Model Suitability Investigation
Mark Turner
2021/22

Purpose of the Study

The aim of this study is to investigate how feasible the use of 3-dimensional objects is for 2-factor authentication within daily routines. In particular, the 3D printed objects that will be used were created with user feedback in mind, so the study hopes to assess how suitable these objects are when used over a longer period of time. As such, we require a group of people to attempt to use these objects throughout their day over a period of one week to simulate having to perform 2-factor authentication to access secure apps using an app designed for this purpose.

What will I have to do?

In order to take part in this study, you must:

- Own an android phone
- Be aged 18+

If the above criteria apply to you and you give consent to participate in the study, you will be required to perform the following tasks:

- You will receive a consent form and a short demographic questionnaire, following completion of this, you will be assigned a unique participant number, a model to work with, and an app will be installed on your android phone.

- The experiment will run over the course of a week beginning today, with participants having the chance to try out using the object they have been given on their own mobile devices, which will have a custom app installed to perform the mock authentication on as well as collect some data, some of which the participant will have to provide, such as where they were when they authenticated (this will also be demonstrated today).

- Once the orientation session is complete, participants are asked to go about their normal lives, performing an authentication on the app preferably as soon as a notification is received to do so, but participants should aim for at least 2 authentications in the app per day. As such, participants should ensure to keep their model nearby to allow this to be done.

- Once the week is over, participants should come back to perform an exit interview on a day scheduled before the end of the orientation, with questions being asked about their experience using the model. After the exit interview, the participants will be compensated. The exit interview is audio recorded and before analysis, the recordings will be transcribed into written form. Personal information will be removed and replaced by neutral placeholders. The interviewer will explicitly tell you when recording has started

Data collection & use

The data that will be collected by the app automatically include the time taken to authenticate, the time of day and date the authentication took place, whether the authentication was a success and how many attempts were required. User input collected will include where the authentication took place (eg, home, work, outside etc.). Upon completion and submission, any data collected from the participants will be fully anonymous

and kept secure and password protected. The audio recordings from the exit interview will be transcribed before analysis. The data from the demographic questionnaire will be anonymised. All data from the experiment will not be linked to individuals except for the consent form.

The data will be analysed for the study and kept until past the end of the research, with the findings of the study potentially being reused in additional research projects.

Further information

During the study, should there be any problems, such as the model no longer working for any reason, wishing to drop out of the experiment, etc, the participant should contact Mark Turner by email at 2386300T@student.gla.ac.uk. If there are any problems during the orientation, I will be right here for any questions and concerns.

To be clear, this study is not assessing you in any way, but the use of the 3D models, so don't hesitate to contact me for any problems. You are free to drop out of the study at any time, however we would not be able to reimburse you, should you still choose to do so, I would ask that you get in touch so we can discuss the data collected up to that point to enable a partial reimbursement.

If you have further questions during the study, please contact:

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Who has reviewed this study?

This study adheres to the BPS ethical guidelines. You are free to discuss your participation in this study with the investigator or supervisor, however should you with to speak to someone not involved in this study, you may contact the chair of the School of Computing Science Ethics Committee: Prof. Matthew Chalmers.

Consent form

Please confirm to indicate that you have read the information sheet and understand the contents of the study, and that any questions you may have about the study have already been answered. You further confirm that you are 18+ years old

☐ I understand and agree to take part in this study

Name:_____ Email:_____

Signature:_____ Date:_____