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Event Processing Tools

pos_change_eve_fromfile

- **Description**

Reads event codes from a text file and replace one or all event types of a **.pos** file.

- **Usage**

```
pos_change_eve_fromfile file_in.pos new_codes.txt file_out.pos event_code  
or
```

```
pos_change_eve_fromfile file_in.pos new_codes.txt file_out.pos -all
```

with :

- file_in.pos : input event file to process (with extension).
- new_codes.txt : text file (with extension) containing new sequence of event codes.
- file_out.pos : output event file (with extension).
- event_code : event code to change.
- -all : flag to change all event codes.

- **Fields of parameter file and examples**

The text file contains only event codes ordered by time (one for each line).

For example :

```
123  
45  
67
```

...

- **Example**

- **Comments**

- **Current version**

1.02 06-01-2011

- **History**

- 1.01 18-06-2002 (CTB) : 1st documented version.
- 1.02 06-01-2011 (PEA) : update to use cmake and free release of Elan. Merge of 2 programs : pos_change_eve (changes one event code) and pos_change_eve_fromfile (changes all event codes).

- **Files**

\$ELANPATH/bin/pos_change_eve_fromfile

- **See also**

[poscheve](#) ^[1], [poschseq](#) ^[2]

pos_concat

- **Description**

Merges 2 event file (.pos) that starts at the same time.

- **Usage**

pos_concat file1_in.pos file2_in.pos file_out.pos
with :

- file1_in.pos : input position file #1 containing the position and event codes (with extension).
- file2_in.pos : input position file #2 containing the position and event codes (with extension).
- file_out.pos : output position file containing the modified event codes (with extension).

- **Fields of parameter file and examples**

- **Example**

- **Comments**

- **Current version**

1.02 06-01-2011

- **History**

- 1.02 06-01-2011 (PEA) : update to use cmake and free release of Elan.

- **Files**

\$ELANPATH/bin/poscheve

- **See also**

posconcat, pos_merge

pos_create_singletrials

- **Description**

Creates an event file (.pos) that can be used for single trials analysis : the choosen event code becomes a sequence of codes 1, 2, 3...

- **Usage**

pos_create_singletrials file_in.pos file_out.pos event_code
with :

- file_in.pos : input position file containing the position and event codes (with extension).
- file_out.pos : output position file containing the modified event codes (with extension).

- event_code : event code to use for single trial extraction.

- **Fields of parameter file and examples**

- **Example**

The following example creates single trials for event code 10 :

`pos_create_singletrials mypos.pos evt10_single.pos 10`

mypos.pos contains :

```
2829 10 0
4125 127 0
4212 10 0
5508 127 0
5595 10 0
6891 127 0
6978 10 0
8274 127 0
8361 10 0
9657 127 0
9744 30 0
11040 127 0
11127 10 0
12423 127 0
12510 10 0
13806 127 0
13893 10 0
15189 127 0
15275 10 0
16572 127 0
```

After computation, evt10_single.pos contains :

```
2829 1 0
4212 2 0
5595 3 0
6978 4 0
8361 5 0
9744 6 0
11127 7 0
12510 8 0
13893 9 0
15275 10 0
```

- **Comments**

- **Current version**

1.02 06-01-2011

- **History**

- 1.02 06-01-2011 (PEA) : update to use cmake and free release of Elan.

- **Files**

`$ELANPATH/bin/pos_create_singletrials`

- **See also**

pos_extract

- **Description**

Reads a **.pos** event file and outputs only pairs of events to a new event **.pos** file.

- **Usage**

```
pos_extract file_in.pos file_out.pos
with :
```

- file_in.pos : input position file containing the position and event codes (with extension).
- file_out.pos : output position file containing the modified event codes (with extension).

This program uses an interactive input. The questions are as follows (questions (program) are italic, answers (user) are bold):

Number of conditions (event pairs):

2

Condition 1:

event code :

1

followed by event code:

100

Condition 2:

event code :

2

followed by event code:

100

- **Fields of parameter file and examples**

- **Example**

- **Comments**

- **Current version**

1.02 11-01-2011

- **History**

- 1.00 15-04-1997(CTB-PEA) : 1st documented version.
- 1.01 ?? (PEA) : minor modification.
- 1.02 11-01-2011 (PEA) : update to use cmake and free release of Elan.

- **Files**

\$ELANPATH/bin/pos_extract

- **See also**

pos_hyp

- **Description**

Changes event code of a **.pos<:strong>** event file by adding **100*sleep stage (for positive stage values) or 1000*sleep stage (for negative stage values) to the event codes.**

- **Usage**

```
pos_hyp file_in.pos file_hyp.hyp file_out.pos sampling_period
with :
```

- file_in.pos : input position file containing the position and event codes (with extension).
- file_hyp.hyp : hypnogram file containing the sleep stages (with extension).
- file_out.pos : output position file containing the modified event codes (with extension).
- sampling_period : sampling period (in seconds).

- **Fields of parameter file and examples**

- **Example**

- **Comments**

- **Current version**

2.02 06-01-2011

- **History**

- 2.01 18-06-2002 (PEA) : 1st documented version.
- 2.02 06-01-2011 (PEA) : update to use cmake and free release of Elan.

- **Files**

\$ELANPATH/bin/pos_hyp

- **See also**

pos_merge

- **Description**

Mixes 2 event file (.pos) that starts at the same time. The output is is event codes of file #1 at positions of file #2.

- **Usage**

pos_merge file1_in.pos file2_in.pos file_out.pos
with :

- file1_in.pos : input position file #1 containing the position and event codes (with extension).
- file2_in.pos : input position file #2 containing the position and event codes (with extension).
- file_out.pos : output position file containing the modified event codes (with extension).

- **Fields of parameter file and examples**

- **Example**

- **Comments**

- **Current version**

1.02 06-01-2011

- **History**
 - 1.02 06-01-2011 (PEA) : update to use cmake and free release of Elan.

- **Files**

\$ELANPATH/bin/pos_merge

- **See also**

posconcat, pos_concat

pos_result_high

- **Description**

Searches for a better result than a threshold on a time window in a **.pos** event file.

- **Usage**

pos_result_high file_in.pos file_out.pos threshold time_window
with :

- file_in.pos : input position file containing the position and event codes (with extension).
- file_out.pos : output position file containing the modified event codes (with extension).
- threshold : threshold of result (value between 0 and 1).
- time_window : duration for result computing (in number of trials (or events)).

This program uses an interactive input. The questions are as follows (questions (program) are italic, answers (user) are bold):

Number of codes for true responses :

2

True response code 1 :

1

True response code 2 :

3

Number of codes for false responses :

3

False response code 1 :

2

False response code 2 :

4

False response code 3 :

6

- **Fields of parameter file and examples**

- **Example**

- **Comments**

- **Current version**

1.02 11-01-2011

- **History**

- 1.00 01-02-2001(CTB-PEA) : 1st documented version.
- 1.01 ?? (PEA) : minor modification.
- 1.02 11-01-2011 (PEA) : update to use cmake and free release of Elan.

- **Files**

\$ELANPATH/bin/pos_result_high

- **See also**

pos_result_low

pos_result_low

- **Description**

Searches for a worse result than a threshold on a time window in a **.pos** event file.

- **Usage**

pos_result_low file_in.pos file_out.pos threshold time_window
with :

- file_in.pos : input position file containing the position and event codes (with extension).
- file_out.pos : output position file containing the modified event codes (with extension).
- threshold : threshold of result (value between 0 and 1).
- time_window : duration for result computing (in number of trials (or events)).

This program uses an interactive input. The questions are as follows (questions (program) are italic, answers (user) are bold):

Number of codes for true responses :

2

True response code 1 :

1

True response code 2 :

3

Number of codes for false responses :

3

False response code 1 :

2

False response code 2 :

4

False response code 3 :

6

- **Fields of parameter file and examples**

- **Example**

- **Comments**

- **Current version**

1.02 11-01-2011

- **History**

- 1.00 01-02-2001(CTB-PEA) : 1st documented version.
- 1.01 ?? (PEA) : minor modification.
- 1.02 11-01-2011 (PEA) : update to use cmake and free release of Elan.

- **Files**

\$ELANPATH/bin/pos_result_low

- **See also**

pos_result_high

pos_shift

- **Description**

Adds (or removes) a time offset to all event of .pos file.

- **Usage**

pos_shift file_in.pos file_out.pos time_offset
with :

- file_in.pos : input position file containing the position and event codes (with extension).
- file_out.pos : output position file containing the modified event codes (with extension).
- time_offset : number of samples of time offset.

- **Fields of parameter file and examples**

- **Example**

- **Comments**

- **Current version**

1.01 06-01-2011

- **History**

- 1.01 06-01-2011 (PEA) : update to use cmake and free release of Elan.

- **Files**

\$ELANPATH/bin/pos_shift

- **See also**

pos_shift_event

pos_shift_event

- **Description**

Adds (or removes) a time offset to some events of .pos file.

- **Usage**

pos_shift_event file_in.pos file_out.pos
with :

- file_in.pos : input position file containing the position and event codes (with extension).
- file_out.pos : output position file containing the modified event codes (with extension).

This program uses an interactive input. The questions are as follows (questions (program) are italic, answers (user) are bold):

Number of event codes to modify :

2

Event code #1 :

2

Time shift (in samples) :

20

Event code #2 :

4

Time shift (in samples) :

40

- **Fields of parameter file and examples**

- **Example**

In the example above, the program adds 20 samples to event code 2 timestamps, and 40 samples to event code 4 timestamps :

pos_shift_event file_in.pos file_out.pos

file_in.pos		file_out.pos		
7824	4 0	7864	4 0	
8009	2 0	8029	2 0	
8867	100 0	8867	100 0	
9087	4 0	9127	4 0	
9699	2 0	9719	2 0	
9840	4 0	9880	4 0	

- **Comments**

- **Current version**

1.01 06-01-2011

- **History**

- 1.01 06-01-2011 (PEA) : update to use cmake and free release of Elan.

- **Files**

\$ELANPATH/bin/pos_shift_event

- **See also**

pos_shift

pos_split

- **Description**

Reads a **.pos** event file and splits sequence of 3 events (1 5 3 1 5 2 1 5 2 ...) to 2 new **.pos** event files. The choice of the output file is done with the number of samples between the 2 first events.

- **Usage**

pos_split file_in.pos nsamples event_code1 event_code2 file1_out.pos file2_out.pos
with :

- file_in.pos : input position file containing the position and event codes (with extension).
- - if number of samples <= nsamples : event code sequence to file1_out.pos .
- - if number of samples > nsamples : event code sequence to file2_out.pos .
- event_code1 : 1st event of the sequence.
- event_code2 : 2nd event of the sequence.
- file1_out.pos : 1st output position file containing the modified event codes (with extension).
- file2_out.pos : 2nd output position file containing the modified event codes (with extension).

- **Fields of parameter file and examples**

- **Example**

- **Comments**

- **Current version**

1.02 11-01-2011

- **History**

- 1.00 23-05-1997 (PEA) : 1st version.
- 1.01 18-06-2002 (PEA) : minor modifications.
- 1.02 05-01-2011 (PEA) : update to use cmake and free release of Elan.

- **Files**

\$ELANPATH/bin/pos_split

- **See also**

poscheve

- **Description**

Finds, replaces event codes in a **.pos** file (one event code at a time) and writes to a new file.

- **Usage**

poscheve file_in.pos file_out.pos old_event_code new_event_code [+all_events]
with :

- file_in.pos : input event file to process (with extension).
- file_out.pos : output event file to create (with extension).
- old_event_code : event code to modify.
- new_event_code : new event code.
- option :
 - +all_events : works on all events (accepted and rejected) instead of accepted events only (default).

- **Fields of parameter file and examples**

- **Example**

- **Comments**

- **Current version**

1.05 19-09-2011

- **History**

- 1.01 13-08-2007 (PEA) : 1st documented version.
- 1.02 05-01-2011 (PEA) : update to use cmake and free release of Elan.
- 1.03 15-09-2011 (PEA) : adds +all_events flag to work on all events (accepted and rejected).
- 1.04 16-09-2011 (PEA) : fixes error without +all_events option (input parameter test).
- 1.05 19-09-2011 (PEA) : minor modification (usage text).

- **Files**

\$ELANPATH/bin/poscheve

- **See also**

[poschseq](#) ^[2], [pos_change_eve_fromfile](#) ^[3]

poschseq

- **Description**

Finds, replaces a sequence of event codes in a **.pos** file, and writes to a new file.
Default is to work with accepted events only. But it can treat all events (accepted and rejected).

- **Usage**

poschseq file_in.pos file_out.pos [+all_events]
with :

- file_in.pos : input event file to process (with extension).
- file_out.pos : output event file to create (with extension).
- option :
+all_events : works on all events (accepted and rejected) instead of accepted events only (default).

This program uses an interactive input. The questions are as follows (questions (program) are italic, answers (user) are bold):

number of events in the sequence to find:

3

event 1 of the sequence to find:

1

event 2 of the sequence to find:

2

event 3 of the sequence to find:

100

event 1 of the new sequence:

1

event 2 of the new sequence:

21

event 3 of the new sequence:

100

- **Fields of parameter file and examples**

- **Example**

In the example above, all sequences of successive events 1 – 2 – 100 will be replaced by the sequence 1 – 21 – 100. This can be useful to recode correct behavioral responses; for instance: 1 is the warning stimulus, 2 the target stimulus and 100 the subject's response. In the new pos file, the target stimuli followed by a correct answer is now coded as 21 :

file_in.pos		file_out.pos		
7824	1	0 7824	1	0
8009	2	0 8009	21	0
8867	100	0 8867	100	0
9087	1	0 9087	1	0
9699	2	0 9699	2	0
9840	1	0 9840	1	0

- **Comments**

- **Current version**

1.06 16-09-2011

- **History**

- 1.03 13-08-2007 (PEA) : 1st documented version.
- 1.04 05-01-2011 (PEA) : update to use cmake and free release of Elan.
- 1.05 27-07-2011 (PEA) : adds +all_events flag to work on all events (accepted and rejected). Removes static allocations.
- 1.06 16-09-2011 (PEA) : fixes error without +all_events option (input parameter test).

- **Files**

\$ELANPATH/bin/poschseq

- **See also**

[poscheve](#) ^[1], [pos_change_eve_fromfile](#) ^[3]

poschseqrt

- **Description**

Finds and replaces sequences of event codes in a **.pos** file if the delay between the 2 last event codes of the sequence is above or below a time threshold. This is useful for recoding sequences corresponding to too short or too long behavioral reaction time.

- **Usage**

poschseqrt file_in.pos file_out.pos sampling_period time_threshold
with :

- file_in.pos : input event file to process (with extension).
- file_out.pos : output event file (with extension).
- sampling_period : sampling period of the signal (in ms).
- time_threshold : time threshold (in ms) between the 2 last event codes of the sequence :
if >0 : recoding if time interval > threshold.
if <0 : recoding if time interval < threshold.

This program uses an interactive input. The questions are as follows (questions (program) are italic, answers (user) are

bold):
number of events in the sequence to find:
3
event 1 of the sequence to find:
1
event 2 of the sequence to find:
2
event 3 of the sequence to find:
100
event 1 of the new sequence:
1
event 2 of the new sequence:
21
event 3 of the new sequence:
100

- **Fields of parameter file and examples**

- **Example**

poschseqrt filein.pos fileout.pos 1 -500

In this example, all sequences of successive events 1 – 2 – 100 will be replaced by the sequence 1 – 21 – 100, only when the time interval between events 21 and 100 is less than 500 samples (with a sampling rate of 1 ms, this means less than 500 ms). This can be useful to recode correct behavioral responses with long enough reaction time; for instance: 1 is the warning stimulus, 2 the target stimulus and 100 the subject's response. In the new pos file, the target stimuli followed by a correct answer is now coded as 21 :

```
myfile.pos mynewfile.pos
7824 1 0 7824 1 0
8009 2 0 8009 21 0
8867 100 0 8867 100 0
9087 1 0 9087 1 0
9699 2 0 9699 2 0
9840 1 0 9840 1 0
```

- **Comments**

- **Current version**

1.02 06-01-2011

- **History**

- 1.01 13-08-2007 (PEA) : 1st documented version.
- 1.02 06-01-2011 (PEA) : update to use cmake and free release of Elan. Merge of 2 programs : pos_change_eve (changes one event code) and pos_change_eve_fromfile (changes all event codes).

- **Files**

\$ELANPATH/bin/poschseqrt

- **See also**

poscheve, poschseq, pos_change_eve_fromfile

posconcat

- **Description**

Concatenates **.pos** files (according to **.eeg** files).

- **Usage**

posconcat [+force]
with :

- option :
+force : don't check electrode number and name compatibility. If omitted, the programs checks that .eeg files use the same channels (names and numbers).

This program uses an interactive input. The questions are as follows (questions (program) are italic, answers (user) are bold):

Event file name #1 (with extension) (or Enter to stop) :

event_file_1.pos

EEG file name #1 (with extension) :

eeg_file_1.eeg

Event file name #2 (with extension) (or Enter to stop) :

event_file_2.pos

EEG file name #2 (with extension) :

eeg_file_2.eeg

Event file name #3 (with extension) (or Enter to stop) :

Output file name (with extension) :

concat_events.pos

- **Fields of parameter file and examples**

- **Example**

- **Comments**

- **Current version**

1.01 05-01-2011

- **History**

- 1.00 10-06-2009 (PEA) : 1st version.
- 1.01 05-01-2011 (PEA) : update to use cmake and free release of Elan.

- **Files**

\$ELANPATH/bin/posconcat

- **See also**

pos_concat, pos_merge

posdel

- **Description**

Deletes some events in a **.pos** event file.

- **Usage**

posdel file_in.pos file_out.pos
with :

- file_in.pos : input position file containing the position and event codes (with extension).
- file_out.pos : output position file containing the modified event codes (with extension).

This program uses an interactive input. The questions are as follows (questions (program) are italic, answers (user) are bold):

Number of event codes to delete :

2

Event code #1 to delete :

2

Event code #2 to delete :

4

- **Fields of parameter file and examples**

- **Example**

In the example above, the program removes all events with code 2 and 4 :

posdel file_in.pos file_out.pos

file_in.pos		file_out.pos	
7824	4	0	
8009	2	0	
8867	100	0	8867 100
9087	4	0	
9699	2	0	
9840	4	0	

- **Comments**

- **Current version**

1.02 06-01-2011

- **History**

- 1.01 18-06-2002 (PEA) : 1st documented version.
- 1.02 06-01-2011 (PEA) : update to use cmake and free release of Elan.

- **Files**

\$ELANPATH/bin/posdel

- **See also**

posrt

- **Description**

Computes the mean interval (reaction time) between 2 events (**.pos** file) and creates histogram files in EP file format **.p**.

- **Usage**

poschseq file.eeg.ent file_in.pos

with :

- file.eeg.ent : header file of a .eeg file (used to read sampling frequency).
- file_in.pos : input event file to process (with extension).

This program uses an interactive input. The questions are as follows (questions (program) are italic, answers (user) are bold):

Number of conditions (event pairs):

2

Condition 1:

event code :

1

followed by event code:

100

Condition 2:

event code :

2

followed by event code:

100

Do you want to create an EP file (.p) for RT histogram (y/n)?*

y

if yes

Do you want to use an EP file (.p) as a template (y/n)?*

y

the template file is used to determine the time window, the sampling period and the number of channels which will contain the same histogram; this facilitate comparison of the histogram and the EP file with erpa.

if yes

Template EP file name (no .p extension):

subject.001

Output EP file name for RT histogram (no .p extension):

histo.target

Bin size (in ms) of the histogram:

10

the counts of RTs will be accumulated in this bin size, and the whole time epoch (defined by the template file or by the max latency) will be defined by successive bins.

if no template file

Sampling period (in ms) of the output EP file:

1

Max latency (in ms) of the output EP file (max RT = 983 ms) :

1000

Histogram values: positive (1) or negative (-1):

1

the histogram values can be stored as positive or negative values. Negative values facilitate comparison with the ep file with positivity down displayed by erpa.

Histogram values: count numbers (0) or % (1):

1

count numbers (useful for averaging of histogram files) or percentage (count numbers are divided by the total number of considered trials) can be stored.

- **Fields of parameter file and examples**

- **Example**

- **Comments**

- **Current version**

2.25 05-01-2011

- **History**

- 2.24 01-10-2010 (PEA) : 1st documented version.
- 2.25 05-01-2011 (PEA) : update to use cmake and free release of Elan. Remove static allocation for reading EEG file header.

- **Files**

\$ELANPATH/bin/posrt

- **See also**

Lyon Neuroscience Research Center - Brain Dynamic and Cognition team

CRNL



Source URL: http://elan.lyon.inserm.fr/?q=ref_event_proc_tool

Links:

[1] <http://elan.lyon.inserm.fr/?q=poscheve>

[2] <http://elan.lyon.inserm.fr/?q=poschseq>

[3] http://elan.lyon.inserm.fr/?q=pos_change_eve_fromfile