

Chapter 4

Experiments and Results

4.1 Plan of Experiments

To evaluate the success of the prototype experiments were made. To do so, a small group of people were invited to participate in the trials of the haptic sleeve.

The test is divided in three parts: Test of the motor control, of the pattern control and of the different intensities. The following plan was executed.

4.1.1 Test of the Motor Control

After the subject is comfortably sitting down with the sleeve in their arm, the first thing to test is the Motor Control part of the interface. The goal of this test is to check if the user can feel the vibrations and distinguish the different motors that are ON. It also aims to discover which area of the arm/hand the user finds more complicated to "feel". A scheme of the test can be found in Figure 4.1.

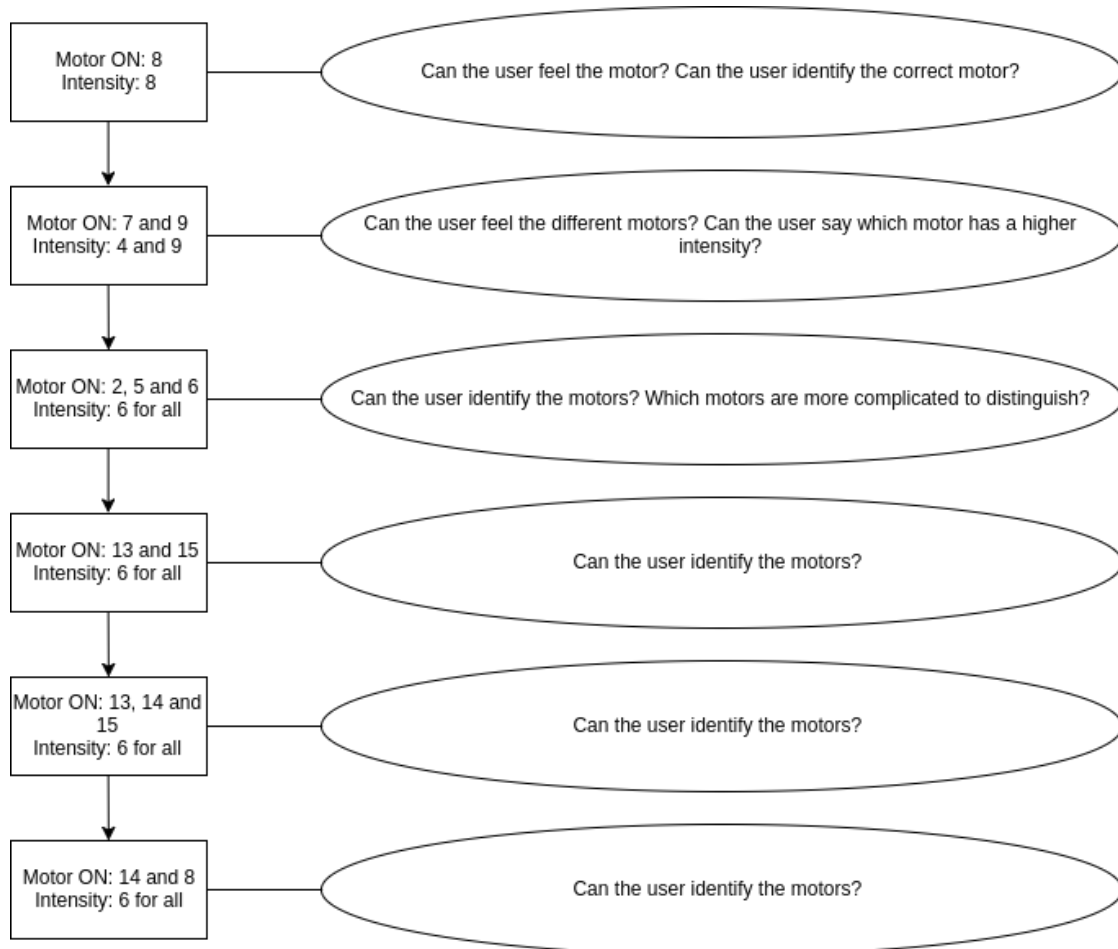


Figure 4.1: Diagram of the motor control test where the rectangles identify the motors to turn on and their intensity and the elipses describe the questions that should be asked to the user

4.1.2 Test of the Pattern Control

The second test (Figure 4.2) that should be done is on the pattern control section of the interface. This aims to show if the user is receiving the desired stimulus.

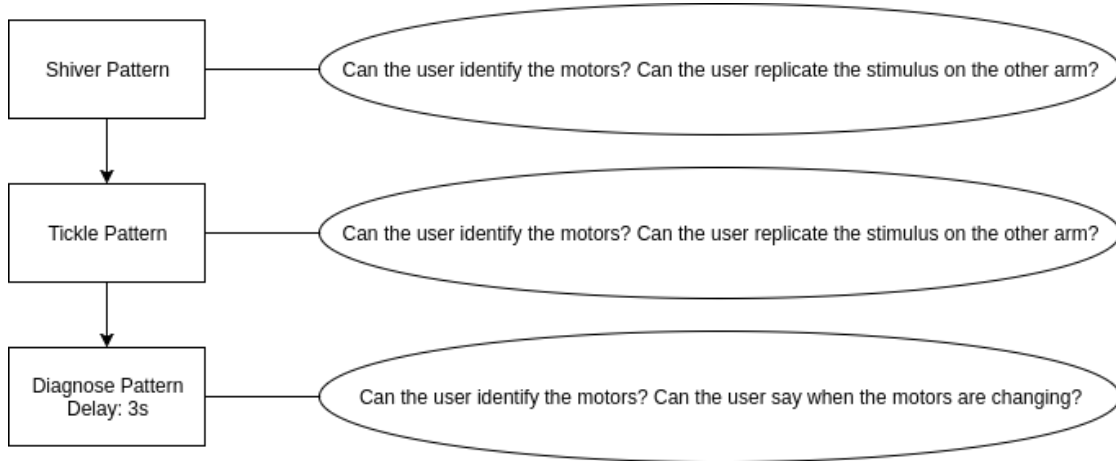


Figure 4.2: Diagram of the pattern control test where the rectangles identify the patterns that should be activated and the elipses describe the questions that should be asked to the user

4.1.3 Test of different intensities

The last test (Figure 4.3) serves to confirm that the intensity of the motor can be controlled. It also shows if the user can differentiate the contrasting intensities (which one is higher).

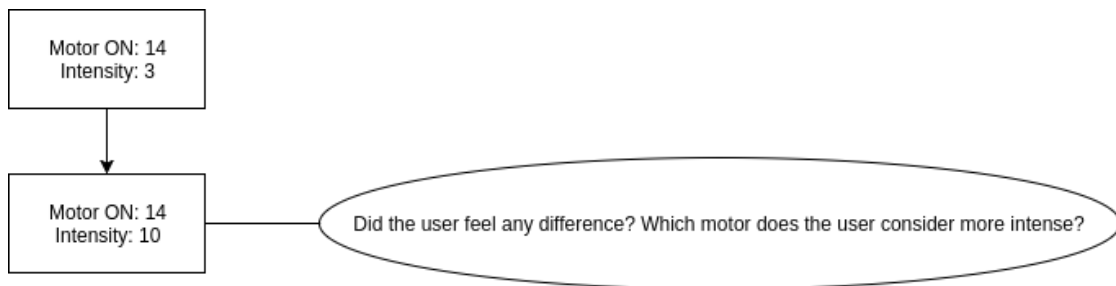


Figure 4.3: Diagram of the different intensities test where the rectangles identify the motor to turn on and its intensity and the elipse describe the questions that should be asked to the user