

Opening Remarks

Torrin Marquardt
International Engagement Manager,
Standards Australia

STANDARDS
Australia



ISO/IEC JTC 1 and Digital Trade

23 June 2021

Phil Wennblom, JTC 1 Chair



About JTC 1

Joint Technical Committee of ISO and IEC

- Created by ISO and IEC Councils in 1987
- “Standardization in the field of Information Technology”: building blocks for global markets
- Responding to the needs of businesses, consumers, governments, other organizations

35 P-members and 65 O-members

Organized in 22 Subcommittees and 4 JTC 1 Working Groups

More than 4500 active participants developing 587 standards; 3248 published

Technical areas

Coded character sets

Telecommunications and information exchange
between systems

Software and systems engineering

Cards and security devices for personal
identification

Programming languages

Digitally recorded media

Computer graphics, image processing

Interconnection of IT equipment (home electronics)

IT security techniques

Office equipment (printing)

Coding of audio, picture, multimedia (JPEG,
MPEG)

Automatic ID and data capture (RFID)

Data management

Document description, processing

User interfaces

IT for learning, education, training

Biometrics

Cloud computing

IT Sustainability

IT governance

Internet of Things and Digital Twin

Artificial Intelligence

Smart cities

3D printing and scanning

Trustworthiness

Quantum Computing

JTC 1 Advisory Groups

- Communications
- JTC 1 Emerging Technology and Innovation (JETI)
- Systems Integration Facilitation
- Outreach
- Standards and Regulations
- Brain-Computer Interface
- Meta-Reference Architecture and Reference Architecture for Systems Integration
- Use cases for VR and AR based ICT Integration Systems in JTC 1
- Meeting guidelines (SD 19)

And an Ad Hoc Group on Collaboration Across Domains (formed May 2021)

JTC 1 Focus

Develop information technology standards that are applicable across domains

- Sometimes referred to as horizontal or foundational standards
- Emphasis on initiating new areas of work at the right time, delivering high quality standards that respond to market trends
- Track record of acceptance by global markets

Work together with other ISO and IEC TCs and other organizations that are utilizing information technology to develop domain-specific standards

- More than 400 liaisons (JTC 1 and its SCs)
- Emphasis on effective cooperation

Benefits of JTC 1 Standards

- Enable interoperability among products and services from different suppliers
- Facilitate global supply chains and enable cooperation among suppliers, providing a foundation for global trade
- Promote competition that results in more choice and lower prices
- Establish expectations and practices that result in higher quality products and services
- Encapsulate expertise and best practice, which allows everyone to use information technology productively and safely

Examples

ISO/IEC 14496 (MPEG-4) was developed by JTC 1/SC 29 (*Coding of audio, picture, multimedia and hypermedia information*) in collaboration with ITU-T SG 16 and is one of the most widely implemented standards in the information technology sector, with literally billions of implementations in use worldwide.

ISO/IEC 27001 was developed by JTC 1/SC 27 (*Information security, cybersecurity and privacy protection*) to provide an information security standards management system. Used by organizations worldwide to ensure the security of all types of digital data, it is one of the top selling standards across ISO and IEC.

JTC 1/SC 37 (*Biometrics*) recently published the main parts of the ISO/IEC 39794 standard supporting the incorporation of biometric data in e-Passports. Data conforming to the first generation of these standards is contained in upwards of 1.4 billion passports issued by nearly 140 states. The revised standards, requested by the International Civil Aviation Organization (ICAO) and developed with liaison to JTC 1/SC 17, will be mandatory from 2030 onwards.

Summary and Call to Action

- International Standards for Information and Communication Technology have never been more important
- We welcome your participation to shape the future foundation of digital trade
 - Most JTC 1 meetings are fully virtual through at least 2021
- More information about ISO/IEC JTC 1 is available at [JTC1info.org](https://www.jtc1info.org)
- We welcome your questions
- Thank you!





Information Technology Standards To Support Digital Trade

Sharing of experience

Teddy Sukardi
tedsuka@indo.net.id

Standards and Trade

- International trade has existed through history as the exchange of capital, products and services among countries.
- The development and wide usage of the internet and digital technologies have further enhanced international trade in terms of size and complexity.
- The development of digital good and services has added another dimension to domestic and international trade, presenting new challenges and opportunities
- Standardization helps break down barriers to level the playing field for companies and help them compete freely in global markets, this is also relevant to digital products and services.

Ecosystem not “just standards”

- To have maximum impact standards need regulations and certifications that often require time and effort to materialize.
- Stakeholders need to be aware and actively contribute to the “**ecosystem of standards**”, not just the standards by themselves.

IT Standards ... prioritize the most needed

- Throughout history, the IT community has always supported standards to ensure interoperability between systems. This has happened somewhat “naturally”, in such a way that often national adoption of a number of technical standards for IT is NOT required.
- Some standards such as in the area **of Information security** will still require adoption as national standards, further followed by certifications as part of compliance to regulations.
- **Readiness of regulations and certifications** are often identified as areas for improvement.
- Information security, including **personal data protection** will remain to be an area that will require major attention.

Indonesian National Standards

BSN, the Indonesian Standard Organisation has adopted a number of IT Standards that are important to support Digital Trade related activities. such as :

- 1) The SNI-ISO/IEC 27000-series, 46 standards, covering best practice recommendations on information security management—the management of information risks through information security controls—within the context of an overall Information security management system. Regulations and certifications are in place and starting to be enforced.
- 2) SNI ISO/IEC 38505-1:2017 Information technology – Governance of IT – Governance of data.
- 3) SNI 8799:2019 Indonesian technical, management and audit standard for data centers, a home grown standard.

- Standards will continue to support digital products/services, digital delivery and digital trade enablers.
- Further regional discussions on standards would open up opportunities for collaboration that benefit trade, including digital trade



Digital Trade Standardization

Experiences in IT & Digital
Governance, Service Management,
Business Process Outsourcing

Jan Begg, Chair [ISO/IEC JTC 1/SC 40](#)

23rd June 2021

Overview of DTS

IT & Digital Governance,
Service Management,
Business Process Outsourcing (BPO)

Observing members

Indonesia, Malaysia, Philippines, Singapore

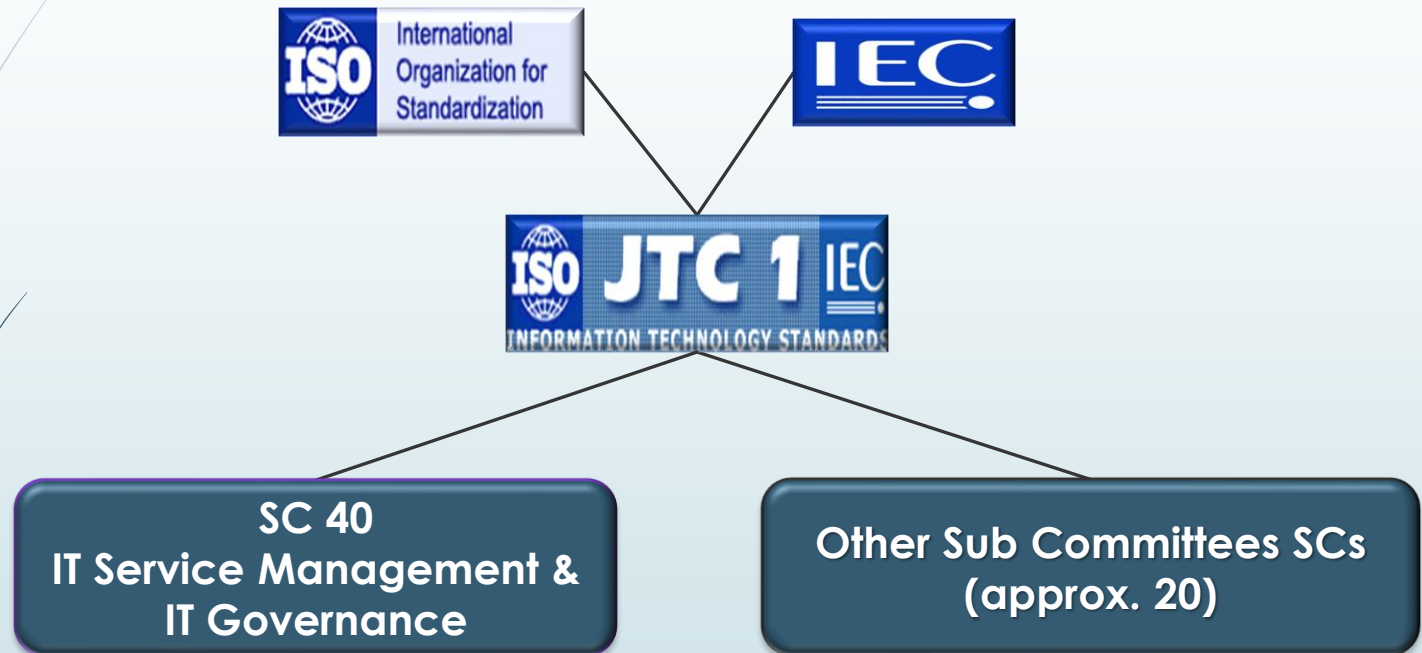
Overview

- My Experience
- SC 40 Background
- Important Technical Standards
- DTS experience
 - developing governance of data standards
 - ITES-BPO
- Standardization Trends

My Technology Background & Standardization Experience

- Software development, outsourcing & technology operations
- Led major transformational projects across multiple countries
- Senior executive roles in Australia, UK and USA
- Industry sectors – financial services, manufacturing, logistics, healthcare, infrastructure, education
- Non-executive director, chair & independent member of Audit Committees/Advisory Boards.
- Fellow of the Australian Institute of Company Directors (FAICD)
- Over 10 years contribution to international IT governance, service management & BPO standardization.
- Chair of ISO/IEC JTC 1/SC 40 committee with **57** member countries, **25** published standards, **9** under development.

SC 40's Parent Committee & Fit In Standardisation World of ISO & IEC



ISO/IEC JTC 1/SC 40 Background

Created 2013 by JTC 1 Resolution to consolidate standardization of IT Service Management & IT Governance

- Standards Australia holds the Chair & Secretariat
- Mr John Sheridan, was inaugural chair, then Ms Jan Begg from 2017

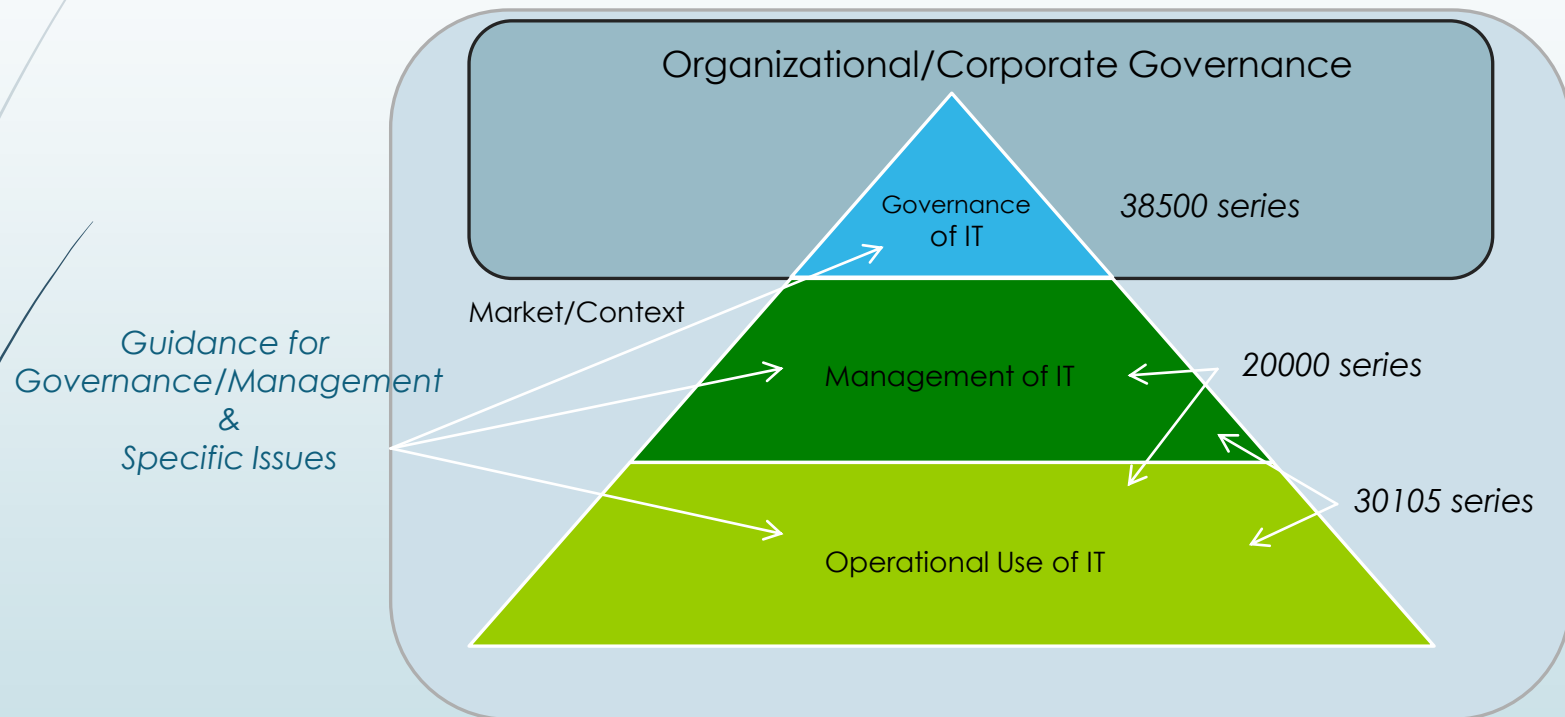
Scope

- Develop standards, tools, frameworks, best practices and related documents for IT Service Management and IT Governance, including areas of IT activity such as audit, digital forensics, governance, risk management, outsourcing, service operations and service maintenance, but excluding subject matter covered under the scope and existing work programs of JTC 1/SC 27 and JTC 1/SC 38.

Work initially covered:

- Governance of IT, including the development of the **ISO/IEC 38500 series** standards and related documents.
- Operational aspects of Governance of IT, including **ISO/IEC 30121** Information Technology — Governance of digital forensic risk framework, and interfaces with the management of IT as well as the role of governance in the area of business innovation.
- All aspects relating to IT service management, including the development of the **ISO/IEC 20000 series** standards and related documents.
- All aspects relating to IT-Enabled Services — Business Process Outsourcing, including the development of the **ISO/IEC 30105 series** standards and related documents.

SC 40 Important Technical Standards



Example of standards development

Governance of Data timeline

- **June 2014 Sydney**
 - idea - governance of data floated
 - ad hoc study group formed
- **Nov 2014 Delft**
 - study group reported
 - further country contributions
- **April 2015**
 - contributions gathered into a framework
- **May 2015 Sao Paulo**
 - NZ proposed a new project for an international standard, China co-editors
- **May 2016 Suzhou**
 - Work continued towards DIS ballot for 38505-1
 - 200 people attended 3hr IT Governance Forum with insights from local businesses
Simultaneous English/Chinese translations allowed for interchange of ideas.
- **November 2016 London**
 - Work continued on 38505-2



The Application of ISO/IEC 38500 to the Governance of Data

ISO/IEC 38505 Part 1 published 2017, Part 2 published 2018

WIP ISO/IEC 38505-3 Governance of Data Classification

ITES-BPO creating value in digital trade

ISO/IEC 30105 series: IT Enabled Services -Business Process Outsourcing (ITES- BPO) lifecycle processes

➤ BPO is

- outsourcing of a specific set of business process activities
- knowledge required for carrying out these activities
- on behalf of a client organization

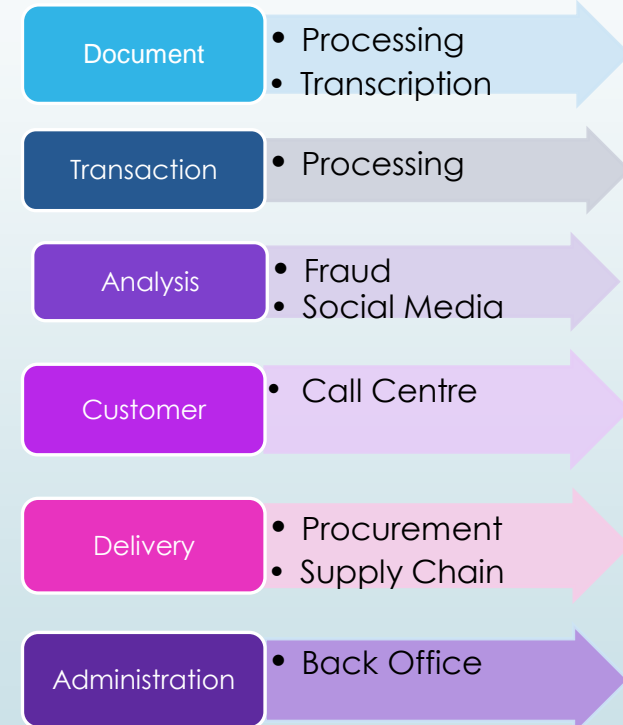
➤ Global BPO spend from est.
USD186B, 2015 to > USD330B, 2019

➤ BPO focuses on

- performance of the outsourced business processes
- rather than on performance of the Information System

➤ BPO Evolution

- From short term cost saving
- to sustained performance improvement through standardization



Status of International Standardization

Market characteristics in the digital age

- rapid technological advances,
- unpredictable ways of conducting business,
- customers' changing expectations,
- business operations conducted in a data rich environment via a complex system of service provision.

The governance and management of these arrangements is critical for success, survival & competitive advantage.

Ongoing revision & extension of core standards:

- ISO/IEC 38500 series: Governance of IT/Digital Governance
- ISO/IEC 20000 series: Service management
- ISO/IEC 30105 series: ITES- BPO lifecycle processes

Key topics

- Governance of digital platforms
- Governance of Data Classification
- Consumer engagement
- Continuous Process Improvement (CPI)



Status of international standardization

Liaisons & collaborations

Active liaisons Committees

- Software and systems engineering
- Information security, cybersecurity and privacy protection
- Cloud computing and distributed platforms
- Artificial intelligence
- Information and documentation
- Quality management and quality assurance
- Innovation management
- Blockchain and distributed ledger technologies
- Governance of organizations
- Excellence in service

Active liaisons Organisations

- **ISACA** Information Systems Audit and Control Association
- **itSMFI** The IT Service Management Forum International Limited
- **OASIS** Organization for the Advancement of Structured Information Standards
- **IAF** International Accreditation Forum, Inc.

Joint Project with SC 42 – Governance implications of AI ISO/IEC 38507

What does the future hold?

Our standards continue to evolve:

- in response to technology changes & business needs
- translated into many languages & adopted by countries.

Governance

Governance of digital assets and traditional information technology is a critical subset of good organisational governance.

38500 series is recognised as better practice by regulators, auditors, policy makers and consultants across the world.

Current revision for emerging technology and the new business models.

Service Management

At the management level ISO/IEC 20000 is one of the most successful Management System Standards (MSS), used internationally for over a decade

Growth in certification 12% annually.

Further development for a more complex world.

Business Process Outsourcing

The ISO/IEC 30105 series was developed to improve consistency, delivery quality & predictability in the delivery of ITES-BPO services.

The standards are being revised to provide further value for customers & service providers.

Thank you

- Want to get involved?
- Standards are developed by the people who need them – that could mean **you**
- Technical committees include experts from many backgrounds, nominated by ISO's national members.
- If you want to help shape future standards in your field, contact your national member: www.iso.org/members.html

Questions?

More information: [About SC 40](#)

ASEAN-Australia DTS Initiative

JTC 1 SC 35

User interfaces and accessibility Overview

Khalid CHOUKRI



ISO/IEC JTC 1 SC 35

Plenary meeting, Paris July 2017



ISO/IEC JTC 1 SC 35

Virtual meeting 2021

 KIM, KUK of KOREA	 Khalid CHOUKRI	 Thorsten Katzman...	 HyeonWoo, Nam	 Karl Pentzlin
 Jee-In Kim	 Yoshikazu YAMAM...	 Yu Lei	 Dr. JEONG Hyuk	 NOMURA
 Andy Heath	 Yosh NAKANO	 Mélissa Jean	 Wanzhong Ma (CN)	 Yuji Inoue
 Hongan	 Denis Chêne	 Thibault Grouas	 JAEIL SONG	 Hui Chen
 Alain LaBonté, JTC1/S...	 Hiroaki IKEDA	 Xu Yang (China)	 Jim Carter	 Yoshikazu SEKI, ...
 Miran Choi (KR)	 Zhou Xuan - Chi...	 Yaeseul Park (KR)	 4522406543	



SC35 Scope

Standardization in the field of **user-system interfaces in information and communication technology (ICT) environments** and support for these interfaces to serve all users, including people having **accessibility** or other specific needs, with a priority of meeting the JTC 1 requirements for **cultural and linguistic adaptability**.

Stable membership: 19 Participants and 18 Observers,

40 to 50 participants /meeting

“Nine” Active Working Groups

Highlights 1.

- From traditional user interfaces to Wearable haptics & Affective Computing
- New important projects:
 - "Affective Computing" within a new WG,
 - Interfaces considering emotions and affective computing
 - Conversational speech interactions
 - Guidance on making content Easy To Read and Understand
 - Immersive technologies (AR, VR, ...)
- Guidance on audio descriptions and Visual presentation of audio information (including captions and subtitles) but also conversion of modalities (speech, text, images)

Highlights 2.

- Develops IT accessibility guidance consistent with:
 - *ISO/IEC Guide 71 **Guide for addressing accessibility in standards***
 - *ISO/IEC 29138 series Information technology — User interface accessibility — Part 1: User accessibility needs*
 - *ISO/IEC 30071: **Code of practice for creating accessible ICT products and services***
- Deals with a range of contexts of use of IT
 - from traditional office and home environments
 - through public and mobile environments
 - to emerging environments, such as immersive environments

Basics !!

Nouvel AZERTY



AZERTY traditionnel



Gesture based interfaces

Voice assistant

SAMSUNG

Swipe left/right with 3 fingers



Settings
Media volume
Speech rate
Punctuation
Dark screen
Large cursor
Notification

Talkback



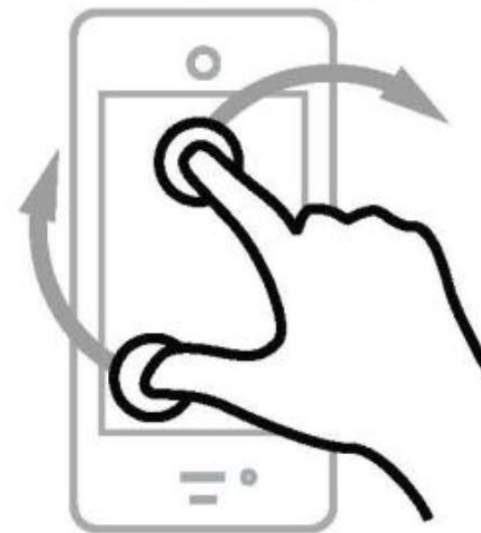
Swipe down then right

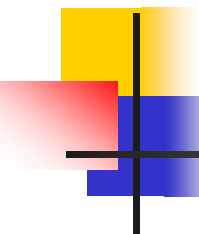















Voiceover



Rotate with 2 fingers





		1 Finger		2 Fingers		3 Fingers		4 Fingers		
	Tap	Speak the item under your finger		Pause / resume speech		Read from top	Speak page number or rows	(near top of Screen) Move to first element (near bottom of Screen) Move to the last element		
	Double tap	Activate the selected item Active edit mode (focus on editable text)		Start / stop current action		Read from next item	Toggle Speech on and off	Start voiceover help		
	Triple tap	Google Zoom function		Information center	Item Chooser	Spell last utterance (copy)	Toggle screen curtain on and off			
		Double tap the selected item								
	Quadruple tap					Copy last spoken text to the clipboard				
	Double tap & hold	Move or drag an icon, view more options for selected items		Selection mode		Label control				
	Left swipe	Move to previous / next item		Change pages and screens	Cut	Context menu: settings	Move to previous/next pages/screens			
	Right swipe				Paste					
	Up swipe	Move using selected option of context menu	Select previous/next selected rotor option	<div>Scroll lists and pages</div>	Copy	Read pages starting at the top	Context menu: granularities	Move or scroll up/down		
	Down swipe				Select all	Read pages at the selected item				
	Left return swipe	Scroll up / down (page)								
	Right return swipe									
	Up return swipe	Move to first / last item on screen Move cursor to beginning / end (edit & selection mode)								
	Down return swipe									

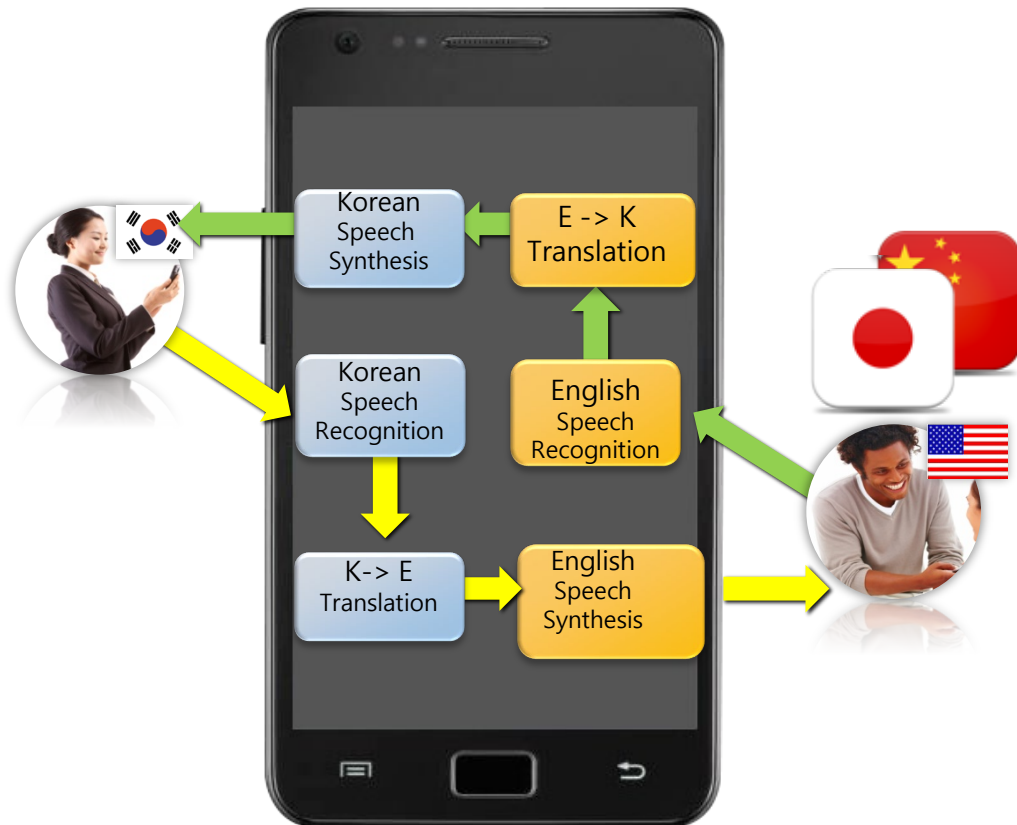
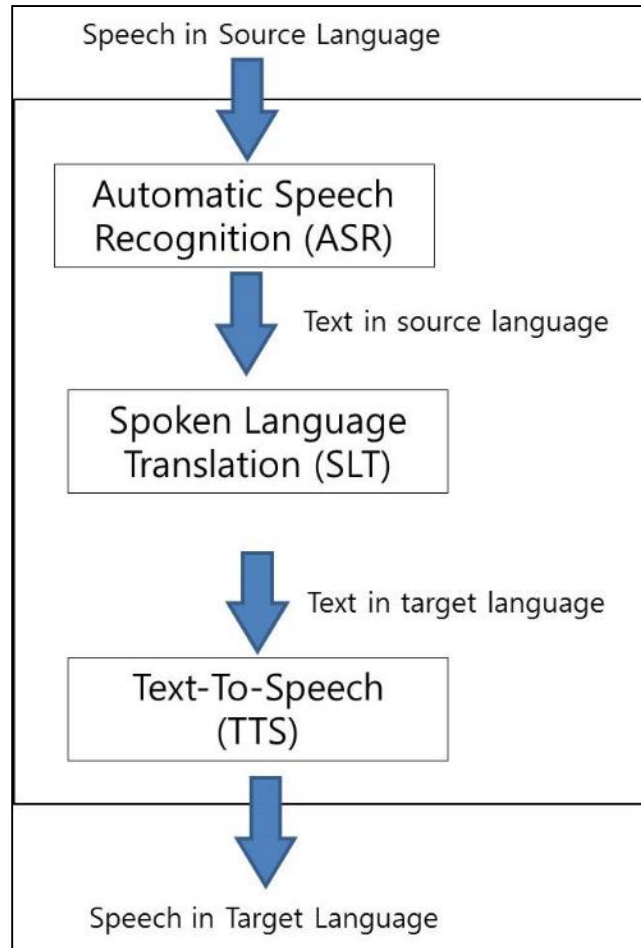
2 finger scroll will not function in selection mode

2 finger scroll will not function in selection mode

Source : Samsung Electronics, Apple, Google

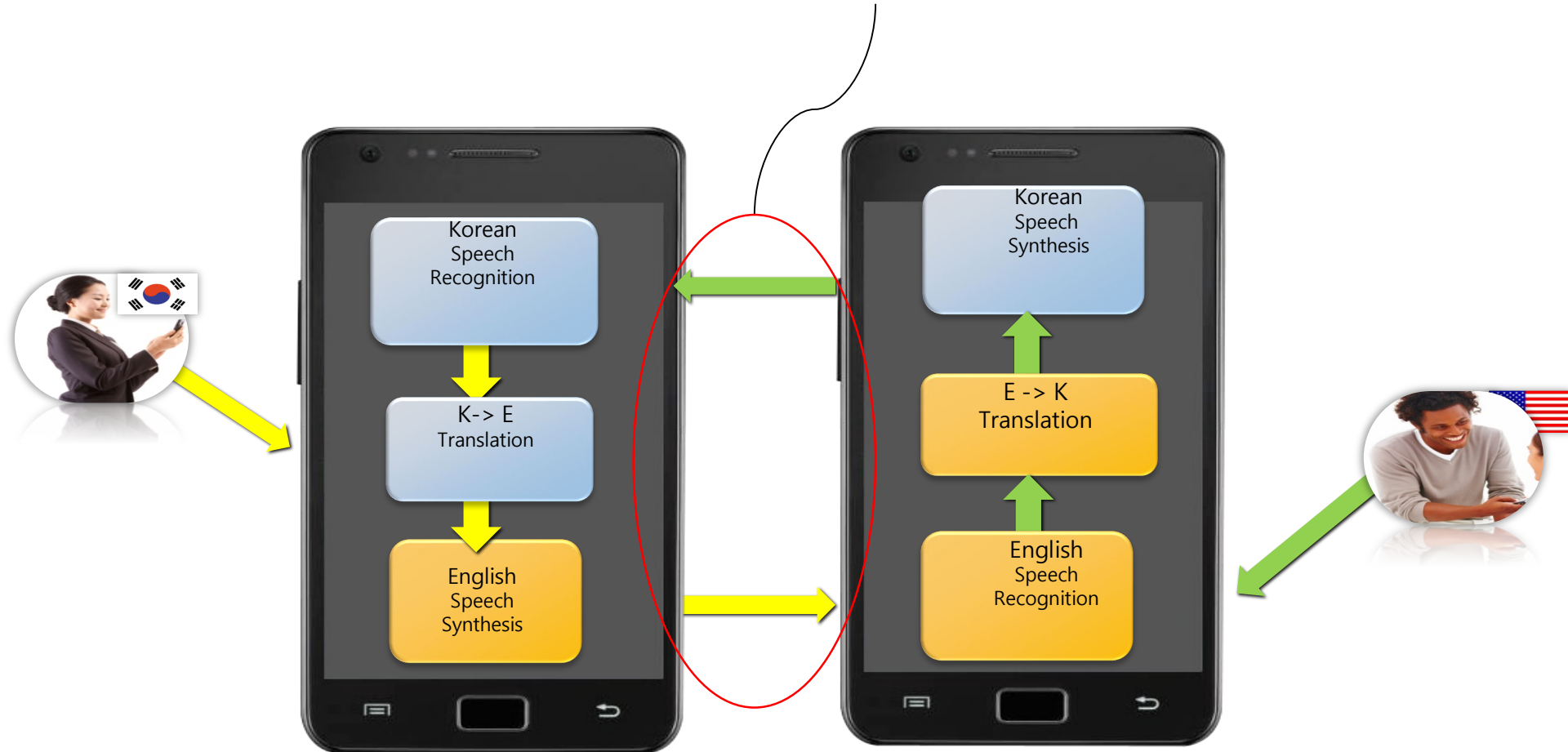
Speech to Speech Translation

"Technology that enables speakers of different languages to communicate"



Speech to Speech Translation

Should be standardized



Example ISO/IEC 20071 series

IT—User interface component accessibility

(Parts currently under development or redevelopment)

- *Part 5: Accessible user interface for accessibility settings on information devices* (to replace ISO/IEC 24786)
- *Part 11: Guidance on text alternatives for images* (IS 2019)
- *Part 15: Guidance on scanning visual information for presentation as text* in various modalities (TS 2017)
- *Part 21: Guidance on audio descriptions* (TS 2015)
- *Part 23: Guidance on the visual presentation of audio information (including captions and subtitles)* (2018)
- *Part 25: Guidance on the audio presentation of text in videos (including captions, subtitles, and other on-screen text)* (TS 2015)

Highlights SC35 work

Affective Computing user interfaces

Targeting consideration of emotions, sentiments, moods, and other affective concepts when designing interfaces and interactions.

Highlights SC35 work

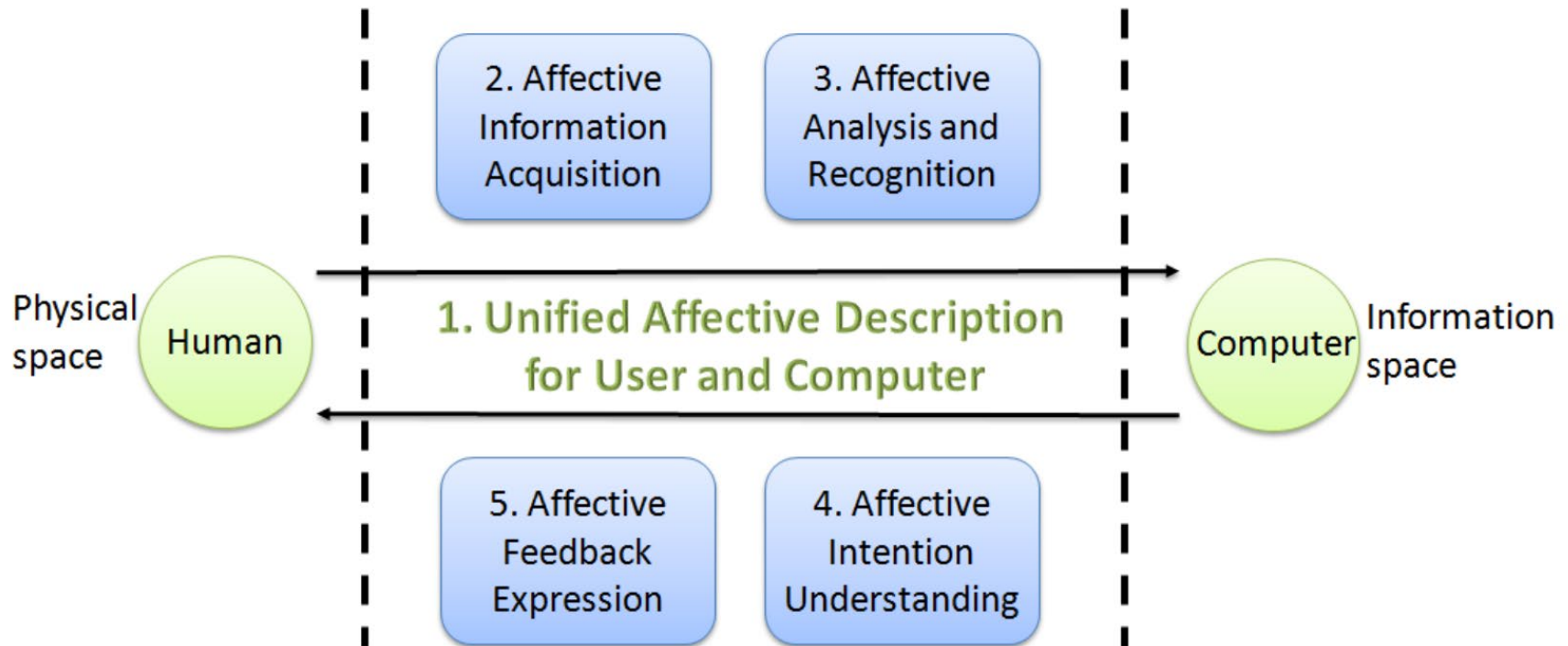


Figure 1 – AUI technical framework

EASY to Read and EASY to Understand

- From interfaces point of view (Character fonts, Contrast, etc.) To Cognitive, Linguistic and Cultural aspects, example:

Form and layout

- Structure
- Headings
- Text alignment
- Lines and spacing
- Columns and margins
- Page numbers and orientation
- Fonts
- Contrast
- Paper quality
- Colours
- Other elements

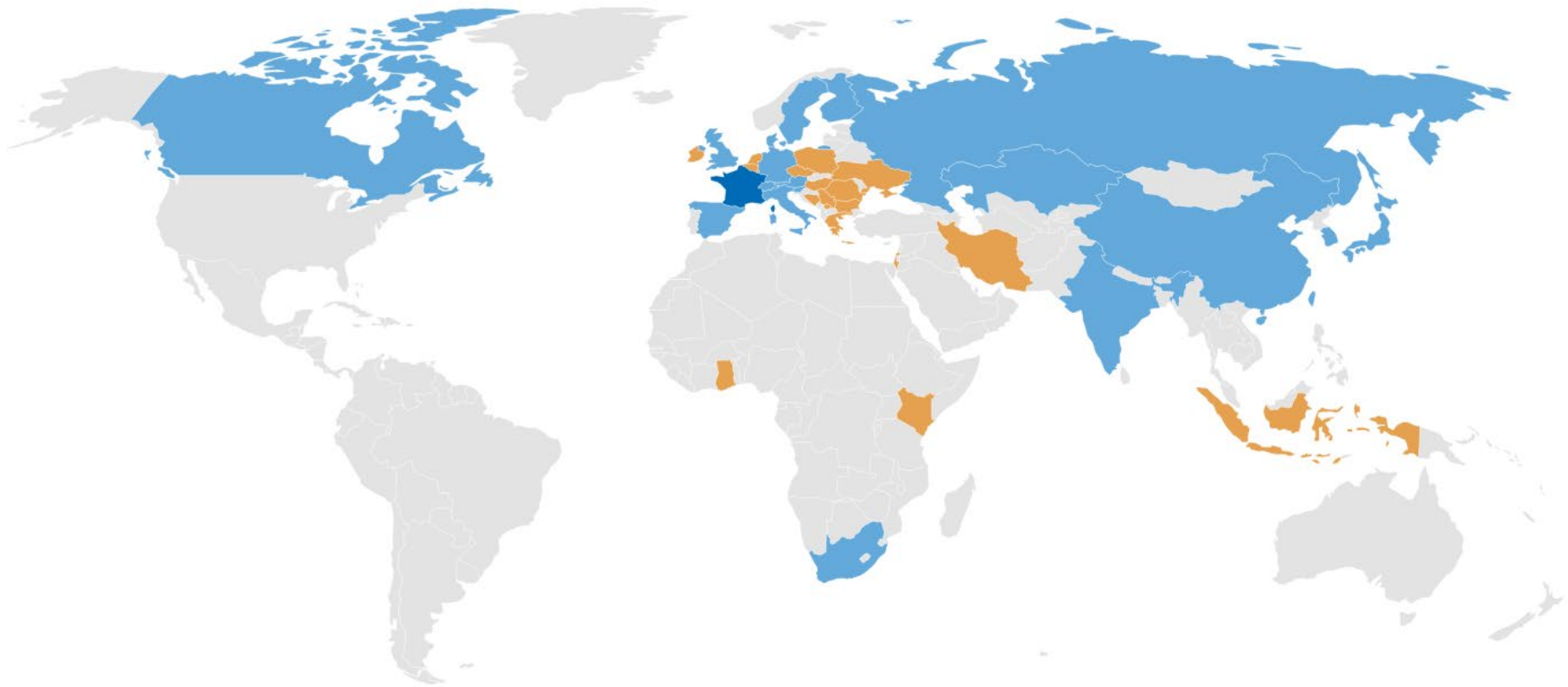
Non-verbal paratextual elements

- General
- Images
- Other graphical éléments

Verbal paratextual elements

Verbal and graphical elements, including images, that complement a written text in order to enhance comprehension.

SC35 Membership



This map is designed to visually demonstrate the geographic distribution of our Members. The boundaries shown do not imply an official endorsement or acceptance by ISO.

Thank you very much for your attention

Organization of SC 35

JTC 1/SC 35 is subdivided in Working Groups

- **WG1 : Keyboards and Input Interfaces** – Mr Alain LABONTÉ
- **WG2 : Graphical User Interface and Interaction** – Dr Yoshikazu YAMAMOTO
- **WG4 : User Interfaces for Mobile Devices** – Dr Yoshikazu YAMAMOTO
- **WG5 : Cultural and Linguistic Adaptability** – Mr Thibault GROUAS
- **WG6 : User Interface Accessibility** – Pr. Jim CARTER
- **WG7 : User Interfaces Object, Actions and Attributes** – Pr Jim CARTER
- ~~**WG8 : User Interfaces for Remote Interactions** – Pr Gottfried ZIMMERMANN (work done)~~
- **WG9 : Gesture-based interfaces across devices and methods** – Pr. Jee-In Kim
- **WG 10 : Affective Computing (to start soon)**

Thank you very much for your attention



**How can I get involved in developing
Digital Trade Standards?**

How can I participate?



INTERNATIONAL
TECHNICAL COMMITTEE

NATIONAL
STANDARDS
BODY



NATIONAL MIRROR
COMMITTEE

Roles & responsibilities in the development of DTS

International Participation



NATIONAL MIRROR COMMITTEE

- Responsible for managing your national contribution to international standards
- Managed by a national committee manager/secretariat
- Nominate delegates to participate on International Technical Committee
- Consults with interested parties at national level where needed
- Coordinate votes on international ballots
- Proposes the national adoption of international standards



INTERNATIONAL TECHNICAL COMMITTEE

- Responsible for drafting international standards
- Endorsed representatives from your country work with representatives from other countries
- Managed by an international committee manager/secretariat

International Technical Committees



**PARTICIPATING
MEMBER**

OR



**OBSERVING
MEMBER**

International Technical Committees

PARTICIPATING MEMBER

- Actively participate in the international work
- Monitor all work items of the international Committee
- Attend international meetings
- Comment on drafts
- Obligation to vote on all Draft International Standards (DIS)



OBSERVING MEMBER

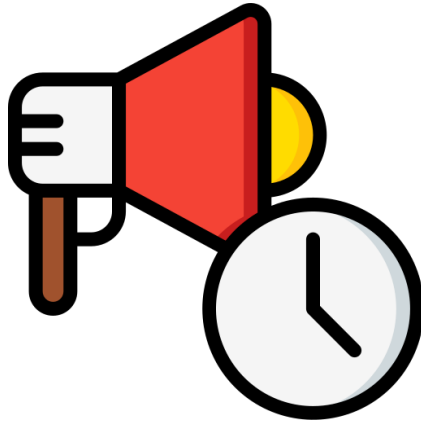
- Monitor all work items of the international Committee
- Attend international meetings
- Comment on DIS and Final Draft International Standards (FDIS)*



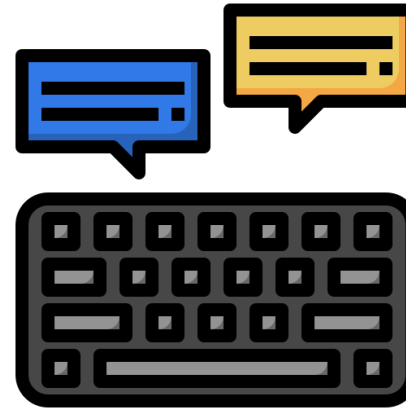
* Full members only

International Technical Committees

TIPS ON COMMENTING



**COMMENT EARLY IN
THE PROCESS**



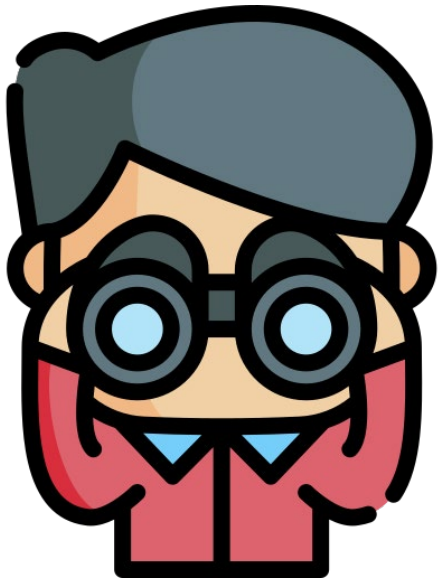
**SUGGESTED
AMENDMENTS ARE
CLEAR & CONSTRUCTIVE**



**ADVOCATE YOUR NATIONAL
POSITION**

International Technical Committees

WHAT ELSE DO I NEED TO KNOW BEFORE OBSERVING A MEETING?



- Different meeting types – plenary, working group
- Different meeting documents – resolutions, agendas
- Your NSB is there to support your attendance

International Technical Committees

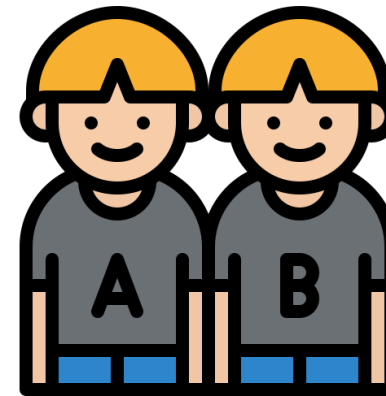
HOW CAN MEMBERS GET MORE INVOLVED?



**ATTEND VIRTUAL
MEETINGS**



**COMMENTING
ON DRAFT
STANDARDS**



**ISO TWINNING OR IEC
MENTORING
PROGRAMME**



**UPGRADE TO
P MEMBERSHIP**

International Technical Committees

“HOP INTO DTS” CHALLENGE

Between now and our next DTS workshop Standards Australia challenges you to get more involved in Digital Trade Standards!

Complete our post workshop survey for a chance to win an Australian themed prize.

All you have to do is share the actions you plan to take to increase your involvement in DTS.



Post Workshop Activity

Scan the QR code to undertake the post-workshop survey.



Upcoming 2021 Workshops

- Workshop 3** Effective Digital Trade Standards Mirror Committees – 15 September 2021
- Workshop 4** Digital Trade Standards Distribution and Outreach – 8 December 2021