I enforce a strict organizational structure for data output from the experiments, based on the subject ID and the paradigm. For example, for a subject named "test", examined using the gaze_bias paradigm, the output is placed in your default data folder (which you set in the GUI) in a folder called "BP".

The trials for this paradigm will be saved in a main folder "test_g", which will contain a separate folder for each trial recording: test_g1 through (e.g.) test_g14.

Each of these folders will contain:
1) an EDF file transferred from the tracker;
2) a log file "test_g1.txt" containing messages sent by the gaze-bias experiment about the timing and status of various operations performed during the trial;
3) a results file (e.g., 'test_g1_results.mat') containing target position info, different GUI handles for debugging), and so forth.

The first time you work with a data set, you will need to convert the EDF files into MATLAB-readable data: run “edf2bin” and select the file to be converted. When it finishes it will ask you to confirm the data channels order.

edf2bin will create several files: a data file *(yourfilename*.bin), a default calibration file (*adjbias_yourfilename*.txt), an experiment results file (*yourfilename*_results.mat) and some additional support files (extras, messages and events). These will be stored in the same directory as the EDF file you selected.

Test if the data has been saved properly. Load it using “datstat”, which opens a GUI (named "EM Data"). You will see several controls that determine post-processing options. The default is to leave "Filter", "Adjust bias" and "Deblink" checked.

Click the “Read” button, navigate to *yourfilename*.bin, and note the information that is displayed in the command window as it loads. The data will be placed into your MATLAB workspace. Plot it using “plth” for the horizontal plane, “pltv” for the vertical plane, or “plthv” to show both.

If it looks generally good (not too much noise, not too many dropouts, etc) you can now calibrate it using “cal”.

Refer to the calibration documents Rec_Cal_Nyst.pdf and “Data_cal.pdf” for the whys and hows of calibration.

After calibration of a channel is complete, “cal” will display the calibration factors in the command window. Copy these and paste into the adjust_bias text file. The next time you read that data, it will use those values to adjust the data to match your calibrations.

You should save the calibration figures in a new folder (name it “calfigs”) in the data folder. Click the “Q” (quit) button in the calibration zoomtool window before saving.

Verify that you are happy with the results by clearing the data out of memory (select it and click the “Remove” button), and then read it in again and display it.

Now you are ready to run your analyses.

For gaze-bias test data, run “gbplay”, which will create a playback GUI. Click “Load Results” and select *yourfilename*_results.mat.

You can select which presentations and which fixations to analyze. If you do not activate the “From/To” checkboxes, the defaults are “all”.

Click “Analyze” and it will create a folder named “analysis_*datetime*” containing the files *yourname*_summary.txt and *yourname*.csv.

The summary file contains the analysis text for each picture presentation, listing time to first fixation, quadrant name, duration, and picture.

The .csv is an spreadsheet file containing each fixation’s results.