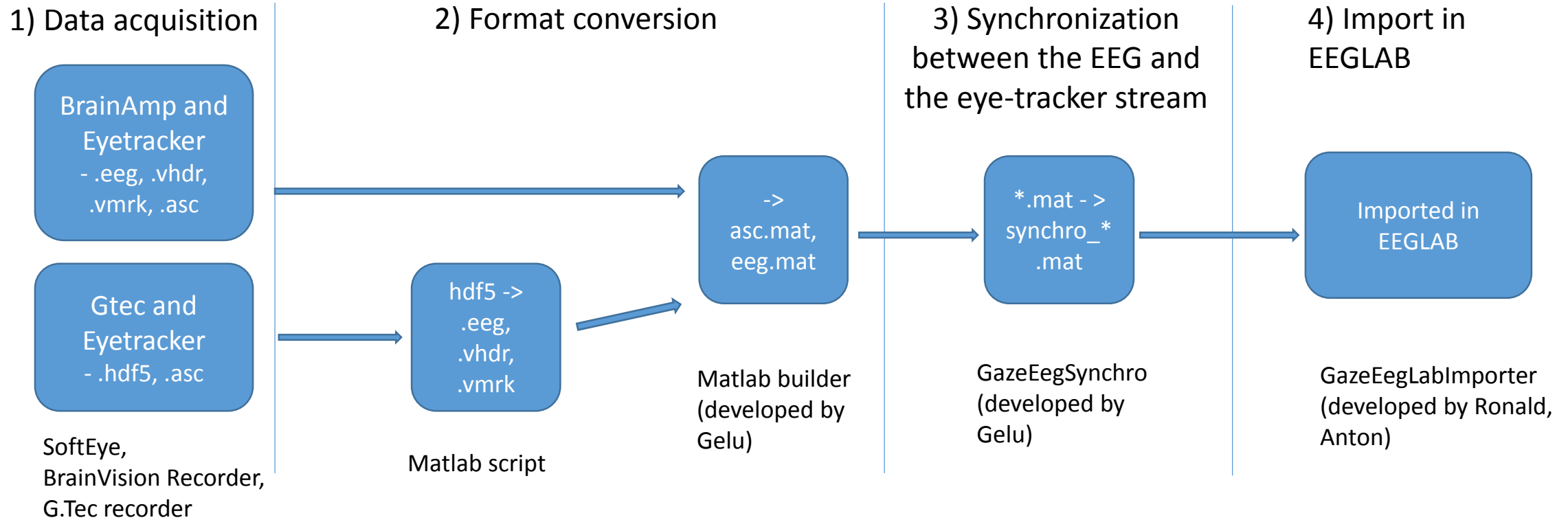


# GazeEEGLabImporter

- Date: 10/12/2013
- Version 1.0
- Produced by Anton Andreev, Gipsa-lab

# Offline data processing for ERP data analysis in EEGLAB



In 1) the signal is acquired in a number of files. Normally these are .asc from the eyetracker and .eeg, .vmrk, .vmrk for the Brainamp format (EEG). The g.tec produces a .hdf5 file which is also converted to .eeg, .vmrk, .vmrk. After that the files are converted to .mat using the MatBuilder software. In 3) the two datastreams EEG and Eyetracking data are synchronized leveraging the differences produced by the different acquisition devices (notably the “drift”). GazeEEGSynchro produces .mat file and the total number of channels is the sum of the EEG and the eye tracker's channels. In 4) GazeEegLabImporter imports the result in EEGLAB and it is used for ERP analysis.

#### 4) Import in EEGLAB



## GazeEegLabImporter

- Converts to EEGLAB data structures ("EEG","ALLEEG"), this includes the triggers
- Creates epochs
- Applies filtering over each epoch – default is 50Hz Notch, High Pass filter 2Hz.
- Removes artifacts – EEG and non-EEG channels (close to the eyes) are used to detect and attenuate the affect of eye blink artifacts
- Displays the average of the selected epochs per channel