S-Mobile
Security of Services on Mobile Systems

The context

- Mobile platform manufacturers
- Mobile service providers
- Mobile applications providers
- Aimed at nomadic devices: from smart phones to PDA, from RFID to embedded systems

The problem

Enforcement of security policies for services running in mobile systems, like smartphones, PDA, etc, e.g.

- Play this video only 5 times
- Delete this SMS after 4 days
- Forbid a untrusted external application to read the agenda
- No game may send more than 3 SMSs or call 0900 numbers

The goal

Open up the market of software applications for mobile platforms.

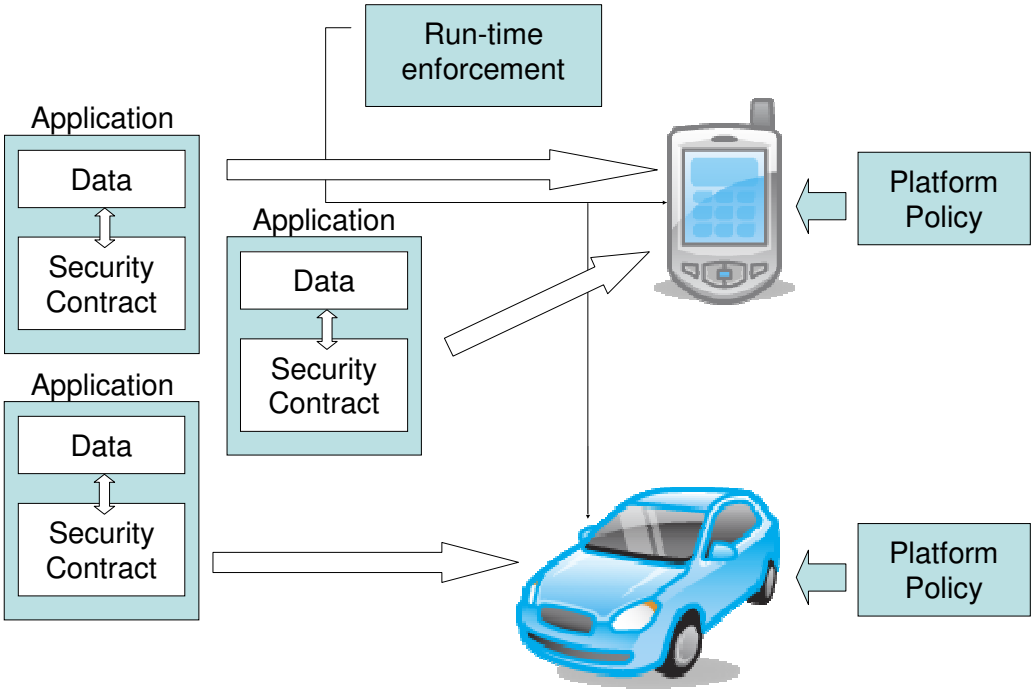
For this, create a framework and technological solutions for trusted deployment and execution of mobile applications in heterogeneous environments.

Approach

S-Mobile will extend the existing security models beyond the sandbox to integrate mechanisms for trust management and credentials negotiation. A license-based security mechanism will lie at the core of the framework. A license is a fine-grained claim done by a mobile application regarding the interaction with relevant security and privacy features of a mobile platform. This license is published by applications, is understood by devices and all stakeholders (users, mobile operators, developers, platform developers, etc.), and is enforced at time of delivery and loading, and during execution of the application by the mobile platform.

Challenges

- Security policies as contracts attached to data/objects
- Contract language
- Contract conflicts detection
- Contract (run-time) enforcement



Who we are

The S-Mobile project is a collaboration between:

- Vrije Universiteit Amsterdam
- Technische Universiteit Eindhoven

- TNO
- Philips Research

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