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| ITU Logo | INTERNATIONAL TELECOMMUNICATION UNION**TELECOMMUNICATIONSTANDARDIZATION SECTOR**STUDY PERIOD 2017-2020 | TSAG-C.23 |
| **TSAG** |
| **Original: English** |
| **Question(s):** | N/A | Geneva, 1-4 May 2017 |
| **CONTRIBUTION** |
| **Source:** | Mitsubishi Electric Corporation |
| **Title:** | Revised proposal for a new Global Coordination and Collaboration mechanism including multilateral collaboration with other bodies (Rev. 3) |
| **Purpose:** | Proposal |
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| **Keywords:** | Coordination; collaboration; GCC; multilateral coordination/collaboration; working method |
| **Abstract:** | This contribution proposes a new multilateral coordination/coordination mechanism among multiple SDOs and/or SDOs including ITU-T called Global Coordination and Collaboration (GCC), among multiple SDOs and/or SDOs including ITU-T, based on the original proposal presented in TSAG C-121 (Geneva, July 2016).  |

**Summary**

To cope with the growing requirements for the harmonization of uncoordinatedly specified telecommunication/ICT-related standards and de facto standards, this document proposes the creation of new unified cooperation mechanism equipped with coordination functionality among member bodies, and provisions for cooperative standardization work across one or more ITU-T SGs and multiple participating SDOs, forums and consortia.

The generic cooperation mechanism proposed is called “Global Coordination and Collaboration”, abbreviated as “GCC” hereinafter as has been.

Because of the lack of time for detailed discussion facing WTSA-16 in near future, we could not have a detailed discussion on TSAG-C-121 of 2013-2016 Study period during TSAG meeting in July 2016, and agreed to include the issues raised in the contribution into the Living List of issues regarding Strengthening Collaboration as reported in TSAG TD 309 R1 (Geneva, July 2016). This contribution is developed modifying the original proposal in TSAG-C-72 and C-121 of 2013-2016 Study Period, in accordance with the collaboration principles described in newly revised text of Supplement 5 to the ITU-T A-series Recommendations (Geneva, July 2016) to include the application to multilateral collaboration.

1. **Introduction**

Today, many organizations, either de jure, de facto, regional and national SDOs, forums and consortia are working on the standardization on the common areas of interest in ICT, resulting in the existence of uncoordinatedly specified standards, wasting of resources, duplication of work, equipment incompatibility and confusion of the users of these standards.

To solve such serious problems, bilateral collaboration between two relevant organizations, such as the one on video coding algorithm development between ITU-T SG16 and ISO/IEC JTC 1 SC29, has been extensively conducted (based on ITU-T A.23), where both entities are "co-owners" of the Joint Collaborative Team (JCT) for video coding specification. In this example JCT, both ITU-T and JTC1 are "equal partners" in managing the group and its outcomes. However, efficiently managing the process becomes more complicated when three or more organizations are involved.

Making a set of multiple bilateral coordination/collaboration agreements on a common area of ICT among multiple organizations is rather impractical. Figure 1 shows the comparison of complications for the cases where multiple bilateral agreement and one multilateral agreement were introduced for the collaboration in a specific technical are, ITS, for example, It is clear that introduction of multilateral collaboration mechanism among multiple organizations under a single agreement makes the things simpler and practical.

 One Bilateral Three Bilateral Six Bilateral

Organization

Organization

Organization

Organization

Organization

Organization

Organization

Organization

Organization

Numbers of participating organizations

 Two Three Four

Organization

Organization

Organization

Organization

Organization

Organization

Organization

 One Multilateral One Multilateral

**Figure 1 Comparison of complexities between multiple bilateral agreement cases**

 **and a single multilateral agreement case**

 Therefore, the need of a multilateral collaboration and cooperation mechanism among more than two organizations including ITU-T Study Group(s) where all participating organizations are "co-owners" of the group, so to say a one-stop shopping type of collaboration/cooperation mechanism, has become all the more important.

Multiple type of works;

- analysis of current standardization situation,

- distribution of work among the participating organizations,

- coordination of works among participating organizations

 and/or

* collaborative and/or cooperative development of standards

are necessary in coordination and collaboration. It is important to operate these functions efficiently and consistently under a unified leadership.

Considerations on this type of coordination and collaboration have been accumulated through the operation of the Collaboration on ITS Communication Standards (CITS) trial. This document introduces the key aspects on this type of coordination and collaboration based on a generalized text of the CITS ToR, and could be seen as a first attempt to draft a framework for a new equal-footing, multilateral collaboration mechanism.

1. **Discussion**
	1. **Importance of cooperation and collaboration among ITU-T groups and external standardization bodies**

Today, many organizations, either de jure, de facto, regional or national SDOs, forums or consortia are working on the standardization on common or similar areas of ICT, resulting in the waste of resources, duplication of work, equipment incompatibility, and confusion among users and implementers of these standards. To be prominent in such competing environment, effective and consistent management of the standardization work becomes more important. Therefore, effective coordination and collaboration of works among relevant SGs and external standardization bodies is essential.

* + 1. **Existing ITU-T working methods and beyond**

In addition to the normal standardization works of SGs, ITU-T has been used many working methods such as FG, JCA, IRG and JCT that have been shown to be effective in handling coordinated standards development activities in a variety of specific situations.

Table 1 shows the comparison of existing functionalities with those of newly proposed mechanism. As it can be seen, the main differentiation of the GCC with the existing methods are;

* the participating organizations are "equal owners" of the process, while the other existing mechanisms, except for JCT, are ITU-T-centric.
* International organizations (i.e. WHO, UNECE) not developing technical organizations can also participate in coordination

Focus Groups specified in Recommendation ITU-T A.7 have been effective to explore new standardization areas, JCAs have been coordinating the relevant standardization works inside and outside ITU-T, have been providing a good cooperative places across relevant ITU-T SGs, IRGs are helping advance the collaboration among ITU-T Sectors (ITU-T and ITU-R in particular), and JCTs specified in Recommendation ITU-T A.23 have attained remarkable outputs[[1]](#footnote-1). All these functions have been working well when a single working method has been applied, but they would not be effective enough if they combined together. For example:

* FGs have been utilized to show the direction of new works for ITU-T SGs, but the life-time is limited to preliminary phase of studies, and not to be suitable for the coordination and collaboration continuously.
* JCAs cannot do technical works. Coordination activities of JCAs have been more focused on internal coordination or avoid duplication of works, but not focused on the distribution of works among relevant SDOs.
* IRGs are effective, but only limited among ITU Sectors.
* JCTs have proven successful for harmonized standards development between ITU-T and JTC1, and the newly revised Supplement 5 to A-series Recommendations has the promise to also allow harmonized standards development between two entities (ITU-T SG and other one external organization), however neither would effectively be able to address coordinated standards development with three or more involved organizations including ITU-T.

In current situation, coordination and collaboration requirements on specific area have become much more complicated. Consistent coordination on multiple work items should be necessary, and the different levels of collaborations, only exchanging liaison, collaborative works and joint collaborative works, should be required in parallel in a specific area under a unified leadership.

Making a set of bilateral collaboration agreements on a single ICT field among multiple organizations is rather complicated, impractical and time-consuming, as illustrated in Figure 1, – if at all successful. Therefore, the need for a multilateral coordination and collaboration mechanism where all partners are "co-owners" of the group, with combined functionalities for analysis, coordination and distribution of works and collaborative development of draft standards, offering provision for co-located meetings among multiple SDOs and ITU-T SGs for collaborative works, has become all the more important.

* + 1. **Importance of equal footing in future standardization areas**

In the past, technological development was more segmented, and different organizations created a traditions within their sectors for developing standards and other implementation agreements. Recent decades have seen a convergence of various fields of knowledge, and ITU – with a tradition in telecommunications/ICTs – started work across other sectors. In this particular context, collaboration and coordination is paramount, as is respecting the lead role these other organizations have in their respective fields.

A practical example is again the standardization around intelligent transportation systems; developed independently over decades. There is a significant cross-section between the ICT and automobile industry, necessitating cross- pollination of expertize in both domains recognizing each partner's stand in their sector – hence the establishment of CITS.

ITS is not the only cross-sector example – *inter alia* standardization for aviation, banking, e-health, e-education, e-government and other e-services should fit in this scenario.

**Table 1 – Comparison of suggested new GCC with existing and non-existing cooperation mechanisms**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Non-existing Group** | **Existing Groups** | **Suggested mechanism** |
| **GSI (with JCA)** | **FG**  | **IRG** | **JCT** | **CITS (under trial)** | **GCC** |
| Ownership | ITU-T | ITU | ITU-T with other ITU sector(s) | ITU-T & ISO/IEC JTC 1 | ITU-T with other entities | ITU with other entities |
| Membership | ITU-T members only | * ITU-T members
* Non- members\*
 | ITU members of relevant sectors | * ITU-T members
* other SDO’s members
 | All the SDO members concerned | All the SDO members and those from Academia concerned,  |
| Example | IPTV-GSI, | FG-IMT-2000, FG-AC  | IRG-AVA, IRG-AVAQ | JCT-VC, JCT-3V | CITS |  |
| Parent Group | SG | SG | SGs in different sectors | SG and other group in JTC 1  | SG & other groups in other SDOs | SG & other groups in other SDOs |
| Partnership | Multiple SGs | Multiple organizations  | Multiple ITU Sectors | Bi-lateral SDOs | Multi-lateral SDOs | ITU with other SDO(s) and other organizations providing support expertise (e.g. user groups or Intergovernmental Organizations such as ICAO or WHO) |
| Co-location | SG(s) & Expert Groups  | none | Expert groups | Usually with SG/SC | Not specified | ITU-T SGs, SDOs’ Groups |
| Life-time | Not limited | 23 months on average\*\* | Not limited | Not limited | Not limited | Not limited |
| Main tasks | * Coordination among relevant SGs
* Developing draft Recs.
 | * Pre-standardization phase study
* Survey of existing work and requirements
 | * Coordination among sectors
* Developing draft Recs
 | * Developing draft Recs
* Identifying new areas for study
 | * Analysis of existing works
* Coordination among SDOs
* Drafting Recs.
 | * Analysis of existing works
* Coordination among SDO(s) other organizations providing support expertise
* Distribution of works
* Drafting standards
 |
| Making Recs | at relevant SG  | (no Recs. Developed) | at relevant sector | at relevant SDOs | at relevant SDO(s) | at relevant SDO(s) |
| Related rules | Rec. ITU-T A1, § 2.2.11 | Rec. ITU-T A.7 | Rec. ITU-T A.1 (§ 2.3). | Rec. ITU-T A.23 | (experimental project of TSAG; ToR in the [website](http://www.itu.int/en/ITU-T/extcoop/cits)) | New Rec. necessaryNewly revised Supplement 5 of A-series Recs. will be applied |
| Remarks | for reference |  |  |  |  |  |

Notes \* : including those from academia

 \*\*: see TD 16/RevCom (2015-05)

## 2.2 Discussion on new mechanism

### 2.2.1 Objectives

The objectives of the proposed multilateral coordination and collaboration mechanism on a specific common area of interest, based on those specified for CITS, are:

1. to provide a globally recognized forum on a specific topic for the creation of an internationally accepted, globally harmonized set of standards of the highest quality in the most expeditious manner possible that will enable the rapid deployment of products and services in the global marketplace, by:
	1. identifying ongoing work as well as standardization gaps that may exist;
	2. promoting existing applicable standards and their cross-referencing where appropriate,
	3. modifying and extending existing standards where indicated, by the organization in charge of those standards, and
	4. in a coordinated manner, developing new standards where necessary

to respect the strengths and existing charters of ITU and other participating organizations (SDOs) so as to:

* 1. minimize any negative impact on past and current development efforts within each organization, and
	2. to avoid any unnecessary duplication in future development efforts,

and,

1. to minimize the procedural and negative budgetary impact of any actions for the benefit of all participants.

### 2.2.2 Requirements for Global Coordination and Collaboration (GCC)

The key requirements for such coordination and collaboration mechanism are:

* Neutral ownership

To promote this type of coordination/collaboration, it is important that all participants in and all contributions to the coordination/collaboration have equal status in the technical work and shall be considered on equal terms. Even and fair joint ownership for the governance of GCC needs to be introduced.

* Develop common international standards

The ultimate target of this type of cooperation is to make common international standards and to make the products and services interoperable to each other.

* Standardization rules are not altered

Standardization process taken by any member SDO, including ITU-T and ITU-R, should follow the rules specified by the organization itself, and need not be altered.

The functions for Global Coordination and Collaboration include:

* Survey the specific area of technology, identify existing specifications and ongoing standardization activities, and make analysis of what is still missing (gap analysis)
* Allocate the work to relevant organizations, according to their field of expertise
* Coordinate relevant standardization works among the different standardization organizations participating in the GCC and also with other organizations providing support expertise (e.g. user groups or Intergovernmental Organizations such as ICAO or WHO)
* Study and draft baseline texts for further standardization
* Provision of common place for collocated and collaborative meetings for:
	+ participating ITU-T SGs/WPs and their Questions
	+ participating SDOs, forums and consortia
	+ other organizations providing support expertise (e.g. user groups or Intergovernmental Organizations such as ICAO or WHO)
	+ GCC-led collaborative working groups

### 2.2.3 Selection of the mode of collaborative works

Guidance in clause 7.1 of Supplement 5 to A-series Recommendation with expansion among ITU-T Study Group(s) and other organization(s) shall be applied for selecting the mode of collaborative works in GCC. Figure 2 shows the flow for selecting mode of collaboration.



Figure 2 – Selection of collaboration mode

（Copied from Supplement 5 to A-sries Recommendations）,

*(The Figure is derived from Supplement 5 for bilateral collaboration case, but the selection principle should be the same for multilateral cases expressed in Appendix V of the Supplement)*.

# 3 Proposals

To enhance ITU-T standardization activities through coordination and collaborations with external standardization bodies and also with other organizations providing support expertise (e.g. user groups or Intergovernmental Organizations such as ICAO or WHO) , as well as inside ITU-T, creation of a new mechanism for coordination and collaboration, GCC, combining and utilizing existing working methods and extending them beyond current limitations if necessary, capable to be operated efficiently and consistently under unified leadership is proposed.

A GCC may include the combination of existing functionalities of FG, JCA and already non-existing functionalities of GSI as appropriate, also enables the coordination with other organizations providing support expertise (e.g. user groups or Intergovernmental Organizations such as ICAO or WHO) and provide the provisions for co-located and collaborative works among multi-lateral SDOs, forums, consortia and other organizations providing support expertise. There should be no reason to exclude the functionalities of GSI when an ITU-T SG needs to collaborate with other SG when they work together in co-location.

Detailed working methods for specific GCC should be discussed by GCC itself, and determined by itself since the situation among multiple participating SDOs should be different from one GCC to another, and should be very important aspects for making consensus, but in principle, it should pay well attention to the rules applied to existing working methods. The principle of guidelines for collaboration and exchange of information with other organizations specified in Supplement 5 to ITU-T A-series Recommendation shall be applied to GCC.

## 3.1 Proposed characteristics of new mechanism (GCC)

### 3.1.1 Generic Structure

GCC is comprised of Participating Organizations, Steering Committee and Collaborative Working Groups.

The generic structure of GCC is illustrated in Figure 3.

### 3.1.2 Participating organizations

The Collaborations should be open to:

* The members of participating organizations,

it is also open to

* representatives of ITU Member States[[2]](#footnote-2), Sector Members, Associates and Academia, and any individual from a country which is a member of ITU who wishes to contribute to the work,
* any individual from a national, regional or international SDO who wishes to contribute to the work.

if the leader of Working Group agrees to invite.

The coordination should be open to those participating in collaboration works and;

* representatives and the members of other organizations providing support expertise (e.g. user groups or Intergovernmental Organizations such as ICAO or WHO) for coordination

if the Chairman of steering committee agrees to invite.

### 3.1.3 Administrative support

TSB is to provide administrative service to GCC, and assign a counsellor.

### 3.1.4 Steering Committee

The “Steering Committee” comprises a chairman (or co-chairmen) and one or more vice-chairmen. At the establishment of GCC, ITU and the other initially identified participating organizations appoint the chairman. If needed, after the establishment of the GCC, subsequent appointment of Chairman (and co-chairmen, if necessary) and vice-chairmen will be made by the Steering Committee. In case a non-ITU-T member is appointed as a chairman, at least one person nominated from ITU-T should also be appointed as a co-chairman since the Steering Committee should be well acquainted with the rules and working procedures taken by ITU-T. The term of office of chairman (co-chairmen) and vice-chairmen is two years. Renewal of appointment is acceptable.

Each participating organization can nominate a representative for steering committee. Chairman (men) and vice chairmen are elected from the representatives.

NOTE: For the purposes of the GCC, each sector of ITU is considered as a different organization. JTC 1 should also be considered as a different entity from IEC and/or ISO.

### 3.1.5 Collaborative Working Groups and Work Items

Any member of the Steering Committee may propose a topic (Work Item) to be considered by the GCC. Work Item can be either analysis or standardization activities (either normative or non-normative). The Steering Committee shall, in consultation with the Work Item proposer(s), propose a Collaboration Working Group structure, including the mode of operation, to progress a qualified Work Item, and seek consensus of the GCC Participants, after which the Work Item will become an *established* Work Item. Table 2shows the possible examples of combination of steering committee and Work Groups

A SDO-led Collaborative Working Group shall be organized for the collaborative development of work item led by one of the participating organization, including ITU-T, in Liaison approach (Supplement 5, clause 7.3). Once a deliverable is developed by the Collaborative Working Group, it shall be submitted to leading SDO for conversion into its standard(s) in accordance with its established standardization procedure. Other participating SDOs are encouraged to reference the resulting standard(s)

 **Table 2 Example of combinations of Group/Organization for Steering Committee**

 **and Working Groups**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| OrganizationGroup |  ITU-T |  Org. B | Org. C |  Org. D |
|  Ga/SG m |  Gc/SG n |  Gj/B |  Gl/B |  Gp/C |  Gv/D |
|  Steering Committee  |  x |  x |  x |  x |  x |  x |
|  Working Group 1 |  x |   |  x |   |  x |  x |
|  Working Group 2 |  x |   |  |  x |  |  x |
|  **:** |  |  |  |  |  |  |
|  Working GroupY |  |  x |  |  x |  x |  |

ITU-T SG

Organization B

Organization A A

Global Coordination and Collaboration on XXX

TSB to provide administrative support

Steering Committee

[Single SDO-led Collaborative Working Groups]

[Multiple-SDOs-led Collaborative Working Groups]

[GCC-led Common Working Groups]

WG on

Work Item I

WG on

Work Item P

WG on

Work Item A

WG on

Work Item M

WG on

Work Item L

WG on

Work Item J

Common Team

(Suppl.5, Clause7.5)

Liaison approach

(Suppl.5, Clause7.3)

Collaborative work

(Suppl.5, Clause7.4)

**Figure 3 – General Structure of GCC**

A Multiple-SDOs-led Collaborative Working Group shall be organized for the collaborative development of work item led jointly by multiple participating organizations in Collaborative working mode (Supplement 5, clause 7.4). At least one participating organization must accept the Work Item leadership role for the Collaboration Working Group to exist. Once a deliverable is developed by the Collaborative Working Group, it shall be submitted to multiple leading SDOs for conversion into their standard(s) as the common or technically-aligned standard(s) of their organizations, in accordance with their established procedures. Other participating SDOs are encouraged to reference the resulting standard(s).

A GCC-led Common Working Group shall be organized for the collaborative development of work item led jointly by multiple participating organizations in Collaborative working mode (Supplement 5, clause 7.5). Once a deliverable is developed by the Collaborative Working Group, it shall be submitted to multiple leading SDOs for conversion into their standard(s) as the common or technically-aligned standard(s) of their organizations, in accordance with their established procedures. Other participating SDOs are encouraged to reference the resulting standard(s).

### 3.1.6 Working methods – general policies and procedures

Each Cooperative Working Group will determine by consensus how to process Work Items assigned to it in accordance with its normal operational procedures of leading bodies.

Multi-SDO-led Collaborative Working Groups and GCC-led-Common Working Groups work by consensus, except for decisions for which the Steering Committee is responsible.

As expressed in clause 2.2.2, standardization process taken lead by any SDO, including ITU-T and ITU-R, will follow the rules specified by its organization, and need not be altered.

### 3.1.7 Patent policy and copyright arrangements and copyright issues

Clause 11 of proposed revised Supplement No. 5 for A-series Recommendations shall be applied.

## 3.2 Procedure for establishing a GCC

Proposed procedural steps for the creation of a GCC are:

1. First, provisional discussion with candidate organizations (SDOs, Forums, SGs, etc.) for the creation of GCC shall be made with advanced consultation with the TSB director.
2. A SG (or SGs jointly) shall make consultation across ITU-T SG Chairmen for the preliminary agreement for creating GCC with justifications and draft ToR.
3. After getting preliminary agreement from Chairmen, SG(s) will iterate with candidate participation organizations towards a consensus on the structure and ToR, see §3.3.1 below..
4. Finally agreed ToR shall be approved by participating SDO(s).

In all cases, the Director of TSB and the chairman of TSAG are to be kept duly advised during the establishment procedure.

The establishment of a GCC and its first meeting will be announced by the Director of TSB in cooperation with SDOs concerned.

## 3.3 ToR of GCC (Generic part)

### 3.3.1 Creation of ToR

In the establishment phase, the steering committee of the proposed GCC shall discuss and draft specific ToR together with proposed detailed structure, in consultation with ITU-T Director (consultation may also be made in other participating organizations following to their procedures), and approval of participating organizations shall be sought. In principle, modified guidelines for collaboration and exchange of information with other organizations (based on Supplement 5 to ITU-T A-series Recommendations shall be taken into account.

### 3.3.2 Revision of ToR

Any member of the Steering Committee may propose a revision of ToR. The Steering Committee shall, in consultation with the revision proposer(s), discuss the draft revised ToR, and, as applicable, seek consensus of the Steering Committee. The revised ToR becomes effective after the approval of all participating organizations.

# 4 Conclusion

Establishment of new collaboration and coordination mechanism within ITU-T and with external organizations is proposed based on the experience and knowledge accumulated through the operation of the CITS trial. To strengthen the standardization activities of ITU-T SGs, provision for effective collaboration and coordination mechanism within and outside ITU-T is necessary.

Introduction of this new mechanism under unified leadership should work effectively and can replace the combined usage of JCA and formerly existed GSI if external cooperation/collaboration and internal cooperation/collaboration are included.

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1. We expect that the mechanism being guided in Supplement 5 of A-series Recommendations will also be useful for the joint development of standards between ITU-T and one external organization (Multilateral cooperation/collaboration case). [↑](#footnote-ref-1)
2. See <http://itu.int/members/>.
 [↑](#footnote-ref-2)