

Making CTS and its application with Greek, Portuguese, and English alignments on Ducat

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Sunoikisis Digital Classics Summer 2020

Session 9



Christopher W. Blackwell
cwblackwell@gmail.com
Furman University



Anise d'Orange Ferreira
anise.ferreira@unesp.br
UNESP/CNPq



Context

- [CAPES/PrInT/UNESP Program](#) : Theme: Plural Societies > Projects: Linguagens e Produção do Conhecimento > Network: Línguas para aprender, incluir, inovar e preservar: explorando teorias, métodos e práticas > Open Projects in Digital Classics
- Academic mission: Learning more about CTS- URN applications
- At Furman: CITE-app and DUCAT creating CEX files for Portuguese texts



What Cite-app is

- Cite-app is a single web-page browser app based on the CITE architecture protocol to work with texts for exploring citable resources, written in the language ScalaJs
- What kind of texts? Those with citable resources: identifiable and retrievable via machine-actionable canonical citations in URN format. (CTS-URNs)
- CITE architecture is a protocol that allows the texts to be identified and retrieved via machine-actionable canonical citations in URN format
- What kind of work? Lexical items retrieval of one or more texts



CTS - URN: canonically cited passages

- CTS URNs have 4 components separated by a colon ":".
- URN:CTS:[NAMESPACE]:[WORK identifiers]:[PASSAGE]
urn:cts: means that we have a URN under a CTS protocol.
- [NAMESPACE] represents the data set. Ex. **greekLit**
- [WORK identifiers separated by a dot: **textgroup**. **work**. **edition** | **translation**, **exemplar** Ex: **tlg.0553.tlg001.1st1K-grc**
- [PASSAGE] specifies the text part in the document. Ex. **1.1.1** and **5.1.1**
urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1:1.1.1
urn:cts:greekLit:tlg0553.tlg001.ferreira:5.1.1





Eumaeus Adding CEX files.

b93ab47 on 29 Jan

[1 contributor](#)

590 lines (586 sloc) | 800 KB

[Raw](#)[Blame](#)[History](#)

```
1
2  #!cexversion
3  3.0
4
5  #!citelibrary
6  name#CEX library
7  urn#urn:cite2:cex:TEMPCOLL.TEMPVERSION:TEMP_ID
8  license#CC 3.0 NC-BY
9
10 #!ctscatalog
11 urn#citationScheme#groupName#workTitle#versionLabel#exemplarLabel#online#lang
12 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1:#book/section/subsection#Artemidorus#Onirocriticon#Pack, Teubner, 1963, F1K
13
14 #!ctsdata
15 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1:1.prooimion.head#APTEMIDΩΡΟΣ ΚΑΣΣΙΩ ΜΑΞΙΜΩ ΧΑΙΠΕΙΝ
16 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1:1.prooimion.1#Πολλάκις προειράπην ἐπὶ τὴν πραγματείαν τὴν προκειμένην ὁρμή
17 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1:1.prooimion.2#Ἰτέον δὴ λοιπὸν ἐπὶ τὸ προκείμενον, ἵνα μὴ μείζον ἡμῖν ἢ τὸ π
18 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1:1.1.1#Περὶ μὲν οὖν ἐνυπνίου καὶ ὀνείρου διαφορᾶς τῆς πρὸς ἄλληλα διαίρεσις
19 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1:1.1.2#Περὶ μὲν οὖν ἐνυπνίου τοσαῦτα εἰρήσθω τὸ δὲ ὄνομα αὐτὸ κύριον, οὐχ ἢ
20 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1:1.2.1#Ἐτι τῶν ὀνείρων οἱ μὲν εἰσι θεωρηματικοὶ οἱ δὲ ἀλληγορικοί. καὶ θεωρη
21 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1:1.2.2#Ἐὼ δ' οἶμαι δεῖν καὶ τὴν αἰτίαν αὐτῶν, ὥς μάλιστα δυνατόν ἐμοί, καθ'
22 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1:1.2.3#Ὀνειρὸς ἐστὶ κίνησις ἢ πλάσις ψυχῆς πολυσχέμων σημαντικῇ τῶν ἐσομένων
23 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1:1.2.4#Ἐτι τῶν ἀλληγορικῶν ὀρίζονται τινες πάντε εἶναι εἶδη. τοὺς μὲν γὰρ ἰδ
24 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1:1.3.1#Ἐτι δὲ λέγουσιν οἱ περὶ ταῦτα δεινοὶ ὅτι δεῖ κρίνειν αἵσια τὰ φύσει κ
25 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1:1.3.2#Ταῦτα μὲν οὖν εἰς ἀναπλήρωσιν τῶν ὑπὸ τῶν παλαιῶν ἐνδεῶς εἰρημένων ἰ
26 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1:1.4.1#Τῶν ὀνείρων οἱ μὲν πολλὰ διὰ πολλῶν προαγορεύουσιν, οἱ δὲ ὀλίγα δι' ἑ
```

How does it work?

Repository: CEX library. Library URN: urn:cite2:cex:unesp_fu.v1:demo_all. License: CC 3.0 NC-BY

CITE Environment version 1.14.0 [[Online Help](#)]

1
Choose a local .cex file Nenh...nado

Browse Texts

Explore Texts

urn:cts:greekLit:tlg0096.tlg002.First1K-grc1:1.head

urn:cts:greekLit:tlg0096.tlg002.First1K-grc1:1.head

Retrieve Passage

See All Versions of Passage

▲ Text Passage History

2

▲ Cited Works



How does it work?

Repository: CEX library. Library URN: urn:cite2:cex:unesp_fu.v1:demo_all. License: CC 3.0 NC-BY

CITE Environment version 1.14.0 [[Online Help](#)]

Choose a local . cex file all.cex.txt

Browse Texts

Explore Texts

urn:cts:greekLit:tlg0096.tlg002.mcdezotti:1.text

urn:cts:greekLit:tlg0096.tlg002.mcdezotti:1.text

Retrieve Passage

See All Versions of Passage

▲ Text Passage History

3



▲ Cited Works

Aesop, Fabulae (M.C. Dezotti, trans., 2020) urn:cts:greekLit:tlg0096.tlg002.mcdezotti:1.text

1.text Os bens todos, por serem frágeis, foram perseguidos pelos males. Então, subiram ao céu. E os bens perguntaram a Zeus como deviam comportar-se entre os homens. Ele então falou para se acercarem dos homens, não todos em conjunto, mas um de cada vez. Por isso os males constantemente se acercam dos homens porque estão por perto, enquanto os bens descem do céu mais devagar. A fábula mostra que ninguém depara rapidamente com um bem, mas pelos males cada pessoa é a cada momento atingida.



4

Browse Texts

Explore Texts

urn:cts:greekLit:tlg0096.tlg002.First1K-grad:1.head

Citation Results

▲ Previous Searches

▲ **Scope for Exploration**
Whole Corpus

N-Gram Tools

N-Gram Occurs

Filter String

Ignore Punctuation ☒

String Search

String Search:

Token Search

Enter one or more word-tokens, separated by a space:

Token Search:

Proximity:

▼ Scope for Exploration

Whole Corpus

Whole Corpus

[Aesop, Fabulae \(Helm, Teubner, 1872\)](#)
(fable)

[Aesop, Fabulae \(M.C. Dezotti, trans., 2020\)](#)
(fable)

[Artemidorus, Onirocriticon \(Pack, Teubner, 1963, F1K digital edition\)](#)
(book/section/subsection)

[Homeric Epic, Odisseia \(Christian Werner, trans.\)](#)
(book/line)

[Artemidorus, Onirocriticon \(A. Ferreira, trans. 2015\)](#)
(book/section/subsection)

Browse Texts

Explore Texts

urn:cts:greekLit:tlg0096.tlg002.mcdezotti:

N-Grams

NGram Query: n=3; threshold = 3; ignore-punctuation=true; filtered by "";
scope=urn:cts:greekLit:tlg0096.tlg002.mcdezotti:. Time: 0.038 seconds. Results: 3.

(10) [fábula mostra que](#) (10) [A fábula mostra](#) (4) [se pôs a](#)

Citation Results

Fetches 4 passages in 0.272 seconds: threshold = 3; ignore-punctuation = true; queried on
'urn:cts:greekLit:tlg0096.tlg002.mcdezotti:'.

1. [Aesop, Fabulae \(M.C. Dezotti, trans., 2020\), 12.text](#) “...oram fugindo. E como o pastor **se pôs a**
acusá-las de ingratidão, vist...”
2. [Aesop, Fabulae \(M.C. Dezotti, trans., 2020\), 14.text](#) “...etexto bem plausível. E então **se pôs a**
acusá-lo de que era um estorv...”
3. [Aesop, Fabulae \(M.C. Dezotti, trans., 2020\), 16.text](#) “...stado na frente do galinheiro **se pôs a**
perguntar a elas como estavam...”
4. [Aesop, Fabulae \(M.C. Dezotti, trans., 2020\), 17.text](#) “...a e, tendo acertado o chifre, **se pôs a**
pedir que ela não revelasse a...”

[▲ Previous Searches](#)

[▲ Scope for Exploration](#)

Aesop, Fabulae (M.C. Dezotti, trans., 2020)

N-Gram Tools

N-Gram Occurs > times

Filter String

Ignore Punctuation ☒

String Search

String Search:

Token Search

Enter one or more word-tokens, separated by a space:

Token Search:

Proximity:

Browse Texts

Explore Texts

urn:cts:greekLit:tlg0096.tlg002.First1K-grc1:

N-Grams

NGram Query: n=3; threshold = 3; ignore-punctuation=true; filtered by "";
scope=urn:cts:greekLit:tlg0096.tlg002.First1K-grc1:. Time: 0.025 seconds. Results: 2.

(7) [Ὁ λόγος δηλοῖ](#) (4) [λόγος δηλοῖ ὅτι](#)

Citation Results

Fetchted 7 passages in 0.262 seconds: threshold = 3; ignore-punctuation = true; queried on
'urn:cts:greekLit:tlg0096.tlg002.First1K-grc1:'.

1. [Aesop, Fabulae \(Helm, Teubner, 1872\), 1.text](#) “...ὰ βράδιον ἐξ οὐρανοῦ κάτεισι. ***Ὁ λόγος δηλοῖ**, ὅτι ἀγαθῷ μὲν οὐδεὶς ταχέως ...”
2. [Aesop, Fabulae \(Helm, Teubner, 1872\), 5.text](#) “...ετοῦ πάντας αὐτοὺς κατέφαγεν. ***Ὁ λόγος δηλοῖ**, ὅτι οἱ φιλίαν παρασπονδούντε...”
3. [Aesop, Fabulae \(Helm, Teubner, 1872\), 7.text](#) “...ι, τοὺς ἀετούς μὴ νεοττεύειν. ***Ὁ λόγος δηλοῖ**, μηδενὸς καταφρονεῖν, λογιζομ...”
4. [Aesop, Fabulae \(Helm, Teubner, 1872\), 9.text](#) “...ὰ μηδέπω φαινόμενα διώκοιμι. ***Ὁ λόγος δηλοῖ**, ὡς οὕτω καὶ τῶν ἀνθρώπων ἀλό...”
5. [Aesop, Fabulae \(Helm, Teubner, 1872\), 11.text](#) “...ὶ Διονυσίοις ἐρίφους τέξεται. ***Ὁ λόγος δηλοῖ**, ὅτι πολλοὶ διὰ τὸ ἴδιον κέρδ...”
6. [Aesop, Fabulae \(Helm, Teubner, 1872\), 12.text](#) “...ν, ἐκεῖνας ἡμῶν προκρινεῖς. ***Ὁ λόγος δηλοῖ** μὴ δεῖν τούτων προσεταιρίζεσθ...”
7. [Aesop, Fabulae \(Helm, Teubner, 1872\), 15.text](#) “...λαξ γένη, οὐ προσελευσόμεθα. ***Ὁ λόγος δηλοῖ**, ὅτι οἱ φρόνιμοι τῶν ἀνθρώπων...”

▲ Previous Searches

▲ Scope for Exploration
Aesop, Fabulae (Helm, Teubner, 1872)

N-Gram Tools

N-Gram

3

 Occurs >

3

 times

Filter String

String to filter results

Ignore Punctuation ☒

Query for N-Grams

String Search

String Search:

se pos a

Search

Token Search

Enter one or more word-tokens, separated by a space:

Token Search:

word1 word2 word3

Proximity:

20

Search

What DUCAT is

- Daughter-of-Ugarit Citation Alignment Tool.
- An alignment tool in a single web-page app based on the CITE architecture protocol and based on Ugarit alignment tool (up to 3 texts).
- Texts and translations with citable resources - identifiable and retrievable via machine-actional canonical citations in URN format. (CTS-URNs)
- It is able to load multiple translations
- The words also are identified





Eumaeus initial check-in.

15011a9 on 29 Jan

1 contributor

11014 lines (11011 sloc) 726 KB

Raw

Blame

History



```
1  #!cexversion
2  3.0
3
4  #!citelibrary
5  name#CEX Library created by CEXWriter
6  urn#urn:cite2:cex:TEMPCOLL.TEMPVERSION:TEMP_ID
7  license#Public Domain.
8
9  #!ctscatalog
10 urn#citationScheme#groupName#workTitle#versionLabel#exemplarLabel#online#lang
11 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:#book/section/subsection/token#Artemidorus#Onirocriticon#Pack, Teub
12 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:#book/section/subsection/token#Artemidorus#Onirocriticon#A. Ferreira,
13
14 #!ctsdata
15 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.prooimion.head.0#E
16 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.prooimion.1.0#Ἀρτεμίδωρος
17 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.prooimion.1.1#Ἀρτεμίδωρῳ
18 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.prooimion.1.2#οὐδ'
19 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.prooimion.1.3#χαίρειν.
20 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.prooimion.2.0#Ἀξίον
21 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.prooimion.2.1#μὲν
22 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.prooimion.2.2#ἴσως,
23 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.prooimion.2.3#ὧ
24 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.prooimion.2.4#τέκνον,
25 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.prooimion.2.5#ἐγκαλεῖν
26 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.prooimion.2.6#τῆς
27 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.prooimion.2.7#βραδυτήτος
28 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.prooimion.2.9#ἡμῖν,
29 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.prooimion.2.10#εἰ
```

```
1  #!cexversion
2  3.0
3
4  #!citelibrary
5  name#CEX Library created by CEXWriter
6  urn#urn:cite2:cex:TEMPCOLL.TEMPVERSION:TEMP_ID
7  license#Public Domain.
8
9  #!ctscatalog
10 urn#citationScheme#groupName#workTitle#versionLabel#exemplarLabel#online#lang
11 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:#book/section/subsection/token#Artemidorus#Onirocriticon#A. Ferreira,
12 urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:#book/section/subsection/token#Artemidorus#Onirocriticon#Pack, Teubi
13
14 #!ctsdata
15 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.prooimion.head.0#5
16 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.prooimion.1.0#Artemidoro
17 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.prooimion.1.1#saúda
18 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.prooimion.1.2#o
19 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.prooimion.1.3#seu
20 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.prooimion.1.4#filho
21 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.prooimion.1.5#Artemidoro
22 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.prooimion.2.0#Talvez,
23 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.prooimion.2.1#filho,
24 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.prooimion.2.2#fosse
25 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.prooimion.2.3#justo
26 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.prooimion.2.4#nos
27 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.prooimion.2.5#acusar
28 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.prooimion.2.6#de
29 urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.prooimion.2.7#morosidade,
```

New alignment:

 

Artemidorus, Onirocriticon (Pack, Teubner, 1963, F1K digital edition: Tokenized) urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.3

5.3.1 εἰς γυμνάσιον τὸ ἐν τῇ πατρίδι

ὄν αὐτοῦ εἰσελθὼν ἰδεῖν εἰκόνα ἰδίαν, ἣ τις καὶ

ὑπαρ ἦν ἀνακειμένη· εἶτα ἐδόκει αὐτῷ τὸ πῆγμα

τῆς εἰκόνος πᾶν τὸ ἔξωθεν διαλελύσθαι.

πυνθανομένῳ δέ τινα τί συμβεβηκὸς εἴη περὶ τὴν

εἰκόνα λέγειν ᾧετο ἡ μὲν εἰκὼν μου μένει ὑγιής, τὸ

δὲ πῆγμα λέλυται. χωλὸς ἐγένετο ἀμφοτέρους

τοὺς πόδας εἰκότως· τὸ μὲν γὰρ γυμνάσιον

σύμβολον ἦν τῆς καθ' ὅλον τὸν ὄγκον εὐεξίας, ἡ

δὲ εἰκὼν τὰ περὶ τὸ πρόσωπον ἐσήμαινε, τὸ δὲ

ἔξωθεν πῆγμα τὰ λοιπὰ τοῦ σώματος ἦν.

Artemidorus, Onirocriticon (A. Ferreira, trans. 2015: Tokenized) urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.3

5.3.1 que, ao entrar em um

ginásio que existia em sua terra natal, via seu

próprio retrato, o qual, em estado de vigília, estava

exposto como oferenda. depois, o quadro do

retrato lhe parecia se desprender todo por fora. A

alguém que perguntava o que havia acontecido em

volta do retrato, ele acreditava responder: "o meu

retrato, por um lado, permanece intacto; por outro,

o quadro está desmantelado". Aleijado se tornou

de ambos os pés, justamente. Pois o ginásio era

símbolo do bom estado do corpo inteiro, o retrato

sinallizava o aspecto do rosto, e o quadro de fora

era o restante do corpo.



Saved Alignments:

0 1 2 3 4 5

New alignment:



Artemidorus, Onirocriticon (Pack, Teubner, 1963, F1K digital edition:
Tokenized) <urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.1>

5.1.1 "Εδοξέ τις τοῦ Ποσειδῶνος
τοῦ ἐν Ἴσθμῳ τῇ βάσει ἀλύσει προσδεδέσθαι.
ἱερεὺς ἐγένετο τοῦ Ποσειδῶνος ἔδει γὰρ αὐτὸν
ἀχώριστον εἶναι τῶν τῆς ἱερωσύνης τόπων.

Artemidorus, Onirocriticon (A. Ferreira, trans. 2015: Tokenized)
<urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.1>

5.1.1 Um sujeito sonhou acorrentar-se
na base da estátua de Poseidon no
templo de istmo. Tornou-se sacerdote de
Poseidon: pois era preciso ser inseparável dos lo-
cais do sacerdócio.



Saved Alignments:

New alignment:



Artemidorus, Onirocriticon (Pack, Teubner, 1963, F1K digital edition: Tokenized) [urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.95](https://www.ancientlibrary.com/urbin/urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.95)

5.95.1

καὶ ἅμα τὴν κεφαλὴν δήσας

ἐστεφανῶσθαι. ἐγένετο ἱερονίκης καὶ οὐκ ἄδοξος·

καὶ μέχρι ἄφθορος ἦν, λαμπρῶς καὶ ἐπιφανῶς τῇ

ἀθλήσει ἐχρήσατο, χαρισάμενος δὲ ἀφροδισίοις

ἀδόξως κατέλυσεν.

Artemidorus, Onirocriticon (A. Ferreira, trans. 2015: Tokenized) [urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.95](https://www.ancientlibrary.com/urbin/urn:cts:greekLit:tlg0553.tlg001.ferreira.token:5.95)

5.95.1

e, ao mesmo tempo, tendo

abaixado a cabeça, era coroadado. Tornou-se

vencedor dos jogos sagrados e não sem

notoriedade: e, enquanto estava puro, permaneceu

na carreira de atleta com distinção, mas, tendo

cedido aos caprichos dos prazeres sexuais, largou

a carreira de forma inglória.

urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.

▲ Add Text

Invalid URN

Clear All



New alignment:

τις

“Εδοξέ

Um

sujeito

sonhou



All Versions

Artemidorus, Onirocritica
edition: Tokenized) urn:cts:greekLit:tlg0553.tlg001.1st1K-grc1.token:5.3

5.3.1

“Εδοξέ

τῇ πατρίδι

εἰκόνα ἰδού

ἀνακειμένη

τῆς εἰκόνης παντὸς ἐξώθεν διαλελυσθαι.

πυνθανομένῳ δέ τινι τί συμβεβηκὸς εἴη

περὶ τὴν εἰκόνα λέγειν ὥς τε ἡ μὲν εἰκὼν

remove

(2015: Tokenized)
5.3

que, ao

existia em sua

retrato, o qual,

exposto

como oferenda. depois, o quadro do

retrato lhe parecia se desprender todo

por fora. A alguém que perguntava o que

Download CEX File

Corpus Options: All passages of all texts

Alignment Options: Alignments only

Alignment Collection URN urn:cite2:ducat:alignments.temp

CEX File Name DucatDownload.cex

Editor Name DucatUser

Cancel

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FURMAN-UNESP page

https://furman-editions-in-progress.github.io/UNESP_FU/



A future plan for the DDGP (Dig.Dict.Grc-Por)

- Transform the DDGP corpus in a text with citable resources: identifiable and retrievable via machine-actional canonical citations in URN format
- 1) entries linked to other dictionaries
- 2) proper names (authors, works, places, person names)
- Exchange of visits, students, and training for our programmer

