

Dissertação de Mestrado em Engenharia Informática (2017/2018)

Title : E-Id Emulator.

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Description

Emulators for E-Id cards enable developers to rapidly test their applications and middleware's without the need for real Hardware, card readers and smartcards. Open source projects for developing emulators exist, for instance *OpenSC (Open Smart Card Project)* which provides a PKCS#15 *emulator* to access certificates and keys, along with the data objects and the emulator for the Estonian E-Id card. This thesis will explore the concept of E-Id emulators in the context of the Portuguese Identity Card, more commonly known as the Cartão de Cidadão. In particular it will be necessary to define a set of requirements for the emulator. The requirements should be based on a design that systematically categorizes the current functionalities of the E-Id card in terms of relevance for application and middleware developers, this way the functionalities that the emulator should emulate can be prioritized and tests developed that target a particular class of functionalities.

Work Plan

- 1 Literature and State of the Art Review.
- 2 Study of the characteristics and algorithms used in the Cartão De Cidadão.
- 3 Categorization of the functionalities to implement.
- 4 Applet Development-
- 5 Implementation, Testing and Evaluation of the Emulator.
- 6 Publication of the results and Writing of the Dissertation.

References

- Virtual Smart Card Architecture. <http://frankmorgner.github.io/vsmartcard/>
- The Aventura MyEID PKI applet : see <https://github.com/OpenSC/OpenSC/wiki/Aventura-MyEID-PKI-card>
- Estonia e-id. <https://github.com/open-eid/>
- Applet playground. <https://github.com/martinpaljak/AppletPlayground>