Information and Communications Technology (ICT)

ISO/IEC JTC 1:
Vision, Mission and Principles

The ISO/IEC Joint Technical Committee for Information Technology (JTC 1) is one of the largest and most prolific technical committees in international standardization. With over 2600 published standards developed under the broad umbrella of the committee and its 20 subcommittees, JTC 1 makes a huge impact on the ICT industry worldwide.
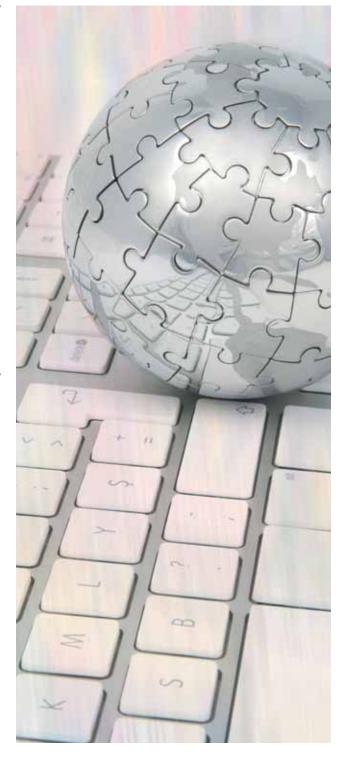
Vision

ISO/IEC JTC 1 is the standards development environment where experts come together to develop worldwide Information and Communications Technology (ICT) standards for business and consumer applications.

JTC 1 provides the standards approval environment for integrating diverse and complex ICT technologies. These standards rely on the core infrastructure technologies developed by JTC 1 centres of expertise complemented by specifications developed in other organizations.

Mission

JTC 1 was created by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) to provide a single, comprehensive standardization committee in which to address international Information Technology (IT) standardization.

Today, JTC 1 is globally recognized as the focal point of formal standardization in ICT, which encompasses all technologies for the capture, storage, retrieval, processing, display, representation, organization, management, security, transfer, and interchange of data and information.

JTC 1 standards are globally recognized, provide global interoperability and provide sustained development and retention of investment.

JTC 1's mission is to develop, maintain, promote and facilitate ICT standards required by global markets to meet business and user requirements.

Areas of JTC 1 focus include:

- Design and development of ICT systems and tools

- Performance and quality of ICT products and systems

- Security of ICT systems and information

- Portability of application programs

- Interoperability of ICT products and systems

- Unified tools and environments

- Harmonized ICT vocabulary

- User friendly and ergonomically designed user interfaces

- Sustainability for and by Information Technology (IT)

JTC 1 is the organization of choice for the creation of standards in its areas of expertise, initiation of new areas of standardization requiring JTC 1's unique strengths and attributes, and progression of specifications developed in other ICT-related consortia/fora into International Standards.

JTC 1 Principles

1. JTC 1 standards development will be conducted with full attention to a strong **business-like approach** (e.g., cost effective, short development times, market-oriented results).

2. JTC 1 will provide a **wide range of quality products and services** within its scope and mission to cover identified global needs.

3. The JTC 1 community will **actively promote the use of its products** and services and the **timely implementation** of ISO/IEC standards within the form of **useful products** on a worldwide basis.

4. JTC 1 will ensure that its user needs, including **multicultural requirements**, are fully met such that its products and services promote international trade.

5. JTC 1 **recognizes the value of the work of other organizations** and the contribution they make to international IT standardization and will complement existing and forthcoming JTC 1 programs through other leading edge activity with the objective of providing the best standards worldwide.

6. JTC 1 will provide a standards development environment which **attracts technical experts and users** having identified standardization needs.

Convergence of Technologies

The concept of ICT takes into account the impact of digital techniques towards the convergence of various domains and technologies into a more global domain called ICT. Convergence is occurring in two dimensions:

- Three basic technologies – information technology, consumer electronics and telecommunications - converge in the sense that the same fundamental technologies are applied in all three areas. This can be termed horizontal convergence; the resulting technology is often called ICT. The advent of ICT demanded a closer overall cooperation, in the standardization arena, among the 3 key international standards organizations: ISO, IEC and the International Telecommunication Union (ITU).

- Simultaneously, ICT progresses into all aspects of life (business, industry, home, administration, education, charity, etc.), with conventional processes and applications now exploiting the capabilities offered by ICT. This may be termed vertical convergence. New ICT applications are characterized by the involvement of different technologies and high complexity; in general, they cannot be covered by a single standard, but are part of an

interdisciplinary system. This demands closer cooperation between technology-oriented and application-oriented experts, both in product and in standards development.

Thus, JTC 1 provides a single forum where a wide array of technologies can be integrated into serviceable standards. As these converging technologies become pervasive in every aspect of modern life, infrastructure standards developed by JTC 1 are the essential building blocks for the implementation of many other technologies.

Strength from Synergy

JTC 1's strength comes from its scope, which allows for synergy among diverse areas of ICT standardization. This synergy leads to better and more consistent standards, less overlap, and less duplication. This advantage increases as the infrastructure technologies intersect more and more: The standardization work is able to take advantage of common goals rather than compete with other bodies for resources and focus. The result is better standards with increased applicability and more products based upon them. JTC 1 also provides external consortia/fora with an effective vehicle for progressing their specifications into International Standards.

Coordination and Cooperation

In today's world of formal standards bodies, informal organizations, and industry consortia, no single organization or single model for the development of standards and specifications is sufficient to meet the needs of developers, consumers, and other affected bodies for technical standardization. Owing to its strengths in scope, speed, its close links to ISO, IEC and ITU-T, and the properties and stature of formal standardization, however, JTC 1 can provide unique abilities in systems integration and coordination within the framework of standardization that will empower the ICT industry worldwide.

Speed and Flexibility

JTC 1 has been a leader in developing and adopting flexible procedures and in streamlining its processes. JTC 1's procedures are based on the ISO/IEC Directives, which have evolved to support speed and flexibility: ISO/IEC International Standards have been developed and adopted by JTC 1 in as little as 18 months. Using the Fast Track process, a specification can be introduced to JTC 1 and progressed to a standard in less than 6 months. JTC 1 is responsive to market needs of the rapidly changing ICT sector via advances such as the development of the Publicly Available Specification (PAS) Transposition Process. The PAS process enables the transposition of technical specifications from sources outside JTC 1 into ISO/IEC International Standards (IS).

ISO/IEC JTC 1

Information and Communications Technology (ICT) standards for business and consumer applications

ISO/IEC JTC 1 consists of the following subcommittees (SCs):

- ISO/IEC JTC 1/SC 2   Coded character sets

- ISO/IEC JTC 1/SC 6   Telecommunications and information exchange between systems

- ISO/IEC JTC 1/SC 7   Software and systems engineering

- ISO/IEC JTC 1/SC 17   Cards and personal identification

- ISO/IEC JTC 1/SC 22   Programming languages, their environments and system software interfaces

- ISO/IEC JTC 1/SC 23   Digitally Recorded Media for Information Interchange and Storage

- ISO/IEC JTC 1/SC 24   Computer graphics, image processing and environmental data representation

- ISO/IEC JTC 1/SC 25   Interconnection of information technology equipment

- ISO/IEC JTC 1/SC 27   IT Security techniques

- ISO/IEC JTC 1/SC 28   Office equipment

- ISO/IEC JTC 1/SC 29   Coding of audio, picture, multimedia and hypermedia information

- ISO/IEC JTC 1/SC 31   Automatic identification and data capture techniques

- ISO/IEC JTC 1/SC 32   Data management and interchange

- ISO/IEC JTC 1/SC 34   Document description and processing languages

- ISO/IEC JTC 1/SC 35   User interfaces

- ISO/IEC JTC 1/SC 36   Information technology for learning, education and training

- ISO/IEC JTC 1/SC 37   Biometrics

- ISO/IEC JTC 1/SC 38   Distributed application platforms and services (DAPS)

- ISO/IEC JTC 1/SC 39   Sustainability for and by Information Technology

- ISO/IEC JTC 1/SC 40   IT Service Management and IT Governance

http://www.jtc1.org

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