Overview of texts governing the cooperation between ITU-T, and ISO and IEC (incl. JTC 1)
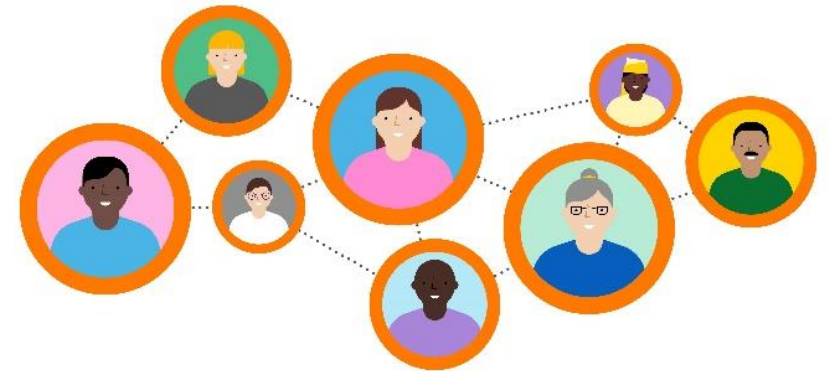
**Olivier Dubuisson
(Rec. ITU-T A.23 editor)**

**IEC-ISO-ITU
Joint Smart Cities Task Force (J-SCTF)
Forum on "Strengthening IEC, ISO and ITU
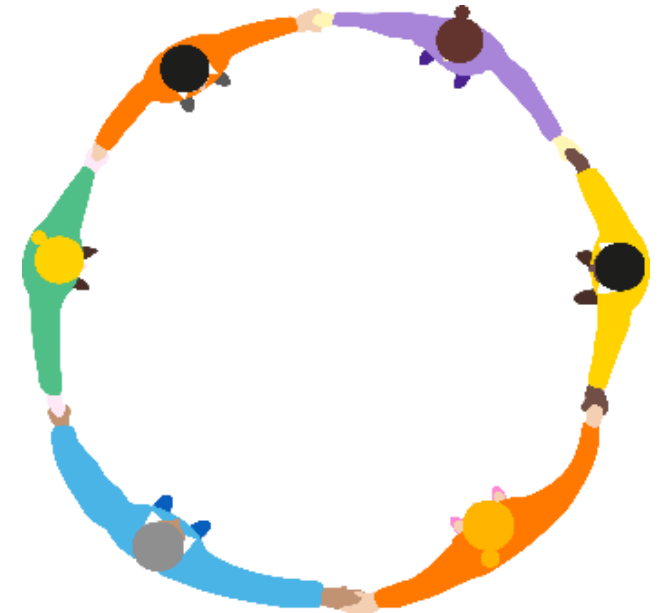collaboration for smart cities"**

Background

- ITU-T, ISO and IEC (in particular JTC 1) have worked in cooperation for decades
- Full range of options available:
  - information exchange (liaison statements)
  - liaison officers
  - work in collaboration
- Procedures are in place for working together:
  - World Telecommunication Standardization Assembly (WTSA) Resolution 7 "*Collaboration with ISO and IEC*"
  - Recommendation ITU-T A.23 | ISO/IEC JTC 1 Standing Document 3 "*Guide for ITU-T and ISO/IEC JTC 1 cooperation*"
  - Category A liaison maintained by JTC 1 with ITU-T
    - Category A: Organizations that make an effective contribution to the work of the technical committee or subcommittee […]. Such organizations are given access to all relevant documentation and are invited to meetings. They may nominate experts to participate in a WG.
  - Common Patent Policy for ITU-T/ITU-R/ISO/IEC
  - Supplement 5 to the ITU-T A-series "*Guidelines for collaboration and exchange of information with other organizations*"

WTSA Resolution 7 "Collaboration with ISO and IEC"

- The primary Resolution setting forth the ITU-T collaboration with ISO, IEC and ISO/IEC JTC 1
- Dating back in 1984
- To examine the work programme of ISO and IEC in the early stages of their studies in order to identify subjects where coordination seems desirable
  - World Standards Cooperation (WSC)
  - IEC SMB/ISO TMB/ITU-T TSAG Standardization Programme Coordination Group (SPCG)
  - liaison mechanisms
- To cooperate with these organizations as widely as possible and by appropriate means, in order to:
  - ensure that the specifications which have been jointly drawn up remain aligned
  - collaborate in drawing up other specifications in fields of joint interest
- To maintain the program of cooperation on the ITU-T website:
  - Search for common Recommendations | International Standards
  - List of common/twin Recommendations | International Standards
  - Mapping between ISO/IEC and ITU-T deliverables
  - "Representatives and other roles" on each ITU-T study group web page

Program of cooperation between ITU-T, and ISO or IEC

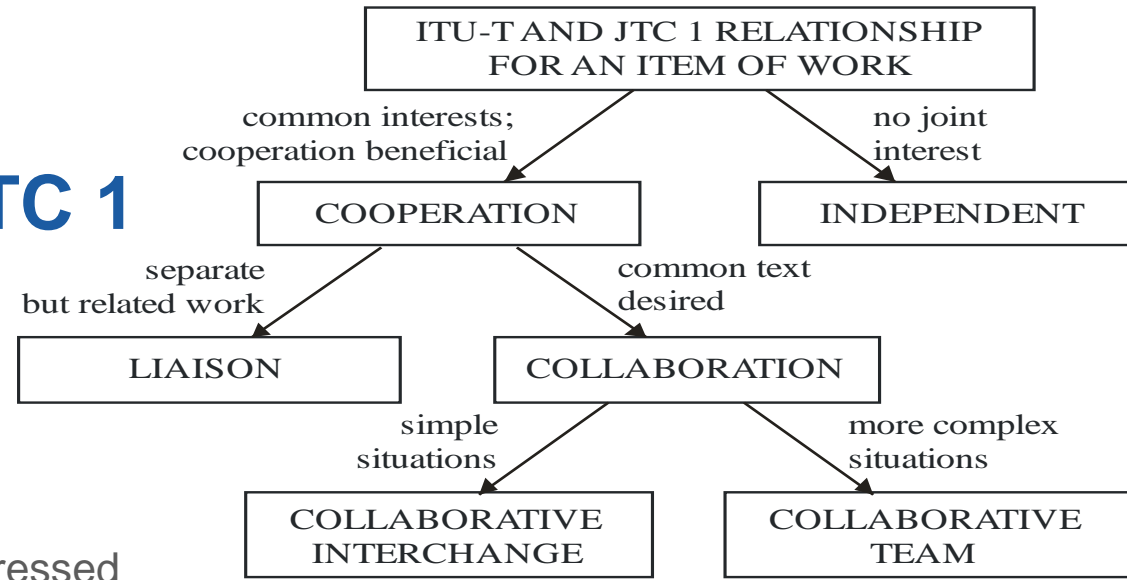| ITU-T study group	IEC TC, ISO TC, ISO/IEC JTC 1/SC
ITU-T **SG 5** "*Environment, climate change and circular economy*"	see relationships
ITU-T **SG 9** "*Broadband cable and TV*"	see relationships
ITU-T **SG 11** "*Signalling requirements, protocols and test specifications*"	see relationships
ITU-T **SG 12** "*Performance, QoS and QoE*"	see relationships
ITU-T **SG 13** "*Future networks, with focus on IMT-2020, cloud computing and trusted network infrastructures*"	see relationships
ITU-T **SG 15** "*Transport, access and home*"	see relationships
ITU-T **SG 16** "*Multimedia*"	see relationships
ITU-T **SG 17** "*Security*"	see relationships
ITU-T **SG 20** "*Internet of things (IoT), and smart cities and communities*"	relationships: ▪ IEC SyC Smart cities ▪ ISO/IEC JTC 1/SC 41 "*Internet of Things and digital twin*" ▪ ISO/IEC JTC 1/WG 11 "*Smart cities*"

Guide for ITU-T and ISO/IEC JTC 1 cooperation

- Started in 1988 (CCITT), now 6th edition
- Recommendation ITU-T A.23, Annex A | ISO/IEC JTC 1 Standing Document 3

- Contains:
  - a reference to approval procedures of each organization
  - a set of synchronization procedures for cooperation
  - rules for presentation of ITU-T | ISO/IEC common texts

- Does **not** introduce any change in the approval process of each organization
  - the JTC 1 approval process (CD, DIS, FDIS) is followed on the JTC 1 side
  - the ITU-T (traditional or alternative) approval process is followed on the ITU-T side

Modes of cooperation between ITU-T and ISO/IEC JTC 1

ITU-T AND JTC 1 RELATIONSHIP FOR AN ITEM OF WORK

common interests; cooperation beneficial → COOPERATION

no joint interest → INDEPENDENT

separate but related work → LIAISON

common text desired → COLLABORATION

simple situations → COLLABORATIVE INTERCHANGE

more complex situations → COLLABORATIVE TEAM
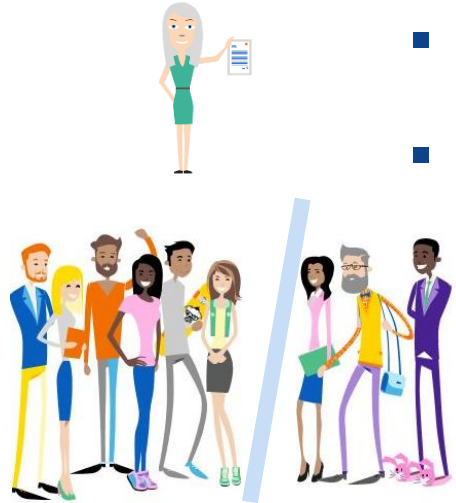
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- **Liaison statements, liaison officers**

- **Collaborative Interchange**
  - technical work on a single topic may be progressed in successive meetings in JTC 1 and in ITU-T
  - used when the work is straightforward, non-controversial, and with sufficient common participation in the meetings of each organization
  - *see clause 7 of the Guide for Cooperation*

- **Collaborative Team**
  - common group composed of experts from a JTC 1 SC and an ITU-T SG
    - ToR agreed by the ITU-T SG and the JTC 1 SC
    - similar to a (sub-)Working Group in JTC 1 and to (a subset of) a Question in ITU-T
    - meetings of the Collaborative Team are announced by each organization (and open to experts of the other organization)
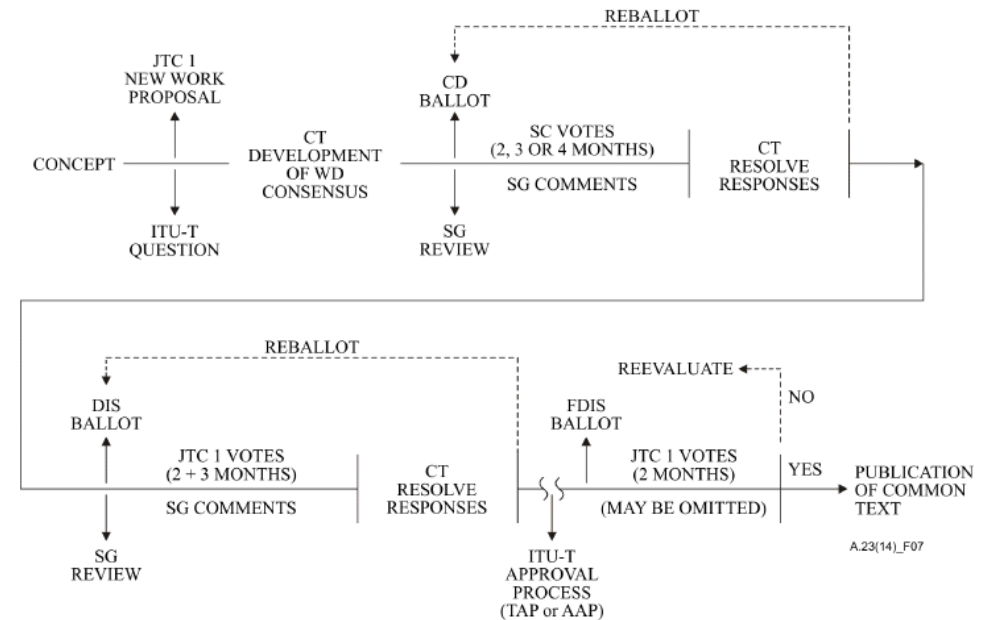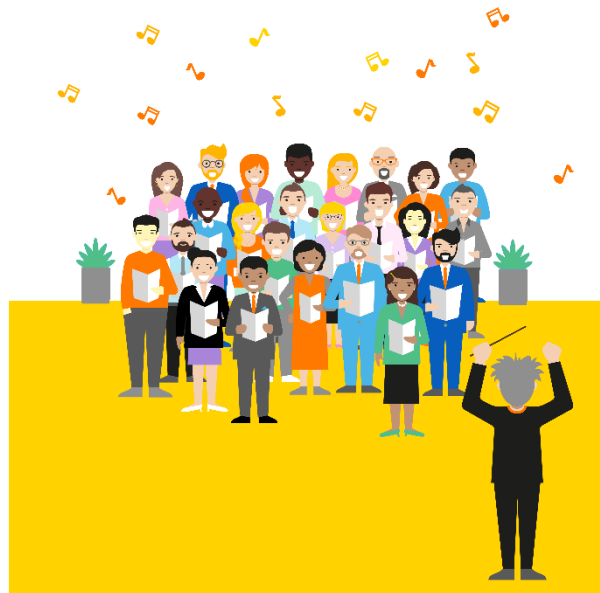 - *see clause 8 of the Guide for Cooperation*

Common text or twin text?

- In each collaborative mode, the output may be:
  - ➤ a **common text**: jointly published between ISO, IEC and ITU-T (using an agreed common publication template)

  - ➤ a **twin text**: <u>identically technical</u> content between the ITU-T Recommendation and the ISO/IEC standard, but distinct publication (with possible non-technical differences, including different publication templates and different information annexes)

- More than 250 "*common*" or "*technically aligned*" standards between both organizations:
  - Rec. ITU-T H.265 | ISO/IEC 23008-2 on high efficiency video coding (HEVC) ➔ Primetime Emmy Award
  - Rec. ITU-T X.509 | ISO/IEC 9594-8 on public-key infrastructure (PKI)
  - Rec. ITU-T X.1051 | ISO/IEC 27011 on information security management
  - Rec. ITU-T Y.3502 | ISO/IEC 17789 on cloud computing
  - List of common/twin Recommendations | International Standards
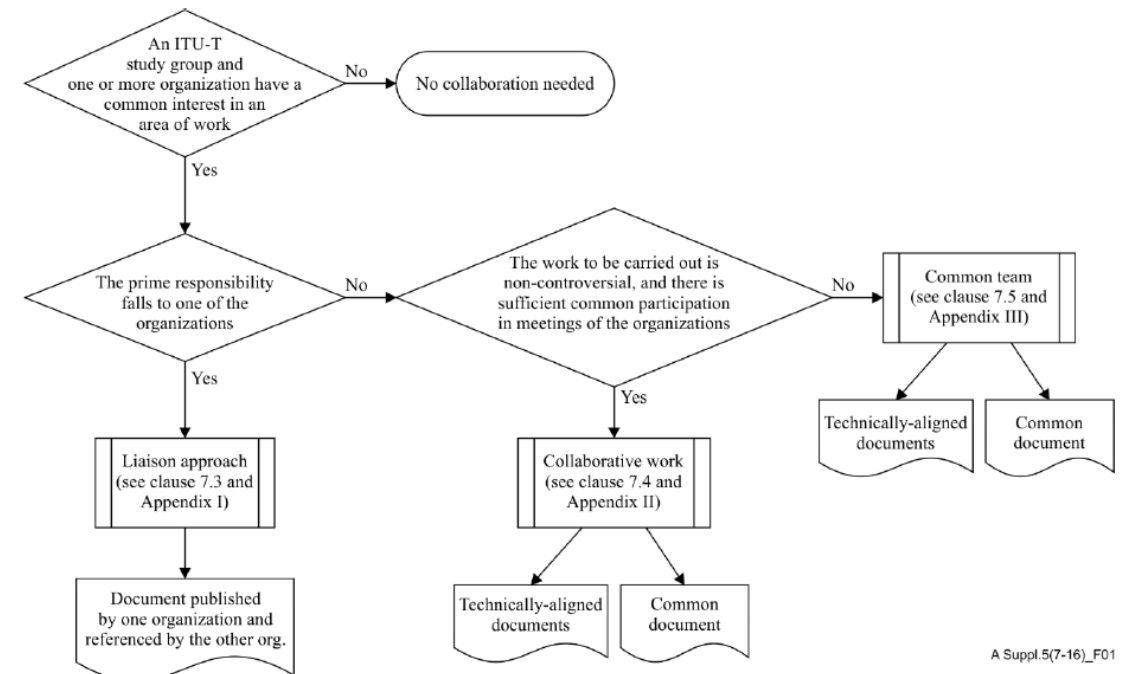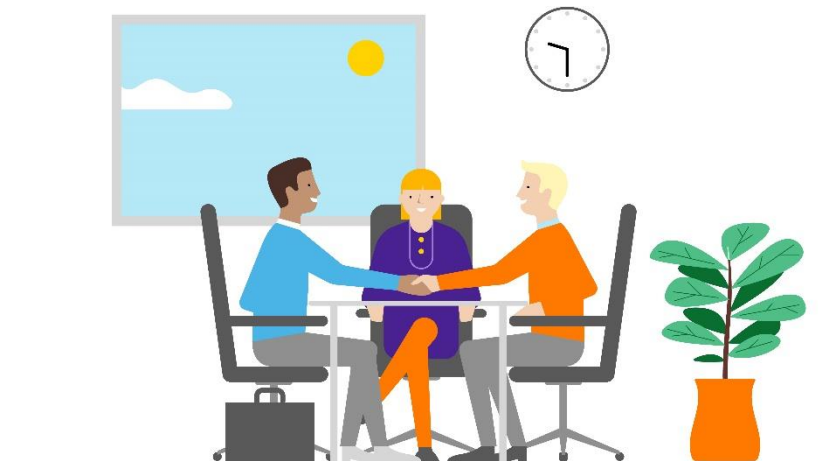
Synchronized approval process

- In all cases (collaborative interchange or collaborative team), the approval process of each organization is applied with no change
- Synchronization of the respective approval procedures
  - one step alternatively in each organization
  - members of each organization submit comments to their organization
  - the other organization is informed of changes introduced when resolving comments before initiating the next step
  - *see clauses 7.9 and 8.9 of the Guide for Cooperation*

Cooperation between an ITU-T SG, and an ISO TC or IEC TC

- [Supplement 5 to the ITU-T A-series](#) "*Guidelines for collaboration and exchange of information with other organizations*"
  - generalization of Rec. ITU-T A.23, Annex A | ISO/IEC JTC 1 Standing Document 3
- Different processes for collaboration and exchange of information
  - liaison mode
  - collaborative work
  - common team
- Generic process for developing common (or technically-aligned) documents
- Guidelines for synchronization of approval processes

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