

in040672

**PROPOSAL FOR PROJECT TO DEVELOP
A NEW STANDARD**

Smart Card Interoperability, programming interfaces for integrated circuit cards

1 Source of the Proposed Standard

1.1 Title:

Information technology - Identification cards - Programming interfaces for integrated circuit cards

1.2 Date Submitted:

May 2004

1.3 Proposer:

INCITS B10.x TG

2 Process Description of the Proposed Standard

2.1 Project Type:

“D” (Development of ANSI standard).

2.2 Type of Document:

Multi part standard

2.3 Definition of Concepts and Special Terms:

TBD

2.4 Expected Relationship with Approved Reference Models, Frameworks, Architectures, etc.:

TBD

2.5 Recommended INCITS Development Technical Committee:

B10 – Identification Cards and Related Devices.

2.6 Anticipated Frequency and Duration of Meetings:

Follow B10 meeting schedule. Additional meetings as appropriate.

2.7 Target Date for Initial Public Review (Milestone 4):

September, 2004

2.8 Estimated Useful Life of Standard:

The field of smart cards has attained maturity but continues to evolve with information technology and user needs. The proposed standard defines a core set of requirements for smart card interoperability that is expected to remain stable for at least 5 years.

3 Business Case for Developing the Proposed Standard

3.1 Description

This Proposed Standard specifies an architectural model for interoperable smart card service provider modules, compatible with both file system cards and virtual machine cards. The specification includes a Basic Services Interface (BSI), which addresses interoperability of a core set of smart card services at the interface layer between client applications and smart card service provider modules. The specification also defines a mechanism at the card edge layer for interoperation with smart cards that use a wide variety of application protocol data unit (APDU) sets, including both file system cards and virtual machine cards.

The initial draft of the Proposed Standard is based on NIST Interagency Report 6887, Government Smart Card Interoperability Specification version 2.1, July 8, 2003. NIST and the General Services Administration, with significant Federal Agency and industry input, developed IR 6887 over the past two years. The specification was developed as a necessary ingredient for the implementation of the government's "Common Access Smart ID Card" project.

It is anticipated other work may be required, such as an on-card application programming interfaces, card administration, and test methods.

This Proposed Standard is intended to serve as a foundation for product development, validation, and procurement specification. It is anticipated that smart cards and applications designed to exploit them will continue to evolve as users, researchers and vendors gain experience. To meet that expected evolution, the features proposed in this standard represent a fundamental and stable set of mechanisms that should be used by developers in meeting the application and card interoperability needs of their customers.

3.2 Existing Practice and the Need for a Standard:

Government agencies, industry, and the public are increasingly relying on smart cards to provide access to physical work areas as well as to information and communications used in critical infrastructures, electronic commerce, identity credentials, and other applications. A wide variety of such applications are being written for smart cards. As smart card technology gains wider adoption, there is an identified need to enable a broader range of interoperability among these diverse applications and card types and to de-couple applications from specific smart card features. In order to address this need in timely manner for the U.S, a standard, or suite of standards, are required at the national level. The ISO work initiated by the U.S in this area will continue to mature as the U.S. national standards are developed; however, the national standard is needed well before the ISO work will be completed. Because both the ISO and ANSI work will be assigned to the same B10 task group, the work will be well harmonized.

3.3 Implementation Impacts of the Proposed Standard

3.3.1 Development Costs

There will be no cost to INCITS for this activity. Costs for development of the new standard will be part of normal committee participation expenses.

3.3.2 Impact on Existing or Potential Markets:

Standardizing smart card interoperability requirements will have positive effects on the market for smart cards and associated application software, including 1) the ability of manufacturers and suppliers to develop, advertise, and validate products, including applications, according to a nationally consistent interoperability framework; and 2) the improved ability of prospective customers of smart card related products to understand the capabilities and limitations of service provider interoperability modules.

3.3.3 Costs and Methods for Conformity Assessment:

Conformity assessment (i.e., validation) against the Proposed Standard should be done by nationally accredited test laboratories, using procedures and test requirements that have been derived from the standard. NIST in conjunction with GSA is now in the process of developing a set of prototype conformity assessment procedures and test requirements. These procedures and tests, after acceptance by government and industry, could be used as the basis for laboratory accreditation by the National Voluntary Laboratory Accreditation Program (NVLAP). The conformity assessment program should be open to commercial and other laboratories that wish to become accredited via NVLAP to perform such validation against the Proposed Standard. Effective validation of modules is expected to be competitive among the laboratories.

3.3.4 Return on Investment

As smart card technology becomes even more widely implemented in the U.S. and elsewhere, it is anticipated that interoperability will become an integral part of the technology.

3.4 Legal Considerations

3.4.1 Patent Assertions:

At the time of this proposal submission, the proposers are aware of a patent infringement claim. This claim is under review by the U.S. Department of Justice. Patent number: US 6,213,392.

3.4.2 Dissemination of the Standard:

The proposers will provide the INCITS Secretariat with a PDF file of the Proposed Standard for dissemination to the committee and for public review. The proposers retain editorial rights until the Proposed Standard is approved as an American National Standard, at which time the document will be transferred in accordance with INCITS policies.

As noted, the initial draft of the Proposed Standard has been published previously as

NIST Interagency Report 6887, July 2003, which is freely available on the Web at <http://smartcard.nist.gov>. NIST IR 6887 was created by government personnel in connection with an extensive public review process that included industry participants and Federal agencies. The document in its original version remains in the public domain.

4 Related Standards Activities

4.1 Existing Standards:

ISO 7816, ISO 15693, ISO 14443, ISO 15457, ISO 7810

INCITS M1 standards and technical reports

4.2 Related Standards Activity:

ISO/IEC/JTC 1/SC 17/WG 4 and WG 8 projects for new and revised standards. Liaison to be made through routine B10 activities.

ISO SC37 – Liaison accomplished through ISO SC17 (Liaison: Singapore)

INCITS M1 – No formal B10 liaison identified

4.3 Recommendations for Close Liaison:

X9A – Liaison established and coordination occurs through routine B10 activities

INCITS/M1

GlobalPlatform (Note: Although Global Platform (GP) is not an official SDO, their technical specifications are widely adopted and considered an important element of smart card enterprise solutions.)

5. Units of Measurement used in the Standard:

Not measurement sensitive.