

Advantages of Placing Standards Work in INCITS and ISO/IEC JTC 1

The ICT Standardization Environment

Worldwide, there are more than 200 Standards Developing Organizations (SDOs) developing standards for Information and Communication Technologies (ICT). ICT encompasses all technologies for the capture, storage, retrieval, processing, display, representation, organization, management, security, transfer, and interchange of data and information. Rapid innovation in ICT has been accompanied by competition among SDOs to undertake new work areas in emerging fields of ICT standardization that are perceived to be of great market relevance (e.g., smart grid, cloud computing, cyber security). This competitive environment has encouraged most SDOs to streamline their consensus building processes in order to effectively develop and approve technically sound standards that meet current market needs.

INCITS

In the U.S., the InterNational Committee for Information Technology Standards (INCITS) is a primary venue for ICT standardization. INCITS is an industry led, private sector SDO that operates under an organizational process with one vote per organization in establishing consensus. INCITS is accredited by, and operates under procedures approved by, the American National Standards Institute (ANSI). The INCITS standards development processes are very streamlined and are designed to ensure that voluntary standards are developed by the consensus of directly and materially affected interests. There are over 1500 technical experts from industry, academia, and government participating in over 50 INCITS Technical Committees.

ANSI has designated INCITS as the U.S. Technical Advisory Group for the International Organization for Standardization/International Electrotechnical Commission Joint Technical Committee 1 on Information Technology (ISO/IEC JTC 1). As such, INCITS serves as the gateway for U.S. participation in ISO/IEC JTC 1, which develops international ICT standards for global markets.

ISO/IEC JTC 1

ISO and IEC are industry led, private sector international standards developing organizations. They operate under a National Body process with one National Body per country and one vote per National Body to establish consensus. In 1987, ISO and IEC combined existing ICT standards groups within ISO and IEC under the newly established joint Technical Committee 1. Presently, there are 66 National Body members of JTC 1. Approximately 2100 technical experts from around the world work within JTC 1. There are 19 JTC 1 Subcommittees (SCs) in which most of JTC 1 standards projects are developed and maintained.

INCITS Technical Committee Process to Develop an American National Standard

INCITS operates through an ANSI accredited consensus process that is characterized by openness, transparency, balance, and due process. Using the INCITS Technical Committee (TC) development process, a new standard can be developed by an INCITS TC in as little as 5 or 6 months. Some recently approved American National Standards (ANSs) include:

Where IT all begins

- INCITS 384: 2011, Information technology - Uniform Health Care Identification Card
- INCITS 459: 2011, Information technology - Requirements for the Implementation of Role Based Access Control (RBAC)
- INCITS 409.5:2011, Information technology - Biometric Performance Testing and Reporting - Part 5: Framework for Testing and Evaluation of Biometric System(s) for Access Control
- INCITS 458: 2011, Information technology - Object-Based Storage Device Commands - 2 (OSD-2)
- INCITS 474: 2011, Information technology - Biometric application programming interface - Java (BioAPI Java)
- INCITS 479: 2011, Information technology - Fibre Channel - Physical Interface - 5 (FC-PI-5)
- INCITS 480: 2011, Information technology - BIOS Enhanced Disk Drive Specification - 4 (EDD-4)

INCITS Fast-Track Process to Develop an American National Standard

INCITS has a streamlined, effective, and straightforward fast-track process that allows mature specifications from external bodies to become American National Standards in just 4 or 5 months. Some American National Standards approved by the INCITS Fast-Track process are:

- INCITS 469-2010, Open Virtualization Format (OVF)
 - submitted by DMTF
- INCITS 359-2004, Role Based Access Control
 - submitted by NIST
- INCITS 358-2002, BioAPI Specification
 - submitted by the BioAPI Consortium
- INCITS 354-2001, Common Industry Format (CIF) for Usability Test Reports
 - submitted by the Industry Usability Reporting (IUSR) Project

JTC 1 5-Stage Process to Develop an ISO/IEC Standard

Using the JTC 1 five-stage process, a new standard can be developed by JTC 1 Subcommittees and Working Groups and approved in 24 months or less. Some recently approved ISO/IEC standards from this process include:

- ISO/IEC 29192-2:2012, Information technology -- Security techniques -- Lightweight cryptography -- Part 2: Block ciphers
- ISO/IEC 27007:2011, Information technology -- Security techniques -- Guidelines for information security management systems auditing
- ISO/IEC 23006-1:2011, Information technology -- MPEG extensible middleware (MXM) -- Part 1: MXM architecture and technologies
- ISO/IEC 13249-3:2011, Information technology -- Database languages -- SQL multimedia and application packages -- Part 3: Spatial
- ISO/IEC 19757-11:2011, Information technology -- Document Schema Definition Languages (DSDL) - Part 11: Schema association

Where IT all begins

- ISO/IEC 19794-6:2011, Information technology -- Biometric data interchange formats -- Part 6: Iris image data

JTC 1 Fast-Track Process to Develop an ISO/IEC Standard

The JTC 1 fast-track process can approve an ISO/IEC standard within 9 months. JTC 1 National Bodies (e.g., INCITS) or Category A liaison organizations of JTC 1 are permitted to submit candidate standards for fast-track balloting. Some ISO/IEC standards approved via the JTC 1 Fast-Track process are:

- ISO/IEC 17203: 2011, Open Virtualization Format (OVF)
- ISO/IEC 16262:2011, ECMAScript Language Specification
- ISO/IEC 13187: 2011, Service management command line protocol (SM CLP) specification
- ISO/IEC 17203: 2011, Open Virtualization Format (OVF)
- ISO/IEC 29500-1: 2008, Office Open XML File Formats -- Part 1: Fundamentals and Markup Language Reference
- ISO/IEC 25062:2006, Common Industry Format (CIF) for usability test reports

JTC 1 PAS Process to Develop an ISO/IEC Standard

JTC 1 also has a Publicly Available Specification (PAS) process that allows ICT consortia to fast process their Publicly Available Specifications (PASs) into ISO/IEC approved standards within 9 months. Consortia, such as OASIS, TCG, the Open Group, OMG, and W3C, have used the JTC 1 PAS process to quickly transpose their specifications into ISO/IEC standards. Some recent ISO/IEC standards approved via the JTC 1 PAS process are:

- ISO/IEC 17826:2012, Information technology – Cloud Data Management Interface (CDMI)
- ISO/IEC 40210:2011, Information technology -- W3C SOAP Version 1.2 Part 1: Messaging Framework
- ISO/IEC 19773:2011, Information technology -- Metadata Registries (MDR) modules
- ISO/IEC 20926:2009, Software and systems engineering -- Software measurement -- IFPUG functional size measurement method
- ISO/IEC 26300:2006, Information technology -- Open Document Format for Office Applications (OpenDocument) v1.0

Participation in INCITS and ISO/IEC JTC 1

Factors affecting the fast or slow development of an ICT standard are: the level of effort by the participants; the technical and political difficulty in developing the standard; and the effective use of the consensus process being followed. INCITS and ISO/IEC JTC 1 provide a repertoire of streamlined ICT standards development processes that can meet stakeholders' needs while ensuring openness, transparency, balance, and due process. INCITS and ISO/IEC JTC 1 have a proven track record of using those processes for the timely development and approval of technically sound, market relevant ICT standards.



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The INCITS Secretariat is administered by the Information Technology Industry Council. Those interested in placing new ICT standards work into INCITS and ISO/IEC JTC 1 are encouraged to contact the INCITS Secretariat at:

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