

# EEG/ECG Data for Emotion Task

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Citation: It will be updated soon. Please contact admin.

## Experimental paradigm

- **Research Ethics**
  - This study was reviewed and approved by the Institutional Review Board at Gwangju Institute of Science and Technology
- **Participants**
  - 80 Healthy participants (17 female), 10 groups (8 participants per group)
  - Participants in one group participates experiment together
  - 8 participants are recorded EEG simultaneously
- **Task**
  - Watching emotion-evoking videos
  - Videos : four genres (Comedy, Horror, Boredom, Sadness), 20 min per video
- **Experimental environment**
  - Experiment period
    - 15<sup>th</sup>, December, 2016 – 19<sup>th</sup>, December, 2016
  - Location
    - Room 310, Main Library of Gwangju Institute of Science and Technology, Gwangju, S. Korea



**Figure 1 Experimental environment**

- **Experimental design**
  - Run 1: Resting 1 min (Opened eye)
  - Run 2: Watching comedy video clips 20 min
  - Run 3: Watching horror video clips 20 min
  - Run 4: Watching boredom video clips 20 min
  - Run 5: Watching sadness video clips 20 min
  - Run 6: Resting 1 min (Opened eye)
  - Questionnaire between each run, 10 min break each run
- **Video clip evaluation**
  - Another 23 participants selected main scenes of each clips and it is used for classification label and used for ground-truth

## **Data recording**

- **Acquisition devices (Figure 2)**
  - Wired/Wireless communications, 8 Channels, Foam electrodes, 1KHz

Sampling Rate, Manufactured by BioBrain, Corp. in Korea

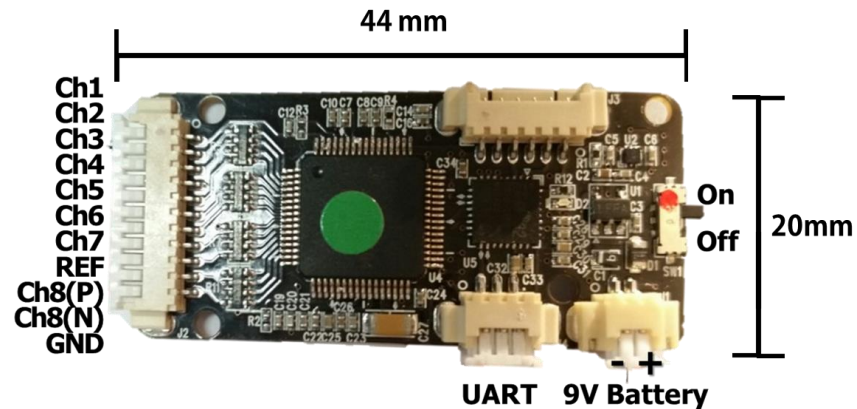


Figure 2 Custom-developed acquisition device

- **Software**
  - OpenViBE with custom acquisition and processing module
- **Channel location**
  - Total 8 channels: 5 EEG – (AF7, Fp1, Fpz, Fp2, AF8), 1 ECG, 1 EOG and 1 EMG

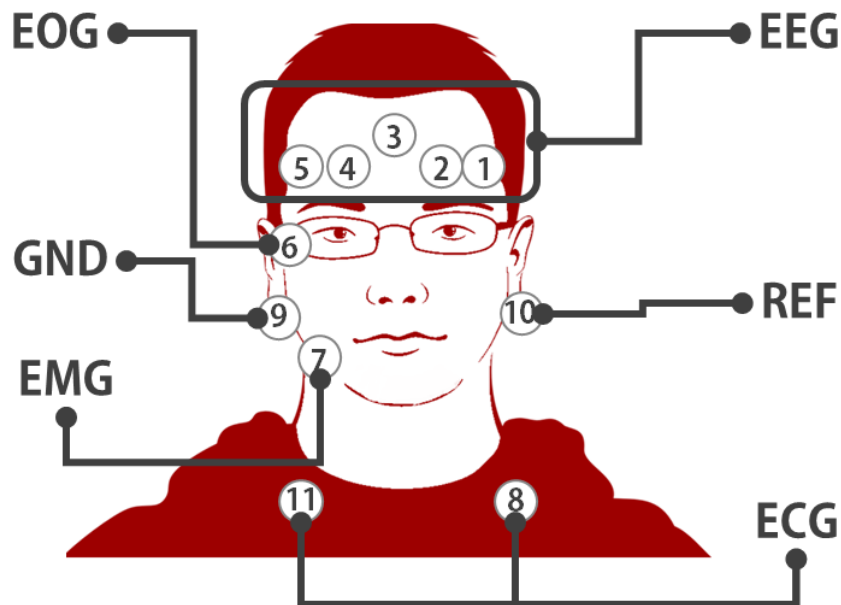


Figure 3 Electrode position used in experiment

## Data file description

- **File extension**
  - The General Data Format for Biomedical Signals (\*.gdf)
  - Recorded from OpenViBE software

- File information
  - Each file include 64 Channels ( 8 people, 8 channels per 1 participant )
  - Resting\_Start – resting 1min (Opened eye)
  - Run1 – EEG data during watching comedy clips 20min
  - Run2 – EEG data during watching horror clips 20min
  - Run3 – EEG data during watching boredom clips 20min
  - Run4 – EEG data during watching sadness clips 20min
  - Resting\_End – resting 1min (Opened eye)
- **Trigger (Marker) information**
  - None