The force multiplier for ICT innovation

ISO/IEC joint technical committee 1 – JTC 1
Information technology standards

ISO in brief

ISO is the International Organization for Standardization. ISO has a membership of 163* national standards bodies from countries large and small, industrialized, developing and in transition, in all regions of the world. ISO's portfolio of some 19 000* standards provides business, government and society with practical tools for all three dimensions of sustainable development : economic, environmental and social.

ISO standards make a positive contribution to the world we live in. They facilitate trade, spread knowledge, disseminate innovative advances in technology, and share good management and conformity assessment practices.

ISO standards provide solutions and achieve benefits for almost all sectors of activity, including agriculture, construction, mechanical engineering, manufacturing, distribution, transport, medical devices, information and communication technologies, the environment, energy, quality management, conformity assessment and services.

ISO only develops standards for which there is a clear market requirement. The work is carried out by experts in the subject drawn directly from the industrial, technical and business sectors that have identified the need for the standard, and which subsequently put the standard to use. These experts may be joined by others with relevant knowledge, such as representatives of government agencies, testing laboratories, consumer associations and academia, and by international governmental and nongovernmental organizations.

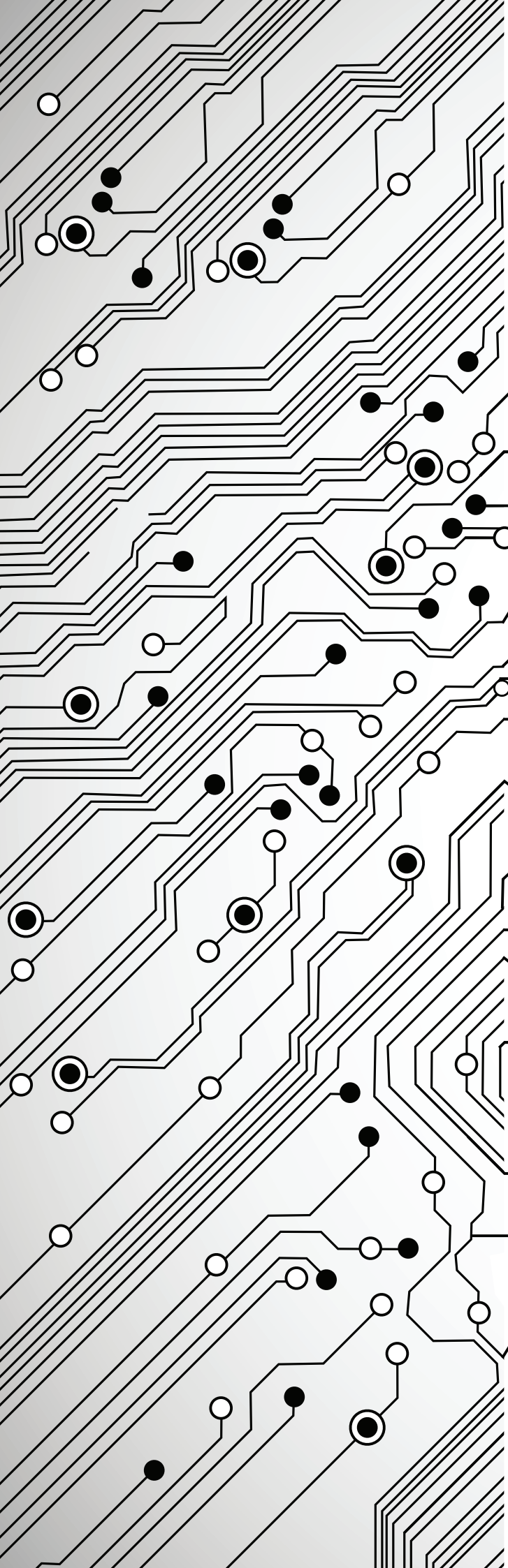
An ISO International Standard represents a global consensus on the state of the art in the subject of that standard.

* In January 2012

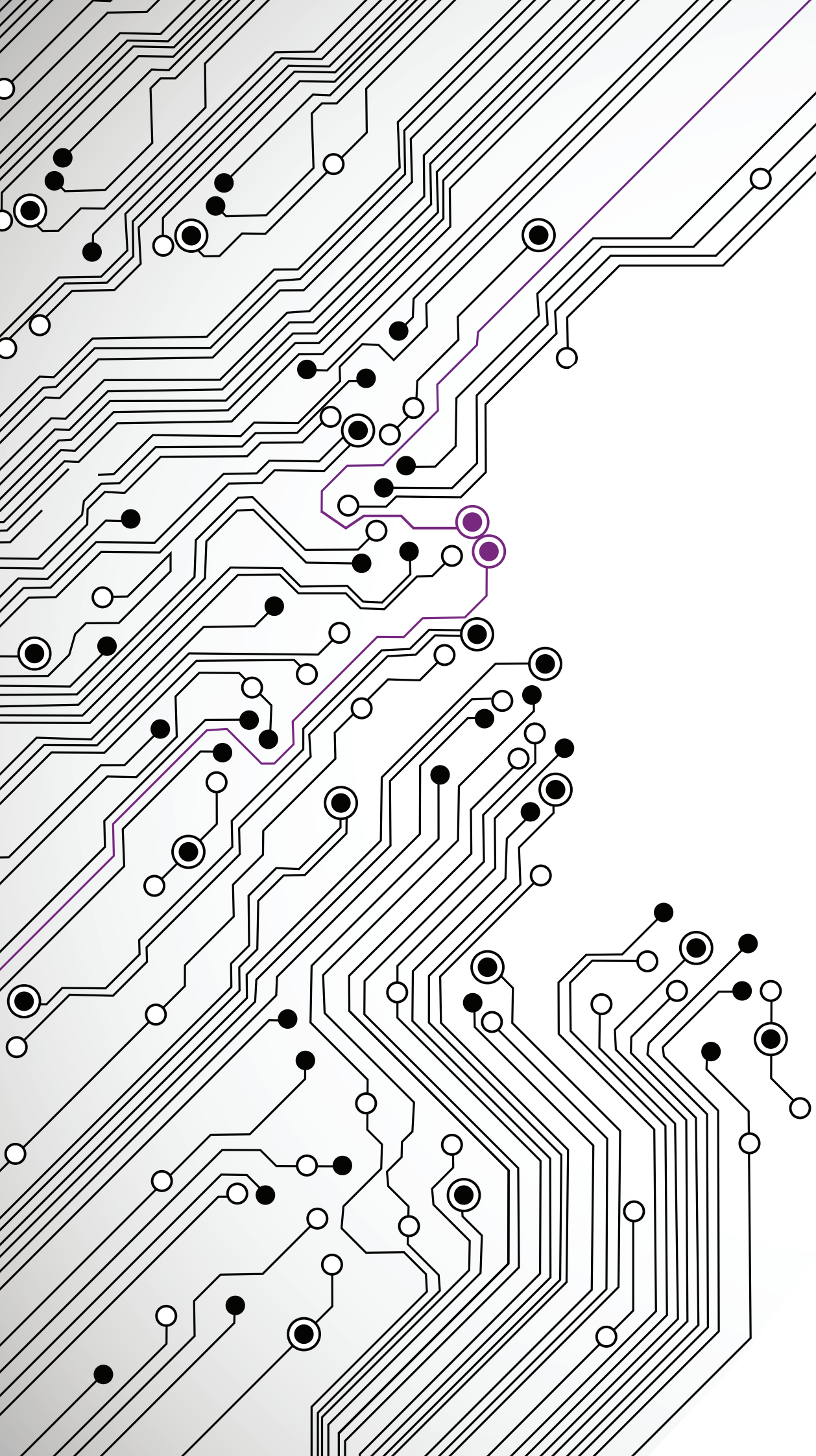
IEC in brief

The IEC (International Electrotechnical Commission) is the world's leading organization that prepares and publishes International Standards for all electrical, electronic and related technologies – collectively known as " electrotechnology ".

IEC International Standards cover a vast range of technologies from power generation, transmission and distribution to home appliances and office equipment, semiconductors, fibre optics, batteries, nanotechnologies, solar energy and marine energy converters, to mention just a few. Wherever you find electricity and electronics, you will find the IEC supporting safety and performance, the environment, electrical energy efficiency and renewable energies. The IEC also manages Conformity Assessment Systems that certify that equipment, systems or components conform to its International Standards.



Contents



About ISO/IEC JTC 1

Information and communication technologies (ICT) pervade all sectors of economic activity and the daily lives of most people worldwide (business, industry, home, administration, education, charity, etc.). They are key components of economic growth, offering significant employment.

The effectiveness and growth of the ICT industry are determined by the ability of the component parts to "talk" to each other – to interoperate. As a result, standards are absolutely essential to the interoperability of different component parts and products from different manufacturers. For example, video-conferencing will only work if the software and protocols used by many different and competing service providers in different countries are compatible. Without ICT standards ensuring interoperability, an opportunity will be lost, with negative economic and social consequences for all.

The joint technical committee of ISO (International Organization for Standardization) and IEC (International Electrotechnical Commission), ISO/IEC JTC 1, *Information technology*, is the place where the basic building blocks of new technologies are defined and where the foundations of important ICT infrastructures are laid.

In addition to this well-established focus of work, ISO/IEC JTC 1 positions itself as a system integrator to complement its current programme of work, especially in areas of standardization where many consortia/fora are active.

With more than 2 400 standards and related documents developed by over 2 000 national body experts from around the world, ISO/IEC JTC 1 brings innovative solutions and best practice to the marketplace. Its standards benefit all stakeholders in society : individuals and businesses and governments.

Individuals benefit from :

- More choice and reduced costs : when standards are used to allow greater ease of access to more than one choice of system, this results in greater competition between manufacturers and service providers.

Businesses benefit from :

- Economies of scale : with standardization, industry can more quickly reach a critical mass, and achieve a return on R&D costs. International standardization initiatives can open up the global market
- Greater consumer confidence in products or services bought from companies observing International Standards
- Increased sales : flexible, interoperable products will be more attractive to clients.

Governments benefit from :

A tool for securing policy initiatives :

- ISO/IEC JTC 1 standards are crucial for the development of interoperable applications, which themselves are important to future economic growth
- ISO/IEC JTC 1 standards provide a measure by which to judge bids for public procurement tenders. International Standards enable procurers to avoid being "locked in" to a single proprietary platform. In the past 25 years of its existence, ISO/IEC JTC 1 has brought about a number of very successful and relevant ICT standards in the fields of multimedia (e.g. MPEG), IC cards ("smart cards"), ICT security, database query and programming languages as well as character sets, to name just a few.

Here are just five examples of the newest innovative and interoperable ICT solutions under the responsibility of ISO/IEC JTC 1 and a few of its subcommittees (SCs) that are offering huge benefits to ICT companies and customers alike.

Smart cards

In today"s world, all of us probably use a credit card-sized plastic card for one reason or another almost daily. Among these are credit cards, debit cards or automatic teller machine (ATM) cards, in mass transit, for identification, not to mention cards to access buildings or specific rooms. ISO/IEC JTC 1 subcommittee SC 17, Cards and personal identification, *is responsible for the deuelopment of a large portfolio of card standards in support of interoperability and data interchange.*

At a minimum, the standards define the physical dimensions of the card and the geometry of the terminals which read those cards (e.g. the slot in an ATM). Then, depending on the reading technology, the standards define how the card " couples " with the card terminal and thereby communicates with the underlying application (e.g. motorized mag strip readers in ATMs, magnetic stripe swipe readers in Point-of-Sale terminals, slot readers in hotel card key locks).

At their most basic level, standards maintain interoperability between cards and the card readers that read them. For a closed system or national implementation, interoperability is important so that components, such as the cards or the chips on smart cards sourced on the open market from various manufacturers, will interoperate, with a high degree of confidence, with card readers sourced from different manufacturers.

For international interoperability, standards maintain interoperability for cards issued by different organizations all over the world. Interoperability ensures that cardholders can access applications to which they are entitled, offered by all manner of service operators anywhere else in the world, simply by inserting their card in an appropriate card reader/terminal. For example, cardholders may obtain cash from a cash machine/

ATM in local currency in a foreign country. Equally as important is denying access to applications and services to which the proffered card is not entitled.

Two of the most sophisticated technologies involve microprocessors embedded in the card, so-called smart cards. These are " cards with contacts " and " contactless cards ".

Cards with contacts are usually inserted manually into a " dip reader " whereas contactless cards use radio frequency coupling to enable " touch and go " for rapid transit ticket gates and " wave and pay " to make low value purchases in retail outlets such as fast food restaurants. Electronic passports (ePassports) and citizen identification cards are further examples where contactless standards have been adopted.

▶ Benefits

International acceptance, due to the development of global card schemes underpinned by card standards, means credit or debit cards can be used to pay for goods and services anywhere in the world or to draw cash from ATMs in the local currency.

Smart cards issued by mass transit authorities around the globe have also speeded up access to the local metro/subway/tube/bus for our daily commute. And some 350 million of the new ePassports have been issued by 100 countries around the world.

▶ Users

Virtually everyone is a potential user : the general public for payment cards, mass transit ticketing, access control, and the new generation of ePassports being issued by governments around the world conforming to standards developed in ISO/IEC JTC 1 for the International Civil Aviation Organization (ICAO).

Bar codes and RFID

Technologies such as bar coding and radio-frequency identification (RFID) provide quick, accurate and cost-effective ways to identify, track, acquire and manage data and information about items, personnel, transactions and resources. These are known as the automatic identification and data capture (AIDC) technologies.

AIDC is an industry term which describes the identification and/or direct collection of data into a microprocessor-controlled device, such as a computer system or a programmable logic controller (PLC), without the use of a keyboard. AIDC technologies provide a reliable means not only to identify but also to track items. It is possible to encode a wide range of information, from a basic item or the identification of a person, to comprehensive details about the item or person, e.g. item description, size, weight, colour, etc.

ISO/IEC JTC 1/SC 31, *Automatic identification and data capture techniques*, is responsible for more than 100 published or in-progress standards in this area. These standards address bar code symbologies (how a bar code is created and read), RFID air interface (how an RFID tag is read), real-time locating systems, and mobile item identification (that explains how a device such as a phone is used to read and access data as well as providing standards to define how the data associated with the technology are stored and read).

▶ Benefits

At their core, all AIDC technologies support two common goals :

- Eliminate errors associated with identification and/or data collection
- Accelerate the throughput process.

AIDC technology standards facilitate the global application of the various AIDC technologies (bar code, RFID, RTLS, etc.). They offer fast and accurate processing speeds from the point of consistent data capture, to efficient system input, to a point that allows end-user " actionable intelligence ".

In addition, the creation and adoption of International Standards has eliminated inconsistency and process divergence problems, enabling better use of the technologies around the world.

▶ Users

Today, AIDC technologies are widely adopted by retail, electronics, aerospace, transportation and logistics as well as healthcare industries, by public library systems and, in the form of electronic road pricing (ERP), for road traffic volume management.

The direct users are generally equipment or device manufacturers, government agencies, industry associations, application standards development organizations, etc.

However, the end-users can be anyone : retail consumers, healthcare professionals, military personnel. business and holiday travelers, even students.

Information security

Information security is rapidly becoming an essential tool for organizations to minimize their risks and to maximize their business opportunities and maintain a competitive edge, manage cash flow, achieve profitability, meet legal compliance and convey a commercial image. Organizations face a growing range of threats and risks to their business. These include attacks coming from outside the organization, such as hackers trying to break into networks, or breaches of security due to insiders using their knowledge and internal access rights for their personal gain. What is more, there are also risks related to virus infection, disruptive software, staff misuse of Internet and e-mail services, or system failure.

ISO/IEC JTC 1/SC 27, *IT Security techniques*, is responsible for helping the fight against the growing problems of cybersecurity attacks, online fraud, information and identity theft. It provides organizations with solutions to protect their sensitive and critical information, as well as personal data, regardless of business sector and organizational structure.

Information security standards deal with the handling of incidents, including disaster recovery scenarios, system failures, business disruptions and malicious software attacks such as those caused by viruses, worms and Trojan horses. They also underpin the security features used in various software products, technologies and applications, including online business transactions.

The information security standards market changed significantly when businesses around the world were introduced to the concept of an information security management system (ISMS). ISO/IEC 27001:2005, *Information technology – Security techniques – Information security management systems – Requirements*, provides

an effective management framework for information security. It meets all types of organizational security needs and business requirements. Additionally, it is capable of evolving and improving the level of protection commensurate with changes in the cyber-threat environment.

Many programmes designed to tackle the cyber-war issue reference ISO/IEC 27001 and its supporting code of practice ISO/IEC 27002:2005, *Information technology – Security techniques – Code of practice for information security management.*

▶ Benefits

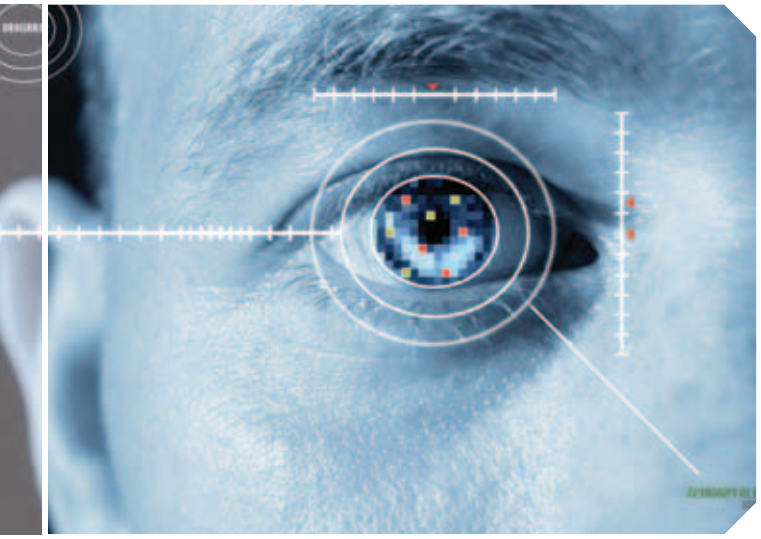
Information security standards provide many benefits to an organization including the following :

- Better and more effectiue management of the risks a business faces
- Greater performance efficiencies in the protection of the information process
- Higher quality of security being deliuered
- Higher return on security inuestment
- Deliuery of assurance and confidence to customers and consumers in the information security of the seruices and products that a company prouides
- Common language for information security to facilitate better business relationships : business-to-business, business-to-consumer, outsourcing, supply chains and other business relationship models.

▶ Users

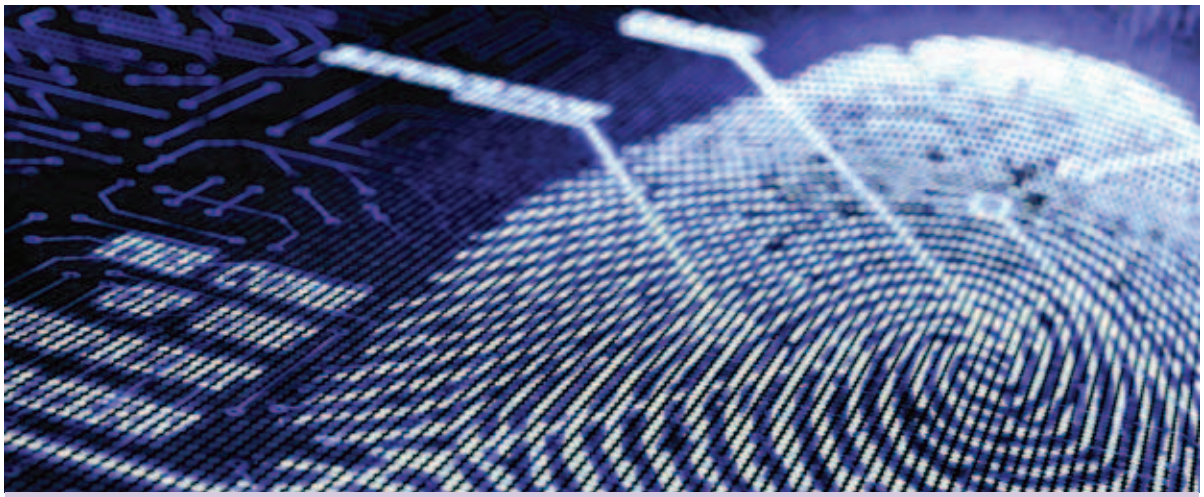
All types of organizations benefit from information security standards, from the smallest to the largest : commercial companies, public sector organizations, gouernment departments and agencies, and research and academic/teaching institutions.

Biometrics



Biometrics provide for secure transactions, positive identification and better informed human judgment. The deployment of standards-based, high-performance, interoperable biometric solutions is expected to increase levels of security for critical infrastructures that have not, until now, been properly served by other technologies. ISO/IEC JTC 1/SC 37, Biometrics, *is responsible for the development of a large portfolio of biometric standards in support of interoperability and data interchange. These standards support a diverse range of systems and applications designed to provide the reliable verification and identification of individuals.*

Topics addressed by these standards include biometric data interchange formats for a number of biometric modalities (e.g. finger, face, iris, signature/sign, vascular data), biometric technical interface standards (e.g. APIs), biometric performance and conformance testing methodology standards, biometric application profiles, biometric sample quality standards, and standards in support of cross-jurisdictional issues related to the utilization of biometric technologies in commercial applications. A harmonized biometric vocabulary to serve the standards community as well as other customers is also in development.



▶ Benefits

The success of biometric applications is particularly dependent on the interoperability of biometric systems. Deploying these systems requires a portfolio of technically sound international biometric standards that meet customers' needs. Biometric standards benefit the customers for whom these standards are developed including end-users, system developers, the IT industry as well as other standards developers working in related standards (e.g. security).

A comprehensive portfolio of biometric standards supporting interoperability and data interchange promote the availability of multiple sources for comparable products. Biometric standards have been the foundation of cross-agency, cross-vendor interoperability and the basis of federated identity management.

▶ Users

Biometric-based solutions are increasingly being required in public and private sector applications worldwide to authenticate a person's identity, secure national borders and restrict access to secure sites including buildings and computer networks. Biometrics are being used for the protection of buildings from unauthorized individuals, in employee identification, in retail, banking and financial institutions, with the management of welfare programs and in healthcare applications.

Other applications include verification of users' identity in mobile devices, colleges (e.g., online identity verification) and amusement parks. For personal security and convenience, consumer uses are also expected to significantly increase in home automation and security systems, retail, gaming and hospitality industries and even in childcare/school applications.

Cloud computing

Cloud computing is the delivery of computing as a service rather than a product, whereby shared resources, software, and information are provided to computers and other devices as a utility (like the electricity grid) over a network (typically the Internet).

ISO/IEC JTC 1/SC 38, *Distributed application platforms and services (DAPS)*, is responsible for the development of standards to support distributed computing paradigms, including cloud computing. In addition to establishing standards for Web services and service oriented architecture (SOA), technologies that are necessary facilitators for cloud computing, a taxonomy, terminology and value proposition for cloud computing are also being developed.

Based on an understanding of the market/business/user requirements for cloud computing standards and a survey of related standardization activities within ISO/IEC JTC 1 and other standards setting organizations, new cloud computing standardization initiatives will be proposed and initiated. Web services and SOA standards define interoperable technologies that provide the foundation for cloud computing. By initiating standardization activities only after first identifying cloud computing standardization requirements, SC 38 will address the public and private sector needs for standards that address end-user requirements and facilitate the rapid deployment of cloud computing.

▶ Benefits

Cloud computing is recognized by governments and private sector organizations as a game-changing technology. Promises of lower cost, higher throughput, and wider availability are all predicated on the assumption that computing clouds need not be unconnected technology islands. Standards and guidelines will specify interoperability and portability mechanisms to connect otherwise isolated processing clouds, resulting in faster deployment of end-user solutions such as eGovernment and eHealth, as well as serving those customers in private sector organizations.

Because standards for distributed application platforms and services are of particular interest to governments as well as private sector organizations, the probability of adoption is greatly increased by developing standards needed under the auspices of ISO/IEC JTC 1, whose international imprimatur is widely recognized and accepted.

▶ Users

Cloud computing, Web services and SOA technologies will be implemented by organizations large and small, in the public and private sectors to deliver solutions to end-user communities of virtually every type. Rapid deployment of these technologies will be facilitated by standards providing interoperability among processing islands, resulting in new services for end-users.

Cloud computing has been recognized by governments and industry throughout the world as a high priority technology requiring global standardization. The USA, the countries of the European Union, Japan and China are just a few of the governments that have initiated cloud computing standardization initiatives. ISO/IEC JTC 1 is well-positioned to address the worldwide recognition of the need for global standards in this important emerging technology area.

What is new and what is coming up

For cards

The next big development is the use of mobile phones as a contactless payment card for low value purchases. The mobile phone will act as a virtual card interoperating with the contactless payment terminal, whether in a fast food restaurant or at a mass transit ticket gate.

For information security

A new series of standards to meet the security and privacy needs in the cloud computing marketplace has just been launched. This development is being carried out in collaboration with other standards and industry groups to ensure the work is on target with market needs.

For AIDC

One of the "next waves" in AIDC is in the realm of the "B2C" (business to consumer) channel, most commonly experienced as the use of mobile phones to read bar code symbols on advertisements, product packaging, etc. This process is used to gather additional information about areas such as purchasing tickets to an upcoming event or the product's use, specifications and/or ingredients. There is a global need for additional AIDC standards which, in a number of cases, are being developed in collaboration with other standards and/or industry organizations.

Addressing accessibility

ISO/IEC JTC 1 believes that the work in the area of information communication and technology standardization for accessibility is a major undertaking, encompassing many international, regional and local interests. Significant efforts are taking place in standards development at various levels.

In response to JTC 1's long-term business plan and international, regional, national, and end-user requirements in the area of accessibility, the Special Working Group on Accessibility (SWG-A) was established. The ISO/IEC JTC 1 SWG-A was created to:

- Determine an approach and implement the gathering of accessibility-related information, taking into consideration the varied and unique opportunities offered by including the direct participation of user organizations, workshops and liaisons
- Maintain and disseminate up-to-date information on all known accessibility-related standards efforts, i.e. the standards inventory
- Maintain and disseminate up-to-date information on accessibility-related user needs, i.e. the user needs summary
- Through the wide dissemination of SWG-A materials, encourage the use of globally relevant, voluntary accessibility-related standards
- Advise consortia/fora, if requested, on their submission of accessibility-related standards/specifications to the formal standards process via the JTC 1 Publicly Available Specification fast-track programme
- Provide support to JTC 1 when it needs assistance related to accessibility.

For more information on ISO/IEC JTC 1 SWG-A, see **jtc1access.org**

Areas of expertise

ISO/IEC JTC 1 centres of expertise are defined by participation in its working structures such as subcommittees (SC) and working groups (WG) :

SCs	Title
JTC 1/WG 6	Corporate Governance of IT
JTC 1/WG 7	Sensor networks
JTC 1/SC 2	Coded character sets
JTC 1/SC 6	Telecommunications and information exchange between systems
JTC 1/SC 7	Software and systems engineering
JTC 1/SC 17	Cards and personal identification
JTC 1/SC 22	Programming languages, their environments and system software interfaces
JTC 1/SC 23	Digitally Recorded Media for Information Interchange and Storage
JTC 1/SC 24	Computer graphics, image processing and environmental data representation
JTC 1/SC 25	Interconnection of information technology equipment
JTC 1/SC 27	IT Security techniques
JTC 1/SC 28	Office equipment
JTC 1/SC 29	Coding of audio, picture, multimedia and hypermedia information
JTC 1/SC 31	Automatic identification and data capture techniques
JTC 1/SC 32	Data management and interchange
JTC 1/SC 34	Document description and processing languages
JTC 1/SC 35	User interfaces
JTC 1/SC 36	Information technology for learning, education and training
JTC 1/SC 37	Biometrics
JTC 1/SC 38	Distributed application platforms and services (DAPS)

Close links with industry

ISO/IEC JTC 1 benefits from the rapid, market-driven work of *de facto* standards-setting organizations and industry consortia. This is amplified by having many technical experts participate not only in national standardization bodies but also in key *de facto* standards-setting bodies and industrial fora. Liaising and cooperating extends the expertise of ISO/IEC JTC 1's subcommittees and provides feedback on how ISO/IEC JTC 1 standards are being used. It also helps identify any gaps or inconsistencies that need to be addressed. By working with other standards-setting organizations (SDOs), ISO/IEC JTC1's ability to serve an integration function is enhanced.

Page 20 provides a list of some 120 organizations in liaison with ISO/IEC JTC 1.

Who participates

ISO/IEC JTC 1 national body participation includes representatives from producers, governmental and public agencies, academia, businesses and other users, ensuring broad-based, open and balanced representation in the standards development process, thus taking into account the relevant societal aspects.

Currently, ISO/IEC JTC 1 has 70 participating countries within its committee or subcommittees. The American National Standards Institute (ANSI), ISO member for the US, holds the secretariat.

Participating countries

Algeria	IANOR
Armenia	SARM
Australia	SA
Austria	ASI
Belgium	NBN
Brazil	ABNT
Bulgaria	BDS
Canada	SCC
Chile	INN
China	SAC
Colombia	ICONTEC
Côte d'Ivoire	CODINORM
Cyprus	CYS
Czech Republic	UNMZ
Denmark	DS
Egypt	EOS
Estonia	EVS
Finland	SFS
France	AFNOR
Germany	DIN
Greece	ELOT

Hungary	MSZT
Iceland	IST
India	BIS
Indonesia	BSN
Ireland	NSAI
Israel	SII
Italy	UNI
Jamaica	BSJ
Japan	JISC
Kazakhstan	KAZMEMST
Kenya	KEBS
Korea, Democratic People's Republic	CSK
Korea, Republic of	KATS
Lebanon	LIBNOR
Lithuania	LST
Luxembourg	ILNAS
Malaysia	DSM
Malta	MCCAA
Mauritius	MSB
Mexico	DGN
Mongolia	MASM
Morocco	IMANOR
Netherlands	NEN
New Zealand	SNZ
Nigeria	SON
Norway	SN
Pakistan	PSQCA
Peru	INDECOPI
Philippines	BPS
Poland	PKN
Portugal	IPQ
Romania	ASRO
Russian Federation	GOST R
Serbia	ISS
Singapore	SPRING SG
Slovakia	SUTN
Slovenia	SIST
South Africa	SABS
Spain	AENOR
Sri Lanka	SLSI
Sweden	SIS
Switzerland	SNV
Thailand	TISI
Tunisia	INNORPI
Ukraine	DSSU
United Arab Emirates	ESMA
United Kingdom	BSI
Uruguay	UNIT
USA	ANSI

How to get involved

If you want to get involved in the work of ISO/IEC JTC 1, you should contact the ISO member or IEC national committee in your country.

See ISO Website :

www.iso.org/iso/about/iso_members.htm

See IEC Website :

www.iec.ch/dyn/www/f?p=103:5:0

PAS Submitters

ISO/IEC JTC 1 recognizes the work of other organizations which are approved to submit publicly available specifications (PAS) as drafts for review and approval as International ISO/IEC JTC 1 Standards. The list of approved organizations is as follows :

- Distributed Management Task Force (**DMTF**)
- Organization for the Advancement of Structured Information Standards (**OASIS**)
- Object Management Group (**OMG**)
- Storage Networking Industry Association (**SNIA**)
- The Open Group
- Trusted Computing Group (**TCG**)
- UPnP Forum
- World Wide Web Consortium (**W3C**)

Partnerships with organizations in liaison

0–9

Third Generation Partners Project (3GPP)

A

Asia-Pacific Broadcasting Union

Association for Computing Machinery's Special Interest Group on Ada

Ada-Europe

Advanced Distributed Learning

Audio Engineering Society

The Association for the International Collective Management of Audiovisual Works

Aviation Industry CBT Committee

Association for Automatic Identification and Mobility

American Express

Alliance for Telecommunications Industry Solutions

The Advanced Television System Committee

Agence Universitaire de la Francophonie

B

BioAPI Consortium

C

Common Criteria Development Board

Common Study Center of Telediffusion and Telecommunication

Centro Criptologico Nacional

Consultative Committee for Space Data Systems

Consumer Electronics Association

European Conference of Postal and Telecommunications Administrations

European Organization for Nuclear Research

CGM Open Consortium, Inc.

Contant ID Forum (CIDF)

International Commission on Illumination

International Confederation of Societies of Authors and Composers

D

Digital Accessible Information System

Digital Audio-Visual Council

Digital Geographic Information Working Group

Distributed Management Task Force

Digital Video Broadcasting

E

European Association of Function Point User Groups

European Broadcasting Union

European Commission

European Committee for Banking Standards

Ecma International

Network of Excellence in Cryptology

International Group for Electronic Commerce in the Book and Serials Sectors

European Network and Information Security Agency

Conseil Européen des Paiements AISBL

European Software Institute

European Telecommunications Standards Institute

EUROSTAT

F

International Federation of Film Producers Associations

Future of Identity in the Information Society

FLO Forum

The Frame Relay Forum

G

GS1

Guide Share Europe

I

International Imaging Industry Association

International Air Transport Association

International Biometric Industry Association

International Civil Aviation Organization

International Color Consortium

International Card Manufacturers Association

International DOI Foundation

Institute of Electrical and Electronics Engineers Computer Society

International Federation of the Phonographic Industry

International Function Point Users Group

International Hydrographic Organisation

International Labour Organization

IMS Global Learning Consortium

The International Multimedia Telecommunications Consortium

International Council on Systems Engineering

International Information Centre for Terminology (Infoterm)

Latinoamerican Institute for Quality Assurance

The French National Institute for Research in Computer Science and Control

International Olympic Committee

International Project Management Association

International Press and Telecommunication Council

Internet Streaming Media Alliance

ISMC

Internet Society

International Systems Security Engineering Association

The International SGML/XML Users' Group

The IT Service Management Forum Belgium v.z.w.

International Telecommunications Satellite Organization

International Telecommunication Union

ITU Radiocommunication Bureau (ITU-R)

L

International Federation for Learning-Education-Training Systems Interoperability

Linux Foundation - USENIX Standards Liaison

IEEE Learning Technology Standards Committee

M

MasterCard International

MasterCard Europe sprl

The Multimedia Communications Forum

MFA Forum

MIDI Manufacturers Association

N

North Atlantic Treaty Organization (Air Group IV)

NATO Air Group IV

O

Organization for the Advancement of Structured Information Standards (OASIS)

OASIS Rights Language Technical Committee

Online Computer Library Center, Inc.

Electronic Book Exchange Working Group (EBX)

Organisation for Economic Co-operation and Development, OECD

Open Geospatial Consortium, Inc.

Object Management Group

P

Project Management Institute

Premier Bankcard

S

The Source for Environmental Data Representation & Interchange

Simulation Interoperability Standards Organization

Society of Motion Picture and Television Engineers

Storage Networking Industry

Society for Worldwide Interbank Financial Telecommunication

T

The Open Group

The SPICE User Group (Software Process Improvement and Capability dEtermination) User Group

TV-Anytime Forum

U

UHAPI Forum Administration

United Kingdom Software Metrics Association

Universal Mobile Telecommunications Systems Forum

United Nations Conference on Trade and Development

United Nations Economic Commission for Europe

United Nations University International Institute for Software Technologies

Universal Postal Union

U

Visa International

Visa - Europe

W

World Wide Web Consortium

Web3D Consortium

World Intellectual Property Organization

World Meteorological Organization

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