

The Thot Sign List (TSL)

A digital repertoire of hieroglyphic signs

Stéphane Polis (F.R.S.-FNRS; ULiège)

Luc Desert (ULiège), Peter Dils (SAWL), Jorke Grotenhuis (ULiège),
Ingelore Hafemann (BBAW), Vincent Razanajao (UBordeaux-Montaigne),
Sebastian Richter (BBAW), Serge Rosmorduc (CNAM), Simon D. Schweitzer (BBAW),
Daniel Werning (BBAW, HU Berlin) & Jean Winand (ULiège)



Outline of the talk

- History of the project

Outline of the talk

- History of the project
- Goal and data model

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- History of the project

- Goal and data model

- *TSL goes online*

- Browsing and searching signs and functions
- Exploring signs, classes and tokens
- Navigating sources

Outline of the talk

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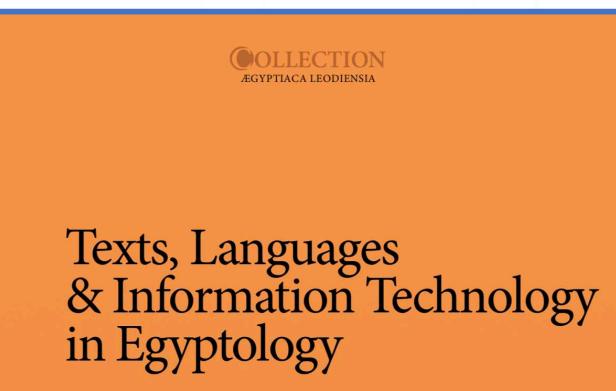
- Try it yourself!

History of the project

2013–2019

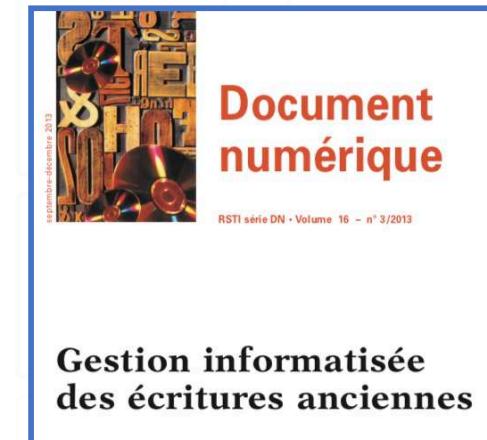
History of the project

- 2013



The Manuel de Codage Encoding of Hieroglyphs
Impedes Development of Corpora*

Mark-Jan NEDERHOF
University of St Andrews



Dictionnaire hiéroglyphique, inventaire des hiéroglyphes et Unicode

Dimitri Meeks

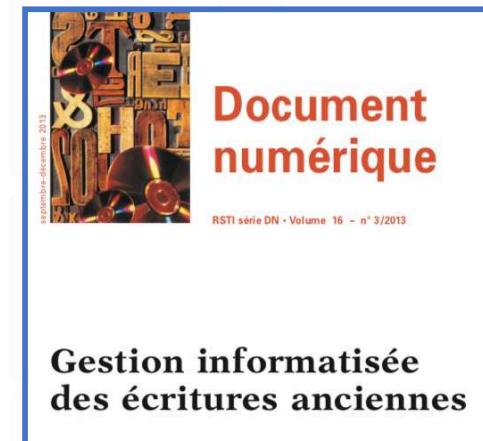
History of the project

- 2013

Réviser le codage de l'égyptien ancien

Vers un répertoire partagé des signes hiéroglyphiques

Stéphane Polis¹, Serge Rosmorduc²



History of the project

- 2013
- 2015



**INTERNATIONAL CONGRESS
OF EGYPTOLOGISTS XI**
Florence, Italy 23 - 30 August 2015
MUSEO EGIZIO FIRENZE
FLORENCE EGYPTIAN MUSEUM

St. Polis & S. Rosmorduc

A shared repository of hieroglyphic signs: The *Thot Sign List (TSL)*

History of the project

- 2013
- 2015



28. January 2015, No. 03/2013

2015 Anneliese Maier Research Award winners announced

Jean Winand

Mit Computerlinguistik zum ägyptischen Wörterbuch

Der belgische Ägyptologe Jean Winand zählt zu den führenden Experten für die ägyptische Sprache. Mithilfe der Computerlinguistik begann er 2006 mit dem Ramses-Projekt die Arbeit an einer Textdatenbank, welche die jüngeren Phasen der ägyptischen Sprachgeschichte abdeckt, und führte damit moderne linguistische Methoden in die Ägyptologie ein. Hoch angesehen ist Winand auch als Co-Autor einer mittelägyptischen Grammatik und für seine Arbeiten zu regionalen sprachlichen Unterschieden und zur Kodierung von Hieroglyphen. In Deutschland will Winand gemeinsam mit seinem Heidelberger Partner Joachim Friedrich Quack die Erkenntnisse aus seinem Ramses-Projekt mit Arbeiten aus Deutschland, wie der der Berliner Akademie der Wissenschaften an einem Thesaurus Linguae Aegyptiae, zusammenführen und ein umfassendes modernes Wörterbuch des Ägyptischen schaffen.

Gastinstitut: Universität Heidelberg, Ägyptologisches Institut

Gastgeber: Prof. Dr. Joachim-Friedrich Quack

Prof. Dr. Jean Winand

wurde 1962 in Belgien geboren. Er ist Professor an der Université de Liège, sowie an der l'Université libre de Bruxelles, beides Belgien. Zudem ist er Mitglied in mehreren nationalen und internationalen Gremien der Ägyptologie. In seinen Arbeiten konzentriert er sich auf die Textanalyse und Lexikographie der ägyptischen Sprache und Schrift.



Foto: Université de Liège/
Michel Houet

History of the project

- 2013
- 2015



History of the project

- 2013
- 2015–2016



THOT - THESAURI & ONTOLOGY

for documenting Ancient Egyptian Resources

B E T A

HOME

THESAURI ▾

TEI INTERCHANGE FORMAT

Search a concept...



Thesauri

Using the definition set by the International Standard Organisation, thesauri are 'controlled and structured vocabulary in which concepts are represented by terms, organised so that relationships between concepts are made explicit, and preferred terms are accompanied by lead-in entries for synonyms or quasi-synonyms'. In Thot, each concept is represented by one or several terms expressed in Arabic, English, French and German, and identified by a unique identifier (the 'thot-number'). It should also be noted that a supplementary 'language' has been included, the so-called 'Thot-xml', in order to provide terms to be used as values of XML attributes in digital documents, such as TEI files.

Thesauri covered by the project

As a first approach, the Thot project aims at compiling a wide range of thesauri relating to artifactual and textual metadata. This will consist in quite small thesauri made of a couple of terms, as well as rather big ones populated by several hundreds of concepts. Subject headings pertaining to general and abstract concepts will be included in a second stage.

Filter concepts in current

- * Thot Collections
 - > * Dates and dating systems
 - > * Language
 - > * Material
 - > * Museums and private collection
 - > * Scripts
 - > * Technique of inscription
 - > * Text content



C98



C102A



C118



C121



U13032



NO CODE



NO CODE



NO CODE

History of the project

- 2013
- 2015–2016



Thot Sign List



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Register

Hello, jgrotenhuis!

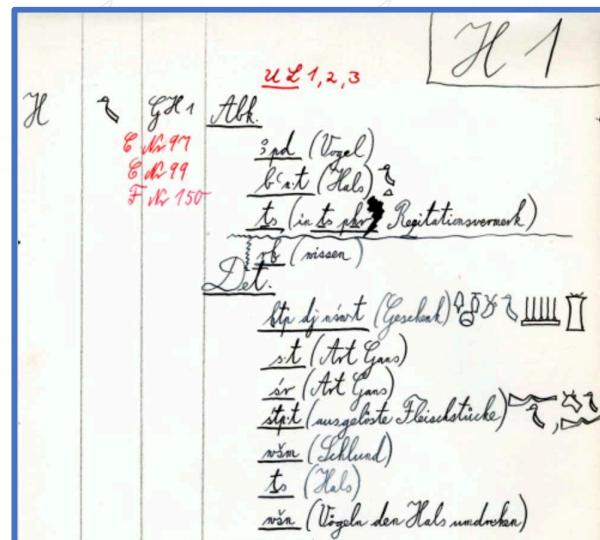
Logout

Thot Sign List

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History of the project

- 2013
- 2015–2016
- 2016–2017



Thot Sign List



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zu Leipzig

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Hello, jgrotenhuis!

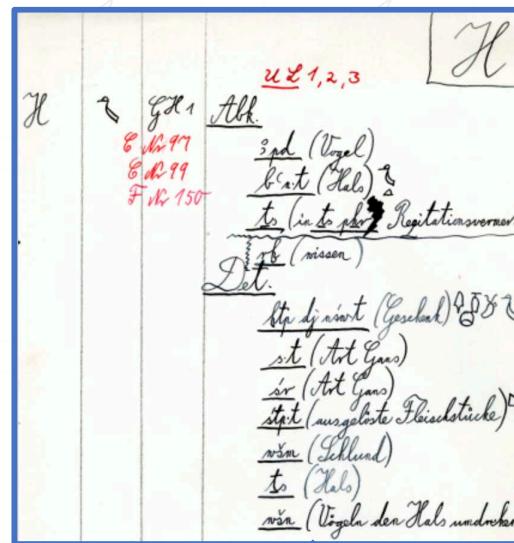
Logout

Thot Sign List

Documents Sources Signs Tokens

History of the project

- 2013
- 2015–2016
- 2016–2017



```

1  ▼ <Zeichenliste>
2  ▼ <Zeichen>
3    <code>A1</code>
4  ▼ <Funktion type="Lautwert">
5    <Element>
6      <Lautwert>j</Lautwert>
7      <Literatur>G 442</Literatur>
8      <Literatur>L 153</Literatur>
9      <Literatur>S 90</Literatur>
10     </Element>
11   <Element>
12     <Lautwert>z</Lautwert>
13     <Literatur>G 442</Literatur>
14     <Literatur>Wb 3, 404 ff.</Literatur>
15     <Literatur>S 45, 133</Literatur>
16   </Element>
17   <Element>
18     <Lautwert>rHw</Lautwert>
19     <Literatur>G 442</Literatur>
20   </Element>
21   <Element>
22     <Lautwert>rmT</Lautwert>
23     <Literatur>S 121</Literatur>
24     <Literatur>Z A1</Literatur>
25     <Literatur>K 127.1</Literatur>
26   </Element>
27   <Funktion>
28     <Funktion type="Determinativ">
29     <Existenz type="JA" />

```

Thot Sign List



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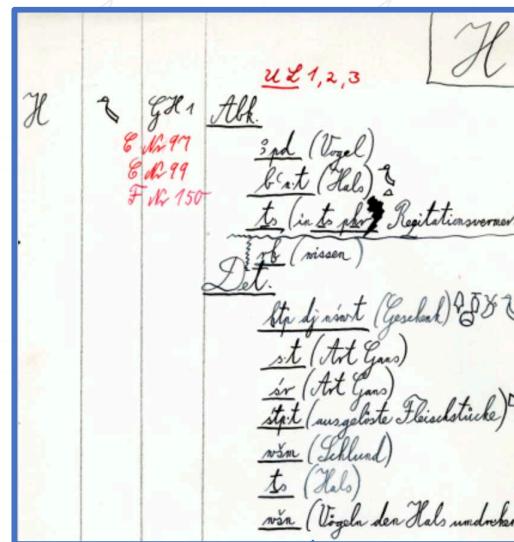
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Thot Sign List

[Documents](#) [Sources](#) [Signs](#) [Tokens](#)

History of the project

- 2013
- 2015–2016
- 2016–2017



```

1  ▼ <Zeichenliste>
2  ▼ <Zeichen>
3    <code>A1</code>
4  ▼ <Funktion type="Lautwert">
5    <Element>
6      <Lautwert>j</Lautwert>
7      <Literatur>G 442</Literatur>
8      <Literatur>L 153</Literatur>
9      <Literatur>S 90</Literatur>
10     </Element>
11   <Element>
12     <Lautwert>z</Lautwert>
13     <Literatur>G 442</Literatur>
14     <Literatur>Wb 3, 404 ff.</Literatur>
15     <Literatur>S 45, 133</Literatur>
16   </Element>
17   <Element>
18     <Lautwert>rHw</Lautwert>
19     <Literatur>G 442</Literatur>
20   </Element>
21   <Element>
22     <Lautwert>rmT</Lautwert>
23     <Literatur>S 121</Literatur>
24     <Literatur>Z A1</Literatur>
25     <Literatur>K 127.1</Literatur>
26   </Element>
27   <Funktion type="Definitor">
28     <Funktion type="Definition">
29     <Existenz type="Ja"/>

```



Thot Sign List



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zu Leipzig

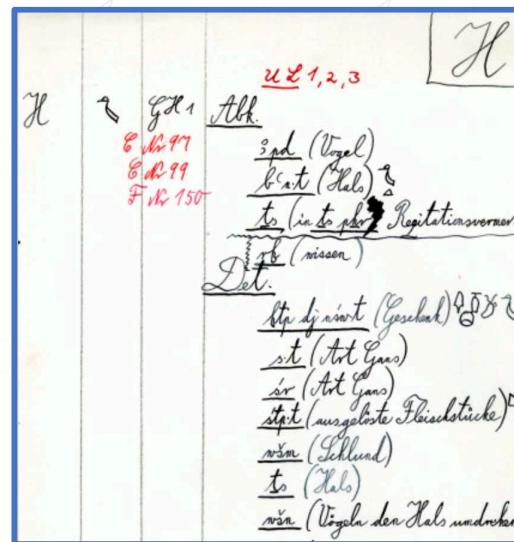
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Thot Sign List

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History of the project

- 2013
- 2015–2016
- 2016–2017



A screenshot of a digital interface. On the left, a list of XML code for signs is shown:

```

1 <Zeichenliste>
2 <Zeichen>
3 <code>A1</code>
4 <Funktion type="Lautwert">
5 <Element>
6 <Lautwert>rmT</Lautwert>
7 <Element>
8 <Lautwert>G 442</Lautwert>
9 <Element>
10 <Lautwert>rmT</Lautwert>
11 <Element>
12 <Lautwert>S 121</Lautwert>
13 <Element>
14 <Lautwert>Z A1</Lautwert>
15 <Element>
16 <Lautwert>K 127.1</Lautwert>
17 <Element>
18 <Lautwert>rmT</Lautwert>
19 <Element>
20 <Element>
21 <Element>
22 <Element>
23 <Element>
24 <Element>
25 <Element>
26 <Element>
27 <Element>
28 <Element>
29 <Element>

```

On the right, a grid of 10x10 icons representing signs is displayed, each with a number below it. The numbers range from 2140 to 2420. Some numbers have additional handwritten notes above them, such as '2020' and '2021' above 2020, and '2022' above 2101.



Thot Sign List



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Thot Sign List

Documents Sources Signs Tokens

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- 2015–2016
- 2016–2017
- 2016–2019



Thot Sign List    Home About Contact Register Hello, spolis! Logout

Sign Id : TSL1_7039 Token Id : **TSL_3_22769** US70361140.svg  Meeks category : J Creator : **jgrotenhuis** Editor : **jgrotenhuis** Hidden Edit

Description Functions Tokens Codes Classes Editor Comment

New function

	Function ID	Type	Function subType	Phonetic Value	Semantic Value	Use	
Edit Delete	6264	classifier		coil (of a snake)		regular	Function Creator : jgrotenhuis Editor : Comment Lemma
Tokens							
	New Token	Token ID	Source ID	Jeshesh code			
		21966	1813				
Bibliography							New

History of the project

- 2013
- 2015–2016
- 2016–2017
- 2016–2019



History of the project

- 2013
- 2015–2016
- 2016–2017
- 2016–2019
- Today

Thot Sign List

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THOT SIGN LIST



Browse Search About

Browse the list of Signs Search the list of Signs Information about the project

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 LIÈGE université

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Legals

Goal and data model

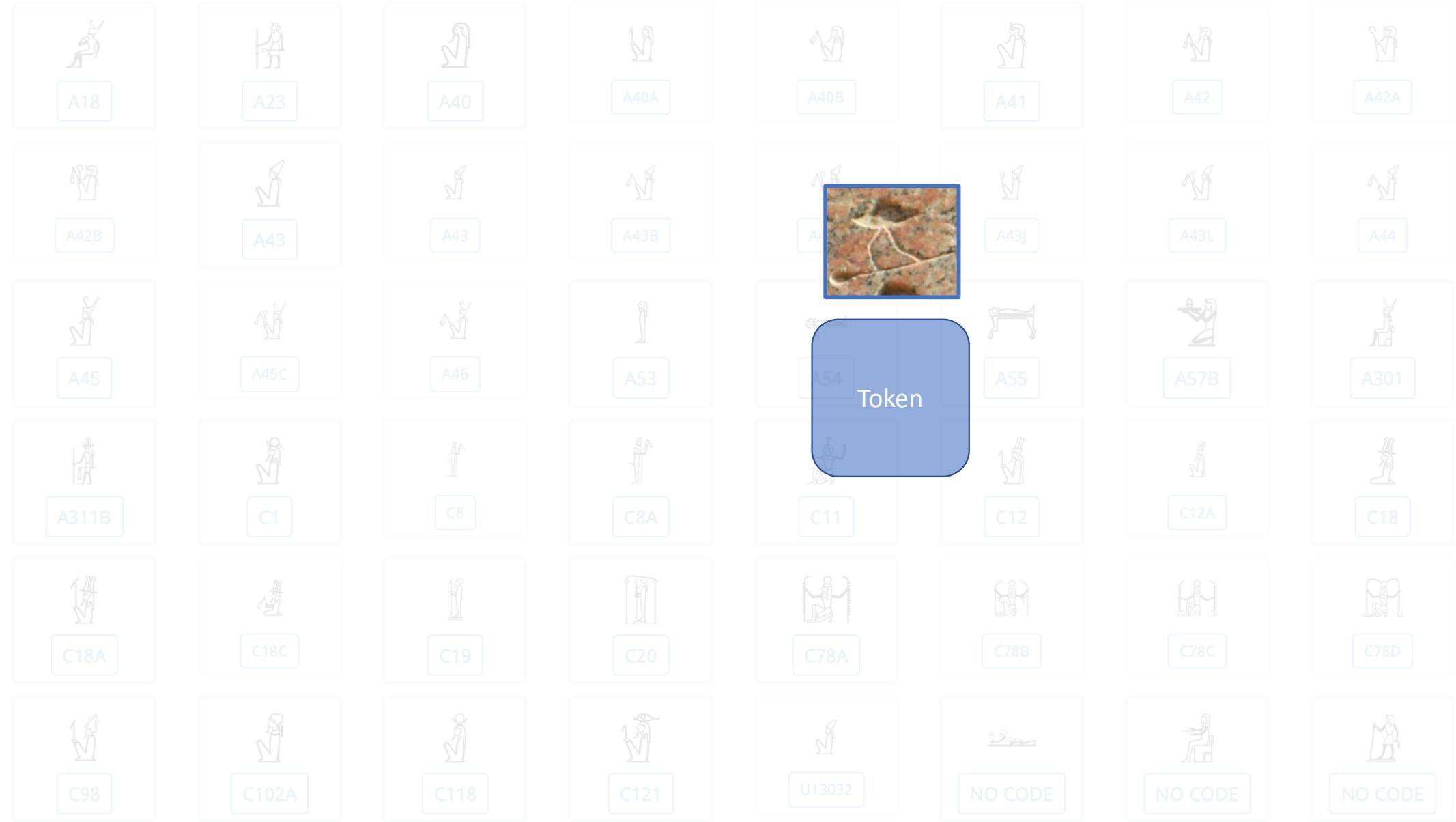
Goal and data model

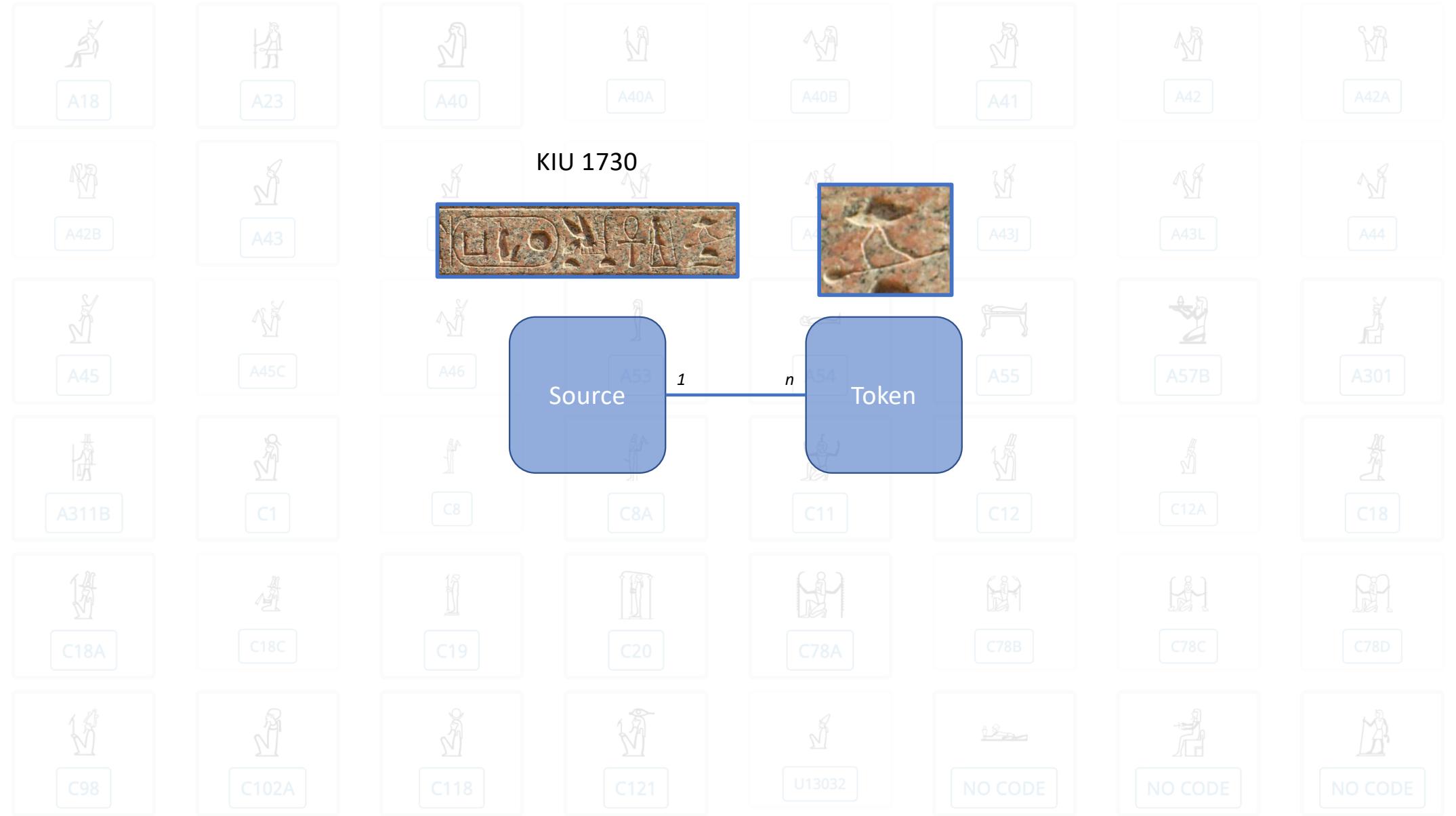
TSL is born out of the practical necessity of creating electronic corpora of hieroglyphic texts in a principled way and its first aim is ***to document the functions*** attested for individual signs

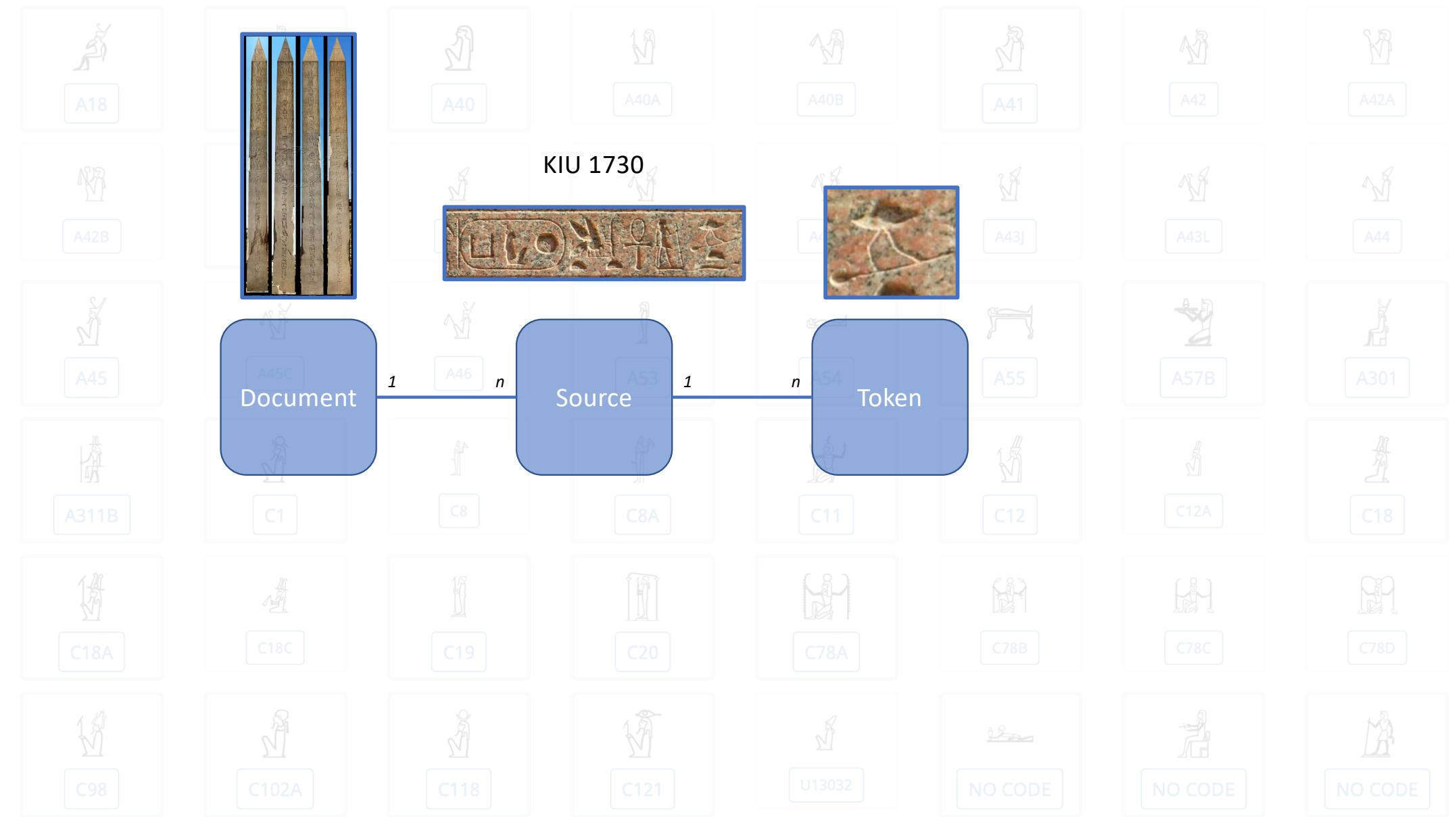
Goal and data model

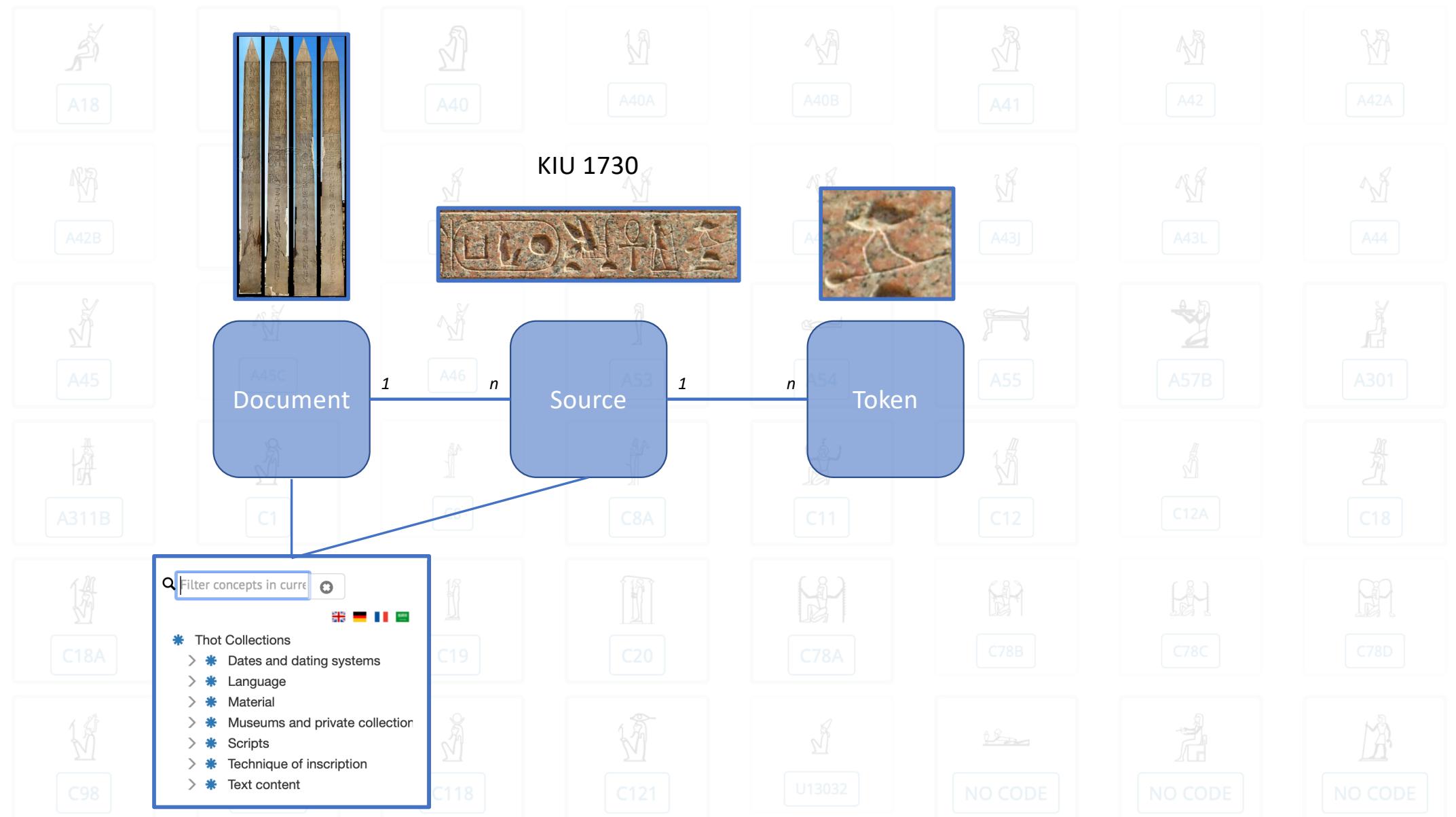
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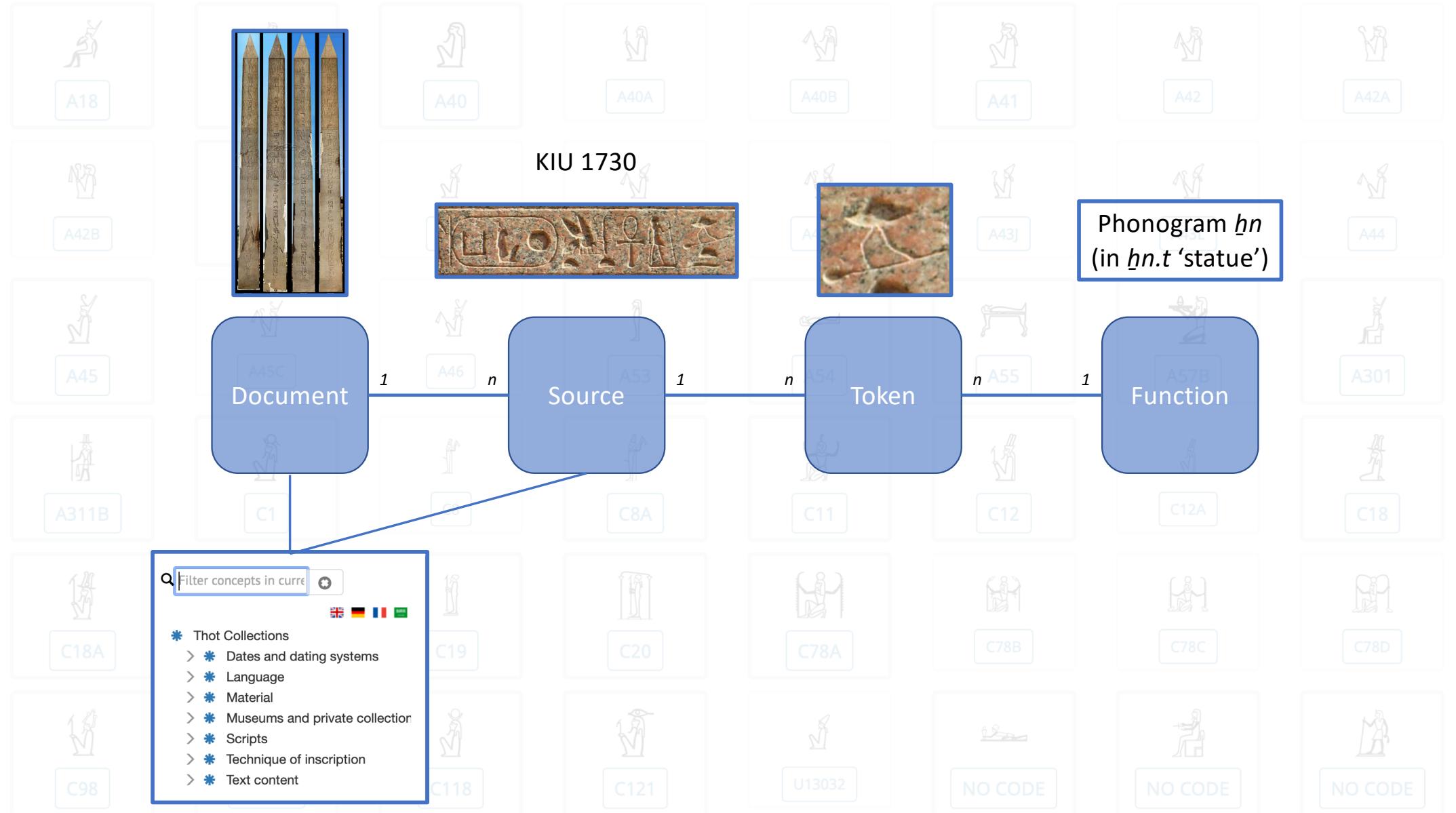
- References to ancient sources
- Description of the iconic features
- Structured repertoire

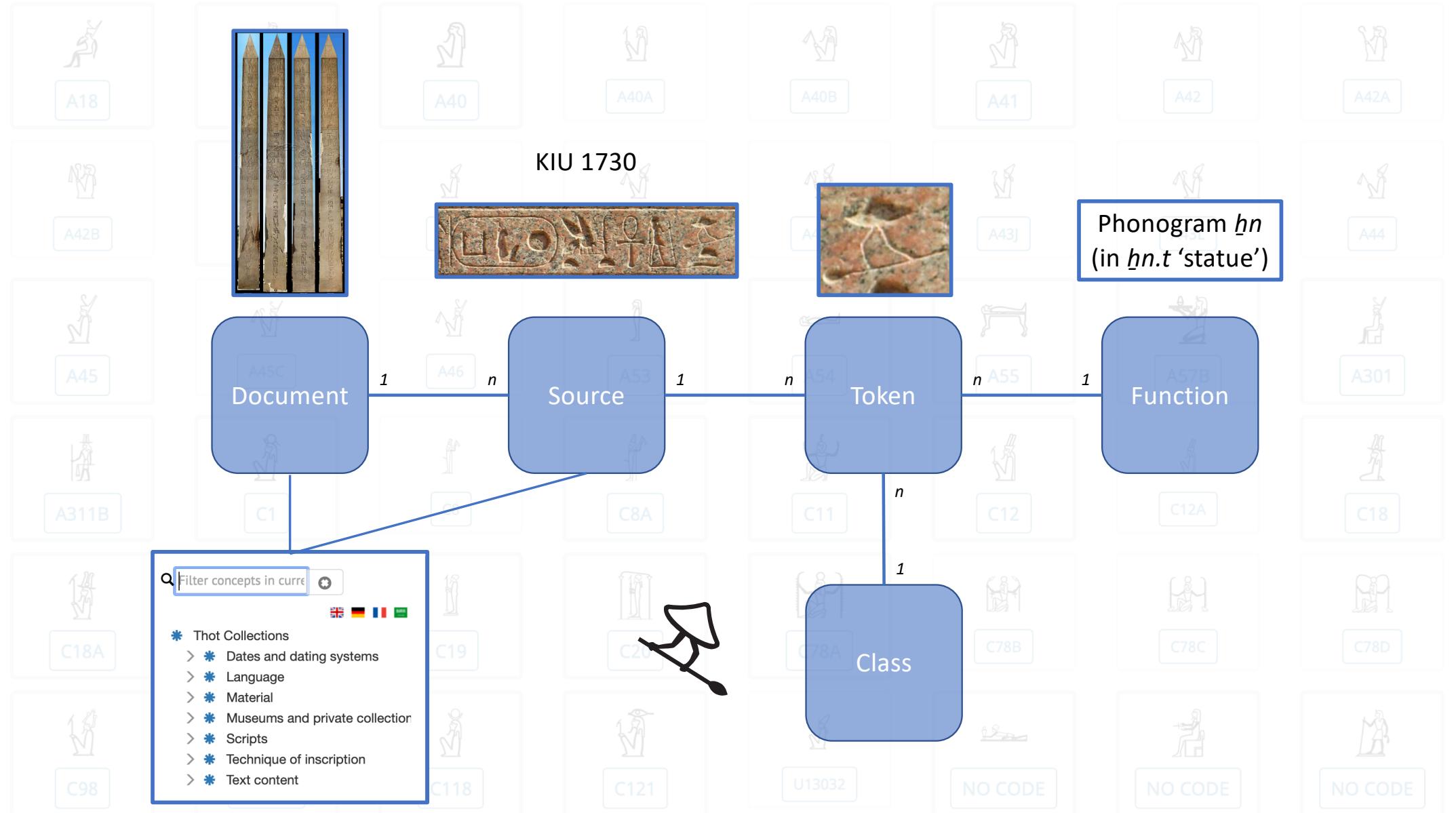


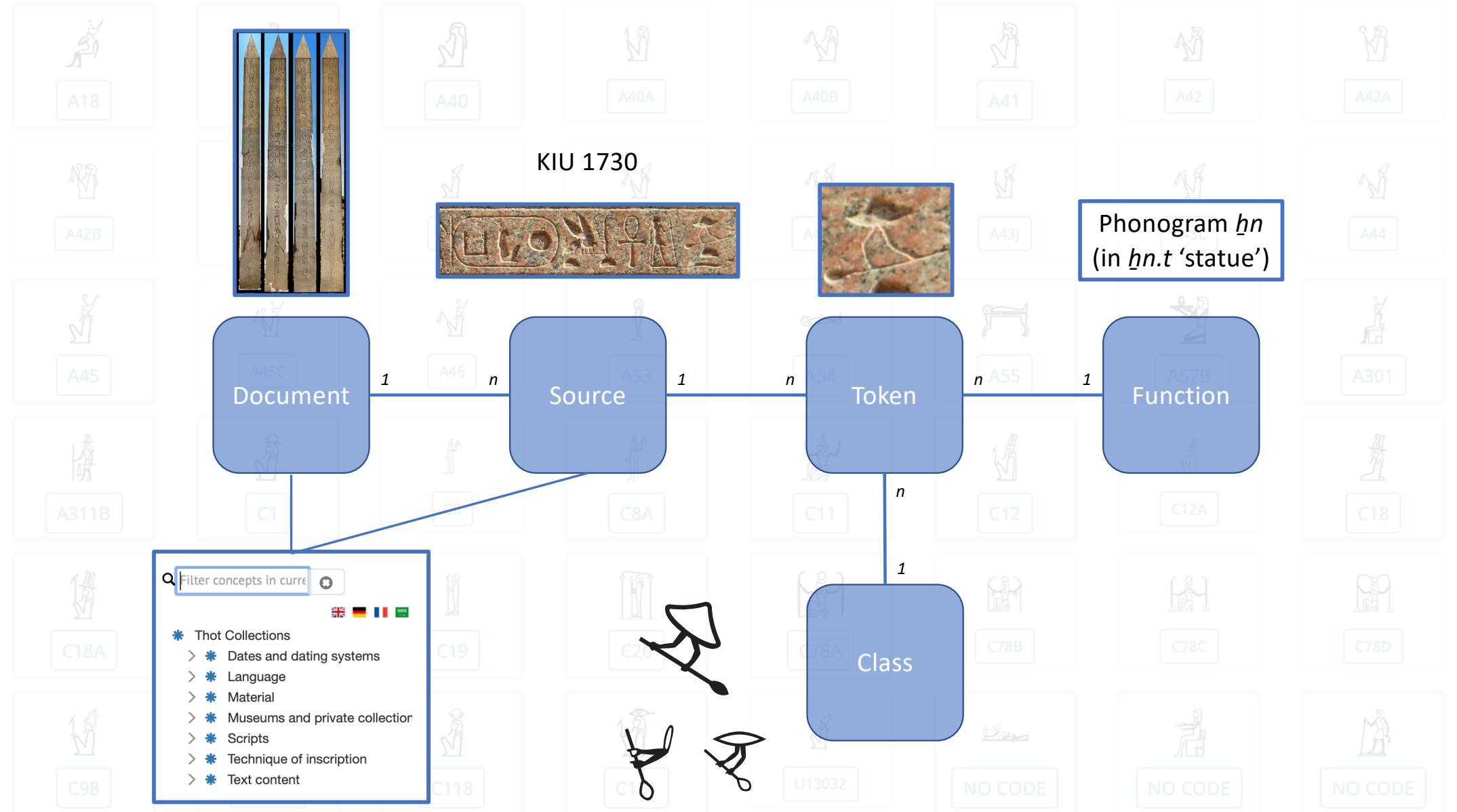


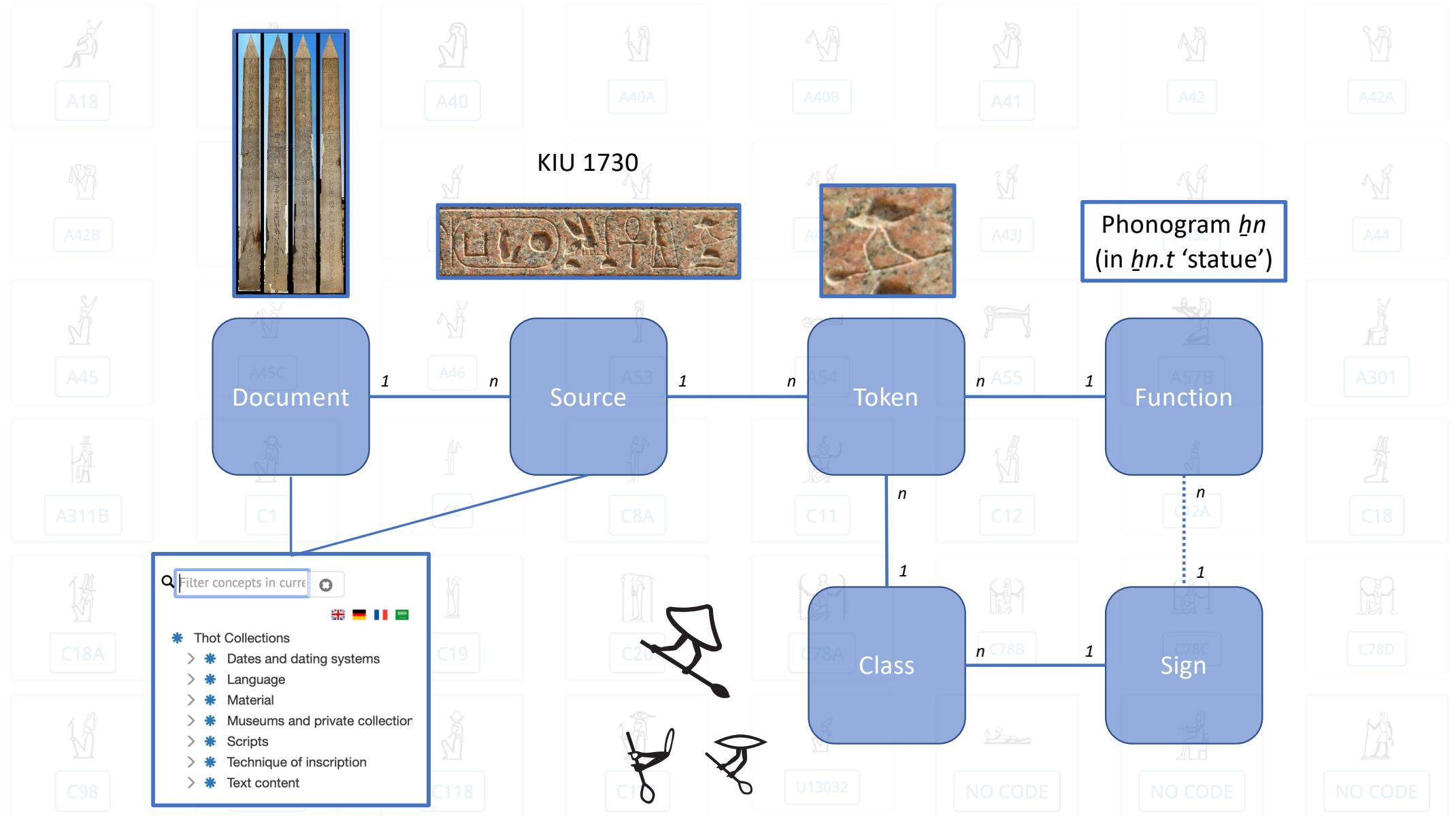


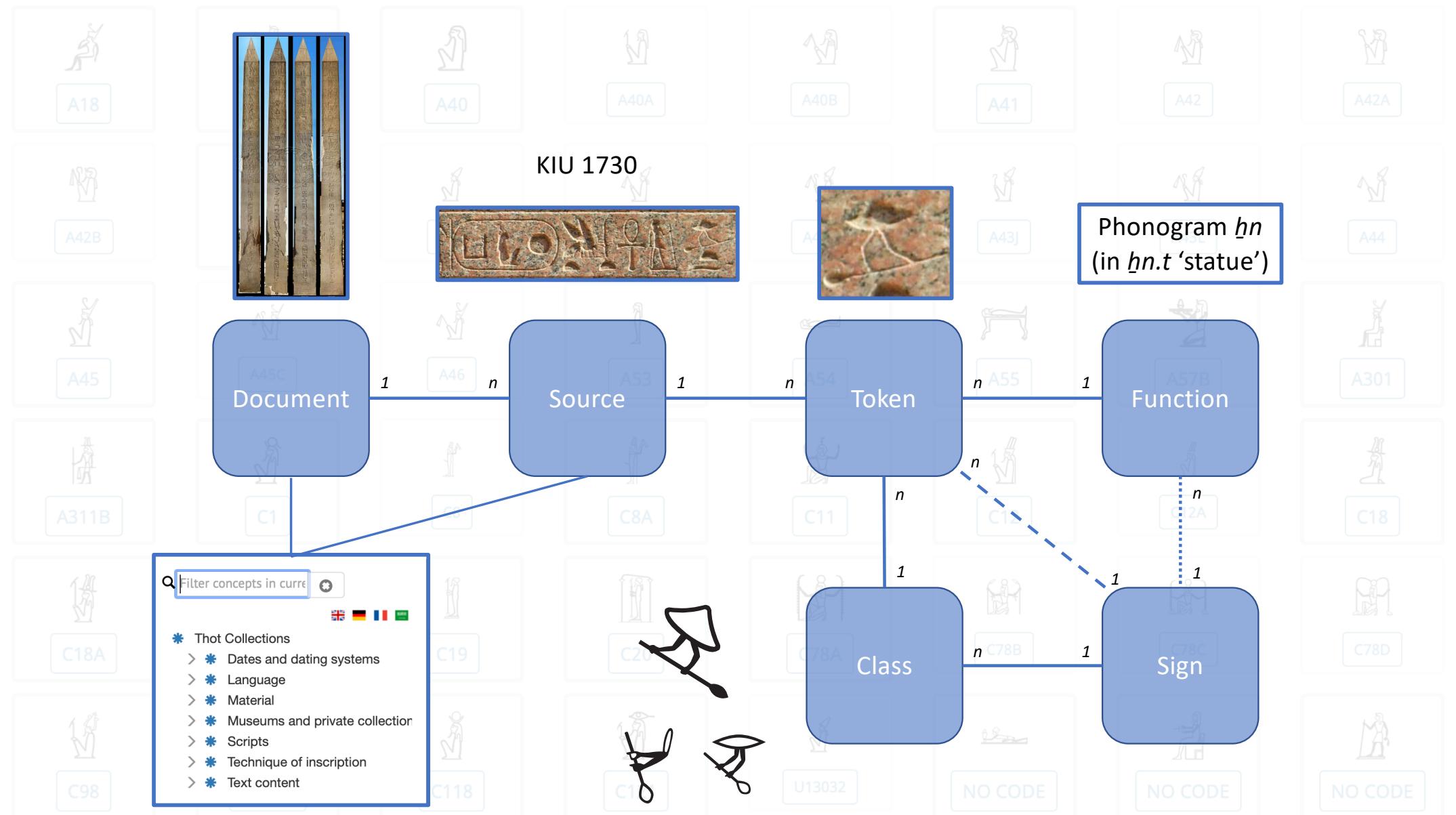












Sign (= Class 00)

Class 01

Token 1

Token 3

Class 02

Token 2

Token 5

Token 4

TSL goes online

Version 1.0

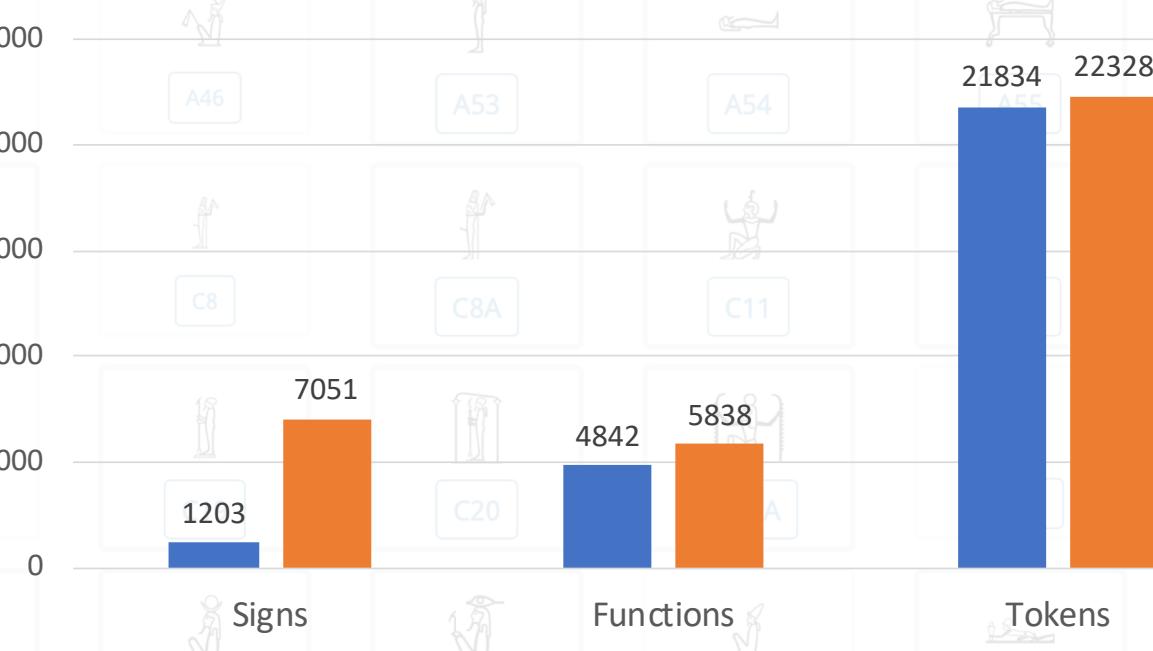
TSL goes Online

- TSL is Gardiner ready

TSL goes Online

- TSL is Gardiner ready

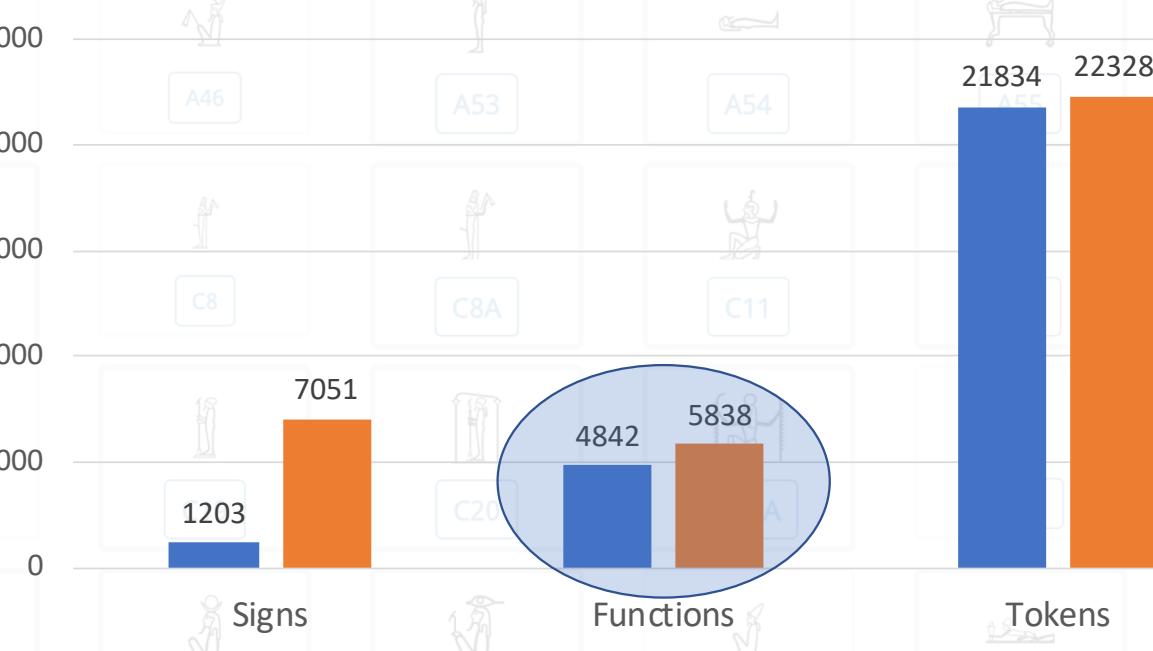
Data in TSL



TSL goes Online

- TSL is Gardiner ready

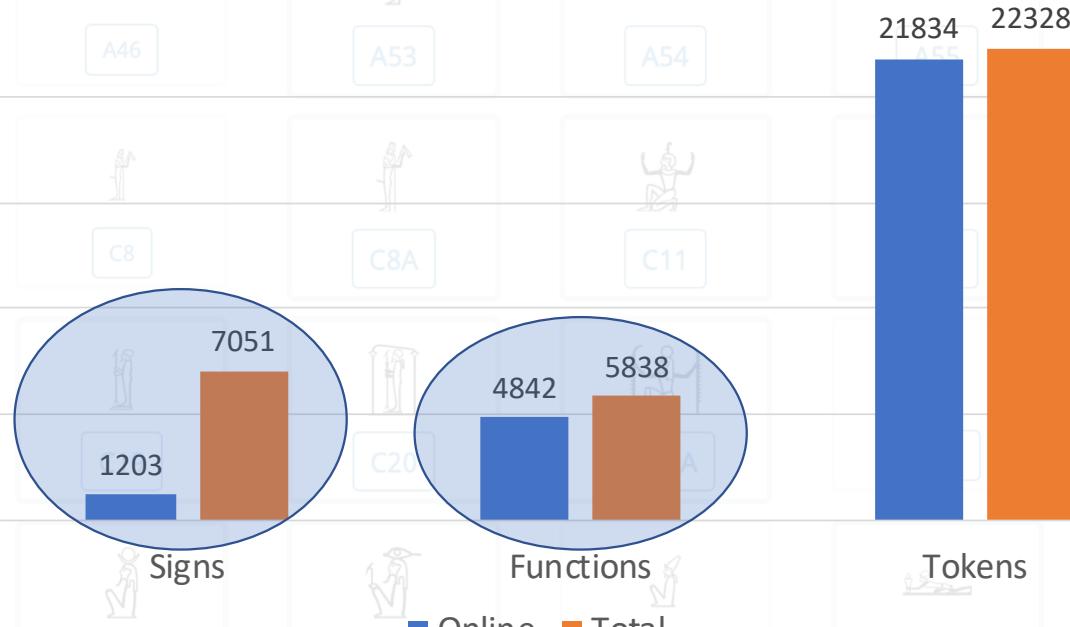
Data in TSL



TSL goes Online

- TSL is Gardiner ready

Data in TSL





THOT SIGN LIST



[Browse](#)

Browse the list of Signs

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Search the list of Signs

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Information about the project

Signs

Filter: Loafs and cakes.

low narrow

First Next 1 Previous Last

D

X1

A

X2



X2D

O

X3

Q

X6

A

X7

O

NO CODE



A18



A19



A42A



A42B



A44



A45



A311B



C1



C8



C8A



C11



C12



C12A



C18A



C18C



C19



C20



C78A



C78B



C78C



C78D



C98



C102A



C118



C121



U13032



NO CODE



NO CODE



NO CODE

Signs

Filter: Loafs and cakes.

low narrow

First Next 1 Previous Last

D

X1

A

X2



X2D

O

X3

Q

X6



X7

O

NO CODE



C1



C8



A7



A7A



C18C



C19



C18A



C12



C102A



C118



C121



U13032



NO CODE



NO CODE



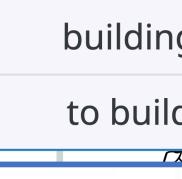
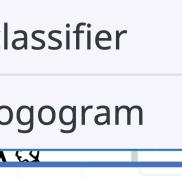
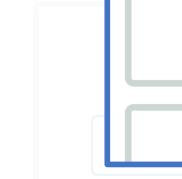
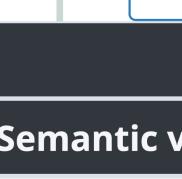
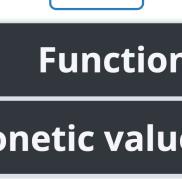
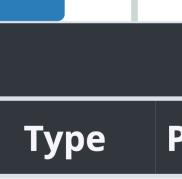
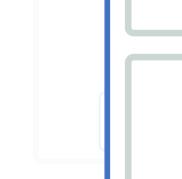
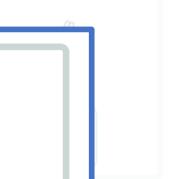
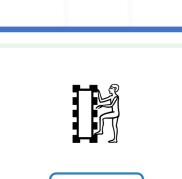
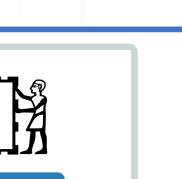
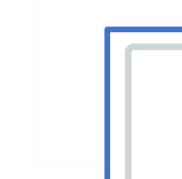
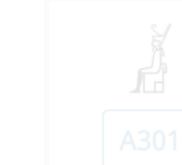
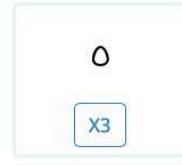
NO CODE

Signs

Filter: Loafs and cakes.

low narrow

First Next 1 Previous Last



Functions

Type	Phonetic value	Semantic value
classifier	—	building
logogram	qd	to build

Search ➤

AND	Function Type	=		
	Function Type	=	logogram	-
AND	Semantic Value	contains	to appear	-
AND	Tag	=	hill	-

Reset

Search

TSL1_4231



N28

A hill with a halo of sun rays behind it.

Sky, earth, water.

C18A

TSL1_4231



N28A

A hill with a halo of sun rays behind it.

Sky, earth, water.



C98

TSL1_4231



N28B

A hill with a wavy halo of sun rays behind it.

Sky, earth, water.



C78D



A18



A18



A18



A18



A18



A18



A18



A42A



A44



A301



C18



A45



A311B



C18A



C98

C102A

C118

C121

U13032

NO CODE

NO CODE

NO CODE



TSL_1_2177

Description: Two arms, holding an oar, in a rowing motion, below a cover.



Category: *Parts Of The Human Body*.

Basic Form: full quadrat

Tag: arms, oar

Type: composite

Components

TSL_1_5126_0



Bibliography

Codes

Gardiner D33

Hieroglyphica D33

Jsesh D33

Unicode U13099



Functions Classes Tokens Cite as

Classifier (1 function(s))

Phonetic value	Semantic value	Use	▼
—	movement by boat	regular	▼

Logogram (1 function(s))

Phonetic value	Semantic value	Use	▼
hnj	to row, to convey by water	regular	▼

Phonemogram (1 function(s))

Phonetic value	Semantic value	Use	▼
hn	—	regular	▼



A18



A42B



A45



A311B



C18A



C98



A42A



A44



A301



C18



C78D



NO CODE

Logogram (1 function(s))

Phonetic value

hnj

Semantic value

to row, to convey by water

Use

regular



Tokens

Token	Source	Date
	<i>hnj jw(=j) hn.n(=j) wr.t hr z pf</i> Row! And I rowed powerfully, said this man.	Menkauhor Kaiuhor
	<i>hn sw mw.t=f</i> Row him, his mother!	Unas_Wenis
	<i>hn sw jm.yw 3b.t sqd sw jm.yw qb.t.w</i> the ones in the horizon will row him, the ones in the cool waters will sail him	Unas_Wenis
	<i>hsf w jz.t=k n.t.j.hm.w-sk.w jr hn.t=k</i> As your crew of Imperishable Stars should not be barred from rowing you, [...]	Nemtiemsaf I Merenre I
	<i>nm p.t hn c s3b hn dw3.t hn c wsjr</i> [...] who travels the sky with Orion and rows the Duat with Osiris.	Nemtiemsaf I Merenre I
	<i>hft d(3)w hm n ntr pn šps r jr.t hn.t=f m jp.t=f rs.(y)t</i> when the majesty of this noble god proceeds to do his water procession in his southern inner room,	Tuthmosis III (complete reign)

[Bibliography](#)[Credits](#)

Functions Classes Tokens Cite as


TSL_1_2177_01

Description ➤
Two arms, holding an oar, in a rowing motion.

Basic Form: full quadrat
Tag: arms, oar
Type: composite
Components [TSL_1_5126_0](#) !

Codes ➤
Hieroglyphica [D33B](#)
Jsesh [D33B](#)

Bibliography
Credits


TSL_1_2177_02

Description ➤
Codes ➤
Bibliography
Credits

A18 A23 A40 A40A A40B A41 A42 A42A

A42B

A45

A311B

C18A C12A C18 C18D

C98 C102A C118 C121 U13032 NO CODE NO CODE NO CODE



A19



A22



A40



A40A



A40B



A41



A42



A42A

[Functions](#) [Classes](#) [Tokens](#) [Cite as](#)



TSL_3_9725



TSL_3_19099



TSL_3_22301



TSL_3_22401



TSL_3_19592



TSL_3_9740



TSL_3_19092



TSL_3_19635



TSL_3_16210



TSL_3_19117



TSL_3_22302



TSL_3_9739

01



TSL_3_19639

01



TSL_3_18622

02



TSL_3_19587

02



TSL_3_21385

02



C98



C102A



C118



C121



U13032



NO CODE



NO CODE



NO CODE

TSL_3_22302

Function Type	Phonetic value	Use
phonemogram	<i>hn</i>	regular

hn.t(y)=f c nh nsht bj.ty m3 c.t-k3-r c d c m n ns.yt

 His living statue, the king of upper and lower Egypt, Maatkare, the electrum of kingship,

[View Source](#)



<http://www.cfeetk.cnrs.fr/archives/?n=62830>

Photograph from the Karnak Project: CNRS, USR 3172 - CFEETK / UMR 5140 - ASM supported by the CNRS and the LabEx Archimede ANR-11-LABX-0032-01, Programme Investissement d'Avenir. All photographs © CNRS-CFEETK

Transcription :

Transliteration : *hn.t(y)=f^cnh nswt bj.ty m3^c.t-k3-r^c d^cm n ns.yt*

Translation : His living statue, the king of upper and lower Egypt, Maatkare, the electrum of kingship,

Comment : Note that the =f suffix pronoun is actually written before the classifier of Xn.ty. Note that the A23A is a placeholder for a statue form of that sign.

Metadata

Provenance : [Central Group](#) Temple of Karnak, colonnade of

Thutmose I, north obelisk

Location in document : Soubassement, south side, line 5.

Date : [Hatshepsut Maatkare](#)

Object type : [Obelisk](#)

material : [granite](#)

Script : [Hieroglyphs](#)

technique of inscription : [sunk relief](#)

Language : [Egyptien de tradition](#)

Text content : [Royal text](#)

Source Code : [KIU 1730, line 5](#)

Bibliography

Credits

www.thotsignlist.org

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