d] portio creaturae tuae. Tu excitas, ut laudare te delectet, quia fecisti nos ad te et inquietum est cor nostrum, donec requiescat in te. Da mihi [c] domine, scire et intellegere, utrum sit prius invocare te an laudare te, et scire te prius sit a ... ocat nescien te? Aliud enim pro al ... ns. An potius invocaris [g] ut sciaris?

[h] Quomodo **C**] Qui *B* Qua *D* ...

Nota critica | Varianti ortografich ...

autem invocabunt, in quem no ... credent sine praedicante? [i] Et ... uirunt eum. Quaerentes enim inveniu ... unt [j] eum. Quaeram te, domine, inv ... ns in te: praedicatus enim es nobis. ... , quam dedisti mihi, quam inspirasti ... ii tui, per ministerium [l] praedicatoris tui [m] .

CAPUT 2

[n] Et quomodo invocabo deum meum, deum et dominum meum, quoniam utique inme ipsum eum invocabo, cum invocabo eum? Et

Search | Create index | Filtri | Mappa di variabilità

In this apparatus entry, the editor has not decided yet which lectio should be considered the lemma. The app contains only rdg elements. They are therefore displayed in a different way from the other apparatus entries. I have also introduced two mistakes: there is no mention of witness B, while witness C is mentioned twice.

Panel 2 (A | 1r | Div 2 | Info)

— 1r —

Liber I

CAPUT 1

Magnus es, *domine*, et laudabilis valde: magna [a] virtus tua, et sapientiae tuae non est numerus et laudare te vult homo, aliqua portio creatr ae tuae [b] , et homo circumferens mortalitem [c] suam, circumferens testimonium peccati sui et testimonium, quia superbis resistis: et tamen laudare te vult homo, aliquando [d] portio creaturae tuae. Tu excitas, ut laudare te delectet, quia fecisti nos ad te et inquietum est cor nostrum, donec requiescat in te. Da mihi [c] 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 [f] potest invocare nesciens. An potius invocaris [g] ut sciaris? In Quando [h] autem invocabunt, in quem non ... unt? Aut quomodo credent sine praedicante? [i] ... um qui requirunt eum. Quaerentes enim ... venientes laudabunt [j] eum. Quaeram te, ... , et invocem te credens in te: praedicatus enim ... domine, fides mea, quam dedisti mihi, quam ... humilitatem [k] filii tui, per ministerium [l] ...

... cabo deum meum, deum et dominum meum, ... ne ipsum eum invocabo, cum invocabo eum? ... me, quoveniat in me deus meus? quo deus ... qui fecit caelum et terram? itane, domine deus

Filtri

(popup menu overlapping panel 2)

HAND
ANY
USER 1
TYPE
ANY
ORTHOGRAPHIC
LESSICOGRAPHIC
OMISS
CAUSE
ANY
UNKNOWN

Panel 3 (C | 254r | Div 2 | Info)

— 254r —

Liber I

CAPUT 1

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

— 254v —

in te. Da nobis [c] 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.]* [f] potest invocare nesciens. An potius invocaris [g] ut sciaris? In Quomodo [h] 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 [j] 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

— 255r —

ego iam in inferis [q] et tamen etiam ibi es. Nam etsi

Filtri

19

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 accidit hic intellectus, ad similitudinem domus, quae
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 rerum [br] secundum quod sunt alicuius 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 praedicata aut subiecta, et universalia aut particularia, aut
huiusmodi quae non accidunt his intellectibus [bt] nisi ex hoc quod diximus
in praemissis.
Ad considerationem autem dictionum ducit 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 ⟋ considerentur aliqua eius nisi soli
intellectus, tunc sufficeret. [bu] Si etiam [bv] [bw] doctor artis posset
revelare id quod est in animo eius alio modo, supersederet semper " [bx] a
verbis, [by] sed quia necessitas ducit nos ad agendum cum verbis praecipue "
- non enim potest ratio componere intellectus quin cum illis proferat verba,
immo quia cogitatio quasi locutio est inter ipsum hominem et cogitatum
suum verbis imaginatis - sequitur ut verba habeant diversas dispositiones
propter quas differant dispositiones intentionum quae comitantur eas in

Search | Create index | Filtri | Mappa di variabilità |

[○] 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

doctor artis posset revelare id quod est in animo eius alio modo,
supersederet semper

PASSO PARALLELO IN
- *Avicenna, Burhān*

Riferimento Bibliografico   XML

Dicemus quod verbum graece 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».

PASSO PARALLELO IN
- *Avicenna, Burhān*

Riferimento Bibliografico   XML

Multi reprehenderunt,

PASSO PARALLELO IN
- *Avicenna, Burhān*

Riferimento Bibliografico   XML

ut « canis » cum dicitur pro « latrabili », et haec est eius significatio,
deinde imponat ad significandum aliud, sicut « pisci »

PASSO PARALLELO IN
- *Boethius, In Porph. Isag.*

Testo   Riferimento Bibliografico   XML

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 Pietro (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

21

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'e
9 indo-européen se prononçait peut-être ä et non e
10 (ästi et non esti)? 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 constitue la langue, pourvu seulement que le changement
22 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

Support for diplomatic editions

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
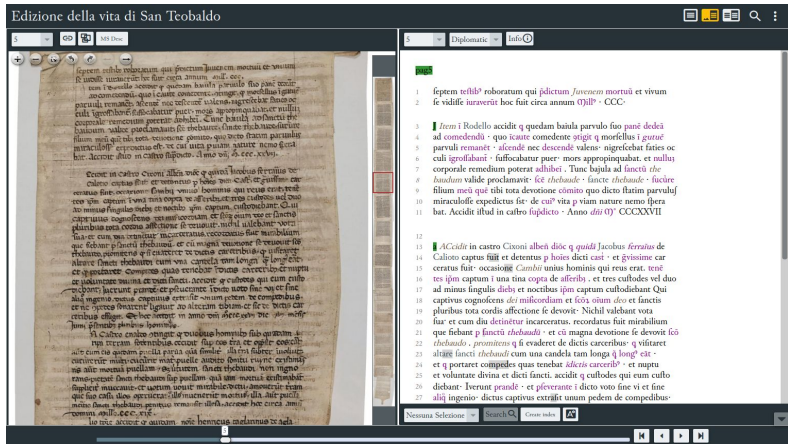
Scroll of the *Vita di San Teobaldo*
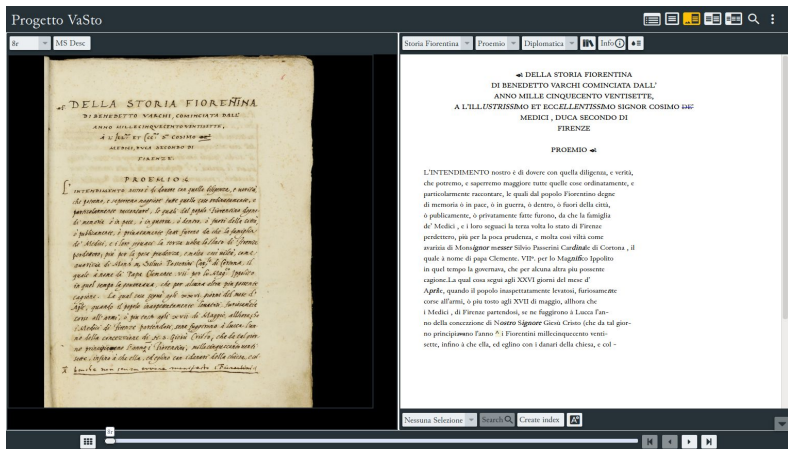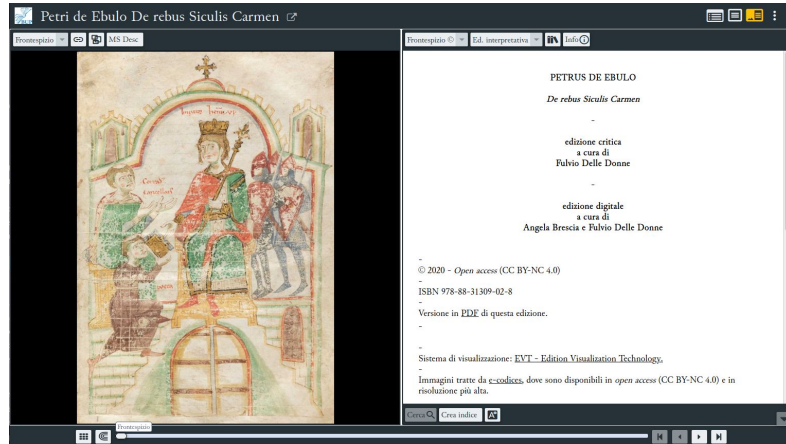
Petrus de Ebulo *De rebus Siculis Carmen*

Progetto VaSto
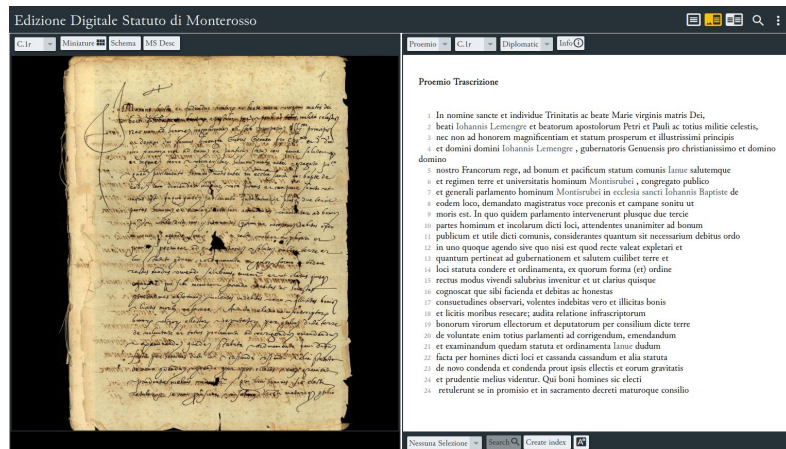
Statuto di Monterosso

24

EVT 3: the next generation
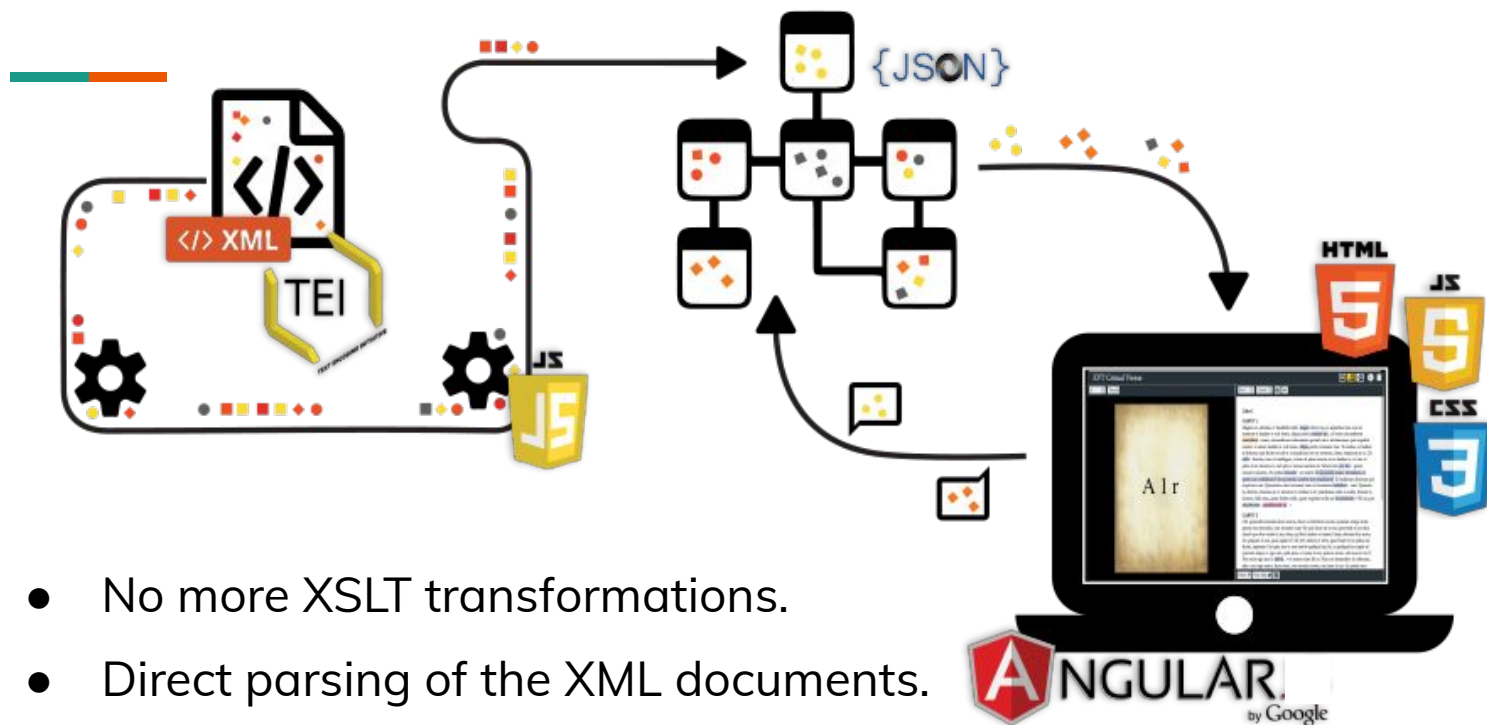
- No more XSLT transformations.

- 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.

- 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

- 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

```
<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>
```

30

```xml
<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

31

```
<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

32

- 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

RETI project: DEPA prototype

The current DEPA prototype

RETI project: DEPA prototype

The current DEPA prototype

RETI project: DEPA prototype

The current DEPA prototype

RETI project: DEPA prototype

- 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

```
<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_
  </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"
                }
            }
        }
    },
```

Diplomatic — 106r

ælmihtig god ꝓhiſ englaſ mid .
þæt he þonne wile deman ſe ah domeſ geweald
anra ge hwylcū ſwa he him ærur her
onþyꝼꝛum lænum life ge earnaþ .
110 ne mæg þær ænig unforht weꝛan .
forþam worde . þe ſe wealdend cwyð.
frineð he forþære mænige hwær ſe man ꝛie
ꝛeðe for dꝛy htneſ naman deaðeſ [3char] wo.\de
bitereſ onbyrigan ſwa he ær on ðam beame dyde .
115 ac hie þonne forhtiað . Ꝙ fea þencaþ
hwæt hieto criſte cweðan onginnen .
Neþearf ðær þonne ænig unforht weꝛan
þe him ær inbreoꝛtū bereð beacna ꝛelest .
Acðurh ða rode ſceal rice geꝛecan
120 of eorð wege æg hwylc ſawl

Interpretative — 106r

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 geearnaþ .
110 ne mæg þær ænig unforht wesan .
for þam worde . þe se wealdend cwyð.
frineð he for þære mænige 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

From *The Dream of the Rood*, verse visualization of f. 106r.

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

C19, c. 102, from *Verso casa*

```
<l 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></l>
```

4B

3B

1A e 2A

Printed apparatus:

^{1A}dura pena, > ^{2A}assidua pena, >
^{3B}dura (*prima* lun<ga>) pena >
^{4B}**avversa pena**
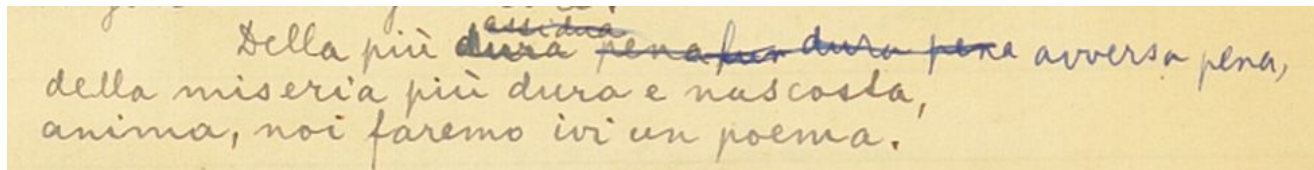
C19, c. 102, from *Verso casa*

Printed apparatus:

[1A]dura pena, > [2A]assidua pena, >
[3B]dura (*prima* lun<ga>) pena >
[4B]**avversa pena**

```
<l 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></l>
```

4B

3B

1A e 2A

Mockup del box di apparato critico

The current EVT 3 prototype

U. Saba, *Canzoniere 1919*

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

Checking the performance of EVT 3 in relation to visual impairment

Accessibility and inclusivity

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

- 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

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'ànno 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 merchatantia chome usato, a di che Idio ne li presti la grazia. Tornnò detto Francescho da Vinegia a dì 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 piuò 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 aute 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

Descrizione
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.

Parole chiave
archivio digitale, Catania, Codifica XML-TEI, Digital Scholarly Edition, filologia digitale, lettere, ottocento, Sicilia, Vincenzo Bellini, ESD, RM

Lingua
eng, it

Istituzione o autore
Pellino Santa

Collegamento alla fonte originale
http://bellinicorrespondence.cnr.it/
https://raw.githubusercontent.com/santapellino/Progetto-tesi-Santa-Pellino/main/BelliniCorrespondence.xml
https://github.com/santapellino/Progetto-tesi-Santa-Pellino

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

EVT as a service

EVT integration in DPhD

New image-image and image-only views
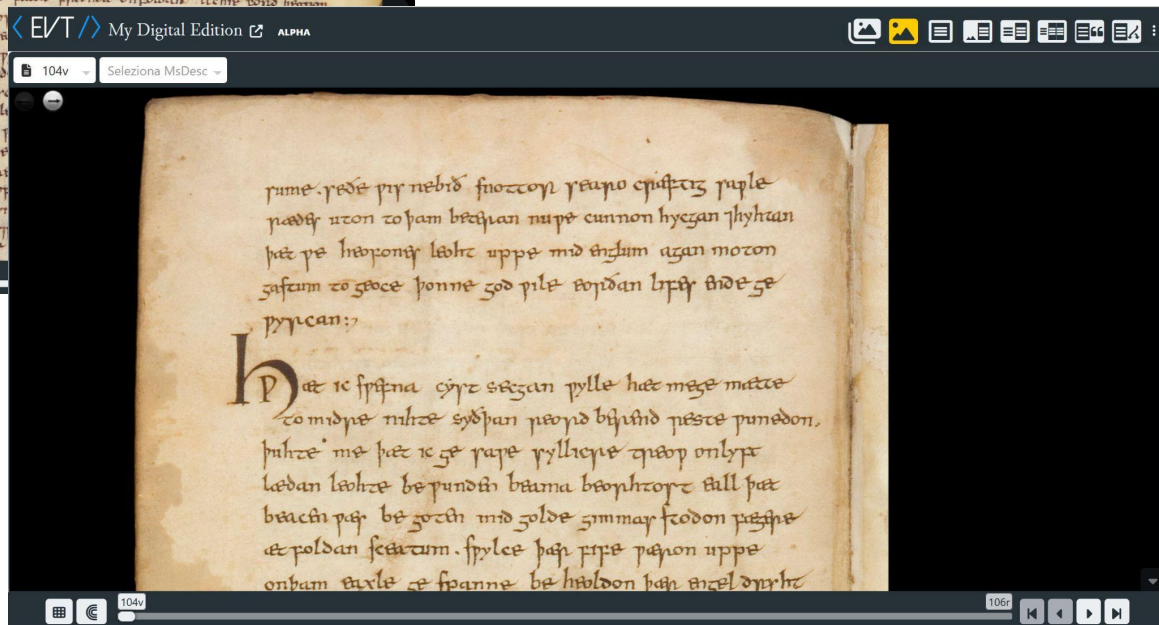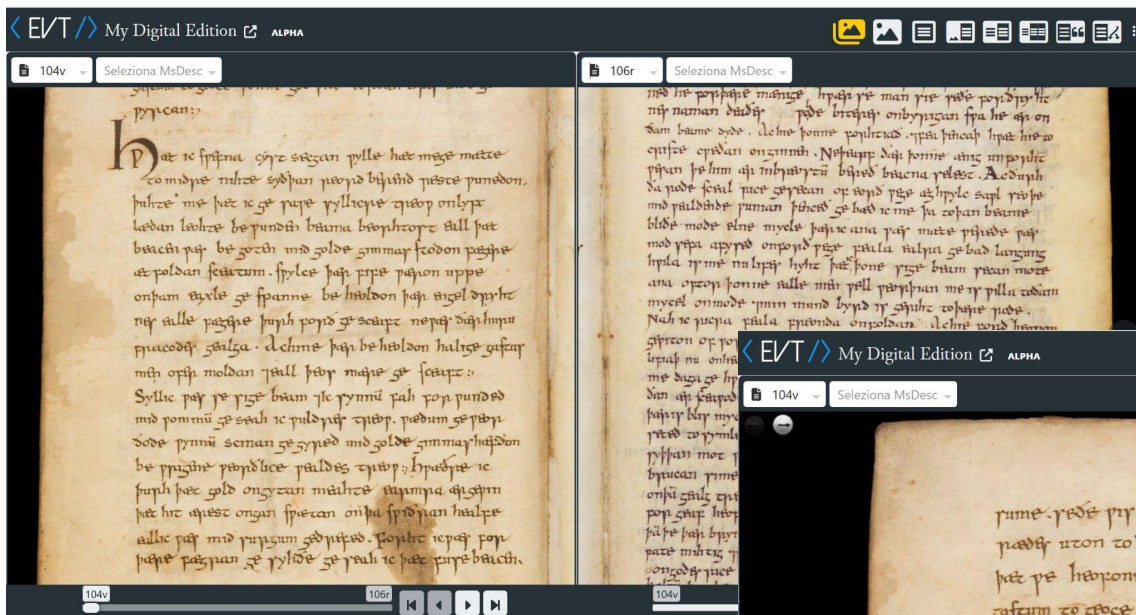
anstallin *sost. f. in -i.* 'Tradimento, fuga o abbandono dei compagni in battaglia'.

| **Descrizione** | Allografi | Etimologia | Bibliografia | Occorrenze | XML | |

'Tradimento, fuga o abbandono dei compagni in battaglia.'.
Probabilmente un'espressione desueta già nell'ER.

Si quis contra inimicús 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

anstallin acc. sing. *Si quis contra inimicús 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 T...

Astalin. Id est decipere. (Gl...

```xml
<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 inimicús 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>
```

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

▼ anstalin

Info Occurrences Relations XMLSource

ⓘ FORM: anstalin
　○ TYPE: lemma
ⓘ GRAMGRP:
ⓘ FORM: anstalin Si quis contra inimicús 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
ⓘ FORM: anstalin Si quis contra inimicús 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
　○ TYPE: inflected
ⓘ CIT: Astalin. Id *est* decipere
ⓘ FORM: astalin MSS 1, 5, 8, 9, 10, 11; Gloss. Matr. anstallin MS 2 anstallim MS 3 astalium MS 12
　○ TYPE: variants
ⓘ SENSE: Tradimento, fuga o abbandono dei compagni in battaglia. Probabilmente una parola antica, tale da necessitare una spiegazione nella glossa

From mockup …   … to visualization in EVT 3

Configuration files

```json
{
    "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
        },
```

```yaml
#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 <u>accessibility</u>, <u>DEPA</u> and <u>EVT as a service</u> branches on develop
- second step: improving support for <u>digital facsimile and diplomatic editions</u> 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 <u>synoptic editions</u> and <u>depa</u> at the same time, paving the way for the <u>integrated edition</u>
  - 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

2023 alpha

2025 beta 2

2024 beta 1

2026 v. 1.0
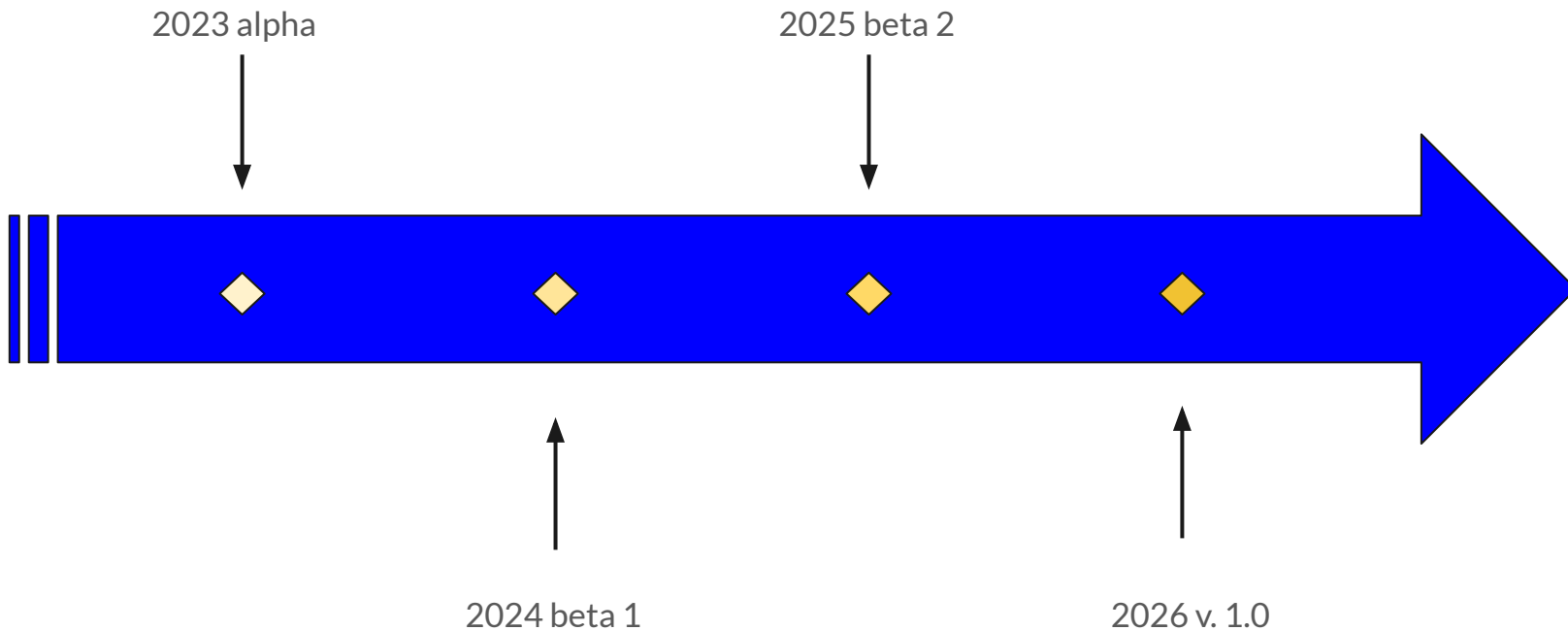
The EVT team

- 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
    - Julia Kenny
    - Giulia Cacioli
    - Giacomo Cerretini
    - Jacopo Pugliese
    - Simone Zenzaro

- **References**

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- **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!