Using ELAN for transcription and annotation

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What is ELAN?

- “ELAN (EUDICO Linguistic Annotator) is an annotation tool that allows you to create, edit, visualize and search annotations for video and audio data.”
- links text annotations with audio and/or video data.
- one audio stream, up to four video streams
- ELAN files can be exported in a variety of formats (including to Shoebox/Toolbox for interlinearisation, then reimported)
What can’t ELAN do?

- It can’t do your transcription
- It can’t do your analysis
- It can’t keep you organised
- It can’t (by itself) make a viewer for community members
- It isn’t (unfortunately) very easy to learn

What can ELAN do?

- It can help with transcription and translation
- It can help with your analysis by presenting your data
- It can help keep you organised by linking the media and data files together
- It can help you find things in your data
- It can help if making a product for community members (text, subtitled video)
Some terminology

- Tiers
- Annotations
- Linguistic types
- Stereotypes

Tiers

- Tiers are where you put your annotations
- Tiers can contain many kinds of annotations, some of the most obvious are:
  - IPA transcription
  - practical orthographic transcription
  - free translations into languages of wider communication
  - morphemes and gloss
  - gesture annotation
  - grammar notes
  - any other information which seems relevant
**Tiers**

- Tiers can be independent or linked to/depend from other tiers.
- There is no (theoretical) limit to the number of tiers.
- Tiers can be hidden or rearranged for ease of use.
- Each speaker has their own set of tiers, so overlapping speech is not a problem.

<table>
<thead>
<tr>
<th>Word</th>
<th>Hierarchical</th>
<th>POS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word1</td>
<td>Word2</td>
<td>(POS1, POS2)</td>
</tr>
<tr>
<td>Word3</td>
<td>Word4</td>
<td>(POS3, POS4)</td>
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Linguistic Types

- Every annotation tier must be assigned a **linguistic type** which tells Elan what type of information the tier contains. *(It would be better if these were called 'tier types')*
- You can set up and name the Linguistic Types — for example reference number, utterance, word, PoS, translation, and so forth.
- They can have Controlled Vocabularies (eg. select a PoS from a drop-down menu)
- The Linguistic Types are defined by Stereotypes which basically specify the way that tiers relate to the time line, and to each other
- The Stereotypes *(it would be better to call them Tier Categories or something)* are basically that a tier will be independent, or hierarchically associated with other tiers

Stereotypes

- **None**: The annotation on the tier is linked directly to the time axis (eg. intonation units/sentences - a transcription or a reference number).
- **Time Subdivision**: The annotation on the parent tier can be subdivided into smaller units, which, in turn, can be linked to time intervals (eg. words). There cannot be gaps between units.
- **Symbolic subdivision**: Similar to **Time Subdivision**, except that the smaller units cannot be linked to a time interval (eg. morphemes within words).
- **Included In**: like **Time Subdivision** but there can be gaps (eg. words, with silence between them).
- **Symbolic association**: one-to-one association with a parent tier, eg. transcription with ref field, gloss and morpheme, free translation with sentence.
Tier dependencies: parents and children

Document X
Text/utterances (speaker A)
- Words
  - Morphemes
    - Parts of speech
    - Glosses
- Free translations
Text/utterances (speaker B)
- Words
  - Morphemes
    - Parts of speech
    - Glosses
- Free translations

Stereotypes:
- (none)
- (Time subdivision)
- (symbolic subdivision)
- (symbolic association)
- (symbolic association)
- (symbolic association)
Too much bother?

- Maybe. But you only need to do it once, then you can import types and tiers from other ELAN projects, or set up templates.
- Change or add to them as you need.
- Once you have annotated with ELAN, you have well-structured XML which can be used for other purposes - ie. exported to Shoebox, DVD subtitles etc.

Working with Shoebox

- This is not entirely straightforward, but is not too difficult if you are already quite familiar with the workings of Shoebox and the structure of its files.
- If you know you want to export to Shoebox, it’s better to start from the beginning with a ref type and tier (stereotype: None) which will only contain time information now (ie. it will be empty), but later will contain a Shoebox ref number. The transcription tier will be a symbolic association depending from the ref tier.
- The Shoebox export process puts the time and speaker information in separate fields. After working in Shoebox, ELAN can import the file, and the time and speaker information will be preserved.
Exercise 1: Exploring ELAN

- Open the elan_training folder, then the elan_example folder. Open the file named elan_example3.eaf.
- Play and then stop:
  - Play/Pause button:  
  - CTRL+SPACE
- Make a selection, and play the selection:
  - Click
  - SHIFT+SPACE
  - with and without the LOOP box ticked.
  - deselect:
- View a specific window: Grid, Text, Subtitles, and choose different tiers to view.
- Use the Find window to search for text.

Exercise 2: Creating/Saving a new ELAN document

- Launch ELAN
- File > New > (navigate to elan_training/ elan_exercise and select the media file: elan_exercise.wav > OK
- The waveform should open
- File > Save/Save As > (type the name elan_exercise). This will create an .eaf file. Make sure you are saving it in the right place!
- File > Automatic backup > (click the time interval)
Exercise 3: Creating linguistic types

- Create linguistic types
  - Type > Add New linguistic type
  - Type Name: t, Stereotype: none > Add (this will be for sentences)
  - Type Name: w, Stereotype: Time Subdivision > Add (this will be for words)
- Close.

Exercise 4: Creating tiers

- Create a tier for transcription
  - Tier > Add New Tier > type the name t@A (this will be for Speaker A)
    (make sure Linguistic Type is t) > Add
- Create a tier for words
  - (while Add Tier box is still open) type the name w@A
    (make sure Parent Tier is t@A and Linguistic Type is w) > Add.
- Close.
Exercise 5: Entering/editing annotations

- Listen to the sound file (and look at the waveform) and think about breaking the speech up into units (sentences, intonation units). There are two ways to do this:
  1. Straight into the tier
     - Select a time span containing a unit: click, hold and drag with the mouse > play the selection (possibly toggle the Loop Mode).
     - Right click > New Annotation here (for the active tier) > transcribe the unit > Ctrl + Enter (to save) or Esc (not to save).
     - CTRL-ENTER IS VERY IMPORTANT. DON’T FORGET, EVERY TIME YOU ENTER ANY ANNOTATION, CTRL-ENTER!
  2. Segmentation mode.
     - Play the sound while pressing Enter to segment (similar to Transcriber).
     - Click Apply to save the segmentation.

- Changing boundaries:
  - click an annotation to select it > draw the new boundary > Ctrl+Enter (to save)
  - select an annotation > press & hold Alt and drag the boundary of the active annotation to a new place.

Exercise 6: Using Elan to break sentences up into words

- When there are a few annotations on tier t@A, Elan can fill the word tier w@A from it.
- Edit > Tokenise Tier
- Source Tier > t@A
- Destination Tier > w@A
- Start
Exercise 7: add a free translation tier

- first add a new type f
  - Type > Add New linguistic type
  - Type Name: f, Stereotype: Symbolic Association > Add
- now add tier f
  - Tier > Add New Tier > type the name f@A (this will be for Speaker A)
    (make sure Linguistic Type is f)
  - Add
- The tier should be there. Double click in it to enter free translations corresponding to the segments in t. Don’t forget Ctrl-Enter!
- Save it, and have some coffee, or lunch.