Hi, I am Marco Aceves, Ph.D., researcher from the Autonomous University of Queretaro, Mexico. Thank you for downloading our database. We want to know who is using our database, so please spare a minute of your time and send us an email to: [marco.aceves@gmail.com](mailto:marco.aceves@gmail.com) with your name and affiliation. We will be happy to assist you and know about you. Best regards

**Donation Form:**

Filling out this form will enable us to process your data set efficiently. Before filling out the form, it might help to [visit a data set page](http://archive.ics.uci.edu/ml/datasets.html) to see how others have documented their data sets. If you have any problems, please do not hesitate to [contact us](http://archive.ics.uci.edu/ml/contact.html). Thanks for your contribution!

**Data Set Name:**

EEG Steady-State Visual Evoked Potential Signals

**Abstract:**

This database consists on 30 subjects performing Brain Computer Interface for Steady State Visual Evoked Potentials (BCI-SSVEP).

**Source:**

This database was obtained by performing the experiments using a commercial device for 30 subjects in order to partially fulfill the requirements for the Ph.D. candidate in Computer Science: Fernandez-Fraga S.M. and was supervised by Dr. M. A. Aceves-Fernandez, Ph.D. from the Autonomous University of Queretaro, Mexico (UAQ). The experiments were carried out complying with the highest ethical standards both locally (Bioethical standards provided by our University) and internationally (documents provided by the World Health Organization) and supervised by an expert physician at all time.

**Relevant Information:**

The tests are explained in more detail in the articles attached to the databases. The tests are visual experiments, so the signal you may be more interested in are the electrodes O1 and O2 (Columns I and J) according to the extensive literature review and international standards. Each subject performed different tests which are provided in .csv format as follows: suppose you have a .csv which name is A001SB1\_1 This means the data corresponds to group A (only Group A is provided at present), subject 001, Test SB1 (Five Box Visual Test), and first experiment (\_1, there could be a repetition of the experiment which will be \_2, \_3, etc). The different tests are as follows: SB1 - Five Box Visual Test 1, SB2 - Five Box Visual Test 2, SB3 - Five Box Visual Test 3 (There are three different Five Box tests, these are not repetitions of the same test), SV1 - Visual Image Search, SM1 - Motor Images (Hand Shake Experiment). Since these experiments are visual tests, you may be interested in the electrodes O1 and O2. A file named Signal Database.xlsx is provided with a list of every experiment carried out and the subjects for each experiment. The real name of each subject are not provided due to confidentiality issues.

**Attribute Information:**

There are 16 attributes, of which the last 14 are the signals coming from the electrodes. They are named according to international standards (see the references). The first two are the time-domain and a signal called interpolated which is normally 0.

**Relevant Papers:**

Please e-mail to marco.aceves@gmail.com for the full article and/or information on where to fetch the paper(s).

\*Fernandez-Fraga, S. M., Aceves-Fernandez, M. A., Pedraza-Ortega, J. C. (2018). Feature Extraction of EEG Signal upon BCI Systems Based on Steady-State Visual Evoked Potentials Using the Ant Colony Optimization Algorithm. Discrete Dynamics in Nature and Society, 2018.

\*S. M. Fernandez-Fraga, M. A. Aceves-Fernandez, J. C. Pedraza-Ortega & J. M. Ramos-Arreguín (2018). Screen Task Experiments for EEG Signals Based on SSVEP Brain Computer Interface. International Journal of Advanced Research, 2018.

\*Fernandez-Fraga, S.M., Aceves-Fernandez, M.A., Rodríguez-Resendíz, J.  
et al. Evolving Systems (2017). Steady-state visual evoked potential  
(SSEVP) from EEG signal modeling based upon recurrence plots, Evolving  
Systems. <https://doi.org/10.1007/s12530-017-9213-9>

**Citation Requests / Acknowledgements:**

Please if you use the database for any purpose, include one (or more) of the provided references and acknowledge the corresponding author (Aceves-Fernandez).

**Additional Information**

The Excel columns for each eperiment are as follows:

Column          Electrode  
C                     AF3  
D                     F7  
E                     F3  
F                     FC5  
G                     T7  
H                     P7  
I                       O1  
J                      O2  
K                      P8  
L                      T8  
M                     FC6  
N                     F4  
O                     F8  
P                     AF4

The different tests are as follows: SB1 - Five Box Visual Test 1, SB2  
- Five Box Visual Test 2, SB3 - Five Box Visual Test 3 (There are  
three different Five Box tests, these are not repetitions of the same  
test), SV1 - Visual Image Search, SM1 - Motor Images (Hand Shake  
Experiment).  
SB1-3 can be seen in page 7 of the IJAR paper, SV1 (Image search) you  
may want to look at this paper: "Dimigen, O., Sommer, W., Hohlfeld,  
A., Jacobs, A., & Kliegl, R. (2011). Coregistration of eye movements  
and EEG in natural reading: Analyses & Review. Journal of Experimenta  
Psychology: General, 140 (4), 552-572".  
In the case of the test SM1 (motor images) Attached is a document that  
explains in English the setup.  
  
We have published a more in depth paper on the experiments but is in  
Spanish, hence I did not include it. However, I hope you find this  
information useful.