ELEC-E7852 Computational Interaction and Design 2024
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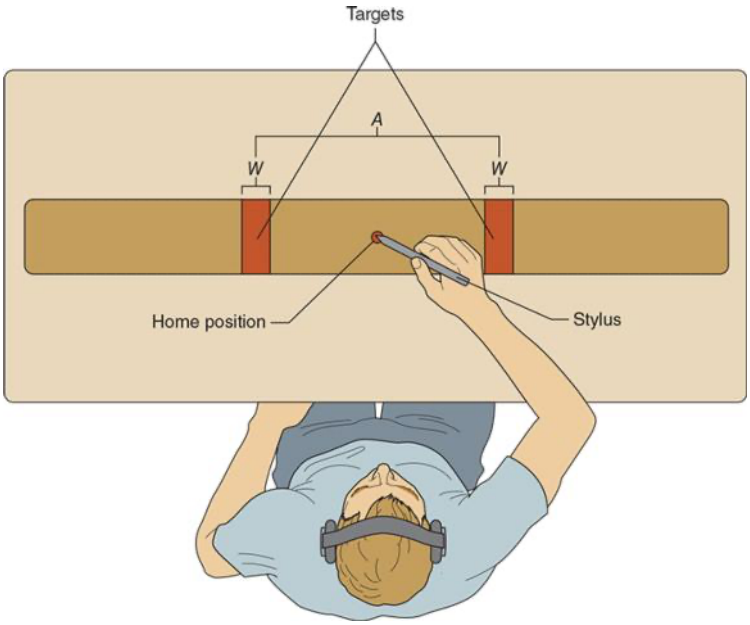

Assignment 6b: Biomechanical simulation (optional, 5p)

Biomechanical user simulations predict three aspects of movement: movement trajectories, movement performance (speed and accuracy), and ergonomics (e.g., muscle activation). Pick two of these aspects, and then design and run an experiment to validate the predictions empirically. You will need to solve how to measure the outcomes. One user is enough. Pay attention to the design of the experiment and the metrics you use. Try to formulate your study such that you can give a solid quantitative answer.

Grading:

- Experimental method well thought and follows good practices of the field +2
- Results well-reported and includes predictions compared against data +2
- Meaningful conclusion drawn with thoughtful discussion of pros and cons +1

Tips:

- See the paper by Ikkala et al. (UIST'22) for ideas.
- You do not need an EMG device to measure some aspects of performance.