

Thesis title: *User privacy in the age of smartphones*

Thesis description:

Smartphones are everywhere, and so are smartphone apps. Apps are no longer restricted to a few large and well-known companies. Your bank has an app, your grocery store has one, your pizza place requires you to use their app for ordering and probably your hair stylist will soon follow.

At the same time, installing an app on your personal phone is similar to inviting an unknown person into your house. So you should ask yourself if the app you just installed will be a well-behaving guest in your digital home. And if not, is it due to incompetence, malice or just bad luck?

In this thesis we will examine a number of common apps from Swedish companies including banks and carriers and other major service providers to see how they are built with respect to security and privacy - and how they behave when no one is looking.

Tasks:

- Understanding the Android permission and security system.
- Examining and possibly reverse engineering a number of selected apps. This could include binary inspection but also network traffic analysis.
- Interviewing the people responsible for these apps, including first and third party developers and first and third party services they rely on.

Competence:

- Security analysis
- Programming
- Android, Java and Linux

Applications should include a brief personal letter, CV, and recent grades. In your application, make sure to give examples of previous programming or other projects that you consider relevant for the position.

Expected start time: As soon as possible

Location: SICS Swedish ICT AB, Lund

Contact person/s: Dr. Arash Vahidi (arash@sics.se)



About SICS

SICS Swedish ICT is a leading research institute for applied information and communication technology in Sweden. SICS is a part of Swedish ICT Research AB, a non-profit research organization owned by the Swedish government and industry. SICS' mission is to contribute to the competitive strength of Swedish industry by conducting advanced and focused research in strategic areas of computer science, and actively promote the uptake of new research ideas and results in industry and society at large. SICS is an active participant in collaborative national, European, and other international R&D programs.

SICS Security lab main research areas are Cloud Security, Security in the Internet of Things (IoT) and Secure Virtualization. The Security Lab is distributed between two locations: one part of the group sits in the main office in Kista, while the other part are pioneers in our relatively new SICS offices in Lund

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