

Research Plan

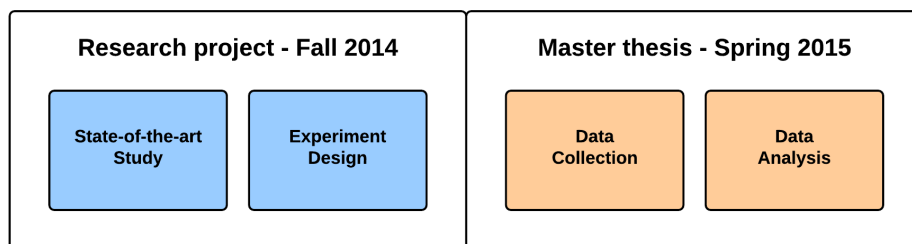
Title of the project	
Responsible people	Marte Løge, Lillian Røstad, Per Thorsheim
Time period for the project	
Amount of resources	
Web address for the project	

Change Log

Version	Date of change	What is changed?	Reason for change

Research Introduction

My research are divided into two phases, e.g reseach project and master thesis. This research plan will cover my research in my Research project and my master thesis. My Research project will include a state-of-the-art study as well as a design of my experiment that will be conducted in my master thesis. My master thesis will include data collection through the designed experiment from my research project, and a analysis of the collected data from the experiment.



Background

In today's society we're addicted to our mobile devices in our every day life. Mobile devices are not just a communication tool for calling and texting, but also an important tool for every day tasks like doing our work, reading mail, pay our bills and keeping up with our social life. Our whole life is contained in one device! When such a small device is so important, it makes it vulnerable. How do we secure it?

The interest in graphical passwords started by the assumption that pictures are easier to remember and more secure than words and numbers. Google's Android platform released the functionality for Unlock Patterns in 2008. The Android Unlock pattern is a graphical password scheme that asks the user to make a pattern on a 3x3 grid by making a pattern of connected nodes. Since its release there have been a lot of discussion of its security, but few researchers have done a scientific research on the Android Unlock Pattern. The problem is not just the theoretical password space, but the password space in practice.

In 2013 a research group conducted the first large-scale user study on Android Unlock Patterns. The outcome of the research was an analysis of 2900 collected Android Unlock Patterns. They found a lot of bias in the pattern making process concluding that the schemes are less secure than their theoretical security.

Passwords are human-chosen secrets that are connected to you as a person. When the password are created you might create a password that are an association to something you know or recognize; passwords are more than just words and numbers. The human brain interprets visual elements in a different way than numbers and words. It is important to study the bias introduced in the password making process that are introduced as a cause of human factors.

There are conducted a lot of research that analyse human factors in PIN's and other alphanumeric passwords, but it still remains a lot of work authentication on mobile devices.

Purpose

Products

Process

Participants

Paradigm

Presentation

Document

Both the research project and the master thesis will be delivered as a document, e.g report.

Presentation

The reseach project will also be a presentation at the conference P“PasswordsCon14” in December at NTNU.