



DIGITAL HUMANITIES 2022

Annotation and Enrichment Workflow

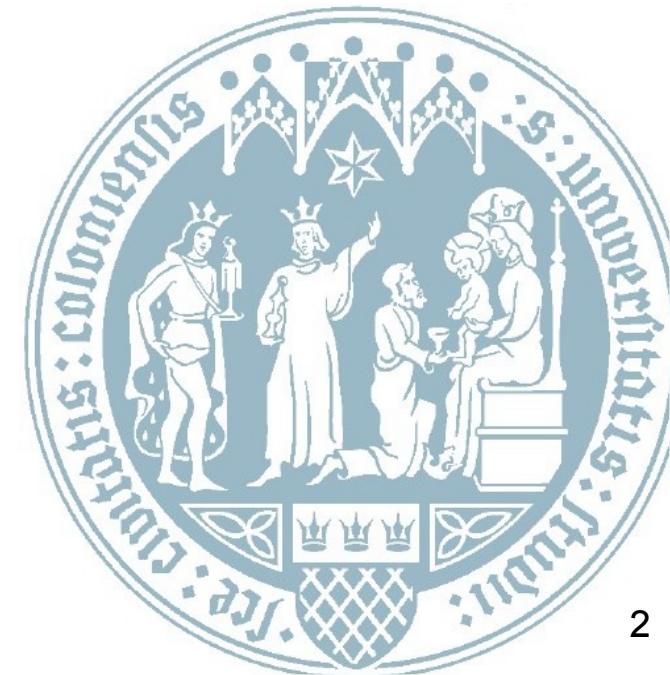
Christian Chiarcos

University of Cologne, Germany



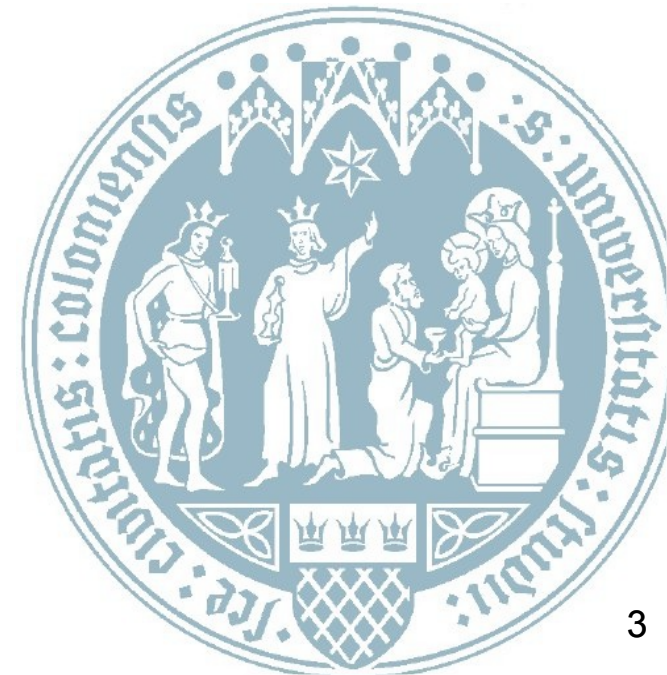
Annotation and Enrichment Workflow

- **Goal:** Show how RDF technology can be used for combining tools and data
 - here: annotate and link named entities
- **Recogito:** Annotate with JSON-LD (that is an RDF format)
 - plain text => plain text + RDF data
- **Protégé:** Create and browse ontologies
 - OWL
- **BlazeGraph:** Query, transform and link annotations and ontologies
 - OWL + RDF data



Sample Data

- Plain text input
 - Recogito also supports TEI, but this is less robust
- Use Case: Annotate named entities and their relations (links)
- Sample Data: World English Bible
 - Open Source, procedure can be replicated on virtually any language
 - If you have your own data, feel free to try that, as well, but this is what we prepared



Sample Data

- All data and documentation in the tutorial repository on [GitHub](#)
 - <https://github.com/dh-tech/DH2022-workshop>
- Slides and links on the [GitHub page](#)
 - <https://dh-tech.github.io/DH2022-workshop/>
- Data samples
 - during the tutorial, we work with excerpts, only
 - This also works for really long texts (say, a full Bible), but some functions (e.g., automated annotation) take some time we'd rather use to look into features ;)
 - for specific data samples, we provide [tiny URLs](#)
- [Bible excerpt](#):
 - <https://tinyurl.com/mtukhwtk>

<https://github.com/dh-tech/DH2022-workshop/blob/main/data/genesis-1-10.txt>



Sample Data: <https://tinyurl.com/mtukhwtk>

267 lines (267 sloc) | 31.2 KB

Raw

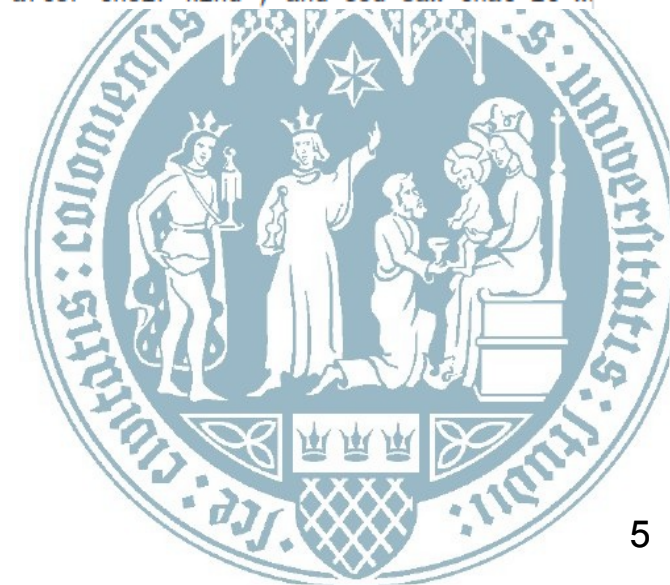
Blame



```
1 In the beginning God created the heavens and the earth .
2 Now the earth was formless and empty . Darkness was on the surface of the deep . God 's Spirit was hovering over the surface of the waters .
3 God said , " Let there be light , " and there was light .
4 God saw the light , and saw that it was good . God divided the light from the darkness .
5 God called the light " day , " and the darkness he called " night . " There was evening and there was morning , one day.
6 God said , " Let there be an expanse in the middle of the waters , and let it divide the waters from the waters . "
7 God made the expanse , and divided the waters which were under the expanse from the waters which were above the expanse ; and it was so .
8 God called the expanse " sky . " There was evening and there was morning , a second day.
9 God said , " Let the waters under the sky be gathered together to one place , and let the dry land appear ; " and it was so .
10 God called the dry land " earth , " and the gathering together of the waters he called " seas . " God saw that it was good .
11 God said , " Let the earth put forth grass , herbs yielding seed , and fruit trees bearing fruit after their kind , with its seed in it , on the earth ; " and
12 The earth brought forth grass , herbs yielding seed after their kind , and trees bearing fruit , with its seed in it , after their kind ; and God saw that it w
```

Goal: annotate named entities

- locations “places”
 - geographical locations: *earth, Euphrates, Nineveh, Assyria, ...*
 - mythological locations: *the waters, the heavens, Eden, ...*



Sample Data: <https://tinyurl.com/mtukhwtk>

267 lines (267 sloc) | 31.2 KB

Raw

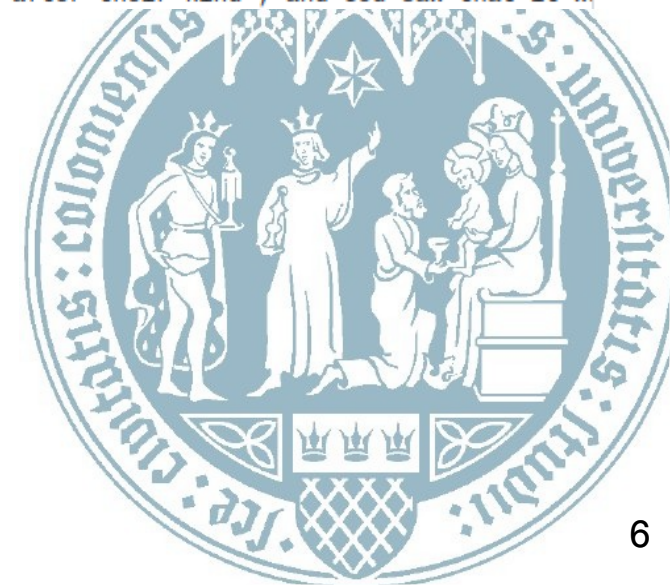
Blame



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9 God said , " Let the waters under the sky be gathered together to one place , and let the dry land appear ; " and it was so .
10 God called the dry land " earth , " and the gathering together of the waters he called " seas . " God saw that it was good .
11 God said , " Let the earth put forth grass , herbs yielding seed , and fruit trees bearing fruit after their kind , with its seed in it , on the earth ; " and
12 The earth brought forth grass , herbs yielding seed after their kind , and trees bearing fruit , with its seed in it , after their kind ; and God saw that it w
```

Goal: annotate named entities

- locations “places”
- persons
 - humans (*Adam, Eve, Noah, ...*)
 - non-human (*God, Yahweh, Spirit, the serpent, ...*)



Sample Data: <https://tinyurl.com/mtukhwtk>

267 lines (267 sloc) | 31.2 KB

Raw

Blame



```
1 In the beginning God created the heavens and the earth .
2 Now the earth was formless and empty . Darkness was on the surface of the deep . God 's Spirit was hovering over the surface of the waters .
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6 God said , " Let there be an expanse in the middle of the waters , and let it divide the waters from the waters . "
7 God made the expanse , and divided the waters which were under the expanse from the waters which were above the expanse ; and it was so .
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9 God said , " Let the waters under the sky be gathered together to one place , and let the dry land appear ; " and it was so .
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11 God said , " Let the earth put forth grass , herbs yielding seed , and fruit trees bearing fruit after their kind , with its seed in it , on the earth ; " and
12 The earth brought forth grass , herbs yielding seed after their kind , and trees bearing fruit , with its seed in it , after their kind ; and God saw that it w
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Goal: annotate named entities

- locations “places”
- persons
- relations
 - e.g., between persons (*X isFatherOf Y*)



Sample Data: <https://tinyurl.com/mtukhwtk>

267 lines (267 sloc) | 31.2 KB

Raw

Blame

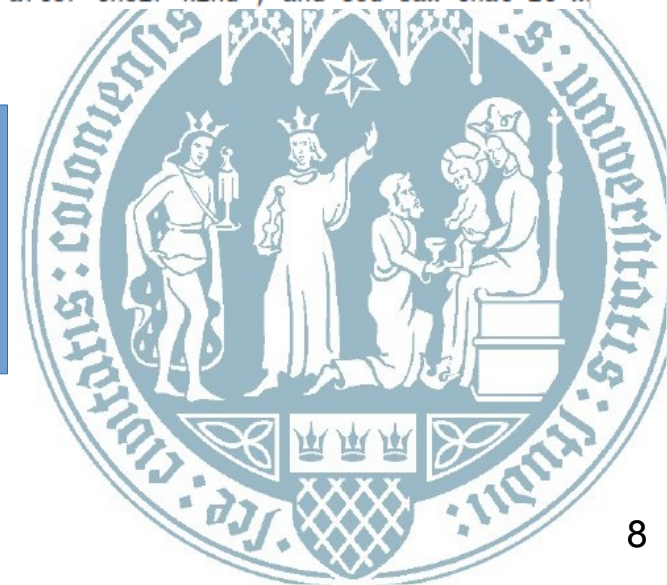


```
1 In the beginning God created the heavens and the earth .
2 Now the earth was formless and empty . Darkness was on the surface of the deep . God 's Spirit was hovering over the surface of the waters .
3 God said , " Let there be light , " and there was light .
4 God saw the light , and saw that it was good . God divided the light from the darkness .
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8 God called the expanse " sky . " There was evening and there was morning , a second day.
9 God said , " Let the waters under the sky be gathered together to one place , and let the dry land appear ; " and it was so .
10 God called the dry land " earth , " and the gathering together of the waters he called " seas . " God saw that it was good .
11 God said , " Let the earth put forth grass , herbs yielding seed , and fruit trees bearing fruit after their kind , with its seed in it , on the earth ; " and
12 The earth brought forth grass , herbs yielding seed after their kind , and trees bearing fruit , with its seed in it , after their kind ; and God saw that it w
```

Goal: annotate named entities

- locations “places”
- persons
- relations
 - e.g., between persons (*X isFatherOf Y*)

Later, these can be
enriched/linked and queried





Annotating Data in Recogito

Christian Chiarcos
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Recogito

Tool for the annotation of (e.g., geographical) entities and their relations

Procopius Building Book 2.txt
189 Annotations · No Other Contributors

ANNOTATION MODE: NORMAL QUICK RELATIONS COLOUR: BY ENTITY TYPE BY VERIFICATION

All the new churches which the Emperor Justinian built both in Constantinople and in the passage of time, he restored, as well as all the other buildings which he erected here, must proceed to the defences with which he surrounded the farthest limits of the territory to halt painfully and to labour with an impossible subject. For it is not the pyramids which the rulers of Egypt, on which labour was expended for a useless show, but rather all the walling it about and frustrating the attacks of the barbarians on the Romans. And it seems

When the Persians retired from the territory of the Romans, selling to them the city of Amida, as I have related in the Books on the Wars, the Emperor Anastasius selected a hitherto insignificant village close to the Persian boundary, Daras by name, and urgently set about enclosing it with a wall and making it into a city which should serve as a bulwark against the enemy. But since it was forbidden in the treaty which the Emperor Theodosius once concluded with the Persian nation, that either party should construct any new fortress on his own land where it bordered on the boundaries of the other nation, the Persians, citing the terms of the peace, tried with all their might to obstruct the work, though they were hard pressed by being involved in a war with the Huns. So the Romans, observing that they were for this reason unprepared, pressed on the work of building all more keenly, being anxious to get ahead of the enemy before they should finish their struggle with the Huns and come against them. Consequently, being fearful by reason of suspicion of the enemy, and continually expecting their attacks, they did not carry out the building

Ad Tygrem/Amida
pleiades:874298
An ancient place, cited: BAtlas 89 C3 Ad Tygrem/A...
Amida, Diyarbakir, Diyarbakir, Qara Amid, Diyar Bak...
720 BC - 2000

Automatic Match Confirm Change

Add a comment...

Add tag...

Cancel OK & Next OK



Recogito

Tool for the annotation of (e.g., geographical) entities and their relations

Supports annotation of

- different source documents, e.g., plain text, TEI/XML
 - textual and multimodal content (e.g., maps)
- in a graphical environment with the mouse

Web tool: recogito.pelagios.org

- no installation needed, just a login



Walk through: recogito.pelagios.org

In the next 20 min, we will

- create account
- download data from GitHub
- upload data into Recogito
- hand-annotate a few terms
- run NER
- annotate "father of" relationship
- export JSON-LD

Then, we have time to annotate your data



Walk through: recogito.pelagios.org

https://recogito.pelagios.org

Recogito |  partner of the
Pelagios
network

Help About

Log In

If you haven't done so,
please register and log in

Semantic Annotation without the pointy brackets

Work on texts and images. Identify and mark named entities. Use
your data in other tools or connect to other data on the Web.

Without the need to learn code.

[Learn More](#)

chiarcos

Your email address

.....

Register for Recogito

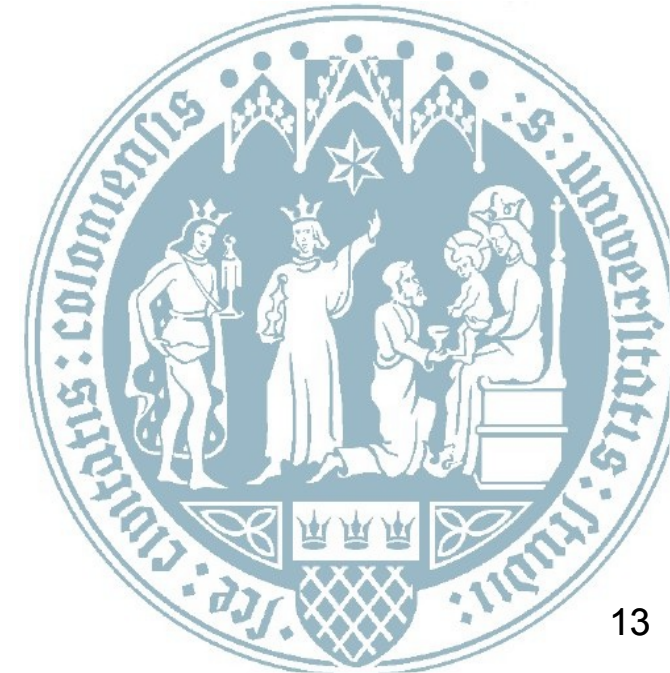
☐ Agree to our Terms and Conditions of Use and
the storage of your E-Mail address.



OPEN SOURCE SOFTWARE

Awarded Best Open Source Software in the
Open Publishing Awards 2019 and Best DH
Tool in the [Digital Humanities Awards 2018](#).

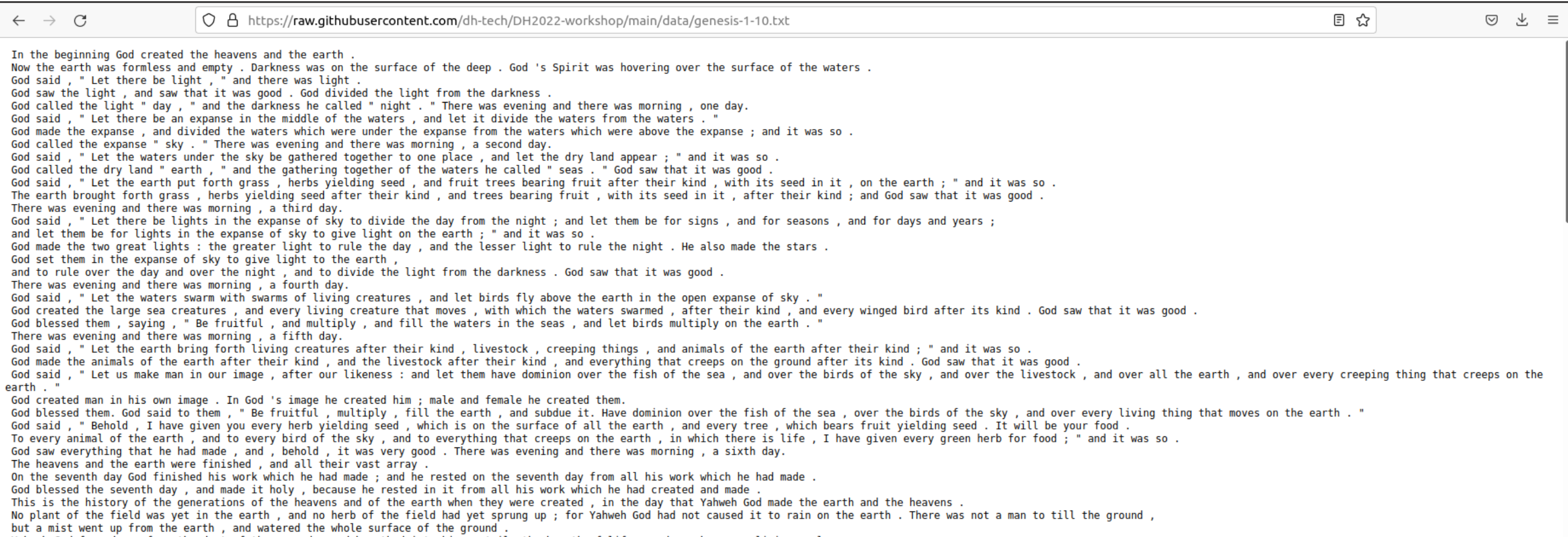
DH
Awards 2018 Winner: Best DH
tool or suite of
tools



Walk through: recogito.pelagios.org

Download sample data
<https://tinyurl.com/mtukhwtk>

e.g., using download functionality integrated into your browser
might be <CTRL>+S



The screenshot shows a web browser window with the address bar displaying `https://raw.githubusercontent.com/dh-tech/DH2022-workshop/main/data/genesis-1-10.txt`. The page content is the text of the Bible, specifically the first ten chapters of Genesis, rendered in a monospaced font. The text describes the creation of the world, from the beginning to the creation of man and the establishment of the world's order.

```
In the beginning God created the heavens and the earth .
Now the earth was formless and empty . Darkness was on the surface of the deep . God 's Spirit was hovering over the surface of the waters .
God said , " Let there be light , " and there was light .
God saw the light , and saw that it was good . God divided the light from the darkness .
God called the light " day , " and the darkness he called " night . " There was evening and there was morning , one day .
God said , " Let there be an expanse in the middle of the waters , and let it divide the waters from the waters . "
God made the expanse , and divided the waters which were under the expanse from the waters which were above the expanse ; and it was so .
God called the expanse " sky . " There was evening and there was morning , a second day .
God said , " Let the waters under the sky be gathered together to one place , and let the dry land appear ; " and it was so .
God called the dry land " earth , " and the gathering together of the waters he called " seas . " God saw that it was good .
God said , " Let the earth put forth grass , herbs yielding seed , and fruit trees bearing fruit after their kind , with its seed in it , on the earth ; " and it was so .
The earth brought forth grass , herbs yielding seed after their kind , and trees bearing fruit , with its seed in it , after their kind ; and God saw that it was good .
There was evening and there was morning , a third day .
God said , " Let there be lights in the expanse of sky to divide the day from the night ; and let them be for signs , and for seasons , and for days and years ;
and let them be for lights in the expanse of sky to give light on the earth ; " and it was so .
God made the two great lights : the greater light to rule the day , and the lesser light to rule the night . He also made the stars .
God set them in the expanse of sky to give light to the earth ,
and to rule over the day and over the night , and to divide the light from the darkness . God saw that it was good .
There was evening and there was morning , a fourth day .
God said , " Let the waters swarm with swarms of living creatures , and let birds fly above the earth in the open expanse of sky . "
God created the large sea creatures , and every living creature that moves , with which the waters swarmed , after their kind , and every winged bird after its kind . God saw that it was good .
God blessed them , saying , " Be fruitful , and multiply , and fill the waters in the seas , and let birds multiply on the earth . "
There was evening and there was morning , a fifth day .
God said , " Let the earth bring forth living creatures after their kind , livestock , creeping things , and animals of the earth after their kind ; " and it was so .
God made the animals of the earth after their kind , and the livestock after their kind , and everything that creeps on the ground after its kind . God saw that it was good .
God said , " Let us make man in our image , after our likeness : and let them have dominion over the fish of the sea , and over the birds of the sky , and over the livestock , and over all the earth , and over every creeping thing that creeps on the
earth . "
God created man in his own image . In God 's image he created him ; male and female he created them .
God blessed them . God said to them , " Be fruitful , multiply , fill the earth , and subdue it . Have dominion over the fish of the sea , over the birds of the sky , and over every living thing that moves on the earth . "
God said , " Behold , I have given you every herb yielding seed , which is on the surface of all the earth , and every tree , which bears fruit yielding seed . It will be your food .
To every animal of the earth , and to every bird of the sky , and to everything that creeps on the earth , in which there is life , I have given every green herb for food ; " and it was so .
God saw everything that he had made , and , behold , it was very good . There was evening and there was morning , a sixth day .
The heavens and the earth were finished , and all their vast array .
On the seventh day God finished his work which he had made ; and he rested on the seventh day from all his work which he had made .
God blessed the seventh day , and made it holy , because he rested in it from all his work which he had created and made .
This is the history of the generations of the heavens and of the earth when they were created , in the day that Yahweh God made the earth and the heavens .
No plant of the field was yet in the earth and no herb of the field had yet sprung up ; for Yahweh God had not caused it to rain on the earth . There was not a man to till the ground ,
but a mist went up from the earth , and watered the whole surface of the ground .
```


Walk through: recogito.pelagios.org

The screenshot shows the Recogito workspace interface. The browser address bar displays `https://recogito.pelagios.org/chiarcos`. On the left sidebar, the user profile 'chiarcos' (joined 15 Jul 2019) is shown. Below the profile, a blue button labeled '+ New' is circled in orange. Further down the sidebar are sections for 'My Documents', 'Shared with me', 'Storage' (4.28 of 200 MB used), and 'Activity' (72 edits). The main workspace area features a search bar 'Search my workspace' and a table titled 'My Documents' with a '+ Add a description...' link. The table has columns for 'Author', 'Title', and 'Lang'. It lists several documents, including 'bible-web.txt', 'recogito-download-sample.tei.xml', '11977073.txt', 'DPN_SD_1869.tei.xml', and a 'Welcome to Recogito' message from the 'Recogito Team'.

Author	Title	Lang
	bible-web.txt	
	recogito-download-sample.tei.xml	
	11977073.txt	
	DPN_SD_1869.tei.xml	
Recogito Team	Welcome to Recogito	

log into your workspace
create a "+ New" document

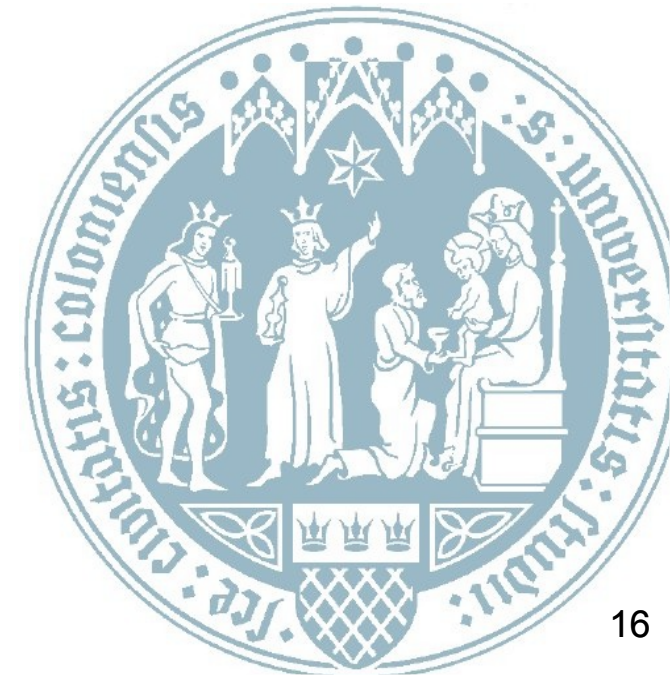


Walk through: recogito.pelagios.org

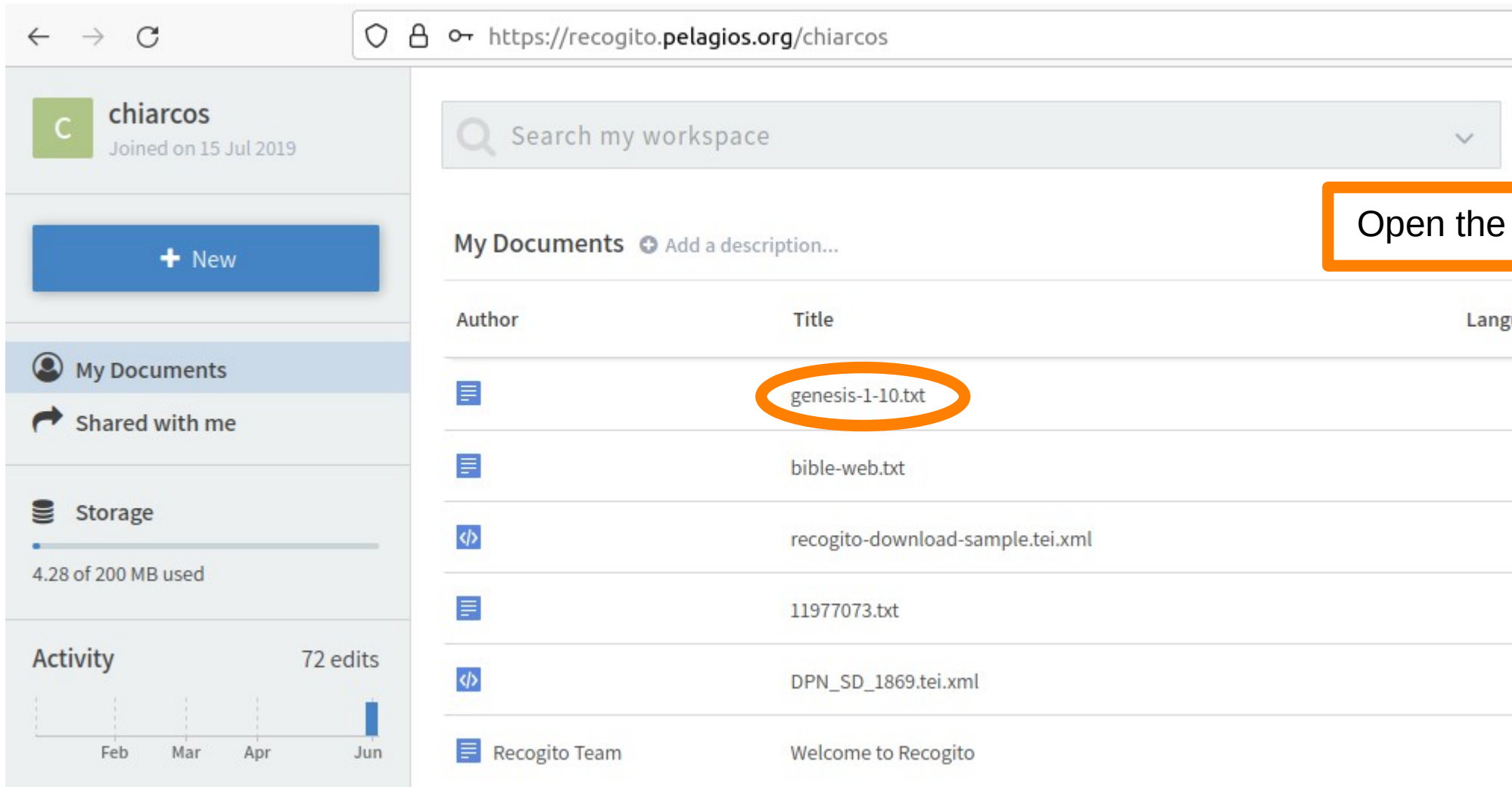
The screenshot shows the Recogito workspace interface. The browser address bar displays `https://recogito.pelagios.org/chiarcos`. On the left sidebar, the user profile for 'chiarcos' (joined on 15 Jul 2019) is shown. Below it, a menu is open with 'File upload' highlighted by an orange circle. Other options in the menu include 'Folder', 'From IIIF manifest', 'From CTS service', and 'From RISE Repository'. The 'Storage' section shows 4.28 of 200 MB used. The 'Activity' section shows 72 edits from February to June. The main workspace area has a search bar 'Search my workspace' and a table titled 'My Documents' with a '+ Add a description...' link. The table lists documents with columns 'Author' and 'Title':

Author	Title
	bible-web.txt
	recogito-download-sample.tei.xml
	11977073.txt
	DPN_SD_1869.tei.xml
Recogito Team	Welcome to Recogito

File upload of the previously downloaded data sample



Walk through: recogito.pelagios.org



The screenshot shows the Recogito web interface. The browser address bar displays `https://recogito.pelagios.org/chiarcos`. The left sidebar identifies the user as **chiarcos**, joined on 15 Jul 2019, and includes a '+ New' button. Below this are sections for 'My Documents', 'Shared with me', 'Storage' (4.28 of 200 MB used), and 'Activity' (72 edits, with a bar chart for Feb, Mar, Apr, Jun). The main workspace features a search bar labeled 'Search my workspace' and a 'My Documents' section with an 'Add a description...' link. A table lists documents with columns for Author, Title, and Language. The first document, 'genesis-1-10.txt', is highlighted with an orange circle. Other documents include 'bible-web.txt', 'recogito-download-sample.tei.xml', '11977073.txt', 'DPN_SD_1869.tei.xml', and a 'Welcome to Recogito' message from the Recogito Team.

Author	Title	Language
	genesis-1-10.txt	
	bible-web.txt	
	recogito-download-sample.tei.xml	
	11977073.txt	
	DPN_SD_1869.tei.xml	
Recogito Team	Welcome to Recogito	

Open the new document








Walk through: recogito.pelagios.org

← → ↺

https://recogito.pelagios.org/document/uwbc4hkcdurg1s/part/1/edit

chiarcos
Joined on 15 Jul 2019

genesis-1-10.txt



genesis-1-10.txt

0 Annotations · No Other Contributors

ANNOTATION MODE:

NORMAL

QUICK ▾

RELATIONS

COLOUR:

BY ENTITY TYPE

BY VERIFICATION STATUS

BY FIRST TAG

In the beginning God created the heavens and the earth .

Now the earth was formless and empty . Darkness was on the surface of the deep . God 's Spirit was hovering over the surface of the waters .

God said , " Let there be light , " and there was light .

God saw the light , and saw that it was good . God divided the light from the darkness .

God called the light " day , " and the darkness he called " night . " There was evening and there was morning , one day.

God said , " Let there be an expanse in the middle of the waters , and let it divide the waters from the waters . "

God made the expanse , and divided the waters which were under the expanse from the waters which were above the expanse ; and it was so .

God called the expanse " sky . " There was evening and there was morning , a second day.

We stay with normal
annotation mode

Walk through: recogito.pelagios.org

The screenshot shows the web interface of recogito.pelagios.org. The browser address bar displays the URL. On the left, a sidebar identifies the user as 'chiarcos' and the document as 'genesis-1-10.txt'. The main editing area shows the text 'In the beginning God created the heavens and the earth .', with the word 'God' highlighted. A context menu is open over the highlighted text, offering options to 'Place', 'Person', or 'Event', as well as 'Add a comment...' and 'Add tag...'. At the bottom of the menu are 'Cancel', 'OK & Next', and 'OK' buttons. Two orange callout boxes provide instructions: 'mark a span with the mouse' points to the highlighted word, and 'add a comment, tag, or give it a type (place, person, event)' points to the context menu options.

← → ↻ <https://recogito.pelagios.org/document/uwbc4hkcdurg1s/part/1/edit>

chiarcos
Joined on 15 Jul 2019

genesis-1-10.txt

genesis-1-10.txt

0 Annotations · No Other Contributors

ANNOTATION MODE: **NORMAL** QUICK ▾ RELATIONS COLOUR: **BY ENTITY TYPE** BY VERIFICATION STATUS BY FIRST TAG

In the beginning **God** created the heavens and the earth .

Now the earth was without form and void, and darkness was over the face of the deep. And the Spirit of God was hovering over the surface of the waters .

God said , " Let there be light , " and there was light .

God saw the light , and it was good , and God separated the light from the darkness .

God called the light " day , " and the darkness " night . " And there was evening and there was morning , one day .

God called the darkness " night . " And there was evening and there was morning , a second day .

God said , " Let the waters under the sky be gathered together into one place , " and it was so .

God made the expanse , and divided the waters which were under the expanse from the waters which were above the expanse ; and it was so .

God called the expanse " sky . " There was evening and there was morning , a second day .

Place Person Event

Add a comment...

Add tag...

Cancel OK & Next OK

mark a span with the mouse

add a comment, tag, or give it a type (place, person, event)

Walk through: recogito.pelagios.org

The screenshot shows the web interface of <https://recogito.pelagios.org/document/uwbc4hkcdurg1s/part/1/edit>. The user 'chiarcos' is logged in. The document 'genesis-1-10.txt' is open, showing the text 'In the beginning God created the heavens and the earth .'. The 'ANNOTATION MODE' is set to 'NORMAL'. A modal dialog is open for marking 'God' as a person. The dialog has tabs for 'Place', 'Person', and 'Event'. The 'Person' tab is selected, showing a person icon and the text 'Marked as a Person'. Below this, there is a text input field with the placeholder 'you can put any free text comment here, tags are useful for annotating classes that Recogito doesn't support'. At the bottom of the dialog are buttons for 'Cancel', 'OK & Next', and 'OK'.

chiarcos
Joined on 15 Jul 2019

genesis-1-10.txt

0 Annotations · No Other Contributors

ANNOTATION MODE: NORMAL QUICK RELATIONS COLOUR: BY ENTITY TYPE BY VERIFICATION STATUS BY FIRST TAG

In the beginning God created the heavens and the earth .

Now the earth was without form and void, and darkness was over the surface of the deep, and God's Spirit was hovering over the surface of the waters .

God said , " Let there be light , " and there was light .

God saw the light , and it was good , and God separated the light from the darkness .

God called the light " day , " and the darkness " night . " And there was evening , and there was morning , one day .

God said , " Let the waters be productive , and let there be living creatures in the waters from the waters . " And God created the great sea monsters and every living creature that moves in the waters which were above the expanse ; and it was so . And God blessed them , saying , " Be fruitful , and multiply , and fill the waters . " And there was evening , and there was morning , a second day .

God called the expanse " sky , " and it was so . And God separated the sky from the waters below .

God said , " Let the dry land appear ; " and it was so .

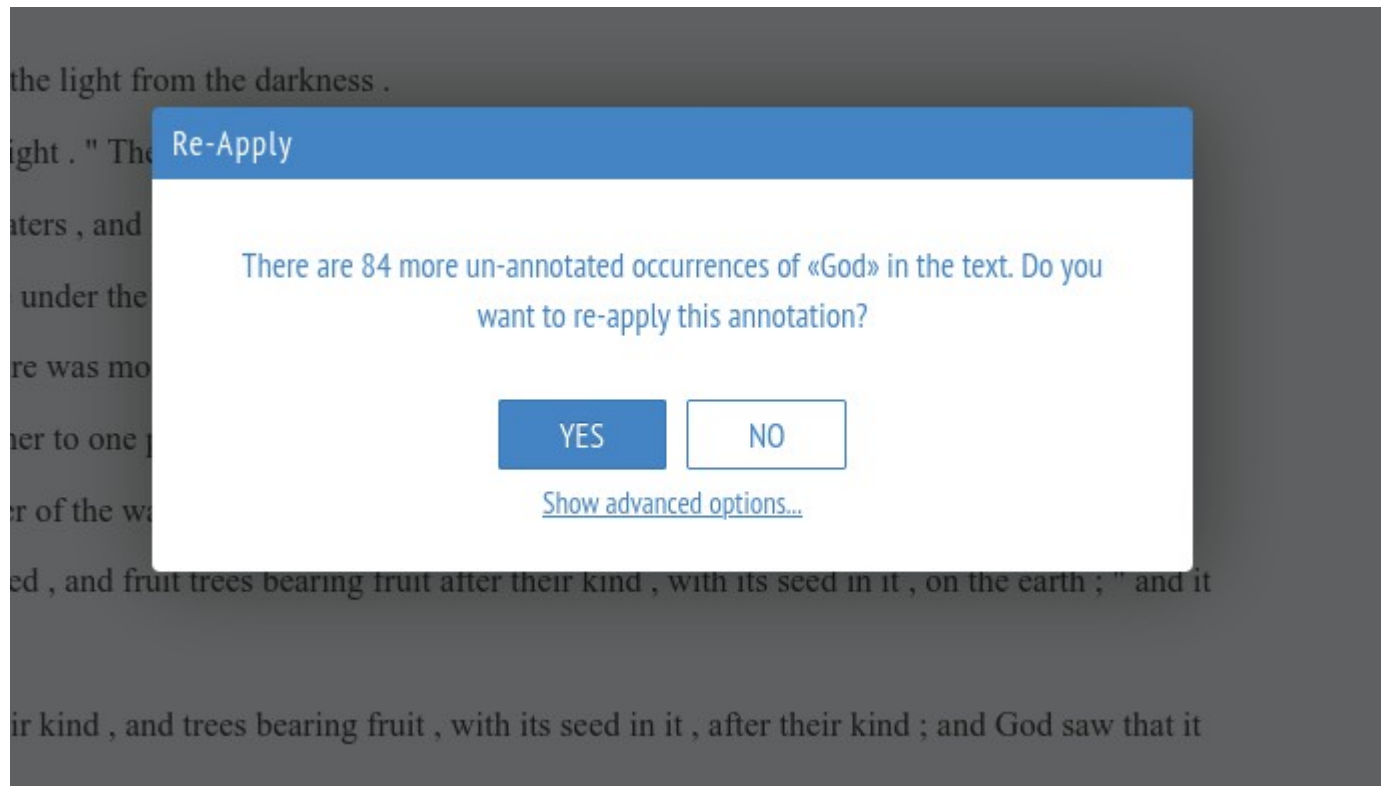
God called the dry land " earth , " and the gathering together of the waters he called " seas . " God saw that it was good .

God said , " Let the earth put forth grass , herbs yielding seed , and fruit trees bearing fruit after their kind , with its seed in it , on the earth ; " and it was so .

annotate as a person



Walk through: recogito.pelagios.org



click "Ok" =>
dialog for auto-annotation



Walk through: recogito.pelagios.org

Bulk Annotation

God

you can put any free text ...

Apply this annotation if:

- ☒ phrase matches «God»
 - ☒ require full word match (surrounded by whitespace, comma, etc.)
 - ☐ allow any string match, including inside words
- ☐ annotation status is currently Not Verified

Apply this change to:

- ☒ annotated matches
- ☒ unannotated matches

Your change will affect 84 unannotated matches

Cancel Apply Changes

advanced => refined
auto-annotation options








Walk through: recogito.pelagios.org

← → ↺

https://recogito.pelagios.org/document/uwbc4hkcdurg1s/part/1/edit

chiarcos
Joined on 15 Jul 2019

genesis-1-10.txt



genesis-1-10.txt

85 Annotations · No Other Contributors

ANNOTATION MODE:

NORMAL

QUICK ▾

RELATIONS

COLOUR:

BY ENTITY TYPE

BY VERIFICATION STATUS

BY FIRST TAG

In the beginning **God** created the heavens and the earth .

Now the earth was formless and empty . Darkness was on the surface of the deep . **God** 's Spirit was hovering over the surface of the waters .

God said , " Let there be light , " and there was light .

God saw the light , and saw that it was good . **God** divided the light from the darkness .

God called the light " day , " and the darkness he called " night . " There was evening and there was morning , one day.

God said , " Let there be an expanse in the middle of the waters , and let it divide the waters from the waters . "

God made the expanse , and divided the waters which were under the expanse from the waters which were above the expanse ; and it was so .

God called the expanse " sky . " There was evening and there was morning , a second day.

now, let's annotate some places

Walk through: recogito.pelagios.org

In the beginning God created the heavens and the earth .

Now the earth was formless

God said , " Let there be light

God saw the light , and saw

God called the light " day , "

God said , " Let there be an

God made the expanse , and

God called the expanse " sky

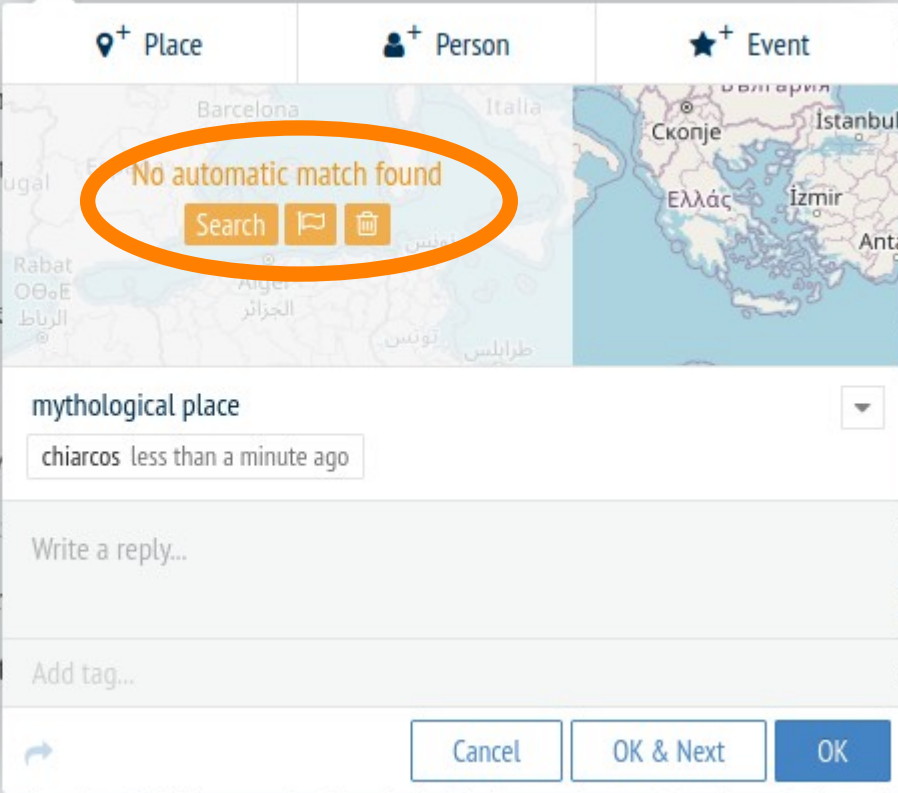
God said , " Let the waters u

God called the dry land " ear

God said , " Let the earth put

was so .

The earth brought forth grass , herbs yielding seed after their kind , and trees bearing fruit , with its seed

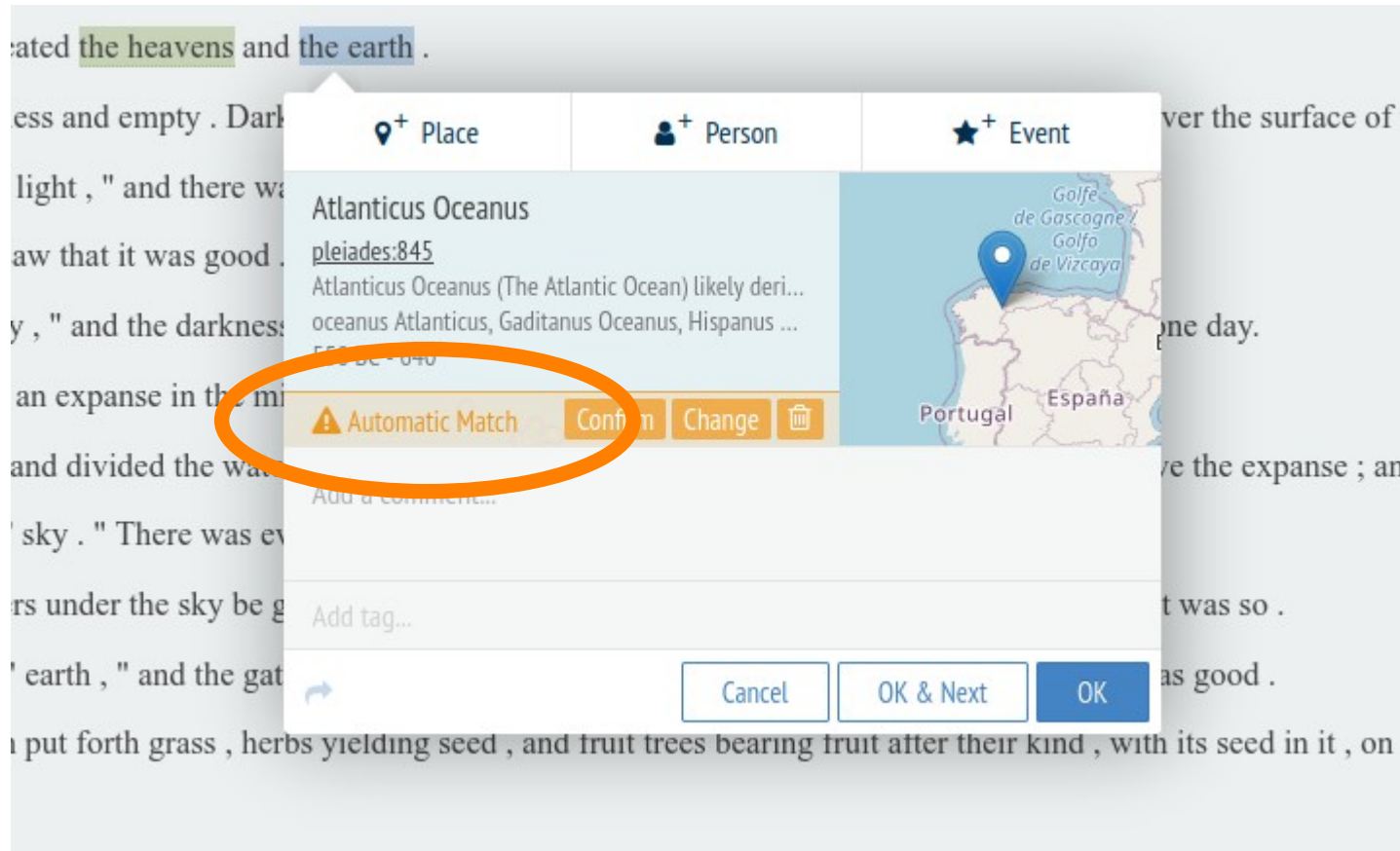


The screenshot shows the Recogito interface with a map overlay. The map shows a region including Barcelona, Italia, and parts of the Mediterranean. A message "No automatic match found" is displayed in a yellow box, with "Search" and "Add tag" buttons below it. Below the map, there is a text input field containing "mythological place" and a dropdown menu. Below that, there is a text input field containing "chiarcos less than a minute ago". At the bottom of the overlay, there are buttons for "Cancel", "OK & Next", and "OK".

For places, Recogito attempts to match against internal gazetteers
we use a comment to clarify that it is a mythological place



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It is hard to override automated matches for mythological places, you're expected to provide alternative coordinates, then use comments or tags to clarify for postprocessing



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resh and the onyx stone .
er that flows through the whole land of Cush .
ne which flows in front of Assyria . The fourth river is the Euphrates .
den of Eden to dress it and
ery tree of the garden you
ou shall not eat of it ; for i
ld be alone ; I will make
l of the field , and every b
, that was its name .
ls of the sky , and to every
and he slept ; and he too
n the man , into a woman , and brought her to the man .
flesh of my flesh . She will be called 'w oman , ' because she was taken out of Man . "

Place

Person

Event

Assyria

kima:12986

Asshur, Assur, אשור

chiarcos less than a minute ago

Add a comment...

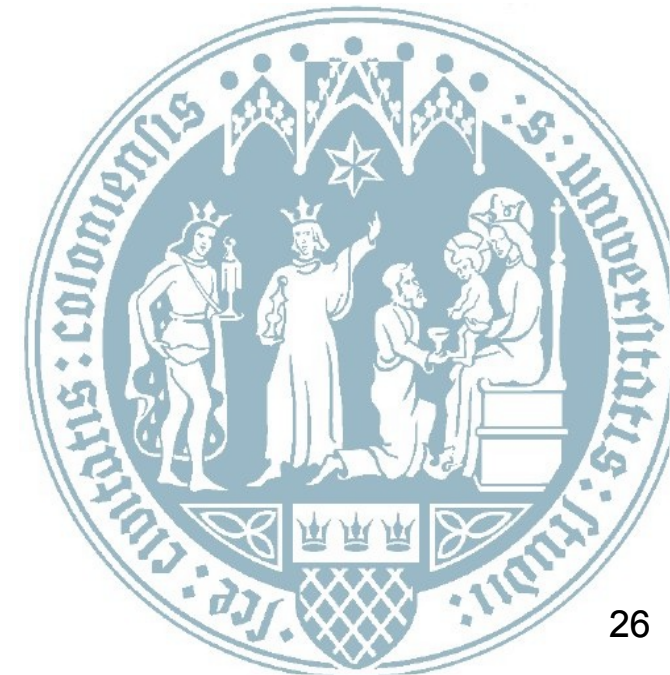
Add tag...

Cancel

OK & Next

OK

Manual disambiguation in gazetteer may also include unlocated places (here: Assyria)



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We got a match ;)

whole land of Cush .

of Assyria . The fourth river is the Euphrates .

nd to keep it.

a may freely eat ;

in the day that you eat of it you v

him a helper suitable for him. "

bird of the sky , and brought them

ry animal of the field ; but for ma

ok one of his ribs , and closed up

1 , and brought her to the man .

Place

Person

Event

Euphrates (river)

pleiades:912849

The longest river of Western Asia, the Euphrates fl...

Euphrates, Purattu, Εὐφράτης, Arahtu, Buranu...

18000 BC - 2000

Automatic Match

Confirm

Change

Add a comment...

Add tag...

Cancel

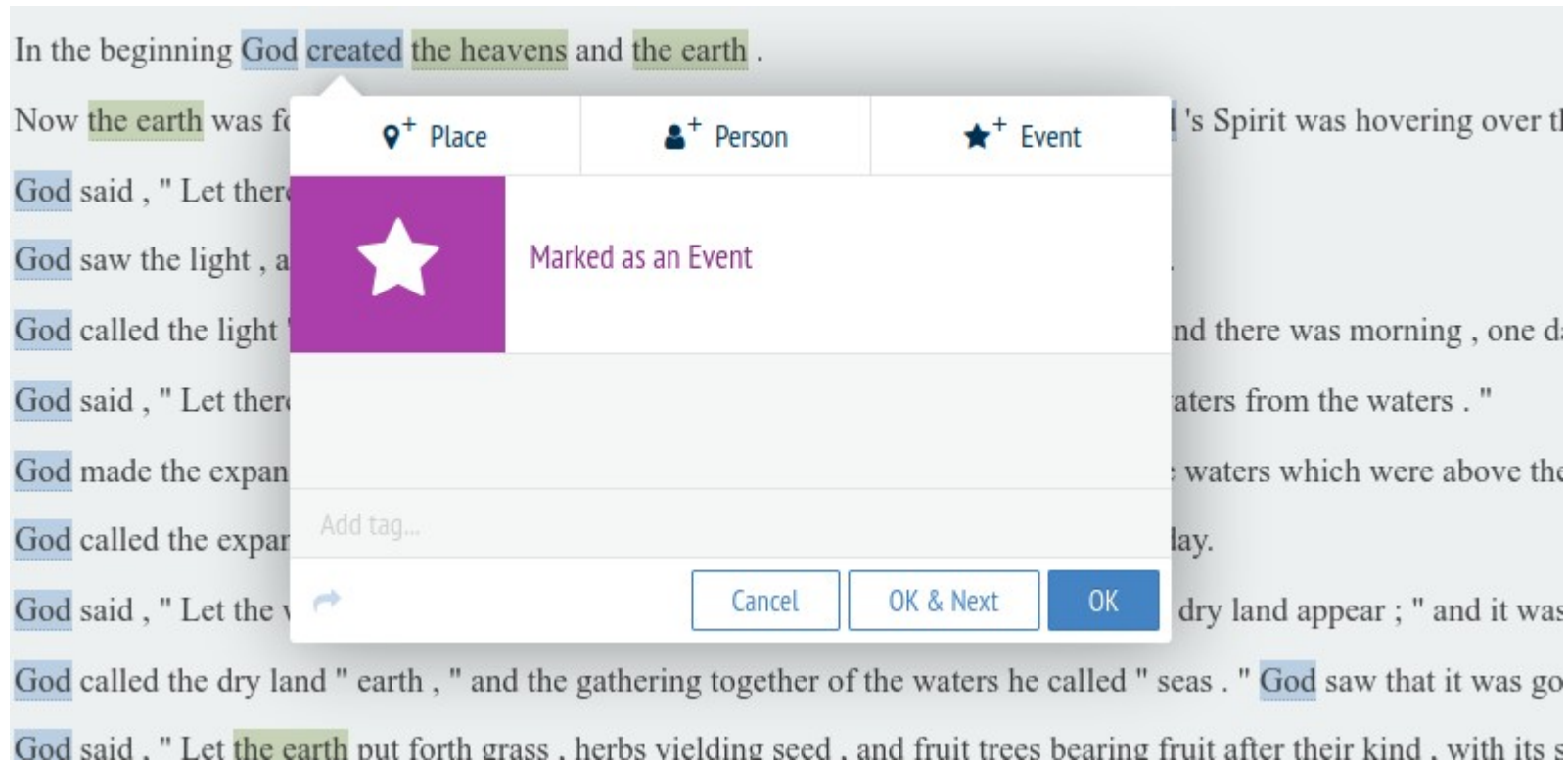
OK & Next

OK



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Annotating an event



Walk through: recogito.pelagios.org

Annotating relations
different annotation mode!

ANNOTATION MODE: NORMAL QUICK **RELATIONS** COLOUR: BY ENTITY TYPE BY VERIFICATION STATUS BY FIRST TAG

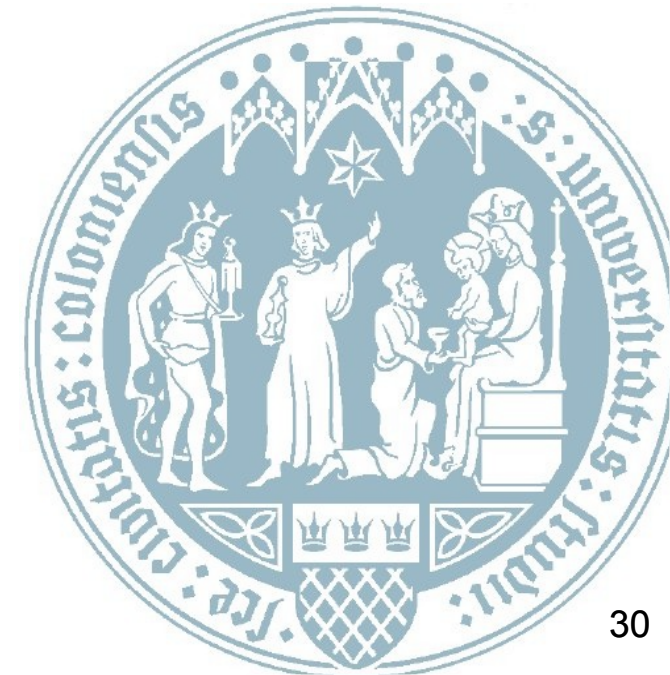
The rainbow will be in the cloud . I will look at it , that I may remember the everlasting covenant between God and that is on the earth . "

God said to Noah , " This is the token of the covenant which I have established between me and all flesh that is on

The sons of Noah who went forth from the ship were Shem , Ham , and Japheth . Ham is the father of Canaan .

These three were the sons of Noah , and from these , the whole earth was populated .

Noah began to be a farmer , and planted a vineyard .



Walk through: recogito.pelagios.org

hat is on the earth . "

God said to Noah , " This is the token of the covenant which I have establi

The sons of Noah who went forth from the ship were Shem , Ham , and Ja

These three were the sons of Noah , and from these , the whole earth was p

Noah began to be a farmer , and planted a vineyard .

click on one entity => arrow
click on second entity => link
give it a tag

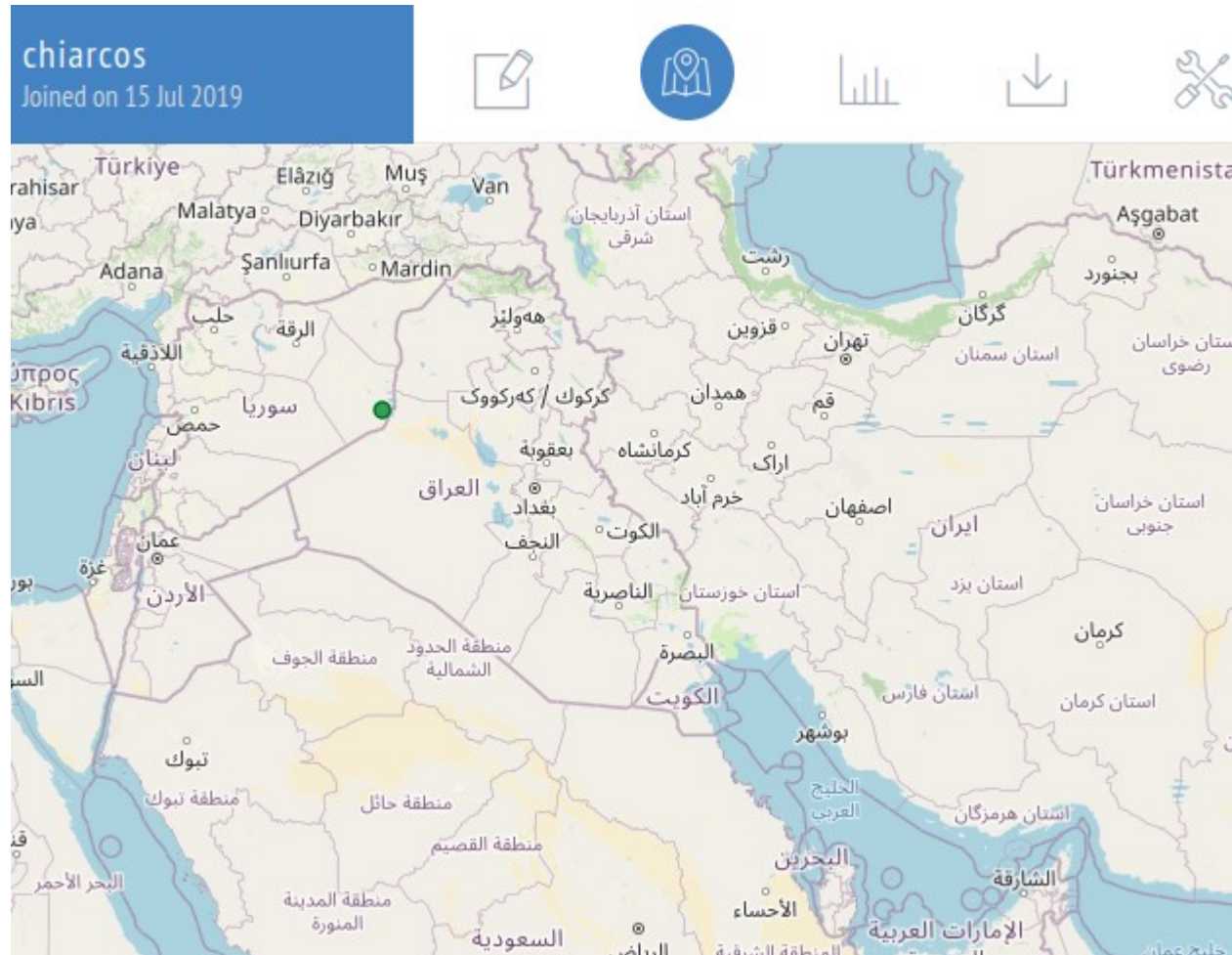
God said to Noah , " This is the token of the covenant which I have established between me and all flesh that is on the earth . "

The sons of Noah who went forth from the ship were Shem , Ham , and Japheth . Ham is the father of Canaan .

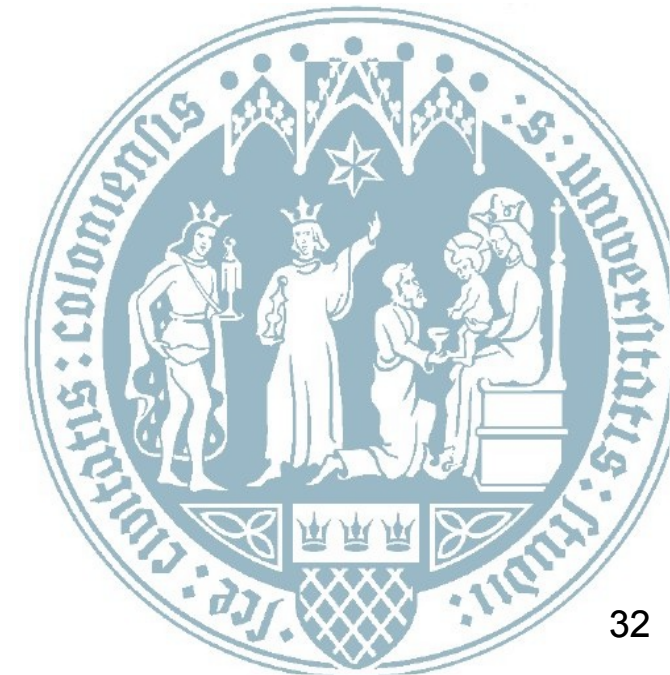
These three were the sons of Noah , and from these , the whole earth was populated .



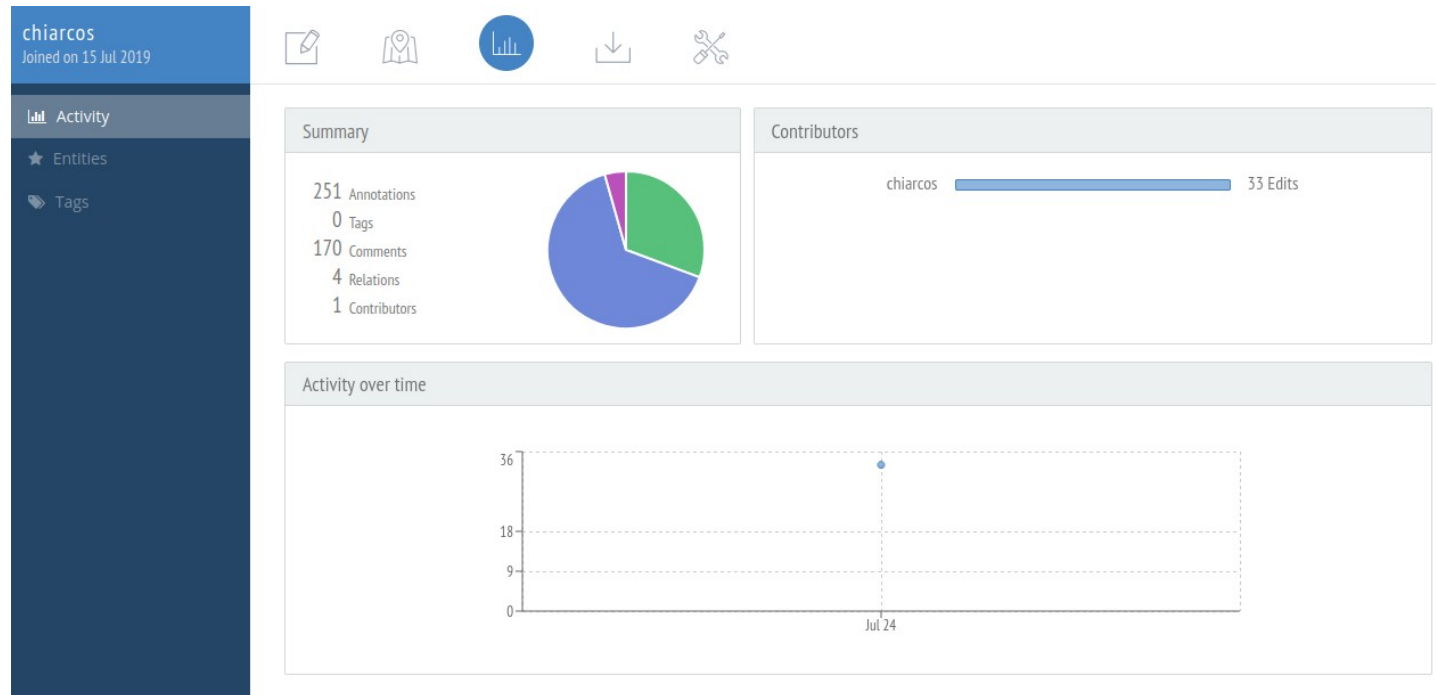
Walk through: recogito.pelagios.org



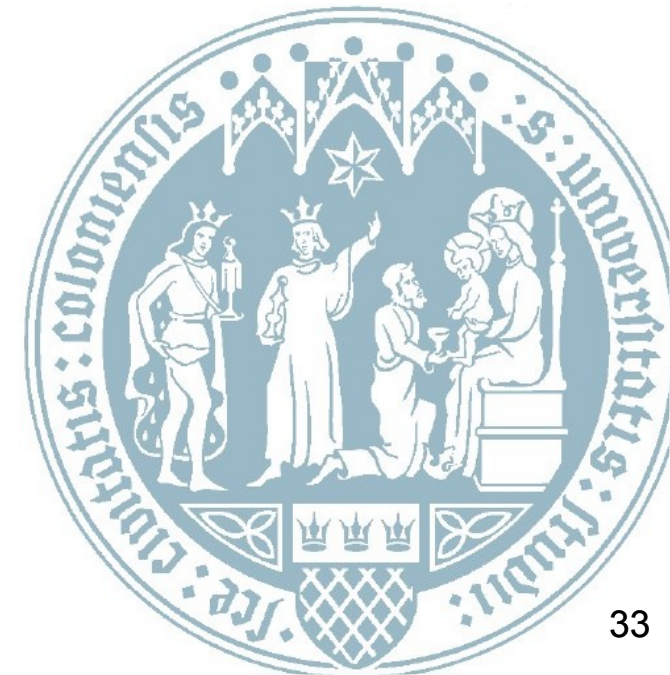
change to map view



Walk through: recogito.pelagios.org



change to stats view



Walk through: recogito.pelagios.org

chiarcos
Joined on 15 Jul 2019



change to download view

Annotations

CSV

Download annotations as a data table for importing into spreadsheet software or a GIS.

CSV

RDF

Download annotations and document metadata as RDF, encoded using Open Annotation and Dublin Core.

JSON-LD

RDF/Turtle






RDF/XML



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Annotations

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Download RDF/XML

more export options

Places

GeoJSON

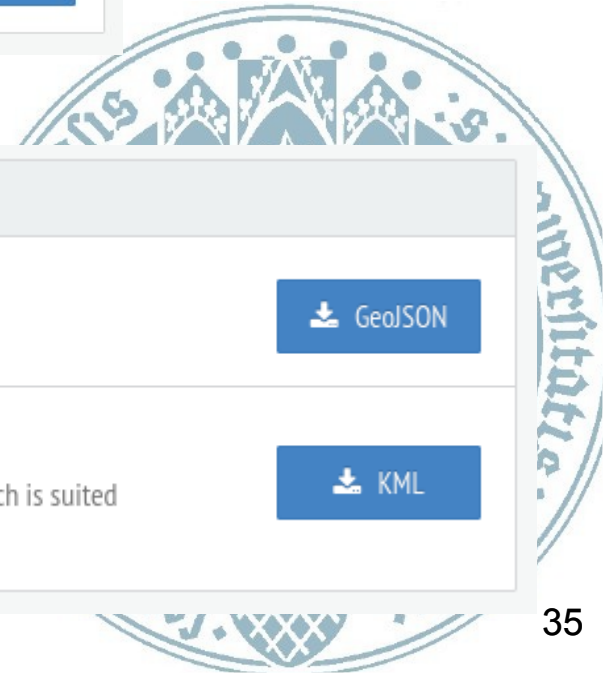
Confirmed geo-located places in the document as a GeoJSON FeatureCollection.

Download GeoJSON

KML BETA






Geo-located places as KML file, for viewing in Google Earth. You can also download a [slightly modified alternative KML serialization](#) which is suited specifically for the [DARIAH GeoBrowser](#).

Download KML



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chiarcos
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Download RDF/Turtle

Download RDF/XML

more export options

Relations

Basic CSV
A basic CSV export of relationships in the document.

Download CSV






Gephi CSV Node/Edge Lists
The relationships annotated in this document, as CSV files compatible with the Node and Edge List format of the [Gephi](#) graph visualization platform. Each annotation is represented as one node.

Download Nodes

Download Edges

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chiarcos
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Annotations

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more export options

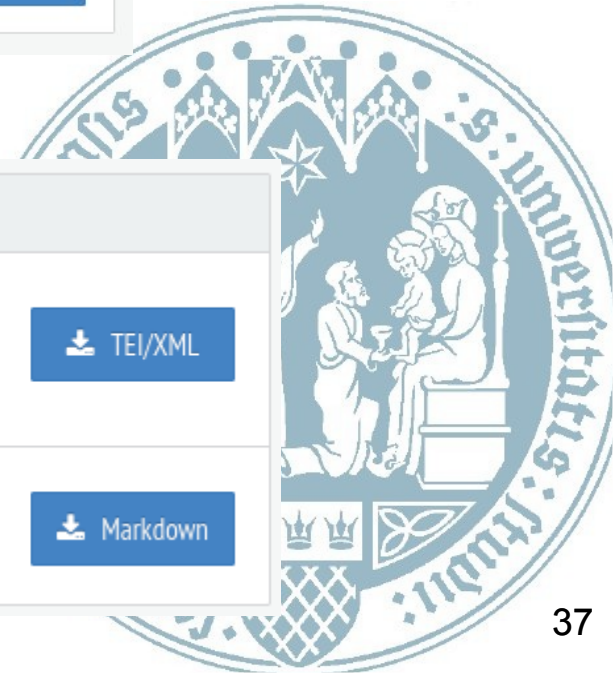
Annotated Document

TEI
Annotated text in a basic TEI/XML serialization. Note: only place name annotations are included at the moment. Also, overlapping annotations are filtered out as TEI does not support them.

Download TEI/XML






Markdown **BETA**
A basic markdown serialization. Note: presently, only commentary is included in the export.

Download Markdown



Walk through: recogito.pelagios.org

chiarcos
Joined on 15 Jul 2019



Annotations

CSV

Download annotations as a data table for importing into spreadsheet software or a GIS.

↓ CSV

RDF

Download annotations and document metadata as RDF, encoded using Open Annotation and Dublin Core.

↓ JSON-LD

↓ RDF/Turtle

↓ RDF/XML

more export options

Other

IOB **BETA**

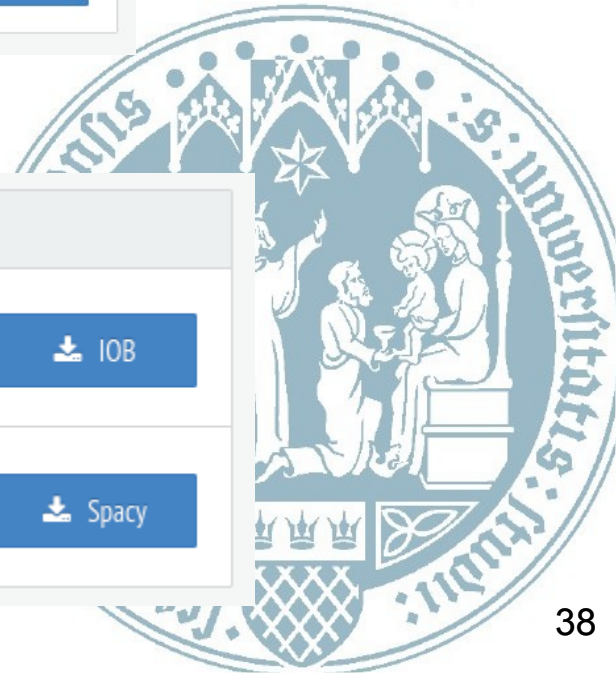
The text tokenized in [IOB format](#), a common format used for machine learning training data.

↓ IOB

Spacy JSON **BETA**

The text, line by line, in a JSON format usable as training data input for the [Spacy](#) machine learning library. Work in progress!

↓ Spacy



What it can and can't do

Recogito is great for annotating geographical places (in text and images)

For these, it also provides entity linking [URI, coordinates, structured RDF data]

Recogito is also usable for annotating relations, but *no controlled vocabulary*

Recogito has only three predefined entity types, others require *tag abuse*

Recogito can annotate named entities, but not perform entity linking (except for geographical entities)

Recogito can export a vast range of formats.

- Native format is standoff annotation with JSON-LD (an RDF format)
- Other formats are lossy



Bonus: Named Entity Recognition

The screenshot shows the Recogito web interface. The browser address bar displays <https://recogito.pelagios.org/chiarcos>. The user profile on the left is for 'chiarcos', joined on 15 Jul 2019. The main area is titled 'My Documents' and contains a table of documents. A context menu is open over the first document, 'genesis-1-10.txt', with the 'Named Entity Recognition' option highlighted by an orange circle.

Author	Title	Language
	genesis-1-10.txt	
	bible-web.txt	
	recogito-download-sampl...	
	11977073.txt	
	DPN_SD_1869.tei.xml	
Recogi...	Welcome to Recogito	15 Jul 2019

The context menu for 'genesis-1-10.txt' includes the following options:

- Open
- Open in new tab
- Move to
- Duplicate
- Delete
- Share
- Explore network
- Named Entity Recognition**



Bonus: Named Entity Recognition

make sure to select correct
language engine
(English: the second)

this takes a while ...

Named Entity Recognition (NER)

NER identifies places and persons in your text automatically. Depending on the length of your text, this may take a while.

Recognition Engines

<input checked="" type="radio"/> Example Kima NER Plugin	he	An attempt to use Kima with the Recogito NER plugin interface.
<input type="radio"/> Stanford CoreNLP	en	The standard engine with the default English language model
<input type="radio"/> Stanford CoreNLP	fr	The standard engine with the default French language model
<input type="radio"/> Stanford CoreNLP	de	The standard engine with the default German language model
<input type="radio"/> Stanford CoreNLP	es	The standard engine with the default Spanish language model
<input type="radio"/> Herodotus Latin NER		An experimental Latin NER plugin by Alex Erdmann

Note: different engines can provide different results and are generally optimized for a specific language.

Authority Files

☒ identify entities against all available authority files

<input checked="" type="checkbox"/> HistoGIS	A GIS repository for historical temporalized spatial data by the Austrian Centre for Digital Humanities
<input checked="" type="checkbox"/> Pleiades	Pleiades Gazetteer of the Ancient World
<input checked="" type="checkbox"/> CHGIS	China Historical GIS



Bonus: Named Entity Recognition

results are sub-optimal, but
a reasonable basis for post-
correction

To Shem , the father of all the children of Eber , the elder brother of Japheth , to him also were children born .

The sons of Shem : Elam , Asshur , Arpachshad , Lud , and Aram .

The sons of Aram : Uz , Hul , Gether , and Mash .

Arpachshad became the father of Shelah . Shelah became the father of Eber .

To Eber were born two sons . The name of the one was Peleg , for in his days the earth was divided . His brother 's name was Joktan .

Joktan became the father of Almodad , Sheleph , Hazarmaveth , Jerah ,

Hadoram , Uzal , Diklah ,



Thanks for the attention !

Now try it yourself !

slides available from

<https://dh-tech.github.io/DH2022-workshop/>

