Collaboration mechanisms between an ITU-T study group and an ISO technical committee

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Joint ITU-T SG17 & ISO TC 307/JWG 4 workshop
on "DLT security, identity management and privacy"

Background

- ITU-T, ISO and IEC (in particular JTC 1) have worked cooperatively 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*"
    - for cooperation between an ITU-T study group (or part thereof) and
                an ISO/IEC JTC 1 sub-committee (or part thereof)
  - 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.
  - Supplement 5 to the ITU-T Series A Recommendations
        "*Guidelines for collaboration and exchange of information with other organizations*"
    - for cooperation between an ITU-T study group (or part thereof), and
                an ISO technical committee or an IEC technical committee (or part thereof)
  - Common Patent Policy for ITU-T/ITU-R/ISO/IEC

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

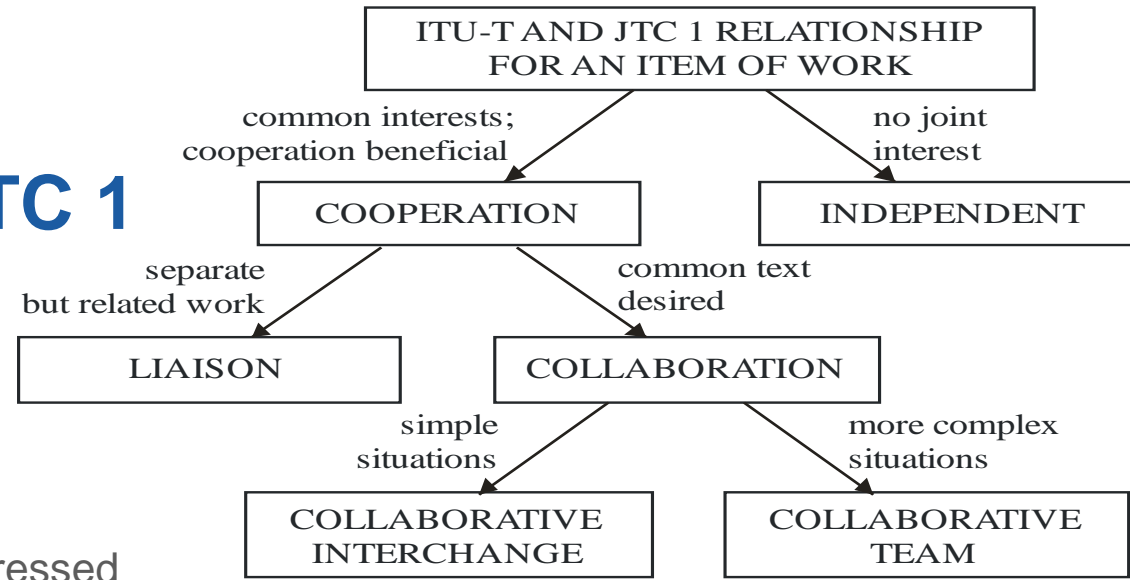| ITU-T study group	IEC TC, ISO TC, ISO/IEC JTC 1/SC
ITU-T **SG 5** "*Environment, climate change and circular economy*"	see relationships
ITU-T **SG 9** "*Broadband cable and TV*"	see relationships
ITU-T **SG 11** "*Signalling requirements, protocols and test specifications*"	see relationships
ITU-T **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 • ISO TC 307 (Blockchain and distributed ledger technologies) • ISO/IEC JTC 1/SC 27 (IT security techniques)
ITU-T **SG 20** "*Internet of things (IoT), and smart cities and communities*"	see relationships

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

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                    ┌─────────────────────────────┐
                    │  ITU-T AND JTC 1 RELATIONSHIP │
                    │   FOR AN ITEM OF WORK         │
                    └─────────────────────────────┘
      common interests;                          no joint
   cooperation beneficial                         interest
              ┌──────────────────┐      ┌──────────────────┐
              │   COOPERATION    │      │   INDEPENDENT    │
              └──────────────────┘      └──────────────────┘
     separate                  common text
  but related work             desired
        ┌──────────────┐      ┌──────────────────┐
        │   LIAISON    │      │  COLLABORATION   │
        └──────────────┘      └──────────────────┘
                    simple              more complex
                    situations          situations
            ┌──────────────────┐    ┌──────────────────┐
            │   COLLABORATIVE  │    │   COLLABORATIVE  │
            │   INTERCHANGE    │    │      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*
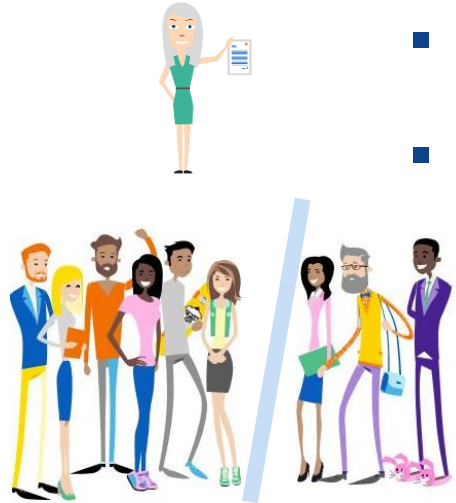
Common text or twin text?

- 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**: identically technical 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, many being "best-sellers"
  - Rec. ITU-T H.265 | ISO/IEC 23008-2 on high efficiency video coding (HEVC) [ITU-T SG16 & JTC 1/SC 29]
    - ➔ Primetime Emmy Award
  - Rec. ITU-T X.509 | ISO/IEC 9594-8 on *public-key infrastructure (PKI)* [ITU-T SG17 & JTC 1/SC 6]
  - Rec. ITU-T X.660 | ISO/IEC 9834 series on *object identifiers (OIDs)* [ITU-T SG17 & JTC 1/SC 6]
  - Rec. ITU-T X.680 & X.690 | ISO/IEC 8824 & 8825 series on *ASN.1 and encoding rules* [ITU-T SG17 & JTC 1/SC 6]
  - Rec. ITU-T X.1051 | ISO/IEC 27011 on *information security management* [ITU-T SG17 & JTC 1/SC 27]
  - Rec. ITU-T Y.3502 | ISO/IEC 17789 on *cloud computing* [ITU-T SG17 & JTC 1/SC 38]
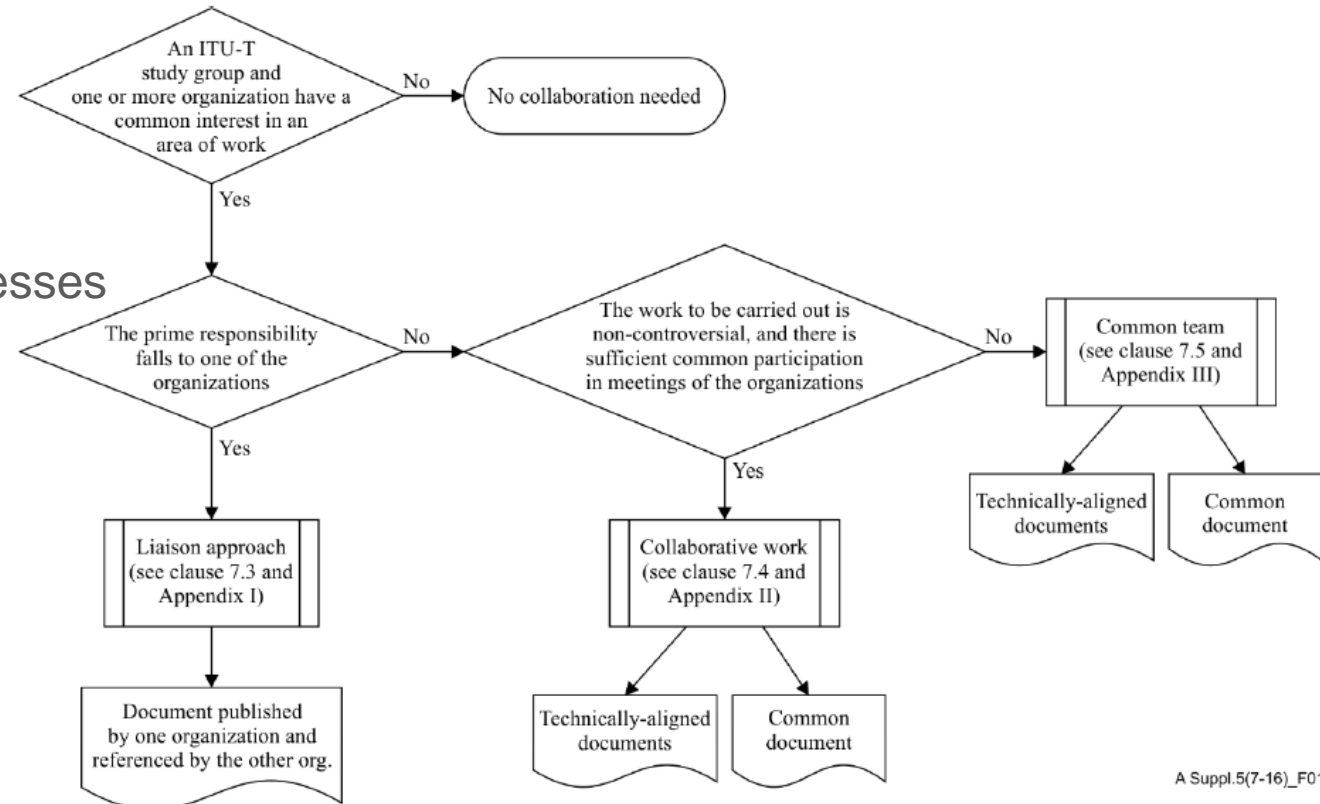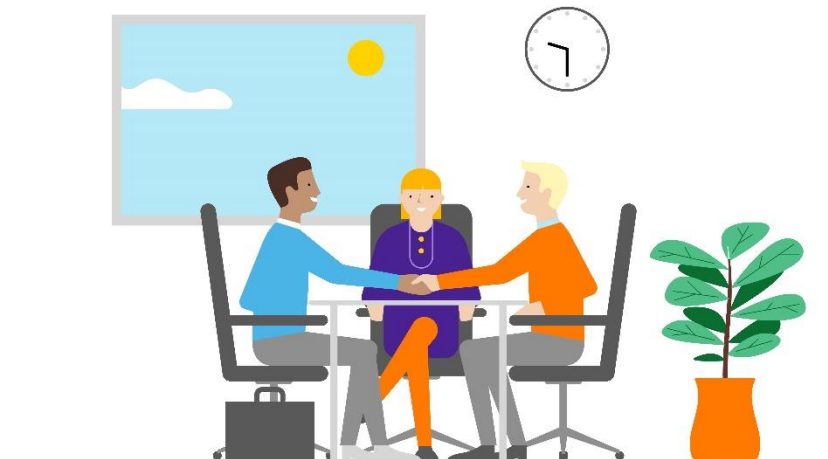
Synchronized approval process

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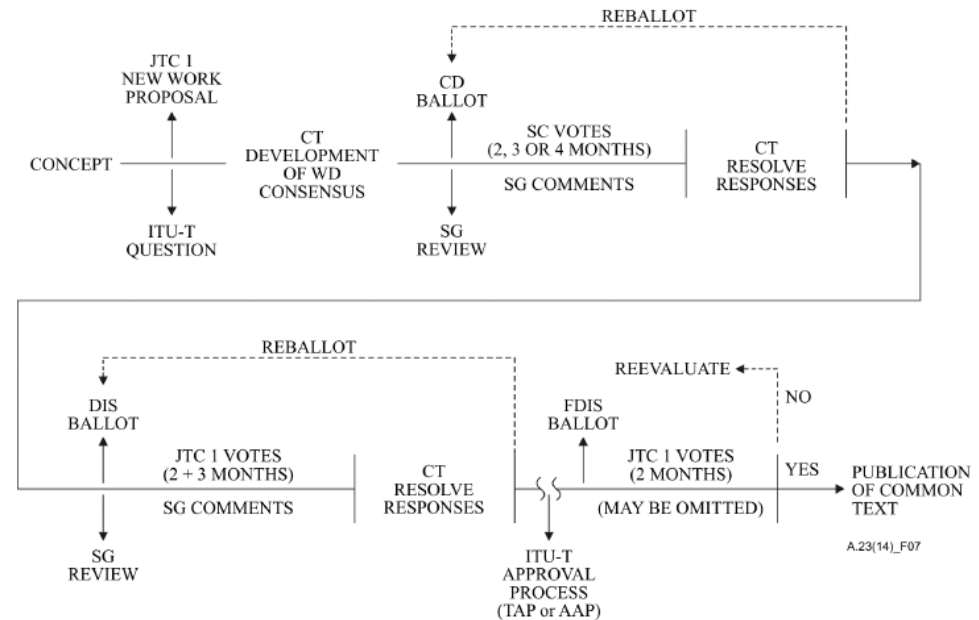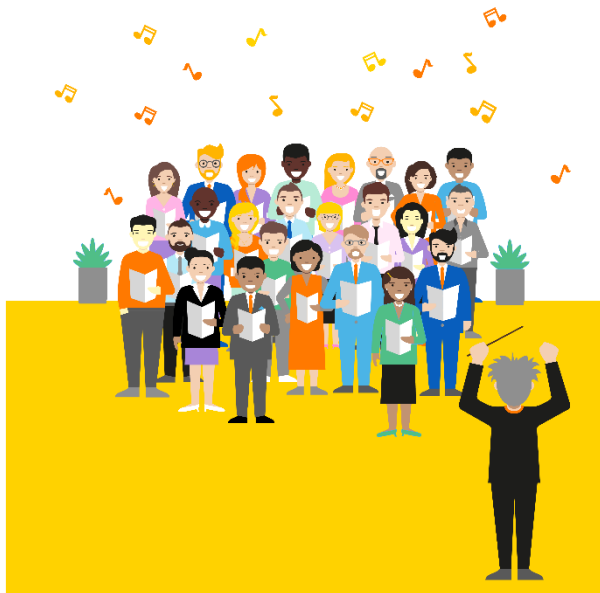
Cooperation between an ITU-T SG, and an ISO TC or IEC TC

- **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
  - ITU-T-only document, no equivalent in ISO and IEC
- Different processes for collaboration and exchange of information
  → see clause 8.2 for a recommended format of the **terms of reference to be agreed** between parties
  - liaison mode
  - collaborative work
  - common team
- Generic process for developing common (or technically-aligned) documents
- Guidelines for synchronization of approval processes

An ITU-T study group and one or more organization have a common interest in an area of work — No → No collaboration needed

Yes ↓

The prime responsibility falls to one of the organizations — No → The work to be carried out is non-controversial, and there is sufficient common participation in meetings of the organizations — No → Common team (see clause 7.5 and Appendix III)

Yes ↓ (prime responsibility): Liaison approach (see clause 7.3 and Appendix I) → Document published by one organization and referenced by the other org.

Yes ↓ (non-controversial): Collaborative work (see clause 7.4 and Appendix II) → Technically-aligned documents / Common document

Common team → Technically-aligned documents / Common document

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