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American National Standard

INCITS 423.4-2009

*for Information Technology –
Conformance Testing
Methodology Standard for
Biometric Data Interchange
Format Standards–
Part 4: Conformance Testing
Methodology for INCITS 381-2004,
Finger Image-Based
Data Interchange Format*

Developed by



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INCITS 423.4-2009

American National Standard
for Information Technology –

Conformance Testing Methodology
Standard for Biometric Data Interchange
Format Standards –
Part 4: Conformance Testing Methodology
for INCITS 381-2004, Finger Image-Based
Data Interchange Format

Secretariat

Information Technology Industry Council

Approved October 13, 2009

American National Standards Institute, Inc.

American National Standard

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Foreword (This foreword is not part of American National Standard INCITS 423.4-2009.)

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Introduction

The Finger Image-Based Data Interchange Format standard, ANSI INCITS 381-2004, specifies a data record interchange format for storing, recording, and transmitting information from one or more finger or palm image areas within a Common Biometric Exchange Formats Framework (CBEFF) data structure. It defines the content, format, and units of measurement for such information.

Currently, there are no standardized methods for conducting conformance tests of commercial products that claim to support the Finger Image-based Data Interchange Format specification. Application and Biometric Service Provider (BSP) developers may interpret the Finger Image-based Data Interchange Format specification differently from one another; therefore, their implementations of the specification may differ and not interoperate.

Conformance to ANSI INCITS 381-2004 is a necessary prerequisite for achieving interoperability among implementations; therefore, there is a need for a standardized, generally accepted, Finger Image-based Data Interchange Format conformance testing methodology that would allow implementation of a set of test tools realizing this methodology.

This part of ANSI INCITS 423 is intended for those applications that require use of finger image data according to ANSI INCITS 381-2004. It defines a testing methodology to assure conformance of a vendor's application or service to the Finger Image-based Data Record requirements as set forth in ANSI INCITS 381-2004. This part of ANSI INCITS 423 is intended to:

- a) establish elements of the Conformance Testing Methodology framework that are specific to the Finger Image-based Data Record requirements of ANSI INCITS 381-2004 conformance testing
- b) define requirements and guidelines for specifying conformance test suites and related test methods for measuring conformity of products and services to the Finger Image-based Data Record requirements of ANSI INCITS 381-2004, and
- c) define test procedures to be followed before, during, and after conformance testing.

This part of ANSI INCITS 423 is applicable to the development and use of conformity test method specifications, conformity test suites for Finger Image-based Data Record requirements as specified in ANSI INCITS 381-2004, and conformance testing programs for ANSI INCITS 381-2004-conformant products. It is intended primarily for use by testing organizations, but may be applied by developers and users of test method specifications and test method implementations.

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American National Standard
for Information Technology –

Conformance Testing Methodology Standard for Biometric Data Interchange Format Standards – Part 4: Conformance Testing Methodology for INCITS 381-2004, Finger Image-Based Data Interchange Format

1 Scope

This part of ANSI INCITS 423 is concerned with conformance testing of implementations claiming conformance to the Finger Image-Based Data Interchange Format specification as per ANSI INCITS 381-2004. Further, this part of ANSI INCITS 423 is concerned with testing only of the Biometric Data Interchange Records (BDIR) requirements as defined in ANSI INCITS 381-2004. For the purposes of this part of ANSI INCITS 423, and as also described in Part 1: Generalized Conformance Testing Methodology of ANSI INCITS 423, conformance testing of the CBEFF requirements as set forth in ANSI INCITS 381-2004 is not within the scope of this part of ANSI INCITS 423.

This part of ANSI INCITS 423 is not concerned with testing of other characteristics of biometric products or other types of testing of biometric products (i.e., acceptance, performance, robustness, security). Any organization contemplating the use of test methods defined in this part of ANSI INCITS 423 should carefully consider the constraints on their applicability.

For the purposes of this part of ANSI INCITS 423, of the two types (A and B) and three levels (1, 2, and 3) of conformance testing as defined in ANSI INCITS 423.1, only Type A and Levels 1 and 2 are within the scope of this part of ANSI INCITS 423. Selected test cases and assertions that define Level 3 and Type B conformance test methods and procedures are included in this part of ANSI INCITS 423 as informative materials.

Materials identified in this part of ANSI INCITS 423 as guidelines are suggestions or options, as are all examples, notes, and footnotes.

2 Conformance

Conformance testing methodology implementations (conformance test suites or CTS) that claim conformance to this part of ANSI INCITS 423 shall satisfy the normative requirements of the methodology for those levels of test they are claiming to perform, as described in Clause 6. Additionally, implementations of Level 1 or Level 2 tests shall use the assertions defined in Clause 7 with the specific assertion details given in the relevant subsequent clauses of this part of ANSI INCITS 423. Implementations of ANSI INCITS 381-2004 shall be able to claim conformance only to those requirements specified in ANSI INCITS 381-2004 that are tested by the test methods specified in this part of ANSI INCITS 423.

3 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this American National Standard. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

- ANSI INCITS 381-2004, *Information Technology – Finger Image-Based Data Interchange Format*
- ANSI INCITS 423.1-2008, *Information Technology – Conformance Testing Methodology Standard for Biometric Data Interchange Format Standards – Part 1: Generalized Conformance Testing Methodology*