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INFO 463 Input and Interaction
NineBoard User Test Report

General Observations

We ran user tests on three participants who were all males with an average age of 19.33. Each test consisted of the participant inputting 45 phrases, with the first 5 being practice trials. Early on, each participant would take time to scan the keyboard while typing. One participant repeatedly switched between the two different methods of inputting a space: a right swipe in the text box, and pressing the space button located at the bottom of the keyboard, in an attempt to see if one was faster. Occasionally, participants' fingers would press the incorrect button despite aiming for the correct one. This is indicative of the precision side of the "Fat Finger" problem. Another issue that we observed was the tendency for users to swipe and lift off of the board, meaning that their finger wouldn't actually be near the next likely character. Our participants would also have trouble finding characters when they were located on the same button that they just pressed or swiped.

Key Results

Measurement	Participant 1	Participant 2	Participant 3	Average
AdjWPM	4.89	7.89	8.16	6.98
KSPC	1.40	1.19	1.08	1.22
TotErrRate	0.30	0.24	0.21	0.25

Discussion

The average AdjWPM of NineBoard was 6.98, while the KSPC was relatively low at 1.22. The average total error rate was 0.25. The AdjWPM was less than desirable, but knowing the device that NineBoard would run on and that the KSPC for a QWERTY keyboard is ~ 1.00, we were satisfied with the KSPC

Participants 2 and 3 had more training than Participant 1 due to trying the keyboard beforehand. Thus, when they were approached about participating in a formal user test, they performed better than Participant 1 due to the additional training.

After analyzing the results, we identified possible reasons for the low AdjWPM and low KSPC. NineBoard is a nontraditional keyboard that requires target awareness, so it took time for users to learn the layout. We initially thought that organizing the letters by frequency and likelihood would help users input words faster. It would be interesting to organize NineBoard with a more familiar layout, like simply following alphabetical order. In addition, the Japanese keyboard that inspired our keyboard is heavily based upon the patterns of the Japanese language. A keyboard like ours may work better with a language that is more pattern-based than English.