Lab 8 Report- Steady State Visually Evoked Potentials

ECBM 4090 - Brain Computer Interface Lab

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**Report: Question 1**

**Frame rate 12 means that each frame (black or white) is shown for 1/12 second.**

**What is the frequency of the visual stimuli (how many full cycles per second) when the frame rate is 12Hz, 20Hz, and 30Hz? (3 pts)**

* Total frames per second are 12 and 6 full cycles per second (each cycle takes 2 frames)
* Total frames per second are 20 and there are 10 full cycles per second
* Total frames per second are 30 and there are 15 full cycles per second

**Report: Question 2**

**Are you able to detect the attended visual stimulus in real-time?**

**Include screenshots of the SSVEP power during each attentional condition. (7 pts)**

| Attend 20Hz Distractor 30Hz | Attend 30Hz Distractor 20Hz |
| --- | --- |
|  |  |
| *We were able to see when attention was greater for both conditions, however it was much more noticeable for Attend 20Hz. The magnitudes in the Attend 20Hz condition were noticeably larger, reflecting the subject's ability to concentrate more effectively at this frequency.*  *This is evident in the plots, where the magnitude scales are significantly higher compared to the Attend 30Hz condition.*  *The increased magnitude suggests that the subject's brain response was stronger and more synchronized with the 20Hz stimulus, indicating greater engagement or focus during these trials.* | |