

Use the data you have generated with the sheets given to you in the class.

Remember that each sheet contains 12 different areas where you made repeat target selections. In time  $t = 10$  sec you have recorded the number of selections you achieved accurately.

Procedure:

- Fill in your data in the link
- Include a picture of your sheets in your report (important).

For each of the twelve areas calculate the average duration of target selection (i.e. the duration of movement for each hit), i.e. the quotient total time / (number of options). Then present the following items in a table:

- the condition (i.e. the serial number of each area, from 1-12)
- the distance  $D$  between the two targets in each area (i.e., the length of the gray area)
- the target width ( $W$ ), (i.e. the width of each of the targets)
- the degree of difficulty (difficulty index or ID). Use Fitts's Law,  $t = a + b * ID$ , where  $ID = \log_2(D / W + 1)$ , the average target selection time you calculated above.

Then make a diagram showing the trend line that correlates the degree of difficulty with the time it takes to select the target. Calculate the constants  $a$ ,  $b$  of the equation  $t = a + b * ID$ .

How do the values of the constants that you calculated compare with those mentioned in the literature? Discuss.

Repeat the above for the problem of signing. What do you notice?

### **Deliverable**

Write a "scientific article" that you will present at a "conference", with the results of your experiment and your conclusions. The page limit required by your "conference" is 2. In the article describe the research question, the parameters of the experiment, how you implemented each of the steps you have followed. Make sure your text is written with technical language and that it contains references to external sources, e.g. in scientific texts, using the APA style for references.

Your report should follow the ACM template, using the single column ACM Master Article Template (find it in STEP 1 in section The Workflow and Templates). Please submit a PDF file.