Connecting the pieces: Building Operability into the Infrastructure of Smart Card Systems

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Standards make interoperability

- GSC-IS must succeed
  - Necessary for government and corporate
  - Must be kept simple
  - There is still some work

- Smart Card middleware migration path
  - Major OS [Microsoft, Apple, Sun] providers will likely support the emerging GSC-IS standard out of the box
  - Cards / middleware become a commodity: Applications and Card / Identity Management System become the value add
How to make GSC-IS succeed

- Prove the specification.
  - Show multi vendor compatibility
  - Reference Implementation

- Compliance certification process
  - Have a GSC-IS XX certifying process and test procedures

- Fill in some remaining issues
  - Ambiguities
  - Personalization
  - Contactless
  - Biometrics / shareable interfaces
  - Lookup mechanisms for recovered keys
How to make GSC-IS succeed

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Note: All gray areas should be able to be purchased from separate vendors
How to make GSC-IS succeed

- Specification should not hinder growth of new technologies

  - **File system approach**
    - Based upon ISO7816-4,7,8,9,15

  - **VM approach**
    - Should map as close to host side API’s as possible
    - Should handle key, certificate, PIN associations on card and make the middleware as stateless and simple as possible

  - **BSI / XSI**
    - Should provide a simple, useable host side API that can be integrated in the PKCS#11 and CSP’s
    - Should provide a good API reference for building next generation RMI applications such as Java Card 3.0 or the .NET cards
How to make GSC-IS succeed

- The specification should make it possible for an entity to purchase host middleware, card management systems, and applets from different vendors.

- This is done through complete specification of the card edge and host side API.

- Ultimately a good specification through global consensus building will reduce the cost of deployment of smart card systems throughout federal agencies and corporations.
When GSC-IS Succeeds,
We All Succeed

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