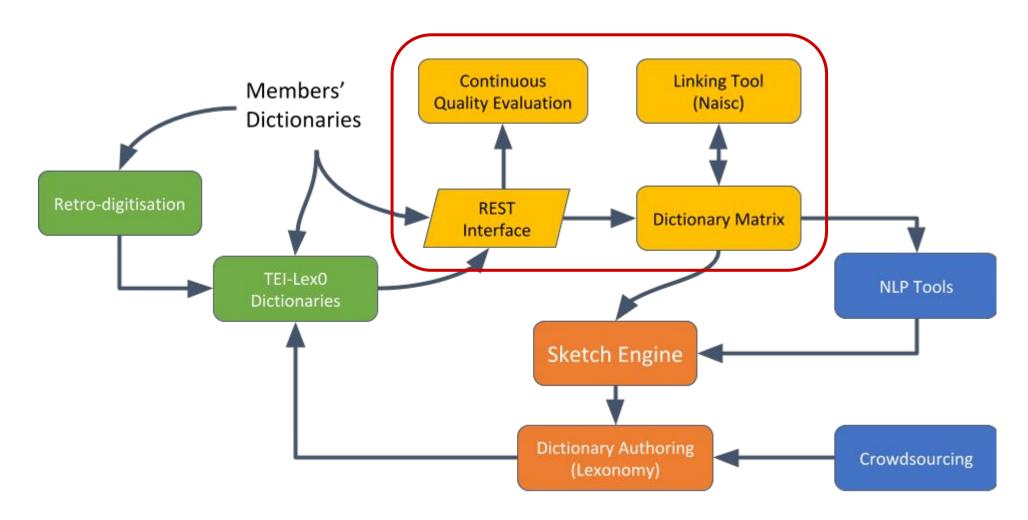


# Linking and the Dictionary Matrix

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#### **ELEXIS Architecture**





## **REST Interface**



#### What is it?

Uniform input standard for the dictionary matrix

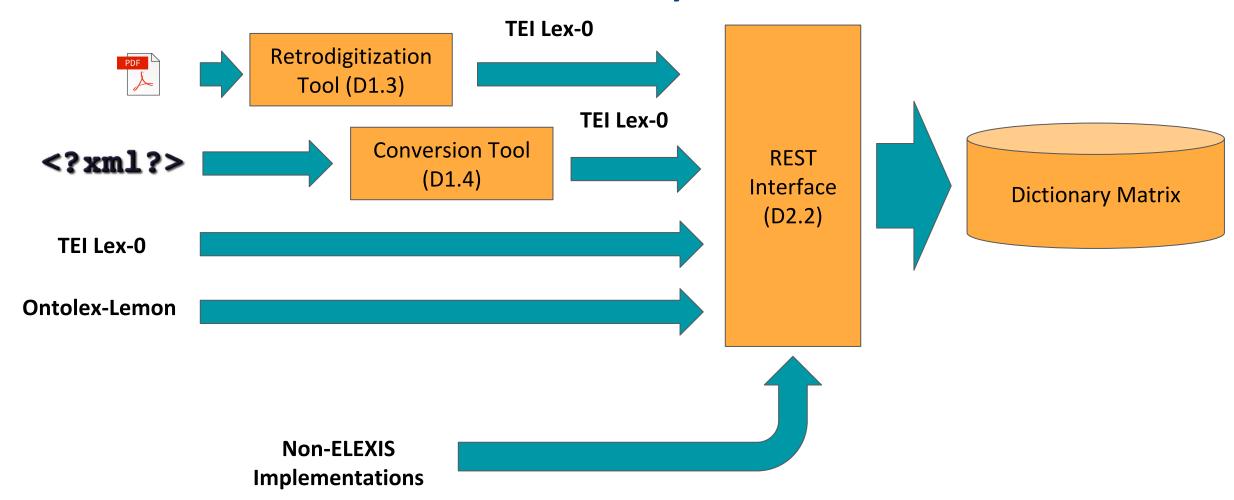
Collects basic dictionary and entry information

Supports many formats and use cases

Called by the dictionary matrix

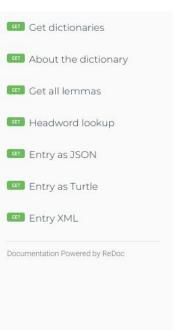


#### Routes into the Dictionary Matrix

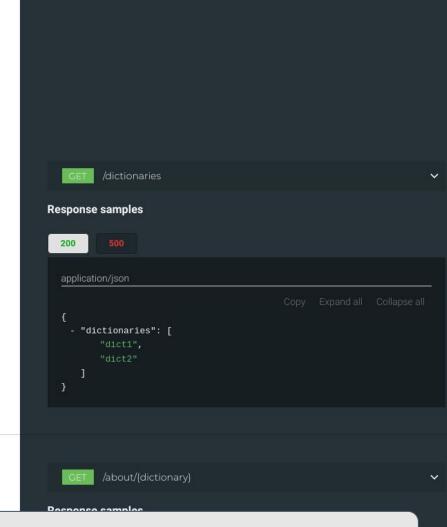


#### The REST API









#### About the dictionary

Get the metadata about the dictionary, including the conditions

PATH PARAMETERS

https://elexis-eu.github.io/elexis-rest/elexis.html

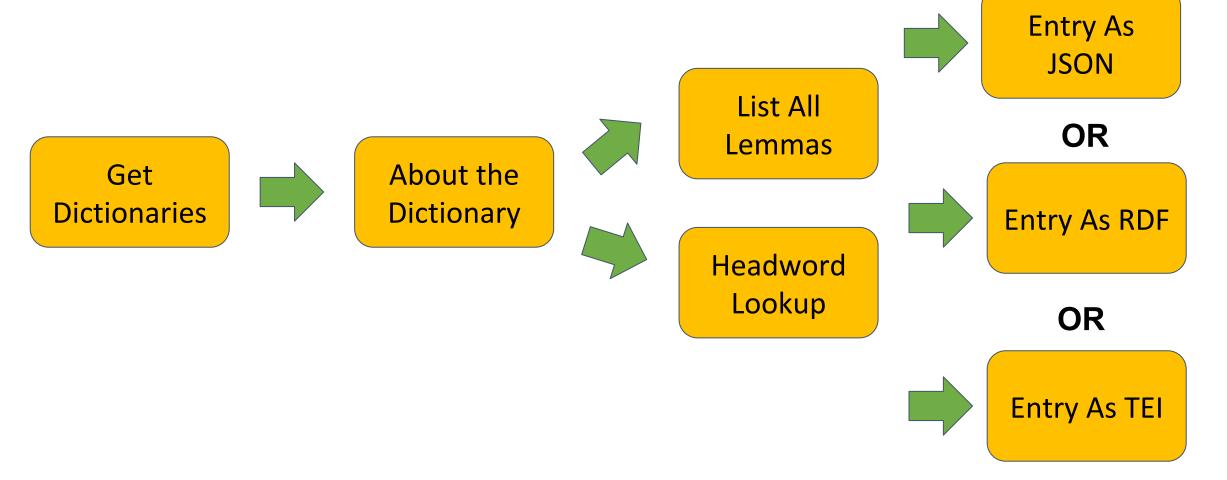
→ dictionar; required

Identifier of the dictionary to describe

application/json



#### The REST API workflow





### About a dictionary

Release: Public, Non-Commercial, Research, Private

**Source Language:** The language of the headwords

Target Languages: The languages of the content

**Genre:** General, Learner's, Etymological, Specialist, Historical, Spelling or Terminological Dictionary (or any combination)

License

Title, Creator, Publisher, ... (plus 48 other properties)



### **Dictionary Entries**

#### **Minimal requirements**

- A lemma
- A language
- One or more part-of-speech from Universal Dependencies:

ADJ: adjective **INTJ**: interjection

ADP: adposition **NOUN:** noun

ADV: adverb **NUM:** numeral

AUX: auxiliary PART: particle VERB: verb

CCONJ: coordinating conjunction PRON: pronoun

**DET:** determiner PROPN: proper noun

These are the indexed and **public** properties in the Matrix Dictionary

**PUNCT:** punctuation

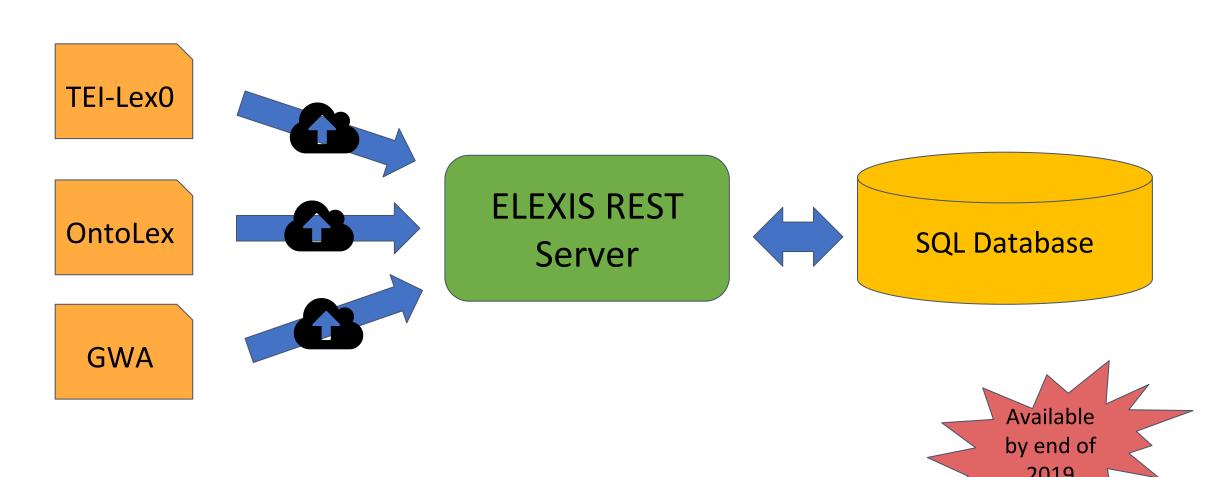
SCONJ: subordinating conjunction

X: other

SYM: symbol



#### **ELEXIS REST Server**





# **ELEXIS Linking**

Activity involving mental or physical effort done in order to achieve a purpose or result. 'he was tired after a day's work in the fields' + More example sentences + Synonyms 1.1 Mental or physical activity as a means of earning income; employment. 'I'm still looking for work' + More example sentences + Synonyms The place where one is employed. 'I was returning home from work on a packed subway' + More example sentences 1.3 The period of time one spends in paid employment. 'he was going to the theatre after work' + More example sentences 1.4 West Indian [count noun] A job. 'I decided to get a work' + More example sentences + Synonyms 2 A task or tasks to be undertaken.

'they made sure the work was progressing smoothly'

+ More example sentences + Synonyms

The materials for a task.

'she frequently took work home with her'

+ More example sentences

**2.2** (in combination or with modifier **works**) *British* Activity involving construction or repair. 'extra costs caused by additional building works'

ramme under grant agreement No 731015.

- 1. (heading, uncountable) Employment.
  - 1. Labour, occupation, job. [quotations ▼]

My work involves a lot of travel.

2. The place where one is employed.

He hasn't come home yet, he's still at work.

3. One's employer

"I want to go to the R.E.M. reunion concert but I'm not sure if my work will let me off.

- 2. (heading, uncountable) Effort.
  - 1. Effort expended on a particular task

Holding a brick over your head is hard work. It takes a lot of work to write a dictionary

2. Sustained human effort to overcome obstacles and achieve a result.

We know what we must do. Let's go to work.

3. Something on which effort is expended.

There's lots of work waiting for me at the office.

- 4. (physics) A measure of energy expended in moving an object; most commonly, force time Work is done against friction to drag a bag along the ground.
- 5. (physics, more generally) A measure of energy that is usefully extracted from a process.
- 3. Sustained effort to achieve a goal or result, especially overcoming obstacles. [quotations ▼] We don't have much time. Let's get to work piling up those sandbags.
- 4. (heading) Product; the result of effort.
  - 1. (uncountable, often in combination) The result of a particular manner of production. There's a lot of guesswork involved.
  - 2. (uncountable, often in combination) Something produced using the specified material or t We've got some paperwork to do before we can get started. The piece was decorated
  - 3. (countable) A literary, artistic, or intellectual production. [quotations ▼]

It is a work of art.

the poetic works of Alexander Pope

4. (countable) A fortification.

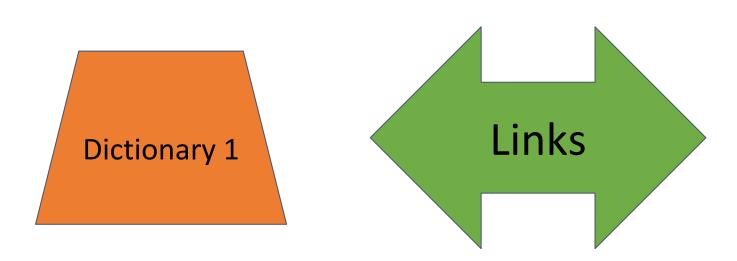
William the Conqueror fortified many castles, throwing up new ramparts, bastions and

- 5. (uncountable, slang, professional wrestling) The staging of events to appear as real.
- 6. (mining) Ore before it is dressed.

(Can we find and add a quotation of Raymond to this entry?)



## Monolingual Linking



Dictionary 2





#### The Dictionary Matrix

Search

Bank

#### **Search Results**

Bank (English Noun)

1. "The land alongside or sloping down to a river or lake." - From Oxford Dictionaries

"sloping land (especially the slope beside a body of water);" From Princeton WordNet

2. "A bank is a financial institution that accepts deposits from the public and creates credit" - From <u>Wikipedia</u>



## Linking Workflow

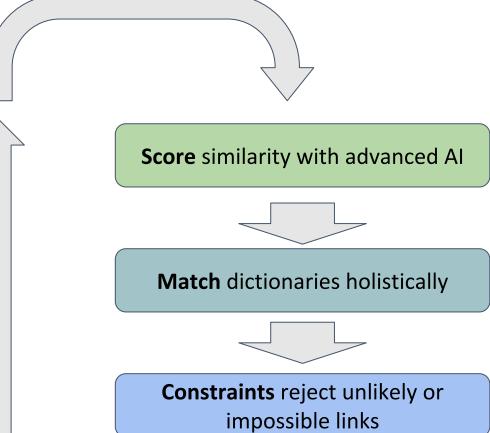
**Blocking**: Identify Entries to Link



**Lens**: Extract Relevant Facts

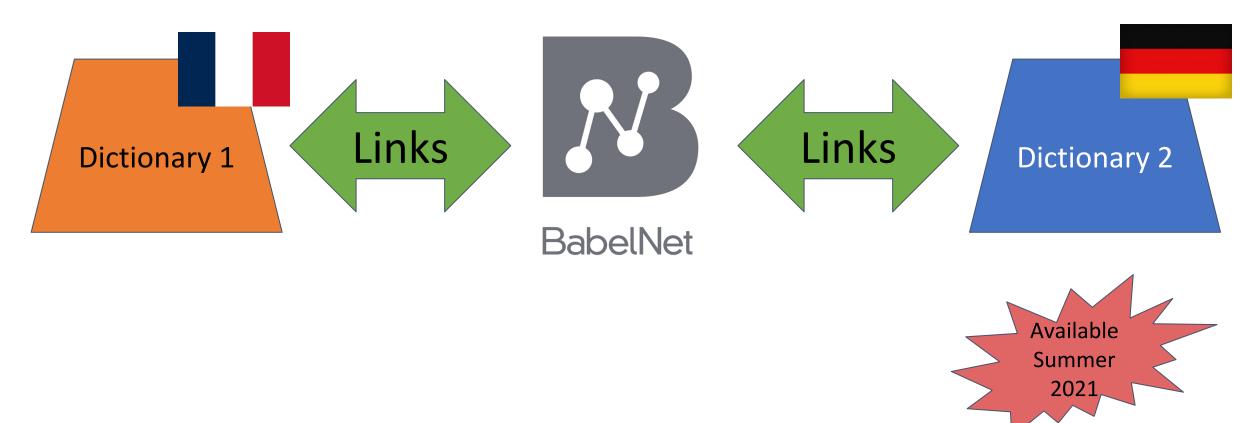


**Features**: Analyze Textual Content





## **Cross-lingual Linking**





# ELEXIS Quality Assurance



## Validation and Quality Assurance









**Operational** 



Uptime



Ave. Response



Scientific



Sense per lemma



Definition Similarity







## Questions?

Or come see me at the booth.