Research and Development in Mobile Phone Security

The project aims to study specific mobile phone platforms to determine what vulnerabilities they may contain, and what threats they may pose to phone users. Mobile phones are increasingly being used by consumers as all-in-one devices for communicating with others, for organizing their work and private lives, and for entertainment. As such, mobile devices now contain more and more sensitive data, making them attractive targets for cyber-attackers. Research into the security of mobile platforms is therefore essential.

In this project, we craft new techniques and tools to study the workings of mobile phones’ system components and applications, and to analyze their security properties. We also develop new ways to assess the security impact of vulnerabilities found in mobile operating systems – for example, to determine if the vulnerabilities may allow an attacker to install malware on a phone.

The mobile platforms we study include Apple’s iOS – which is used on the iPhone and other Apple devices – as well as Google’s Android.