Connecting the Pieces – Building Operability into the Infrastructure of Card-based Systems

Smart Cards in Government Conference
Smart Card Alliance

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Background

**Department of Defense Common Access Card (CAC)**

- The ID card for approx. 4.4 million eligible recipients
- Smart Card with Java (v2.1+) and Global Platform (v2.0+)
- Contains the digital credentials needed to implement a Department wide Public Key Infrastructure (PKI)
- Secures both logical and physical access to DoD assets
- Streamline business procedures / improve efficiency and effectiveness
- Increase security of DoD systems and facilities

DoD Goal: Any operating system, any card, any reader
Why Interoperability?

- Big and complex infrastructure - many different systems and configurations - this is a fact of life
- Many legacy systems that need connections through CAC technology
- Encourage competition by having many vendors able to offer products and applications
- Information technology best practice - a sign of a mature technology platform
What We Initially Found

• Some standards but many technology areas lacked any standards
• Many “defacto” standards - i.e. industry best practices
• Many areas where the technology was not sufficiently matured

The reality was:
• All cards unique
• All card readers unique
• Most existing applications couldn’t talk to cards
Interoperability Solutions

The DoD Strategy:

- Embrace standards where they exist
  ex: ISO Standards

- Adopt industry best practices as “defacto” standards
  ex: Global Platform - JavaCard

- Publish specifications and distribute freely
  ex: Card edge specifications for applets were published

- Develop interfaces that are provided to anyone interested in developing or adapting applications to work with our card system
  ex: CAC Developers Kit
Move to Government-wide Interoperability

- Government Smart Card Interoperability Spec v2.1 (GSC-ISv2.1) (NISTR 6887) - very important step forward (NIST led effort)
- Federal Identity Credentialing Committee (FICC)
  - OMB sponsored effort
  - Different levels of trust
  - Endorsed by DoD
- ISO & ANSI
Summary and Conclusions

Achieving interoperability is hard work:

- Have made significant progress
- No single solution - it takes a combination
- Want to be open and encourage open specifications
- Define common policy on identity proofing, interoperability requirements, and standards

Interoperability and Standards are a Must
Questions

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