



ELAN Workshop

for sign language and gesture annotation

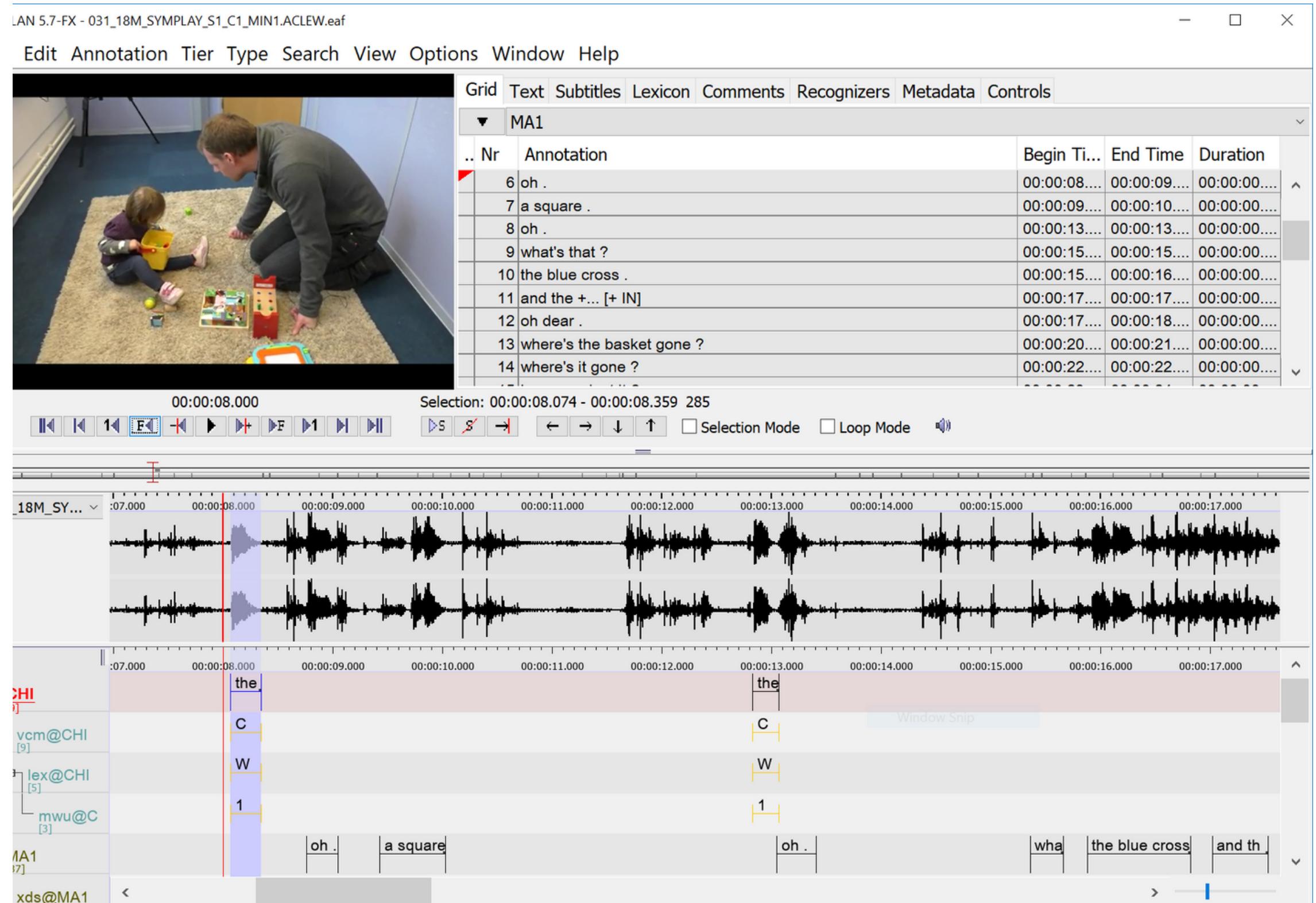
DATE
2023 May 05

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 onur.keles1@boun.edu.tr

PRESENTER
Onur Keleş

What is ELAN?

- A linguistic annotation software
- Developed at the Max Planck Institute for Psycholinguistics, Nijmegen, The Netherlands
- Mainly used for annotating sign language, gestures, and multimodal communication



Resources

Documentation:

<https://archive.mpi.nl/tla/elan/documentation>

ELANport (tutorial videos):

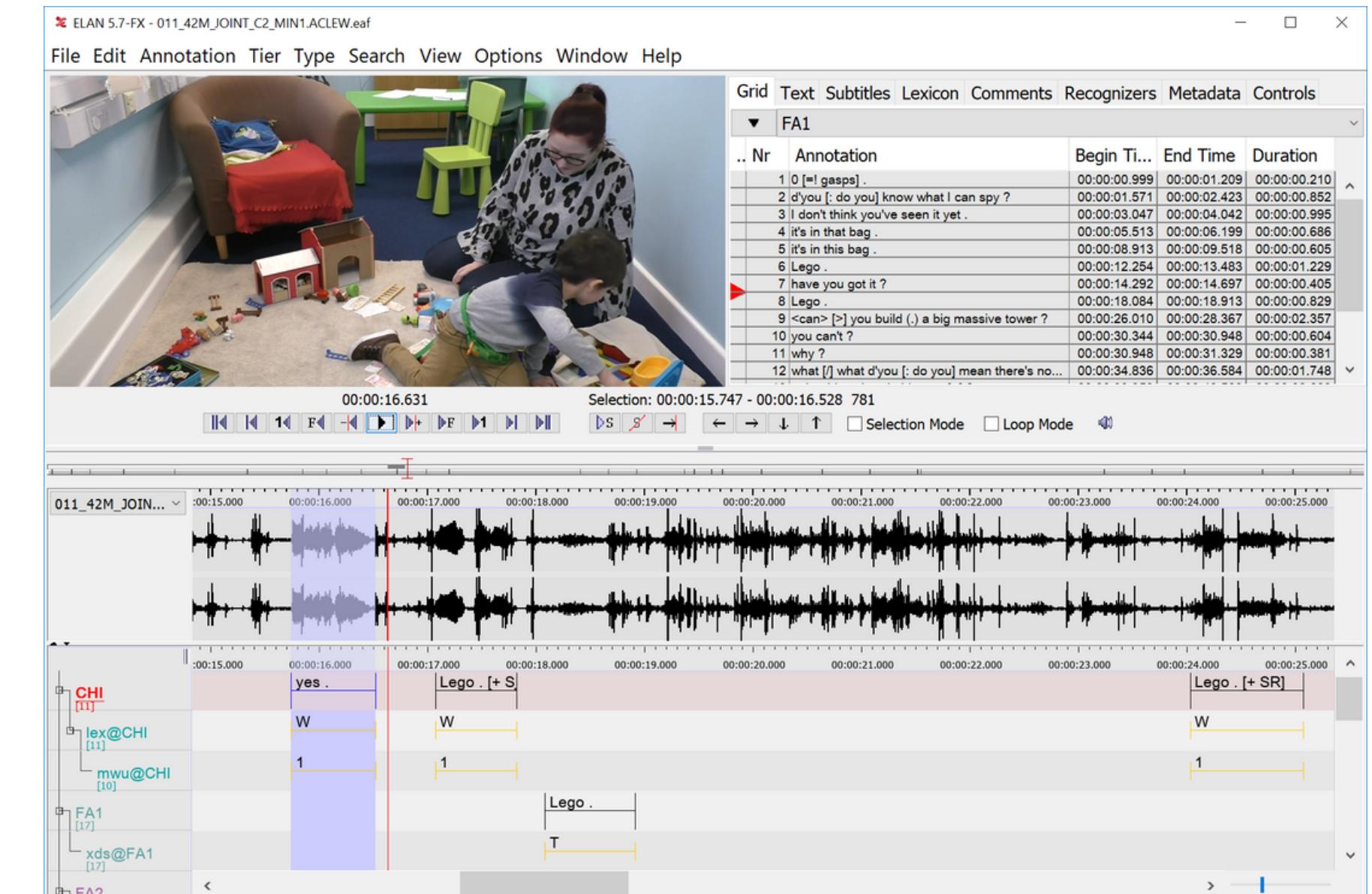
<https://beyzasumer.com/elanport/>

Available multimedia corpora:

<https://archive.mpi.nl>

Corpus for TiD signs:

<http://tidsozluk.net>



Program



TUTORIAL

- Installation
- Creating your first ELAN file
- Tiers and types
- Controlled vocabulary
- Corpus search with ELAN
- Other functions



DEMONSTRATION

- Annotation from scratch



PRACTICE (you do it now)

- Speech-Gesture
- Sign Language

Install ELAN

Download

Intro Release notes Documentation **Download** Citing Support Resources

Download the current version of **ELAN** for your platform

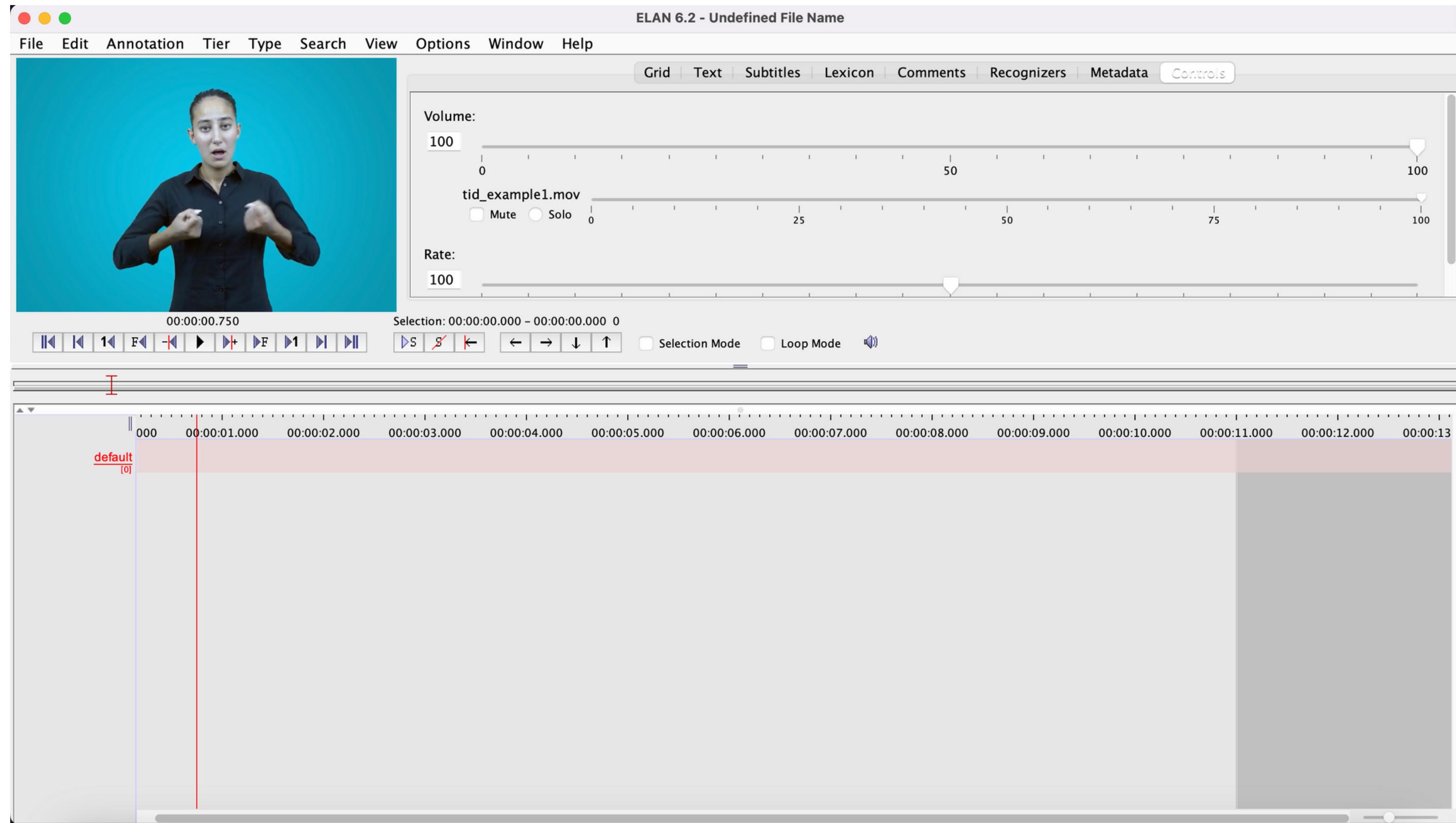
By downloading and using ELAN you agree to cite **ELAN** in any publication based on research in which **ELAN** has been used. You can cite a paper or cite as software, e.g. as follows:

"ELAN (Version 6.4) [Computer software]. (2022). Nijmegen: Max Planck Institute for Psycholinguistics. Retrieved from <https://archive.mpi.nl/tla/elan>"

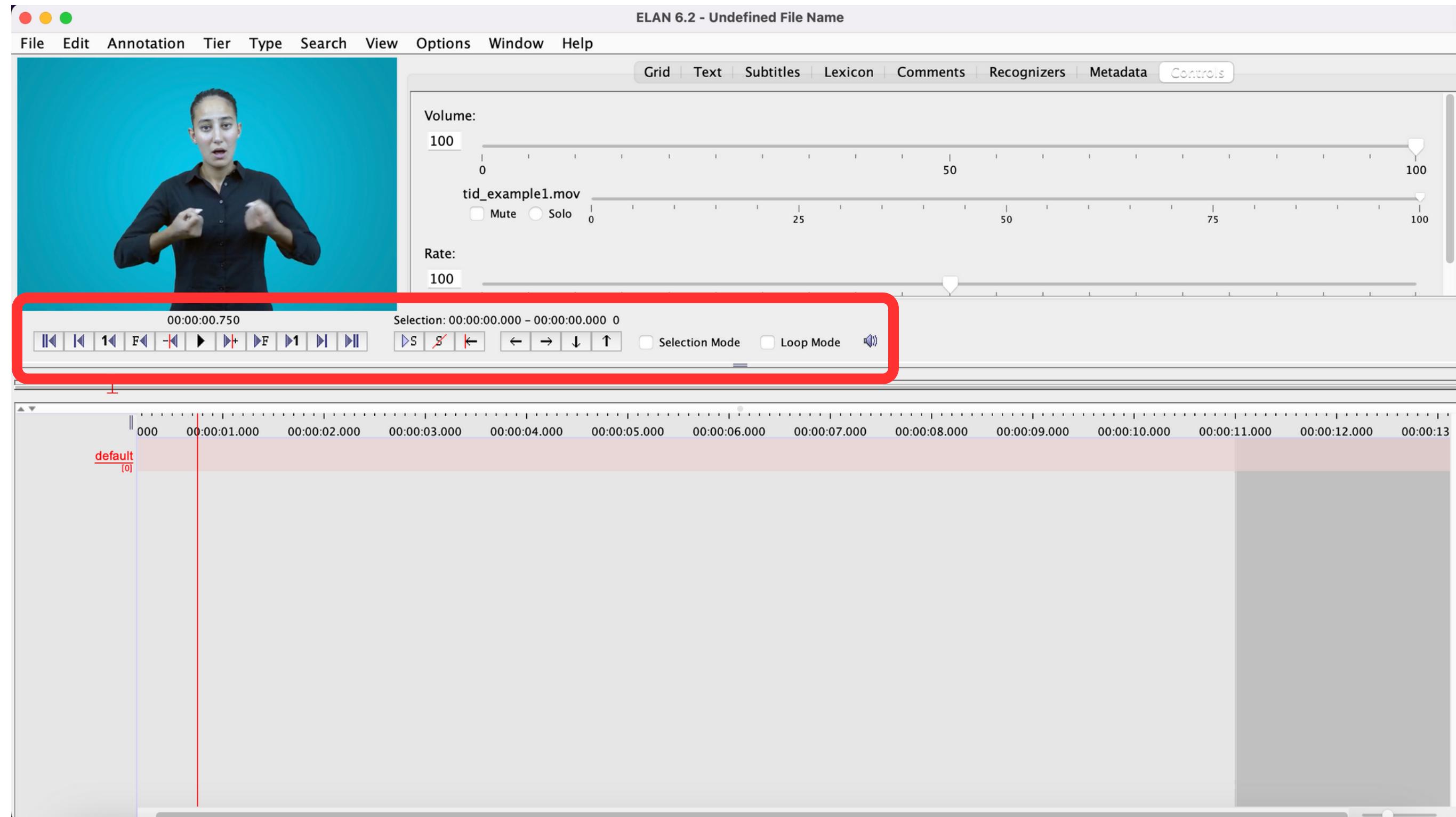
OS	Download	Format	Description
 Windows	ELAN 6.4 Simple-ELAN 1.4	[.exe] [.zip] [.exe] [.zip]	Installer (.exe) and portable, unpack-and-run (.zip) version both include a Java 18 runtime. Requires: 64-bit, Windows 10, 8, Vista, 7(? not tested anymore)
 macOS	ELAN 6.4 ELAN 6.4-M1 Simple-ELAN 1.4	[.zip] [.dmg] [.zip] [.dmg] [.zip] [.dmg]	Zip and dmg files containing a .app which includes a Java 18 runtime. The M1 version only works on <i>Apple silicon</i> Macs. Requires: 64-bit, macOS High Sierra (10.13) or higher
 Linux	ELAN 6.4 Simple-ELAN 1.4	[.tar.gz] [.deb] [.tar.gz] [.deb]	Archive files or Debian installers, all including a Java 18 runtime. Requires: 64-bit, tested on Ubuntu 20.04
All	Source code of ELAN 6.4	[.zip]	Archive containing the source files and a Maven build script. Requires: Maven 3.3 or >, OpenJDK 14 or >
All	Previous releases		

INTERFACE

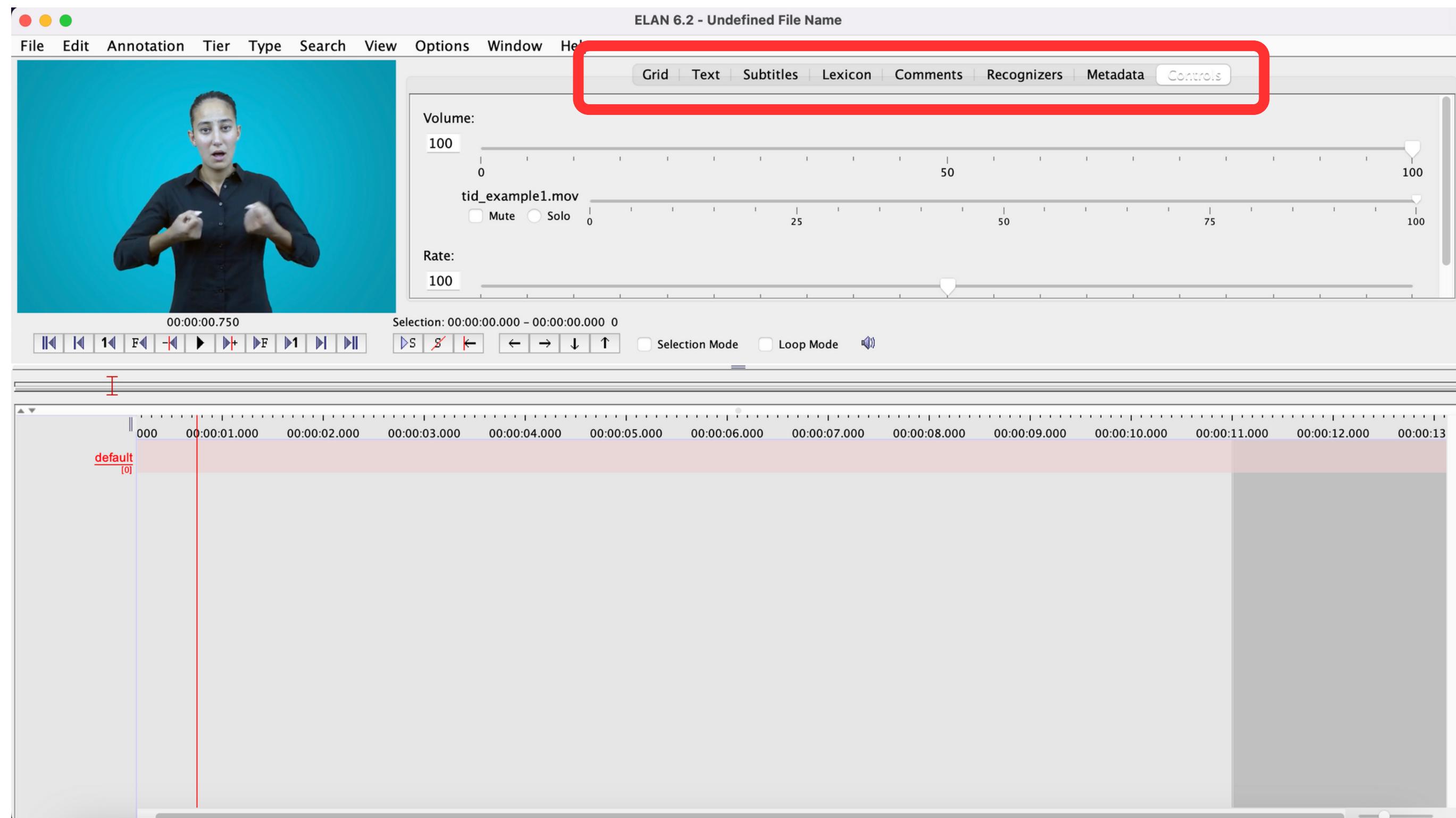
WORKSHOP



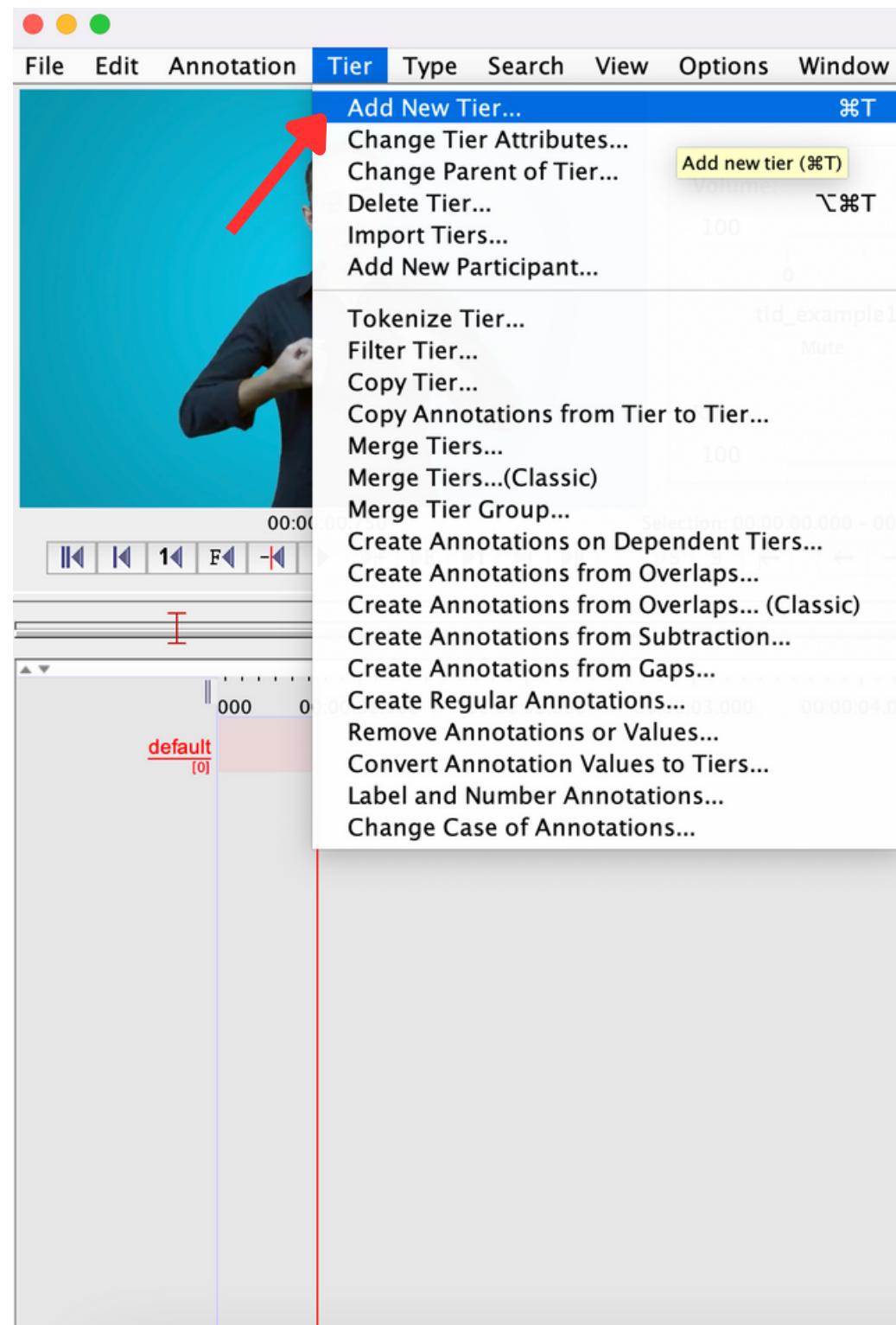
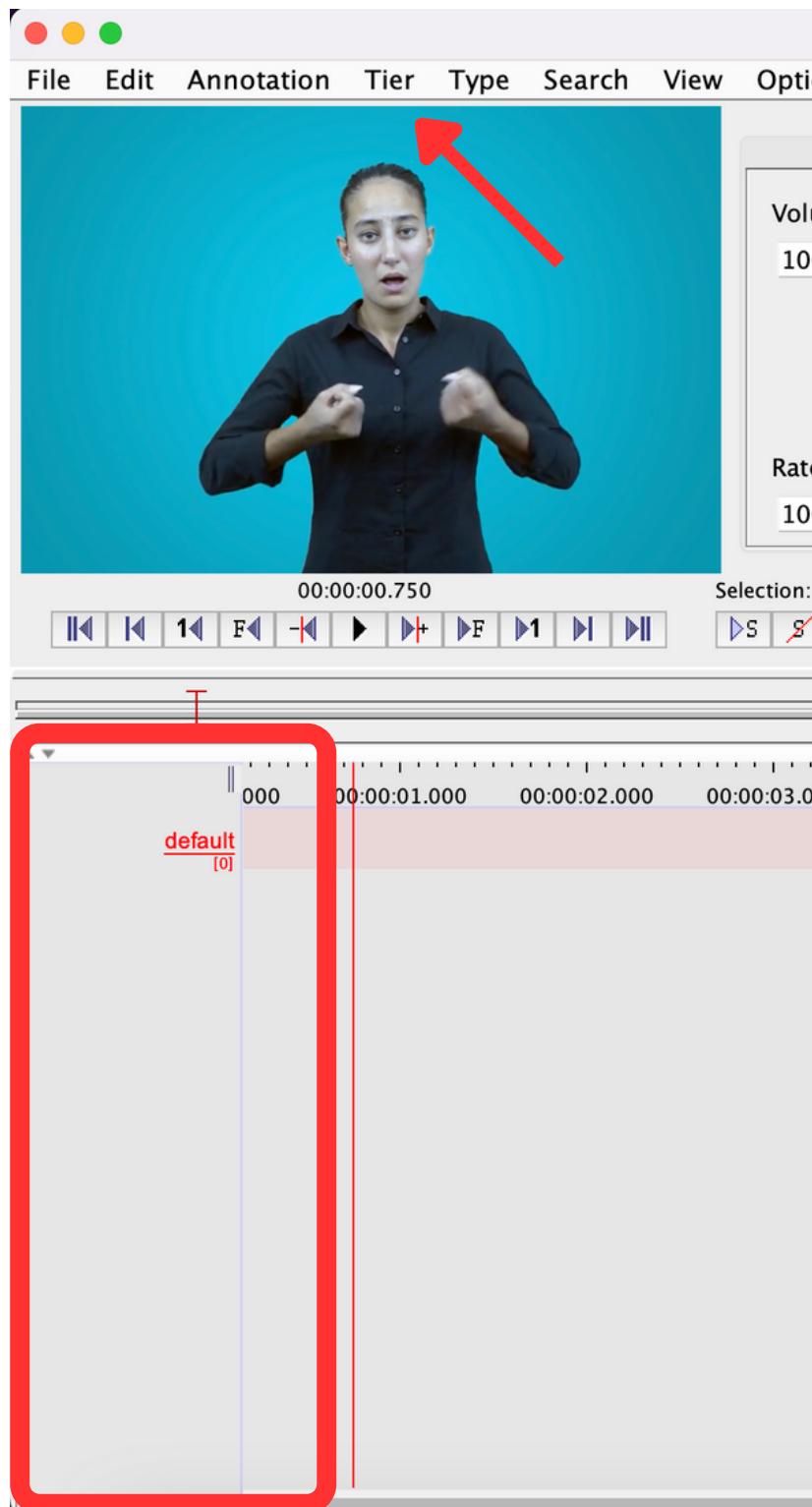
Video navigation



Panels



Tiers



Add a new tier

This screenshot shows the 'Add Tier' dialog box. It has sections for Current Tiers and Add Tier. The 'Add Tier' section contains fields for Tier Name (Sign), Participant (P1), Annotator (Onur Keles), Parent Tier (none), Tier Type (default-It), Input Method (None), and Content Language (None --). A red box highlights the 'Add Tier' section, and another red box highlights the 'Tier Name' field.

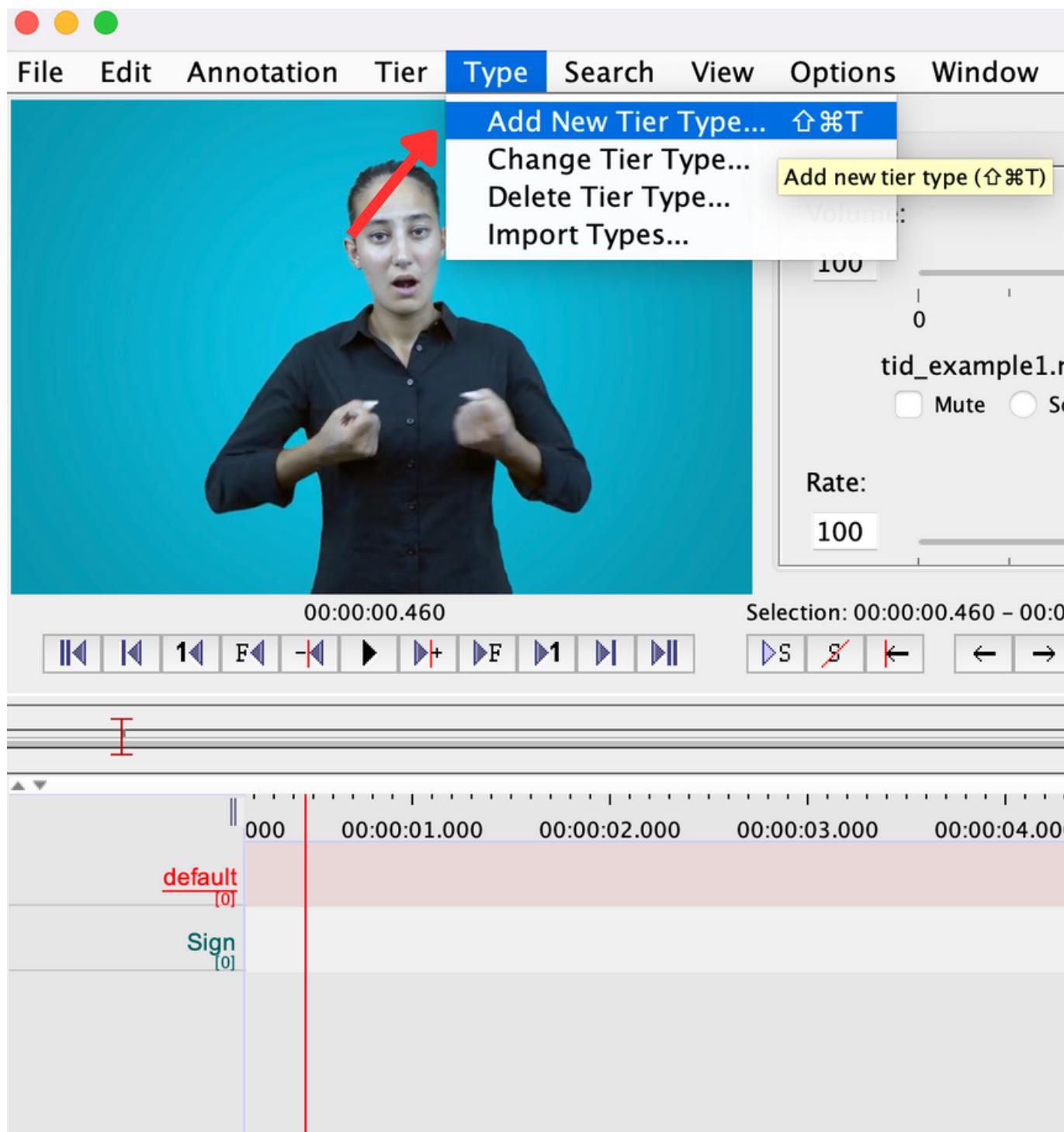
Add Tier					
Add Tier					
Current Tiers					
Tier Name	Parent Tier	Tier Type	Participant	Annotator	Input Method
default	-	default-It			

Add Tier

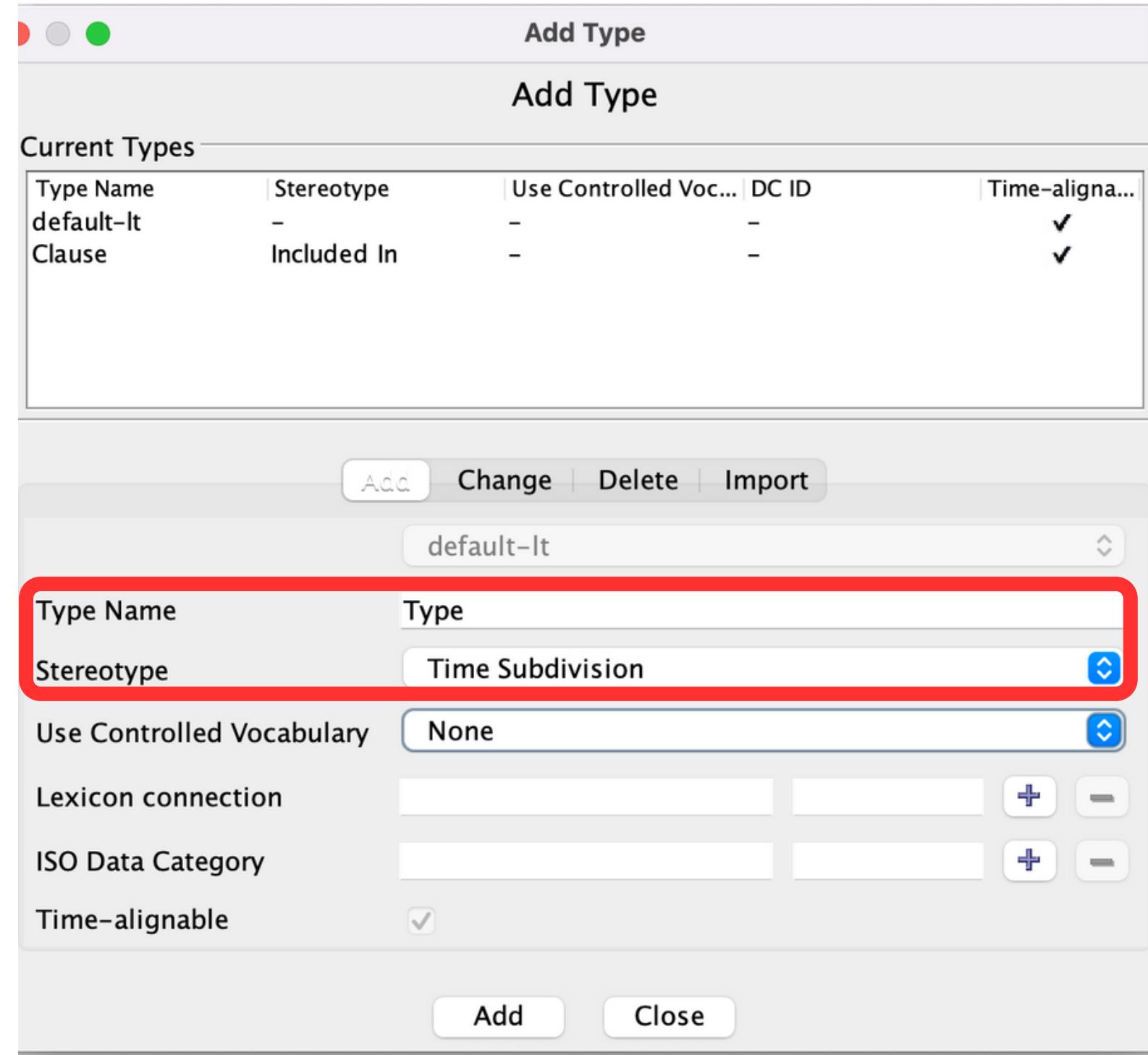
Tier Name	Sign
Participant	P1
Annotator	Onur Keles
Parent Tier	none
Tier Type	default-It
Input Method	None
Content Language	None --

Add **Change** **Delete** **Import**

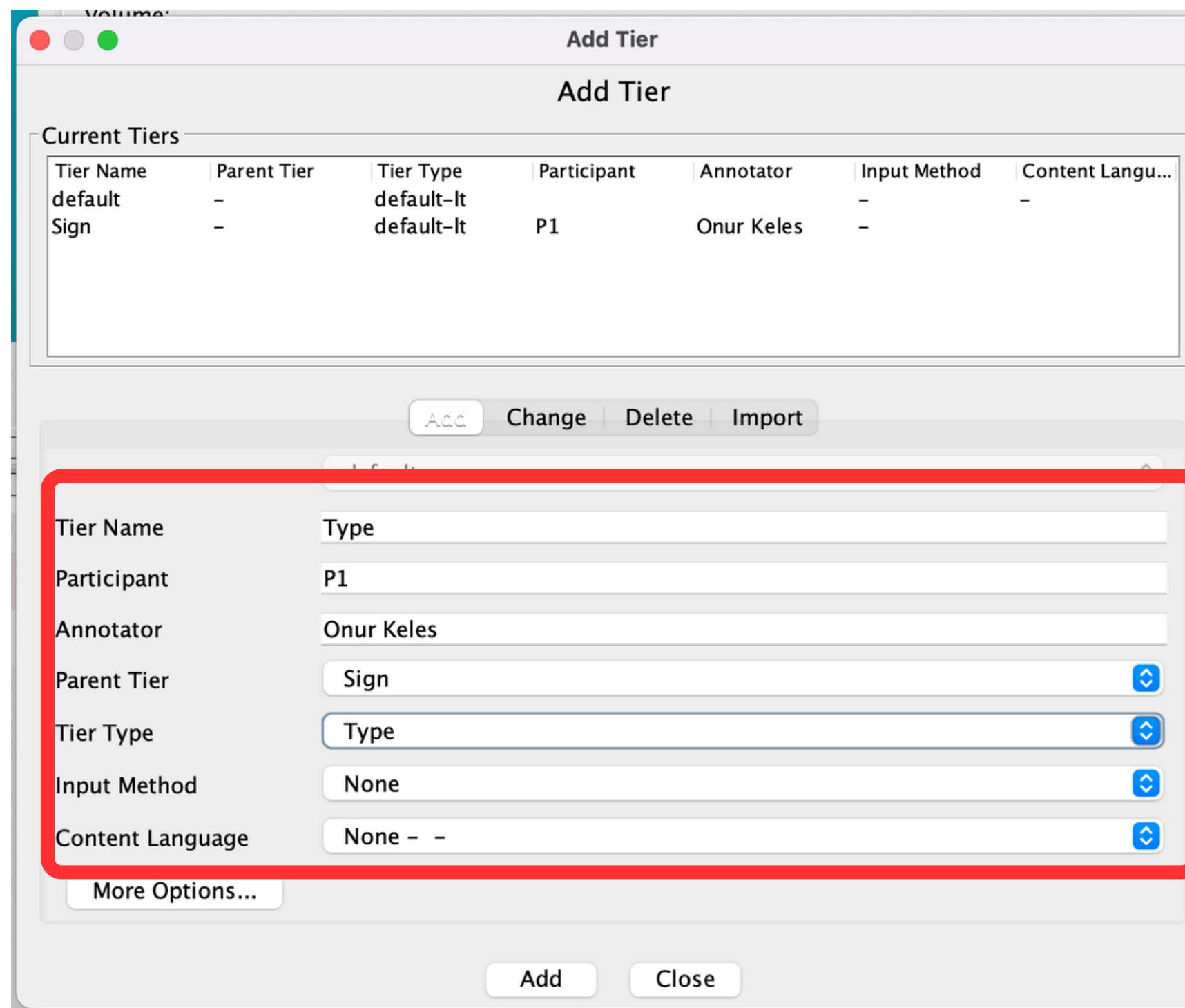
To have a parent and child tiers, first create a type:



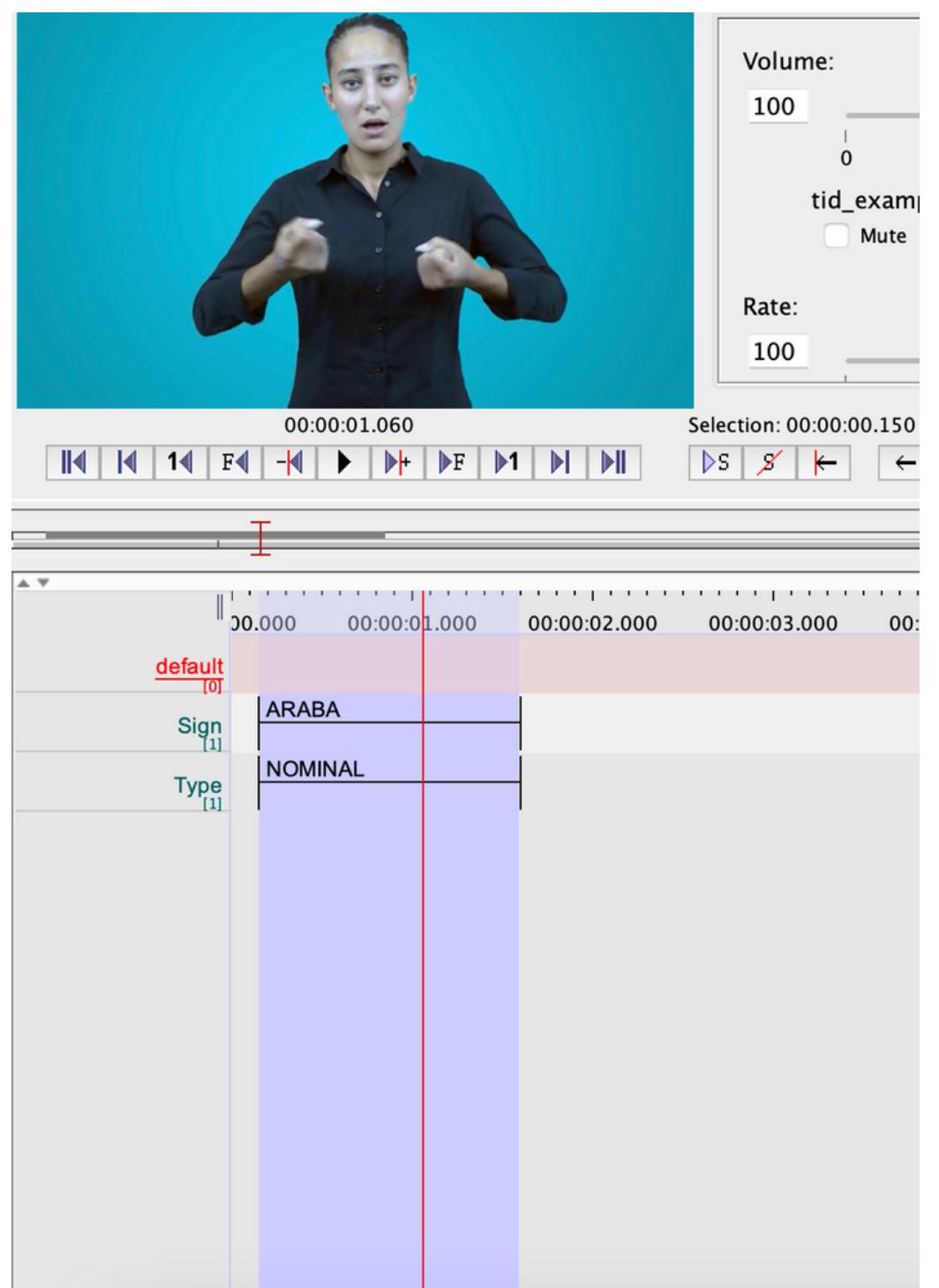
Choose a stereotype



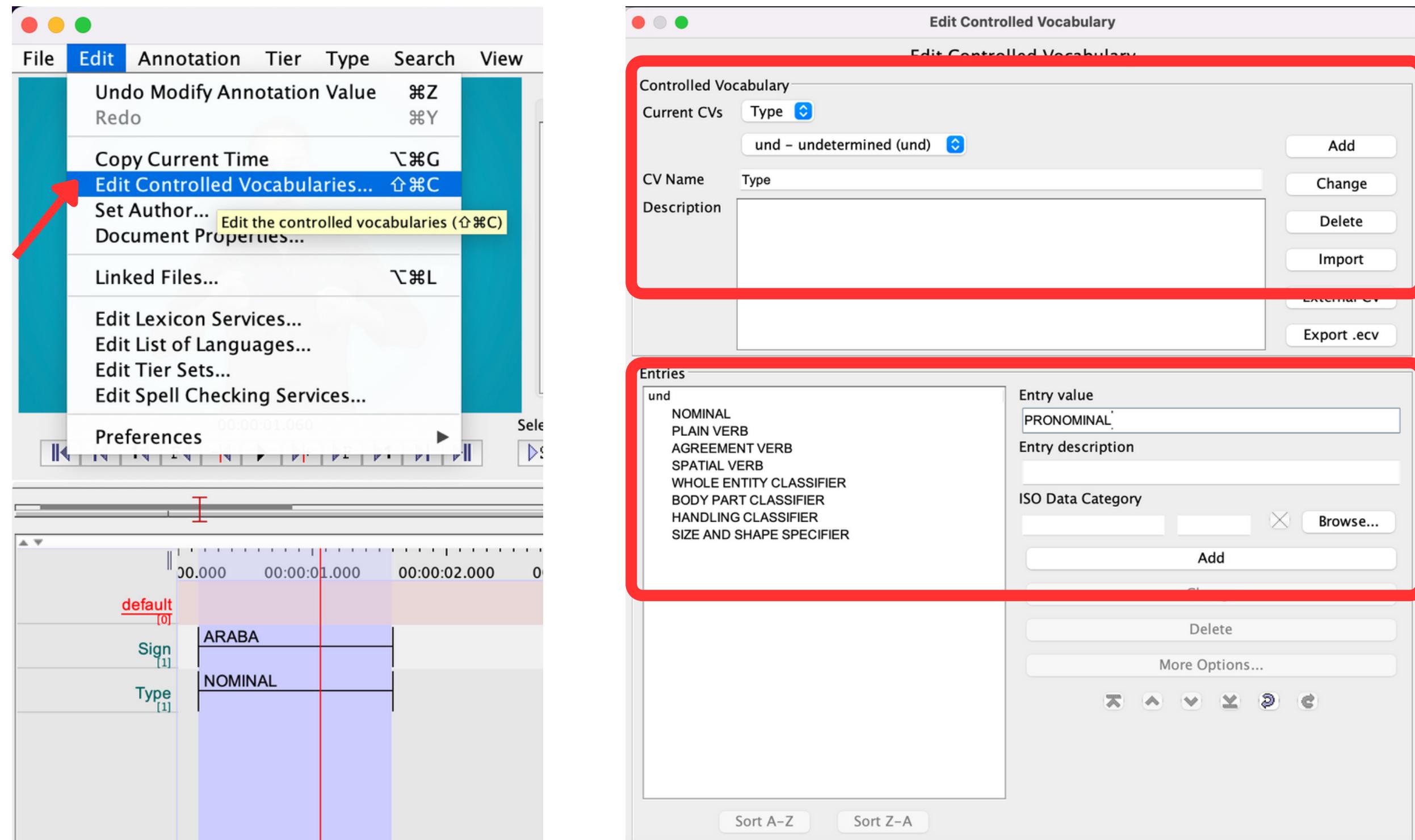
Add child tier and pick its parent and type



Start annotating



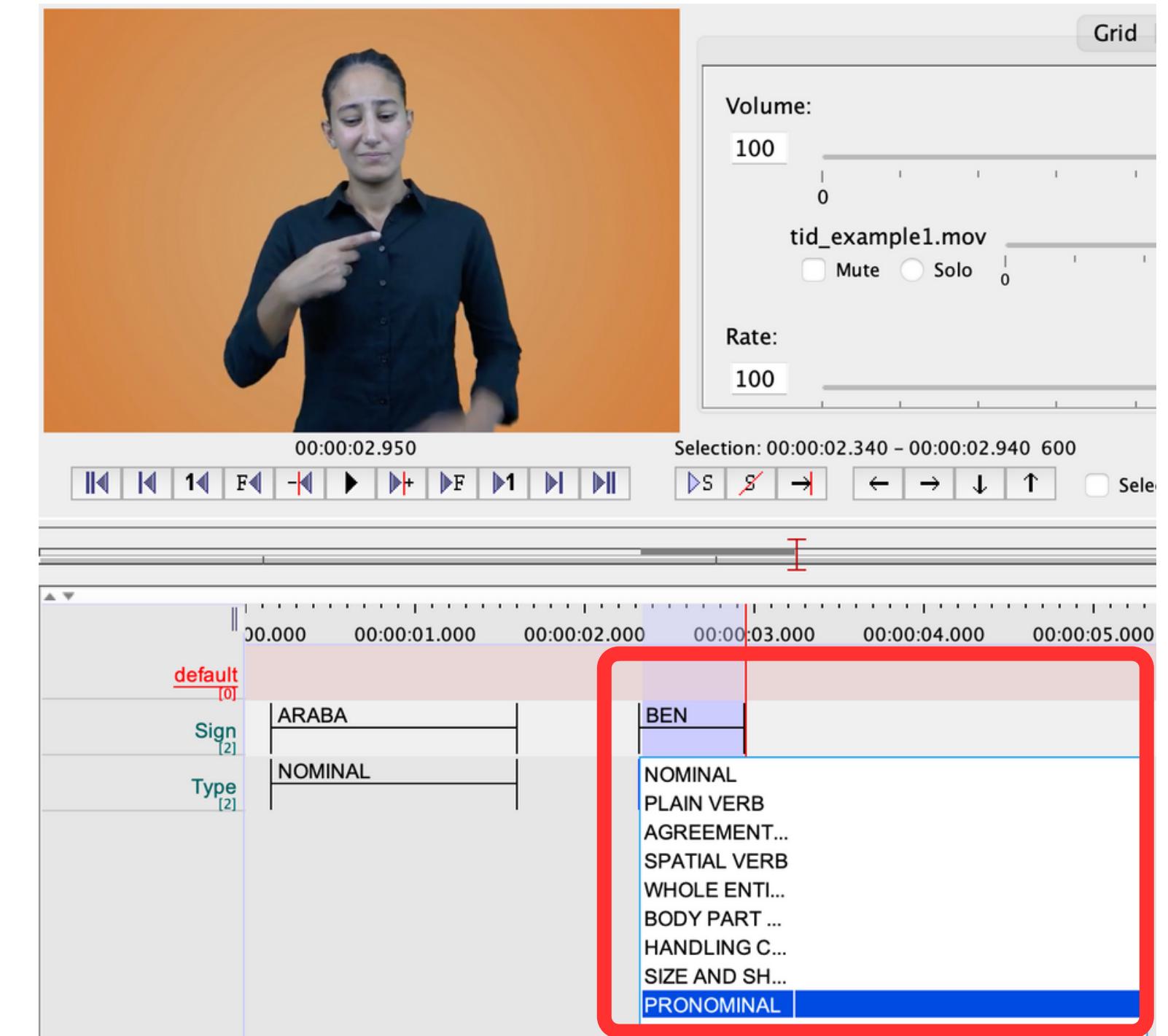
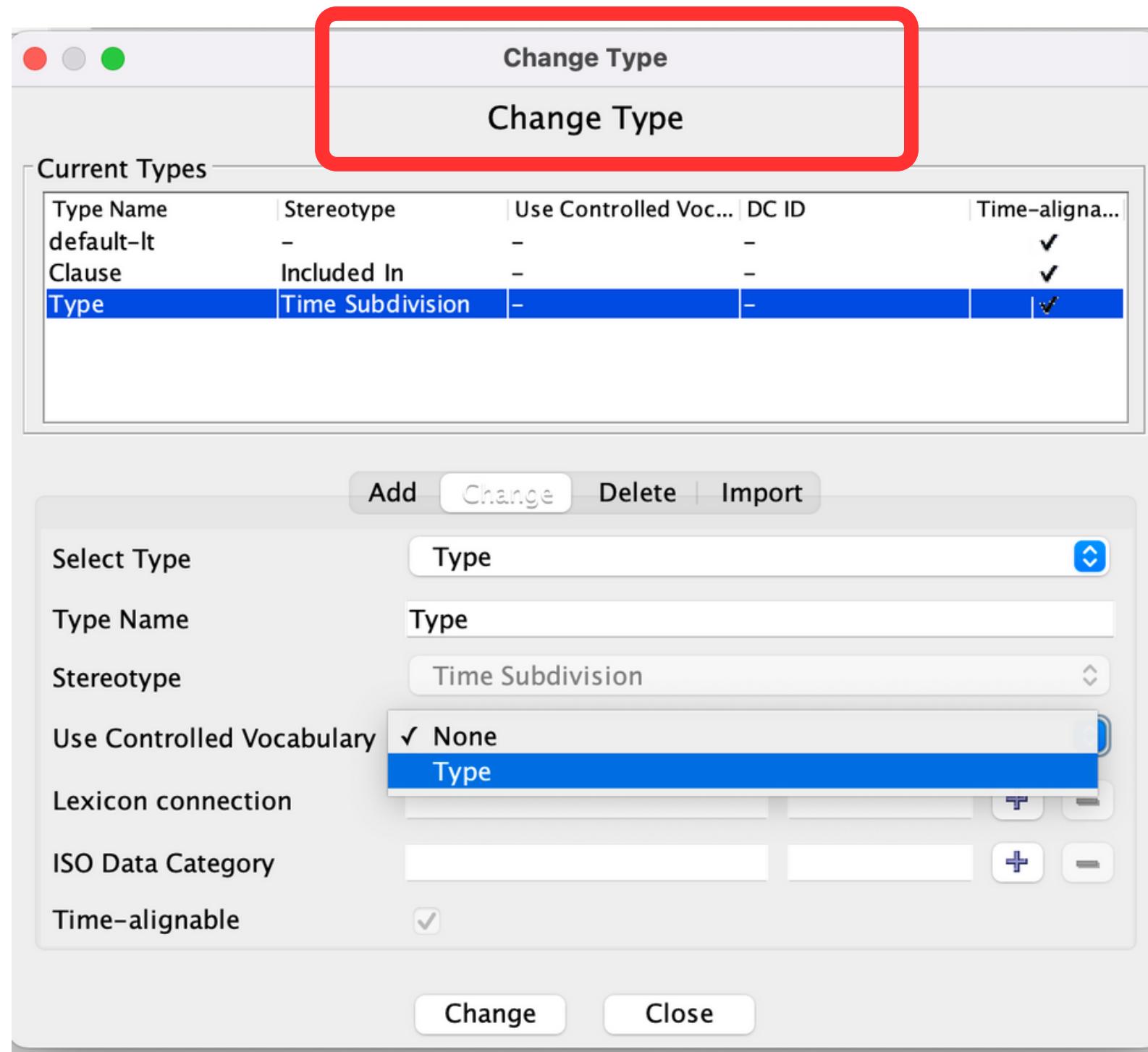
Add controlled vocabulary (optional)



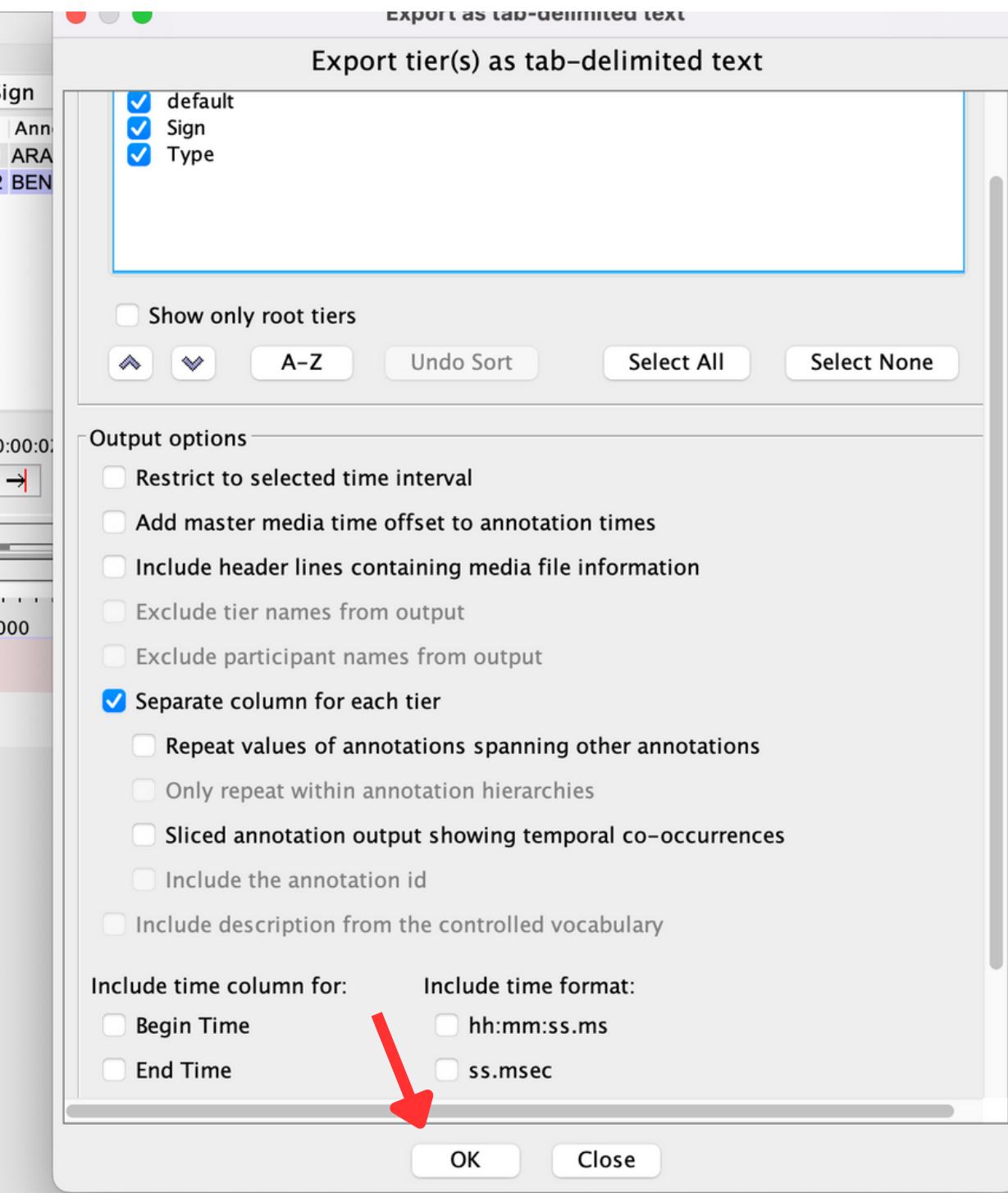
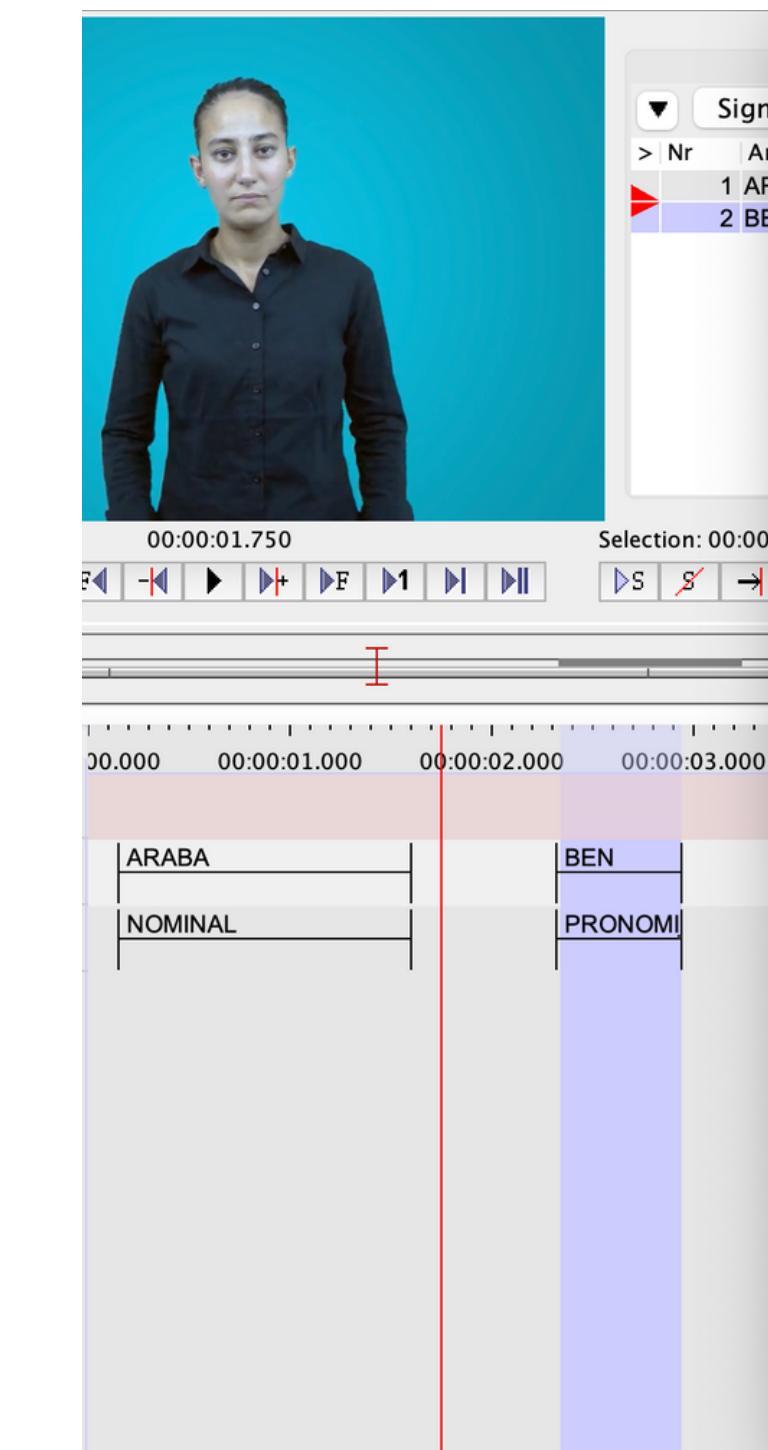
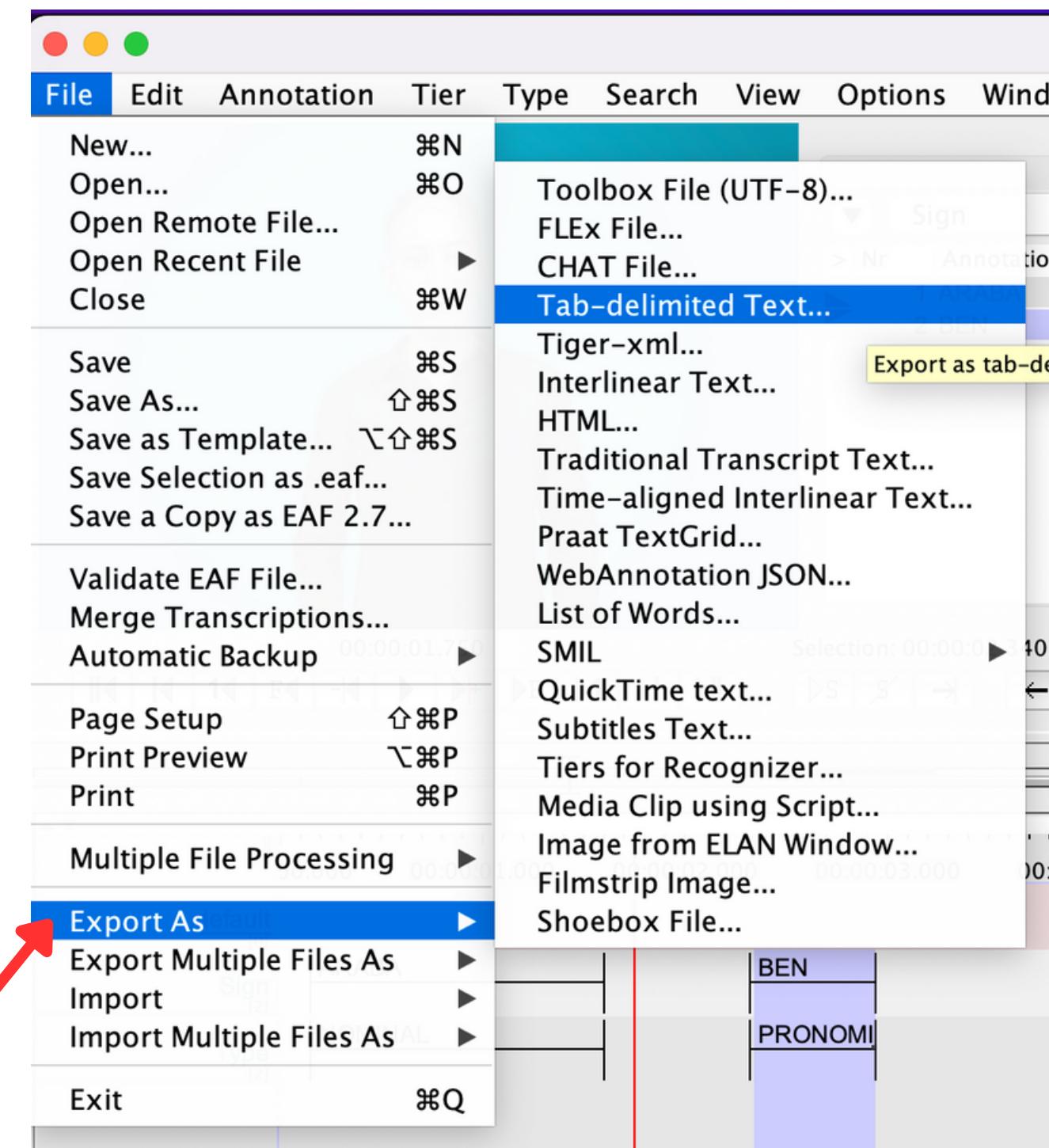
(1) Add CV (controlled vocab)

(2) Add possible entries

Change type and add your controlled vocab



Export your annotation once it is done



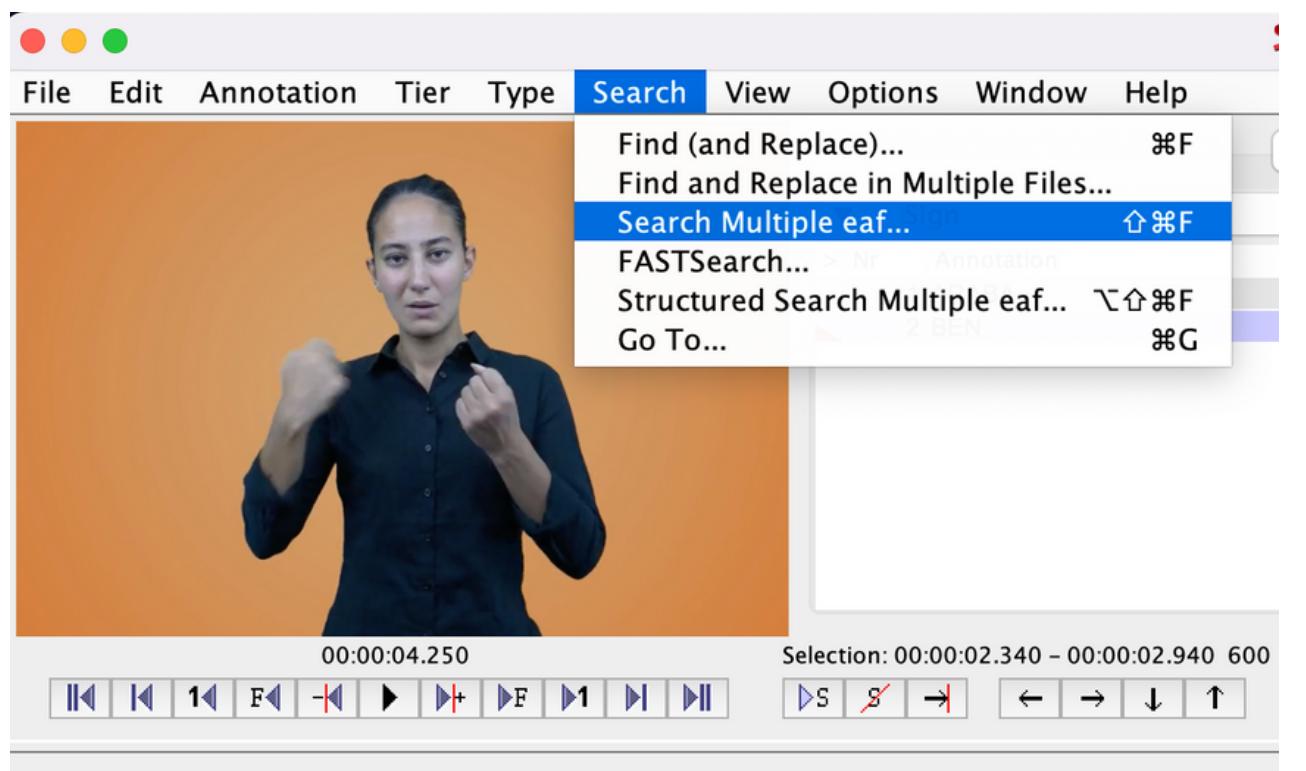
You can use the grid to browse through your tiers

The screenshot shows a software interface for speech analysis. At the top, there is a navigation bar with tabs: Grid (which is selected), Text, Subtitles, Lexicon, Comments, Recognizers, Metadata, and Controls. Below the navigation bar, there is a section titled "İşaret" (Annotations) with a dropdown arrow icon. The list of annotations is as follows:

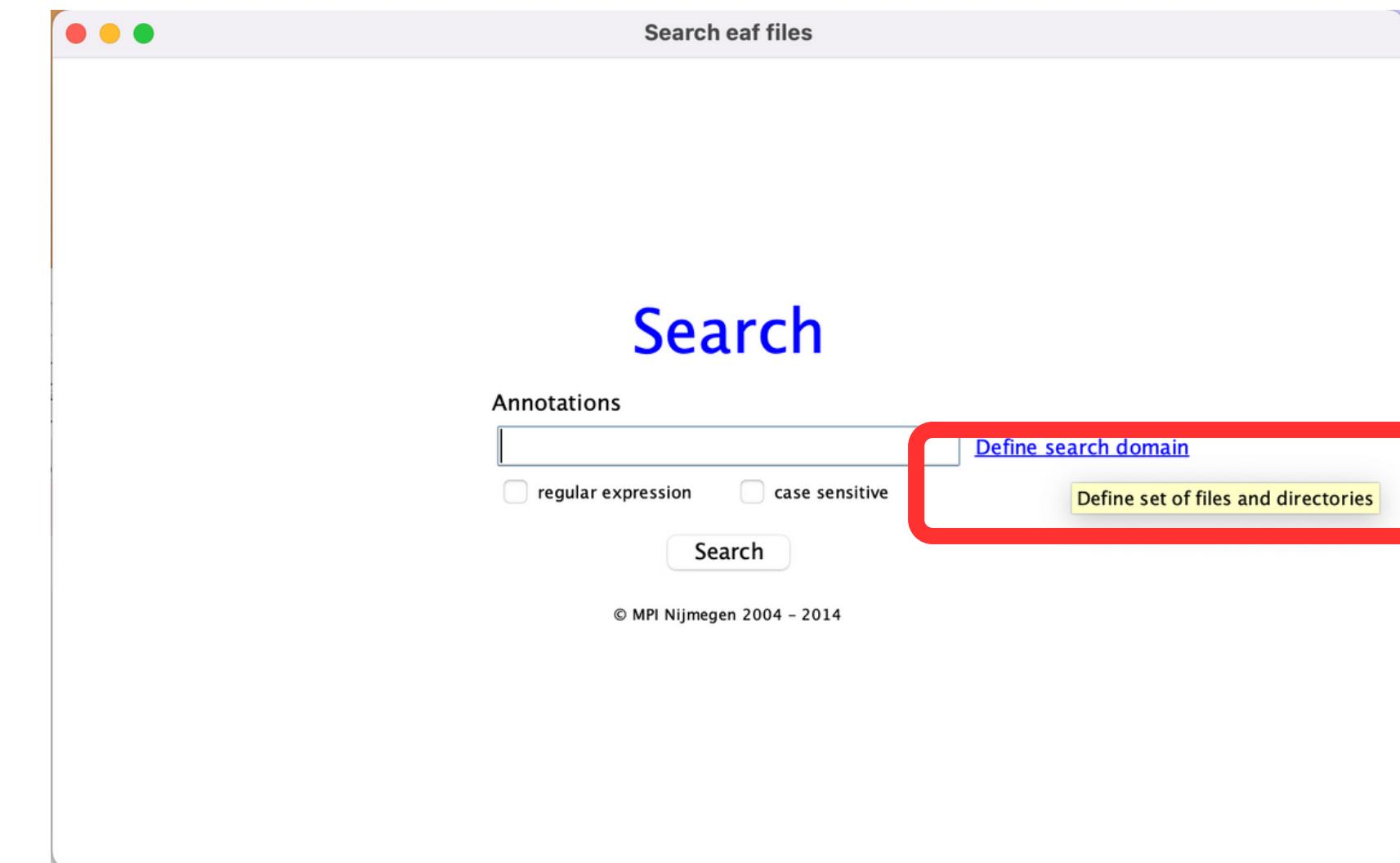
Nr	Annotation
1	ODUN-TAHTA
2	DİKDÖRTGEN
3	TAHTA-KAFA-ÇARPMAK-?
4	KOŞMAK
5	FARE
6	FARE-KAÇMAK ARKA-KEDİ-TAKİP
7	KOŞMAK PEŞİNDE-?
8	BORU
9	HAVA
10	BORU-HAVA-GİRMEK

Below the annotations, there is a yellow box containing the word "HAVA". At the bottom of the interface, there are playback controls: a timeline showing "00:00:00.000", a selection range "Selection: 00:00:00.000 - 00:00:00.000 0", and various control buttons for Selection Mode, Loop Mode, and playback (rewind, fast forward, play, etc.).

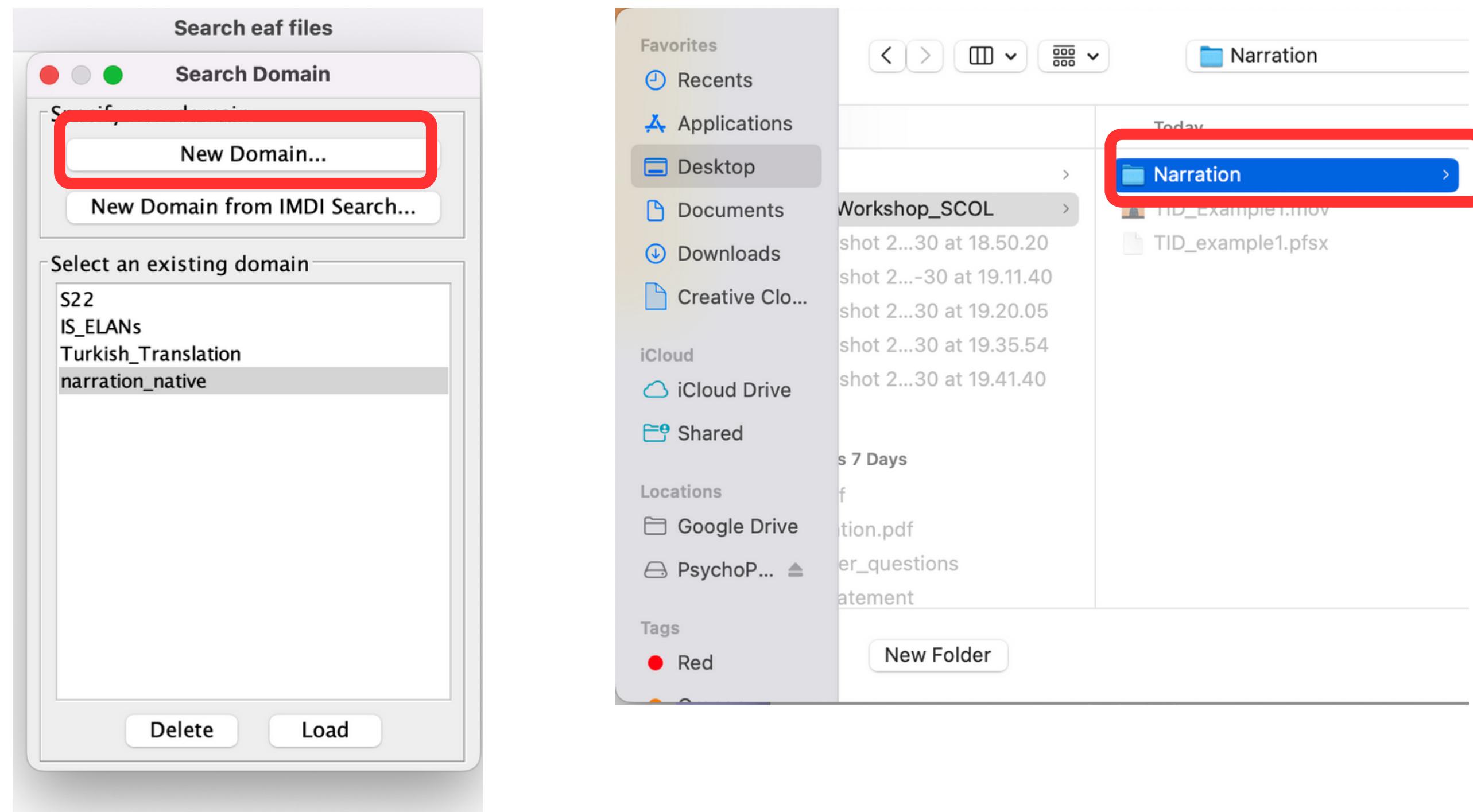
Find and replace in multiple files



Define search domain



Define new domain or choose an existing domain



You can click on an annotation to go to the relevant file

The screenshot shows the 'Search eaf files' window. In the search bar, 'noun' is entered. Below the search bar, there are checkboxes for 'regular expression' and 'case sensitive'. The 'Search' button is visible, along with 'Define search domain' and 'Export' links. A message 'Search complete' is displayed. The main area shows a table of search results with 1037 occurrences. The first few rows of the table are:

Nr	File	Tier	Before	... After	Parent	Child	Begin Time	End Time	Duration
1	Katilimci13	GTR1		Bare noun			00:00:54.3...	00:00:56.9...	00:00:02.5...
2	Katilimci13	GTR1		Bare noun	Bare noun		00:00:56.9...	00:00:58.5...	00:00:01.6...
3	Katilimci13	GTR1		Bare noun	BaSASS - Tracing		00:00:58.5...	00:01:00.0...	00:00:01.5...
4	Katilimci13	GTR1	SASS - Tracing	BaWhole entity ...			00:01:02.8...	00:01:04.0...	00:00:01.2...
5	Katilimci13	GTR1	Whole entity ...	BaWhole entity ...			00:01:05.8...	00:01:08.7...	00:00:02.9...
6	Katilimci13	GTR1		Plain verb	BaPoint noun		00:02:26.9...	00:02:29.5...	00:00:02.6...
7	Katilimci13	GTR1		Bare noun	PcPlain verb		00:02:29.5...	00:02:32.9...	00:00:03.3...
8	Katilimci13	GTR1	Constructed ...	BaConstructed ...			00:02:35.9...	00:02:38.2...	00:00:02.3...
9	Katilimci13	GTR1		Plain verb	BaWhole entity ...		00:02:41.2...	00:02:46.0...	00:00:04.7...

You can also do a structured search to see concordance and frequency

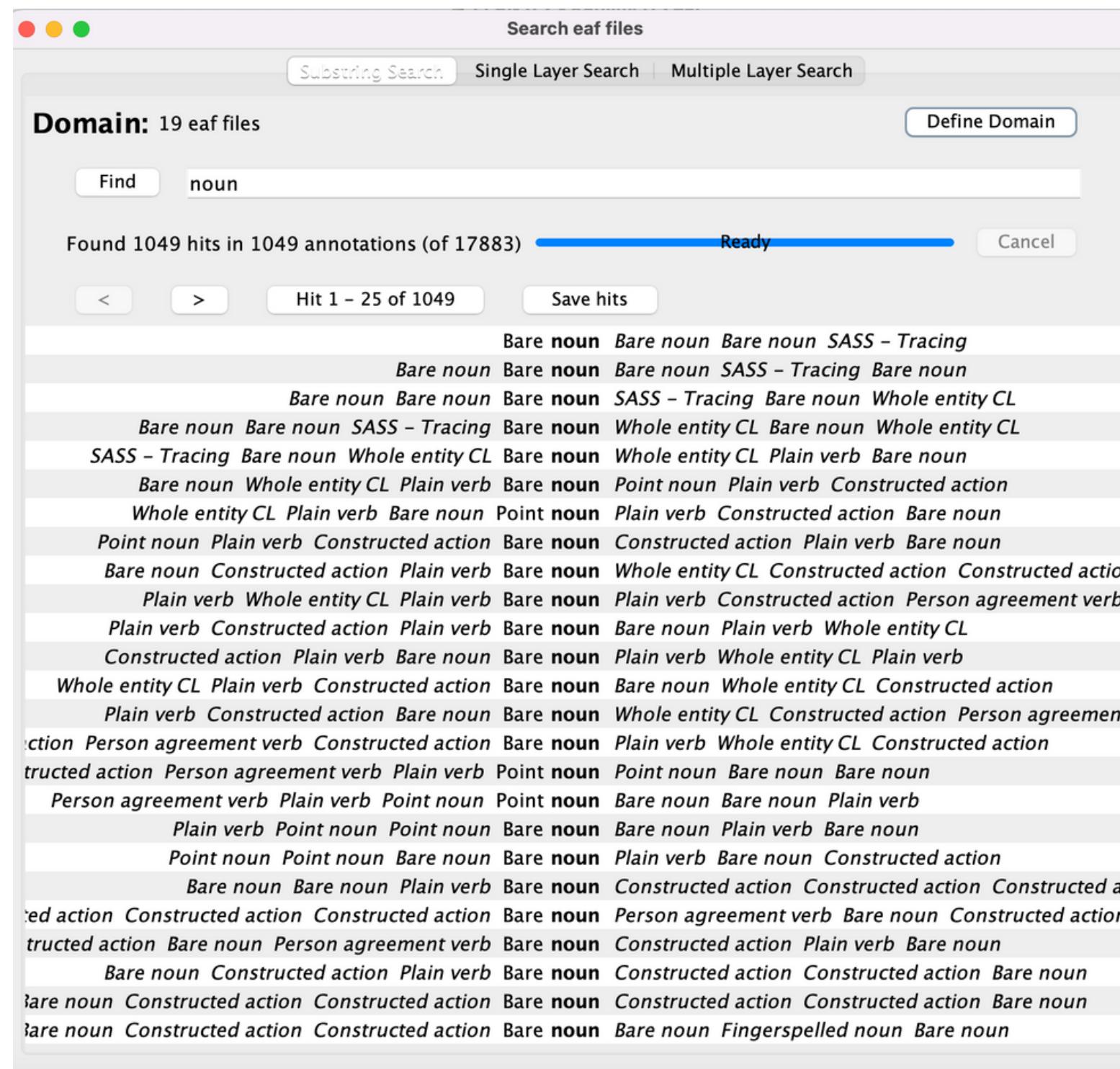
The screenshot shows the Elan application menu. The 'Search' tab is highlighted in blue. The menu items are:

- Type
- Search**
- View
- Options
- Window
- Help

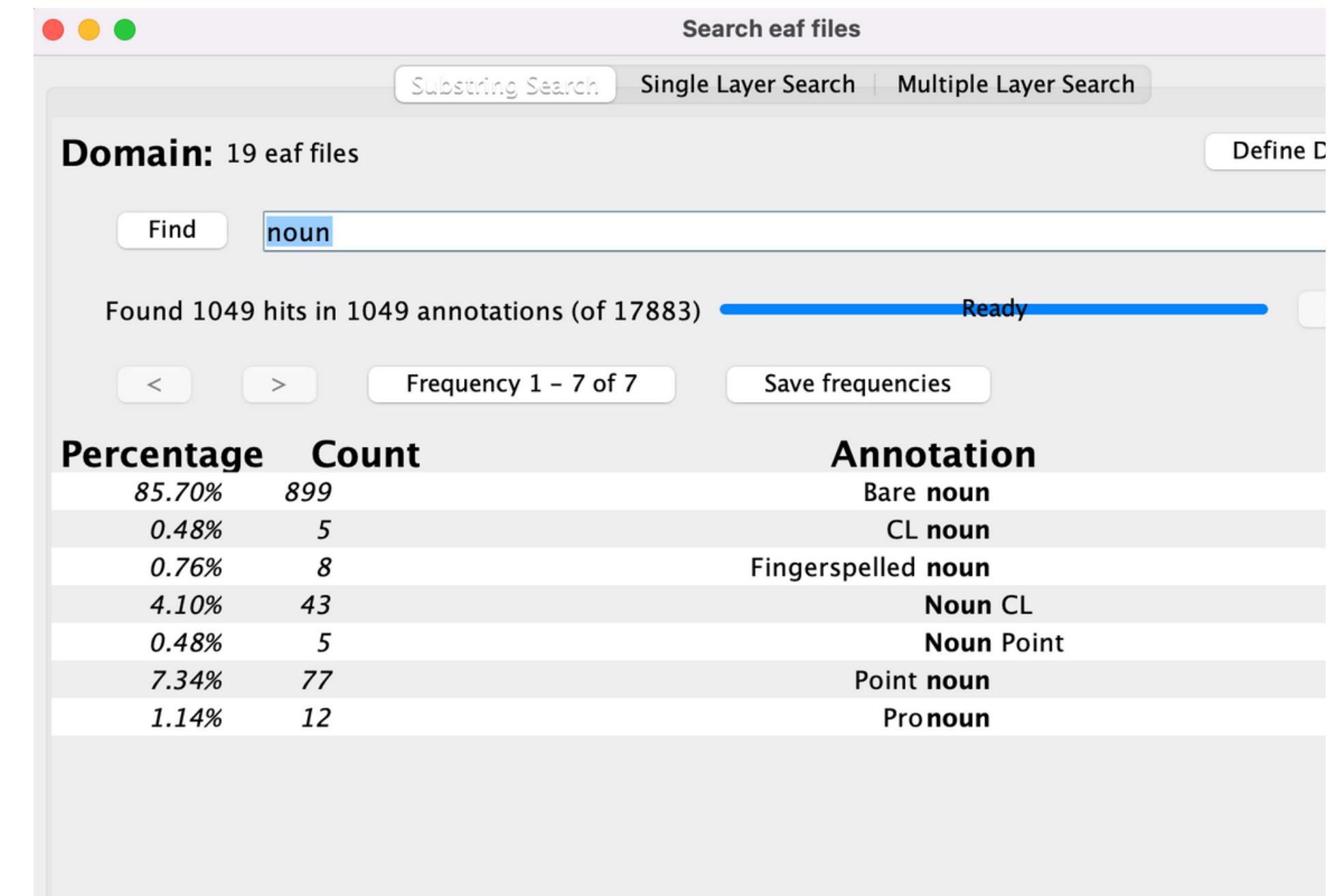
Below the menu, a submenu is open under the 'Search' tab, listing:

- Find (and Replace)...
- Find and Replace in Multiple Files...
- Search Multiple eaf...
- FASTSearch...
- Structured Search Multiple eaf...** (highlighted with a red arrow)
- Go To...

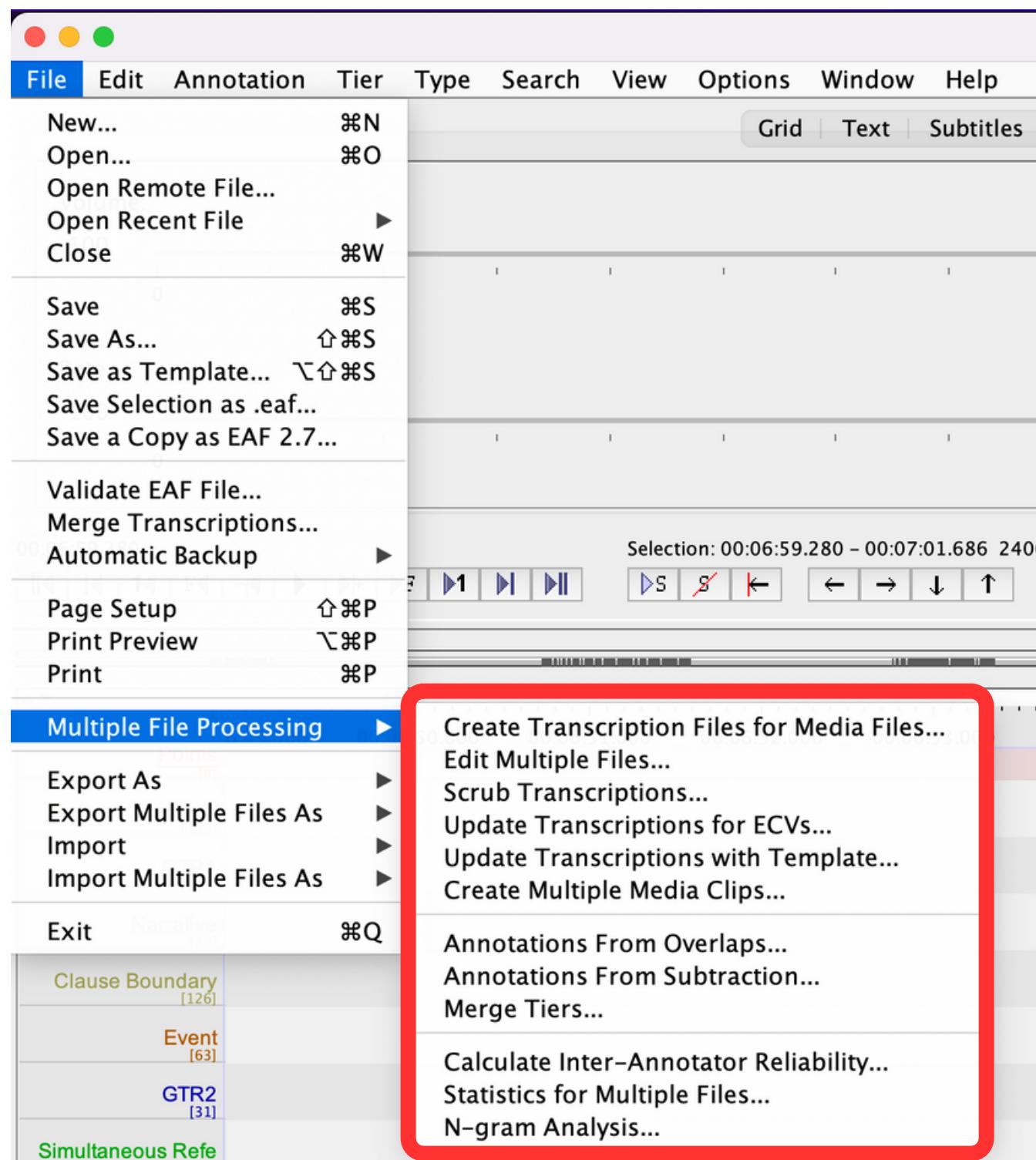
Concordance view



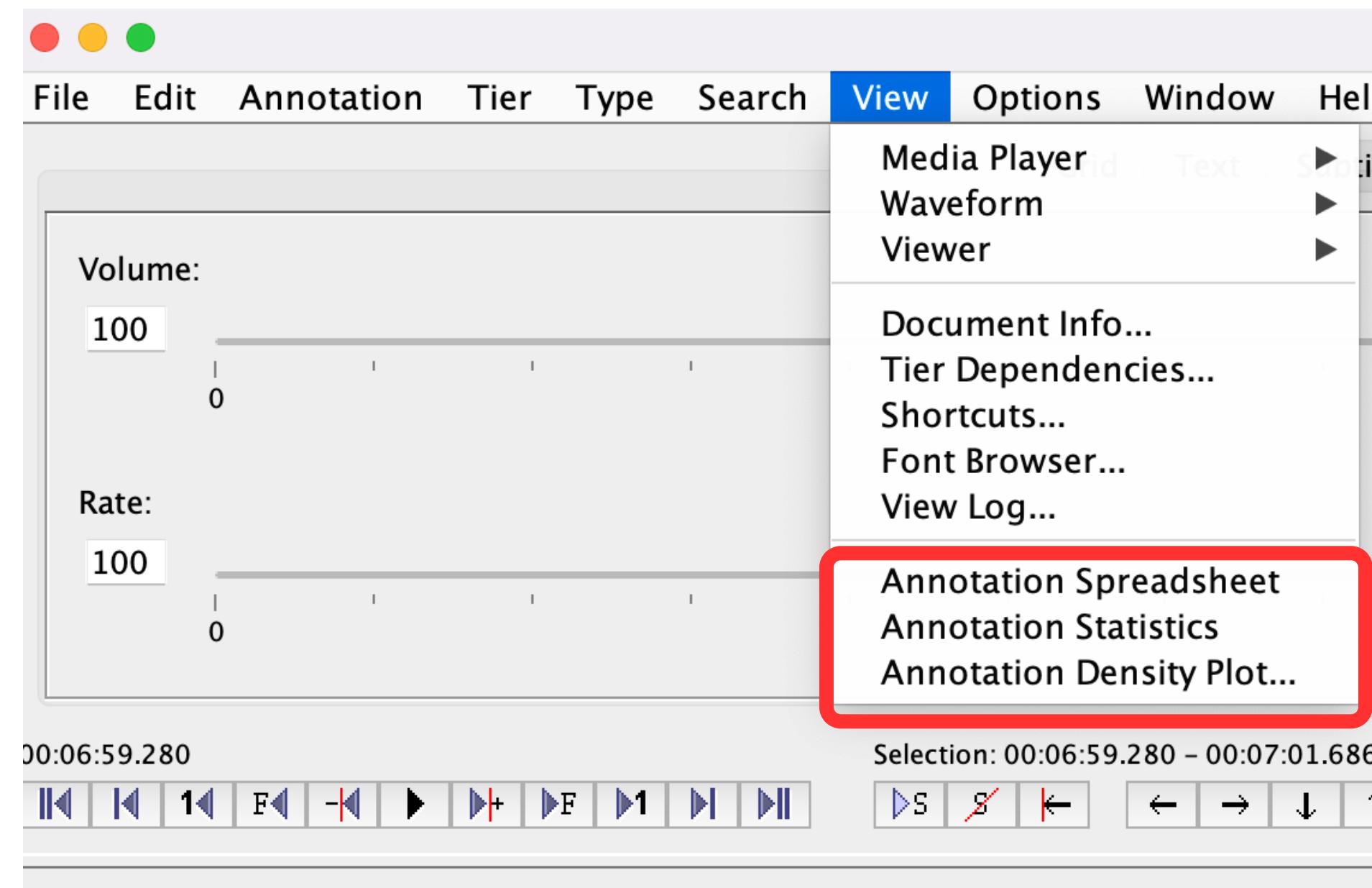
Show frequency (choose by right click)



You can process multiple files



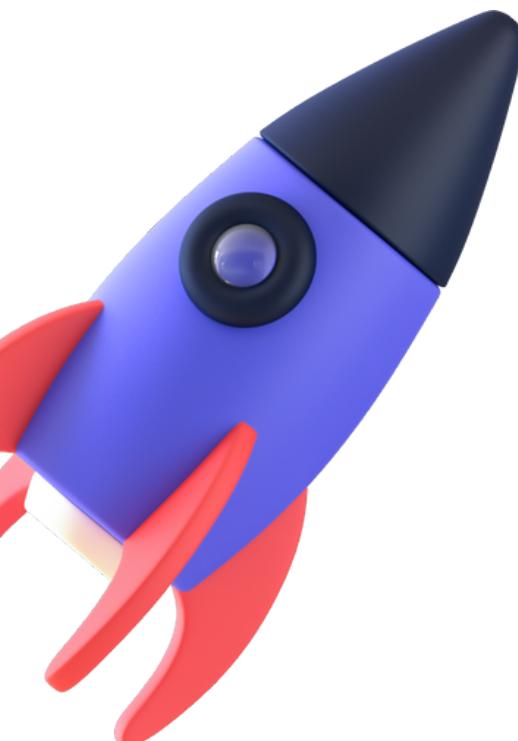
View annotation sheet, statistics, density plot



QUESTIONS?

WORKSHOP

Any
questions?



DEMONSTRATION

WORKSHOP

Demonstration

Let's complete the remaining annotations and export the file.



PRACTICE

WORKSHOP

Practice

It's your time now!



Steps:

1. Go to my Github repository by scanning the code.
2. Decide if you will annotate speech-gesture or sign language
3. Open the relevant folder
4. Download the folder with relevant media
5. Start annotating according to the guide provided in the next slide (also available in the repository).
6. Good luck!



Speech-Gesture Dataset: <https://shorturl.at/boATo>



Details

Title	route description to Kleve
Contributor	Peter Wittenburg Sotaro Kita
Country	Netherlands
Genre	Unspecified
Format	video/x-mpeg1 audio/x-wav image/jpeg image/tiff text/x-eaf+xml
Language	English
Persistent Identifier	https://hdl.handle.net/1839/00-0000-0000-0009-294C-9
Description	Peter explains how to come from Nijmegen to Kleve by car, such that Kita would be able to get there.
Description	This recording was made to generate a freely available test resource including speech and gestures. The annotations were created by Peter and Kita who is gesture researcher at the MPI for Psycholinguistics.

Tasks

Create and annotate the following tiers:

1. *Gesture*:

When does each gesture start and end?

2. *Motion Event Type*:

Does it encode path or manner? You can add controlled vocabulary for this.

Sign Language Dataset: 30 sec production clip from My verbal fluency paper

Articles

Effects of age of acquisition and category size on signed verbal fluency

Onur Keleş , Furkan Atmaca  & Kadir Gökgöz 

Pages 361-383 | Received 06 May 2021, Accepted 22 Dec 2021, Published online: 31 Mar 2022

 Download citation  <https://doi.org/10.1080/10489223.2021.2023814>

 Check for updates

ABSTRACT

Using a free-recall paradigm, we explored the effects of age of acquisition and category size on verbal fluency in Turkish Sign Language (Türk İşaret Dili [TİD]). We studied the semantic and phonological fluency task performances of deaf native and deaf late adult signers. We measured the number of correct responses and performed a time course analysis to observe how signers engage in lexical retrieval. Each task parameter had three difficulty settings corresponding to the size of the selected phonological and semantic categories. The results show that native TİD signers produced more correct responses. However, the results reveal no relation between the age of acquisition and the retrieval rate since participants maintained close subsequent response times. This indicates that participants had similar lexical access. Furthermore, the number of signs that the participants produced decreased as the level of difficulty (as a function of category size) increased. Therefore, phonological and semantic category size was found to be a suitable measure for categorical difficulty in TİD. We conclude that both groups of signers update information in the working memory and engage in lexical access similarly, but delayed acquisition of TİD results in a smaller search set in the mental lexicon.

Tasks

Create and annotate the following tiers:

1. *English Translation for each sign*

2. Accuracy:

Is the response correct or incorrect? You can use controlled vocabulary for this one.



Thank you!

DATE
2023 May 05



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PRESENTER
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