

Discriminant Features and Temporal Structure of Nonmanuals in American Sign Language

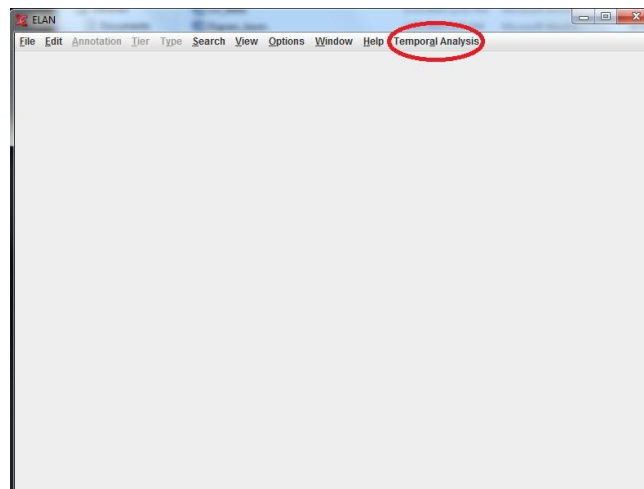
Tutorial on Modified ELAN for Temporal Analysis.

We have created a Java JAR executable that is compatible with java JRE 1.6. In

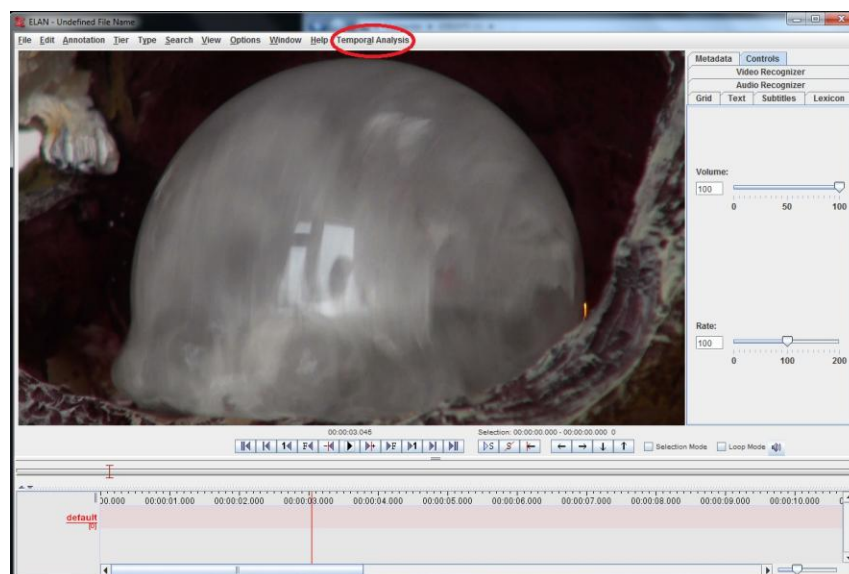
Windows: Double click in the file ELANfslbeta.jar.

Linux: In the console type “java -jar ELANfslbeta.jar”

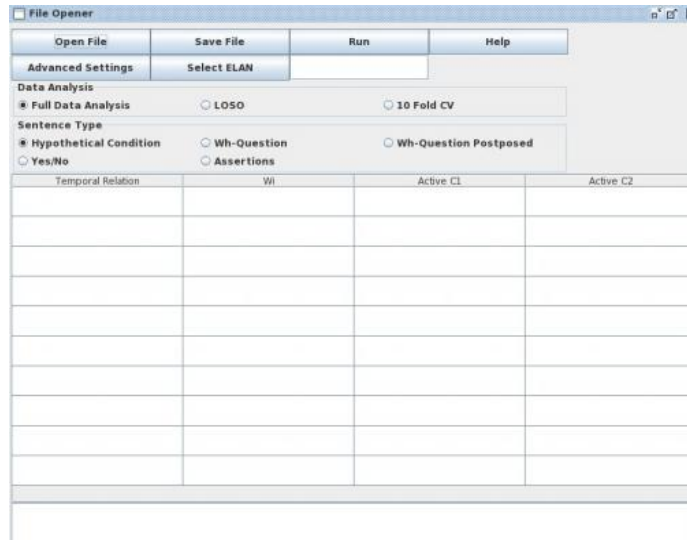
1. Create new file or open existing ELAN annotation formatted file (.eaf).



2. After creating or opening existing file, click Temporal Analysis Button to open Temporal Analysis interface.

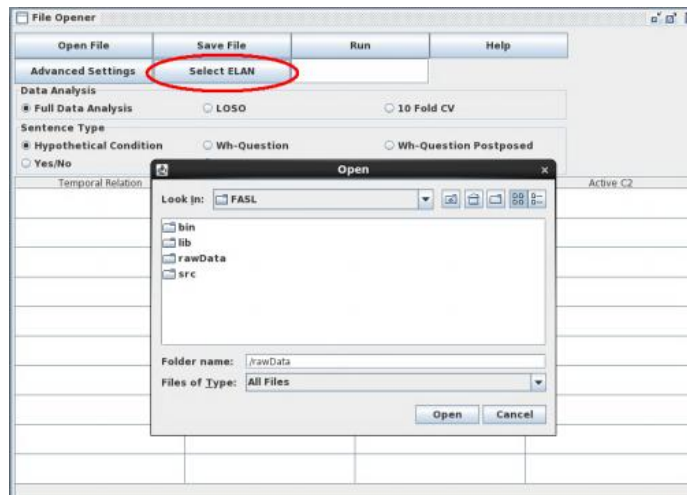


3. That will open the following interface:



4. Loading TDF exported ELAN files.

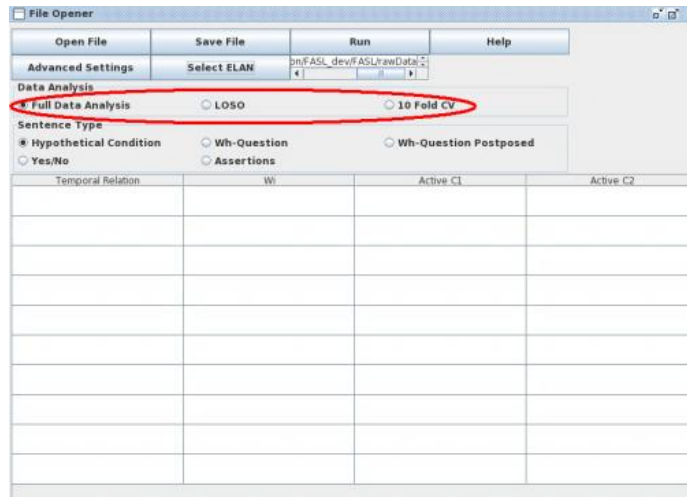
- Make sure that the ELAN annotations were save as a Tab Delimited File.
- Select the **FOLDER** with all the TDF to be analyze.



5. Selecting the type of analysis.

- Full Analysis: It uses all the data as training and testing data.
- Leave one sentence out (LOSO): It trains with all the samples but one that is going to be for testing. Depending on the number of samples it can take several hours (or days).

c. N fold cross-validation: It divides the samples in N subgroups, N-1 are use for training and the left out fold is used for testing.

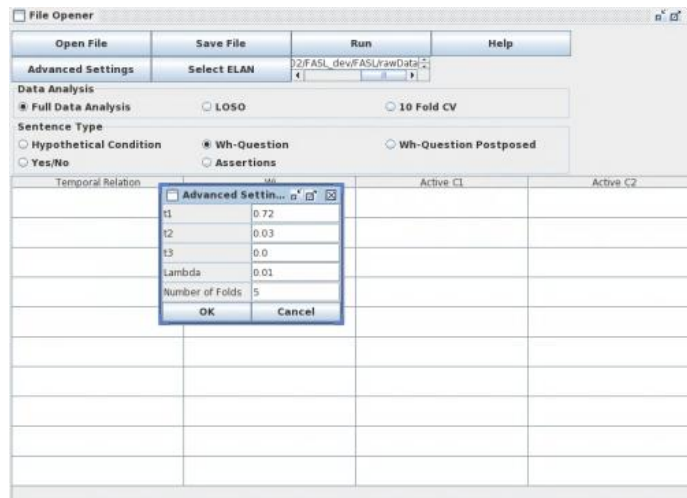


6. Advanced parameters:

a. t1, t2 and t3: Thresholds defined in the paper with respect to closeness between events, and short term memory in seconds.

b. Lambda: Regularization parameter.

c. Number of folds: Number of folds for N Fold CV.



7. Press the button "Run" to execute the program.

File Opener			
Open File	Save File	Run	Help
Advanced Settings	Select ELAN	D:/ASL_dev/ASL_rawData	
Data Analysis			
<input checked="" type="radio"/> Full Data Analysis <input type="radio"/> LOSO <input type="radio"/> N Fold CV			
Sentence Type			
<input type="radio"/> Hypothetical Condition <input checked="" type="radio"/> Wh-Question <input type="radio"/> Wh-Question Postposed			
<input type="radio"/> Yes/No <input type="radio"/> Assertions			
Temporal Relation	Wt	Active C1	Active C2
{Brows move down} equals {Br...	1.0	89.42857142857143	23.234852278417627
{Brows move up} equals {Brow...	0.581026435641274	10.571428571428571	70.55583375062594
{Mouth shape round} equals {...	0.511927904747384	82.85714285714286	46.670005007511264
{Mouth shape flat} starts {Bro...	0.43610182494720...	10.285714285714285	2.2033049574361545
{Mouth shape round} starts {H...	0.4336991195075011	11.714285714285715	1.1517275913870806
{Brows move down} finishes {M...	0.40279829431463...	0.0	2.904356348022033
{Teeth touch Lip} before {Mout...	0.40224354669920...	0.0	7.511266900350526
{Mouth shape flat} during {Hea...	0.38928007239587...	6.2857142857142865	5.908863294942414
{Mouth shape round} before {B...	0.3874440679907243	0.0	1.9529293940911365
{Mouth closed} starts {Brows ...	0.35961900704157...	11.714285714285715	2.2033049574361545

8. Additional functionality: Save results and load results using the buttons on the interface.