Using the software development kit (SDK) provided by ANT Neuro, EEG amplifier eego sport can be accessed and controlled via different programming software, which provides a great variety of possibilities for our research team to script and conduct different experiments.

Our research team mainly focuses on using MATLAB for scripting EEG experiments. Hence we have developed an eego to MATLAB – streaming interface based on the eego SDK and the **MATLAB class wrapper for a C++ class**.

Description:

This package provides an example of how to stream EEG data from ANT Neuro eego amplifier to MATLAB. The program is built with the eego SDK (1.3.4.31165) and MATLAB, with wrapping a C++ class containing the eego SDK functions in a MATLAB class. This implementation uses the mex interface, which operates safely without memory leaks. It doesn't use all functions provided by the eego SDK but could be easily extended for individual needs by adapting the current workflow to variety of functions.

After downloading, copy *class_handle.hpp, eego.cpp* and *eego_interface.m* into your project folder containing the eego SDK and use the following workflow to mex the eego.cpp with MATLAB.

In case you need to change your compiler:
>> mex –setup

Mex eego.cpp:
>> ipath = ['-I' pwd];
>> llib = ['-L' pwd];
>> mex(ipath,llib,'eego.cpp')

Access the eego amplifier using the methods in eego_interface.m such as:
>> ampObj = eego_interface(); % Create a new amplifier object
>> openstream_imp(ampObj); % Create impedance stream
>> openstream_eeg(ampObj, samplingrate); % Create EEG data stream
>> getData(); % Retrieve data from buffer, data will be stored in ampObj.OutputData

Output format is [Samples x Channels]. Use *testmain.m* to test the amplifier by displaying live stream data from two designated channels.

FILE LINK (32bit)

Acknowledgements: based on **MATLAB class wrapper for a C++ class** by Oliver Woodford.
MATLAB Release: R2013a
Other Requirements: C++ compiler: Visual C++ 2012 and above.
eego SDK 1.3.4.31165 (ANT Neuro)
All system components such as processor and MATLAB have to be of 32-bit
configuration only