Department of Electronics and Communication Engineering



PESIT- Bangalore South Campus

SSVEP Classification

Group Number: 31



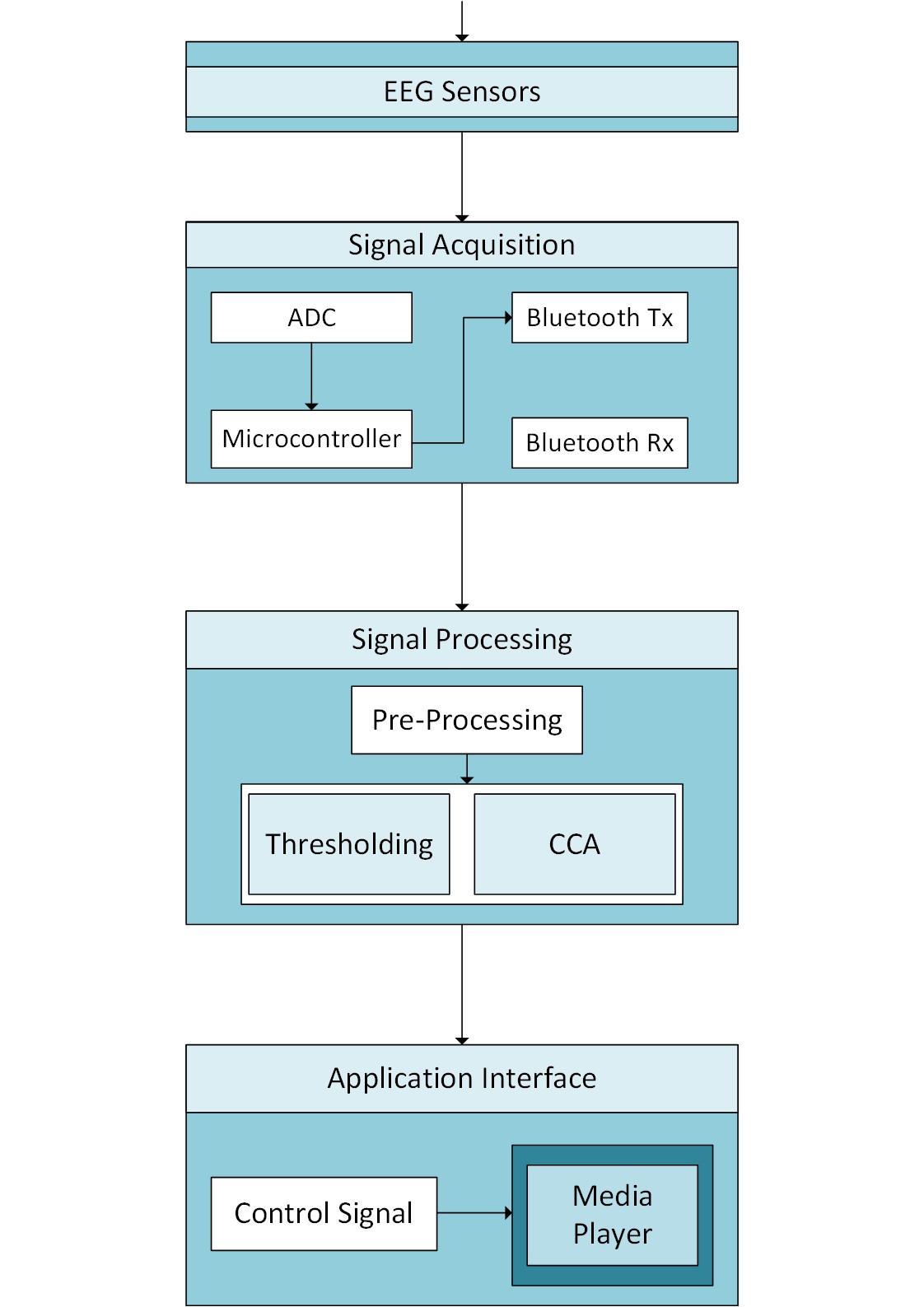
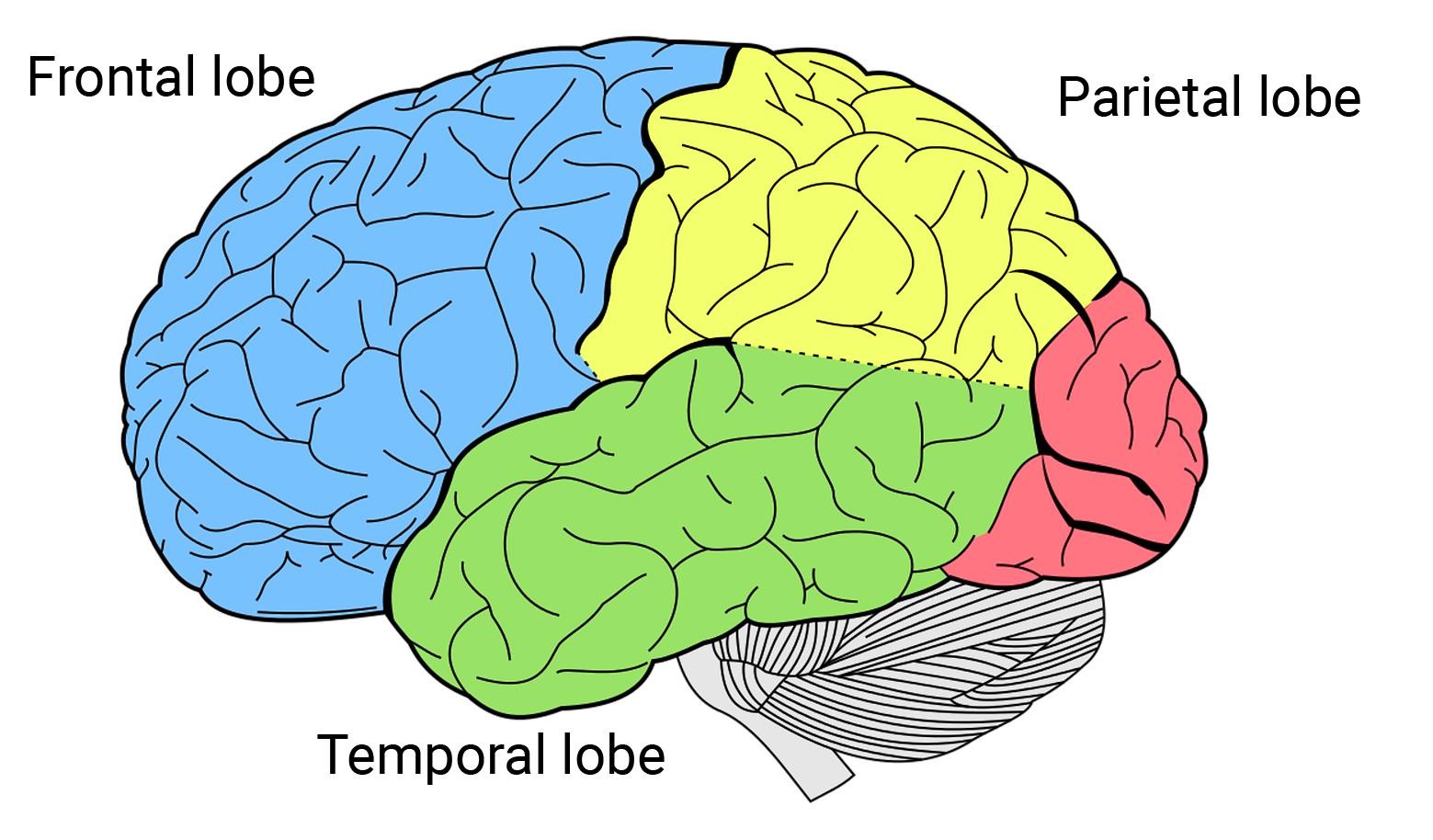
BLOCK DIAGRAM



DEMONSTRATION

**Occipital**

**Lobe**



The Media Player can be controlled using following

three modalities:

**Alpha**: EEG signals that correspond to oscillations in

the 8-12 Hz frequency band are referred to as alpha

waves and are prominently observed in the posterior

region of the head over the **occipital lobe**. This could

be generated when the awake subject closes eyes.

**Clench**: On clenching teeth, there is a burst of activity

in the EEG signal.

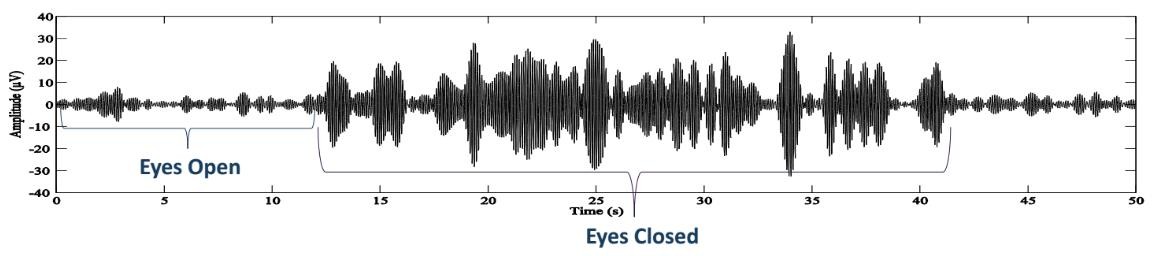
**SSVEP**: Steady State Visually Evoked Potentials (SSVEP) are the component of EEG signal

corresponding to the frequency of the flickering

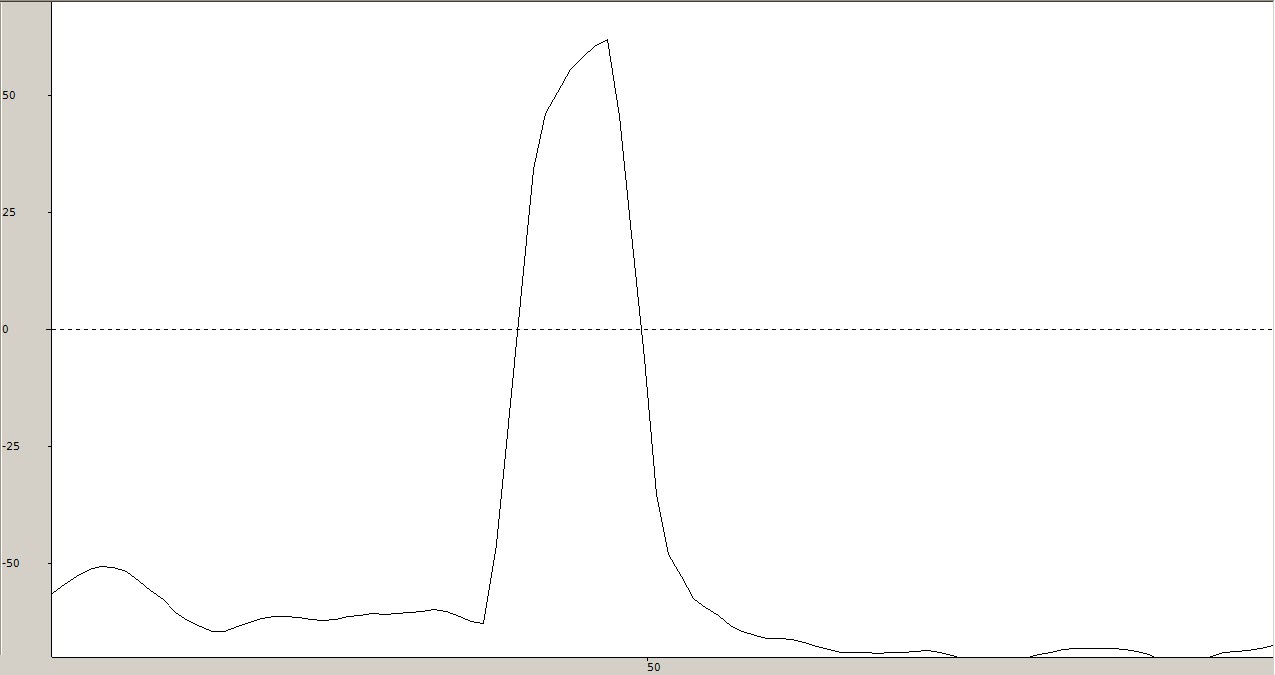
stimulus (15Hz) that the subject is viewing.

Hence, a given command can be executed by either closing the eyes, clenching, or staring at the flickering stimulus.

Alpha signal:



Clench power burst:



DESCRIPTION



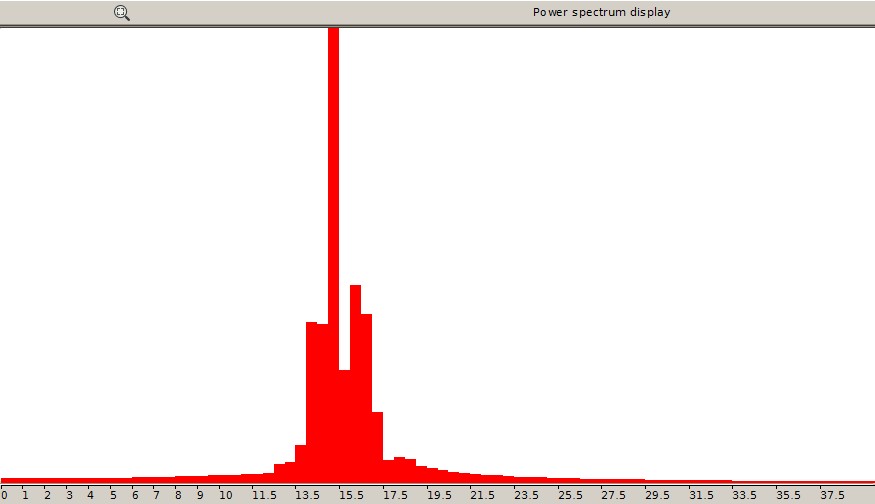
A Brain Computer Interface (BCI) is a direct communication pathway between the brain and an external device. In this project we explore a hybrid non- invasive BCI paradigm using SSVEP and Alpha waves.

GUIDE



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SSVEP 15 Hz FFT power spectrum peak:



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