

Project Proposal for a New INCITS Technical Report
Case Study in the Application of ISO/IEC 24727

1. Source of the Proposed Project

1.1 Title

Case Study in the Application of the ISO/IEC 24727 Series of Standards

1.2 Date Submitted

March, 2006

1.3 Proposer

INCITS B10.9 with a current membership of 36.

2. Process Description for the Proposed Project

2.1 Project Type (Development or Revision)

DT

2.2 Type of Document

Technical Report

2.3 Definitions of Concepts and Special Terms

None

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

2.5 Recommended INCITS Development Technical Committee

B10.9 – Application Programming Interfaces for Integrated Circuit Cards

2.6 Anticipated Frequency and Duration of Meetings

Adhere to B10.9 meeting schedule with additional ad hoc meetings as required.

2.7 Target Date for Initial Public Review (Milestone 4)

The first draft of the technical report will be presented to B10.9 for comment and consideration at the Fall, 2006, B10.9 meeting.

2.8 Estimated Useful Life of Standard or Technical Report

The technical report is expected to be of interest and use over the next five to ten years to entities building integrated circuit card systems that need to interoperate with other integrated circuit card systems. The technical report will also be of interest to those wishing to understand the practicalities of using one or more of the components of ISO/IEC 24727.

3. Business Case for Developing the Proposed Standard

3.1 Description

The proposed technical report is a case study. It describes the binding to and interworking of two integrated circuit card applications on the same card using the emerging ISO/IEC 24727 series of standards. The two card applications used in the technical report are the U.S. Government's Personal Identity Verification (PIV) card application as described in NIST SP 800-73 and the Fare Payment Card application as described in the INCITS Interoperability Framework for Contactless Fare Payment Technologies and Systems documents. While the case study will not posit the absence of additional applications and data on the card, interworking with these additional applications and data structures will not be studied.

The case study will identify the extent to which 1) the card commands defined in ISO/IEC 24727 Part 2 Generic Card Interface can be mapped to the commands of the two card applications, 2) the extent to which the ISO/IEC 24727 Part 3 API can be supported by the two card applications and 3) the transport security defined in ISO/IEC 24727 Part 4 can implement the security policies of the two card applications. The case study shall consider the issuance processes of the responsible authorities and propose an overall process for combined issuance of the two applications and the data associated with them.

Of particular interest will be the surfacing and discussion of aspects of the interoperability of integrated circuit card systems that are *not* addressed by the ISO/IEC 24727 series of standards. An example of such an issue is interoperability aspects of the scripting language and the security considerations intrinsic to the execution of translation scripts.

3.2. Existing Practice and the Need for a Standard

ISO/IEC 24727 is a large and complex standard as compared to other integrated circuit card standards. It is also a standard that is attracting attention from entities building federated integrated circuit card systems that must interoperate between issuers and interwork with other card systems. Examples of such systems are identity card systems such as the electronic passport and driver license systems, payment systems such as PayPass, RIS and EMV and the multitude of proprietary card systems for physical access.

3.3. Implementation Impacts of the Proposed Standard

3.3.1 Development Costs

There will be no direct cost to INCITS for this development. Costs for the development of the technical report will be part of normal committee participation expenses.

3.3.2 Impact on Existing or Potential Markets

The technical report will provide a practical example of the use of the ISO/IEC 24727 standard to create interoperability between two real integrated card applications and thus serve to speed the creation of interoperable card systems by showing in technical detail how interoperability can be achieved using this standard.

3.3.3 Costs and Methods for Conformity Assessment

The technical report will include examples of test methods and mechanisms based on ISO/IEC 24727 Part 5 for assessing integrated circuit card interoperability. A cost model for testing will be included so that readers wishing to develop tests of the interoperability of their own systems can estimate the cost of doing so.

3.3.4 Return on Investment

The development cost for the technical report will be insignificant relative to the costs saved by enhancing understanding of how interoperability of integrated card systems can be achieved using ISO/IEC 24727 and accelerating the development of interoperable card systems using ISO/IEC 24727. And both of these savings pale in the light of the costs saved by running interoperable integrated card systems.

3.4 Legal Considerations

3.4.1 Patent Assertions

Calls will be made to identify assertions of patent rights in accordance with the relevant INCITS, ANSI and ISO/IEC policies and procedures. B10.9 is not aware of any patent assertions that may be made

3.4.2 Dissemination of the Standard or Technical Report

The developers of the Technical Report will provide the INCITS Secretariat with a PDF of the Technical Report for dissemination to the INCITS Committee, INCITS Executive Board and for development in accordance with INCITS policies.

4. Related Standards Activities

4.1 Existing Standards

ISO/IEC 7816
ISO/IEC 24727
ISO/IEC 24749
NIST SP 800-73
Regional Interoperability Specification (RIS)

4.2 Related Standards Activity

ISO/IEC/JTC1/SC17/WG 4/TF9
Proposed INCITS Interoperability Framework for Contactless Payment Technologies and Systems

4.3 Recommendations for Close Liaison

JTC1/SW17/WG4/TF9 for ISO/IEC 24727
INCITS Technical Committee on Cybersecurity (CS1) for identity model

5. Units of Measurement used in the Standard

Not measurement sensitive.