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Many witnesses, many layers:
the digital scholarly edition of the
Iudicium coci et pistoris iudice Vulcano

(Più testimoni, più livelli: l'edizione critica digitale del Iudicium coci et pistoris iudice Vulcano)

First Annual Meeting of the
Associazione Informatica Umanistica e Cultura Digitale
Florence, 14 December 2012

The text I am publishing

- Vespa, *Iudicium coci et pistoris iudice Vulcano*
  - Mock court debate in verse between a cook and a baker
  - Codex Salmasianus (VI century CE)
- Why did I choose this text?
  - Latin Late Antiquity text
  - More than one witness (collation)
  - Why are there no digital scholarly editions of "classical" texts? →
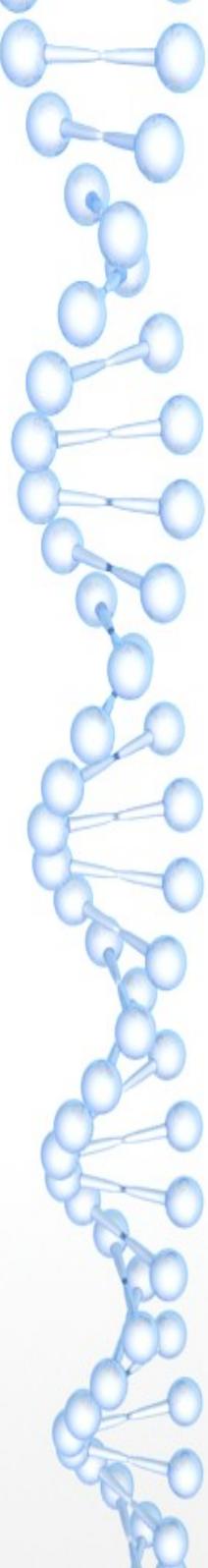
Issues

- Manuscripts
- Collation
  - Digital scholarly editions
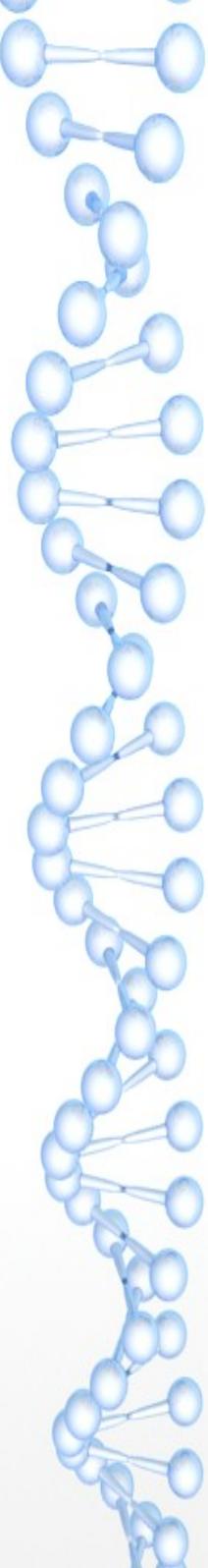
Proof of concept

- T. Orlandi, R. Mordenti
  - Textual layers (graphical, linguistic...)
  - Collation at each layer
  - Tables of signs
- Challenge
  - Sophisticated textual model
  - 'Sustainable' workflow
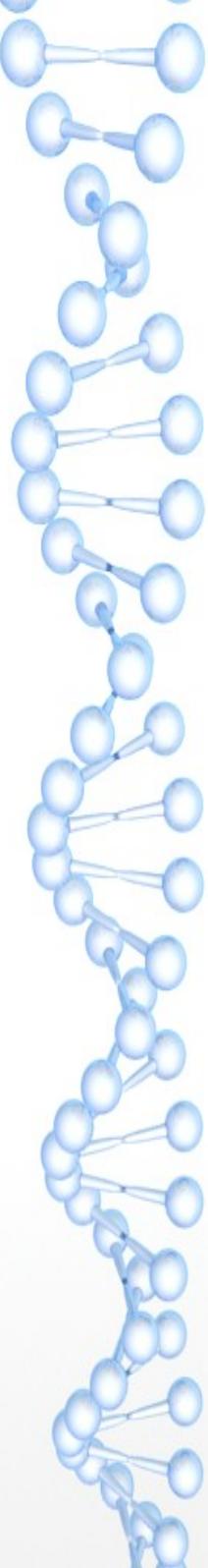
Post-Gutenberg

Iudicium coci et pistoris iudice Vulcano

Ter ternae, varias, cunctae, quae traditis artes,
linquite Pierios colles et scribite mecum!
Ille ego Vespa precor, cui divae saepe dedistis
per multas urbes populo spectante favorem.

5

Scribere maius opus et dulcia carmina quaero;
nec mel erit solum: aliquid quoque iuris habebit.

Post-Gutenberg

*Word:*   [Perseus/1999.04.0059/favor, acc., sing.]

*Alphabemes*: f   a   v   o   r   e   m

Graphemes: f   a   v   o   r   e   m
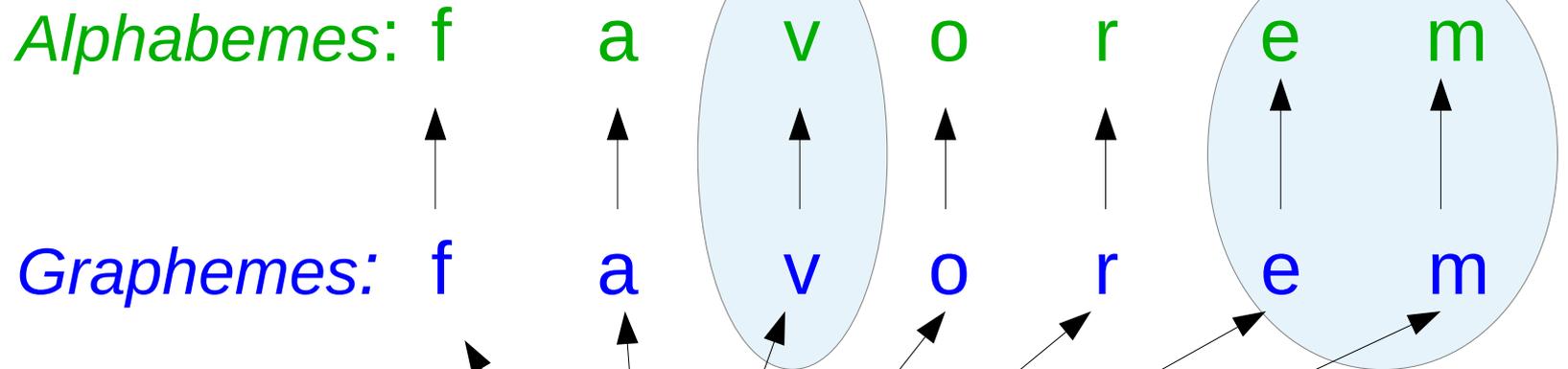
spectante favorem.

Pre-Gutenberg

Pre-Gutenberg

Word: [Perseus/1999.04.0059/favor, acc., sing.]

Alphabemes: f   a   uv   o   r   e   m

Graphemes: f   a   uv   o   r   e_
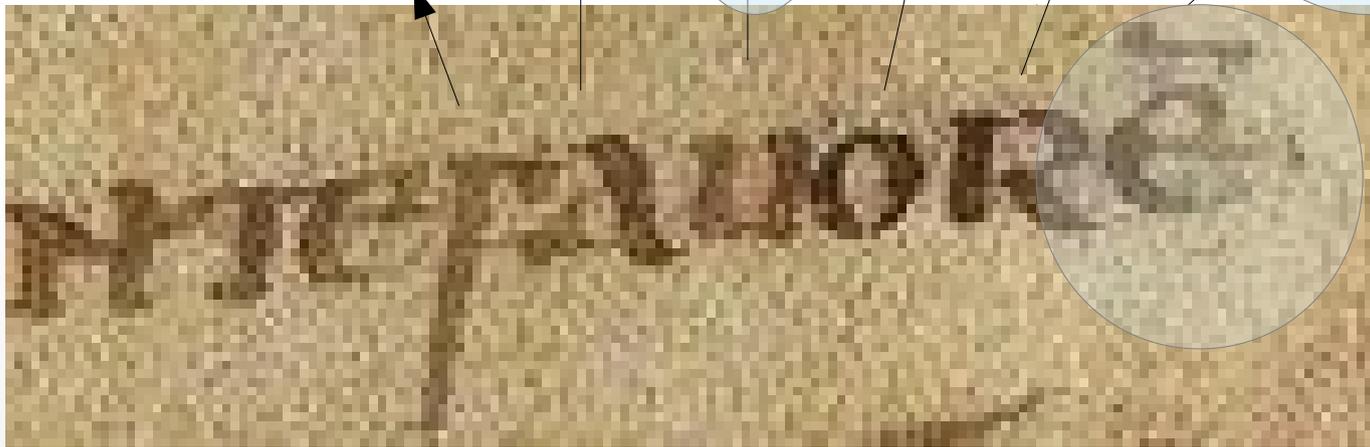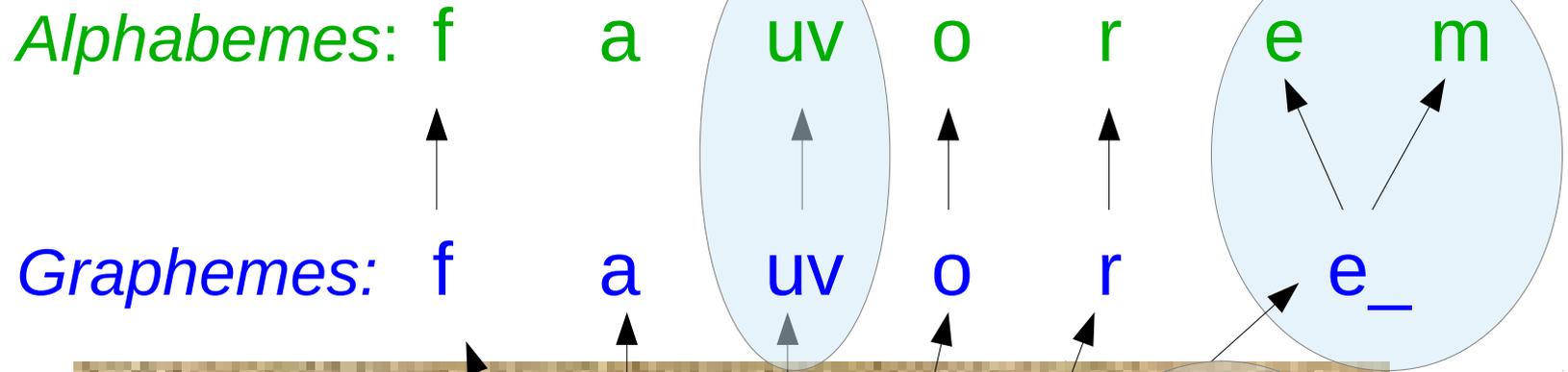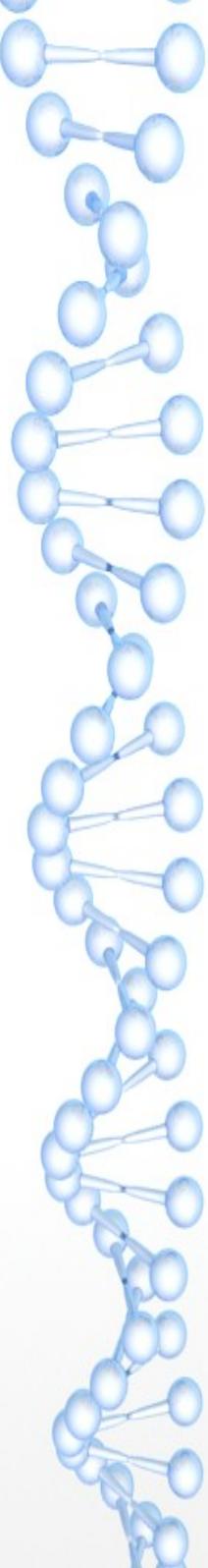
My proposed innovations

- Textual layers
- Tables of signs
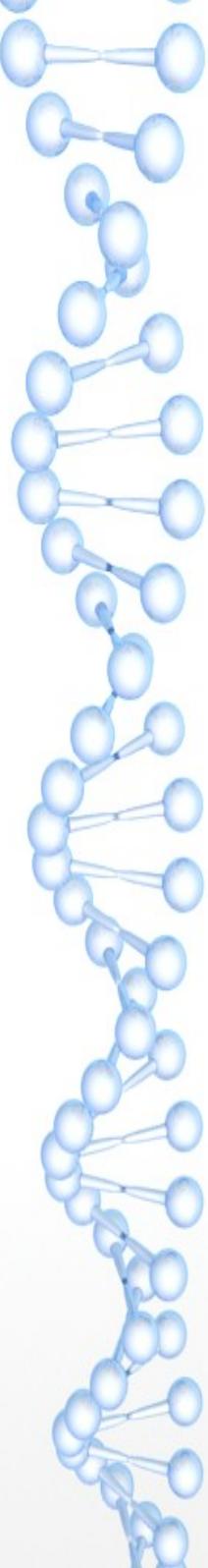
Textual layers

- Textual layers in my edition:
  Linguistic (inflected words)
  Alphabetic (alphabemes)
  Graphical (graphemes, paragraphem., breaks)

- (Also possible: lemmas, allographs, idiographs...)

- Assumptions:

  – Graphemes ↔ Alphabemes (compare TEI: <abbr>/<expan>)

  – Sequence of alphabemes ↔ Inflected word

Textual layers

- "Musical score" edition model
  - Parallel sequences of aligned *tokens*

Table of signs

- *Complete* set of discrete signs that the editor *interpretively* singled out from the graphical *continuum,* at each layer

  - Example: all graphemes that one singles out in a MS

©2011 Google - Immagini ©2011 TerraMetrics, NASA
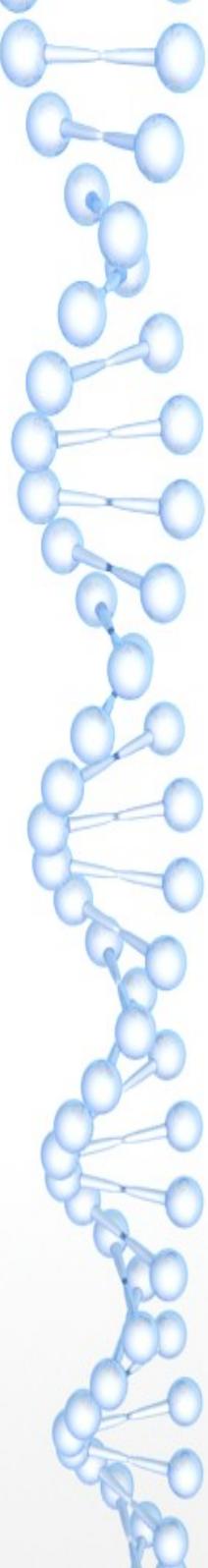
Table of signs CSV (graph. layer)

Graphemes ID	Content (alphabemes ID)	Expression
t	t	Latin minuscule uncial t
u	uv	Latin minuscule uncial u/v (u-shaped, not v-shaped)
ae	a, e	Latin minuscule uncial e with tail bottom left: img/ax.jpg
b_	b, i, s	Latin minuscule uncial b with macron top right
.		Middle dot

Transcription CSV
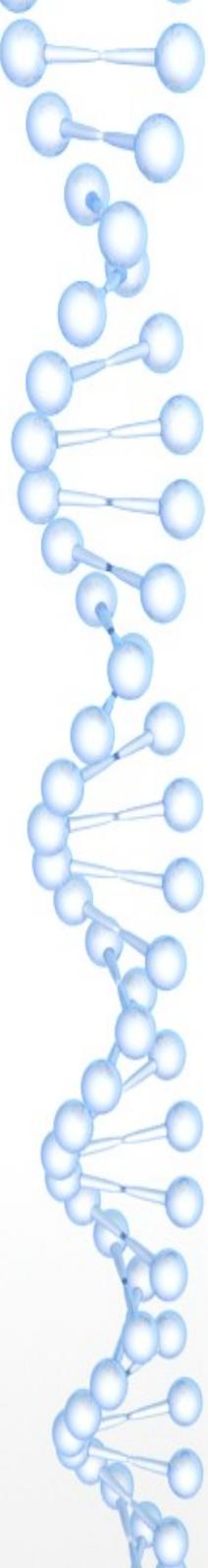
Graphemes ID	Words ID
Judici(u_)	nou,[iudicium],n,s,iudicium
coci	nou,[cocus],g,s,coci
et	con,[et],et
pistoris	nou,[pistor],g,s,pistoris
-lb	

Current workflow

Table of signs CSV
(graphic layer)

Col. 1 *Col. 2*

Graph. ID → Alph. ID

Transcription CSV

Col. 1 *Col. 2*

Graph. ID ↔ (Words ID)

CSV Tabella dei segni (liv. grafico)

ID grafemi	Significato (ID alfabemi)	Significante
t	t	t latina onciale minuscola
u	uv	u/v latina onciale minuscola (a forma di u, non di v)
ae	a, e	e latina onciale minuscola con una coda in basso a sinistra, img/ax.jpg
b_	b, i, s	b latina onciale minuscola con macron in alto a destra
.		Punto al mezzo

CSV Trascrizione

ID grafemi	ID parole
Judici(u_)	nou,[iudicium],n,s,iudicium
coci	nou,[cocus],g,s,coci
et	con,[et],et
pistoris	nou,[pistor],g,s,pistoris
-lb	

Python

Alph. ID

Future Workflow

Table of signs CSV
(graphical layer)
Col. 1   Col. 2
Graph. ID → Alph. ID

Transcription JavaScript

Input field
Graphemes ID

JavaScript

Alph. ID → Perseus → Words ID

Semi-automatic

Semi-automatic

Formats: table of signs

CSV Tabella dei segni (liv. grafico)

ID grafemi	Significato (ID alfabemi)	Significante
t	t	t latina onciale minuscola
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·		Punto al mezzo

- XML/TEI → \<charDecl\>

```
<charDecl>
 <char xml:id= "uv">
  <charProp>
     <localName>Expression</localName>
        <value>U+0075</value>
     <localName>Content</localName>
        <value>uv</value>
```

Issues: 1. only *one* 'table' can be included
        2. declare 'standard' Unicode characters ('m')

Formats: multi-layered transcriptions

- Issue: aligning ranges from three sequences
  - XML: trees
  - Range-based models
    - Standoff properties (D. Fiormonte & D. Schmidt)
    - LMNL (W. Piez)
    - Gregor Middel (Faust Project / Interedition)
    - Extended strings (M. Thaller) etc.

Formats: XML/TEI transcriptions

graphematic.xml

- <g id="1.1" ref="#**J**" />
- <g id="1.2" ref="#**u**" />
- <g id="1.3" ref="#**d**" />
- <g id="1.4" ref="#**i**" />
- <g id="1.5" ref="#**c**" />
- <g id="1.6" ref="#**i**" />
- <g id="1.7" ref="#**u_**" />

alphabetic.xml

- <c id="1.1.1" ref="#**j**" />
- <c id="1.2.1" ref="#**uv**" />
- <c id="1.3.1" ref="#**d**" />
- <c id="1.4.1" ref="#**i**" />
- <c id="1.5.1" ref="#**c**" />
- <c id="1.6.1" ref="#**i**" />
- <c id="1.7.1" ref="#**uv**" />
- <c id="1.7.2" ref="#**m**" />

linguistic.xml

- <w id="1">
  nou,[iudicium],n,s,iudicium
  </w>

Formats: XML/TEI alignment

graphematic.xml

- <g id="1.1" ref="#**J**" />
- <g id="1.2" ref="#**u**" />
- <g id="1.3" ref="#**d**" />
- <g id="1.4" ref="#**i**" />
- <g id="1.5" ref="#**c**" />
- <g id="1.6" ref="#**i**" />
- <g id="1.7" ref="#**u_**" />

alphabetic.xml

- <c id="1.1.1" ref="#**j**" />
- <c id="1.2.1" ref="#**uv**" />
- <c id="1.3.1" ref="#**d**" />
- <c id="1.4.1" ref="#**i**" />
- <c id="1.5.1" ref="#**c**" />
- <c id="1.6.1" ref="#**i**" />
- <c id="1.7.1" ref="#**uv**" />
- <c id="1.7.2" ref="#**m**" />

align_alph_graph.xml

- <link targets="**graphematic.xml#1.7** #1.7" />
- <ptr id="1.7" targets=
      "**alphabetic.xml#1.7.1**
       alphabetic.xml#1.7.2" />
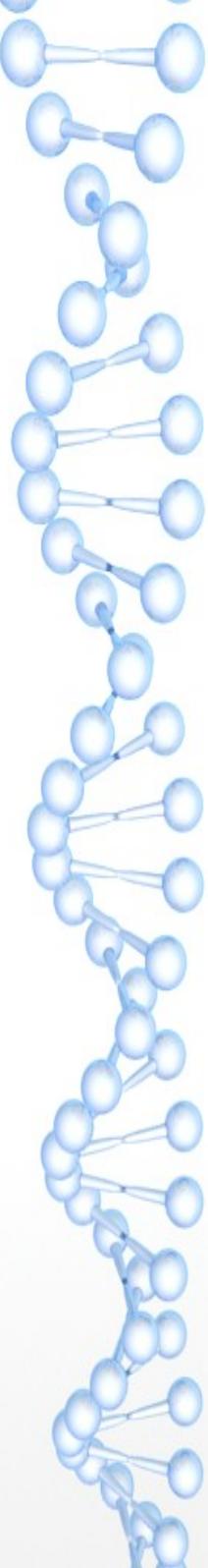
Open issues

- Workflow
  - Semi-automatic
- Table of signs →   What to declare?
  - Only 'non-standard' (TEI / Unicode)
  - All
- Textual layers →   How to align?
  - XML
  - Range-based
- Collation at each layer

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