Subject Data Interpretation

Pat14

* 24 year old male
* Investigating PF 1 Hz and 1.5 Hz data for errors
* Subject often momentarily stopped following reference signal to regain composure at frequencies 1.5 Hz and above
* Subject mentioned difficulty focusing on reference signal for long periods of time
* Subject wore glasses

Pat15

* 28 year old male

Pat16

* 26 year old male

Pat17

* 27 year old female
* Subject mentioned losing focus on reference and measured signal at higher frequencies
* Trial 1 of the PF 2 Hz data did not properly write to the sd card and was excluded.

Pat18

* 53 year old male
* During PF trials subject often pulled upward instead of resting ankle at zero level, causing large overshoot
* Subject wore glasses

Every subject appeared to follow the reference signal more accurately between the 0.75 Hz and 1.5 Hz frequency range. No subject was able to follow the 2 Hz frequency in phase and it often appeared to be at least 180 deg out of phase. At lower frequencies the measured data can often be seen having sharp non-sinusoidal trends. Most of the subjects mentioned the difficultly moving their ankle at such a slow pace as opposed to just letting their ankle fall to the relaxed position, which was possible at frequencies close to 1 Hz, possibly explaining the sharp changes in measured data.

It was also observed subjects 16 and 17 often would undershoot the target reference signal by waiting for the downward trend of the sinusoid. That observation can possibly give insight to the appearance of the flat measured data, as well as the offset in some of their trials.

Overall most subjects followed the reference signal most accurately between 0.75 Hz and 1.5 Hz. The plots show that subjects were unable to accurately follow the reference signal at low frequencies likely due to the slow and unnatural movement of the ankle. Additionally, the data shows that at frequencies 1.75 Hz and above the subjects were often unable to react fast enough to match the reference signal, possibly “guessing” or proactively moving the measured response to the reoccurring location of the reference signal.