Preliminary Study Protocol

Introduction

Volunteer's information collection

- Name
- Age
- Onset blind age
- Experience with Braille
- Experience with Smartphone
- Experience with Smartwatches
- Known methods for text input in daily routine (perkins, QWERTY+TalkBack, Speech Recognition, etc.)

Explanation of project's motivation, hypothesis and ideas

Prototypes first contact

Demonstration of each of the proposed configurations on the Touch prototype:

1. Tone Generator for dot activation feedback
2. Vibration Pattern for dot activation feedback
3. 3D tactile surface for better spatial recognition
4. Screen rotation to better attend user's arm disposition

Ask volunteer, regarding the 4 above:

- How would you rank it's usefulness? (Likert 5)
- Justify choices and suggest changes.

Prototypes analysis

Explanation and demonstration of each of the other five prototypes, speaking out-loud to volunteer which dot is being activated, using Braille's number codification, or on-screen position, as he or she prefer. Ensure maximum clarity in this step to guarantee a good comprehension

For each of the six prototypes, allow free interaction/exploration. Identify and observe difficulties and errors.

Ask the volunteer to type, for each prototype:

- ?
- ?
- ?

Ask to volunteer, regarding each of the six prototypes:

- How would you rank easiness of method comprehension? (Likert 5) *Did you had a clear understanding on how Braille cells are composed?*
- How would you rank easiness of dot identification? (Likert 5) *Were you certain, did you feel secure on targeting each dot?*
- How would you rank method's typing speed? (Likert 5)
- How would you rank method as being error prone? (Likert 5)
- How would you rank method in learn-ability? (Likert 5) *Do you believe that having more practice your performance with this method would be better?*

Ask volunteer to rank methods, order them in terms of preference and offer final thoughts on positive and negative aspects of each one.

Conclusion

Gather suggestions for improvements/fixes on the current project.

Gather suggestions for future features (delete action, full-sentence-listen action, suggestion-words action, etc).