

Working with ELAN and FLEx together: an ELAN-FLEx-ELAN teaching set

Tim Gaved (tim_gaved@soas.ac.uk) and Sophie Salfner (ss123@soas.ac.uk)
January 2014

Introduction

This document describes a possible way of using ELAN and FLEx together. It uses version 4.6.1 of ELAN and version 8.0.3 of FLEx.

In this version of ELAN there are a number of problems with the FLEx import and output.

- Overlapping annotations will be made non-overlapping on import to ELAN. The start point of the second annotation is adjusted to match the endpoint point of the previous one.

We do not have a neat solution to this problem, for now overlapping annotations need to be re-adjusted after importing the FLEx file back to ELAN.

- If Participant information has been added in ELAN initially, we must not select the option “Import participant information from 'Note' field” when the information is reimported into ELAN. If it were to be selected, the timestamps in the file would not be used and the annotations would not have correct beginning and end times.

We will work with participant information as part of the tier attributes and will not select “Import participant information from 'Note' field” during import from FLEx.

We will still additionally work with a participant tier that explicitly annotates the speaker information for each utterance so that we can see the speaker in FLEx.

(This bug has been fixed in ELAN version 4.6.2 and later)

Also, we are aware that a lot of people will already have many annotations in ELAN where the types and tiers do not correspond to the template we use here. One option might be to look at how the tiers are set up in the template we use and see if the existing annotations can be made to fit into the template structure. Another idea could be that someone writes some new code to be able to help map from an old format to a new format, so that only a few manual adjustments would be needed made to make it fit. Such solutions are beyond the scope of this document but if anyone had the time and expertise to explore them the community of ELAN and FLEx users would welcome it. Any suggestions for improvement to ELAN or FLEx in this area should be directed towards the developers.

Step 1: Adapting the basic template

The teaching set contains the basic template `FLExTemplateBase.etf`. This template has the following tiers:

- Interlinear-title-knf
- A_Transcription-text-knf
- A_Words-txt-knf
- A_Translation-gls-en
- A_Participant-note-en

Each tier has a name of the form xxxxxxxx-yyy-zzz where

xxxxxxx is the main name of the tier

yyy is the FLEx type

zzz is the internal flex code for the language of the tier. The internal codes for a FLEx writing system may just be the ISO code, but will be more complex if a variant is used.

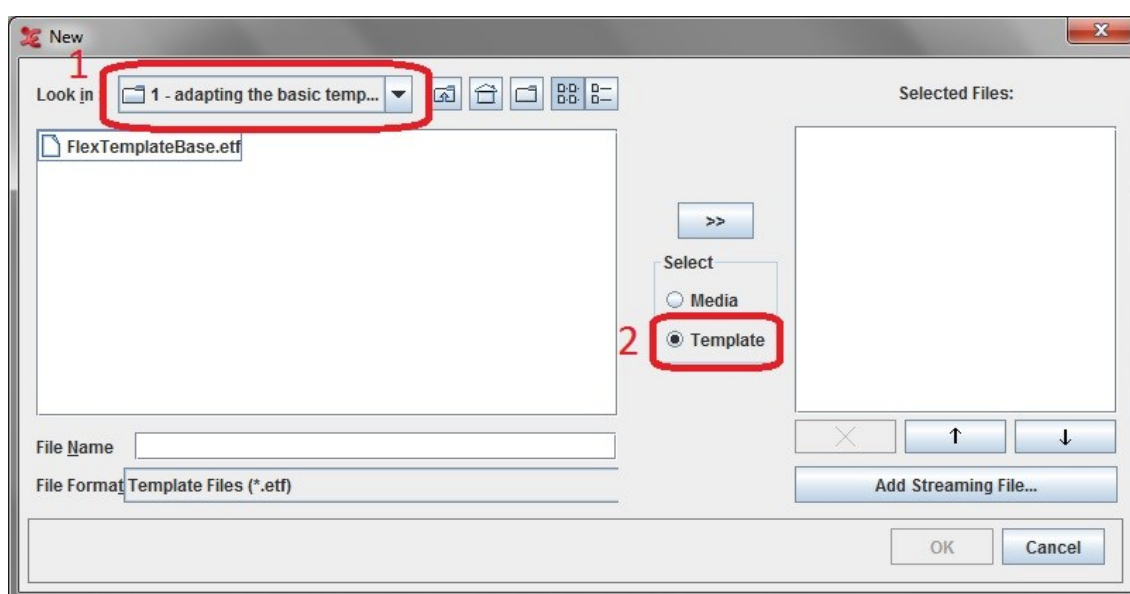
Note: It is important that you get this code correct. If you don't, you will run into problems in FLEx later. Codes are listed at <http://www.ethnologue.com/browse/codes>, language names are listed at <http://www.ethnologue.com/browse/names>. If you click on the language name, it will take you to the language page where you can see the code listed next to ISO 639-3.

In addition, A_ stands for the name of the participant, separated by an underscore from the rest of the tier name.

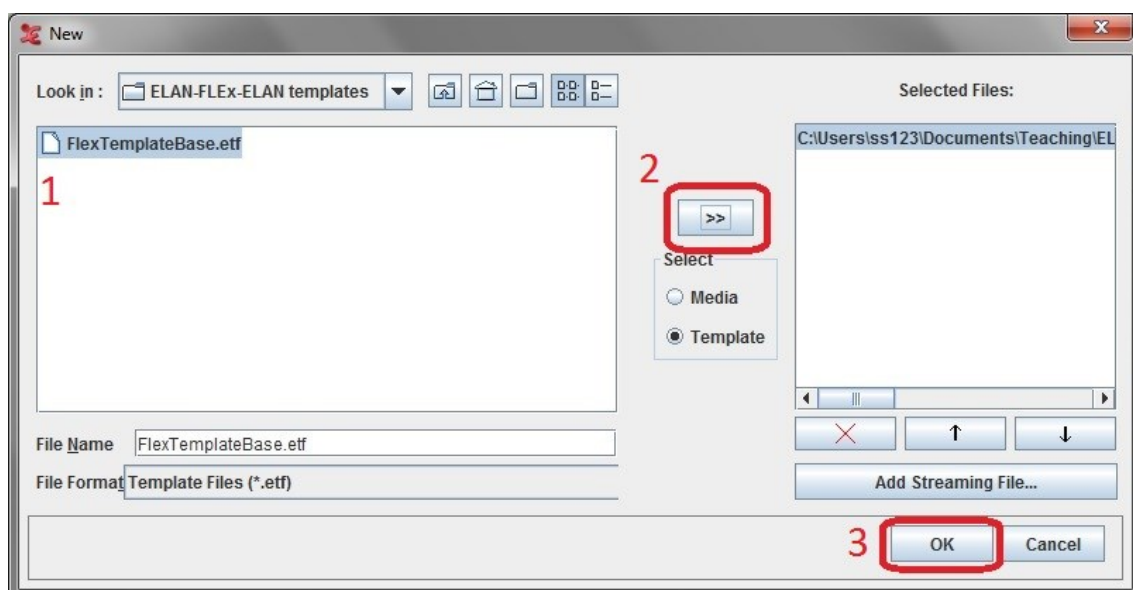
The first task is to edit the tier names so that “knf” is replaced by the code of the language you are using, and if necessary, “en” is replaced by the code of the analysis language you are using. The Interlinear-title can be in the vernacular or the analysis language.

In our example, we are working with a video clip in German. The ISO code for German is “deu”, so everything that is “knf” in the template has to be changed to “deu”. We want to use English as the analysis language, so we will leave “en” as it is. There are various ways of changing the template. Here we are using ELAN itself to change the ISO code.

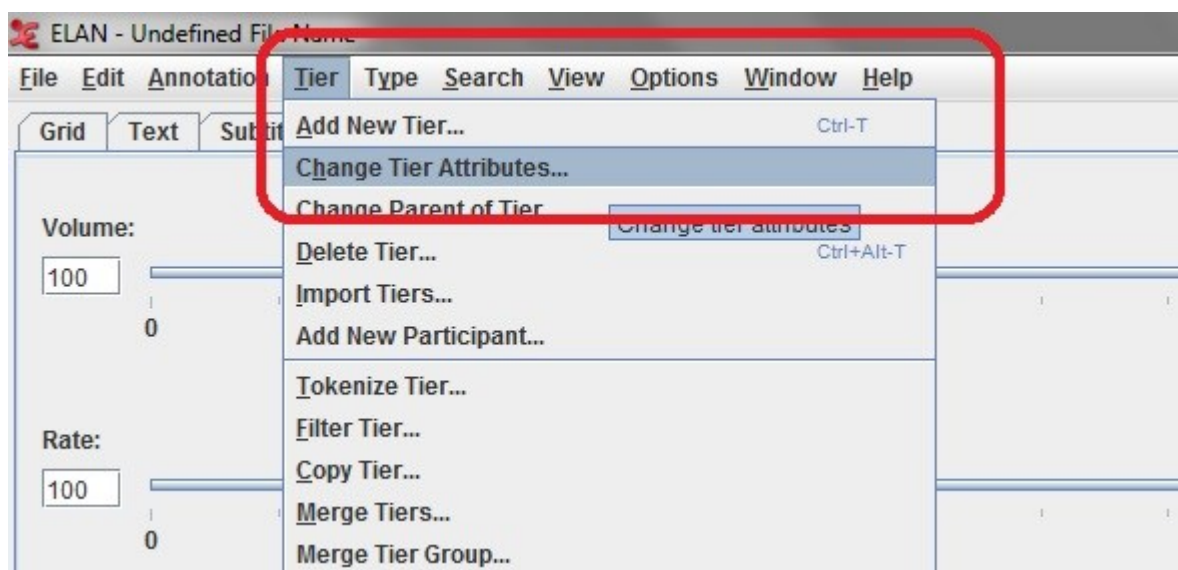
1. Start ELAN. ELAN opens with a blank window with only the menu bar visible, without any video, audio or annotations.
2. In the menu bar, click **File > New**. A window opens that asks you to select the media file and the template for the new file. As we only want to change the template, we do not have any media files. Instead, we will select only a template.
3. To make the templates visible, click into the circle next to ‘Template’. Navigate to the folder 1 - adapting the basic template in the teaching materials. This folder contains the templates, and here is also where you can save new templates.



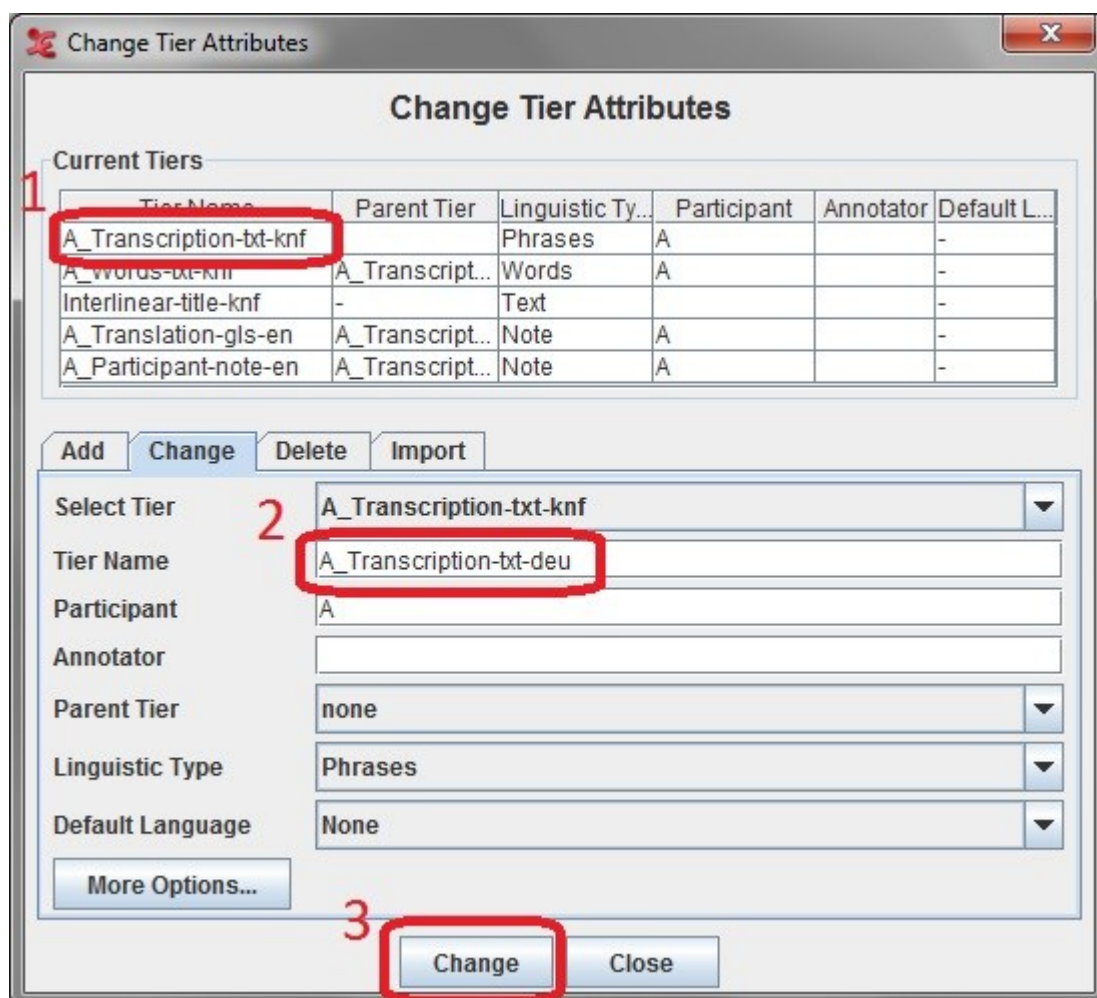
- Click on `FlexTemplateBase.etf` to select the file. Then click on the double arrows in the middle column to move the .etf file across. Finally, click **OK** to open the newly created file.



- To change the vernacular language from “knf” to “deu”, we have to change the properties, i.e. the attributes, of those tiers that are in the vernacular language. To do that, we go to the menu bar, click on **Tier > Change Tier Attributes...**



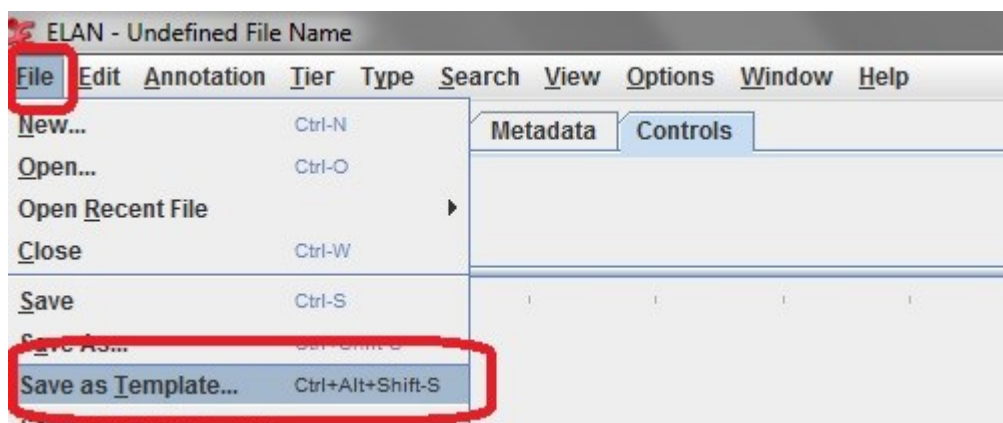
- This opens the Change Tier Attributes window. In the table of the current tiers at the top of the window, click on the tiers one by one to find those that end in “knf”. If you find one, click next to ‘Tier name’, delete “knf” and type “deu” (without the inverted commas) instead. You then have to click on **Change** to actually make the change.



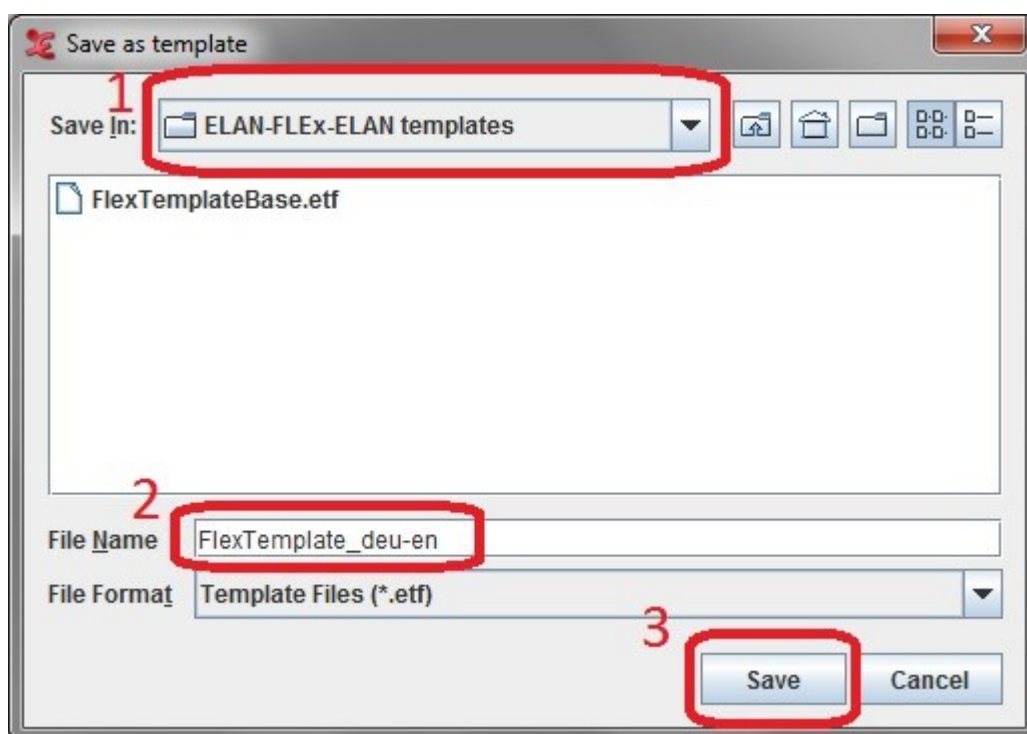
7. Do the same for the tier Words-txt-knf and Interlinear-title-knf. Don't forget to click on **Change** before moving on to the next tier. If you don't click **Change** and move on to the next tier your changes will not actually be made.
8. Finally, click on **Close** to close the Change Tier Attributes window. All the changes should have been made and your ELAN tiers should now look like this:



9. To save the new template, go to the menu bar and click on **File > Save as Template**.



10. This opens the Save as template window. Navigate to the folder where you save templates, e.g. a folder you might call ELAN-FLEx-ELAN templates. Then enter a file name. As we are working with German as the vernacular language and English as the analysis language we could save the template as FlexTemplate_deu-en.etf. Then click on **Save** to save the file.



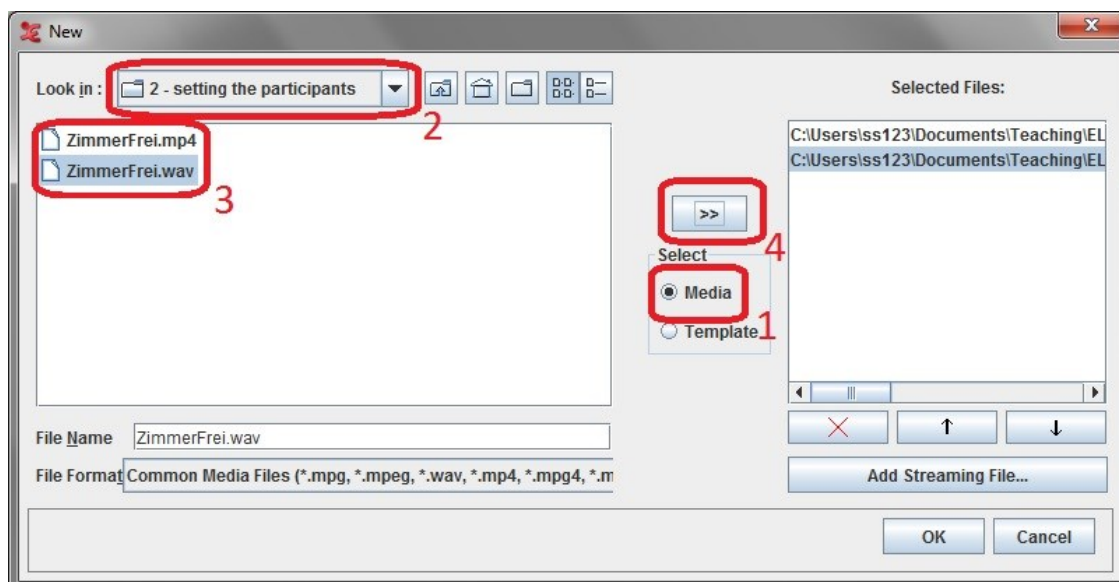
Close ELAN. We now have a template that can tell FLEx what languages we are working with.

Step 2: Setting the participants in the ELAN annotation file

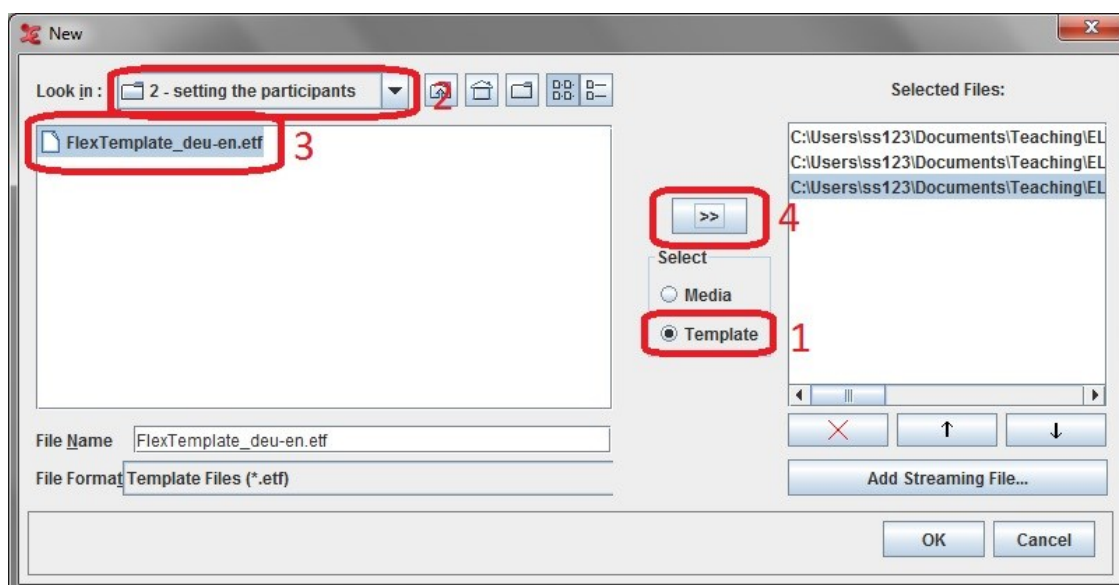
The template we have created contains tiers for one speaker, but most recordings have more than one speaker. Therefore we need to create a set of tiers for each speaker.

11. First, we need to create a new file using the new FLEx template and the media file we are analysing. In the menu bar, click on **File > New**.
12. In the window that opens, navigate to the folder 2 - setting the participants, which contains the .mp4 file, .wav file and template. Click into the

circle next to 'Media' to see the .mp4 file and the .wav file. If needed, navigate to the folder 2 - setting the participants again. Click on ZimmerFrei.mp4 to select the file and then on the double arrows to move it across. Then click on ZimmerFrei.wav to select this file and then again on the double arrows to move it across as well.



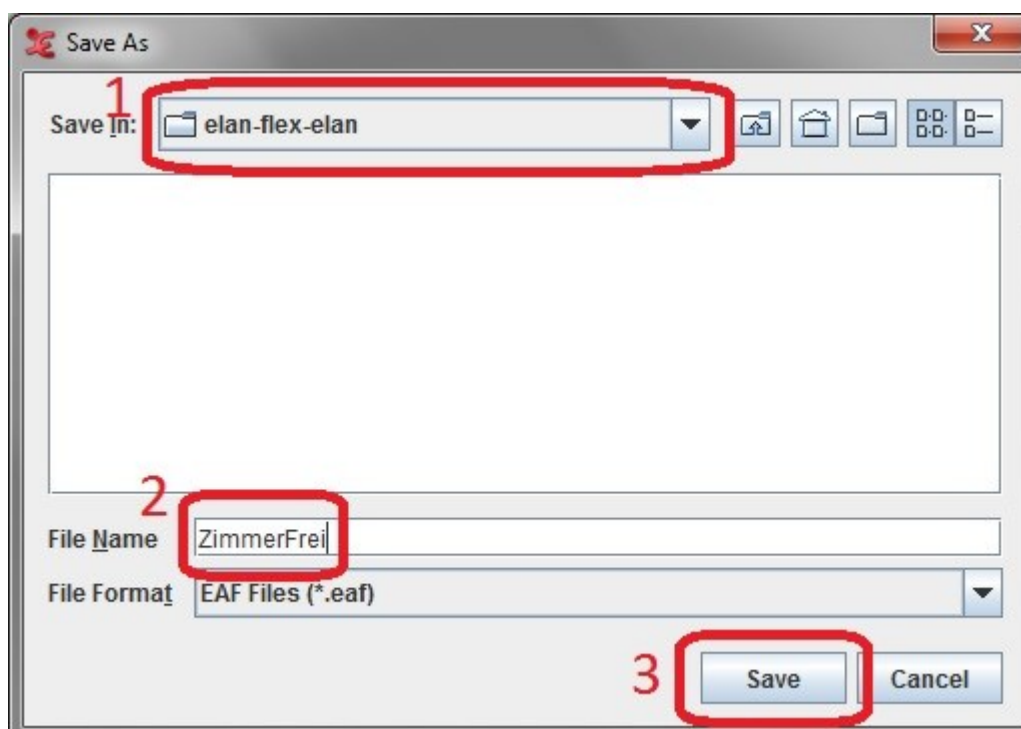
13. Then click into the circle next to 'Template' to make the template visible. If needed, navigate to the folder 2 - setting the participants again. Click on FlexTemplate_deu-en.etf to select the file and then on the double arrows to move it across, as before. Finally, click **OK**.



14. This opens ELAN with a video file, an audio file and annotation tiers. It is good practice to save the file straight away and then to save again in regular intervals. Save the file as ZimmerFrei.eaf by clicking on **File > Save as...**



15. In the window that opens, navigate to the folder where you want to save the file, enter the file name and click on **Save**.



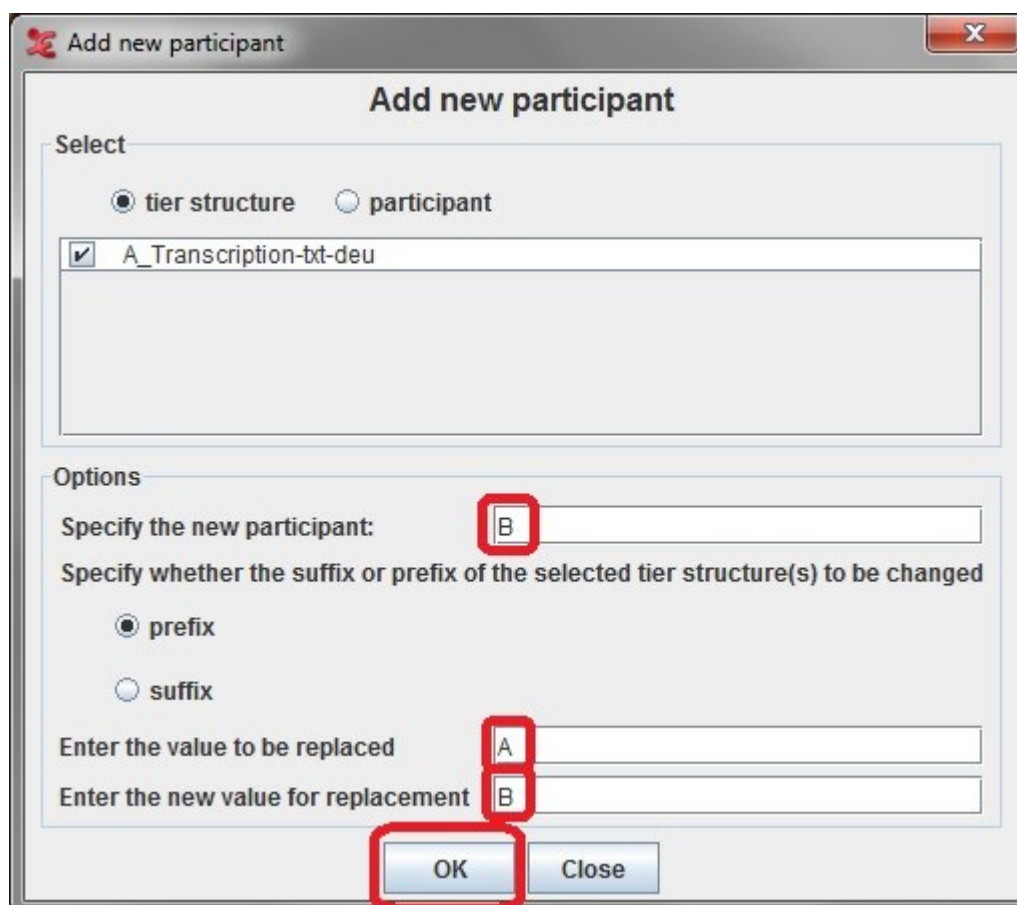
16. The tier Interlinear-title-deu is for the name of the text. To give the text a name, we add an annotation in the Interlinear-title-deu tier and enter “Zimmer Frei”. The start and end points of the annotation are not important.



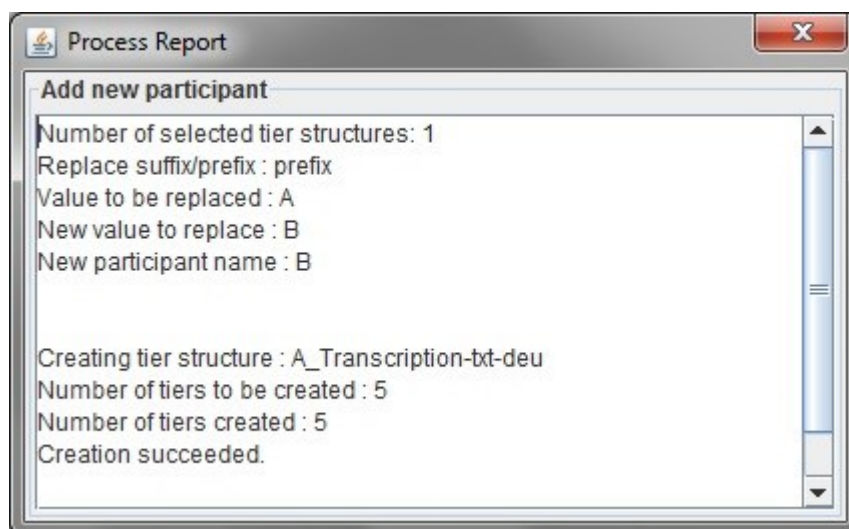
17. A second tier and its daughter tiers (A_Transcription-txt-deu) are for the transcription etc. of one speaker. Since we have two speakers, we now have to add a new participant. In the menu bar, click on **Tier > Add New Participant...**



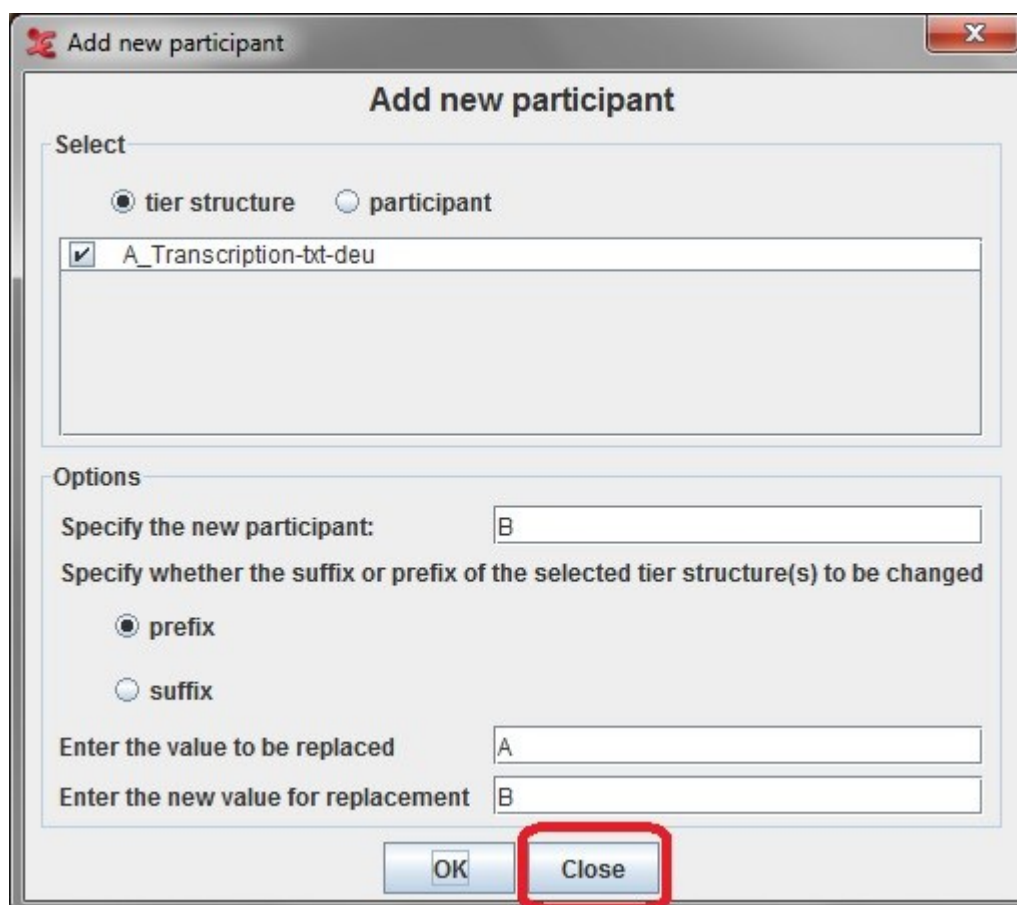
18. In the Add new participant window that opens, we leave all the options in the Select section as is. This way, we are using the same tier structure as in A_Transcription-txt-deu for the second participant. In the Options section, we specify the new participant as “B”. Instead of the “A” in the tier names we would like “B” for this participant. Therefore we enter “A” (without the inverted commas) next to ‘Enter the value to be replaced’, and “B” (without the inverted commas) next to “Enter the new value for replacement’. Then we click on **OK**.



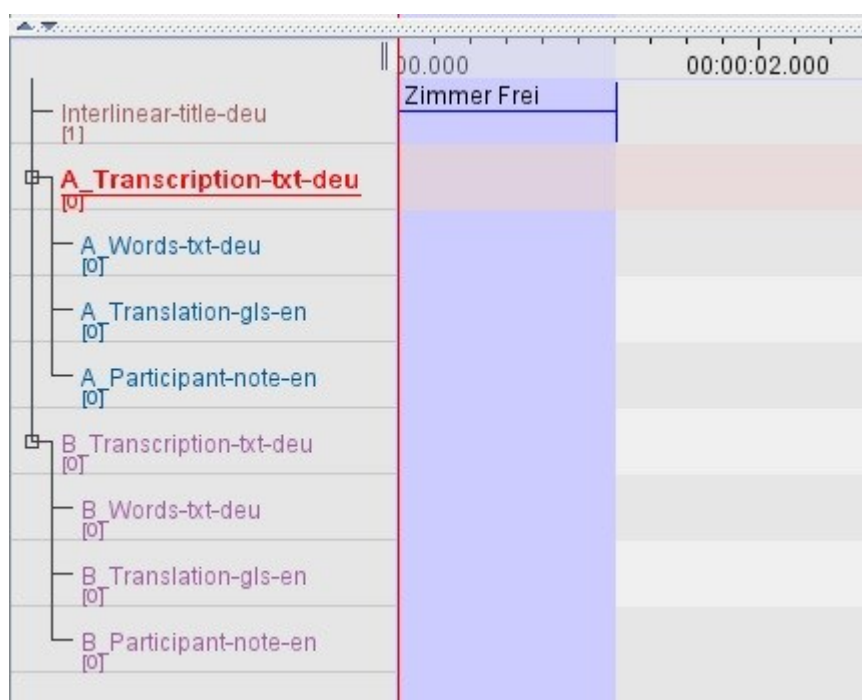
19. A Process Report window opens, we just close this window.



20. Then we close the Add New Participant window.



21. You will now see the new tiers in the ELAN tier structure, which should look something like below (the colours may be different, that's nothing to worry about).



At this point, we have finished setting up the speakers and have prepared the ELAN file for annotation. We can now move on to the actual annotation.

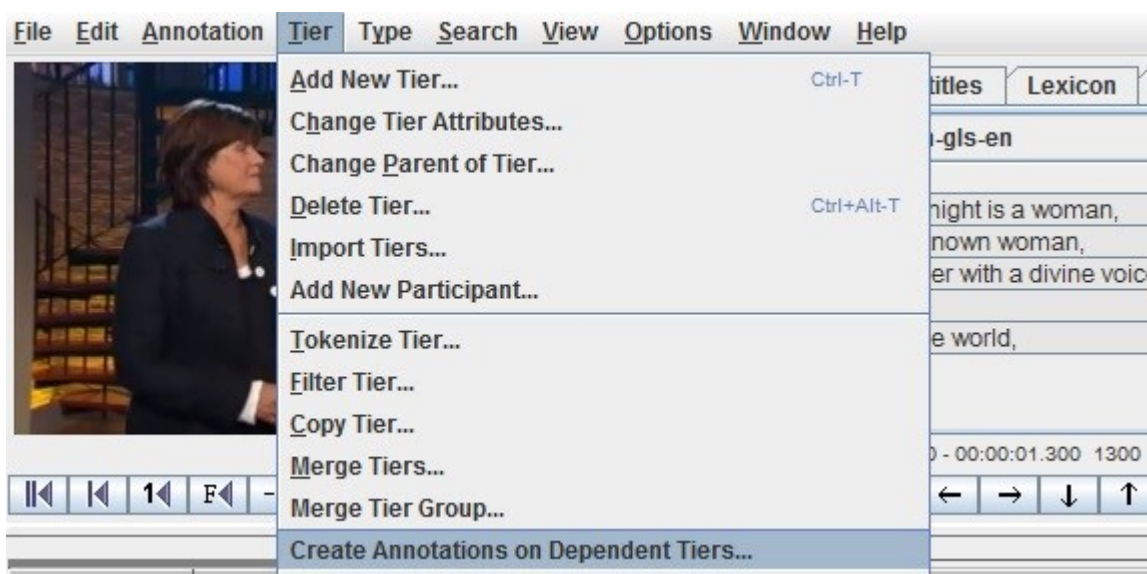
Step 3: Annotating and preparing the file for FLEx

At this stage, you would segment and transcribe the file and add your free translations. If you speak German and want some practice you are free to do so. The file ZimmerFrei_speakersset.eaf is ready for transcription. You can find it in the folder 3 - preparing the ELAN annotation. If you don't want to transcribe just open the file ZimmerFrei_transcribed.eaf, which you can find in the folder 3 - preparing the ELAN annotation.

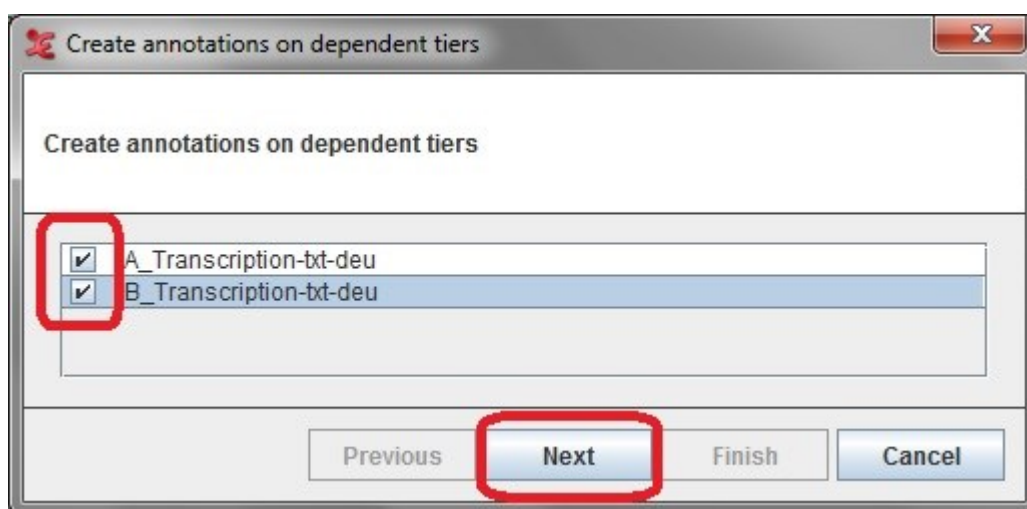
Apart from transcribing and translating, we have to make the speaker for each utterance explicit for FLEx import if we want to see the speakers in FLEx, and we have to break up the phrases into words.

Specify the speakers for each utterance

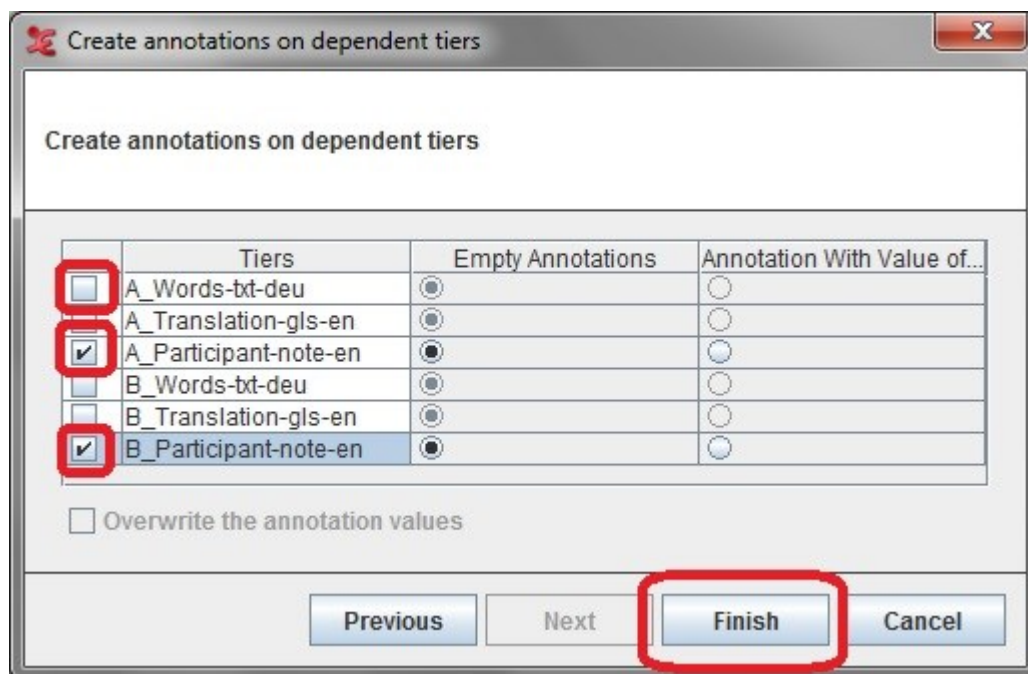
22. To insert the speakers, first click on **Tier > Create Annotations on Dependent Tiers**.



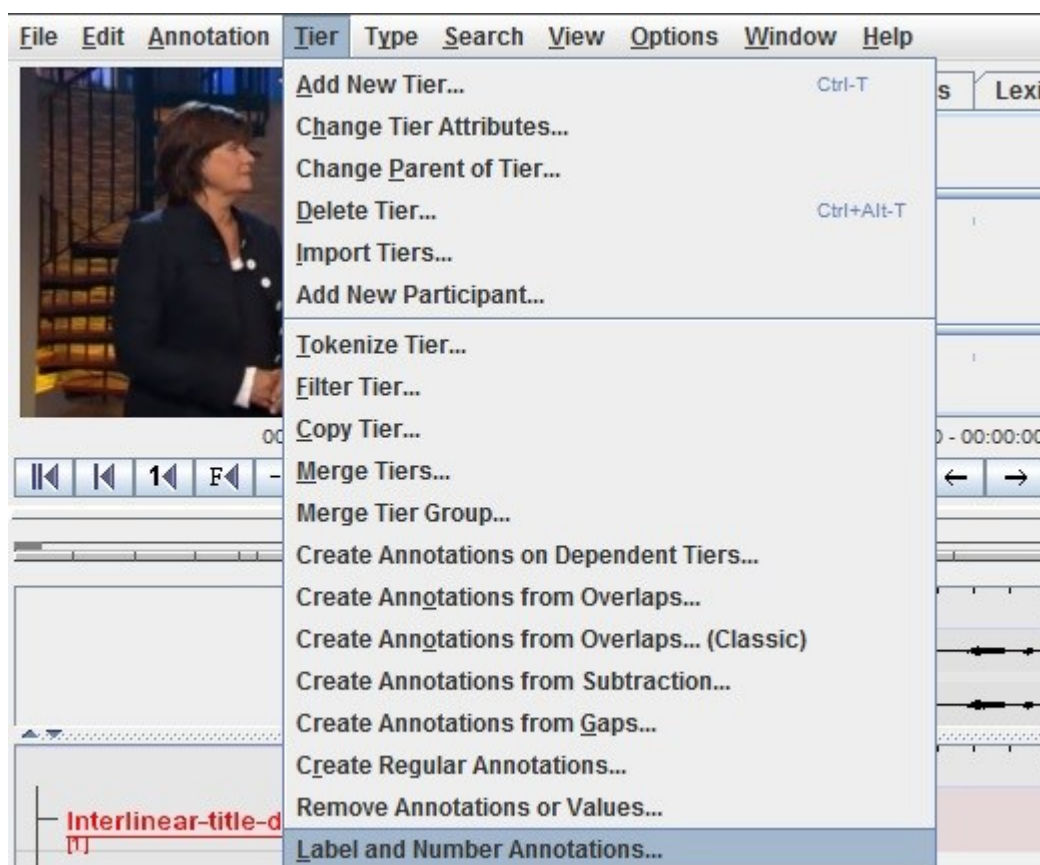
23. For each utterance in the transcription tier, we want an annotation in the participant tier. Therefore we tick both boxes in the window that opens. Then we click **Next**.



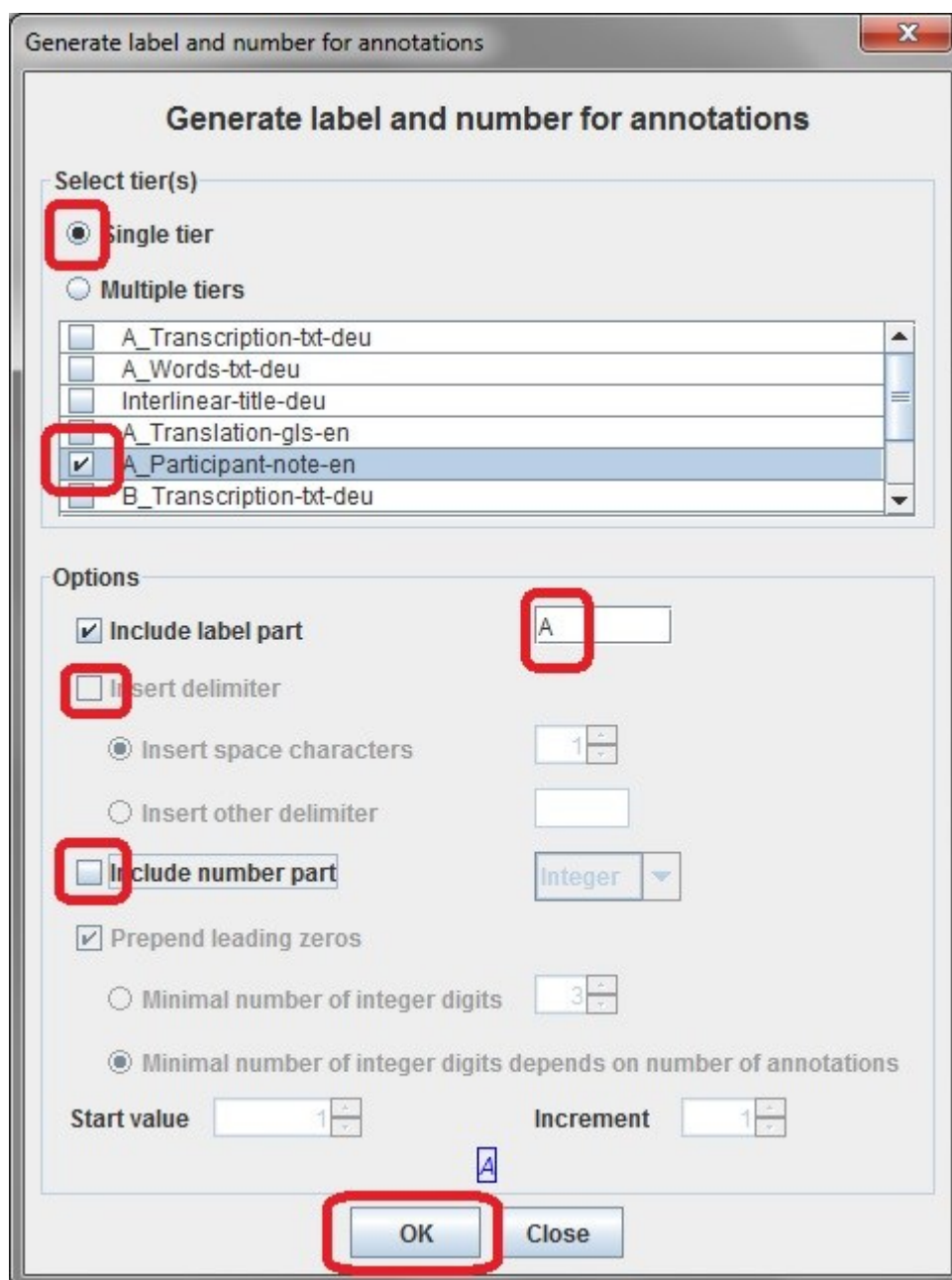
24. We want the new annotations to be created in the participant note tiers. We therefore untick the box next to 'A_Words-txt-deu' and tick the boxes next to 'A_Participant-note-en' and 'B_Participant-note-en'. Then we click on **Finish**. If you now look into your tiers, you will see new blank annotations in the participant note tier under each transcription and translation annotation.



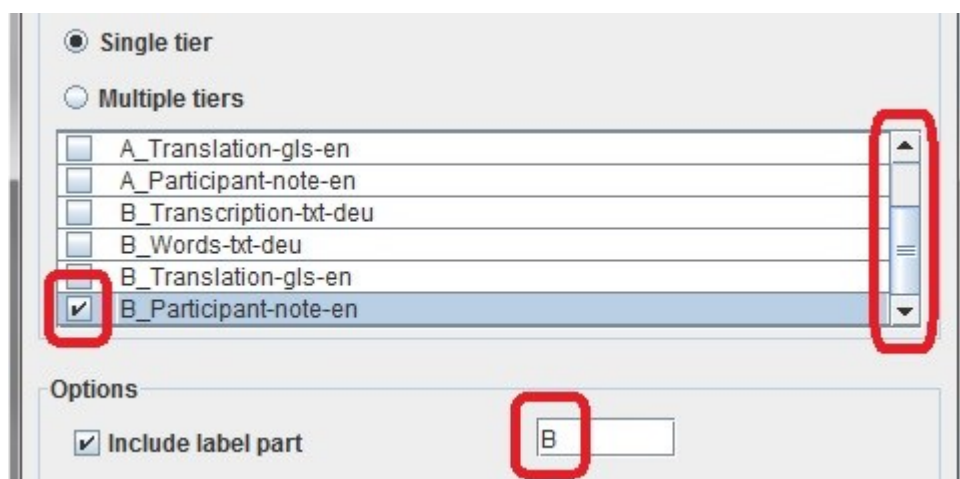
25. To automatically put the participant name in the annotation, we will use the labelling function in ELAN. In the menu bar, click on **Tier > Label and Number Annotations...**



26. In the window that pops up, we make sure that we have selected **Single tier**, and have first ticked the box next to 'A_Participant-note-en'. In the box next to 'Include label part', we write "A" (or the real name of the person, as you wish). We then untick the box next to 'Insert delimiter' and we untick the box next to 'Include number part'. We then click **OK**.



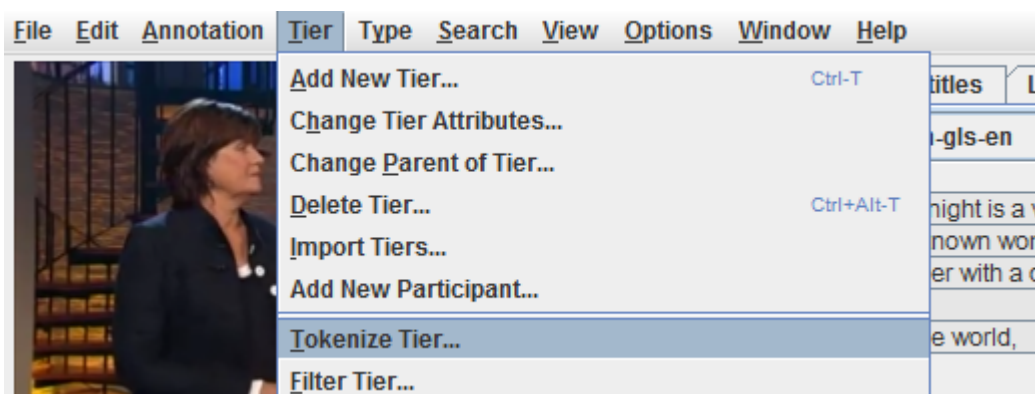
27. For the second speaker we do the same. We tick the box 'B_Participant-note-en' and write "B" next to 'Include label part'. Note that you will have to scroll down along the tiers to be able to see the tier B_Participant-note-en. Then we click on **OK** again. At the end, we close the labelling window.



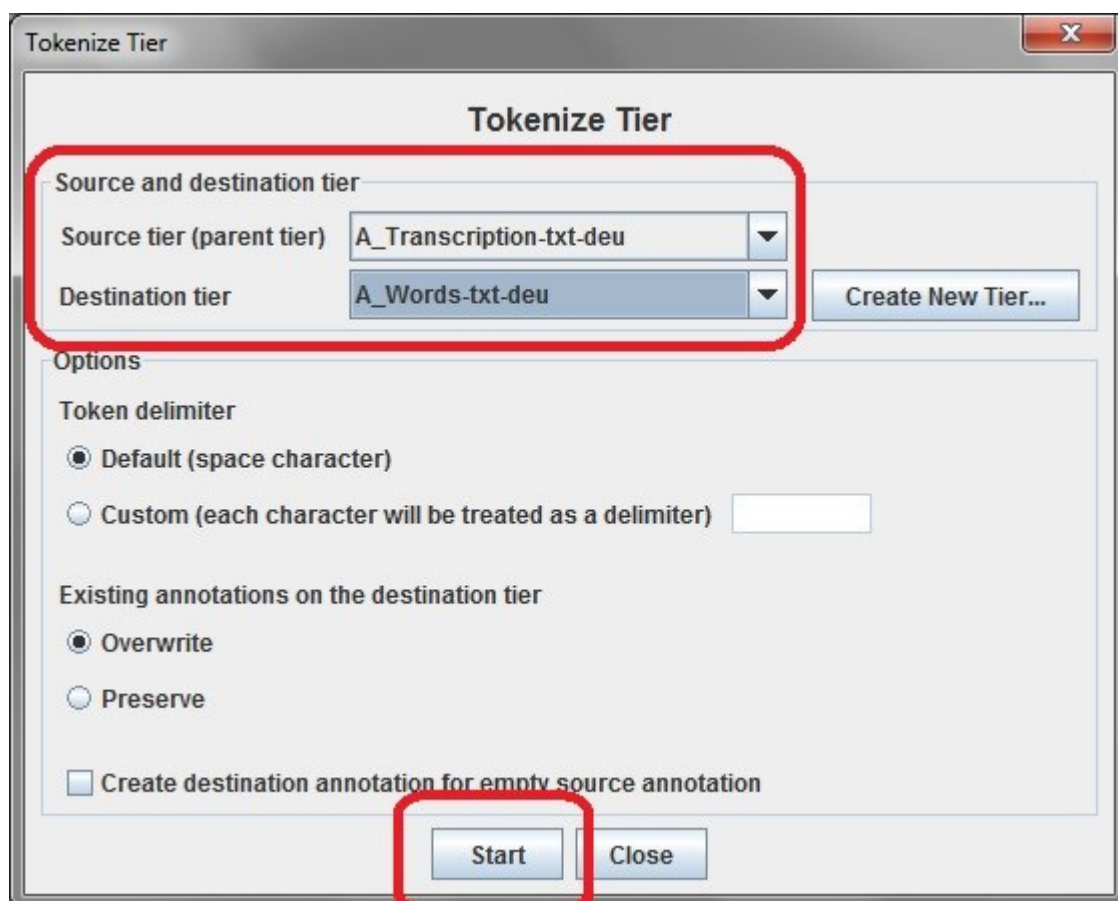
Breaking the phrases into words

To break phrases into words and insert annotations for each word into the word tier, we will use the ELAN tokenizing function.

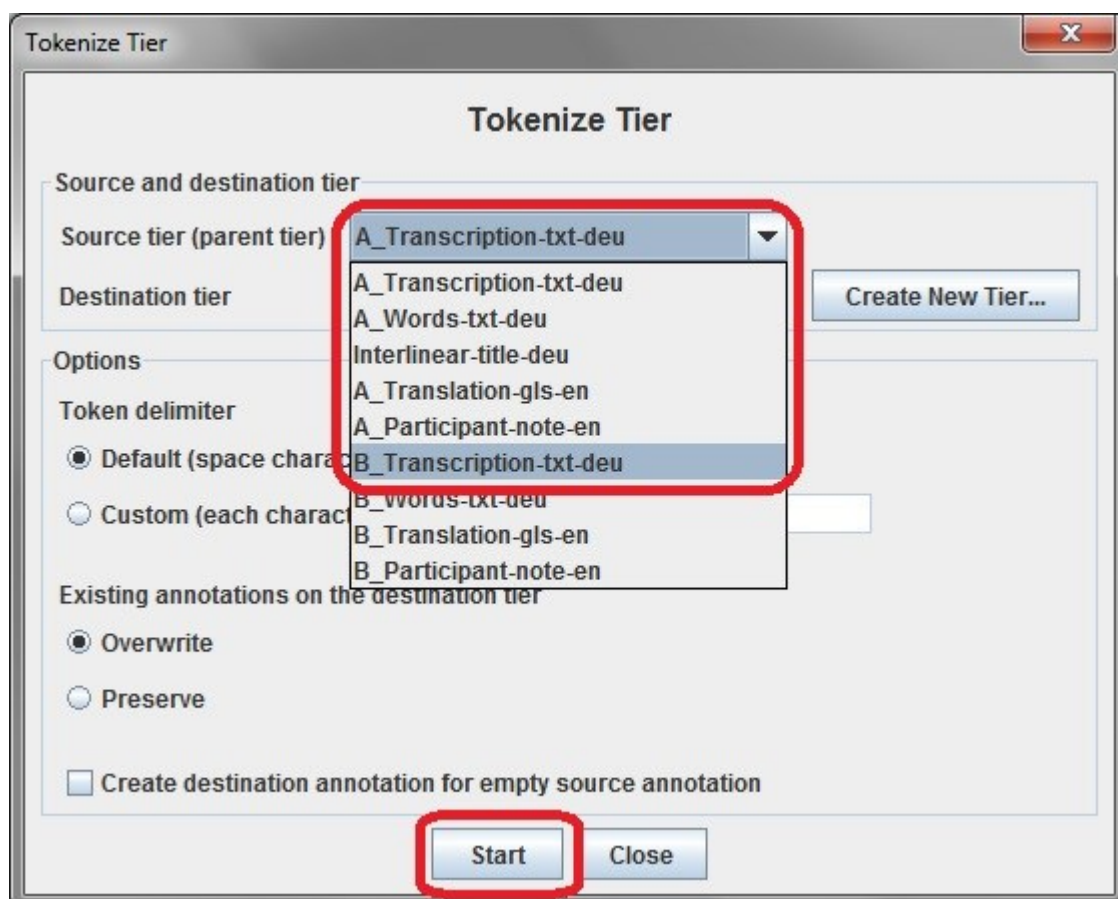
28. In the menu bar, click on **Tier > Tokenize Tier...**



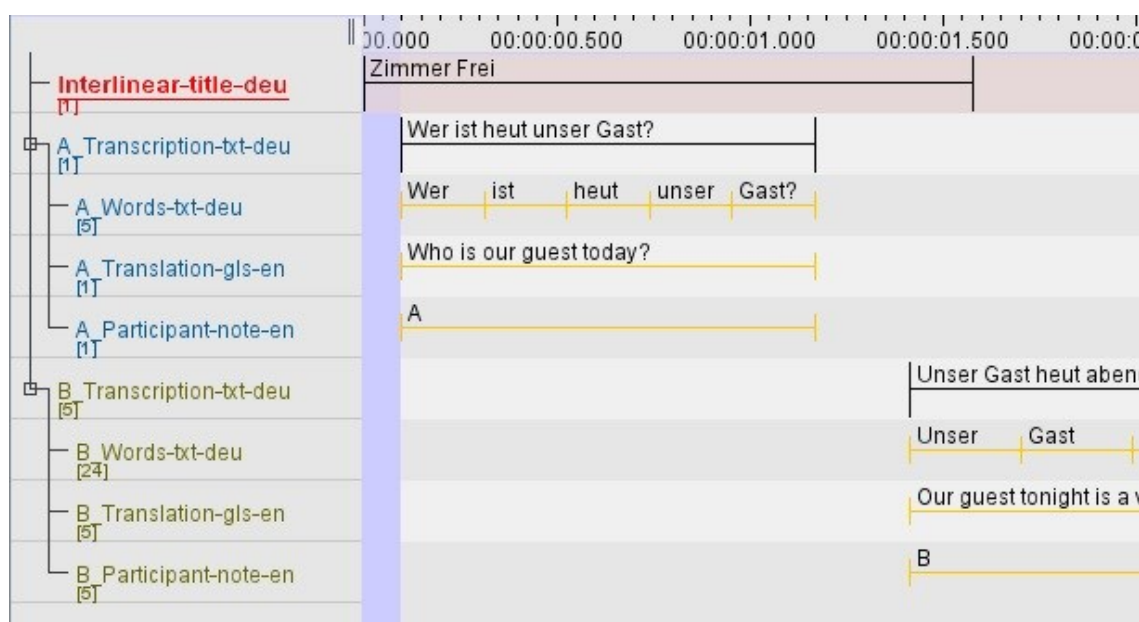
29. The window that pops up asks us to define the source tier (where the phrases are) and the destination tier (where the words should go). The suggested settings are okay for Speaker A, so we can just click **Start**.



30. We have to repeat the same process for Speaker B, though of course we now have to select a different source tier: B_Transcription-txt-deu. This automatically selects the appropriate destination tier and we can click on **Start**.



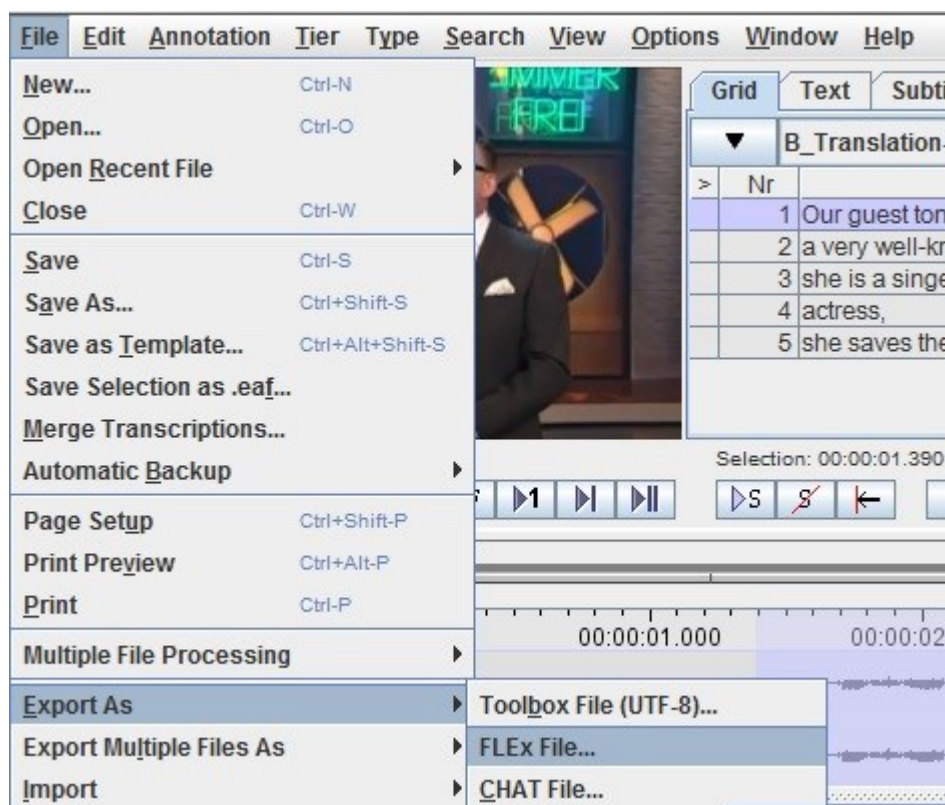
After we have specified the speakers and broken up the tiers, our annotation should look something like this:



Step 4: Export to FLEx

In this step, we finally export to FLEx. You can either continue to work with your file or you can open the file `ZimmerFrei_readyforexport.eaf` in the folder 4 - exporting to FLEx.

31. With the file open in ELAN, go to the menu bar and click on **File > Export As > FLEx file...**



32. In the Export window that pops up, we have to go through four steps/screens. On the first screen (Step1/4: Element Mapping), tick the box next to 'Export interlinear-text tier' and select 'Interlinear-title-deu' from the dropdown list. Do not tick the box next to 'Export paragraph tier'. Then click on **Next**.

Export as FLEEx file

Step 1/4: Element Mapping

Element Mapping

☒ Export interlinear-text tier Interlinear-title-deu

☐ Export paragraph tier <select a tier>

Element Name	Element type
paragraph	
phrase	Phrases
word	Words
morph	No linked types available

Select tiers to be exported

paragraph	phrase	word	morph
	<input checked="" type="checkbox"/> A_Transcription-tx...	<input checked="" type="checkbox"/> A_Words-txt-deu	
	<input checked="" type="checkbox"/> B_Transcription-tx...	<input checked="" type="checkbox"/> B_Words-txt-deu	

Previous **Next** Finish Cancel

33. On the next screen (Step 2/4), nothing needs changing, just click on **Next**.

Export as FLEx file

Step 2/4: Element-Item Configuration

☒ Select a linguistic type for 'morph-type' tiers No linked types available

Item Mapping

interlinear-text_item	phrase_item	word_item	morph_item
	Note		
	No linked types available		

Select tiers to be exported

interlinear-text_item	phrase_item	word_item	morph_item	morph-type
	<input checked="" type="checkbox"/> A_Translatio...			
	<input checked="" type="checkbox"/> A_Participant...			
	<input checked="" type="checkbox"/> B_Translatio...			
	<input checked="" type="checkbox"/> B_Participant...			

Previous **Next** Finish Cancel

34. On the next screen (Step 3/4), nothing should need changing if the tier names are correct. If the type or language appears strange then check the hyphens in the tier name. Click on **Next** again.

Export as FLEx file

Step 3/4: Element-item 'type' and 'lang' attribute configuration

Specify the value for type and lang attribute based on

☒ tier ☐ linguistic type

TierName	type	language
interlinear-text		
Interlinear-title-deu	title	deu
phrase		
A_Transcription-txt-deu	txt	deu
B_Transcription-txt-deu	txt	deu
A_Translation-gls-en	gls	en
A_Participant-note-en	note	en
B_Translation-gls-en	gls	en
B_Participant-note-en	note	en
word		
A_Words-txt-deu	txt	deu
B_Words-txt-deu	txt	deu
morph		

Type-Lang value configuration

Add/remove values for ☒ type ☐ language

Add custom value **Add**

Select the value to be removed <select> **Remove**

Previous **Next** **Finish** **Cancel**

35. In the final screen (Step 4/4), click on **Browse** to navigate to the folder where you can save the file. Enter a file name and click on **Save** to return to the Export window. Then click **Finish** to save the file.

Export as FLEx file

Step 4/4: Save as

Select destination file **Browse...**

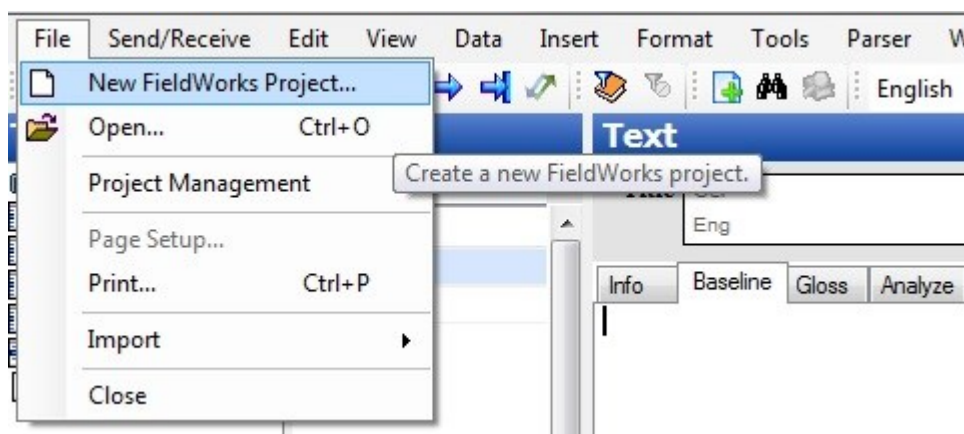
Previous **Next** **Finish** **Cancel**

Step 5: Importing the ELAN file into FLEx and interlinearising

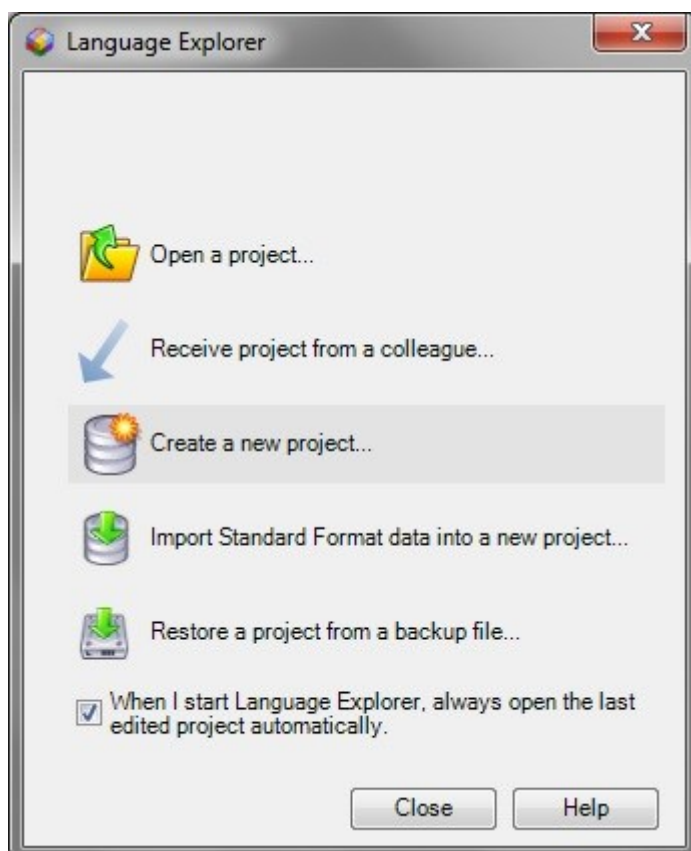
In FLEx, you would usually have your project already set up, with all the languages defined and at least part of your lexicon ready. Since we are unlikely to have a FLEx project set up for German we quickly have to create a project and import a lexicon. Then we can interlinearise and export back to ELAN.

Preparations (only needed for these teaching materials)

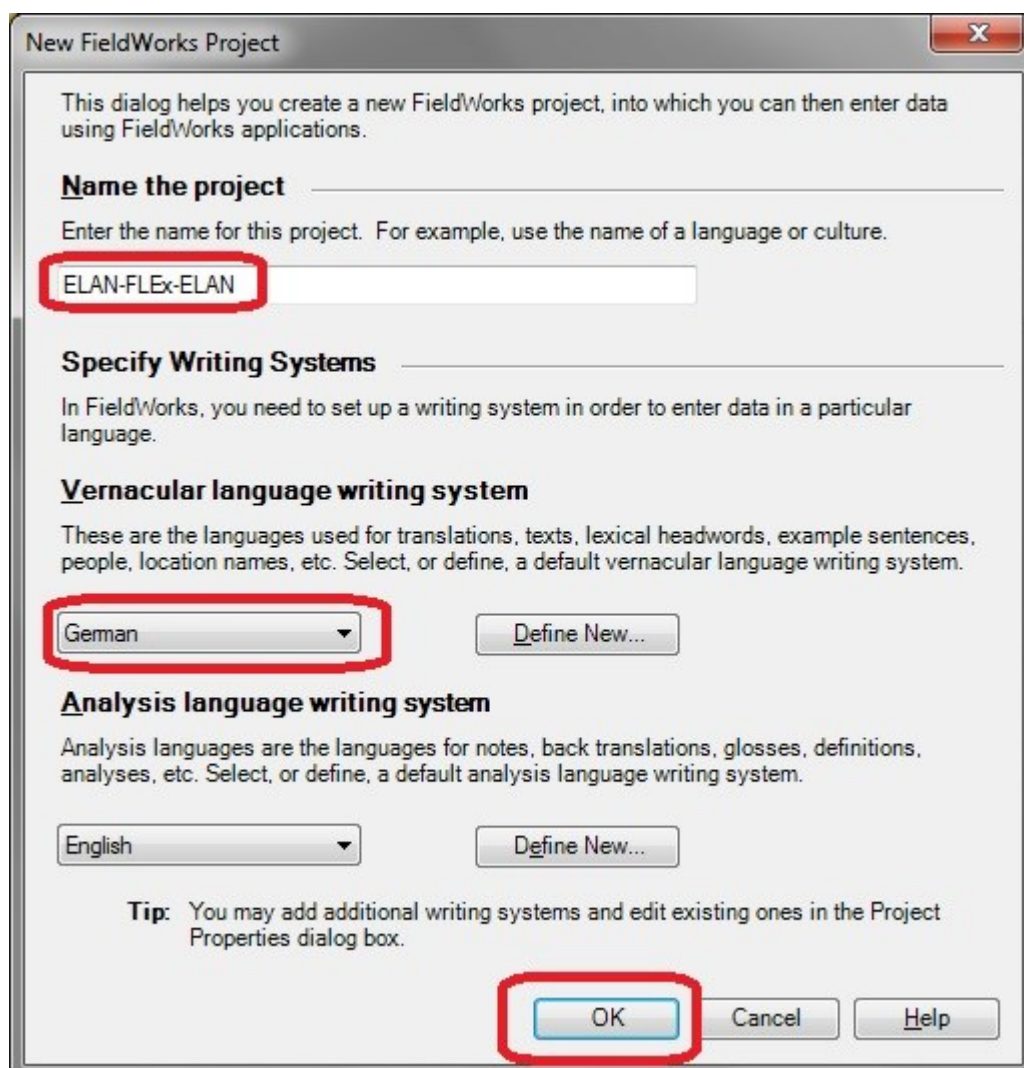
36. Open FLEx, go to the menu bar and click on **File > New FieldWorks Project...**



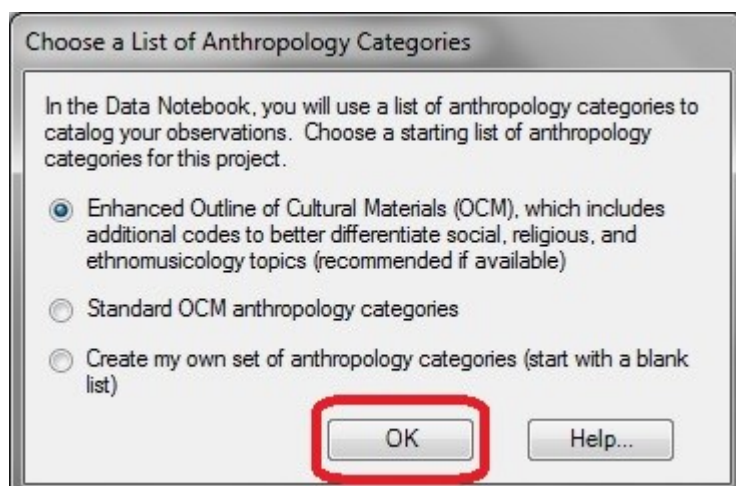
Alternatively, if you are starting FLEx for the first time and it opens its setup window, click on **Create a new project...**



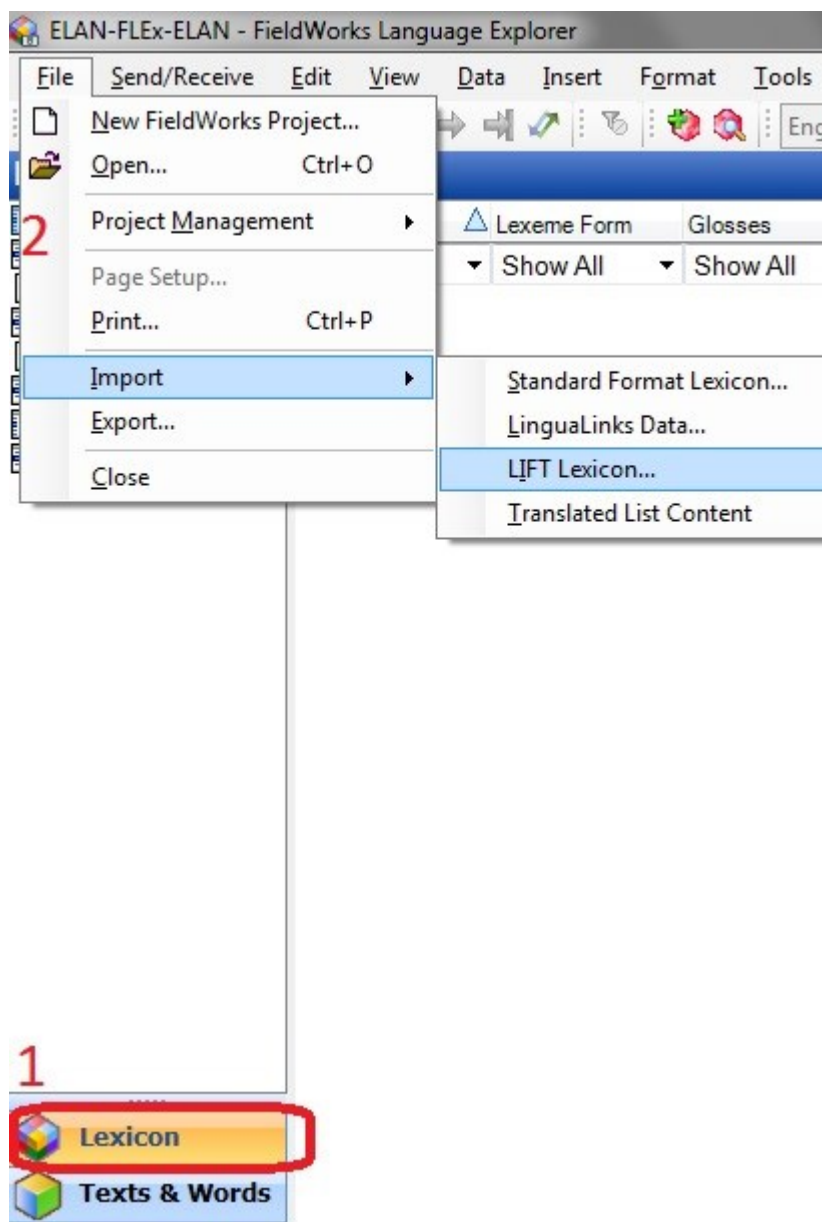
37. In the New FieldWorks Project window that pops up, name the project (e.g. ELAN-FLEx-ELAN) and set the vernacular language writing system as German. You can leave the analysis language as English. Then click on **OK**.



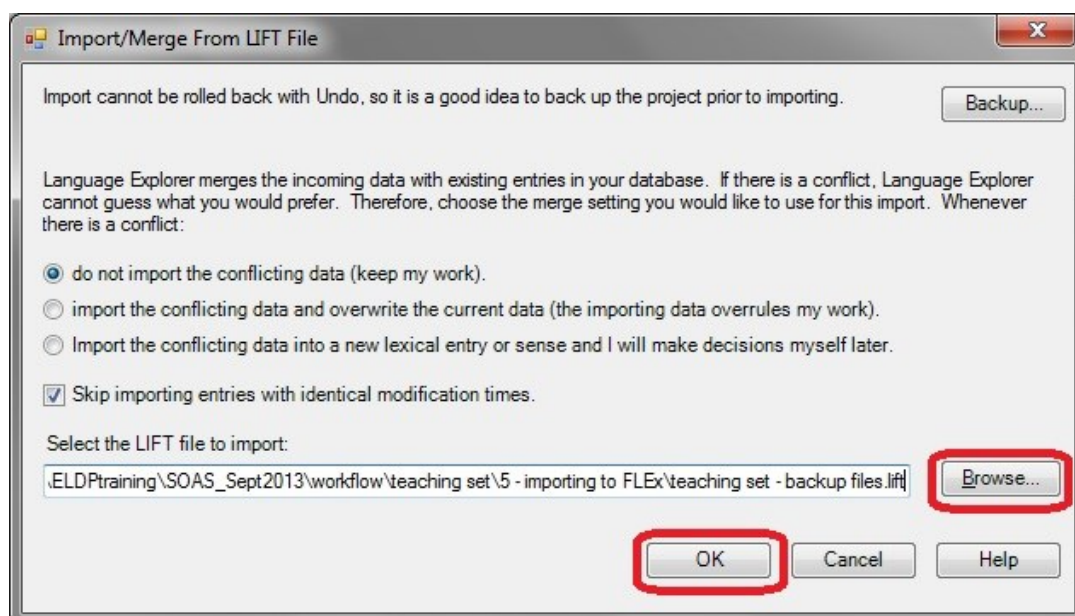
38. A window asking you about anthropological categories will pop up, here you can leave everything as is and only click on **OK**. A few more windows will run and then FLEx will open.



39. To import the dictionary, make sure the **Lexicon** tab in the left bottom corner is selected. Then click on **File > Import > LIFT Lexicon....**



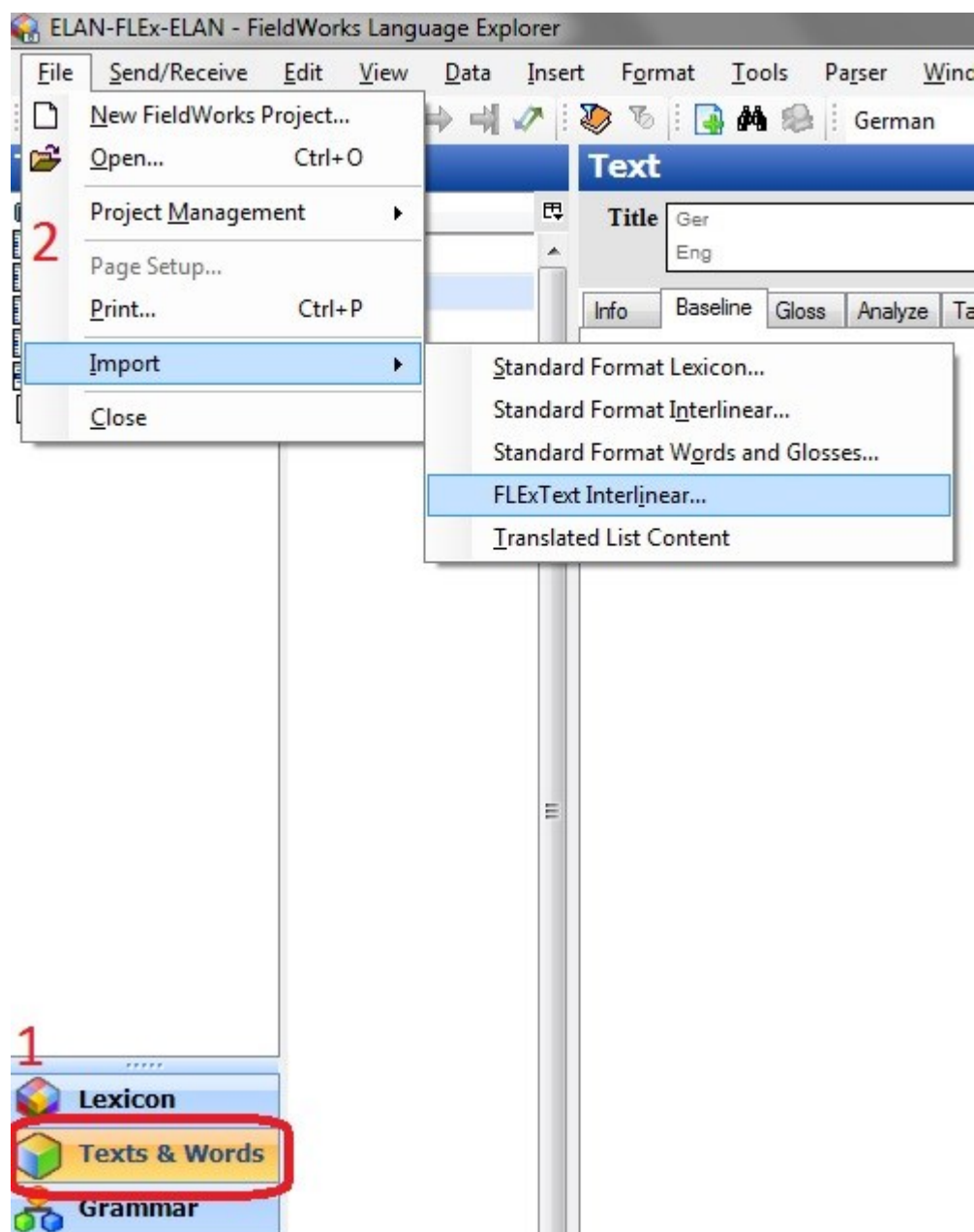
40. In the Import/Merge from LIFT File window that opens, you can leave all settings as they are and click on **Browse**. In the window that opens, navigate to the folder 5 - importing to FLEx and select the file teaching set - backup files.lift. Click on **Open** to return to the import window and on **OK** to import the file. Again, a few windows will run through and a log will open in a browser, and then the lexicon will be open.



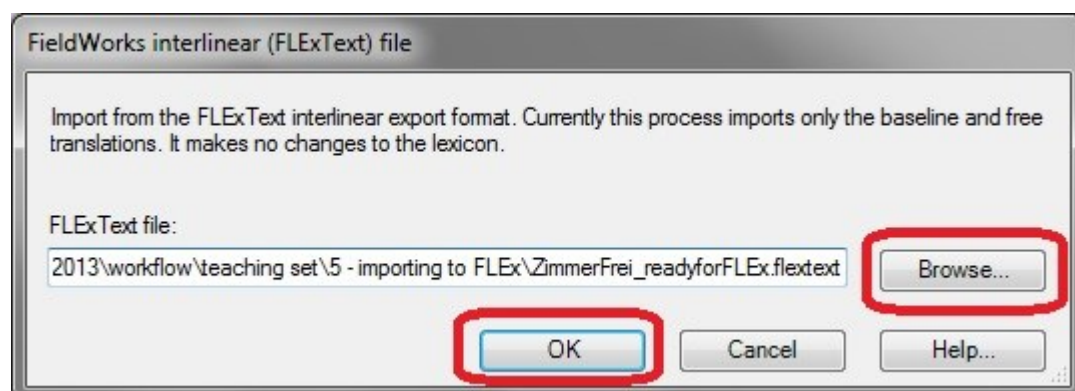
With the project set up and the lexicon imported, we are now ready to return to the actual ELAN-FLEx-ELAN workflow and can continue with importing the file we prepared in ELAN.

Opening the transcription in FLEx and interlinearising

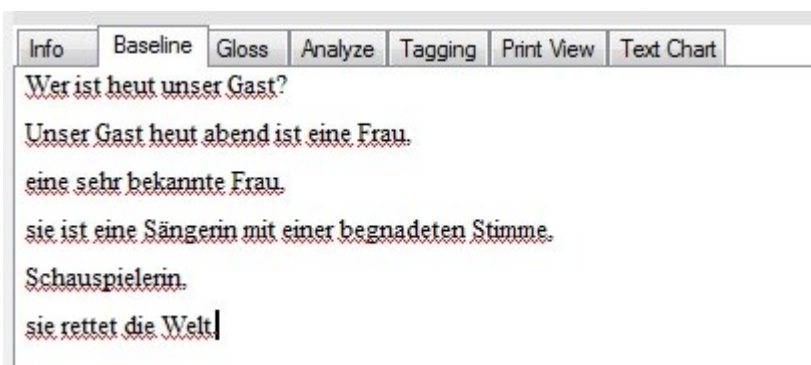
41. To import the ELAN text, click on the **Texts & Words** tab in the left bottom corner to select this tab. Then click on **File > Import > FLExText Interlinear....**



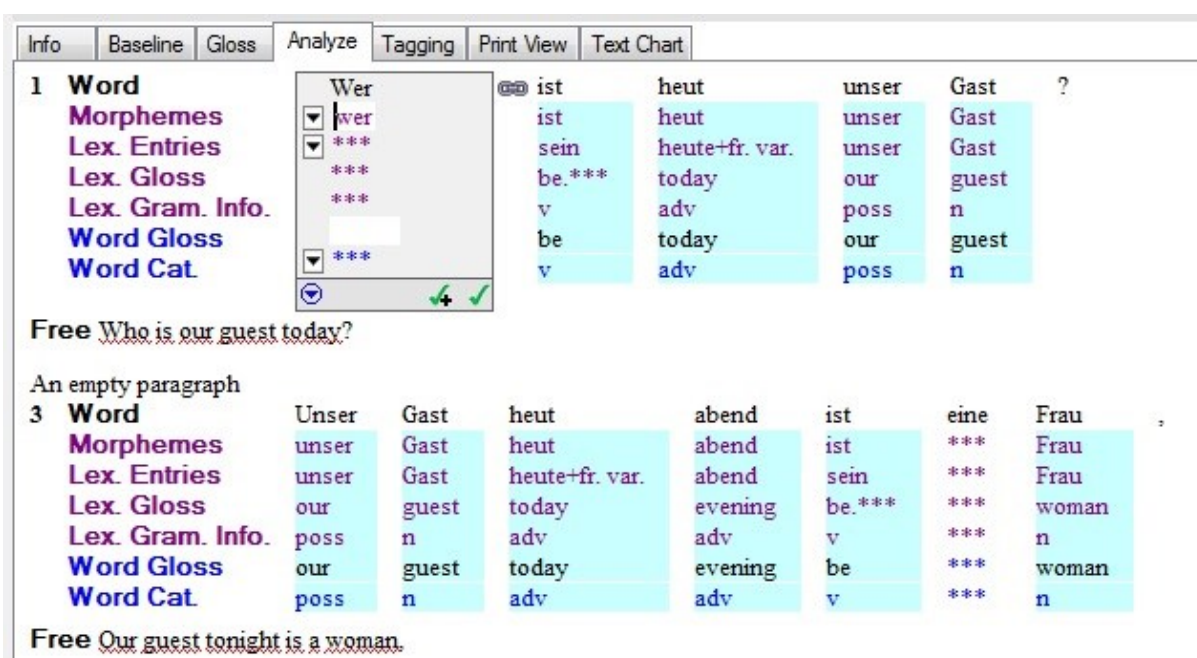
42. In the window that opens, click on **Browse** to navigate to the .flectext file. You can work with the one you created or you can navigate to the folder 5 - importing to FLEx and select the file ZimmerFrei_readyforFLEx.flectext. Then click **OK**. A few windows will run through and the text will open.



43. The text appears in the baseline and looks like this:



44. Click on the **Analyze** tab, which looks a little like below. You can interlinearise a little more, for example splitting up “eine” into “ein -e”. Note that the keyboard has been set to German and the dash is located on the /? key.

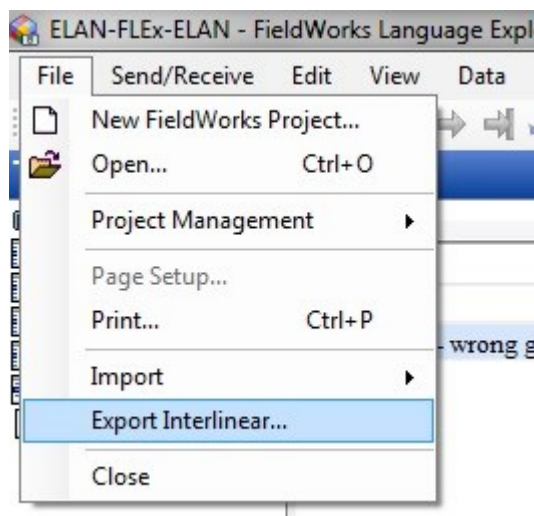


Troubleshooting: If you are getting frustrated because nothing shows up in the morphemes line, word gloss line etc. it could be that your language codes were not set correctly. In the menu bar, click on Format > Set up Writing Systems... The FieldWorks Project Properties window pops up, with the Writing Systems tab selected. Under Vernacular Writing Systems (if it's the vernacular that is giving you problems), click on Modify. The Writing System Properties window pops up and you can see the code in bold next to Ethnologue code. Does it match the extension of your vernacular tier names in ELAN? If no, adapt the tier name in ELAN and try again. That should solve the problem.

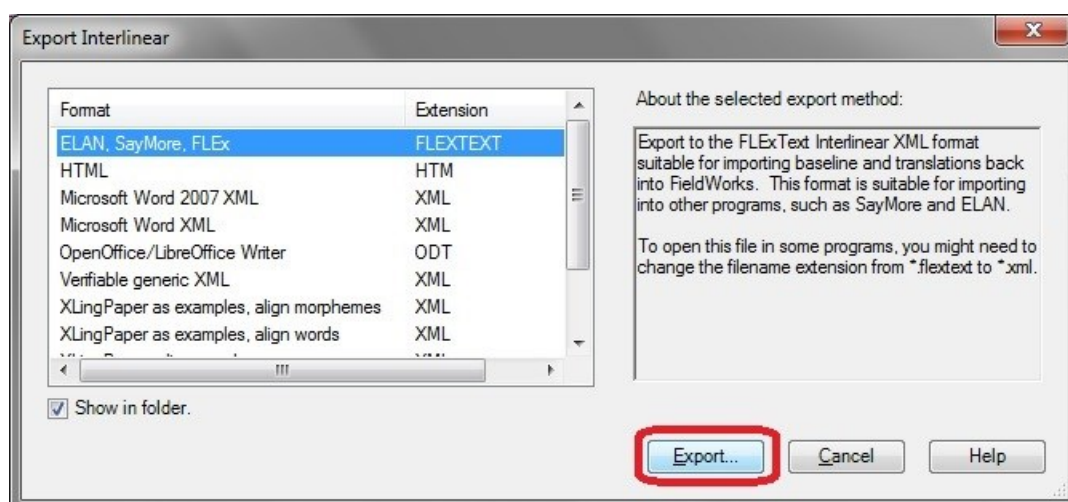
Exporting in a format that ELAN can use to import

To export, make sure that the **Texts & Words** tab in the bottom left of the window is selected, and that the **Analyze** tab in the text window is selected. What you see in this tab is what will be exported, that is, all the displayed lines will be exported to ELAN and all the hidden lines will not be exported. You can use this system to select which lines you want to export as tiers and which lines you do not wish to export.

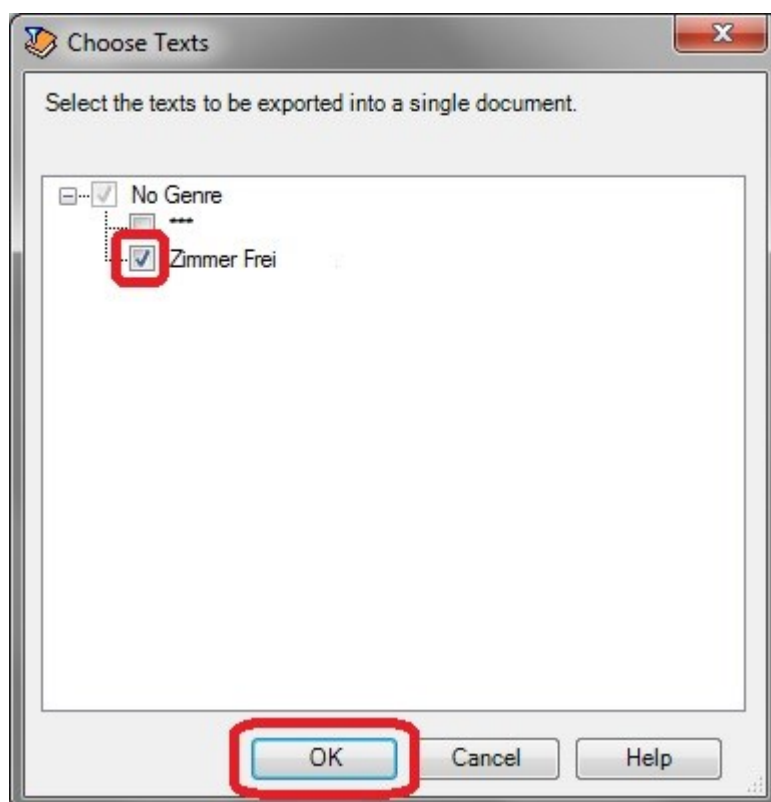
45. In your own annotations, you would annotate everything until you are ready for re-import into ELAN. When you are done with all the interlinearising you want to do, you go to the menu bar and click on **File > Export Interlinear...**



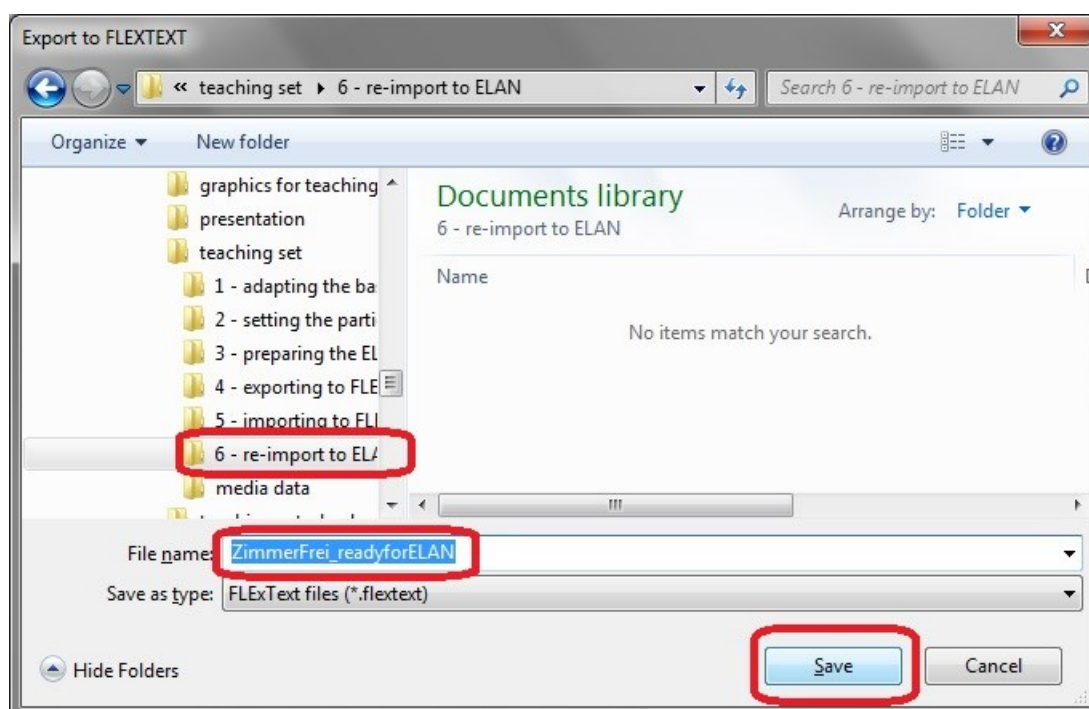
46. In the Export window that opens, select ELAN, Saymore, FLEx as the export format and click on **Export**.



47. A few windows run through and then a Choose Texts window opens. Tick the box next to 'Zimmer Frei' to select this text for export and click on **OK**.



48. In the window that opens, navigate to where you want to save the file, enter a filename and click on **Save**.

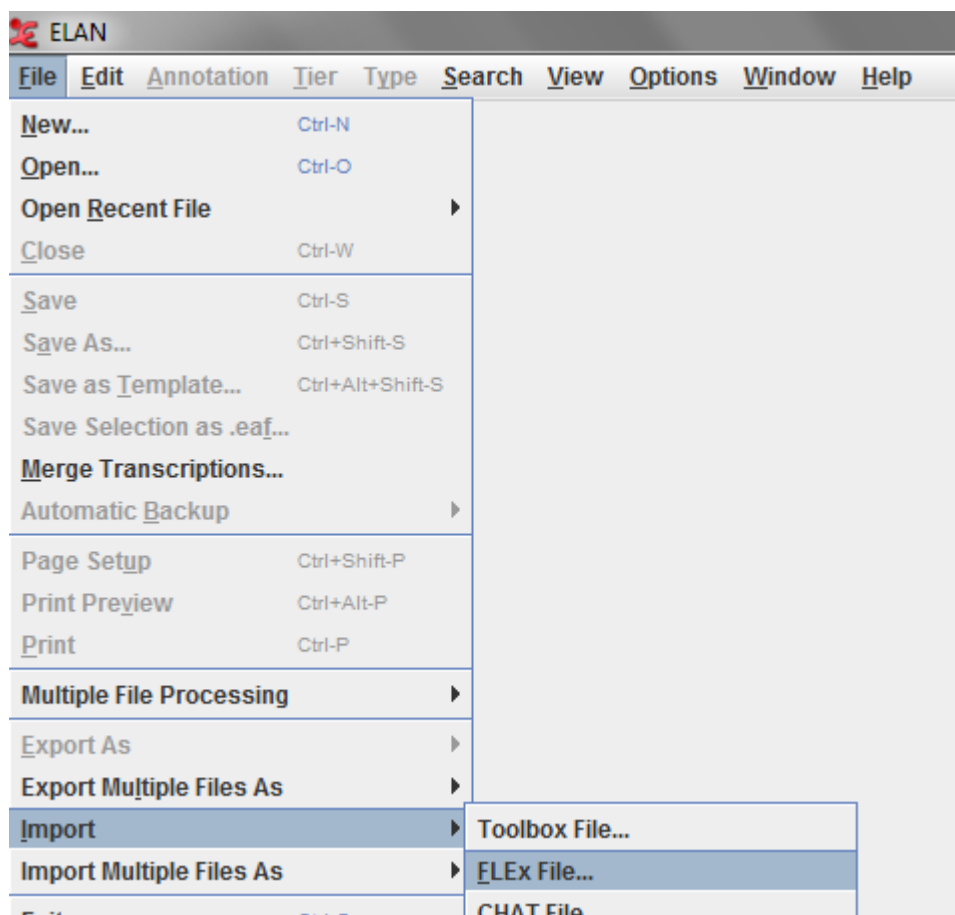


You have interlinearised and exported the file. We can now return to ELAN and import FLEx file back to ELAN.

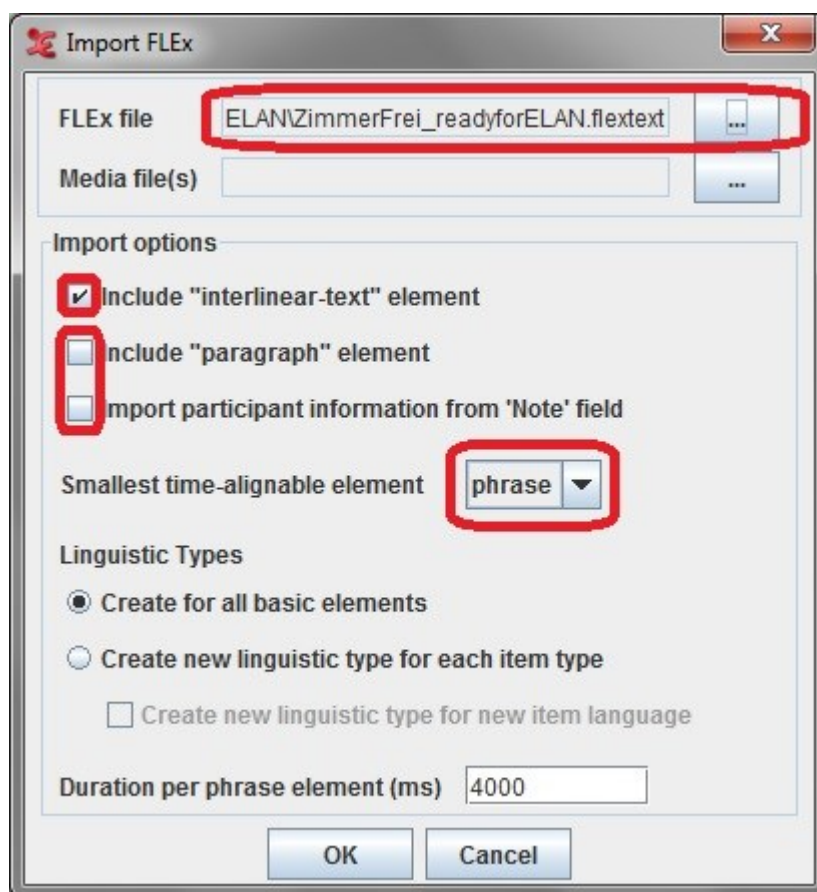
Step 6: Import to ELAN

For this step, you can either work with the file you have created or work with the files given in folder 6 – re-import to ELAN.

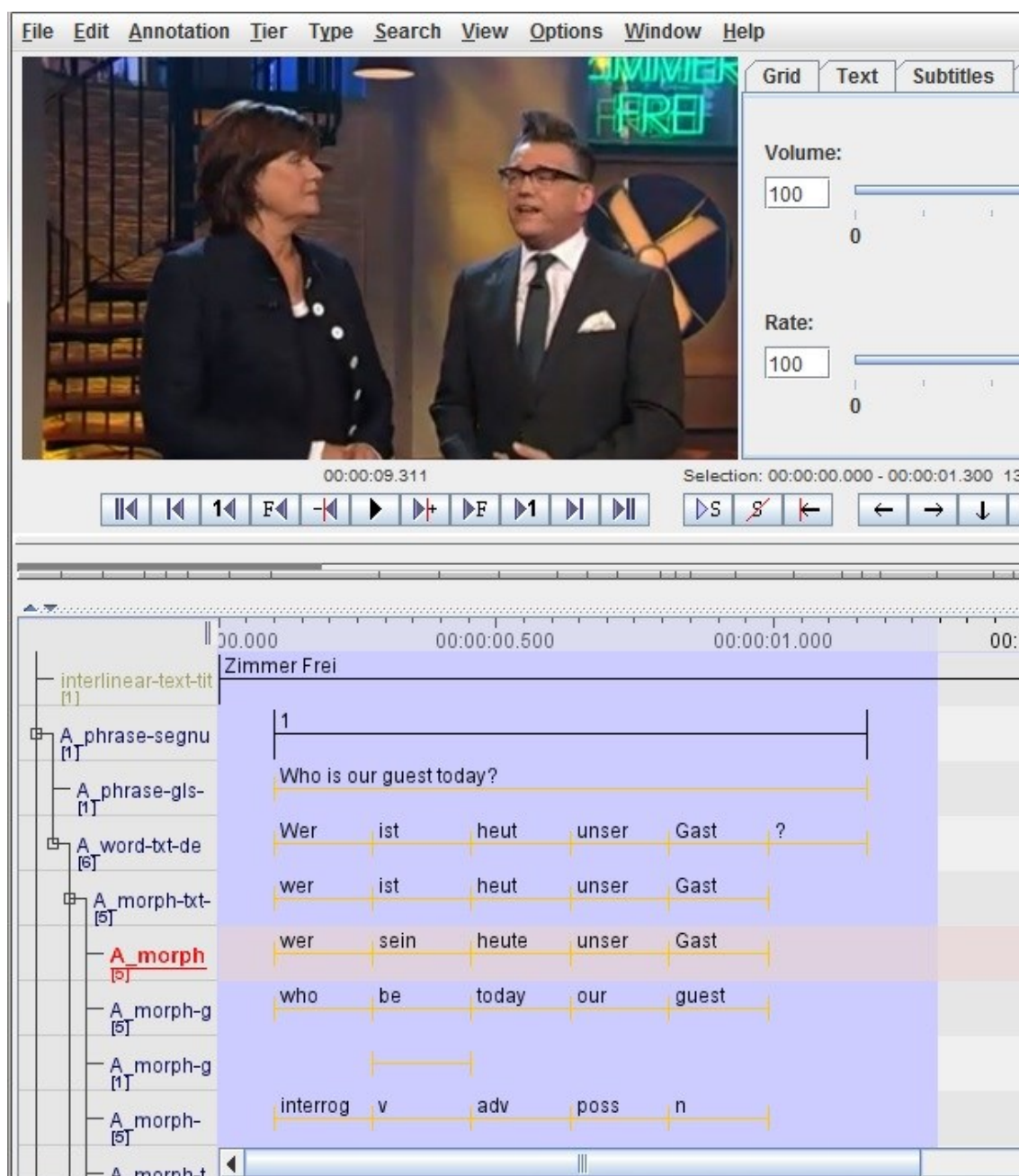
49. Open ELAN. In the menu bar, click on **File > Import > FLEx File**.



50. In the Import FLEx window that opens, click the button with the three dots ... to navigate to the .flextext file and select it. There is no need to select the .mp4 file again, though you will later manually have to add the .wav file if you want it to be shown. In the Import options, tick the box next to 'Include "interlinear-text" element'. Untick the boxes next to 'Include "paragraph" element' and next to 'Import participant information from 'Note' field'. The 'Smallest time-alignable element' should be 'phrase'. Leave the other options. Then click **OK**.

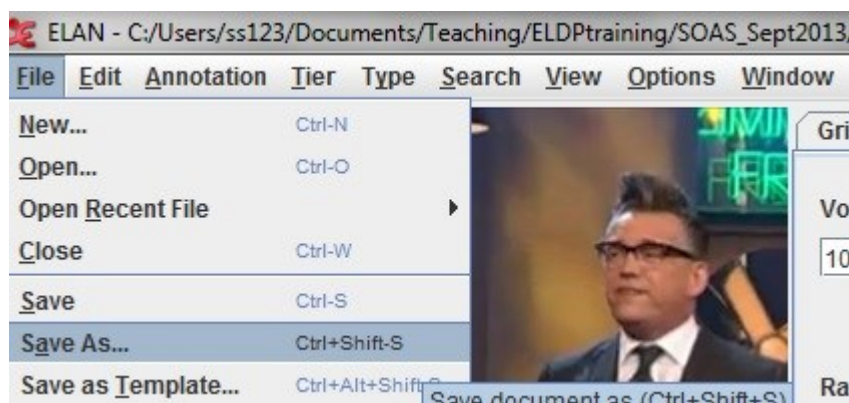


51. When the imported file has opened it should look something like the file below. In the view below, we have zoomed in a bit to make the tiers and annotations more clearly visible. Also, the tiers have been sorted by hierarchy to show how each participant has their own hierarchy labelled A_ or B_.

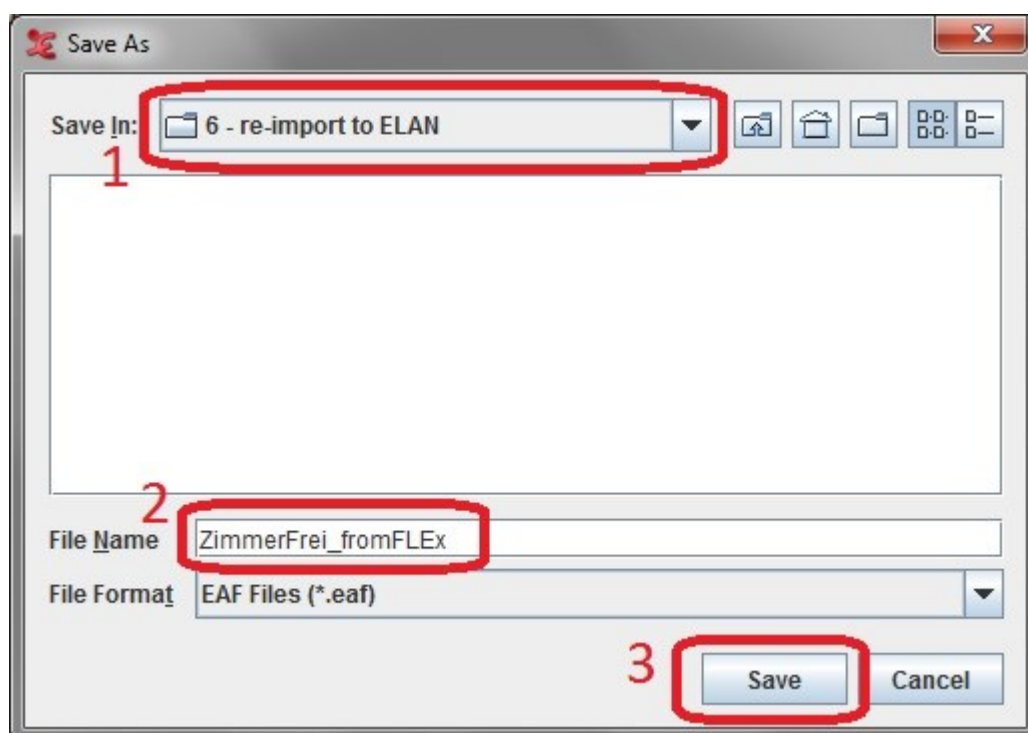


Troubleshooting: If you are expecting interlinearised text in the interlinear text tier and nothing turns up there's nothing to worry about. Somewhat confusingly, the interlinear text tier does not contain any interlinear text. Instead, it should be an annotation for the whole file that contains only the title of the text if you have specified that before in ELAN or FLEx.

52. As the last step, the file has to be saved in the ELAN format again. In the menu bar, click on **File > Save as....**



53. In the window that opens, navigate to the folder you want to save the file in, give it a file name and press **OK**.



And finally, we're done!

Acknowledgements

Thanks are due to Han Sloetjes, who helped with the technical side of the workflow, and the feedback from two testers who helped us iron out a few things that were not yet that clear.

The video clip has been extracted from a podcast of the German TV programme *Zimmer Frei!* with Christine Westermann and Götz Alsmann as presenters and Nina Hagen as the guest, broadcast by the WDR, Germany, on 30 September 2012.