EpiDoc:
Digital editions of inscriptions and papyri

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Overview

- What is epigraphy?
- What is EpiDoc?
- Leiden to TEI
- EpiDoc encoding
- EpiDoc case studies
- Exercise

What is epigraphy?

ΖΗΝΟΦΙΟC
...ΟΝ...ΚΟΚ...ΛΛΑΟΥ...
ΟΥ...ΑCΕΥCΕΒΙΟΥ
ΘΕΟΛΤΑCΙΟCΚΑΛΛΙΚΑΡΠΟΥ
ΒΙΩΤΙΚΟC ΙΟΥΔΑCΑΜΦΙΑΝ...
...ΕΝΙΟCΧΡΥCΟΧΟΟC
ΠΡΑΘΛΙΟC ΙΟΥΔΑC ΠΡΑΘΛΝΟΥ
ΡΟΥΦΟC ΘΕΟΨΥΧΟΛΟC ΓΕΡΩΝ
ΑΜΑΝΤΙΟCΧΑΡΙΝΟΥ ΜΥΡΤΙΛΟC
ΙΑΚΩ ΠΡΟΒΑΤΩΝ CΕΒΗΡΟC
ΕΥΟΔΟC ΙΑCCΩΝ ΕΥΟΔΟΥ
ΘΕΟCΑΒΒΑΘΙΟCΑΛΛΩΝ ΛΝΥCΙΟC
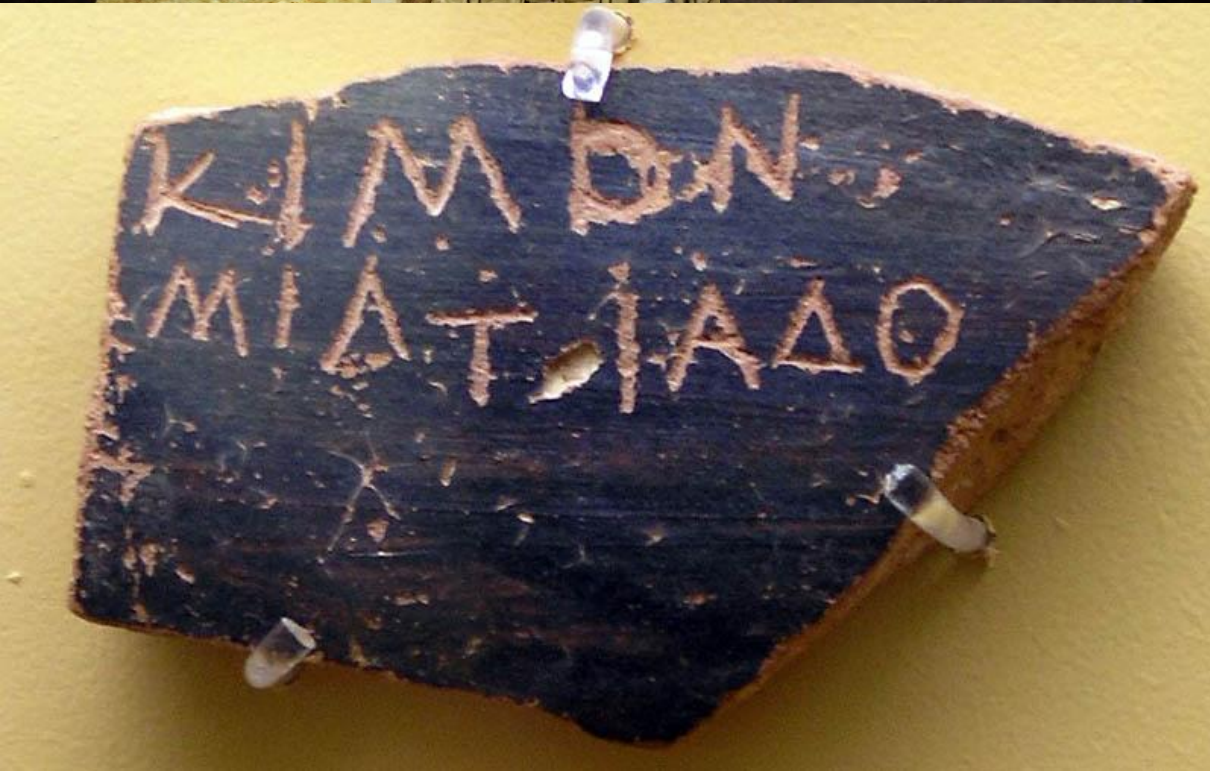ΘΕΥCΑΒΒΑΘΙΟC ΞΕΝΟC ΜΙΛCΩΝ
ΟΤ..ΚΟΛΟC ΝΕΩΤΕΡΟC

THIS STONE WAS LAID BY
HIS MAJESTY KING GEORGE V
ON THE TWENTY-SIXTH DAY OF JUNE 1933
IN THE TWENTY-FOURTH YEAR OF HIS REIGN
HER MAJESTY QUEEN MARY
BEING PRESENT ON THE OCCASION

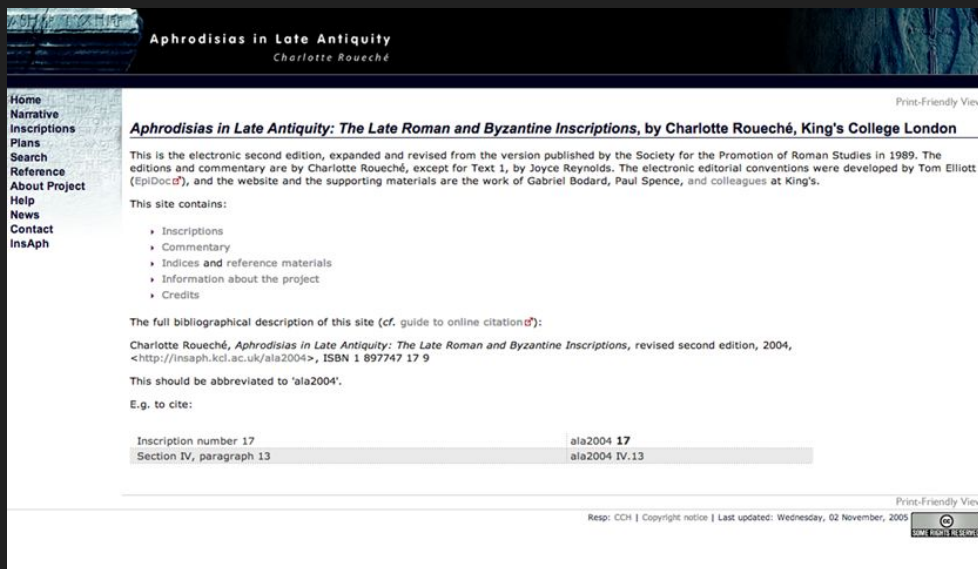|	
...	Illegible letters, not restored by editor.
ạḅ	Letters ambiguous without their context.
[...]	Letters missing, not restored by editor.
[abc]	Letters missing, restored by editor.
⟨...⟩	Letters erroneously omitted, not restored.
⟨abc⟩	Letters erroneously omitted, restored by editor.
a(bc)	Abbreviation expanded by editor.
{abc}	Letters considered superfluous by editor.
⟦abc⟧	Deletion which can be restored.

What is EpiDoc?

EpiDoc

- Leading standard for encoding inscriptions, papyri and other primary and documentary texts

- Based on XML (eXtensible Markup Language)

- [TEI](#) sub-standard for epigraphy, papyrology, ancient documents in a broad sense (one of the most structured TEI sub-standards)

- Developed according to the recommendation of the EAGLE Commission for Epigraphy and Information technology (Panciera 1999) by Tom Elliott, Hugh Cayless, and Amy Hawkins (Ancient World Mapping Center), who published in 2000 the EpiDoc Guidelines Version 1

EpiDoc History

• First projects: Aphrodisias in Late Antiquity, US Epigraphy Project, Vindolanda Tablets

• Beyond epigraphy: Papyri.info and the conversion tools

• EAGLE Europeana network

EpiDoc Tools

- Guidelines: https://epidoc.stoa.org/gl/latest/
- Homepage: http://epidoc.sf.net/
- Schema: http://www.stoa.org/epidoc/schema/latest/tei-epidoc.rng
- Stylesheets: https://github.com/EpiDoc/Stylesheets
- Template: https://epidoc.stoa.org/gl/latest/ex-epidoctemplate.xml?format=raw
- Visualization/publication platform (EFES): https://github.com/EpiDoc/EFES
- Converters: I.Sicily EpiDoc Viewer, EpiDoc Converter of the Patrimonium Project

EpiDoc Guidelines

EpiDoc Guidelines: Ancient documents in TEI XML

EpiDoc is an international, collaborative effort that provides guidelines and tools for encoding scholarly and educational editions of ancient documents. These are the *Guidelines* produced by the collaborative. In addition, the EpiDoc Website provides access to all the tools and collaboration environments supported by the collaborative.

EpiDoc uses a subset of the Text Encoding Initiative's standard for the representation of texts in digital form using the Extensible Markup Language (XML), a technical standard promulgated by the World-Wide Web Consortium. It addresses not only the transcription and editorial preparation of the texts themselves, but also the the history and materiality of the objects on which the texts appear.

These *Guidelines* contain descriptions of the textual, descriptive, and other features that are often expressed with EpiDoc, as well as the TEI elements and attributes that are used to encode them. The links below provide a number of entry points into the full document and should be thought of more as a series of thematic indexes into the content of the *Guidelines*, rather than a single "table of contents" that reflects an ordered, hierarchical document structure.

Browse Guidelines

- Introduction to the Guidelines
- Overview of EpiDoc structure

Full listing of guidelines pages:

- Descriptive and historical data
- Text transcription
- Vocabularies and indexing terms

EpiDoc Tools

- Guidelines: https://epidoc.stoa.org/gl/latest/
- Homepage: http://epidoc.sf.net/
- Schema: http://www.stoa.org/epidoc/schema/latest/tei-epidoc.rng
- Stylesheets: https://github.com/EpiDoc/Stylesheets
- Template: https://epidoc.stoa.org/gl/latest/ex-epidoctemplate.xml?format=raw
- Visualization/publication platform (EFES): https://github.com/EpiDoc/EFES
- Converters: I.Sicily EpiDoc Viewer, EpiDoc Converter of the Patrimonium Project

Welcome to EFES!

Now that you have EFES up and running, it's time to start building your project. Start with one of the options listed below and go from there.

Add your TEI

Put your files in webapps/ROOT/content/xml/tei (TEI) or webapps/ROOT/content/xml/epidoc (EpiDoc) and go to the admin and index them for searching. Then see how they are displayed (TEI and EpiDoc).

Customise the templates

Change the look of this site by modifying the templates in webapps/ROOT/assets/templates. The template for this page is home.xml, and it builds on the base template base.xml.

Read the documentation

The system comes with documentation both online and, in source form, in the docs directory of your installation. It explains how you can modify everything about your project.

EpiDoc Tools

- Guidelines: https://epidoc.stoa.org/gl/latest/
- Homepage: http://epidoc.sf.net/
- Schema: http://www.stoa.org/epidoc/schema/latest/tei-epidoc.rng
- Stylesheets: https://github.com/EpiDoc/Stylesheets
- Template: https://epidoc.stoa.org/gl/latest/ex-epidoctemplate.xml?format=raw
- Visualization/publication platform (EFES): https://github.com/EpiDoc/EFES
- Converters: I.Sicily EpiDoc Viewer, EpiDoc Converter of the Patrimonium Project

Keeping in touch with the EpiDoc community

- Markup List

- Epigraphy.info (controlled vocabularies, ontologies…)
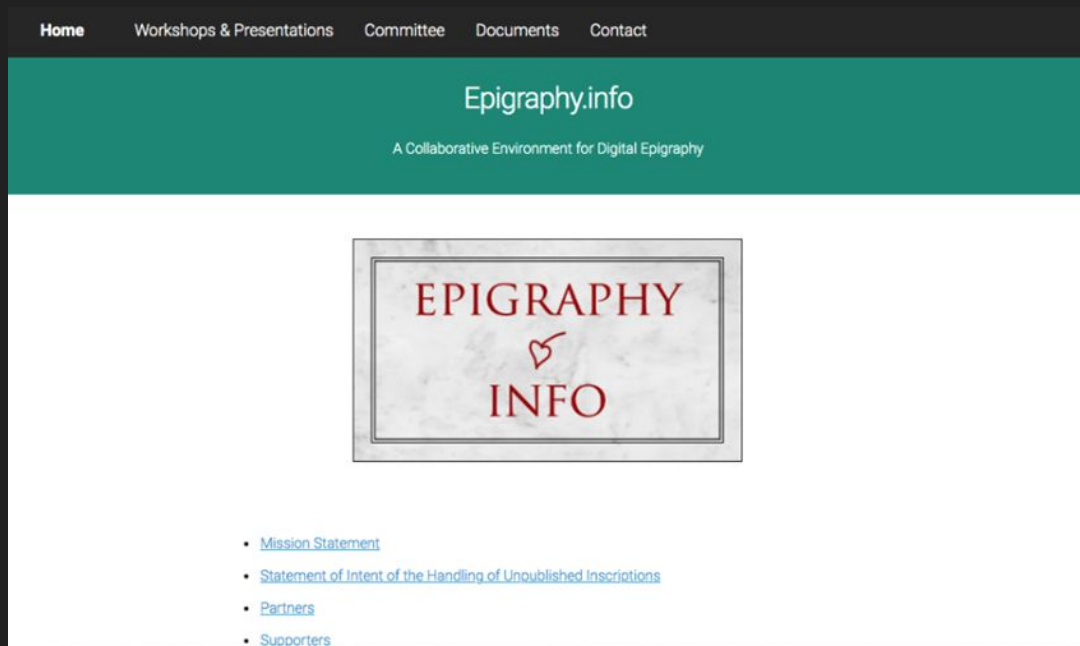
Structure of an EpiDoc Edition

https://epidoc.stoa.org/gl/latest/supp-structure.html

<TEI>   → **root element**

 <teiHeader>...</teiHeader>   → **descriptive & historical data**

 <facsimile>...</facsimile>   → **images**

 <text>...</text>   → **text, apparatus, translations,**
                 commentary, bibliography

</TEI>

\<text>: div[@type]

- **edition**
  - **textpart**
- **apparatus**
- **translation**
- **commentary**
- **bibliography**

```
<text>
    <body>
        <div type="edition">
            <div type="textpart">...</div>
        </div>
        <div type="apparatus">...</div>
        <div type="translation">...</div>
        <div type="commentary">...</div>
        <div type="bibliography">...</div>
    </body>
</text>
```

div[@type='edition']

```
<div type="edition" xml:lang="grc">
    <ab>
        <lb n="1"/>...
        <lb n="2"/>...
        <lb n="3"/>...
    </ab>
</div>
```

- @xml:lang is required (unless textparts have individual languages)
  - (see http://iana.org/assignments/language-subtag-registry/)
- all epigraphic/papyrological/etc. Text
  - contained in <ab>, <lg>/<l>, <p>, etc.
  - all Leiden sigla must be represented in EpiDoc

div[@type='apparatus']

```
<div type="apparatus">
    <listApp>
        <app loc="1">...</app>
        <app loc="2">...</app>
    </listApp>
</div>
```

- TEI app module designed for Lachmannian *apparatus criticus*
  - multiple witnesses

- epigraphic *apparatus criticus*
  - comment on letterforms
  - supplements, interpretations
  - previous editors

div[@type='translation']

```
<div type="translation" xml:lang="en">
    <p>...</p>
    <p>...</p>
</div>
```

- essentially the same rules as for edition
  - EpiDoc sigla, etc., but probably much less markup
    - simpler structure, silent expansion
- @xml:lang='en' | 'de' | 'fr' | 'it' | *etc.*
- @resp/@source
- @subtype='literal' | 'literary' | 'pedagogical' | *vel sim.*

div[@type='commentary']

```
<div type="commentary">
    <p>...</p>
    <p>...</p>
</div>
```

- mostly prose, discussion, commentary
- dating
- quoted text
- external references
- line-by-line comments

div[@type='bibliography']

```
<div type="bibliography">
    <listBibl>
        <bibl>...</bibl>
        <bibl>...</bibl>
    </listBibl>
</div>
```

- <listBibl>/<bibl>
  - links to master bibliography
  - free-standing content

- @subtype='principal' | 'derived' | 'discussion' | *etc.*

\<teiHeader>

\<fileDesc>

    \<sourceDesc>...

       \<msDesc>...

          \<msIdentifier>Information about the repository in which the object is stored\</msIdentifier>

          \<physDesc>Physical description of the object\</physDesc>

          \<history>Ancient and modern history of the object\</history>

       \</msDesc>

    \</source Desc>

\</fileDesc>

Leiden to TEI

...	Illegible letters, not restored by editor.
ạḅ	Letters ambiguous without their context.
[...]	Letters missing, not restored by editor.
[abc]	Letters missing, restored by editor.
⟨...⟩	Letters erroneously omitted, not restored.
⟨abc⟩	Letters erroneously omitted, restored by editor.
a(bc)	Abbreviation expanded by editor.
{abc}	Letters considered superfluous by editor.
⟦abc⟧	Deletion which can be restored.

...	`<gap reason="illegible" extent="unknown"/>`
ạḅ	`<unclear>ab</unclear>`
[...]	`<gap reason="lost" extent="unknown"/>`
[abc]	`<supplied reason="lost">abc</supplied>`
⟨...⟩	`<gap reason="omitted" extent="unknown"/>`
⟨abc⟩	`<supplied reason="omitted">abc</supplied>`
a(bc)	`<expan><abbr>a</abbr><ex>be</ex></expan>`
{abc}	`<surplus>abc</surplus>`
⟦abc⟧	`<del>abc</del>`

EpiDoc encoding

SIMPLE ABBREVIATION

AVG = Augustus

aug   part of the **abbr**eviation that is on the stone: **<abbr>**

ustus   part you need to **ex**pand to resolve word: **<ex>**

Augustus   whole **expan**ded word: **<expan>**

SIMPLE ABBREVIATION

AVG = Augustus

aug   **\<abbr\>**

ustus   **\<ex\>**

Augustus   **\<expan\>**

⇒

\<expan\>
  \<abbr\>Aug\</abbr\>
  \<ex\>ustus\</ex\>
\</expan\>

Critical edition: Aug(ustus)

Diplomatic edition: AVG

UNEXPANDED ABBREVIATION

ΧΟΡ = ?

χορ   <abbr>   ⟹   <abbr>χορ</abbr>

Critical edition: χορ(- - -)

Diplomatic edition: ΧΟΡ

ONE MORE COMPLEX ABBREVIATION

augg   `<abbr>`

g   `<am>`

usti duo   `<ex>`

augusti duo   `<expan>`

⇒

```
<expan>
  <abbr>
    Aug
    <am>g</am>
  </abbr>
  <ex>usti duo</ex>
</expan>
```

Critical edition: Aug(usti duo)

Diplomatic edition: AVGG

Partially restored lacuna

Κατεσκευ[άσθη]
ἐπὶ τῶν εὐσ[εβεστάτων]

Partially restored lacuna

Κατεσκευ**<supplied reason="lost">**άσθη**</supplied>**
ἐπὶ τῶν εὐϛ[εβεστάτων]

Partially restored lacuna

Κατεσκευ**<supplied reason="lost">**άσθη**</supplied>**
ἐπὶ τῶν εὐσ**<supplied reason="lost">**εβεστάτων
</supplied>

Partially restored lacuna

Κατεσκευ**<supplied reason="lost">**άσθη**</supplied>** ἐπὶ τῶν εὐ**<unclear>**σ**</unclear><supplied reason="lost">**εβεστάτων**</supplied>**

Partially restored lacuna

Κατεσκευ[άσθη ...]
ἐπὶ τῶν εὐσ[εβεστάτων ...]

Unrestored lacuna

Κατεσκευ**<supplied reason="lost">**άσθη**</supplied><gap/>**
ἐπὶ τῶν εὐ**<unclear>**σ**</unclear><supplied**
reason="lost">εβεστάτων**</supplied>**

Unrestored lacuna

Κατεσκευ**<supplied reason="lost">**άσθη**</supplied> <gap/>**
ἐπὶ τῶν εὐ**<unclear>**σ**</unclear><supplied**
reason="lost">εβεστάτων**</supplied>**

Unrestored lacuna

Κατεσκευ**<supplied reason="lost">**άσθη**</supplied>** **<gap reason="lost" extent="unknown" unit="character"/>** ἐπὶ τῶν εὐ**<unclear>**σ**</unclear><supplied reason="lost">**εβεστάτων**</supplied>**

Unrestored lacuna

Κατεσκευ**<supplied reason="lost">**άσθη**</supplied> <gap reason="lost" extent="unknown" unit="character"/>**
ἐπὶ τῶν εὐ**<unclear>**σ**</unclear><supplied reason="lost">**εβεστάτων**</supplied> <gap reason="lost" extent="unknown" unit="character"/>**

"But…"

<supplied reason="lost">άσθη</supplied>

$$\Rightarrow \ [\textbf{ά}\boldsymbol{\sigma}\boldsymbol{\theta}\boldsymbol{\eta}]$$

"But…"

<supplied reason="lost">άσθη</supplied>

$\Rightarrow$ [**άσθη**]

<gap reason="lost" extent="unknown" unit="character"/>

$\Rightarrow$ [**…**]

Unrestored lacuna—display

Κατεσκευ[άσθη] [...]
ἐπὶ τῶν εὐς̣[εβεστάτων] [...]

Unrestored lacuna—**corrected**

Κατεσκευ[άσθη] [...]
ἐπὶ τῶν εὐσ[εβεστάτων] [...]

Unrestored lacuna—**corrected**

Κατεσκευ[άσθη ...]
ἐπὶ τῶν εὐσ[εβεστάτων ...]
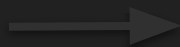
Symbols and marks

- Non meaning-bearing symbols:
  - leaf, scroll, crux, point, dolphin, star, wreath

- Meaning-bearing symbols or shorthand marks:
  - denarius, etos, half, artabe, centurion

- Marks with expansion or regularization to text values:
  - Chi-rho, monogram, ligatures, complex abbreviations

Non meaning-bearing symbols

- <g ref="#leaf"/>
- <g ref="#scroll"/>
- <g ref="#crux"/>
- <g ref="#dipunct"/>

To include the Unicode:

- <g ref="#leaf">❧</g>
- <g ref="#leaf">❧</g>

Critical edition: ((leaf))

Diplomatic edition: ❧

Meaning-bearing marks

- `<g ref="#denarius"/>`

- `<expan>`
     `<abbr>`
          `<am><g ref="#denarius"/></am>`
     `</abbr>`
     `<ex>δηνάρια</ex>`
  `</expan>`

Critical edition: ((δηνάρια))   Diplomatic edition: ✳

Chi-rho

- Expand to name (☧):
  ```
  <expan>
      <abbr><am><g ref="#chi-rho"/></am></abbr>
      <ex>Χριστός</ex>
  </expan>
  ```

- Expand to string (☧OPHER):
  ```
  <expan>
      <abbr><am><g ref="#chi-rho"/></am></abbr>
      <ex>Christ</ex>
      <abbr>opher</abbr>
  </expan>
  ```

Chi-rho

- Ligature (☧ΥΣΟΦΟΡΟΣ):
  <hi rend="ligature">Χρ</hi>υσοφόρος

- Just a symbol (☧):
  <g ref="#chi-rho"/>

To include the Unicode:

- <g ref="#chi-rho">☧</g>
- <g ref="#chi-rho">☧</g>

EpiDoc case studies

Catherine Dobias-Lalou
Inscriptions of Greek Cyrenaica
in collaboration with Alice Bencivenni and Hugues Berthelot
with help from Simona Antolini, Silvia Maria Marengo and Emilio Rosamilia

Catherine Dobias-Lalou
Greek Verse Inscriptions of Cyrenaica
in collaboration with Alice Bencivenni
with help from Joyce M. Reynolds and Charlotte Roueché

Cyrene, agora. Photo by courtesy of J.-P. Perrin, enhanced by A. Bencivenni

https://igcyr.unibo.it/

IGCyr² | GVCyr²

INSCRIPTIONS OF GREEK CYRENAICA | GREEK VERSE INSCRIPTIONS OF CYRENAICA

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Catherine Dobias-Lalou

Inscriptions of Greek Cyrenaica. Second edition

in collaboration with Alice Bencivenni and Hugues Berthelot
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Catherine Dobias-Lalou

Greek Verse Inscriptions of Cyrenaica. Second edition

in collaboration with Alice Bencivenni
with help from Joyce M. Reynolds and Charlotte Roueché

The edition is designed by Irene Vagionakis to draw on and enhance IGCyr | GVCyr: https://igcyr.unibo.it/

https://igcyr2.unibo.it/en/

Appendix: Aligning EpiDoc With Mycenaean Usage (Wingspread Conventions)

Description	Wingspread	DAMOS	EpiDoc encoding	DAMOS example	EpiDoc Guidelines
Characters and glyphs					
syllabogram (in a syllabic word)	pa- or -ro₂	pa- or -ro2	pa--ro2	4327 (PY An(6) 35); 4471; 4626	Clear text
syllabic word	da-mo-de	da-mo-de	`<w xml:id="">`da-mo-de`</w>`	4579	Words and lemmata
logogram	OLE	OLE	`<w type="logogram" xml:id="">`OLE`</w>`	4560	Not yet covered.
syllabogram used as logogram (i.e. adjectival logogram)	PA	PA	`<w type="syllabogram-as-logogram" xml:id="">`PA`</w>`	4960	Not yet covered.
Monogram (i.e. ligatured syllabograms used as logogram)	MERI	ME±RI	`<w type="monogram" xml:id="">`ME±RI`</w>`	2	Not covered.
Ligatured logograms	TELA+PO	TELA+PO	`<w type="ligature" xml:id="">`TELA+PO`</w>`	681	cf. Ligatured Letters
Metrogram	S	S	`<w type="metrogram" xml:id="">`S`</w>`	4214	Not yet covered.
Arithmogram	1	1	`<num xml:id="">`1`</num>`	4170	Numbers/Numerals Of Known Value
Syllabogram as abbreviation	o	o	`<w xml:id="">``<abbr>`O`</abbr>``</w>`	380	Abbreviation not Expanded at All
Word divider	,	,	`<pc xml:id="">``<g ref="#word-divider"/>``</pc>`	4421	cf. Symbol: interpuncts
Dividing line	:	:	`<pc xml:id="">``<g ref="#dividing-line"/>``</pc>`	5096	cf. Symbol: interpuncts
Uninterpreted glyph (syllabogram)	*47	*47	`<w>``<g ref="#s47"/>``</w>`	5034	Cf. Symbol (non meaning-bearing)
Uninterpreted glyph (logogram)	*123	*123	`<g ref="#l123"/>`	4364	Cf. Symbol (non meaning-bearing)
Uninterpreted glyph (vase logogram)	*155ᵛᴬˢ	*155VAS	`<g ref="#l155vas"/>``</w>`	4976	Cf. Symbol (non meaning-bearing)

https://epidoc.stoa.org/gl/latest/app-epi-mycenaean.html

Appendix: Aligning EpiDoc With ORACC

Description	Conventional display	ATF	EpiDoc page(s)
Correction of sign	AB!	AB!	Correction (without specification)
Correction of sign (original shown)	AB!(BA)	AB!(BA)	Erroneous substitution
Damage to sign	bi-⌈it-su⌉	bi-it#-su#	Ambiguous characters (Leiden underdot)
Unknown number of characters lost	[...]	[...]	Lost characters, quantity unknown
One character lost	[x]	[x]	Lost characters, quantity known
Six characters lost	[x x x x x x]	[x x x x x x]	Lost characters, quantity known
Three to six characters lost	[x x x (x x x)]	[x x x (x x x)] (tba)	
Restored lost characters	[AB]	[AB]	Editorial restoration
Uncertainly restored lost characters	[AB?]	[AB?]	Editorial restoration, uncertain
Restoration of accidental omission	<ab>	<ab>	Supplement of omitted characters
Restoration of intentional omission	bi-it-<(su)>	bi-it-<(su)>	Abbreviation fully expanded
Characters rejected by editor	<<ab>>	<<ab>>	Superfluous characters
Unclear sign	x	x	Illegible characters, quantity known
Clear but uninterpreted sign	AB	$AB	Uninterpreted characters (Leiden uppercase)
Ligature or compound grapheme	a+na	a+na	Ligatures

Cf. also Steve Tinney and Eleanor Robson, ATF Quick Reference, *Oracc: The Open Richly Annotated Cuneiform Corpus*, Oracc, 2014.

https://epidoc.stoa.org/gl/latest/app-epi-oracc.html

Exercise