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*Vincent Razanajao (ULg - Liège)
Serge Rosmorduc (CNAM – Paris)
Simon Schweitzer (BBAW – Berlin)
Daniel A. Werning (EXC Topoi – Berlin)

* Attending the TEI conference 2015

Towards a TEI compliant
interchange format
for Ancient Egyptian-Coptic
textual resources



Outline of the talk

- Ancient Egyptian-Coptic
 - One language – Three⁺ writing systems
- The projects involved
 - Thesaurus Lingua Aegyptiae
 - The Ramses Project
 - “Base de données Cachette de Karnak”
 - SeNeReko
 - Rubensohn
- Different goals – similar issues
 - Focus on the witness
 - Complexity of the text-bearing documents
 - The relationship between objects / documents / witnesses / texts
- Towards a TEI interchange format
 - Methodology
 - Proposal and problems
- Conclusions
 - Results and future developments

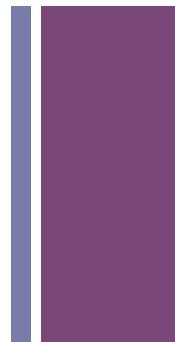


Ancient Egyptian - Coptic

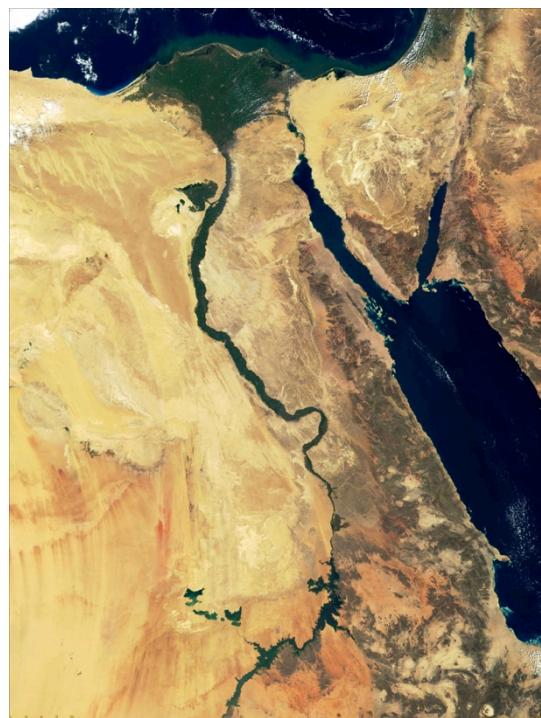
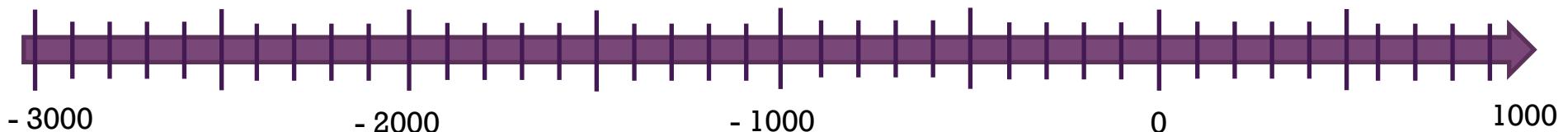
Background information

+

Ancient Egyptian - Coptic

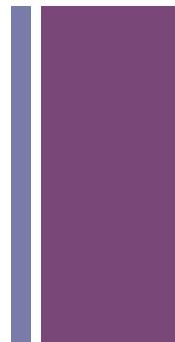


- One language

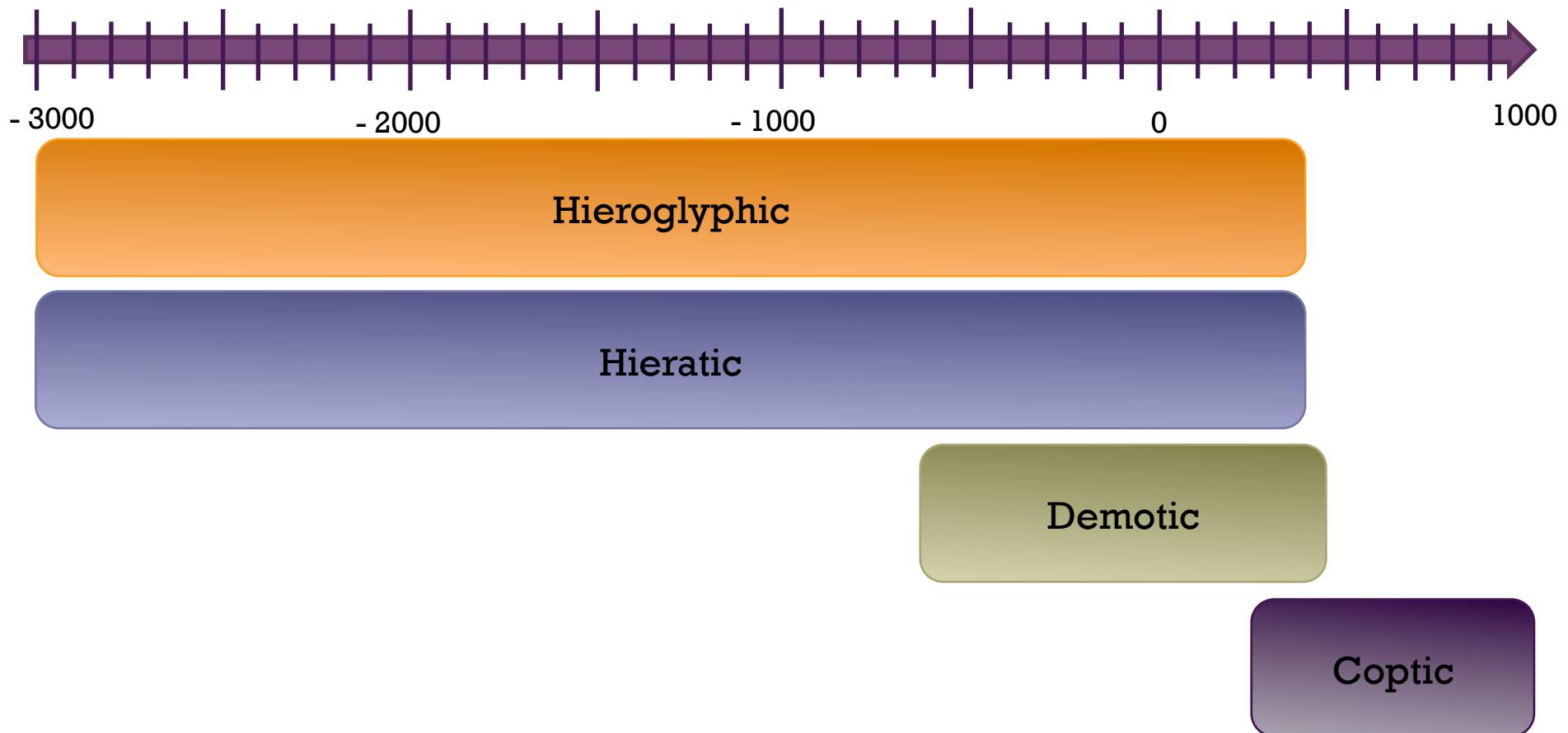




Ancient Egyptian - Coptic

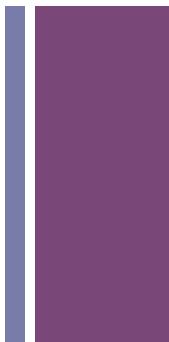


- One language – ‘Three’ writing systems

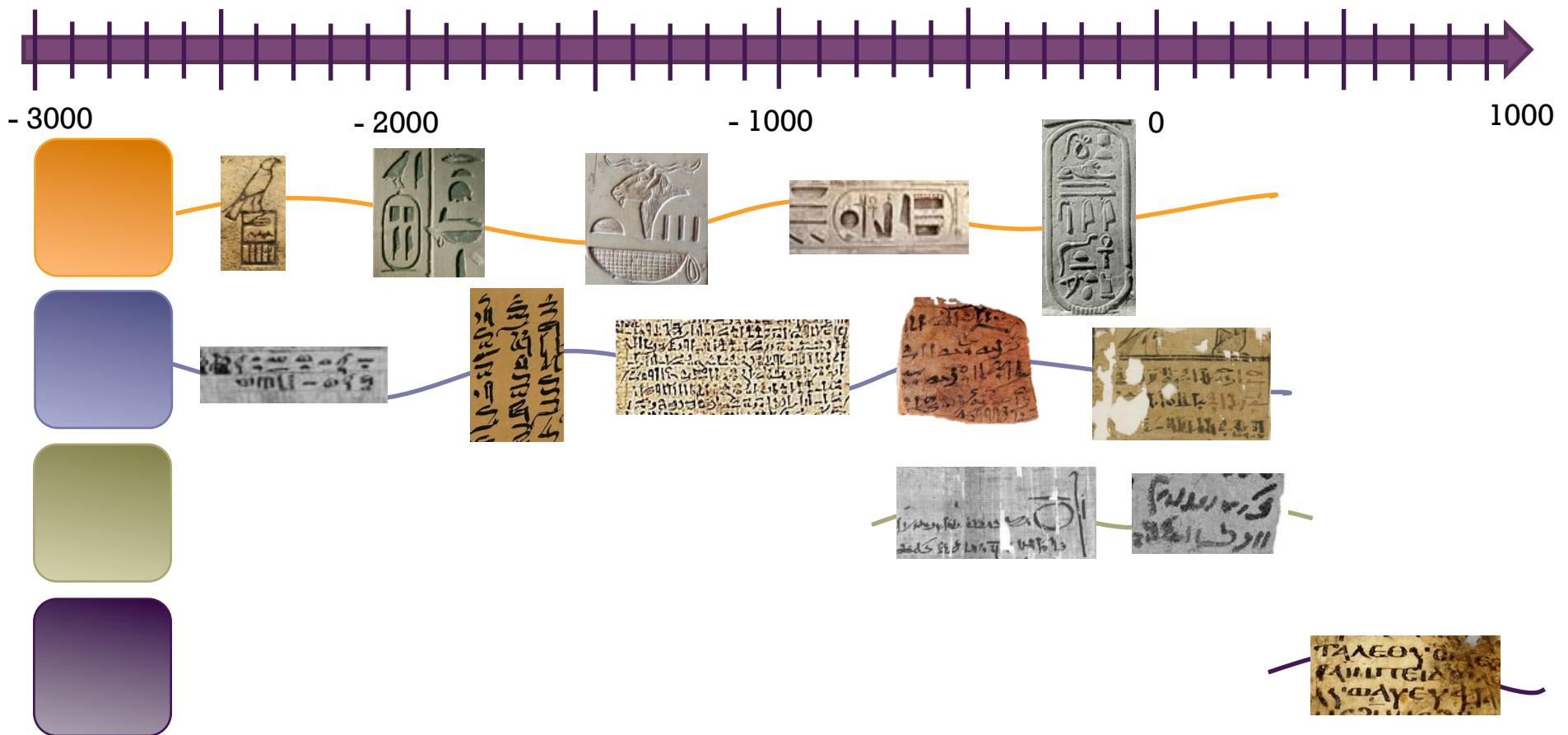




Ancient Egyptian - Coptic

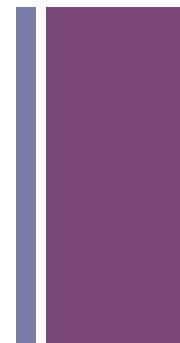


- One language – ‘Three’ writing systems

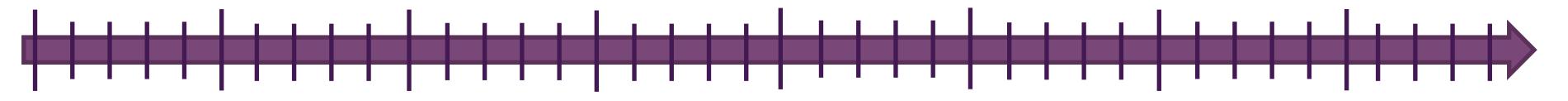




Ancient Egyptian - Coptic



- One language – ‘Three’ writing systems



- 3000



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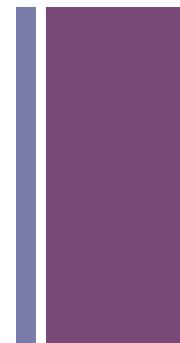
<-N5-F12-C10-i-mn:n:N36->

wsr-mȝ'.t-rȝ.-mry-Jmn

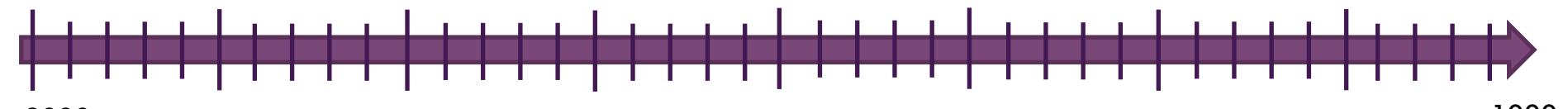




Ancient Egyptian - Coptic



- One language – ‘Three’ writing systems



- 3000



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<-N5-F12-C10-i-mn:n:N36->



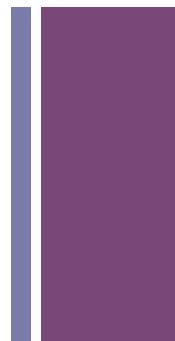
G5&G37-A1:G39-i

wsr-mȝ'.t-rȝ.-mry-Jmn

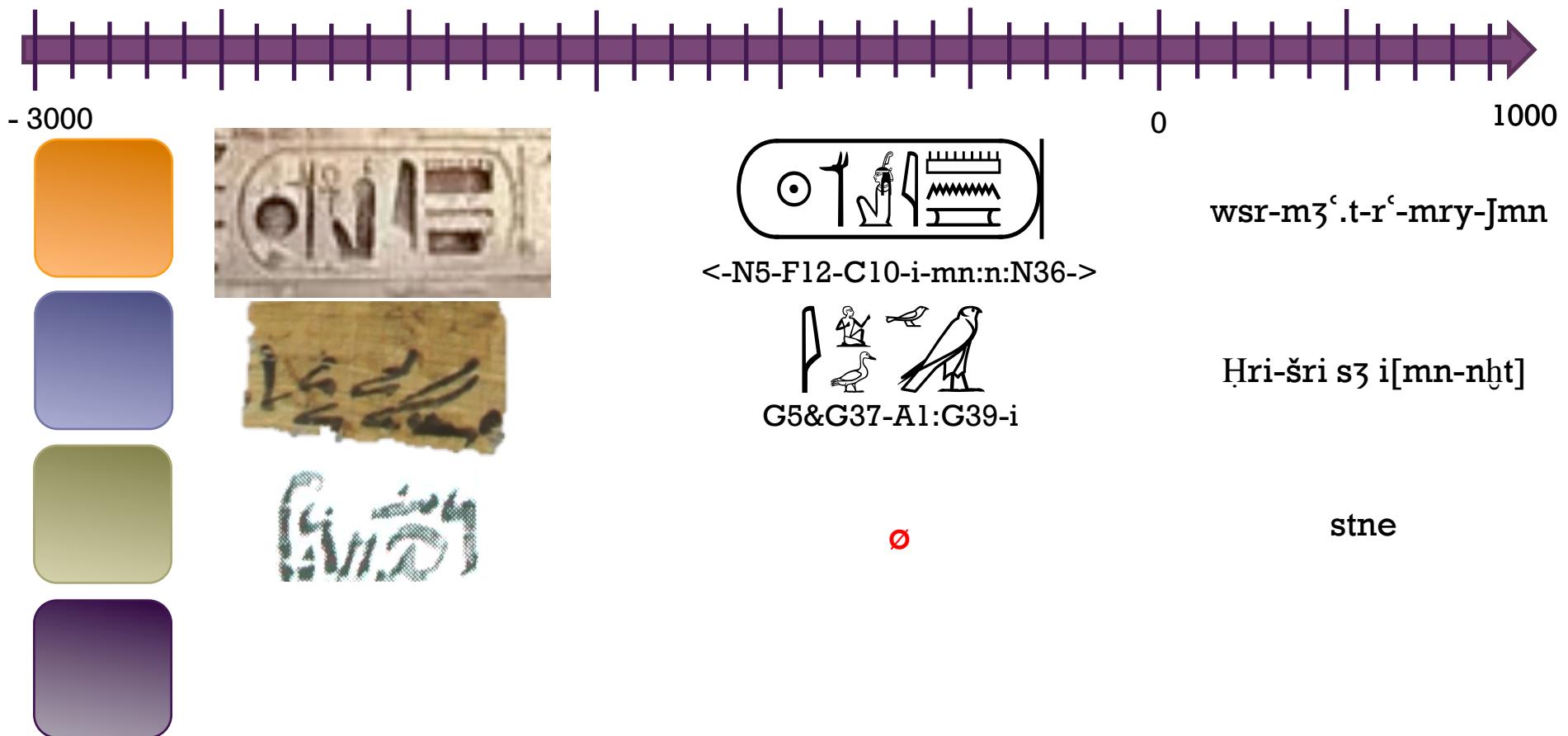
Hri-šri sȝ i[mn-nȝt]



Ancient Egyptian - Coptic

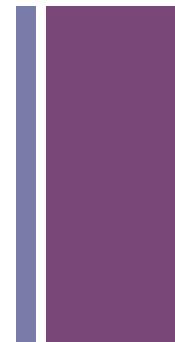


- One language – ‘Three’ writing systems

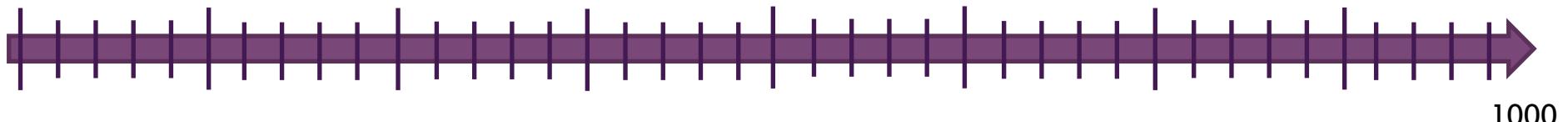




Ancient Egyptian - Coptic



- One language – ‘Three’ writing systems



wsr-mʒ‘.t-r‘-mry-Jmn

<-N5-F12-C10-i-mn:n:N36->



G5&G37-A1:G39-i

Hri-šri sʒ i[mn-nht]



∅

stne



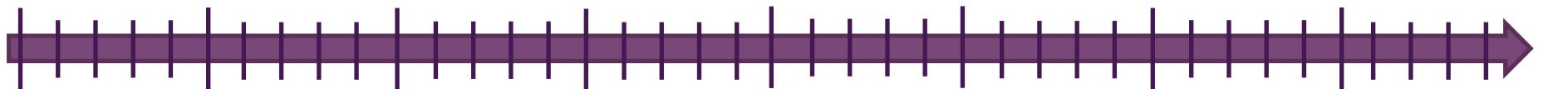
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Ancient Egyptian - Coptic

- One language – ‘Three’ writing systems



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<-N5-F12-C10-i-mn:n:N36->



G5&G37-A1:G39-i

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wsr-mʒ‘.t-r‘-mry-Jmn

Hri-šri sʒ i[mn-nht]

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The projects involved

Belgium – France – Germany



The projects involved

Thesaurus Linguae Aegyptiae (<http://aaew.bbaw.de/tla/index.html>)

- The *Thesaurus Linguae Aegyptiae* is a publication platform made available on the Internet by the Project *Structure and Transformation in the Vocabulary of the Egyptian Language* (former *Ancient Egyptian Dictionary Project*) at the Berlin-Brandenburg Academy of Sciences and Humanities.
- First released for general use on the 31st of October 2004, with the aim to provide access to Ancient Egyptian texts in transliteration (ca. 1 400 000 occurrences; from OEg to Dem. and Ptol.).

 **Thesaurus Linguae Aegyptiae**

Strukturen und Transformationen des Wortschatzes der ägyptischen Sprache



Einführung: Das virtuelle Wörterbuch und die Textdatenbank im Internet • Kontakt und Abonnement der mailinglist • Impressum

im Aufbau des digitalen Corpus altägyptischer Texte kooperieren die folgenden Institutionen und Projekte:
Berlin-Brandenburgische Akademie der Wissenschaften, Strukturen und Transformationen des Wortschatzes der ägyptischen Sprache • Sächsische Akademie der Wissenschaften zu Leipzig, Strukturen und Transformationen des Wortschatzes der ägyptischen Sprache • Akademie der Wissenschaften und der Literatur - Mainz, Demotische Textdatenbank • Nordrhein-Westfälische Akademie der Wissenschaften, Totenbuchprojekt • Katholische Universität Leuven, Leuven online index of Ptolemaic and Roman Hieroglyphic Texts • Akademie der Wissenschaften zu Göttingen, Edfu-Projekt

 Der Thesaurus Linguae Aegyptiae wirkt im philologisch-linguistischen Forschungsbereich des Exzellenzclusters TOPOI mit und dankt für vielfache Unterstützung in diesem Kontext.

für die Unterstützung der Arbeit am Thesaurus Linguae Aegyptiae danken wir den folgenden Institutionen:
Deutsche Forschungsgemeinschaft • Hermann und Elise geborene Heckmann Wentzel-Stiftung • Fritz Thyssen Stiftung

für die Erlaubnis zur Benutzung von Bildmaterial danken wir den folgenden Institutionen:
Österreichische Akademie der Wissenschaften (Wien) • Deutsches Archäologisches Institut (Abteilung Kairo)

weiter danken wir für vielfältige Unterstützung
Jochen Hallof • Daniel Werning

Stand der Datenbanken: 31. Oktober 2014, Version des Anzeigeprogramms: 31. Oktober 2014



The projects involved

Thesaurus Linguae Aegyptiae (<http://aaew.bbaw.de/tla/index.html>)

- Lemmatization and morphological annotation of the text material allow for specific research from lexical, philological, linguistic, and historico-cultural points of view. All texts come with running translations.

Thesaurus Linguae Aegyptiae, pPetersburg 1115, Die Geschichte des Schiffbrüchigen

[\[detailed information for text\]](#) [\[position in hierarchical tree of objects and texts\]](#)

[\[first\]](#) [\[prior\]](#) [\[next\]](#) [\[last\]](#)

nn [8] *nhw n(j) mSa =n*

es gibt keinen Verlust für unsere Truppe.

pH.n =n [9] *pH,wj wAwA,t sni.n =n* [10] *snm,t*

Nachdem wir die Grenze von Wawat erreicht hatten,
sind wir an Bigge vorbeigezogen.

m =k r =f n jy =((n)) [11] *m-Htp*

Sieh uns doch, wir sind in Frieden zurückgekehrt;

tA =n pH =n sw

(und) unser Land haben wir erreicht.

[12] (Rubrum: *sDm r =k n =j :*) *HA,t(j)-a*

Höre mir zu, Fürst!

jnk Swi <m> [13] *HAw*

Ich bin einer, der nicht übertreibt (lit. der frei ist von Übertreibung).

jai tw

Wasche dich,

jmi [14] *mw Hr Dba.(Pl.) =k*

gib Wasser auf deine Finger!

jx wSb =k [15] *wSd.t(w) =k*

Du sollst (nur) antworten, wenn du angesprochen wurdest.

mdwi =k n [16] *nswt jb =k m-a =k*

Du sollst mutig (wörtl.: indem dein Herz in deiner Hand ist) zum König sprechen;

[\[first\]](#) [\[prior\]](#) [\[next\]](#) [\[last\]](#)

P. Dils und H. Felber, Altägyptisches Wörterbuch / Strukturen und Transformationen des Wortschatzes der ägyptischen Sprache, Sächsische Akademie der Wissenschaften, Leipzig

[top of page](#)



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- Lemmatization and morphological annotation of the text material allow for specific research from lexical, philological, linguistic, and historico-cultural points of view. All texts come with running translations.
 - Each token is linked to an entry in the lemma-list

| information for lemma <i>Ἄλι</i> <i>pH</i> (lemma-no. 61370) | |
|--|---|
| translation | erreichen; angreifen (to reach; to attack) |
| short reference | Wb 1, 533.12-535.12; KoptHWb 157 |
| word class | Vb., 2rad |



The projects involved

Thesaurus Linguae Aegyptiae (<http://aaew.bbaw.de/tla/index.html>)

- Lemmatization and morphological annotation of the text material allow for specific research from lexical, philological, linguistic, and historico-cultural points of view. All texts come with running translations.
 - Each token is linked to an entry in the lemma-list
 - The texts and documents are described by metadata

information for text: Thesaurus Linguae Aegyptiae, pPetersburg 1115, Die Geschichte des Schiffbrüchigen

| | |
|-------------------------|--|
| bibliography | - W. Golénischeff, Les papyrus hiératiques Nos. 1115, 1116 A et 1116 B de l'Ermitage Impérial à St. Pétersbourg, (St. Pétersbourg) 1913, 1-2 und Tf. 1-8 [T,*P] - A.M. Blackman, Middle-Egyptian Stories, Bibliotheca Aegyptiaca 2, Bruxelles 1932 (= 1972), 41-48 [*T] - G. Burkard, Überlegungen zur Form der ägyptischen Literatur. Die Geschichte des Schiffbrüchigen als literarisches Kunstwerk, ÄAT 22, Wiesbaden 1993 [Ü] - R.B. Parkinson, The Tale of Sinuhe and Other Ancient Egyptian Poems 1940-1640 BC, Oxford World's Classics, Oxford 1997 (= 1998), 89-101 [Ü] |
| line count according to | [1]: Zeile 1 (Zl. 1-123 und 177-189 sind senkrecht geschrieben; Zl. 124-176 sind waagerecht in 6 Kolumnen geschrieben) |
| provenance | (unbestimmt) R.B. Parkinson, Poetry and Culture in Middle Kingdom Egypt, London and New York 2002, 70-71 und 298-299: vielleicht vom gleichen Schreiber, der pPrisse geschrieben hat, und daher vielleicht auch aus einem Grab von Dra Abu el-Naga in Theben |
| date | 12. Dyn. paläographisch zeitlich gleich mit pPrisse |
| type of object | Papyrus, Rolle |
| script | Mittelhieratische Buchschrift Mittelhieratisch |
| type of text | Erzählung |



The projects involved

The Ramses Project (<http://ramses.ulg.ac.be>)

- The Ramses project aims at building a richly annotated historical corpus of Late Egyptian texts and, more broadly, of all the written material whose linguistic registers attest Late Egyptian linguistic features from the 18th dynasty down to the Third Intermediate Period (ca. 1350-700 BCE).
- University of Liège (Belgium); started in 2006; first Online version in 2015

Ramses Online un corpus annoté du néo-égyptien

A propos ▾ Corpus ▾ Recherches ▾ Aide Version bêta Enregistrement login

Présentation générale

Ramses Online est une interface web donnant accès à *une partie* des données et des fonctionnalités du corpus annoté des textes néo-égyptiens développé à l'Université de Liège et connu sous le nom de [Projet Ramsès](#).

Dans sa version *bêta*, qui a été mise en ligne à l'occasion du 11^e Congrès International des Égyptologues [en août 2015](#), Ramses Online offre aux utilisateurs un [sous-corpus de textes néo-égyptiens](#) traduits en français et dont toutes les occurrences sont [lemmatisées et annotées morphologiquement](#).

Il est dès à présent possible de [visualiser les textes de ce corpus](#) et d'y effectuer des [recherches simples](#) portant (a) sur les lemmes (translittération ou traduction française du lemme), (b) sur les graphies hiéroglyphiques ou (c) sur les traductions des propositions en contexte.

En sus, les [utilisateurs enregistrés](#) ont accès à un moteur de recherche avancé permettant de construire des [requêtes complexes](#) portant simultanément sur les niveaux d'annotations suivants :

- le lemme ;
- la graphie ;
- l'analyse grammaticale.

Présentation générale

[Historique du projet](#)

[Principes d'annotation](#)

[Procédure d'encodage](#)

[Références](#)



The projects involved

The Ramses Project (<http://ramses.ulg.ac.be>)

- 550 000⁺ occurrences / 4600⁺ texts
 - Texts include
 - Hieroglyphic spellings
 - Lemmatization and morphological analysis
 - Sentence-level translation

| | | | | | | | | | |
|--------------------------|-------------------------|--------------------|-----------------|-----------|------------------------|--------------|----------------|--------------|----------------|
| | LRL | P. Berlin P. 10487 | | < | > | | | | |
| <i>hn^c-dd</i> | | | <i>sdm</i> | <i>j</i> | | <i>md.wt</i> | <i>nb.wt</i> | <i>j.h3b</i> | <i>k</i> |
| IND_INIT | 36,5 | 2 | VB | PR.PERS | SUBST | QUANT | VB | PR.PERS | CONNECT |
| | | | PFV | | | | REL.PFV | | |
| <i>par ailleurs</i> | | | <i>entendre</i> | <i>je</i> | <i>parole, affaire</i> | <i>tout</i> | <i>envoyer</i> | <i>tu</i> | <i>à, pour</i> |
| | | | | | | | | | |
| <i>j</i> | <i>hr</i> | <i>w</i> | | | | | | | |
| PR.PERS | CONNECT | PR.PERS | | | | | | | |
| <i>je</i> | <i>sur, au sujet de</i> | <i>ils</i> | | | | | | | |

J'ai pris connaissance de toutes les affaires au sujet desquelles tu m'as écrit ;



The projects involved

The Ramses Project (<http://ramses.ulg.ac.be>)

- 550 000+ occurrences / 4600+ texts

- Texts include

- Hieroglyphic spellings
- Lemmatization and morphological analysis
- Sentence-level translation

| LRL P. Berlin P. 10487 | | | | | | | | | | |
|--------------------------|---------|------------|-----------------|-------------------------|------------------------|--------------|----------------|-----------|----------------|--|
| | | | | | | | | | | |
| <i>hn^c-dd</i> | | <i>sgm</i> | <i>j</i> | <i>md.wt</i> | <i>nb.wt</i> | <i>j.h3b</i> | <i>k</i> | <i>n</i> | | |
| IND_INIT | 36, 5 | 2 | VB PFV | PR.PERS | SUBST | QUANT | VB REL.PFV | PR.PERS | CONNECT | |
| <i>par ailleurs</i> | | | <i>entendre</i> | <i>je</i> | <i>parole, affaire</i> | <i>tout</i> | <i>envoyer</i> | <i>tu</i> | <i>à, pour</i> | |
| | | | <i>j</i> | <i>hr</i> | <i>w</i> | | | | | |
| PR.PERS | CONNECT | PR.PERS | <i>je</i> | <i>sur, au sujet de</i> | <i>ils</i> | | | | | |

J'ai pris connaissance de toutes les affaires au sujet desquelles tu m'as écrit ;



The projects involved

The Ramses Project (<http://ramses.ulg.ac.be>)

- 500 000+ occurrences / 4600+ texts

- Texts include

- Hieroglyphic spellings



- Lemmatization and morphological analysis



- Sentence-level translation

| LRL P. Berlin P. 10487 | | | | | | | | | |
|--------------------------|-------------------------|------------|-----------------|-----------|------------------------|--------------|----------------|-----------|----------------|
| | | | | | | | | | |
| <i>hn^c-dd</i> | | | <i>sgm</i> | <i>j</i> | <i>md.wt</i> | <i>nb.wt</i> | <i>j.h3b</i> | <i>k</i> | <i>n</i> |
| IND_INIT | 36, 5 | 2 | VB | PR.PERS | SUBST | QUANT | VB | PR.PERS | CONNECT |
| | | | PFV | | | | REL.PFV | | |
| <i>par ailleurs</i> | | | <i>entendre</i> | <i>je</i> | <i>parole, affaire</i> | <i>tout</i> | <i>envoyer</i> | <i>tu</i> | <i>à, pour</i> |
| | | | | | | | | | |
| <i>j</i> | <i>hr</i> | <i>w</i> | | | | | | | |
| PR.PERS | CONNECT | PR.PERS | | | | | | | |
| <i>je</i> | <i>sur, au sujet de</i> | <i>ils</i> | | | | | | | |

J'ai pris connaissance de toutes les affaires au sujet desquelles tu m'as écrit ;



The projects involved

The Ramses Project (<http://ramses.ulg.ac.be>)

- 500 000+ occurrences / 4600+ texts

- Texts include

- Hieroglyphic spellings
- Lemmatization and morphological analysis
- Sentence-level translation

| LRL P. Berlin P. 10487 | | | | | | | | | |
|--------------------------|-------------------------|-----------------|-----------|------------------------|--------------|----------------|---------------|----------------|---------|
| | | | | | | | | | |
| <i>hn^c-dd</i> | | <i>sgm</i> | <i>j</i> | <i>md.wt</i> | <i>nb.wt</i> | <i>j.h3b</i> | <i>k</i> | <i>n</i> | |
| IND_INIT | 36, 5 | 2 | VB PFV | PR.PERS | SUBST | QUANT | VB REL.PFV | PR.PERS | CONNECT |
| <i>par ailleurs</i> | | <i>entendre</i> | <i>je</i> | <i>parole, affaire</i> | <i>tout</i> | <i>envoyer</i> | <i>tu</i> | <i>à, pour</i> | |
| | | | | | | | | | |
| <i>j</i> | <i>hr</i> | <i>w</i> | | | | | | | |
| PR.PERS | CONNECT | PR.PERS | | | | | | | |
| <i>je</i> | <i>sur, au sujet de</i> | <i>ils</i> | | | | | | | |

J'ai pris connaissance de toutes les affaires au sujet desquelles tu m'as écrit ;



The projects involved

The Ramses Project (<http://ramses.ulg.ac.be>)

- 500 000+ occurrences / 4600+ texts
- Texts include
 - Metadata and bibliographical references

P. Berlin P 10487; LRL 21

Description du texte

Bibliographie

TLA

The Deir el-Medina Database

BURKARD, G., FISCHER-ELFERT, H. W., *Ägyptische Handschriften*, vol. 4, Stuttgart, 1994, p. 64, n° 88. [AEB: 1994.0524](#)

ČERNÝ, J., *Late Ramesside Letters*, Bruxelles, 1939, p. X et XVII, 36-37. [AEB: BA 5135](#)

JANSSEN, Jac. J., *Late Ramesside Letters and Communications*, Londres, 1991, p. -, pl. 50. [AEB: 1991.10147](#)

WENTE, E. F., *Late Ramesside letters*, Chicago, 1967, p. 53-54. [AEB: 1967.0606](#)

WENTE, E. F., *Letters from Ancient Egypt*, Atlanta, 1990, p. 183. [AEB: 1991.10148](#)



The projects involved

The Karnak Cachette Database Project

(<http://www.ifao.egnet.net/bases/cachette/about>)

- The aims of this project were (1) to design a database for all the objects coming from the Karnak Cachette (1903-1907; 700 statute in stone – 17000 in bronze); (2) to set up photographic documentation concerning the Karnak Cachette, by numbering archives in the current collections and taking additional photographs; (3) to describe each object and give the **museographical, epigraphical, prosopographical** data and complete bibliography in relation to it; and (4) to make the database available on the web.





The projects involved

The Karnak Cachette Database Project
(<http://www.ifao.egnet.net/bases/cachette/about>)

- Rich metadata about the statues

CK 3 : Kneeling statue of Jmn-m-h3t holding vase. Cairo CG 42130

| | | | | | | |
|---------------------------------------|---|-------------------------------|---------------------|-----------------|--|------------------------|
| <i>Short description</i> | K 3 | | | | | |
| <i>Date of discovery (DD/MM/YYYY)</i> | 26/12/1903 | | | | | |
| <i>Type 1</i> | Statue | | | | | |
| <i>Type 2</i> | Kneeling statue holding vase | | | | | |
| <i>Material</i> | Limestone | | | | | |
| <i>Remarks on material</i> | <i>JE: calcaire dur</i> <i>CG: "pierre vert de mer avec des coulées de vert foncé transparent"</i> <i>Legrain:1904b "racine d'émeraude".</i> <i>pierre blanche laiteuse avec veines vertes</i> | | | | | |
| <i>Dimensions</i> | <i>height</i> 62.5 | <i>breadth</i> 18 | <i>length</i> 31 | <i>diameter</i> | <i>Remarks on dimensions</i> CG: 62 | |
| <i>Datation</i> | New Kingdom-T.I.P. | | | | | |
| <i>Remarks on datation</i> | Source : Cartouche (Jmn-htp) mais peut-être statue plus tardive ? Vandier:1958 date cette statue de la XVIIIe dynastie mais hésite entre "Aménophis II-Thoutmosis IV ?" (465, n. 12) et "Aménophis III" (496, n. 1). Voir aussi la datation du PM ("Dyn. XVIII or XXII") [EJ 9/10/2008] | | | | | |
| <i>Conservation</i> | <i>City, museum</i> Cairo, Egyptian Museum | <i>Inventory no.</i> 36577 | <i>JE</i> 42130 | <i>CG</i> | <i>T.R.</i> | <i>S.R.</i> 4/11636 |
| <i>Documents and archives</i> | Kairo Wb. Nr. 192, <409> Fonds IFAO : 8 clichés (20/01/2009) = IFAO NU_2009_1788-1795 Photo Archives Kuentz (II) I/109 | | | | | |
| <i>Remarks</i> | <i>La date de découverte fournie par Legrain:1906, 83 « 28 décembre 1903 » est erronée. JdF 1903-1904, 19 assure que cette statue a été trouvée le 26/12/1903. Voir encore Legrain:1904b, 272 et 275 qui mentionne la découverte d'une « statuette d'Amenemhat » en « pierre verte que je crois être la racine d'émeraude d'Egypte ». La couleur correspond à celle de CG 42130 et cette statue a été trouvée en même temps que celles « de Khai » (K17) et « de Siroi » (K18) dont la découverte est bien datée du 26/12/1903 (voir CK 17-18).</i> | | | | | |
| Bibliography | | | | | | |
| <i>Porter and Moss II, 2nd ed.</i> | 145 | | | | | |
| <i>Notes on PM</i> | "Dyn. XVIII or XXII" | | | | | |
| <i>Iev. 2: Legrain:1906</i> | Statues et statuettes de rois et de particuliers I. Catalogue général des antiquités égyptiennes du Musée du Caire Le Caire 1906 hieroglyphs - commentary - bibliography - photo - description | | | | | |
| | 83-84; pl. 78 | | | | | |



The projects involved

The Karnak Cachette Database Project

(<http://www.ifao.egnet.net/bases/cachette/about>)

- Rich metadata about the statues
- TEI/XML encoding of the texts, both for Online publication and for new types of searches, mainly on prosopographical data; development of Xefee – XML editor for Egyptian Epigraphy

The Karnak Cachette Texts Online

the Encoding of Transliterated Hieroglyphic Inscriptions

Vincent Razanajao¹, Emmanuelle Morlock², Laurent Coulon²
¹Griffith Institute, University of Oxford, ²Hisoma Laboratory (CNRS UMR 5189)

The Karnak Cachette project

Between 1903 and 1907, the French archaeologist Georges Legrain discovered thousands of hidden stone statues, stelae and other objects that were buried in a large pit inside the temple of Amun at Karnak (known as the "Cachette" of Karnak). This ensemble constitutes an extraordinary source of information on the Egyptian clergy and the evolution of local cults. The objects as well as the related documentation now being widely dispersed, and in the absence of a comprehensive inventory of the find, it was decided to create an online inventory and a tool to search this rich corpus. The first version of the online database was launched in 2006. It provided a general description of each object, a label, date of discovery, various inventory numbers, and a bibliography. Version 2 went online in 2012. It gives access to the complete photographic documentation (more than 8000 photographs). The database is regularly updated.

See: <http://www.ifao.egnet.net/bases/cachette/>

Current goals

The project aims at developing the tools to encode, search and publish electronically the hieroglyphic texts inscribed on the objects from the Cachette, enabling different types of full-text searches and queries (especially those dealing with titles and prosopographical data).

The version 3 of the database will comprise an electronic epigraphic edition of the corpus of texts with detailed prosopographical data.

The current efforts are focussed on:

- the development and finalization of a user-friendly tool for the encoding, analysis and online publication of the hieroglyphic texts inscribed on the objects from the Karnak Cachette;
- the implementation of TEI/Epidoc standards in ancient Egyptian Epigraphy to serve as a basis for building bridges between text-edition projects within Egyptology.

Xefee Xml Editor For Egyptian Epigraphy



Version 2 of the scientific database, including all the objects from the Karnak Cachette.
<http://www.ifao.egnet.net/bases/cachette/>



The projects involved

The project SeNeReKo (<http://senereko.ceres.rub.de>)

- SeNeReKo is defined as a ‘playing ground’ for the adaption and development of new methods, bringing together information technology, computer linguistics, and the humanities.
More specifically, the two main goals are:
 - To gain insights about processes of interreligious exchange from historical sources, and
 - To apply recent computational text analysis techniques

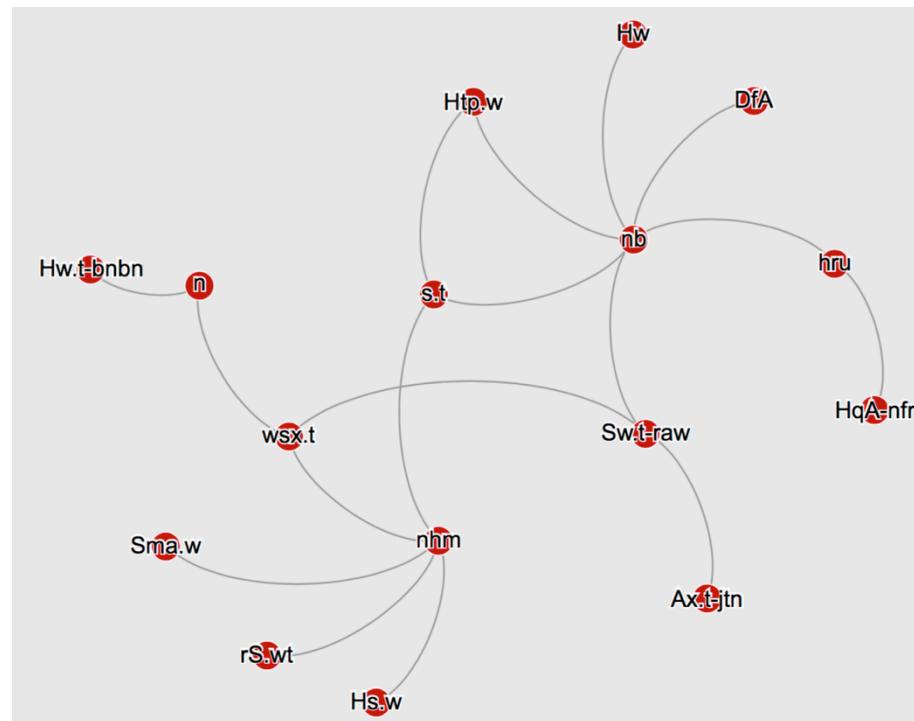
The screenshot shows the homepage of the SeNeReKo project. At the top, there's a navigation bar with links to HOMEPAGE, OVERVIEW, SEARCH, and A-Z. On the right, there's a large blue RUB logo. The main content area has a white background. At the top left, it says "RUHR-UNIVERSITÄT BOCHUM" and "SENEREKO". Below that is a small illustration of a person at a desk with a globe and network connections. The main title is "SEMANTISCH-SOZIALE NETZWERKANALYSE ALS INSTRUMENT ZUR ERFORSCHUNG VON RELIGIONSKONTAKTEN". On the left, there's a sidebar with links to HOME, NEWS, ABOUT THE PROJECT, HNR WORKSHOP 2015, TEAM, SOFTWARE, PUBLICATIONS, and INTERN. The main text area starts with "The project SeNeReKo has two objectives:" followed by a list of two items. Below that, there's a paragraph about the digitalization of historical sources and the project's goals. At the bottom, it mentions it's a joint research project between CERES and TCDH, funded by BMBF. There are also sections for "SPONSORED BY THE" (Federal Ministry of Education and Research), "Tweets" (with a link to Sophie Müzel's Twitter account), and links to "Gods, Graves and Graphs" and "SeNeReKo Software at GitHub".



The projects involved

The project SeNeReKo
(<http://senereko.ceres.rub.de>)

- In the cultural sphere of Ancient Egypt, they used the texts annotated by the TLA and applied network analysis techniques in order to study the dynamics of religious practices.
- As a first step, they converted into a common TEI schema the non-standard file formats that they collected from various projects so as to be able to use standard tools.





The projects involved

The Rubensohn Library (<http://elephantine.smb.museum>)

- The Rubensohn Library is a online resource for researchers provided by the *Staatliche Museen zu Berlin's Egyptian Museum and Papyrus Collection*. Some 800 documents from Elephantine have been restored, conserved, and evaluated as part of a two-year-long research project. They are accessible in the form of an open-access online database (626 papyri, 235 ostraca + wood panels, palm ribs and other objects).
- First published Online in 2015.

The screenshot shows the search interface for the Rubensohn Library. At the top, there is a decorative header featuring fragments of ancient Egyptian papyri and ostraca. Below the header, the title "Die ägyptische und orientalische Rubensohn-Bibliothek" is displayed. The search bar contains several input fields: "Suche" (Search), "Rubensohn-Sammlung", "Projekt", "Dokumentation & Hilfe", and "Kontakt". To the right of the search bar are buttons for "SUCHEN" (Search) and a language selection dropdown set to "DE". Below the search bar, there are ten rows of search filters, each with a dropdown menu. The filters are: Inventarnummer, Sammlungsstandort/-status, Fundjahr: zwischen (Year range), Textträger, Schriftarten, Sprachen, Datierung: zwischen (Year range), Textsorte/-gattung, Textinhalt, Bibliographie, Trismegistos-Nr., and Alle Felder (All fields). The entire interface has a light yellow background.



The projects involved

The Rubensohn Library (<http://elephantine.smb.museum>)

- Rich metadata – no encoding of the texts

The screenshot shows the homepage of the Rubensohn Library. At the top, there are two images: one of a papyrus fragment with the text "Die ägyptische und orientalische Rubensohn-Bibliothek" and another of a papyrus fragment with the text "Ägyptisches Museum und Papyrussammlung Staatliche Museen zu Berlin". Below these are navigation links: "Suche", "Rubensohn-Sammlung", "Projekt", "Dokumentation & Hilfe", and "Kontakt". A search bar with the placeholder "SUCHEN" and a British flag icon follows. The main content area displays a search result for "44 Suchergebnisse für: Schriftart enthält 'Ägyptisch | Hieratisch'". The results are presented in a table with columns: "Inv.Nr.", "Textsorte", "Datierung", "Schriftart", and "Bild". The table lists seven entries, each with a thumbnail image of a papyrus fragment.

| Inv.Nr. | Textsorte | Datierung | Schriftart | Bild |
|-----------------|---|--|--|------|
| Berlin P. 8869 | dokumentarisch Brief | 2363 – 2187 v.Chr. 6. Dyn. oder später (Edel 8. Dyn) | Ägyptisch Hieratisch Althieratisch | |
| Berlin P. 9010 | | 2363 – 2233 v.Chr. 6. Dyn. | Ägyptisch Hieratisch Althieratisch | |
| Berlin P. 10456 | dokumentarisch medizinisches Rezept | 664 – 30 v.Chr. | Ägyptisch Hieratisch Späthieratisch | |
| Berlin P. 10523 | dokumentarisch | 2363 – 2187 v.Chr. 6. Dyn. oder später (Edel 8. Dyn) | Ägyptisch Hieratisch Althieratisch | |
| Berlin P. 12925 | | 2723 – 1794 v.Chr. Altes Reich | Ägyptisch Hieratisch Althieratisch | |
| Berlin P. 13622 | | 1186 – 656 v.Chr. | Ägyptisch Hieratisch Neuhieratisch | |
| Berlin P. 23026 | literarisch/religiös-literarisch Litanei; religiös-literarisch Hymnus | 664 – 526 v.Chr. 30. Dyn. (VOHD IV, 132); 26. Dyn. (Quack) | Ägyptisch Hieratisch | |



The projects involved

The Rubensohn Library (<http://elephantine.smb.museum>)

- Rich metadata – no encoding of the texts

Pap. Berlin P. 8869

Persistente URL: <http://elephantine.smb.museum/record/ID400009/>

Datensatz-Zitation: Datensatz 400009 (= Pap. Berlin P. 8869), Projekt "Die ägyptische und orientalische Rubensohn-Bibliothek", bearbeitet von M. Müller, hrsg. von Ägyptisches Museum und Papyrussammlung Berlin, <http://elephantine.smb.museum/record/ID400009/> (Stand 11.04.2015).

TEI-XML-Datei: http://elephantine.smb.museum/tei/elephantine_rubensohn_db_400009.tei.xml



◀ | Liste | ▶

Sammlung

| | |
|-------------------------------|---|
| Beherbergende Sammlung: | Berlin, ÄMP, P. |
| Inventarnummer: | Berlin P. 8869 |
| Fragmentierungstyp: | fragmentierter Texträger, nicht kompletter Text |
| Publikationserlaubnis-Status: | publiziert |

Herkunft

| | |
|-----------------|--|
| Herkunftstyp: | Ankauf |
| Fundort: | Elephantine Oberägypten, 01. Gau Ägypten |
| Fundjahr: | (?) |
| Antikes Archiv: | Familienarchiv von Gaufürsten |
| Erwerbungstyp: | Ankauf |
| Erwerbungsart: | Luxor Oberägypten Ägypten |
| Erwerbungsjahr: | 1896 |

Texträger

| | |
|------------------|-----------------------|
| Texträger-Typ: | Papyrus |
| Material: | Papyrus |
| Texträger-Farbe: | papyrusfarben, dunkel |

Digitalbilder

P. 08869 Recto
(direkter Link zur Datei)



P. 08869 Verso
(direkter Link zur Datei)





The projects involved

The Rubensohn Library (<http://elephantine.smb.museum>)

- Rich metadata – no encoding of the texts

Pap. Berlin P. 8869

Persistente URL: <http://elephantine.smb.museum/record/ID400009/>

Datensatz-Zitation: Datensatz 400009 (= Pap. Berlin P. 8869), Projekt "Die ägyptische und orientalische Rubensohn-Bibliothek", bearbeitet von M. Müller, hrsg. von Ägyptisches Museum und Papyrussammlung Berlin, <http://elephantine.smb.museum/record/ID400009/> (Stand 11.04.2015).

TEI-XML-Datei: http://elephantine.smb.museum/tei/elephantine_rubensohn_db_400009.tei.xml



◀ | Liste | ▶

Sammlung

| | |
|-------------------------------|---|
| Beherbergende Sammlung: | Berlin, ÄMP, P. |
| Inventarnummer: | Berlin P. 8869 |
| Fragmentierungstyp: | fragmentierter Texträger, nicht kompletter Text |
| Publikationserlaubnis-Status: | publiziert |

Herkunft

| | |
|-----------------|--|
| Herkunftstyp: | Ankauf |
| Fundort: | Elephantine Oberägypten, 01. Gau Ägypten |
| Fundjahr: | (?) |
| Antikes Archiv: | Familienarchiv von Gaufürsten |
| Erwerbungstyp: | Ankauf |
| Erwerbungsart: | Luxor Oberägypten Ägypten |
| Erwerbungsjahr: | 1896 |

Texträger

| | |
|------------------|-----------------------|
| Texträger-Typ: | Papyrus |
| Material: | Papyrus |
| Texträger-Farbe: | papyrusfarben, dunkel |

Digitalbilder

P. 08869 Recto
(direkter Link zur Datei)



P. 08869 Verso
(direkter Link zur Datei)





The projects involved

The Rubensohn Library (<http://elephantine.smb.museum>)

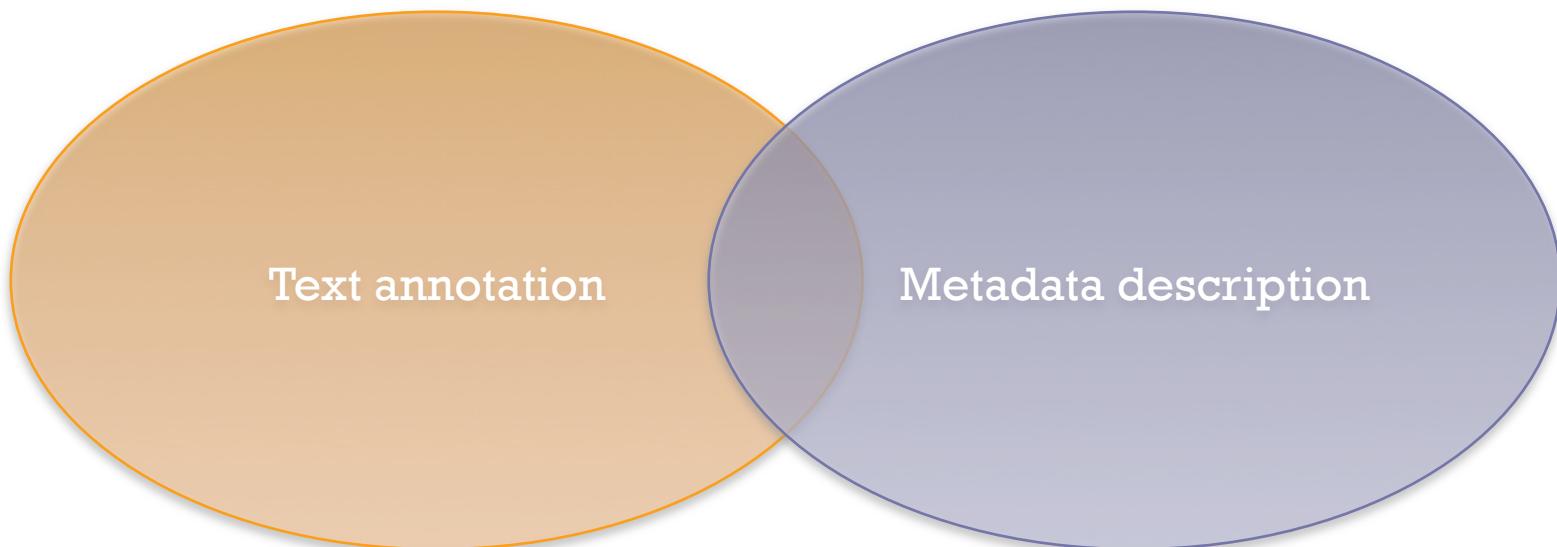
- Rich metadata – no encoding of the texts
- Mapping between the database and the TEI elements/attributes (D. Werning)
 - See https://wikis.hu-berlin.de/annotated_text_databases/TEI:Metadata

| Information | TEI-Tags, suggested by D. Werning | Rubensohn DB, field name | Rubensohn DB, data type |
|---|--|---|--------------------------------|
| DATA RECORD METADATA | | | |
| Record ID | TEI[xml:id="____"] | DatensatzID | Numerical |
| Record name/title | fileDesc/sourceDesc/msDesc/msIdentifier/msName; fileDesc/titleStmt/title | DatensatzTitel | Text |
| Record editor | fileDesc/publicationStmt/publisher; fileDesc/publicationStmt/pubPlace; fileDesc/titleStmt/editor | (constant) | Text |
| Record author | fileDesc/titleStmt/author | DatensatzautorInnen_oeffentlich | Text |
| Record creation date | revisionDesc/listChange/change (first entry) | | |
| Record change list | revisionDesc/listChange/change | Ueberarbeitungshistorie (repetition field) | Text[20x] |
| Latest change of record, date | revisionDesc/listChange/change (last entry) | zuletzt_geaendert | Date |
| Record status ("in progress", "published", ...) | revisionDesc/status="____"] | Bearbeitungsstatus | Text, fixed set of values |
| Record notes/comments (internal) | | Datensatzanmerkungen_intern | Text |
| TEXT SUPPORT METADATA | | | |
| Text support ID | fileDesc/sourceDesc/msDesc/physDesc/objectDesc/supportDesc[xml:id="____"] | TexttraegerID | Text |
| Collection (modern), country | fileDesc/sourceDesc/msDesc/msIdentifier/country | Sammlung:Land | Text, controlled set of values |
| Collection (modern), city | fileDesc/sourceDesc/msDesc/msIdentifier/settlement | Sammlung:Ort | Text, controlled set of values |
| Collection (modern), institution | fileDesc/sourceDesc/msDesc/msIdentifier/institution | Sammlung:Institution | Text |
| Collection (modern), museum | fileDesc/sourceDesc/msDesc/msIdentifier/repository | Sammlung:Sammlungsname | Text |
| Collection (modern), inventory | fileDesc/sourceDesc/msDesc/msIdentifier/collection | Sammlung:SammlungsInventar | Text |
| Collection (modern), inventory (abbreviation) (e.g. "Berlin P.") | | Sammlung:InventarPraefix | Text |
| Inventory no., primary (e.g. "Berlin P. 12345") | fileDesc/sourceDesc/msDesc/msIdentifier/idno | InvNr_primaere | Text |
| Inventory no., primary, bare no. (e.g. "12345") | | InvNr_primaere_blosse_Nr | Text |
| Inventory no., addition (e.g. "Vs.") | | InvNr_Zusatz | Text |
| Alternative inventory nos. | fileDesc/sourceDesc/msDesc/msIdentifier/altIdentifier/idno | InvNrn_weitere (repetition field) | Text[3x] |

+

The projects involved

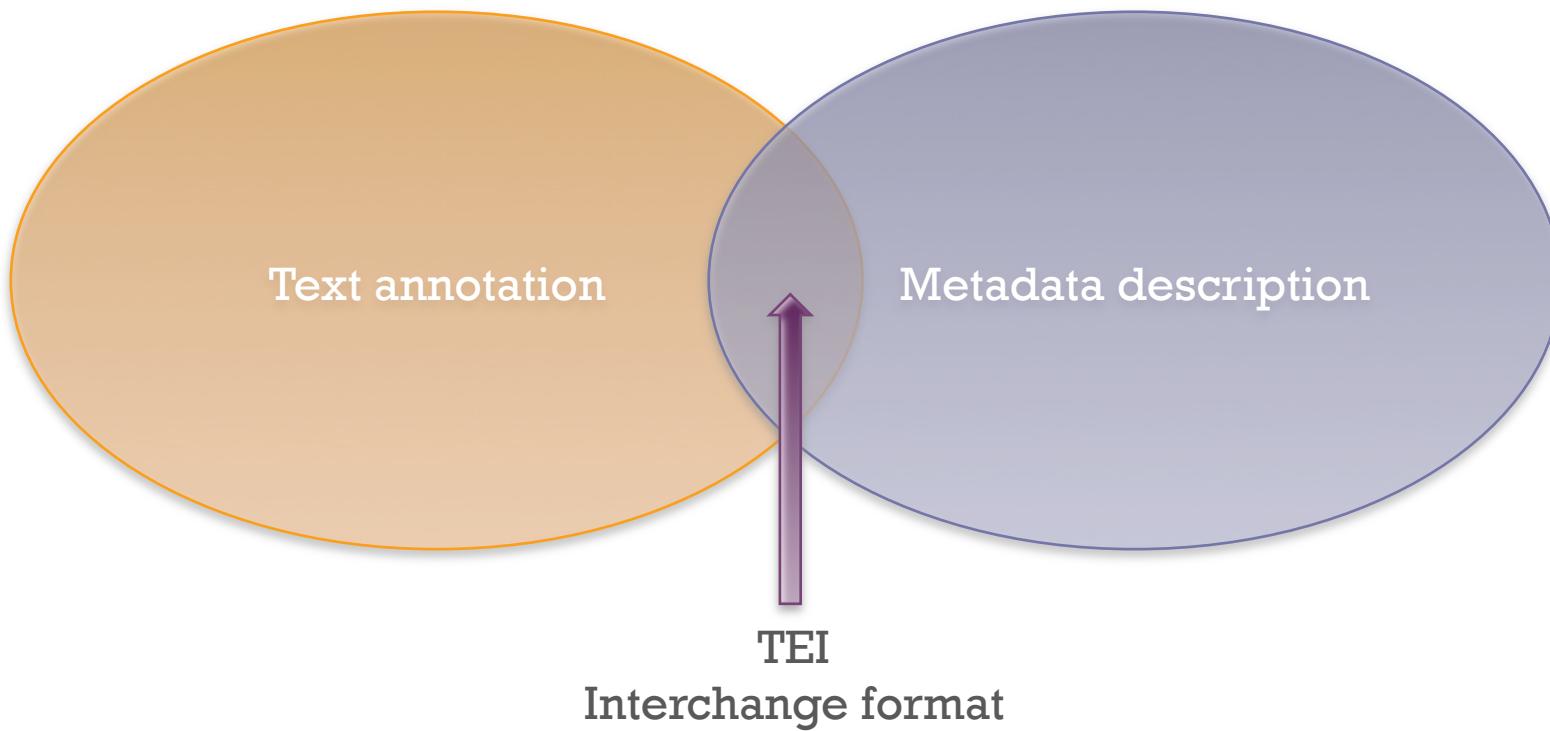
To sum up





The projects involved

To sum up





Different goals – similar issues

On the relation between objects, documents, witnesses and texts



Focus on the ‘witness’

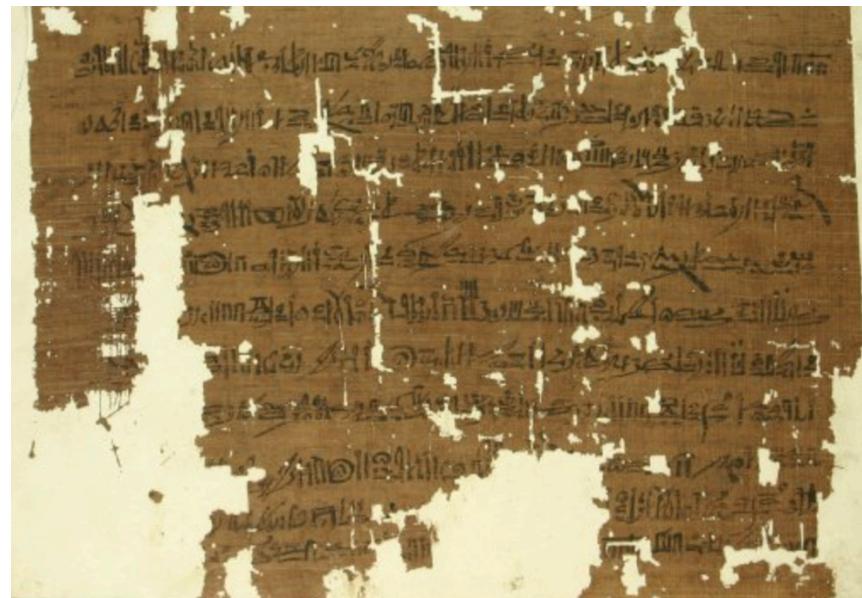
- No standardized critical edition, even for religious and literary texts
- Productive tradition → synoptic edition with all the variants

| | | |
|---|---|-----|
| ◦ ְלֵבָבְךָ בְּרִיתְמַתְּךָ ְלֹא־ Ende //ְךָ | (וְרִיבְנֶה) מְלֵאָה R | |
| ◦ ְלֵבָבְךָ בְּרִיתְמַתְּךָ ְלֹא־ ^a | (וְרִיבְנֶה) מְלֵאָה Am | 10 |
| ◦ ְלֵבָבְךָ בְּרִיתְמַתְּךָ ְלֹא־ | — — — S | |
| • ְלֵבָבְךָ בְּרִיתְמַתְּךָ ְלֹא־ | (וְרִיבְנֶה) מְלֵאָה AOS | |
| • ְלֵבָבְךָ בְּרִיתְמַתְּךָ ְלֹא־ | מְלֵאָה — — G | |
| • (וְרִיבְנֶה) בְּרִיתְמַתְּךָ ְלֹא־ | (וְרִיבְנֶה) מְלֵאָה C | |
| [וְרִיבְנֶה] בְּרִיתְמַתְּךָ ְלֹא־ — — — — — — | מְלֵאָה — — B3 | 15 |
| | [וְרִיבְנֶה] בְּרִיתְמַתְּךָ ְלֹא־ — — — — — — | Bdt |
| | מְלֵאָה [וְרִיבְנֶה] בְּרִיתְמַתְּךָ ְלֹא־ | DM5 |



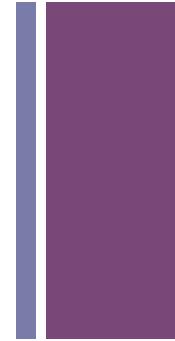
Focus on the ‘witness’

- No standardized critical edition, even for religious and literary texts
 - Productive tradition → synoptic edition with all the variants
 - Variation of support, script, etc. for a single text → Idem





Complex documents

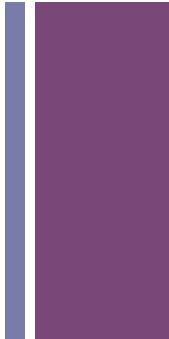


- *Per se*, e.g. the temple of Medinet Habu

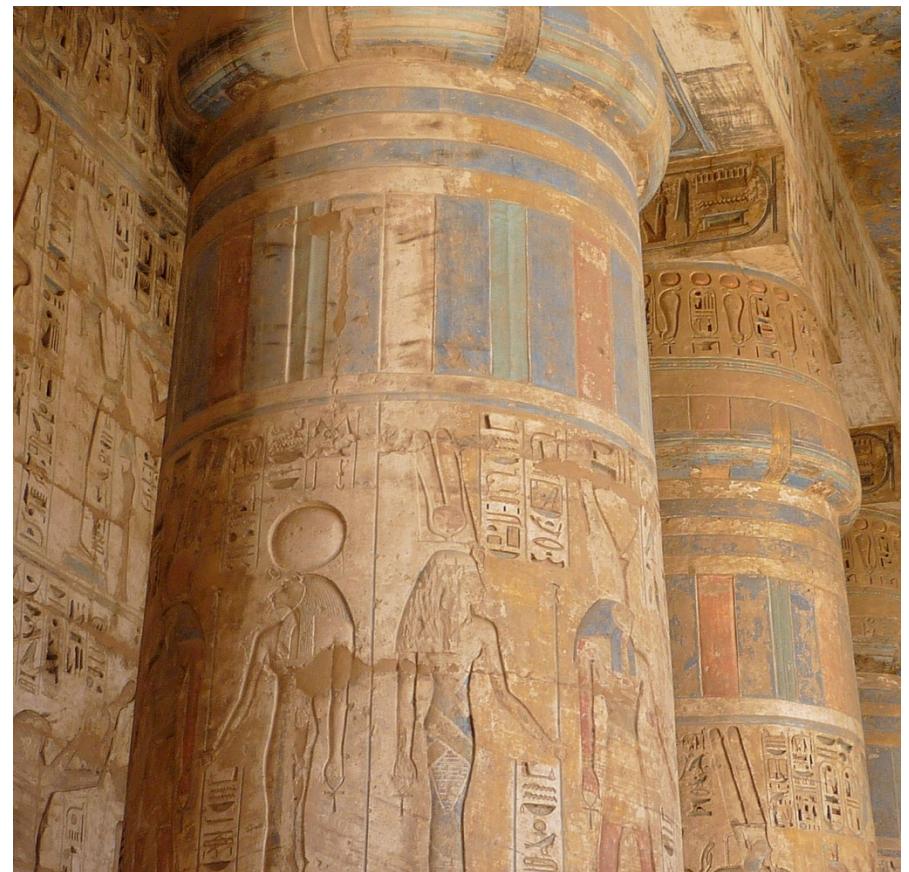




Complex documents



- *Per se*, e.g. the temple of Medinet Habu

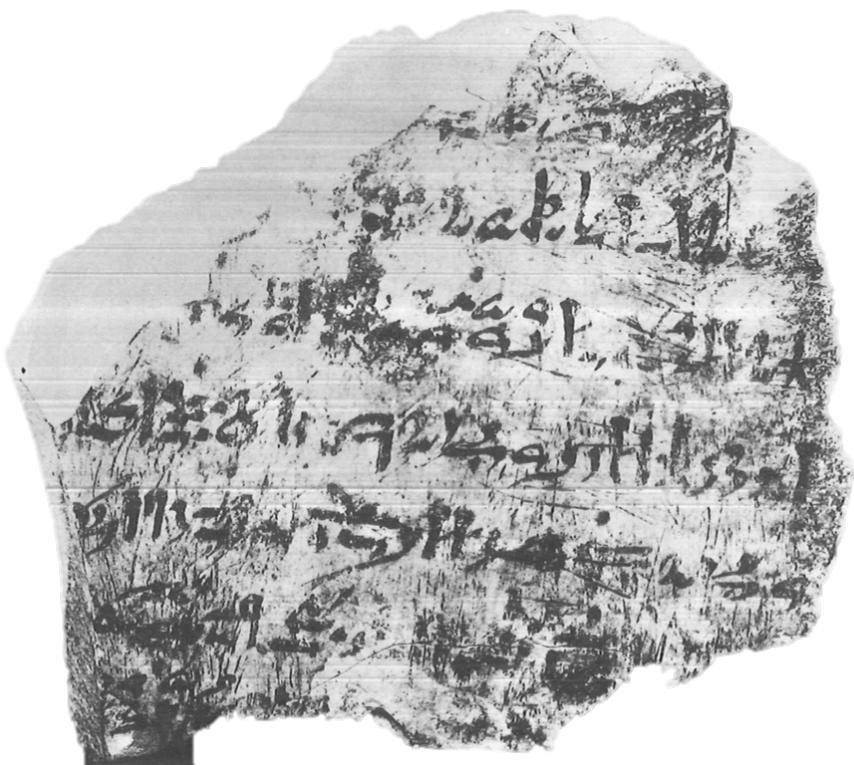




Complex documents

- *Per se*, e.g. the temple of Medinet Habu
- Because of their history

O. Turin 57436

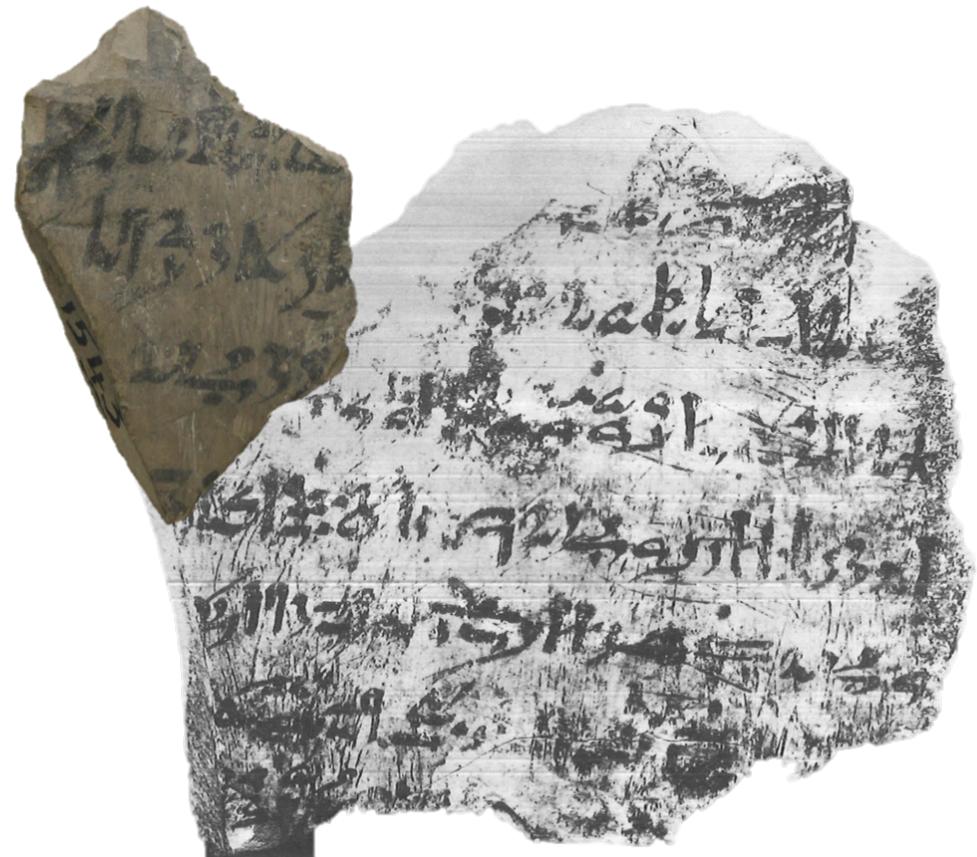




Complex documents

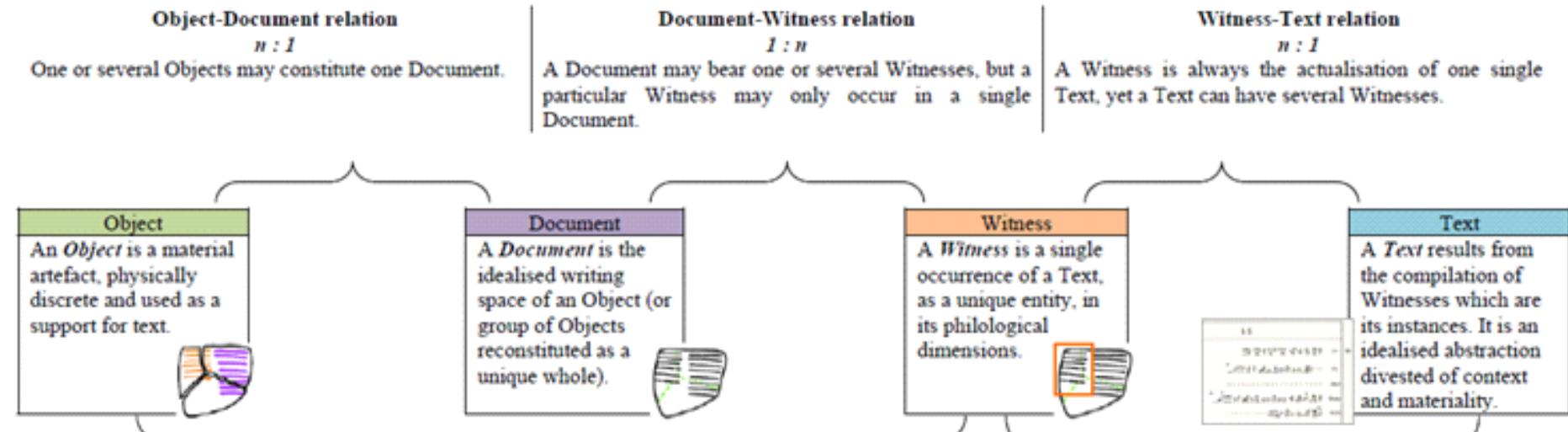
- *Per se*, e.g. the temple of Medinet Habu
- Because of their history

O. IFAO 1543





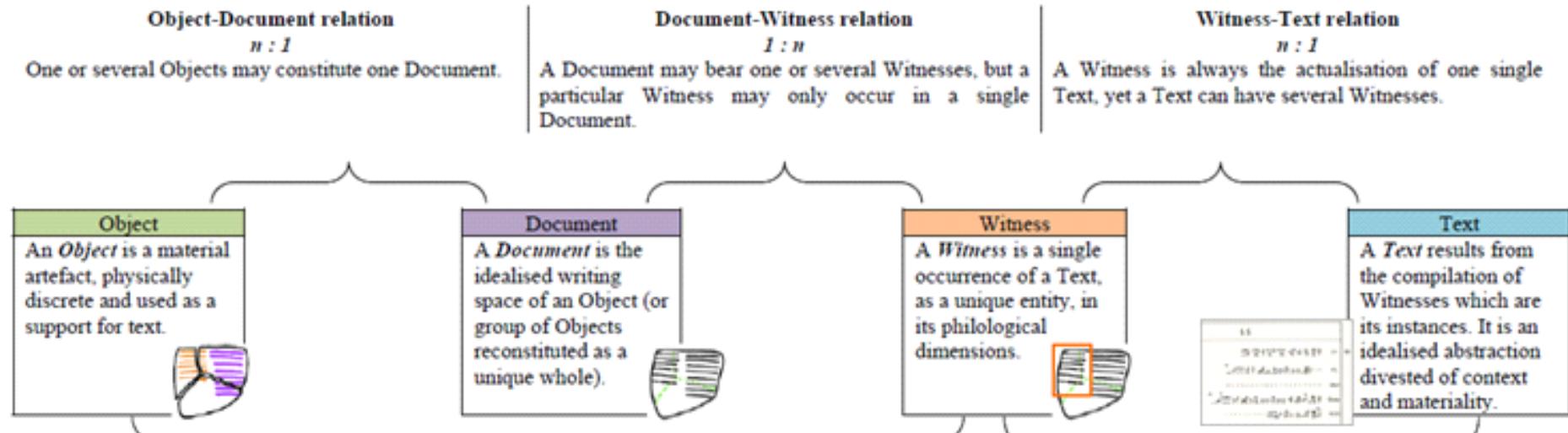
Model for the metadata



| | |
|----------------------|-------|
| § 5 | St 13 |
| ဗုဒ္ဓဘာသာ ရေးမြတ်စွာ | PL |
| ၁၃၁၂ | PA |
| ၁၃၁၃ | OHsm |
| ၁၃၁၄ | 1422 |



Model for the metadata



Dimensions
Provenance
Present location
Etc.

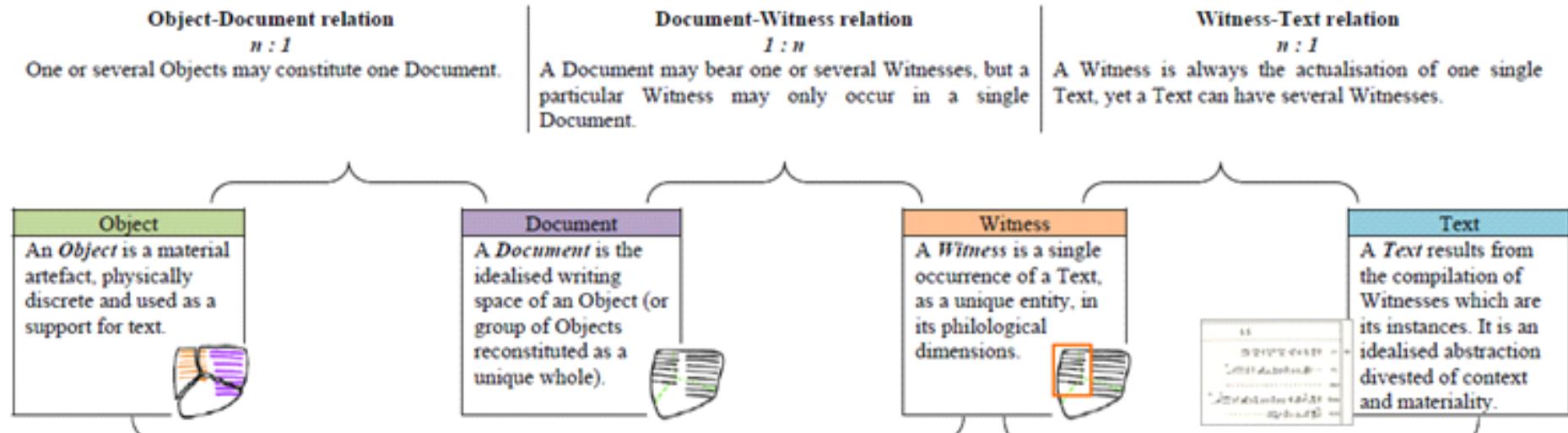
Object type
Date of fabrication
Material
Layout
Etc.

Language
Script
Inscription medium
Scriptor
Etc.

Genre
Date of composition
Author
Etc.



Model for the metadata



How do we share these metadata and texts using a common TEI interchange format?



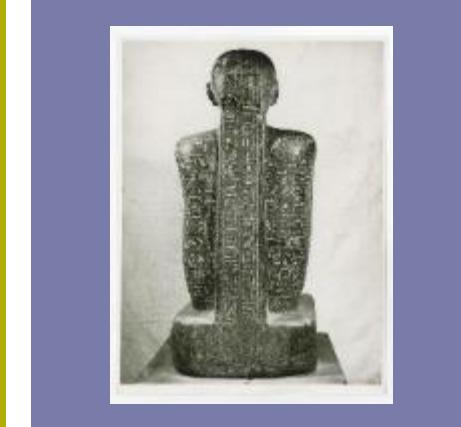
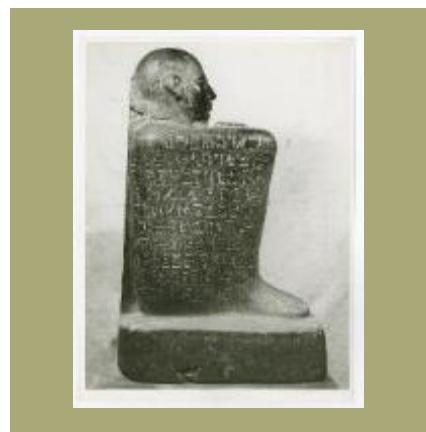
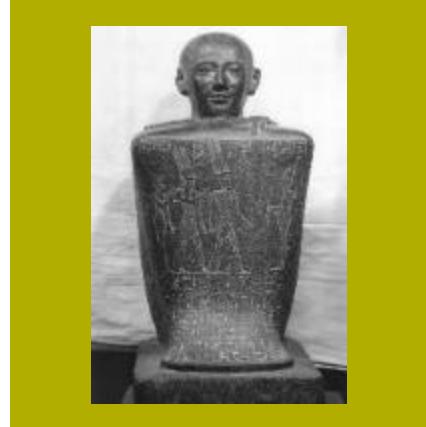
Towards a TEI interchange format

Methodology, proposal and problems



© CGC Legrain

- Each project made a XML/TEI compliant file
- Karnak Cachette Project specifically used the Epidoc template available on sourceforge
- Versions compared using a single table document
(with the same elements appearing in the same rows)



Case-study

Block statue of Hor (III), son of Neser-Imen.
Cairo CG 42230



Beginning of the files

| Cachette Karnak (Laurent Coulon, Emmanuelle Morlock) + Ramses | TLA (Simon Schweitzer) | Senereko | Rubensohn (Daniel Werning) |
|---|---|--|--|
| <?xml version="1.0" encoding="UTF-8"?> | <?xml version="1.0" encoding="UTF-8"?> | <?xml version="1.0" encoding="UTF-8"?> | <?xml version="1.0" encoding="UTF-8"?> |
| <!DOCTYPE TEI SYSTEM "http://www.tei-c.org/Vault/P5/2.0/xml/tei/custom/schema/dtd/tei_all.dtd"> | | | |
| <?xml-model href="http://www.stoa.org/epidoc/schema/latest/tei-epidoc.rng" type="application/xml" schematypens="http://relaxng.org/ns/structure/1.0"?> <?xml-model href="http://www.stoa.org/epidoc/schema/latest/tei-epidoc.rng" type="application/xml" schematypens="http://purl.oclc.org/dsdl/schematron"?> | | | |
| <TEI xmlns="http://www.tei-c.org/ns/1.0" xml:id="CK68" n="cachetteKarnak"> | <TEI xmlns="http://www.tei-c.org/ns/1.0" xml:id="3YHXZFJXYZCYNKKDH76Q55N254"> | <TEI xmlns="http://www.tei-c.org/ns/1.0"> | <TEI xmlns="http://www.tei-c.org/ns/1.0" xmlns:n0="http://www.tei-c.org/ns/Examples" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xml:id="db_307163"> |
| <teiHeader> | <teiHeader> | <teiHeader> | <teiHeader resp="#d_a_werning"> |
| <fileDesc> | <fileDesc> | <fileDesc> | <fileDesc> |
| <titleStmt> | <titleStmt> | <titleStmt> | <titleStmt> |
| <title>Inscription de la statue de Hr fils de Nsr-Jmn - Caire CG 42230</title> | <title><Text></title> | <title>STATUE CAIRE CG 42230</title> | <title>Hockerstatue des Hor (III), Sohn des Neseramun (Kairo CG 42230)</title> |
| </titleStmt> | <author>Karl Jansen-Winkel (Übersetzung); Joanna Hypszer (Hieroglyphen); Simon Schweitzer (Transkription; Lemmatisierung; Flexioncodes)</author> | </titleStmt> | <editor>N.N.</editor> |
| <editionStmt> | <edition>Première édition électronique, <date>2015</date>, réalisée dans le cadre du projet d'édition électronique des textes du projet <ref target="http://www.ifao.egnet.net/bases/cachette">Cachette de Karnak</ref> | <respStmt xml:lang="fr"><resp>Concepteur de l'interface auteur</resp><persName ref="#EM">Emmanuelle Morlock</persName><respStmt><resp>Editeur scientifique</resp><persName ref="#FJ">France Jamen</persName><persName>Laurent Coulon</persName></respStmt></editionStmt> | <respStmt xml:lang="fr_jamen"><resp>Text transliteration and translation:</resp><persName>Fr. Jamen</persName></respStmt><respStmt><resp>TEI encoding:</resp><persName>Daniel A. Werning</persName></respStmt></titleStmt> |
| <publicationStmt> | <authority>UMR 5189 HISoMA</authority> | <publicationStmt> | <publicationStmt> |
| <idno> | <idno> | <!-- Amend and restructure --> | <publisher>Daniel A. Werning</publisher> |
| type="URI">http://www.ifao.egnet.net/bases/cachette/?id=166</idno> | <p>SeNeReKo project</p> | <availability> | <pubPlace>Berlin</pubPlace> |
| <!--<idno> | </publicationStmt> | <availability> | <availability> |
| type="URI">http://www.trismegistos.org/text</idno> --> | | <!-- Choisir une licence CC ? cf. https://creativecommons.org/licenses/ --><licence> | <licence target="http://creativecommons.org/licenses/by-sa/3.0/">Licence for this TEI document: Creative Commons, Attribution-ShareAlike 3.0 Unported (CC BY-SA 3.0)</licence> |
| <availability> | | </availability> | <availability> |
| <licence><!-- Choisir une licence CC ? cf. https://creativecommons.org/licenses/ --></licence> | | <date when="2015-09-28"/> | </availability> |
| </publicationStmt> | | | </publicationStmt> |



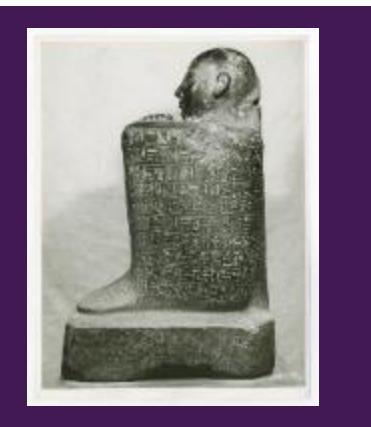
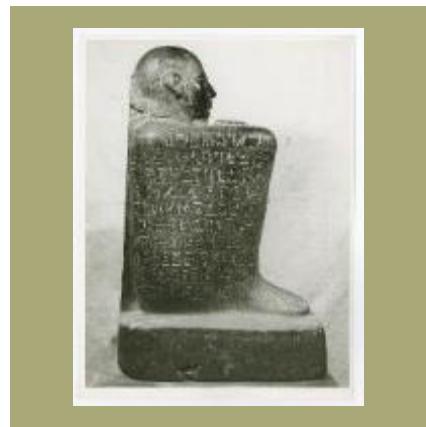
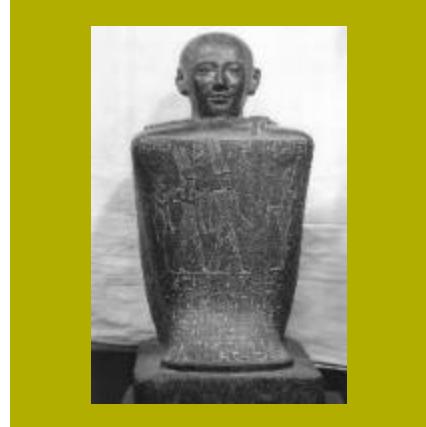
Beginning of TEI/text/body

| Cachette Karnak (Laurent Coulon, Emmanuelle Morlock) + Ramses | TLA (Simon Schweitzer) | Senereko |
|--|--|--|
| <!-- --> | | |
| </teiHeader> | </teiHeader> | |
| <!-- facsimile --> | <text> | |
| <text> | | |
| | <group xml:id="g0"> | |
| | <group xml:id="g1" type="shoulder"> | |
| | <head>Face avant, sur les épaules, à droite (rechts auf den Schultern)</head> | |
| | <text type="text"> | |
| <body> | <body> | |
| <div type="edition"> | | |
| <div type="textpart" xml:id="CK68-text1" subtype="top" n="shoulders"> | | |
| < milestone unit="textpart" xml:id="CK68-text1.1" n="shoulders" subtype="top" decls="right"/> | | |
| <ab> | <ab> | <ab> |
| | <s xml:id="idIBUBaFLhhw1AbU1WlQPhNIRAN4c"> | <s xml:id="s0"> |
| <cb n="1" rend="right-to-left"/> | <lb n="rechts 1"/> | <lb n="1"/> |
| <rs type="formuleDeRecompense"> | | |
| d<supplied reason="subaudible">y</supplied> | <w xml:id="idIBUBaHWSu0sLokBQv7a1y14ksbQ" lemmaRef="tla:177820"><fs feats="m:commonNoun m:masc singular m:mainVerb m:passiveVoice"/>d<supplied reason="defective">.y</supplied> | <w xml:id="w0" lemmaRef="tla:96700"><fs feats="m:masc singular m:mainVerb m:passiveVoice"/>d<reg type="idealized">.y</reg></w> |
| m hsw.t n.t hr nswt | <w> <w xml:id="idIBUBaCqNqSGdpkbjqv8y2EcWvm8" lemmaRef="tla:64350"><fs feats="m:unknown"/>m</w> <w xml:id="idIBUBaDaONQ4z4UO1mljVGa5EMzs" lemmaRef="tla:109800"><fs feats="m:commonNoun m:feminine"/>hzw,t</w> <w xml:id="idIBUBaP4kQcWYvU1XnxMSyTQOt0I" lemmaRef="tla:850787"><fs feats="m:preposition"/>n,<supplied reason="defective">j</supplied>,t</w> <w xml:id="idIBUBaF8EiK6f0kl6hyn3uQBM2T4" lemmaRef="tla:400036"><fs feats="m:preposition"/>hr</w> <addName type="epithet" subtype="deity"><w xml:id="idIBUBaCsjEWx7FEsajgccfpbzYTI" lemmaRef="tla:851639"><fs | <w xml:id="w1" lemmaRef="tla:500292"><fs feats="m:preposition"/>m</w> <w xml:id="w2" lemmaRef="tla:109800"><fs feats="m:feminine singular m:commonNoun"/>hsw.t</w> <w xml:id="w3" lemmaRef="tla:79800"><fs feats="m:feminine singular m:adjective"/>n.t</w> <w xml:id="w4" lemmaRef="tla:80011"><fs feats="m:preposition"/>hr</w> <w xml:id="w5" lemmaRef="tla:88040"><fs feats="m:masculine singular m:commonNoun"/>nswt</w> |



© CGC Legrain

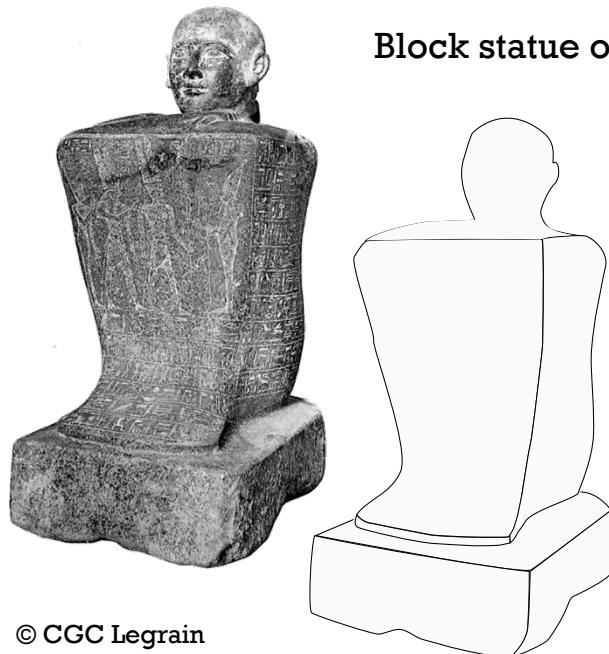
- Defining the 'right' <element> or @attribute for most of the (meta)data was not so difficult
- One of the key issues was to adequately reflect the relationship between object & texts



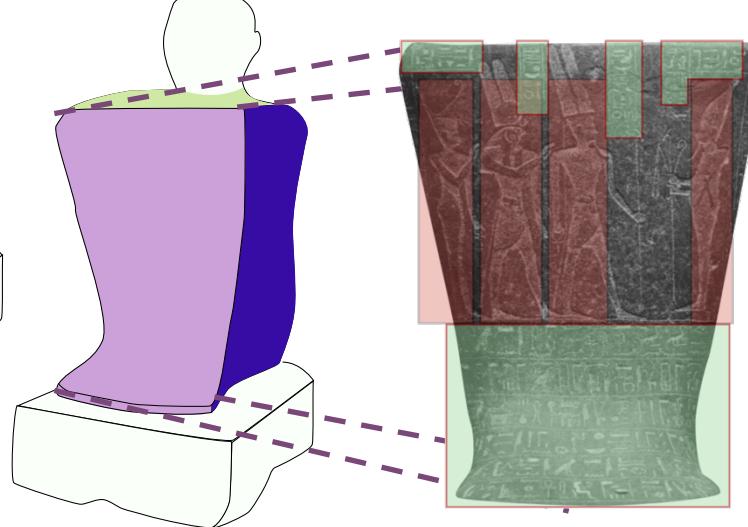
Block statue of Hor (III), son of Neser-Imen. Cairo CG 42230



Block statue of Hr (III), son of Nsr-Jmn. Cairo CG 42230



© CGC Legrain



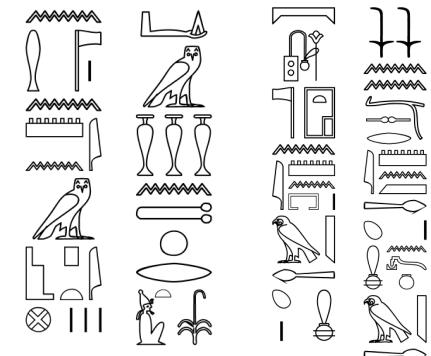
'Ideal' document
`/TEI/teiHeader/fileDesc/
sourceDesc/
msDesc/msIdentifier/
msName`

'artefactual' object
`/TEI/teiHeader/fileDesc/
sourceDesc/msDesc/
msPart`
 or msFrag?
`x 1 as 1 single object`

Writing supports
`/TEI/sourceDoc`
**x 5 surfaces for front,
rear, upper, left & right
sides**

Text layouts
`/TEI/teiHeader/fileDesc/
sourceDesc/msDesc/
physDesc/objectDesc/
layoutDesc`

Figures
`/TEI/teiHeader/fileDesc/
sourceDesc/msDesc/
physDesc/decoDesc`



*dy m hsw.t n.t hr nswt n
hm-ntr n lmn m lp.t-sw.t
hry ss̄w hw.t-ntr n pr lmn
Hr m3' hrw s3 m i nn Ny-
se-r-lmn m3' hrw s3 m i nw
Hr m3' hrw*

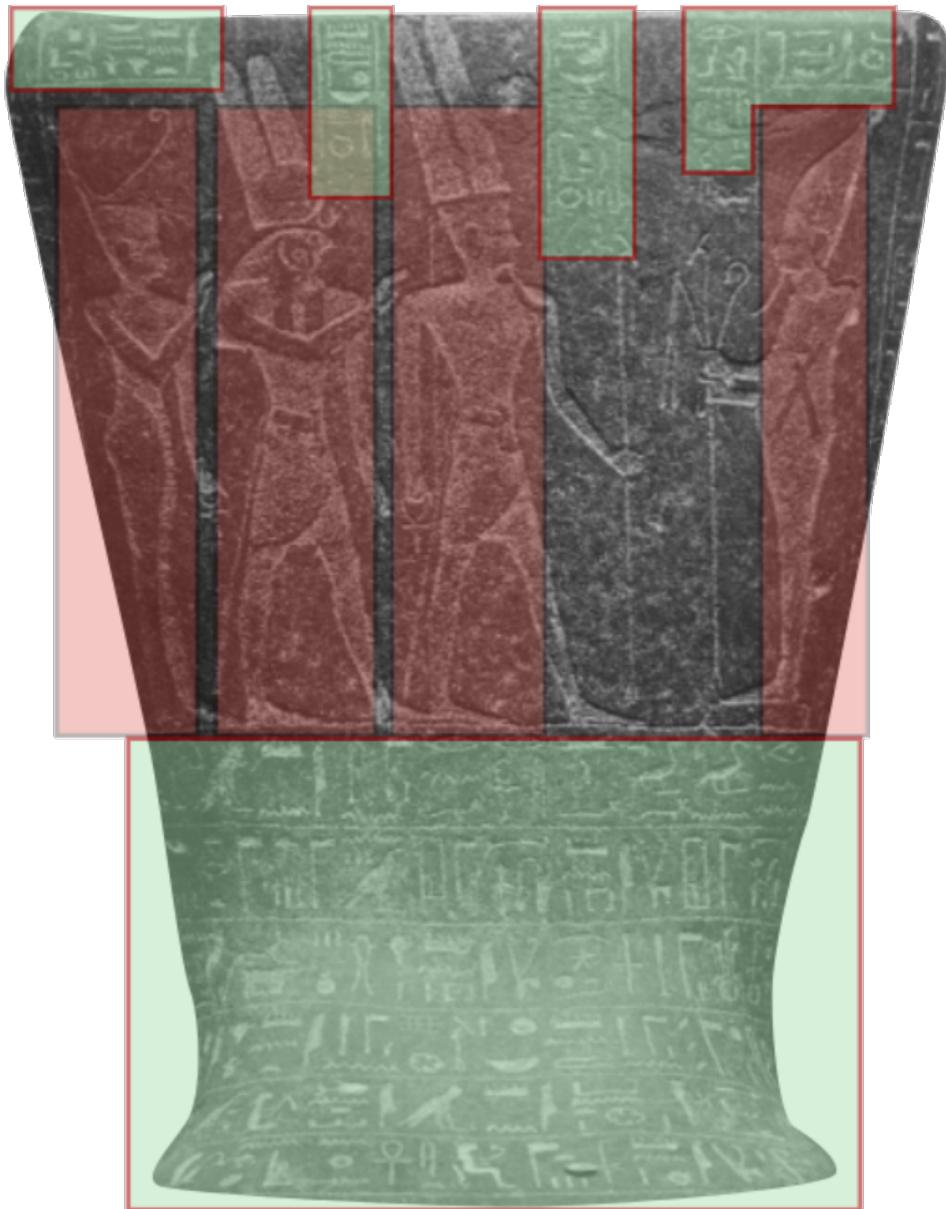
Granted by
royal favour to
the prophet of
Amun in
Karnak, Chief
of the
Scribes...

Abstract texts
`/TEI/teiHeader/fileDesc/
sourceDesc/msDesc/
msContents/msItem`

**x n for as many text
characterizations as
wishes**

Block statue of Hr (III), son of Nsr-Jmn. Cairo CG 42230

Front side – relationships between texts and figures



Front side

/TEI/sourceDoc

```
<surface xml:id="ck68-frontSide" ana="front-side">Face avant de la statue</surface>
```

Text layouts

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/physDesc/objectDesc/layoutDesc

```
<layout xml:id="ck68-txt-osiris" columns="1" writtenLines="1" corresp="#ck68-frontSide #ck68-fig-osiris"><desc>1 colonne et 1 ligne de texte</desc></layout>
<layout xml:id="ck68-txt-amun" columns="1" corresp="#ck68-frontSide #ck68-fig-amun">
<desc>1 colonne de texte</desc></layout>
...
<layout xml:id="ck68-textBelowScene" writtenLines="6" corresp="#ck68-frontSide"><desc>Texte de six lignes sous la scène</desc></layout>
```

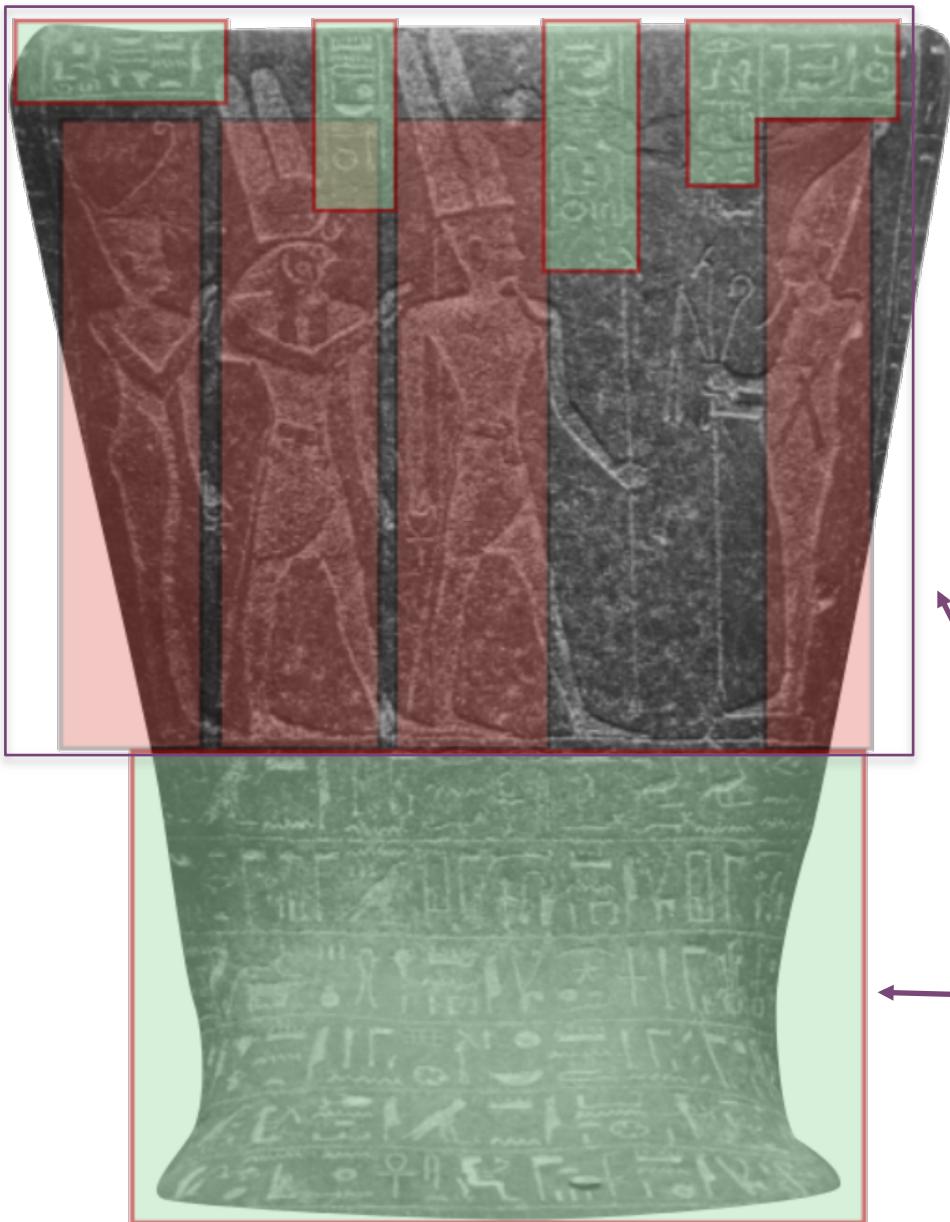
Figures

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/physDesc/decoDesc

```
<decoNote xml:id="ck68-fig-osiris" corresp="ck68-frontSide"><desc>Figure d'Osiris</desc></decoNote>
<decoNote xml:id="ck68-fig-amun" corresp="ck68-frontSide"><desc>Figure d'Amon</desc></decoNote>
<decoNote xml:id="ck68-fig-montu" corresp="ck68-frontSide"><desc>Figure de Montou-Rê</desc></decoNote>
<decoNote xml:id="ck68-fig-amunet" corresp="ck68-frontSide"><desc>Figure d'Amonet</desc></decoNote>
```

Block statue of Hr (III), son of Nsr-Jmn. Cairo CG 42230

Front side – ‘physical’ and ‘abstract’ texts



Front side

/TEI/sourceDoc

```
<surface xml:id="ck68-frontSide" ana="front-side">Face avant  
de la statue</surface>
```

Text layouts

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/
physDesc/objectDesc/layoutDesc

```
<layout xml:id="ck68-txt-osiris" columns="1" writtenLines="1"  
corresp="#ck68-frontSide #ck68-fig-osiris"><desc>1 colonne  
et 1 ligne de texte, orienté vers la gauche</desc></layout>  
<layout xml:id="ck-68-txt-amun" columns="1"  
corresp="#ck68-frontSide #ck68-fig-amun">  
<desc>1 colonne de texte</desc></layout>  
...  
<layout xml:id="ck68-textBelowScene" writtenLines="6"  
corresp="#ck68-frontSide"><desc>Texte de six lignes sous la  
scène</desc></layout>
```

Abstract texts

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msContents

```
<msItem xml:id="ck68-text1" ana="meta-egypt-ths:ritual-scene-  
deities">  
  <title type="modern">Scène représentant Amon-Rê, Montou-  
Rê et Amonet faisant face à Osiris</title>  
  <textLang mainLang="egy-x-egt"/>  
</msItem>  
<msItem xml:id="ck68-text2" ana="meta-egypt-ths:dedication-  
bySon-formula">  
  <title type="modern">Formule de dédicace par le fils</title>  
  <textLang mainLang="egy-x-egt"/>  
</msItem>
```

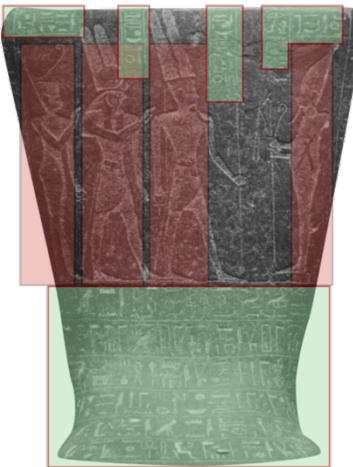
Block statue of Hr (III), son of Nsr-Jmn. Cairo CG 42230

Front side

Text edition

Text edition

```
/TEI/text/body/div[@type="edition"]  
  <div xml:id="ck68-sceneTranslit" type="textpart"  
       corresp="#ck68-txt-osiris #ck68-txt-amun #ck68-txt-montu #ck68-txt-amunet">  
    <ab corresp="#ck68-text1"> ←  
      < milestone unit="layout" corresp="#ck68-txt-osiris"/>  
        <lb n="1" rend="verti-left-to-right"/>{Column 1 of text related to Osiris}  
        <lb n="2" rend="horiz-left-to-right"/>{line 2 of text related to Osiris}  
      < milestone unit="layout" corresp="#ck68-txt-amun"/>  
        <lb n="1" rend="verti-right-to-left"/>{Column 1 of text related to Amun}  
      < milestone unit="layout" corresp="#ck68-txt-montu"/>  
        <lb n="1" rend="verti-right-to-left"/>{Column 1 of text related to Montu-Re}  
      < milestone unit="layout" corresp="#ck68-txt-amunet"/>  
        <lb n="1" rend="verti-right-to-left"/>{Line 1 of text related to Amunet}  
    </ab>  
  </div>  
  <div xml:id="ck68-textBelowScene-osirisTranslit" type="textpart"  
       corresp="#ck68-textBelowScene">  
    <ab corresp="#ck68-text2"> ←  
      <lb n="1" rend="horiz-right-to-left"/>{text}  
      <lb n="2" rend="horiz-right-to-left"/>{text}  
      <lb n="3" rend="horiz-right-to-left"/>{text}  
      <lb n="4" rend="horiz-right-to-left"/>{text}  
      <lb n="5" rend="horiz-right-to-left"/>{text}  
      <lb n="6" rend="horiz-right-to-left"/>{text}  
    </ab>  
  </div>
```



Front side

/TEI/sourceDoc

```
<surface xml:id="ck68-frontSide" ana="front-side">Face avant  
de la statue</surface>
```

Text layouts

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/
physDesc/objectDesc/layoutDesc

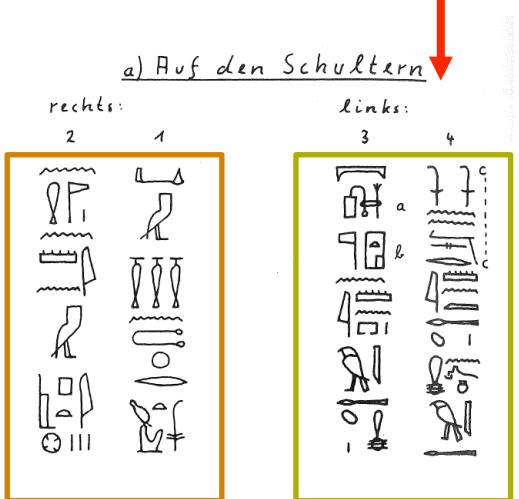
```
<layout xml:id="ck68-txt-osiris" columns="1" writtenLines="1"  
corresp="#ck68-frontSide #ck68-fig-osiris"><desc>1 colonne  
et 1 ligne de texte, orienté vers la gauche</desc></layout>  
<layout xml:id="ck68-txt-amun" columns="1"  
corresp="#ck68-frontSide #ck68-fig-amun">  
<desc>1 colonne de texte</desc></layout>  
...  
<layout xml:id="ck68-textBelowScene" writtenLines="6"  
corresp="#ck68-frontSide"><desc>Texte de six lignes sous la  
scène</desc></layout>
```

Abstract texts

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msContents

```
● <msItem xml:id="ck68-text1" ana="meta-egypt-ths:cultural-  
scene-deities"><title type="modern">Textes de la scène  
figurant Osiris  
face à Amon, Montou-Rê et Amonet</title>  
<textLang mainLang="egy-x-egt"/></msItem>  
<msItem xml:id="ck68-text2" ana="meta-egypt-ths:dedication-  
bySon-formula"><title type="modern">Formule de dédicace  
par  
le fils</title><textLang mainLang="egy-x-egt"/></msItem>
```

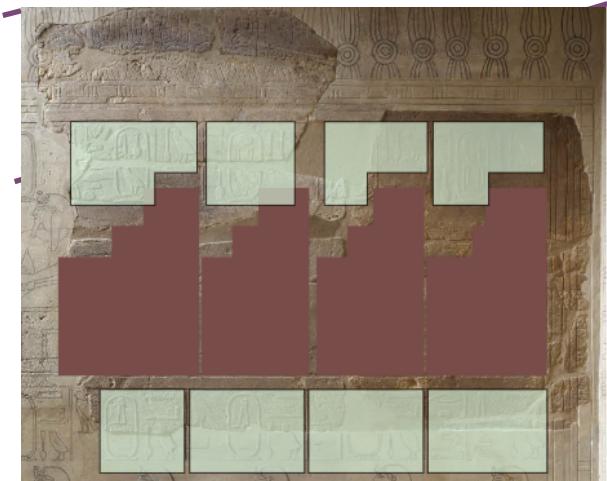
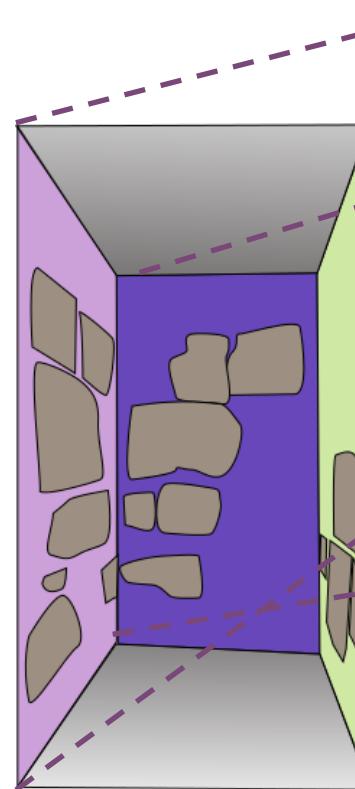
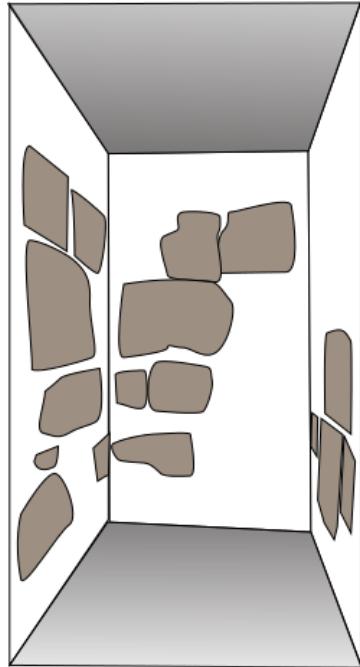
Block statue of Hr (III), son of Nsr-Jmn. Cairo CG 42230
 Upper side – texts on right and left shoulders



"Chamber of kings", Karnak temple, now in Louvre E 13481bis



© 2010 Musée du Louvre
Chr. Décamps



'Ideal' document
`/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msIdentifier/msName`

Blocks from the chapel
`/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msPart`

or msFrag?

x n, as several blocks

Writing supports
`/TEI/sourceDoc`

x 3 surface, for east, south & west walls

Text layouts
`/TEI/teiHeader/fileDesc/sourceDesc/msDesc/physDesc/objectDesc/layoutDesc`

Figures
`/TEI/teiHeader/fileDesc/sourceDesc/msDesc/physDesc/decoDesc`

Abstract text
`/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msContents`

`<msItem xml:id="xxx-yyyy" ana="meta-egypt-ths:royal-annals">`

`<title type="modern">Kings' list from the Chamber of Kings, Karnak</title>`

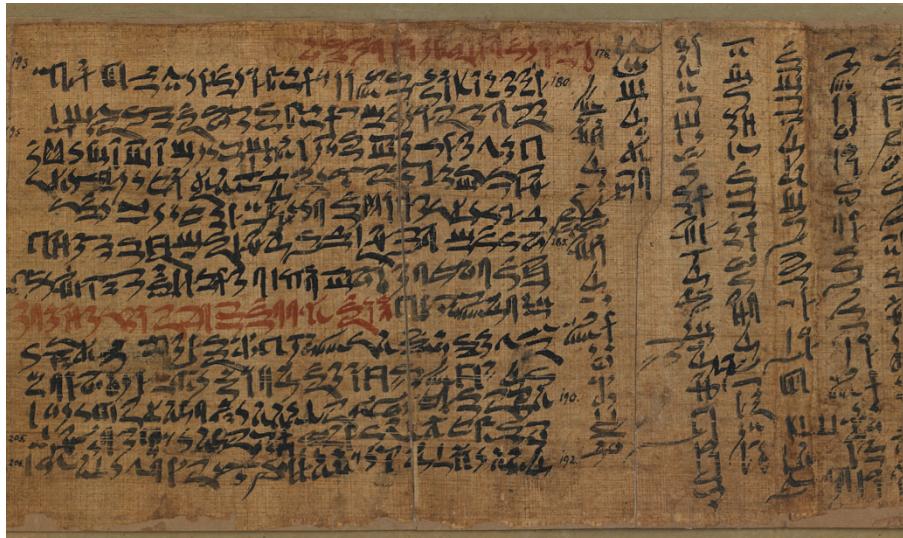
`<textLang mainLang="egy-x-egt"/>`

`</msItem>`



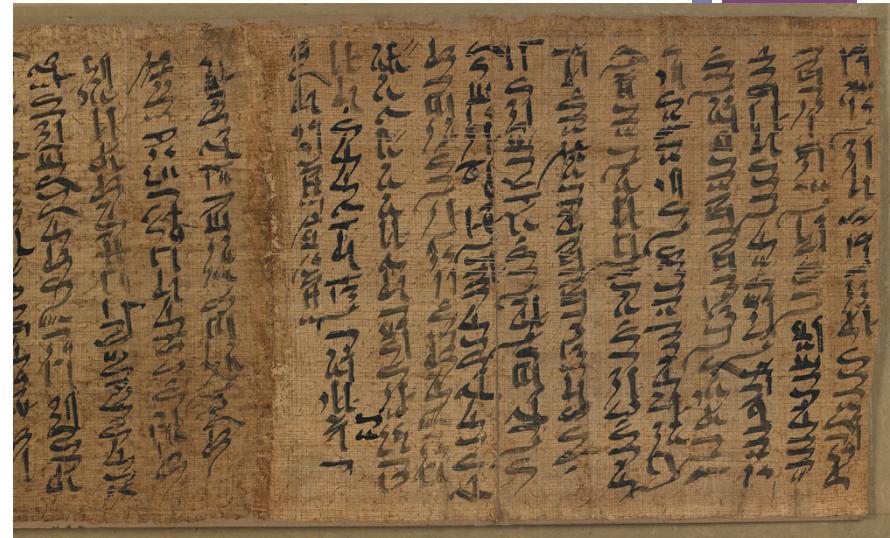
P. Berlin P. 3022 = *Sinuhe*

(Parkinson & Baylis 2012)



Sinuhe B 173-192

(...)



Sinuhe B 141-157

'Ideal' document = P. Berlin P. 3022

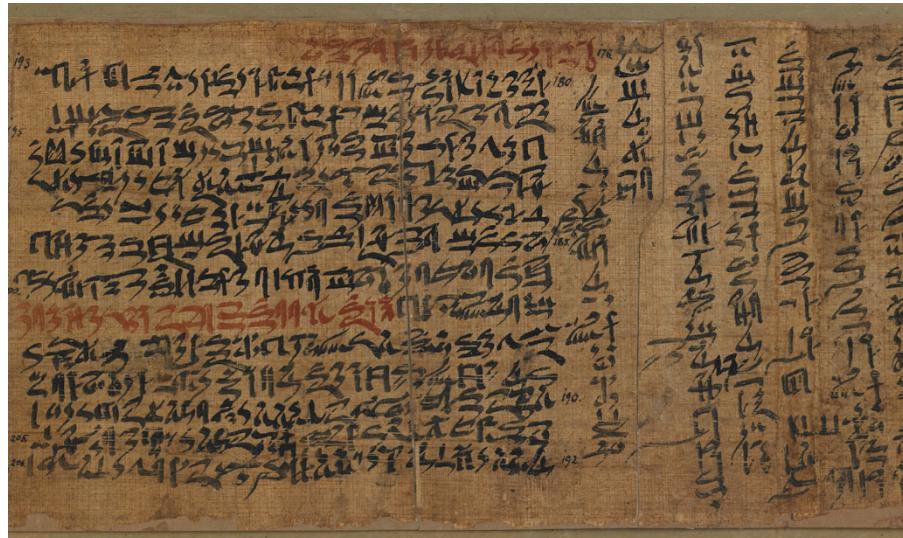
/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msIdentifier/msName





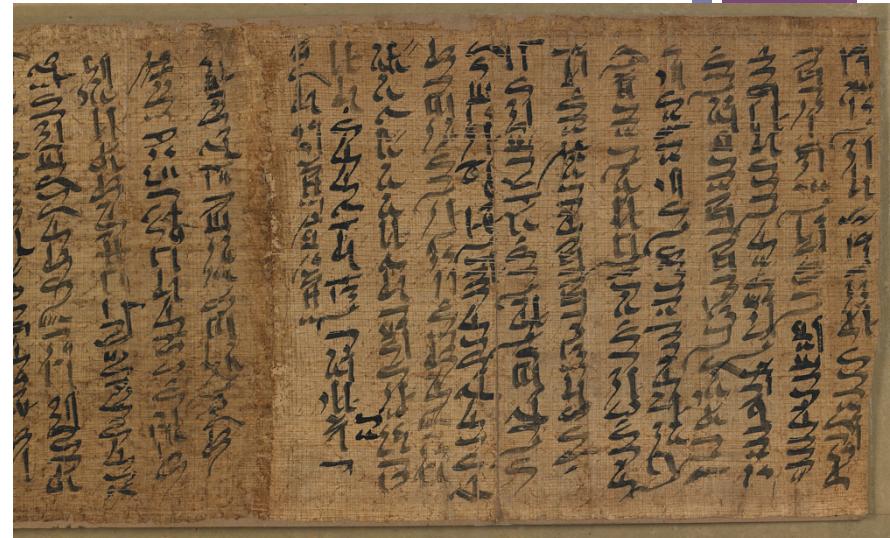
P. Berlin P. 3022 = *Sinuhe*

(Parkinson & Baylis 2012)



Sinuhe B 173-192

(...)



Sinuhe B 141-157

'Ideal' document = P. Berlin P. 3022

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msIdentifier/msName



Physical zones = Papyrus recto

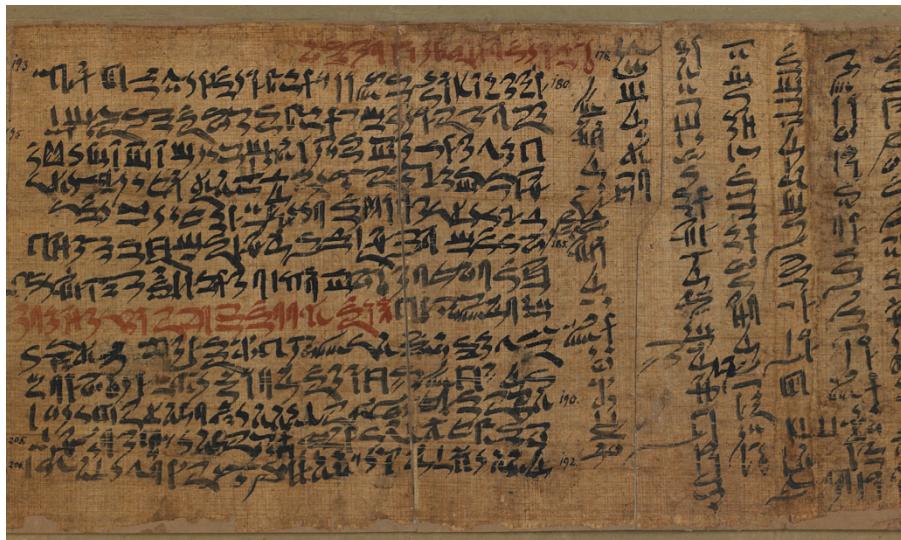
/TEI/sourceDoc/surface + zone

Recto



P. Berlin P. 3022 = *Sinuhe*

(Parkinson & Baylis 2012)

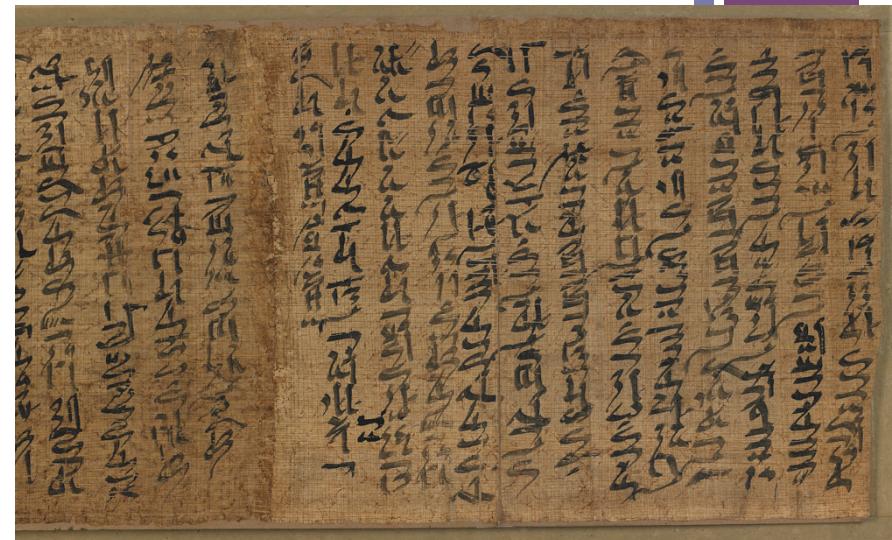


Sinuhe B 173-192

'Ideal' document = P. Berlin P. 3022
/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msIdentifier/msName



(Abstract) text = Sinuhe
/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msContents
<msItem xml:id="TaleSinuhe" ana="meta-egypt-ths:tale">
 <title type="modern">Sinuhe</title>
 <textLang mainLang="egy-x-egt"/>
 ...
</msItem>



Sinuhe B 141-157

Physical zones = Papyrus recto
/TEI/sourceDoc/surface + zone

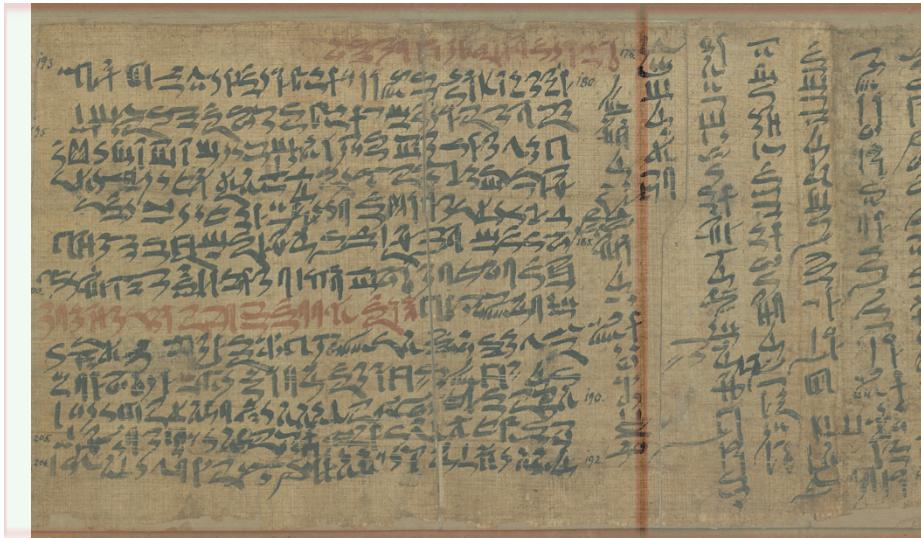


Recto



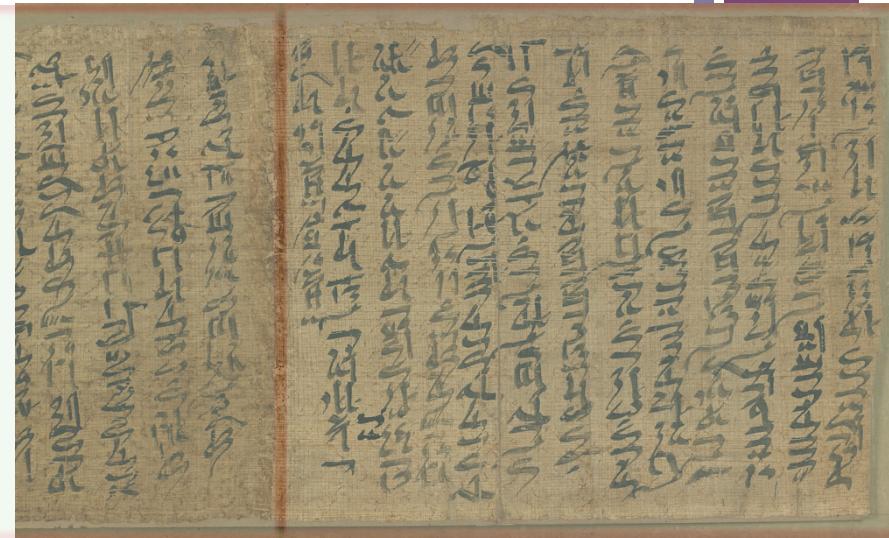
P. Berlin P. 3022 = *Sinuhe*

(Parkinson & Baylis 2012)



Sinuhe B 173-192

(...)



Sinuhe B 141-157

'Ideal' document = P. Berlin P. 3022

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msIdentifier/msName



(Abstract) text = *Sinuhe*

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msContents

<msItem xml:id="TaleSinuhe" ana="meta-egypt-ths:tale">

<title type="modern">*Sinuhe*</title>

<textLang mainLang="egy-x-egt"/>

...

</msItem>

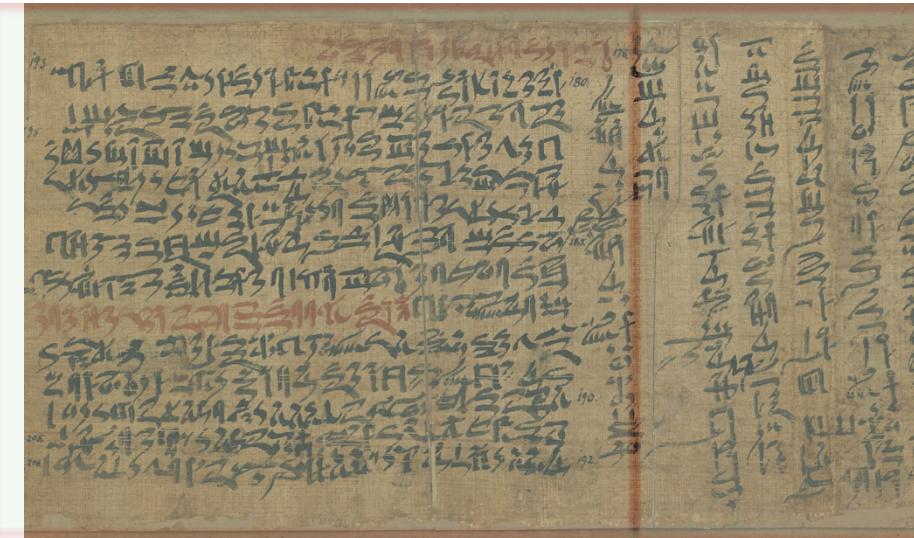
Text layouts

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/
physDesc/objectDesc/layoutDesc



P. Berlin P. 3022 = *Sinuhe*

(Parkinson & Baylis 2012)



Sinuhe B 173-192

'Ideal' document = P. Berlin P. 3022

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msIdentifier/msName



(Abstract) text = *Sinuhe*

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msContents

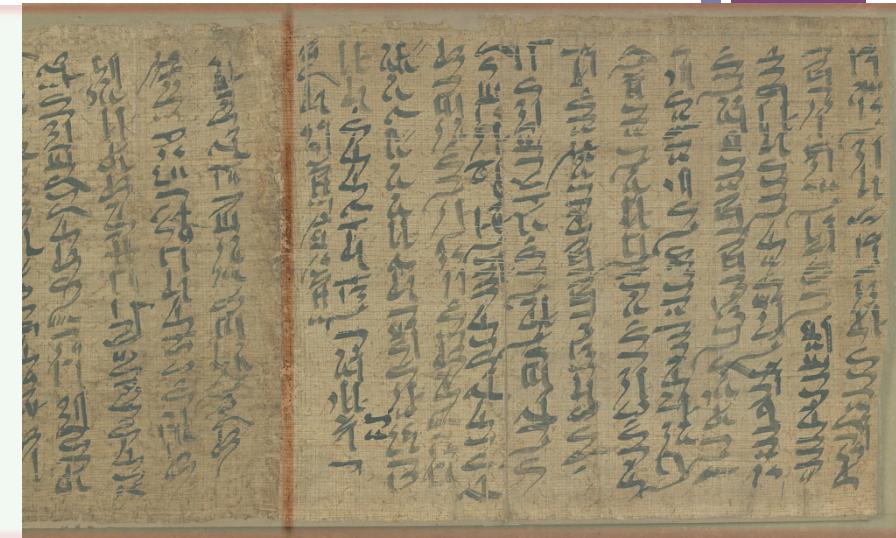
<msItem xml:id="TaleSinuhe" ana="meta-egypt-ths:tale">

<title type="modern">*Sinuhe*</title>

<textLang mainLang="egy-x-egt"/>

...

</msItem>



Sinuhe B 141-157

Text layouts

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/physDesc/objectDesc/layoutDesc

Text edition

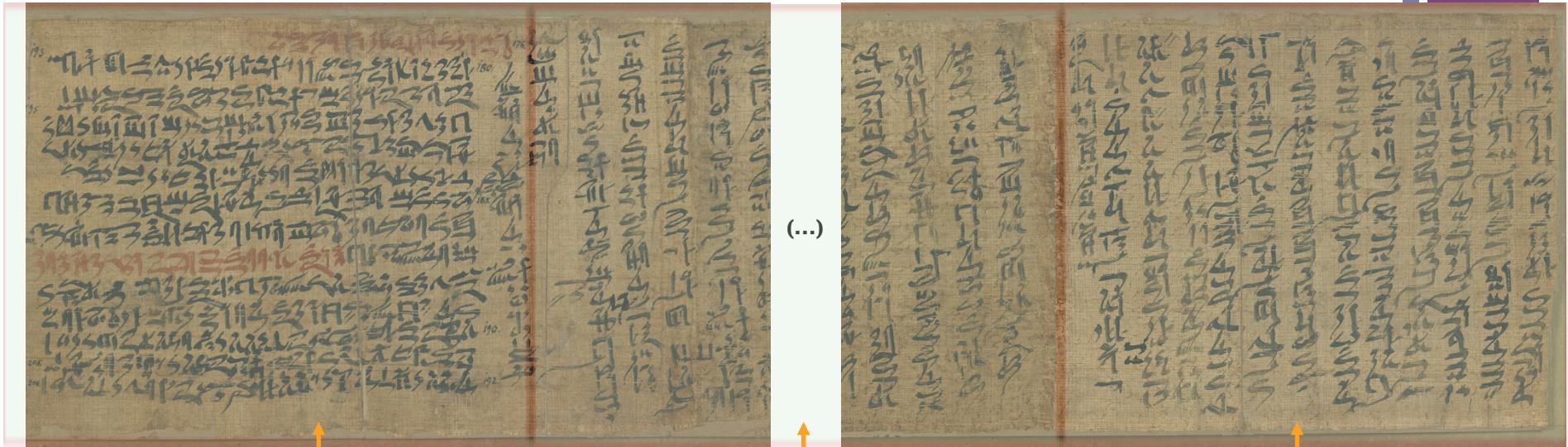
/TEI/text/body/div[@type="edition"]

```
<div xml:id="P3022Translit" type="textpart" corresp="#c1 #c2 #etc.">
  <ab corresp="#TaleSinuhe">(...)
    <milestone unit="layout" corresp="#c2"/>
      <lb n="w" style="writing-mode: vertical-rl; direction: rtl"/>sdm=j ...
    <milestone unit="layout" corresp="#c3"/>
      <lb n="x" style="writing-mode: horizontal-tb; direction: rtl"/>mj.t(j) n wdw ...
      <lb n="y" style="writing-mode: vertical-rl; direction: rtl"/>hr 'nx-ms.wt ...
      <lb n="z" style="writing-mode: vertical-rl; direction: rtl"/>jmn-m-h3.t ...
  </ab>
</div>
```



P. Berlin P. 3022 = *Sinuhe*

(Parkinson & Baylis 2012)



Sinuhe B 173-192

Sinuhe B 141-157

'Ideal' document = P. Berlin P. 3022

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msIdentifier/msName



(Abstract) text = Sinuhe

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msContents

<msItem xml:id="TaleSinuhe" ana="meta-egypt-ths:tale">

<title type="modern">Sinuhe</title>

<textLang mainLang="egy-x-egt"/>

...

</msItem>

Text layouts

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/physDesc/objectDesc/layoutDesc

Text edition

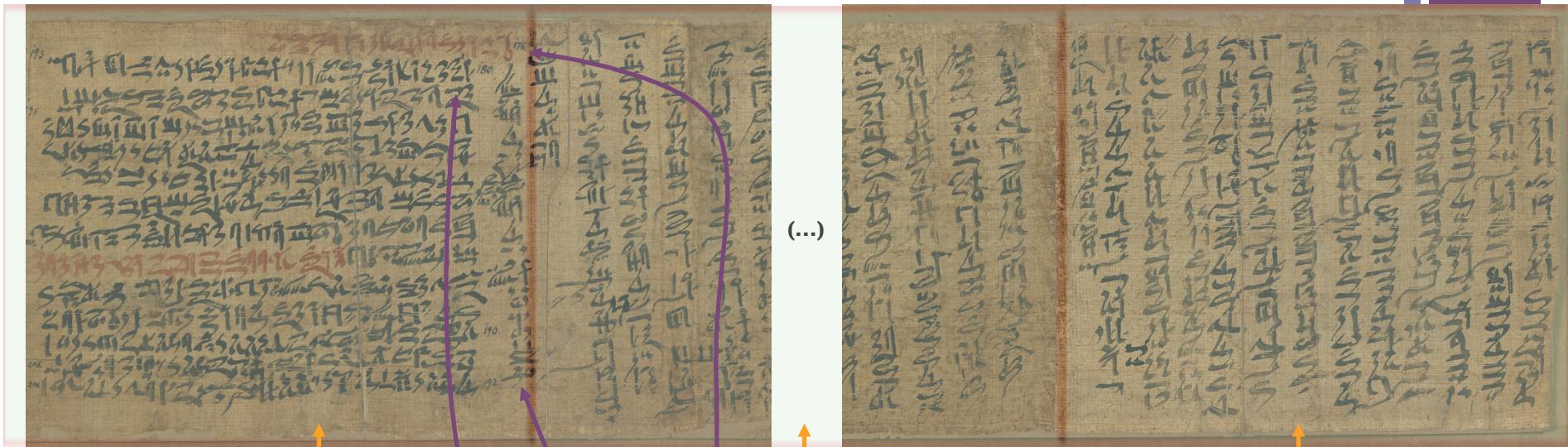
/TEI/text/body/div[@type="edition"]

```
<div xml:id="P3022Translit" type="textpart" corresp="#c1 #c2 #etc.">
  <ab corresp="#TaleSinuhe" corresp="#c1"> (...)</ab>
  <milestone unit="layout" corresp="#c2"/>
    <lb n="w" style="writing-mode: vertical-rl; direction: rtl"/>sdm=j ...
  <milestone unit="layout" corresp="#c3"/>
    <lb n="x" style="writing-mode: horizontal-tb; direction: rtl"/>mj.t(j) n wdw ...
    <lb n="y" style="writing-mode: vertical-rl; direction: rtl"/>hr 'nx-ms.wt ...
    <lb n="z" style="writing-mode: vertical-rl; direction: rtl"/>jmn-m-h3.t ...
  </ab>
</div>
```



P. Berlin P. 3022 = *Sinuhe*

(Parkinson & Baylis 2012)



Sinuhe B 173-192

'Ideal' document = P. Berlin P. 3022

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msIdentifier/msName



(Abstract) text = Sinuhe

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msContents

 <title type="modern">Sinuhe</title>
 <textLang mainLang="egy-x-egt"/>
 ...
</msItem>

(...)

Sinuhe B 141-157

Text layouts

/TEI/teiHeader/fileDesc/sourceDesc/msDesc/physDesc/objectDesc/layoutDesc

Text edition

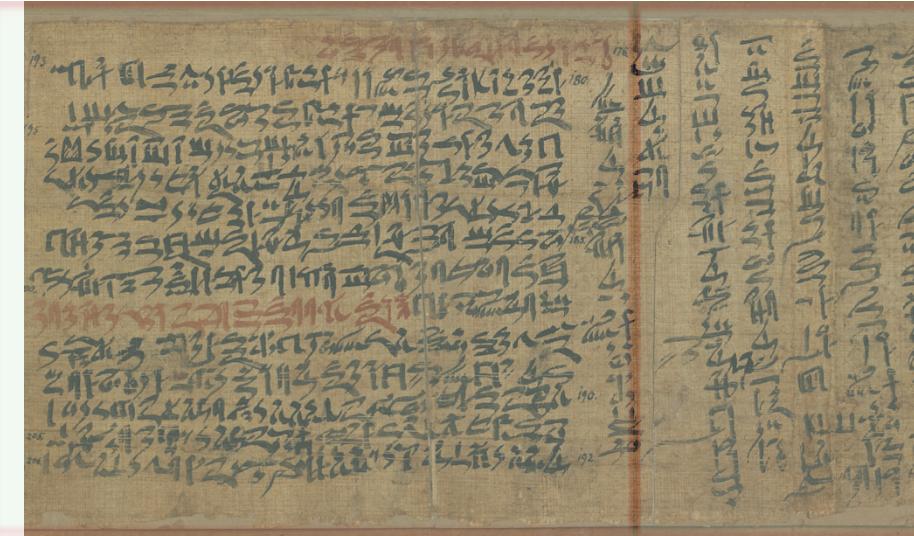
/TEI/text/body/div[@type="edition"]
<div xml:id="P3022Translit" type="textpart" corresp="#c1 #c2 #etc.">
 <ab corresp="#TaleSinuhe" corresp="#c1"> (...)

 <milestone unit="layout" corresp="#c2"/>
 <lb n="w" style="writing-mode: vertical-rl; direction: rtl"/>sdm=j ...
 <milestone unit="layout" corresp="#c3"/>
 <lb n="x" style="writing-mode: horizontal-tb; direction: rtl"/>mj.t(j) n wdw ...
 <lb n="y" style="writing-mode: vertical-rl; direction: rtl"/>hr 'nx-ms.wt ...
 <lb n="z" style="writing-mode: vertical-rl; direction: rtl"/>jmn-m-h3.t ...
 </ab>
</div>



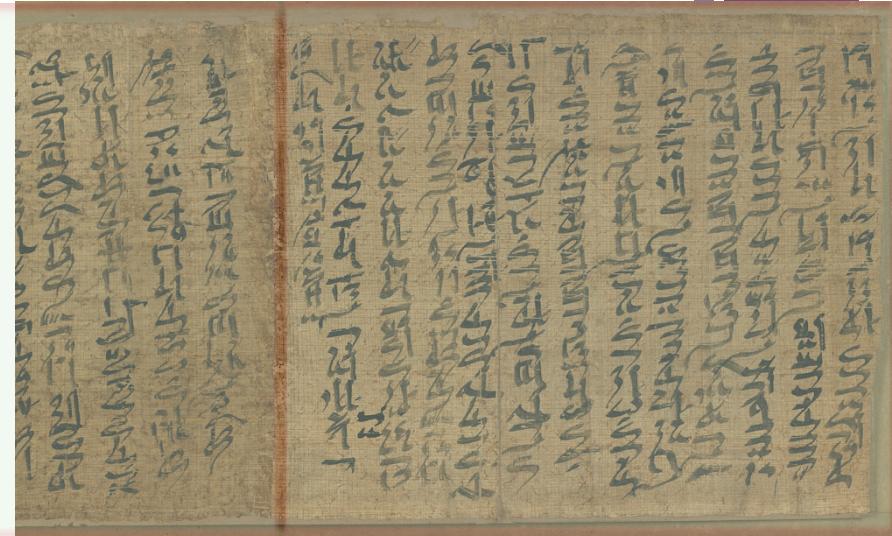
P. Berlin P. 3022 = *Sinuhe*

(Parkinson & Baylis 2012)



Sinuhe B 173-192

(...)



Sinuhe B 141-157

(Abstract) text = *Sinuhe*

```
/TEI/teiHeader/fileDesc/sourceDesc/msDesc/msContents  
<msItem xml:id="TaleSinuhe" ana="meta-egypt-ths:tale">  
  <title type="modern">Sinuhe</title>  
  <textLang mainLang="egy-x-egt"/>  
  <msItem xml:id="SinuheDecree" ana="meta-egypt-ths:royalDecree">  
    [...]  
  </msItem>  
</msItem>
```

<http://www.stoa.org/epidoc/gl/latest/idx-keywords.html>

"There is no specific TEI tag for the category or type of text, so different projects have found different approaches to the encoding of this information." (<rs typ="textType">, <msContents>/<summary>, <textClass>/<keywords> [most TEI compliant, but least specific])



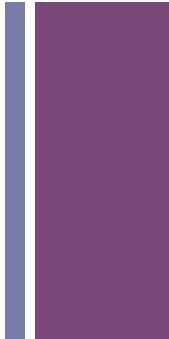
Many controlled vocabularies

- Either defined within the ODD (17⁺),
- or available Online and maintained in a non-TEI environment (12⁺)

| Name | Type | Data sample and/or source | Use |
|--------------------------|-----------|--|--|
| Title types | ODD | ancient, modern | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/msContents/msItem/title/@type |
| Bibliographical types | ODD | Monograph, Article | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/additional/listBibl/bibl/@type |
| Bibliographical subtypes | ODD | in a periodical, i a collected volume | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/additional/listBibl/bibl/@subtype |
| Reference types | ODD | oeb, Aigyptos | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/additional/listBibl/bibl/ref/@type |
| Title level types | ODD | TEI | /TEI/teiHeader[1]/fileDesc[1]/sourceDesc[1]/msDesc[1]/additional[1]/listBibl[1]/bibl[2]/title[1]/@level |
| biblScope types | ODD | Issue, page, col. | /TEI/teiHeader[1]/fileDesc[1]/sourceDesc[1]/msDesc[1]/additional[1]/listBibl[1]/bibl[3]/biblScope[1] |
| Bibliographical types | ODD | Monograph, Article | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/additional/listBibl/bibl/@type |
| Hand style types | ODD | Calligraphic cursive | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/physDesc/handDesc/handNote/@script |
| Role types | ODD | Finder, Buyer, Seller | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/msPart/history/provenance/persName/@role /TEI/teiHeader/fileDesc/sourceDesc/msDesc/msPart/history/acquisition/listPerson/person/persName/@role |
| Types of list of people | ODD | Editorial, peopleInDocument, deitiesInDocument | /TEI/teiHeader/profileDesc/particDesc/listPerson/@type |
| Revision status types | ODD | TEI | /TEI/teiHeader/revisionDesc |
| Text div types | ODD | edition, translation, apparatus, commentary | /TEI/text/body/div/@type |
| Text line orientations | ODD | verti-left-to-right, horiz-left-to-right, verti-right-to-left, horiz-right-to-left | |
| Supplied | ODD | Not in EpiDoc : Idealized, conjecture, haplography | /TEI/text/body/div/div/ab/s/w//supplied/@reason |
| rend for seq | ODD | Cartouche | /TEI/text/body/div/div/ab/s/seg/@rend |
| Type of seq | ODD | oval, serekh, hwt | /TEI/text/body/div/div/ab/s/seg/@type |
| Subtypes of seq | ODD | full, opening, closing | /TEI/text/body/div/div/ab/s/seg/@subtype |
| Text location types | THS + ODD | | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/msContents/msItem/locus/@scheme /TEI/teiHeader/fileDesc/sourceDesc/msDesc/physDesc/objectDesc/supportDesc/support/list/item/@ana |
| Language types | THS + ODD | Old Egyptian, Middle Egyptian, Late Egyptian | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/msContents/msItem/textLang/@mainLang /TEI/teiHeader/fileDesc/sourceDesc/msDesc/msContents/msItem/textLang/@otherLangs /TEI/teiHeader/profileDesc/langUsage/language/@ident /TEI/teiHeader/profileDesc/particDesc/listPerson/person/persName/@xml:lang |
| Script types | THS + ODD | Hieroglyphic, hieratic, demotic | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/physDesc/scriptDesc/scriptNote/@scriptRef |
| Writing tool | THS + ODD | Qalam, cisel | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/physDesc/scriptDesc/scriptNote/@medium |
| Material | THS + ODD | Eagle | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/physDesc/objectDesc/supportDesc/support/material/@ref |
| Preservation state types | THS + ODD | Eagle | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/physDesc/objectDesc/supportDesc/condition/rs/@ref |
| Text types | THS | Documentary, literary, | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/msContents/msItem/@ana |
| Object types | THS | Statue, ostraca, papyrus, temple wall, doorjamb | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/physDesc/objectDesc/supportDesc/support/objectType/@ref |
| Dates | THS | Dynasty 18, Amenhotep III, Roman Period | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/history/origin/origDate/date/@datingPoint |
| Types of provenance | THS | Excavations, market | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/history/provenance/@type /TEI/teiHeader/fileDesc/sourceDesc/msPart/history/provenance/@type |
| Repositories | THS | Egyptian Museum Cairo, Louvre | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/msPart/msIdentifier/repository/@ref |
| Inv. numbering types | THS | JE (Cairo Museum), CG (Cairo Museum) | /TEI/teiHeader/fileDesc/sourceDesc/msDesc/msPart/msIdentifier/idno/@type |



Many controlled vocabularies



- Defined within the ODD (17⁺)
- Available Online and maintained in a non-TEI environment (12⁺)
- Extend the ‘Ref’ capacity of the TEI?
 - E.g. att.handFeatures
 - @scribe & @scribeRef
 - @script & @scriptRef
 - @medium, but No @mediumRef



Extensions for the TEI/Epidoc?

- Extensions for the ‘Text Transcription’ elements?
- Cartouches?



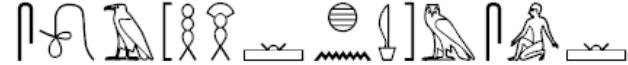
Text transcription



Restitution – for destroyed text '[']' and addition or emendation '<>'

s.w3[h h]ms s.w3<supplied reason="lost" evidence="parallel">h h</supplied>ms

@reason="omitted" @evidence="parallel"
@reason="lost" @evidence="previous-editor"
@reason="haplography" @evidence="conjecture"



Superfluous element

sw{r}j sw<surplus reason="traditional_orthography">r</surplus>j

j{j}mn.t j<surplus reason="repeated">j</surplus> mn.t

pr{.w} pr<surplus reason="mistake">.w</surplus>

Normalized reading of word or paradigm

snb(.w) snb<reg type="____">w</reg>
iw=f (hr) sdm iw=f <reg type="____">hr</reg> sdm

Correction

nTr{.t}<.w> <choice><sic>.t</sic><corr>.w</corr></choice>

Lacuna

s.w3<gap reason="lost|illegible" extent="unknown" />ms



Unclear reading &
Traces

j<unclear reason="damage">mn</unclear>

j<damage>mn</damage>



Text transcription



Erased by the scribe

```
<del reason="erasure">  
    <gap reason="lost|illegible" quantity="1" unit="cadrat">  
</del>
```

Ancient addition

```
<add place="above|below">text</add>
```

Emended by the
scribe

```
<subst>  
    <del rend="corrected">old text</del>  
    <add place="overstrike">new text</add>  
</subst>  
    or, if original illegible  
<add place="overstrike">new text</add>
```

Intentional space left
on the support

```
<space quantity="3" unit="cadrat">
```

Rubrum

```
<hi rend="rubrum"/>
```

Line breaks

`<lb/>`, for horizontal AND vertical lines;
`@style="writing-mode: horizontal-tb | vertical-lr | vertical-rl direction: rtl | ltr"`
`<cb/>` for columns of texts (made of horizontal or vertical lines)

Layout shifts

```
< milestone corresp="#id-layout"/>
```

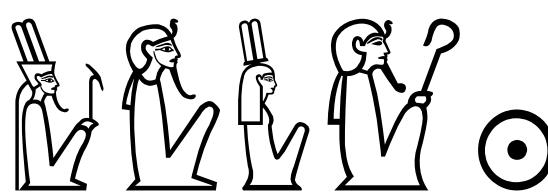
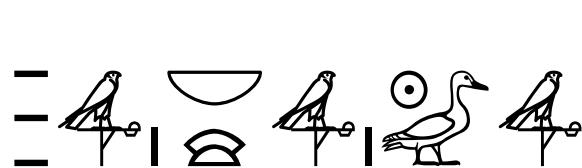


Cartouches



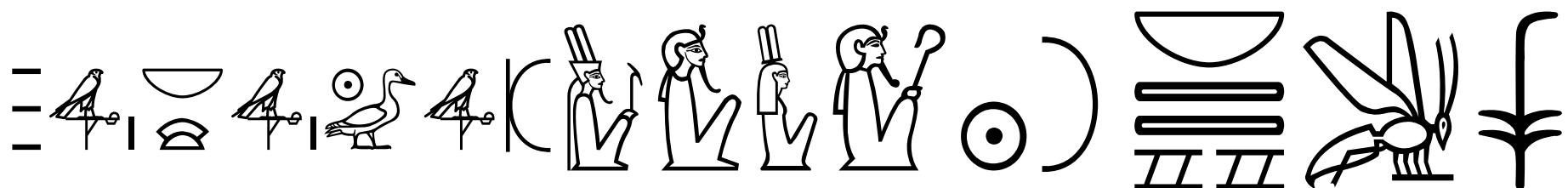
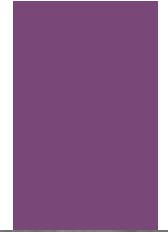


Cartouches



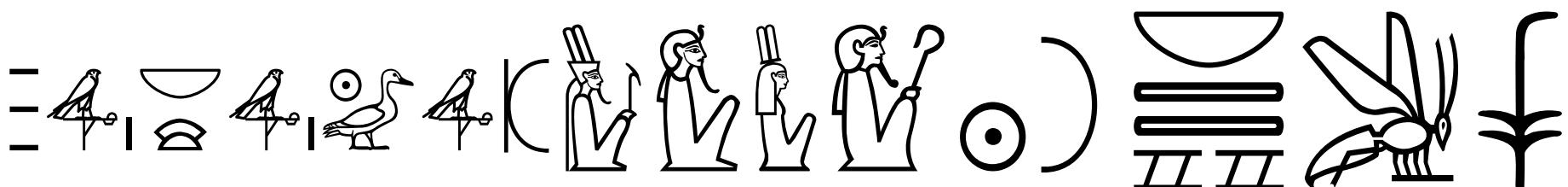
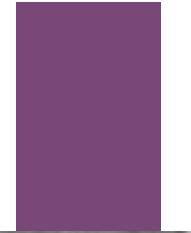


Cartouches





Cartouches

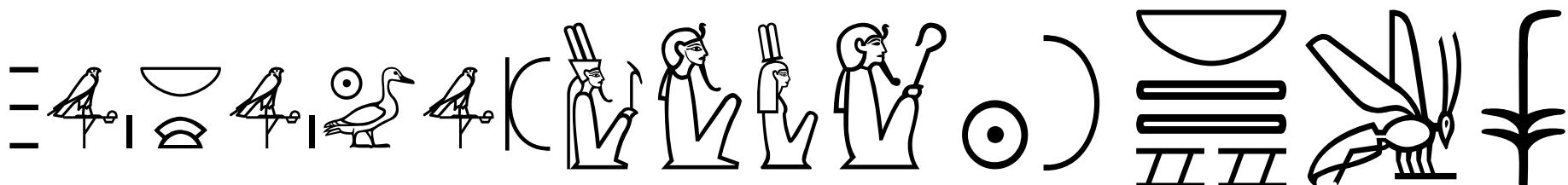


<w xml:id="ramses-1">n(j)sw.t</w>
<w xml:id="ramses-2">bity</w>
<w xml:id="ramses-3">nb</w>
<w xml:id="ramses-4">tȝ.wj</w>
<w xml:id="ramses-5">hqȝ-mȝ'.t-rȝ mr(y)-Imn</w>
<w xml:id="ramses-6">sȝ</w>
<w xml:id="ramses-7">rȝ</w>
<w xml:id="ramses-8">nb</w>
<w xml:id="ramses-9">hȝ.w</w>

King of Upper Egypt,
King of Lower Egypt,
Lord (of)
the two lands,
Ramses VI
son (of)
Râ,
Lord (of)
the crowns.



Cartouches

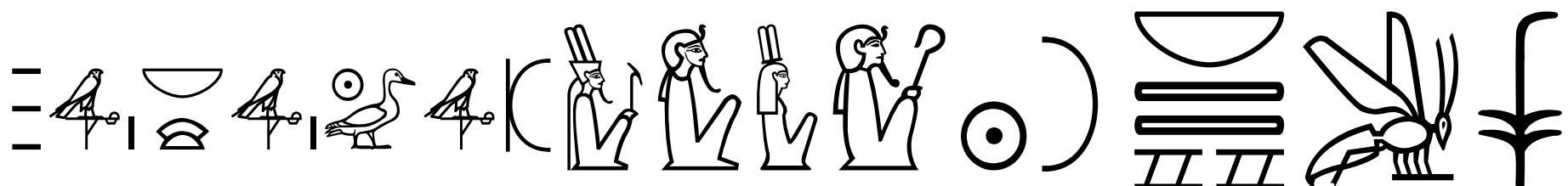


<w xml:id="ramses-1">n(j)sw.t</w>
<w xml:id="ramses-2">bity</w>
<w xml:id="ramses-3">nb</w>
<w xml:id="ramses-4">tʒ.wj</w>
<w xml:id="ramses-5">hqʒ-mʒ'.t-r' mr(y)-Imn</w>
<w xml:id="ramses-6">sʒ</w>
<w xml:id="ramses-7">r'</w>
<w xml:id="ramses-8">nb</w>
<w xml:id="ramses-9">h'.w</w>

King of Upper Egypt,
King of Lower Egypt,
Lord (of)
the two lands,
Ramses VI
son (of)
Râ,
Lord (of)
the crowns.



Cartouches



```
<seg rend="cartouche" type="regular" subtype="full">
```

```
    <w xml:id="ramses-5">
```

```
        Hqȝ-mȝ'.t-rȝ mr(y)-Imn
```

```
    </w>
```

```
</seg>
```

@type="regular| serekh| hwt| etc."

@subtype="full| opening| closing| etc.">

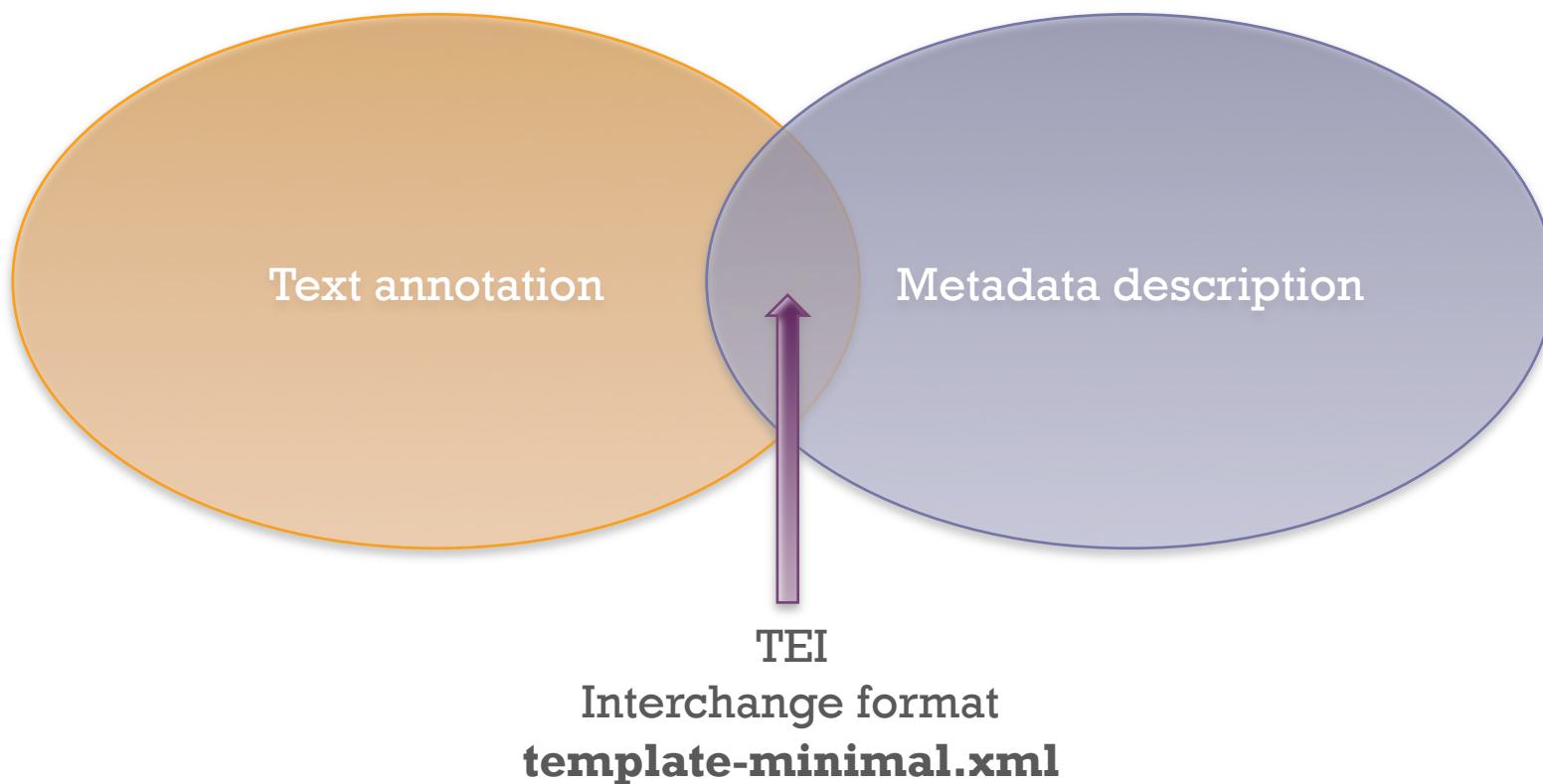
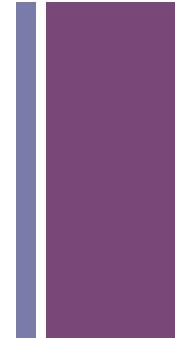


Conclusions

Results and future developments



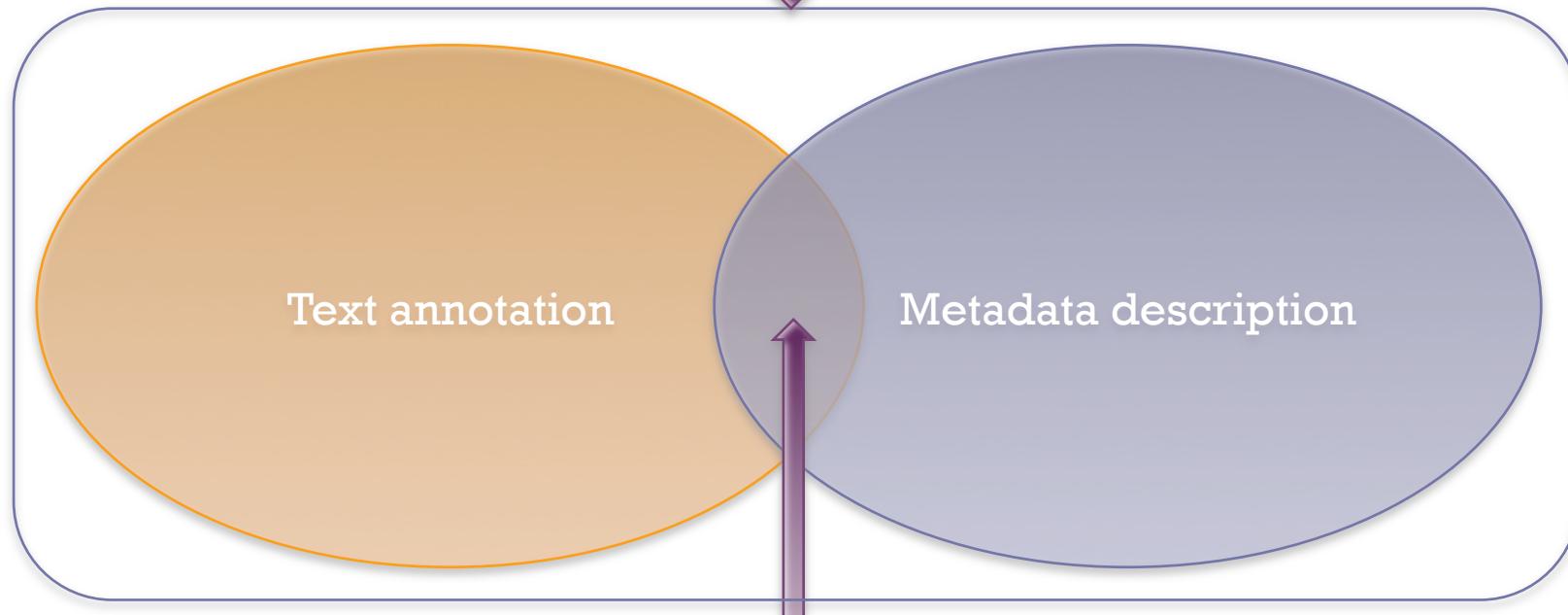
Results





Results

TEI
Interchange format
template-maximal.xml



TEI
Interchange format
template-minimal.xml

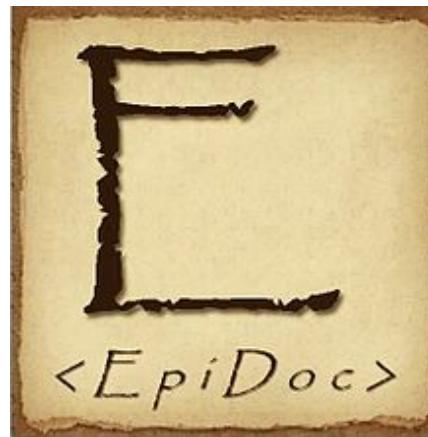


To-do list

- ODD for the interchange format
- Develop the TEI-external controlled vocabularies
- Data models that are true expansions of the kernel
interchange data model for
 - Grammatical annotation
 - Prosopographical annotation
 - ...



Thanks!



```
<msDesc>
  <msIdentifier>
    <msName>Statue Caire CG 4223<
      Name of the "ideal", rec
      Whether intact or in seve
    </msIdentifier>
  <msContents>
    Data about (abstract) te
    <summary>Text</summary>
    Summary of the ancient Eg
    <msItem xml:id="ck68-text1" >
      As many msItem as des
      @ana (or @class?) to
      <locus scheme="#id-term-1
      <author>
        <persName cert="unkn
          Anchene (Jmn-m-
      </author>
      <title type="ancient"/>
      <title type="modern">Free
      <textLang mainLang="egy>
      <note/>
    <msItem>
      Embedded msItem 1
      Same elements as
      <locus scheme="#id-te
      <author>
        <persName cert="l
      </author>
      <title type="ancient"
      <title type="modern">
      <textLang mainLang="e
      <note/>
    </msItem>
  </msItem>
</msContents>
```