

# Appendix 1 :

## Instructions to Participants

### A.1 Description of the Experiment

*The following description should be read to each participant at the beginning of the experiment. Italicized text are instructions to the experimenter.*

*Before you begin, you should have a worksheet available for the participant. You should also have the interface up and running, with the Alphabetic layout selected. No other windows should be visible. Also, assign participants a participant number.*

*Introduce yourself. Give them the consent form to sign, on their worksheet. If it is not signed, do not proceed.*

- My name is \_\_\_\_\_, and I will be giving you instructions on what to do and will answer your questions.

You're helping us by trying out a new product in the early development stages. We have several different versions of this product, and we're looking to see which version is the easiest to use. If you have trouble with some of the tasks, it's the product's fault, not yours. Don't feel bad; that's exactly what we are looking for. Remember, we are testing the product versions, not you.

*Tell the participant that it's OK to quit at any time.*

- Although I don't know of any reason for this to happen, if you should become uncomfortable or find this test objectionable in any way, you are free to quit at any time.

*Tell them about the experiment, and record the participant number.*

- Our team is working on a computer that does not have a keyboard. Because text entry may be occasionally required, we plan to put a simulated keyboard on the screen, such as the one you see in front of you, through which people can "mouse type". *Show them the screen.* The keyboard includes only lower case letters and a space bar. There are no numbers or backspace key. Anything you type appears on this one line entry.

You "mouse-type" by selecting a key on the screen. For example, I will type my name {*type your name*}. Notice that I have to press this button on the upper corner before it will let me type.

*Press the "Press here to begin" button and mouse-type "your name".*

- When I am done, I press this button to tell the system I have finished.

*Press the "Press here when done" button.*

*Point to the screen*

- The purpose of this experiment is to study people's ability to "mouse-type" using a two different keyboard layouts. The keyboard layouts we will use are as follows. This layout is called an

Alphabetic keyboard, and is the same layout usually found on typewriters and computers.

*If you haven't already, select the Alphabetic layout.*

- This layout is called an alphabetic keyboard. Notice that the letters are arranged in alphabetic order. I'll type the word test on it to show you how it works.

*Select the Phone Pad layout.*

- This layout is called a phone pad keyboard. Notice that the letters are arranged as they are on your telephone. I'll type the word 'test' on it to show you how it works.  
*Start typing.* You type a letter by pressing and cycling through each letter on a key until the correct letter appears. To accept the next character, you have to press the '>' key. To type a space, you have to press the '>' twice.  
*Leave a space and show that the letters s and z require 4, not 3 button presses.* Also notice that the 'prs' button includes the letter 'q', while the 'wxy' button includes the letter 'z'.

*Note: Don't tell participants about the possible advantages or disadvantages of each method!*

*Administer the pre-test questionnaire on the worksheet. Write down the answers as they are supplied!.*

*You will need to delete the output file test1.txt after you demonstrate how the mouse typing program works (or else your input will appear in the participant's data file).*

- Before we begin the typing task, I would like you to answer a few questions found on this form.

## **A.2 Specific task instructions**

*Don't forget to record any comments on the worksheet.*

- For all typing tasks, I am going to ask you to type as fast as you can. However, I want you to avoid typing errors. If you do make an occasional mistake, just keep on going... there is no backspace key!. If you make many errors, then you are probably trying too hard and you should slow down a bit.

*Task 1 and 2: Measure their mouse typing ability with the two keyboard layouts. Note that you need to alternate the order that you run these experiments to ensure that half your participants start with the Phone layout and the other half with the Alphabetic layout. For illustration, assume the order is Phone and Alphabetic. Change the layout to the Phone keyboard.*

- Now we will see how fast you can mouse-type on the phone keyboard. As before, you should type as fast as you can while still avoiding typing errors. This time, you will be pressing the button at the beginning and end. Read the first sentence aloud, and start whenever you are ready. This sentence is for practice.

*Note: Participants may forget to press the button starting and ending the experiment. Remind them! Give them the 2nd sentence*

- Now do the same with this sentence. We will be recording your typing time and errors, so go as quickly as you can and try to keep your typing errors down.  
Read the sentence aloud and start whenever you are ready.

*Give them the 3rd sentence*

- Now here is the last sentence with this keyboard. Read it aloud and start when ready.

*Let them type it.*

- Good. What do you think about mouse-typing with this layout?

*Record their comments on the worksheet*

*Switch keyboards, and repeat the above procedure for the alphabetic keyboard. Use the same sentences in the same order of presentation.*

- I'll switch to the next keyboard.....

*Adminster post-test questionairre on the worksheet*

- Now that you have used all keyboards, can you rank order them from best to worst? Do you have any other comments to make?

*Record the results. You may want to ask other questions on oddities that you may have observed.*

*At this point, the experiment is complete. You can answer any questions that the participant may have. Thank them. Finally, record your own observations of what you saw that were not captured by participant's comments. Make sure you save the text1.txt file by renaming it with the participant number.*