

Paolo Monella

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Multi-layer textual representation of pre-modern primary sources

www.unipa.it/paolo.monella/venezia2017

Digital Editing and Medieval Manuscripts

Venezia, Italy, July 3, 2017

Diplomatic or interpretative?

Print editions

Interpretive edition MS A

Nel mezzo del camin di nostra vita
mi ritrovai per una selva oscura,

Diplomatic edition MS A

NEL Meço delcamin din(ost)ra . uita
mi ritrouai p(er) vna selua oscura .

Diplomatic edition

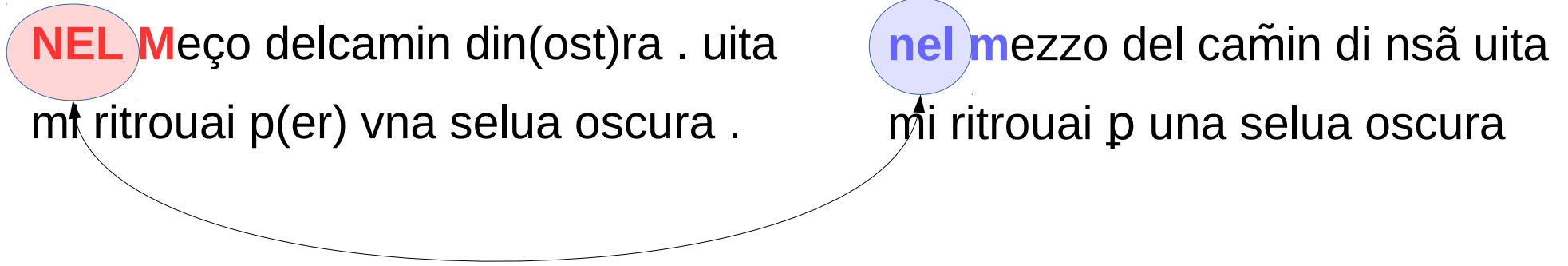
Collation

Diplomatic edition MS A

NEL Meço delcamin din(ost)ra . uita
m̄ ritrouai p(er) vna selua oscura .

Diplomatic edition MS B

nel mezzo del cañin di nsã uita
mi ritrouai p una selua oscura



Diplomatic edition

Collation

Diplomatic edition MS A

NEL Meço delcamin din(ost)ra . uita
mi ritrouai p(er) vna selua oscura .

Diplomatic edition MS B

nel mezo del cañin di nsã uita
mi ritrouai p una selua oscura

Diplomatic edition

Collation

Diplomatic edition MS A

NEL Meço delca**min** di**n(ost)ra** . uita
mi ritrouai **p(er)** vna selua oscura .

Diplomatic edition MS B

nel mezzo del ca**m**in di **nsã** uita
mi ritrouai **p** una selua oscura



Diplomatic edition

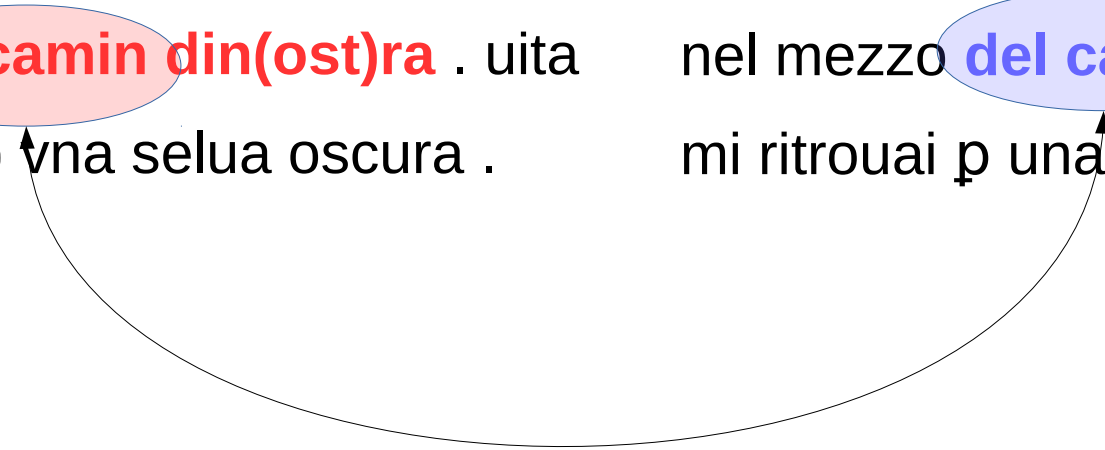
Collation

Diplomatic edition MS A

NEL Meço **delcamin din(ost)ra** . uita
mi ritrouai p(er) vna selua oscura .

Diplomatic edition MS B

nel mezzo **del cañin di nsã** uita
mi ritrouai p una selua oscura



Diplomatic edition

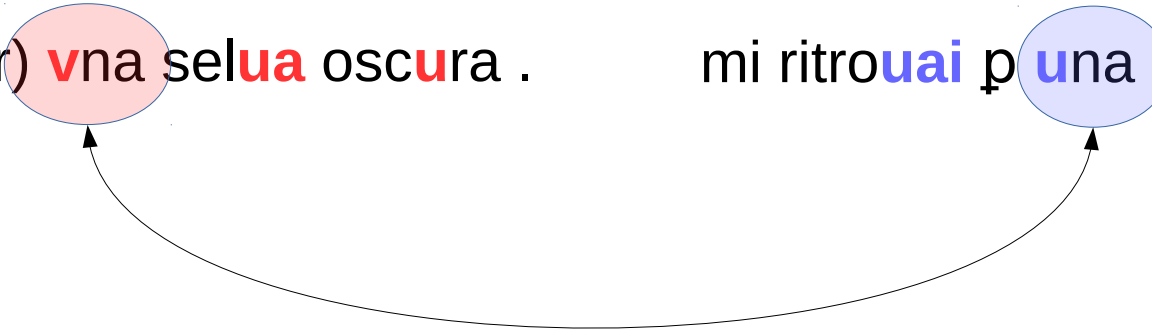
Collation

Diplomatic edition MS A

NEL Meço delcamin din(ost)ra . **u**ita
mi ritrou**uai** p(er) **v**na sel**ua** osc**u**ra .

Diplomatic edition MS B

nel mezzo del cañin di nsã **u**ita
mi ritrou**uai** p **u**na sel**ua** osc**u**ra



Diplomatic edition

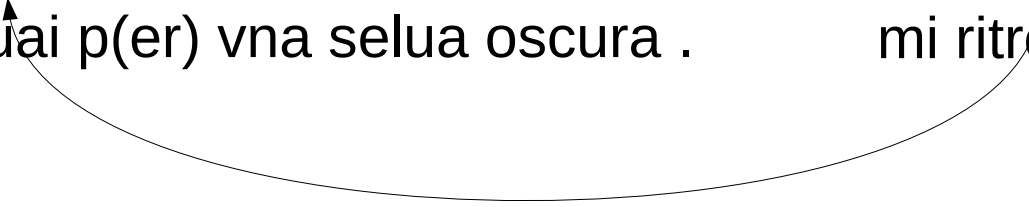
Collation

Diplomatic edition MS A

NEL **Meço** delcamin din(ost)ra . uita
mi ritrouai p(er) vna selua oscura .

Diplomatic edition MS B

nel **mezo** del cañin di nsã uita
mi ritrouai p una selua oscura



Diplomatic edition

Cross-corpus textual search

Diplomatic edition

MS A - Divine Comedy

NEL **Meço** delcamin din(ost)ra . uita
mi ritrouai p(er) vna selua oscura .

Diplomatic edition

MS A - Guittone, Dolcezza alcuna...

e lo dolor per mezzo il volto appare



Diplomatic edition Tools (*lemmatization etc.*)

Diplomatic edition

MS A - Divine Comedy

NEL **Meço** delcamin din(ost)ra . uita
mi ritrouai p(er) vna selua oscura .



Diplomatic edition

Issues

- **Collation** among testimonies of the same work
- **Cross-corpus textual search**
- **Tools** for textual analysis (lemmatization etc.)

Multi-layer edition

- Collation
- Cross-corpus textual search
- Tools

MS A

mi ritrovai per una selva oscura

MS B

mi ritrovai per una selva oscura

MS A

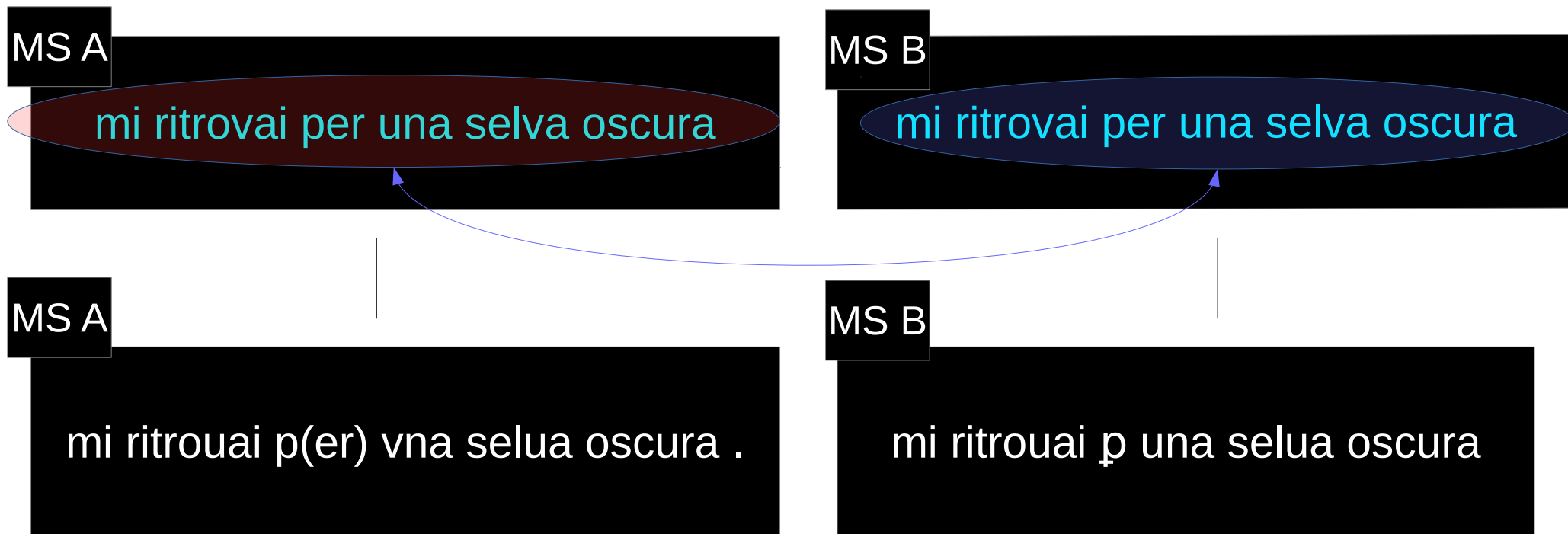
mi ritrouai p(er) vna selua oscura .

MS B

mi ritrouai p una selua oscura

Multi-layer edition

- Collation
 - *Paleographical variants*

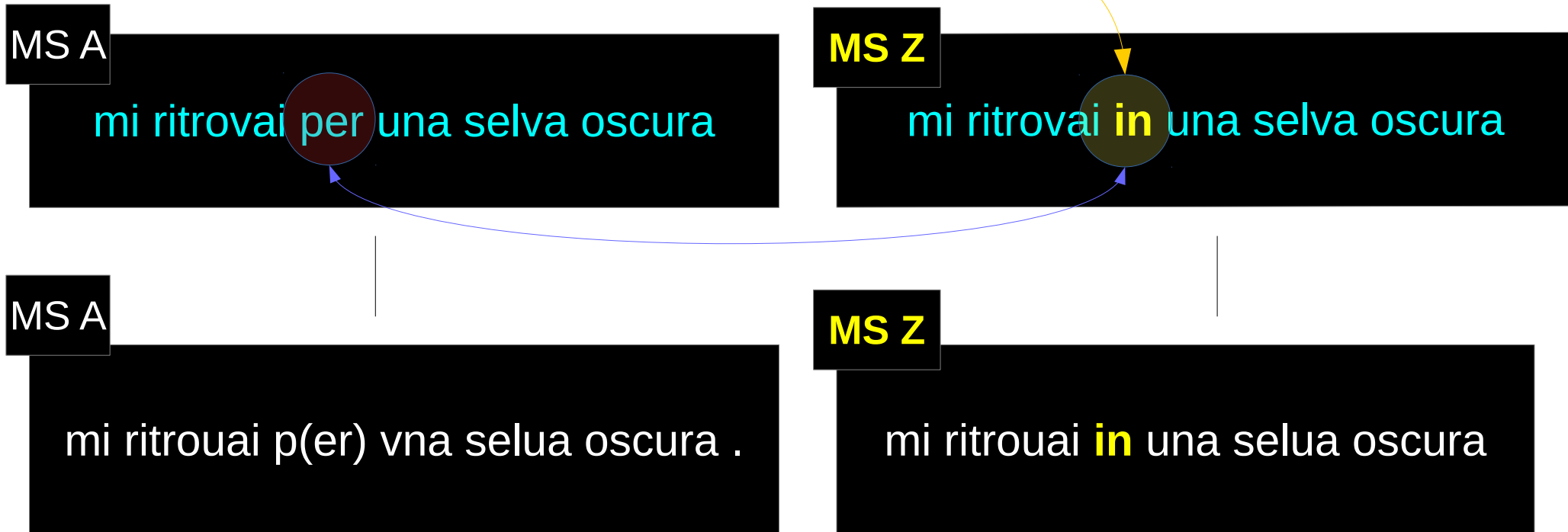


Multi-layer edition

- Collation

- *Paleographical variants*

- *Linguistic variants*



Multi-layer edition

MS A

mi ritrovai per una selva oscura



Digital
diplomatic
edition
(Pierazzo)

MS A

mi ritrouai p(er) vna selua oscura .

Multi-layer edition

MS A

mi ritrovai per una selva oscura

Linguistic sub-system

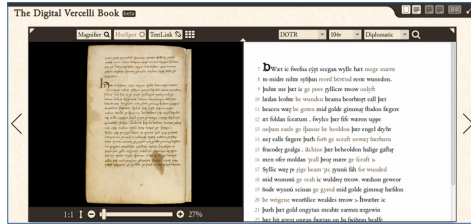
MS A

mi ritrouai p(er) vna selua oscura .

Graphical sub-system

Sub-systems
(Orlandi)

Multi-layer edition *Vercelli Book*



HWæt
Interpretative

MS A

hWæt
Diplomatic

Multi-layer edition *Vercelli Book*

The Digital Vercelli Book beta

Magnifier 🔍 HotSpot ○ TextLink 🌐

DOTR 104v Diplomatic 🔍

1:1 27%

7 **Ð**Wæt ic fwefna cýrt secgan wylle hæc mege mætte
8 to midre nihte syðþan reord berend reste wunedon.
9 þuhte me þæt ic ge fawe syllicre treow onlyft
10 lædan leohte be wunden beama beorhtost eall þæt
11 beacen wæf be goten mid golde gimmar stodon fægere
12 æt foldan sceatum . swylce þær fife wæron uppe
13 onþam eaxle ge spanne be heoldon þær engel dryht
14 nef ealle fægere þurh forð ge sceaft newæf ðærhuru
15 fracoder gealga . Achine þær beheoldon halige gasta
16 men ofer moldan geall þeof mære ge sceaft ;
17 Syllic wæf se rige beam ge cynnū fah for wunded
18 mid wommū ge seah ic wuldref treow. wædum geweor
19 ðode wynnū scinan ge gyred mid golde gimmar hæfdon
20 be wrigene weorðlice wealdes treow ; hwæðre ic
21 þurh þæt gold ongytan meahte earmra ærgewin
22 hæc hit ærest ongan swætan on þa swiðran healf

7 **Ð**Wæt ic fwefna

<http://vbd.humnet.unipi.it/beta/#104v>

Multi-layer edition *Vercelli Book*

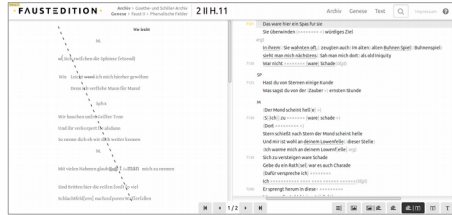
The screenshot displays the 'The Digital Vercelli Book beta' interface. On the left, a thumbnail of a manuscript page is shown at 27% zoom. The main area on the right displays the text of folio 104v in a multi-layered edition. The interface includes a search bar, navigation controls, and a dropdown menu for selecting different layers of the edition.

7 HWæt ic swefna cyst secgan wylle hæ^t me gemætte
8 to midre nihte syðþan reordberend reste wunedon.
9 þuhte me þæt ic gesawe syllicre treow on lyft
10 lædan leohte bewunden beama beorhtost eall þæt
11 beacen wæs begoten mid golde gimmas stodon fægere
12 æt foldan sceatum . swylce þær fife wæron uppe
13 on þam eaxlegespanne beheoldon þær engel dryht
14 nes ealle fægere þurh forðgesceaft ne wæs ðær huru
15 fracodes gealga . ac hine þær beheoldon halige gastas
16 men ofer moldan *and* eall þeos mære gesceaft .
17 Syllic wæs se sigebeam *and* ic synnum fah forwunded
18 mid wommum geseah ic wuldres treow. wædum geweor
19 ðode wynnum scinan gegyred mid golde gimmas hæfdon
20 bewrigene weorðlice wealdes treow . hwæðre ic
21 þurh þæt gold ongytan meahte earmra ærgewin
22 þæt hit ærest ongan swætan on þa swiðran healfe

7 HWæt ic swefna

<http://vbd.humnet.unipi.it/beta/#104v>

Multi-layer edition *Faust-Edition*



sagst
Textual

MS A

sagft
Documentary

Multi-layer edition

Faust-Edition

beta 2 **FAUSTEDITION** Archiv > Goethe- und Schiller-Archiv 2 II H.11 Archiv Genese Text Impressum ?

Genese > Faust II > Pharsalische Felder

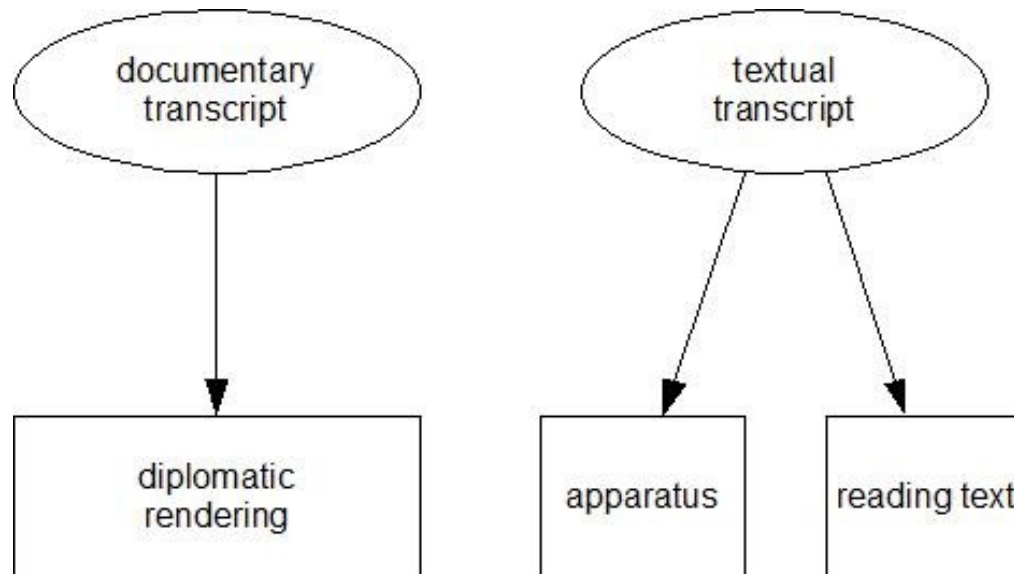
Wie leicht
M.
M (Sich zwischen die Sphinx fetzend)
Wie Leicht werd ich mich hierher gewöhne
Denn ich verftehe Mann für Mann!
Sphx
Wir hauchen unfre Geifter Tone
Und ihr verkorpert die alsdann
So nenne dich eh wir dich weiter kennen
M.
Mit vielen Nahmen glaubt man mich zu nennen
Sind Britten hier die reifen fonft so viel
Schlachtfeld[ern] nachzupuren Wa[ff]erfallen

7121 Das ware hier ein Spas für sie
Sie überwinden (xxxxxxx >) würdiges Ziel
erg)
In ihrem (: Sie wahnen oft. (: zeugten auch) Im alten) alten Buhnen Spiel (: Buhnenspiel)
sieht man mich nächstens (: Sah man mich dort) als old Iniquity
7130 War nicht xxxxxxxx (ware) Schade (tilgt)
SP
7125 Hast du von Sternen einige Kunde
Was sagst du von der (Zauber >) ernsten Stunde
M
(Der Mond scheint hell(e) >)
7130 (S{[ich]} zu xxxxxxx (ware) schade >)
(Dort xxxxxxxx >)
Stern schießt nach Stern der Mond scheint helle
Und mir ist wohl an deinem Lowenfelle (: dieser Stelle)
(Ich warme mich an deinem Lowenf[elle] erg)
7130 Sich zu versteigen ware Schade
Gebe du ein Rath[sel] war es auch Charade
{Dafür verspreche ich} xxxxxxxx
Ich xxxxxxxxxxx xxx xxx xxxxxx xxxxxx (tilgt)
7200 Er sprengt herum in diese xxxxxxxxxxx

1/2

Multi-layer edition

Faust-Edition



G. Brüning, K. Henzel, D. Pravida, *Multiple Encoding in Genetic Editions: The Case of "Faust"*

<https://jtei.revues.org/697>

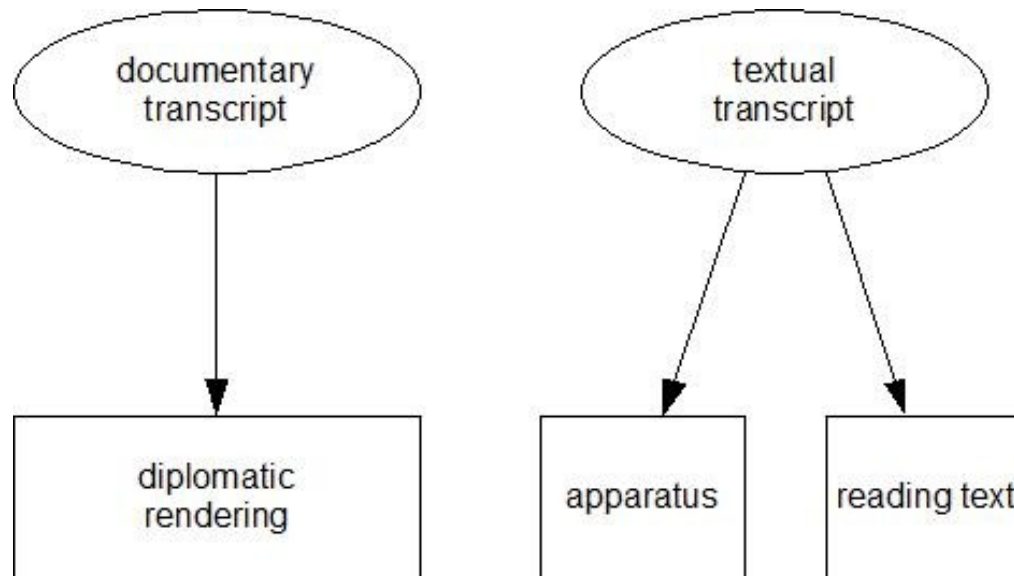
<http://beta.faustedition.net>

Multi-layer edition

Faust-Edition

Was sagst du von der ~~Zauber~~ ernststen Stunde

Was sagst du von der <Zauber > ernststen Stunde



Was sagst du zu der gegenwärtigen Stunde?

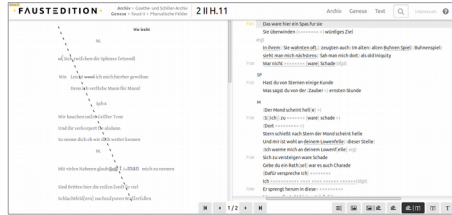
Was sagst du zu der gegenwärtigen Stunde? [Lesetext, 2 H](#)

Was sagst du von der ernststen Stunde [2 II H.11](#)

Was sagst du zu der gegenwärtigen Stunde? [2 II H.13, 2 II H.74](#)

Was sagst du zu der gegenwärtigen Stunde?

Multi-layer edition *Faust-Edition*



sagst
Textual

MS A

sagft
Documentary

Multi-layer edition *Menota*



Íslendingabók
Norm(alized)

<J>flendinga boc
Dipl(omatic)

MS AM 113

fendinga boc
Facs(imile)

Multi-layer edition

Menota

AM 113 b fol. – Íslendingabók v. 1.0.4

Previous page Next page | Go to: 1r | Levels: Facs | Dipl | Norm

[Facs]

[ms: fol. 1r]

- 1 **enðing**a boc goþa ec fyrft by-
- 2 fcopom orum, þorlaⁿⁱi oc katli. oc
- 3 fynda c bæþi þeim oc Sæmundi þ.
En
- 4 meþ þvi at þeim licapi fva at hava
eþa þar viþur
- 5 au^{na}a, þa scrifaða ec þessa of et
fama far, fyr
- 6 vtan attar tolo oc conunga ævi, oc ioc
e þvi er
- 7 mer varþ fidan cunara oc nu er
ger fagt a
- 8 þessi en a þeiri. En hvatki ef

[Dipl]

[ms: fol. 1r]

- 1 **(J)flendinga** boc gorþa ec fyrft by-
- 2 fcopom orum, þorlaki oc katli. oc
- 3 fynda c bæþi þeim oc Sæmundi
presti. En
- 4 meþ þvi at þeim licapi fva at hava
eþa þar viþur
- 5 auka, þa scrifada ec þessa of et
fama far, fyr
- 6 vtan attar tolo oc *conunga* ævi, oc
ioc e þvi er
- 7 mer varþ fidan cunara oc nu er
ger fagt a
- 8 þessi en a þeiri. En hvatki ef

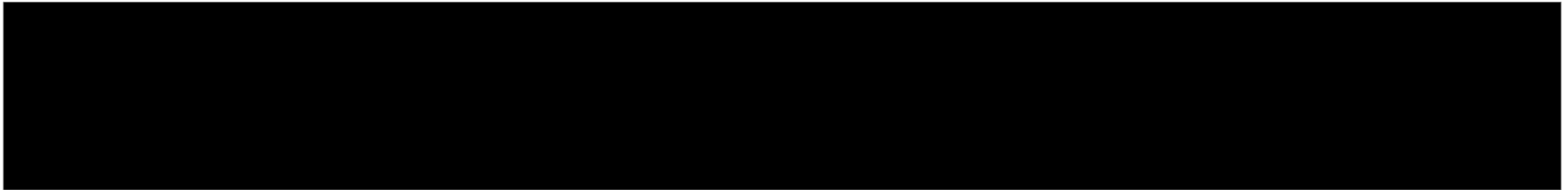
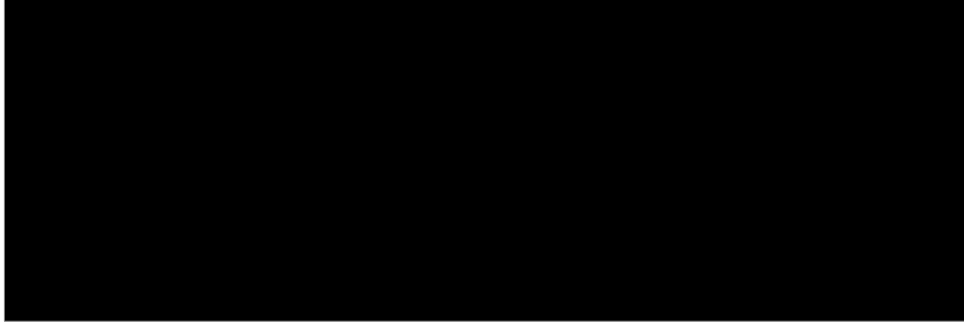
[Norm]

[ms: fol. 1r]

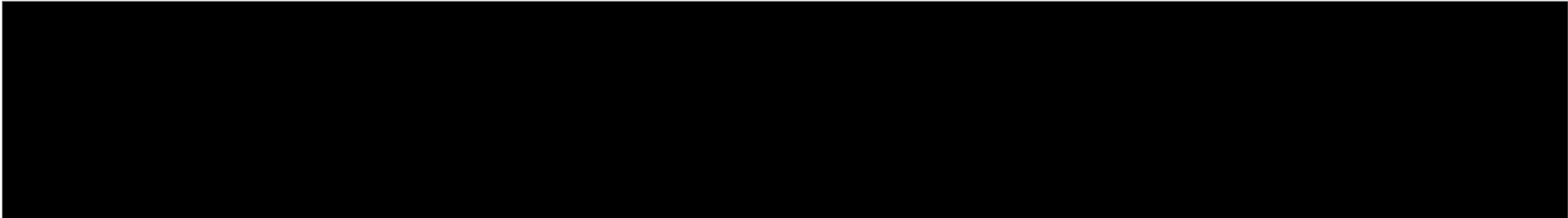
- 1 **Íslendingabók** gørða ek fyrst by-
- 2 skupum orum, Þorláki ok Katli, ok
- 3 sýnda k bæði þeim ok Sæmundi
presti. En
- 4 með þvi at þeim líkaði svá at hafa
eða þar viðr
- 5 auka, þá skrifada ek þessa of et
sama far, fyr
- 6 utan áttartölu ok konunga ævi, ok
jók k þvi es
- 7 mér varð síðan kunnara ok nú es
gerr sagt á
- 8 þessi en á þeiri. En hvatki es es í

Multi-layer edition

Ursus Beneventanus, De nomine (IX Cent.)



MS Casanatensis 1086

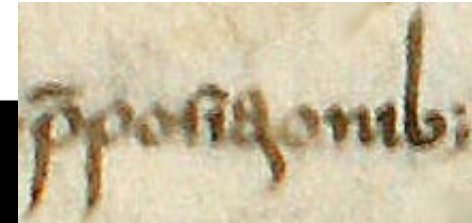


Textual layers

*[praepositio, -onis,
abl. plur.]*_{Word}

p r e p o s i t i o n i b u s _{Alphabemes}

p̄ p o s i t i o n i b ; _{Graphemes}



Textual layers

MS A

MS B

[*praepositio, -onis,*
abl. plur.]_{Word}

[*praepositio, -onis,*
abl. plur.]_{Word}

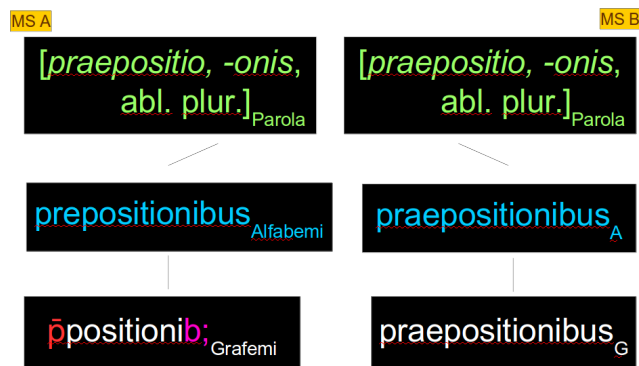
prepositionibus_{Alphabemes}

praepositionibus_A

p̄positionib;_{Graphemes}

praepositionibus_G

Textual layers

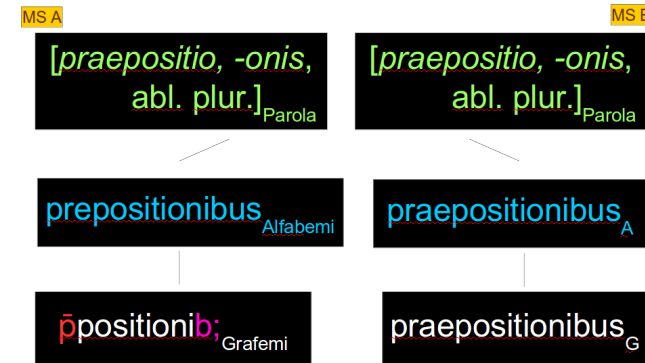


- Orlandi, T. *Informatica testuale. Teoria e prassi*, Laterza, 2010
- *Describing Handwriting, Part IV: Recapitulation and Formal Model*, in the digipal.eu blog

Ursus

Innovations from Orlandi

- Edition on many *semiotic layers* (sub-systems)



- “Table of signs”

Graphemes	Alphabemes	Grapheme Visualization	Type	Notes
a	a	a	Alphabetic	
b	b	b	Alphabetic	
c	c	c	Alphabetic	
d	d	d	Alphabetic	
e	e	e	Alphabetic	
æ	ae	ę	Alphabetic	An 'e'
f	f	f	Alphabetic	

Ursus
Visualization

prepositionibus

p̄positionib;

Ursus

Visualization

"praepositionibus": [praepositio] Nominal, Positive, III decl, Plural Ablative, Feminine,

prepositionibus

p̄positionib;

Ursus *Visualization*

"praepositionibus": [praepositio] Nominal, Positive, III decl, Plural Ablative, Feminine,

preposit

```
<w ana="11C---01---"  
  lemma="praepositio">
```

```
<choice>
```

```
<expan>pre</expan>
```

```
<abbr type="superscription">
```

```
  p<am>̄</am>
```

```
</abbr>
```

```
</choice>
```

```
positionibus</w>
```

p̄position

Ursus *Visualization*

"praepositionibus": [praepositio] Nominal, Positive, III decl, Plural Ablative, Feminine,

prepositionibus ← Ortografia

p̄positionib; ← Paleografia

Ursus

Visualization

est cognomentum propriae qualitatis , de qua et Priscianus e contra
est cognomentum proprie qualitatis , de qua et priscianus e contra
est [cognomentu²] [p^{ri}ae] [qualitatis] : [2xa.2] de qua [et priscianus] [e contra]

nomen dixit " quod est proprium uniuscuiusque non potest esse propria
nomen dixit - quod est proprium unius cuiusque non potest esse propria
nomen [dixit -] [quod est propriu²] [unius [cuius [2xa.3] q;] [non] [potest] [ee] [p^{ri}ia] []

qualitas . praenomen accipitur quando quis nascitur . nomen communis
qualitas ; prenomen accipitur quando quis nascitur ; nomen communis
qualitas ; [praenomen] [accipitur] [quando] [s] [2xa.4] nascitur ; nomen [co²munis] []

Ursus

Visualization

est cognomen propriae qualitatis , de qua et priscianus e contra
est □ cognomentŭ □ pprię □ qualitatis , [2v.a.2] de qua □ et priscianus □ e contra

nomen dixit quod est proprium uniuscuiusque non potest esse propria
nomen □ dixit · □ quod est propriŭ □ unius□ cuius[2v.a.3]q; □ non □ potest □ eē □ ppria

qualitas . praenomen accipitur quando quis nascitur . nomen communis
qualitas ; □ p̄renomen □ accipitur □ quando qs [2v.a.4] nascitur ; **n**omen □ cōmunis

Ursus

Visualization

est cognomentum propriae qualitatis , de qua et priscianus e contra
est □ cognomentŭ "cognomentum": [cognomentum] Nominal, Positive, II decl, Singular Nominative, Neuter, □ ontra

nomen dixit quod est proprium uniuscuiusque non potest esse propria
nomen □ dixit · □ quod est propriŭ □ unius □ cuius_[2v.a.3] q; □ non □ potest □ eē □ ppria

qualitas . praenomen accipitur quando quis nascitur . nomen communis
qualitas ; □ p̄renomen □ accipitur □ quando qs_[2v.a.4] nascitur ; nomen □ cōmunis

Ursus

Flexibility

"uniuscuiusque": [unusquisque] Nominal, Positive, Regularly irregular decl, Singular Genitive, Feminine, Graphical variation B,

uniuscuiusque

unius cuius [2v.a.3] q;

Ursus

Lapsus calami

"mobilis": [mobilis] Nominal, Positive, III decl, Singular Genitive, Neuter,

mouilis

mouilis



Lapsus calami

Ursus

Future developement: collation

MS A

MS B

"propriae": [proprius] Nominal, Positive,
II decl, Singular Genitive, Feminine

"propriae": [proprius] Nominal, Positive,
II decl, Singular Genitive, Feminine

propriae

proprie

propriae

ꝑpprie

Ursus

Future development: collation

MS A

```
<w ana="11A---B2---"  
  lemma="proprius">
```

propriae

propriae

MS B

```
<w ana="11A---B2---"  
  lemma="proprius">
```

proprie

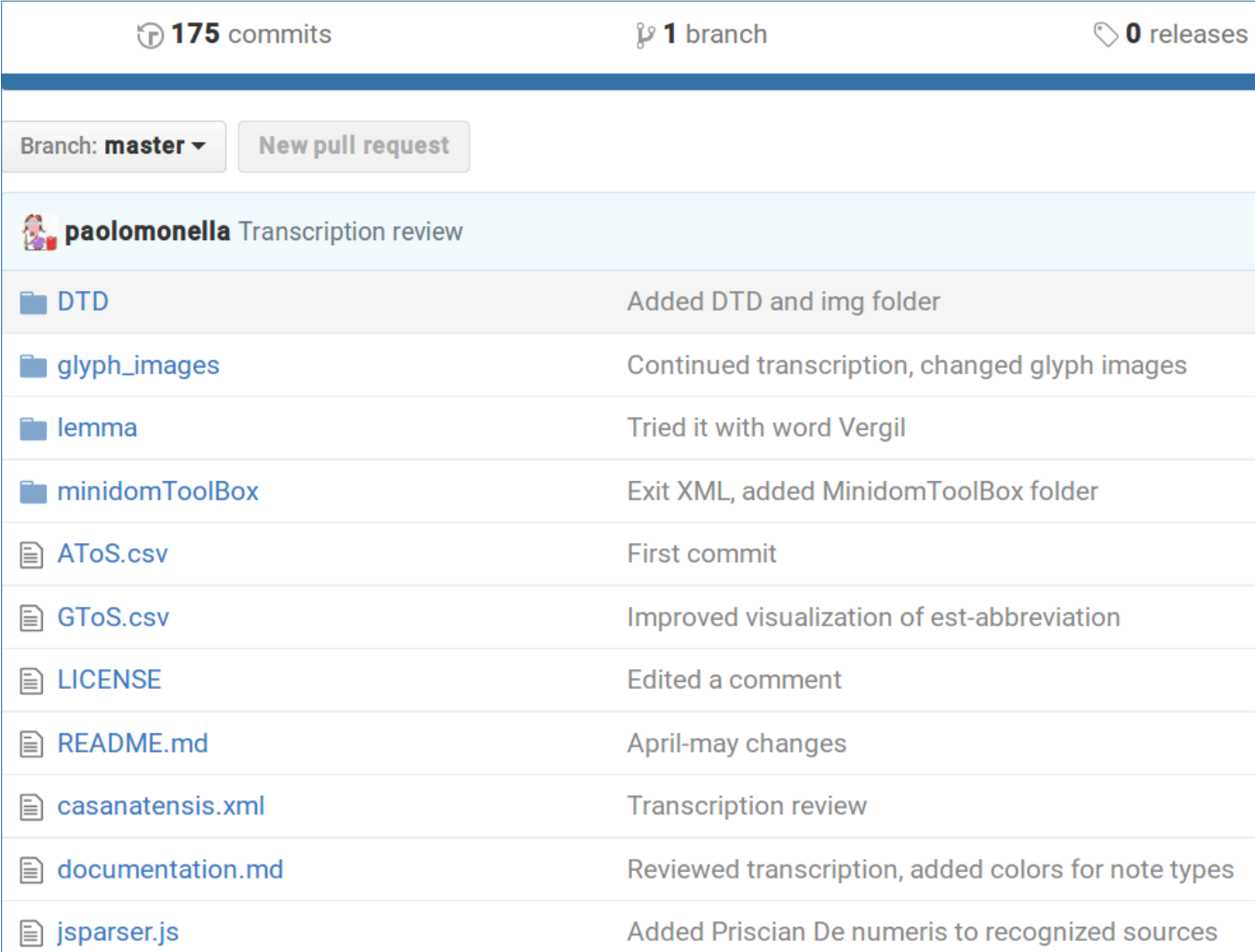
p̄pprie















Ursus

Licence and re-use

- Open Source
 - GNU GPL
 - [GitHub](#)
 - [Docs](#)
 - [Images](#)



175 commits		1 branch		0 releases	
Branch: master ▾		New pull request			
 paolomonella Transcription review					
 DTD	Added DTD and img folder				
 glyph_images	Continued transcription, changed glyph images				
 lemma	Tried it with word Vergil				
 minidomToolBox	Exit XML, added MinidomToolBox folder				
 AToS.csv	First commit				
 GToS.csv	Improved visualization of est-abbreviation				
 LICENSE	Edited a comment				
 README.md	April-may changes				
 casanatensis.xml	Transcription review				
 documentation.md	Reviewed transcription, added colors for note types				
 jsparser.js	Added Priscian De numeris to recognized sources				

Paolo Monella

paolo.monella@gmx.net

Multi-layer textual representation of pre-modern primary sources

www.unipa.it/paolo.monella/venezia2017

www.unipa.it/paolo.monella/ursus

Digital Editing and Medieval Manuscripts

Venezia, Italy, July 3, 2017