MY PHONE DOES WHAT?

Exploring The Effectiveness of a Privacy-Centric Screensaver

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Abstract

Android users are often unaware of the data collection and sharing practices of their mobile applications with third parties. This study aims to enhance the transparency of information and increase users' understanding of the data sharing practices of mobile apps. We explore the feasibility of a novel approach to privacy notifications by visualizing data sharing activities using users screensavers. A total of eight designs were created. Through in-person interviews, we test users' preferences regarding the amount and type of information needed to aid the comprehension of data sharing practices.

Background

LACK OF TRANSPARENCY

Mobile phone users often trust mobile applications with vast amounts of their personal information. However, there are no visual cues that provide insight into the extent to which other services collect, share and make inferences about users' online activities across various mobile applications. The lack of transparency can make it difficult for users to understand ***who* does *what*** with their data.

TOWARDS CONTINUOUS CONSENT

It is no longer enough to list data sharing practices in dense privacy policies and adopt a reactive approach to data privacy. By placing cues on users' screensavers, we create more **salient notices** that serve as a reminder but do not cause a disturbance.

Design

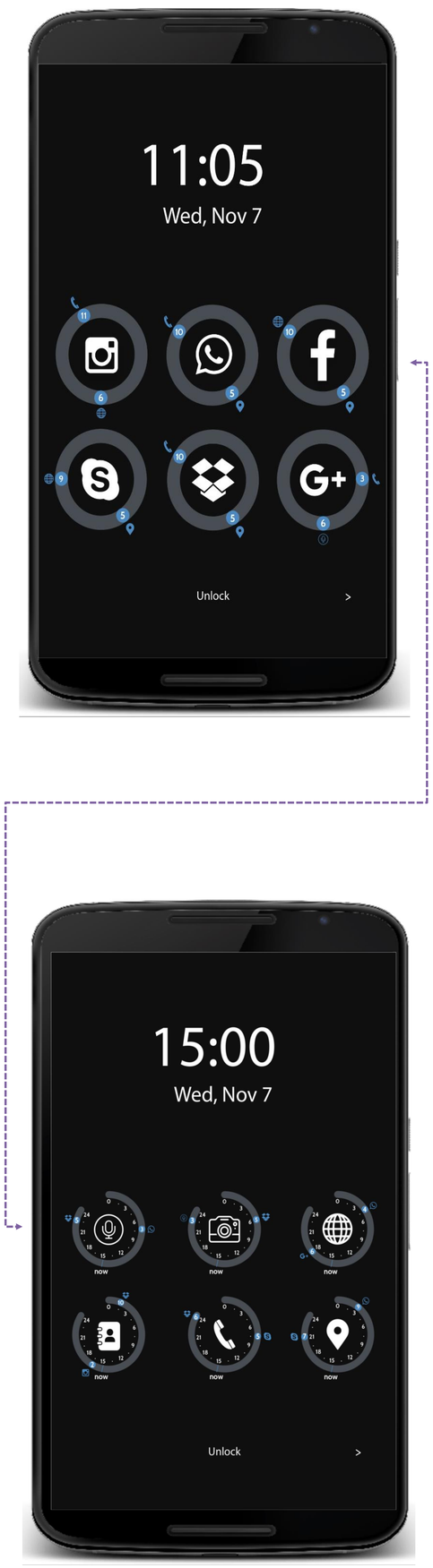


Figure 1: Example screensaver with focus on app type without time (above) and data type with time (below)

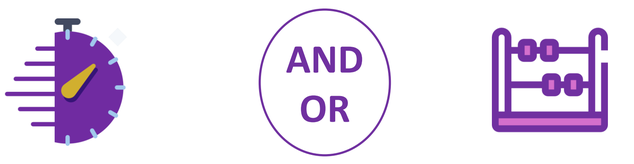
Methodology

This study is focused on collecting qualitative data to investigate what type of information helps people better understand data sharing practices and how the visualization of that information impacts user comprehension.

There were a total of eight (8) designs that illustrated aspects including:

App Type **Data Type**

For each type of information (i.e. app or data type) that was displayed the designs varied in levels of complexity to give more context. The designs included:



Time **Frequency**

PROCEDURE

- Participants were first given an overview of how the app would work
- They were shown two designs. First they were shown each design for five (5) seconds, asked follow-up questions then shown each design for longer while being asked probing questions.
- Each user was asked to complete an online questionnaire about their experience

Going Forward

OPPORTUNITIES

- The insights gathered from this study will help to inform the design and development of a mobile application that would be able to visualize real-time data sharing to third parties
- Future studies could also be extended to platforms other than Android

CONTRIBUTION

- This study would build on existing research on the design and implementation of privacy nudges
- Interpretation of risks made easier for ***all users*** rather than catering to those who are highly motivated and have advanced digital skills.

CONTACT

The work presented was produced by members of the Humans and Technology Lab (HATLab) in Clemson's School of Computing.

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