**Database description**

The database consists of 32 subjects, of which only 26 were chosen due to acquisition problems. The recordings were measured with a BIOSEMI EEG-device of 128 channels. The sampling frequency of the device was 1KHz. Each recording of EEG was measured continuously and contains two labels belonging to two tasks and the the corresponding markers at the start of the tasks.

The first task corresponds to the reading of the neutral text and the second related to motor text reading. The task of reading neutral text corresponds to texts that contain verbs not related to movement, while the motor text includes verbs that suppose some movement, each EEG recording lasts approximately 60 seconds. All the reading tasks were carried out in silence, without the pronunciation of words and was carried out by people with different levels of education in both Spanish and English.

The signal was preprocessed in order to replace defective channels that had acquisition failures,The bad channels were replaced with spherical interpolation statistically weighted on the basis of all sensors and then the variance of the signal across trials was calculated to guarantee the stability of the averaged waveform [Courellis et al., 2016]. After this, the signal was sub-sampled, which resulted in records sampled at 256Hz. In addition, the data were taken to the same reference, using common average. Finally, all records were filtered between 5Hz and 45Hz.

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| --- | --- | --- | --- | --- | --- | --- | --- |
| A1 | 1 | B1 | 33 | C1 | 65 | D1 | 97 |
| A2 | 2 | B2 | 34 | C2 | 66 | D2 | 98 |
| A3 | 3 | B3 | 35 | C3 | 67 | D3 | 99 |
| A4 | 4 | B4 | 36 | C4 | 68 | D4 | 100 |
| A5 | 5 | B5 | 37 | C5 | 69 | D5 | 101 |
| A6 | 6 | B6 | 38 | C6 | 70 | D6 | 102 |
| A7 | 7 | B7 | 39 | C7 | 71 | D7 | 103 |
| A8 | 8 | B8 | 40 | C8 | 72 | D8 | 104 |
| A9 | 9 | B9 | 41 | C9 | 73 | D9 | 105 |
| A10 | 10 | B10 | 42 | C10 | 74 | D10 | 106 |
| A11 | 11 | B11 | 43 | C11 | 75 | D11 | 107 |
| A12 | 12 | B12 | 44 | C12 | 76 | D12 | 108 |
| A13 | 13 | B13 | 45 | C13 | 77 | D13 | 109 |
| A14 | 14 | B14 | 46 | C14 | 78 | D14 | 110 |
| A15 | 15 | B15 | 47 | C15 | 79 | D15 | 111 |
| A16 | 16 | B16 | 48 | C16 | 80 | D16 | 112 |
| A17 | 17 | B17 | 49 | C17 | 81 | D17 | 113 |
| A18 | 18 | B18 | 50 | C18 | 82 | D18 | 114 |
| A19 | 19 | B19 | 51 | C19 | 83 | D19 | 115 |
| A20 | 20 | B20 | 52 | C20 | 84 | D20 | 116 |
| A21 | 21 | B21 | 53 | C21 | 85 | D21 | 117 |
| A22 | 22 | B22 | 54 | C22 | 86 | D22 | 118 |
| A23 | 23 | B23 | 55 | C23 | 87 | D23 | 119 |
| A24 | 24 | B24 | 56 | C24 | 88 | D24 | 120 |
| A25 | 25 | B25 | 57 | C25 | 89 | D25 | 121 |
| A26 | 26 | B26 | 58 | C26 | 90 | D26 | 122 |
| A27 | 27 | B27 | 59 | C27 | 91 | D27 | 123 |
| A28 | 28 | B28 | 60 | C28 | 92 | D28 | 124 |
| A29 | 29 | B29 | 61 | C29 | 93 | D29 | 125 |
| A30 | 30 | B30 | 62 | C30 | 94 | D30 | 126 |
| A31 | 31 | B31 | 63 | C31 | 95 | D31 | 127 |
| A32 | 32 | B32 | 64 | C32 | 96 | D32 | 128 |

|  |  |
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|  | Channels removed |

<https://www.biosemi.com/headcap.htm>

