

ELAN: a Free and Open Source Multimedia Annotation Tool

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Abstract

In this demo we will show the main features and capabilities of ELAN. ELAN is a multipurpose, multimedia annotation tool, available for multiple platforms and it is being developed at the Max Planck Institute for Psycholinguistics.

1. Introduction

Over the years ELAN has found it's application in many sub-fields of linguistics, such as speech and gesture research, sign language and multimodal interaction studies as well as in language documentation projects. In fact its generic approach to media annotation makes it a suitable tool for any kind of research involving audio and/or video recordings. With ELAN it is possible to create text annotations to segments of digital media files in a multi-layered fashion. The layers or tiers can be grouped in hierarchies of depending tiers, in which case annotations on a depending tier refer to one or more annotations on the parent tier.

2. Platform independency

ELAN is available for Windows, Mac OS X and Linux in order to be as undemanding as possible with respect to hardware and operating system. Written in the Java programming language [1], the major part of the software is independent of the underlying operating system. The exception lies in the part dealing with media playback, which relies on a pre-installed, native media framework. Existing and in-house developed components bridge the gap with e.g. DirectX [2] or QuickTime [3] based players.

3. Availability

ELAN can be downloaded free of charge and without registration from the MPI LAT website [4]. Either as standalone application with an installer or as a Java Webstart application.

4. Open source

The sources of ELAN are also available for download and are distributed with necessary libraries and an Ant [5] build script. This enables research groups to add their own functionality and/or incorporate a custom build ELAN in their own research environment. As an example the SIDGrid project [6] can be mentioned.

5. Main features

In this paragraph the main features of ELAN are briefly described.

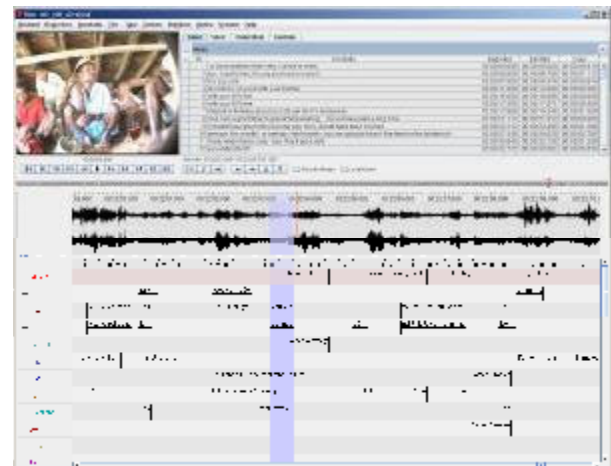


Figure 1: Main window of ELAN.

5.1. Support for many media file formats

One bonus of the delegation of media playback to an existing media framework is the support for all the file formats that the framework supports. Another advantage is that of the best performance possible, which can never be achieved with a pure Java solution.

5.2. Support for multiple video's

It is not uncommon to use 2, 3 or 4 camera's in aforementioned types of research. Therefore it is now possible to associate up to 4 video files with a single annotation document. Each video can be detached from the main window which is particularly useful to fully appreciate high resolution MPEG-2 files. A special synchronisation mode is available to ensure synchronized playback of multiple video's.

5.3. Powerful search options

The user can create complex, structured search queries, based on temporal and/or structural relations between tiers. The query can be conducted within a single file or in a set of user defined annotation files. The results can be exported to tab-delimited text.

5.4. Synchronized viewer for timeseries data

Along with video and or audio files it is possible to link timeseries files to the document. Such files are visualized in a dedicated, synchronized viewer. It provides some basic data

extraction features allowing to transfer numeric data from the timeseries file to annotations [7].

5.5. Import and export formats

To provide compatibility with other important annotation file formats, it is possible to import files generated by Shoebox/Toolbox [8], CHAT [9], Transcriber [10] and Praat [11]. Transcriptions can be exported to a number of formats such as Toolbox and CHAT, a basic tab-delimited format and to a traditional transcript format.

5.6. Printing and text output in interlinear style

A variety of output options in interlinear style is available, such as printing to paper or export to an interlinear text file or HTML file.

6. References

- [1] <http://java.sun.com/>
- [2] <http://www.microsoft.com/windows/directx/default.mspx>
- [3] <http://www.apple.com/quicktime/>
- [4] <http://www.lat-mpi.eu/>
- [5] <http://ant.apache.org/>
- [6] <https://sidgrid.ci.uchicago.edu/home>
- [7] Crasborn, O., Sloetjes, H., Auer, E., and Wittenburg, P., "Combining video and numeric data in the analysis of sign languages within the ELAN annotation software", LREC, 2006.
- [8] <http://www.sil.org/computing/shoebox>
- [9] <http://childes.psy.cmu.edu/>
- [10] <http://trans.sourceforge.net/>
- [11] <http://www.fon.hum.uva.nl/praat/>