



INTERNATIONAL TELECOMMUNICATION UNION

**TELECOMMUNICATION  
STANDARDIZATION SECTOR**

STUDY PERIOD 2017-2020

**SG13-TD183/WP2  
STUDY GROUP 13**

**Original: English**

**Question(s):** 19/13

Geneva, 6-17 November 2017

**TD**

**Source:** Rapporteurs

**Title:** Report of Q19/13, Geneva, 6-17 November 2017

**Purpose:** Information

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**Keywords:** Q19/13, report,

**Abstract:** Report of Q19/13 meeting hold 6 - 17 November 2017, Geneva.

## 1 Opening of the meeting

Rapporteur of Question 19/13, Mr Emil Kowalczyk (Orange Polska) welcomed participants and provided agenda for meeting. The Rapporteur provided information regarding the Q19/13 mailing list and the place for collaborative Q19/13 work.

## 2 Previous meeting

The report from the previous Q19/13 meeting at Geneva, 3-14 July 2017 ([TD 109 \(WP2/13\)](#)) and Rapport of Q19/13 interim meeting at Warsaw, 4-8 September 2017 ([TD 130 \(WP2/13\)](#)) were evoked.

## 3 Goals of this meeting

The Rapporteur indicated goals of this meeting as follows:

- Progress on-going draft Recommendation :
  - o Y.CCICDM-Req,
  - o Y.CCICTM,
  - o Y.BDDP-reqts
  - o Y.cslm-metadata
- Discuss new work items introduced by contributions
- Review the Q19/13 Roadmap and Q19/13 Living Lists
- Review the Q19/13 Work Programme
- Participate in joint sessions with other Questions as needed

#### 4 Approval of the agenda

The agenda (posted as [TD 137 \(WP2/13\)](#)) was presented and approved by the meeting.

#### 5 Discussion of input documents (including liaisons)

##### 5.1 Documents for All questions

The following documents were reviewed and noted.

Document	Subject	Source	Questions	Disposition
<b>GENERAL</b>				
<a href="#">[ 191-GEN ]</a>	LS on the amendment of the Terms of Reference of the JCA on multimedia aspects of e-services	JCA-MMeS	<a href="#">ALL/13</a>	Noted.
<a href="#">[ 187-GEN ]</a>	Recent trends and standardization activities of Machine Learning in communications	<a href="#">TSB</a>	<a href="#">ALL/13</a>	Useful background for future work of Q19/13 towards AI-based management.
<a href="#">[ 186-GEN ]</a>	ITU Journal: ICT Discoveries - seven invited papers published in the first special issue on "The impact of Artificial Intelligence (AI) on communication networks and services"	<a href="#">TSB</a>	<a href="#">ALL/13</a>	Noted.
<a href="#">[ 185-GEN ]</a>	SG13 IMT2020/5G workshop and demo day	<a href="#">Chairman</a>	<a href="#">ALL/13</a>	Materials from workshop are available.
<a href="#">[ 184-GEN ]</a>	LS/i on the establishment of ITU-T Focus Group on Application of Distributed Ledger Technology [ from FG DLT]	<a href="#">FG DLT</a>	<a href="#">ALL/13</a>	Potentially could be interested for use cases related to Q19/13.
<a href="#">[ 183-GEN ]</a>	Report of the 15th ISO/IEC JTC 1/SC 38 meeting (11 - 15 September 2017)	<a href="#">Liaison Rapporteur</a>	<a href="#">QALL/13</a>	Useful document for update Q19/13 about SC38 work, e.g. progress on ISO/IEC 19941.
<a href="#">[ 182-GEN ]</a>	Report of the 8th ISO/IEC JTC 1/WG 9 meeting (14 - 18 August 2017)	<a href="#">Liaison Rapporteur</a>	<a href="#">QALL/13</a>	Useful document for update Q19/13 about WG9 work in aspects of BigData.  Open discussion about precisely targeting liaisons to proper WG

				instead high-level of ISO/IEC.
<a href="#">[ 181-GEN ]</a>	Initial draft output of guidelines and methodologies for developing technical Recommendations	<a href="#">Co-editors of the SG13 ad hoc group</a>	<a href="#">QALL/13</a>	Background for future methodologies for developing technical Recommendations.
<a href="#">[ 179-GEN ]</a>	LS/i/r on request for background information on the implementation of the 2012 International Telecommunication Regulations (reply to TSAG LS8) [from ITU-T SG11]	<a href="#">ITU-T SG11</a>	<a href="#">QALL/13</a>	Noted.
<a href="#">[ 175-GEN ]</a>	LS/i on appointment of ITU technical experts [from ITU-T SG11]	<a href="#">ITU-T SG11</a>	<a href="#">ALL/13</a>	Noted.
<a href="#">[ 173-GEN ]</a>	LS/i on Question ITU-R 236-1/7 "The future of the UTC time scale" [from ITU-R Study Group 7]	<a href="#">ITU-R SG 7</a>	<a href="#">ALL/13</a>	Noted.
<a href="#">[ 170-GEN ]</a> (Rev.1)	ITU Journal: ICT Discoveries - call for papers on "The impact of Artificial Intelligence (AI) on communication networks and services"	<a href="#">TSB</a>	<a href="#">ALL/13</a>	Noted.
<b>PLENARY</b>				
<a href="#">[ 71-PLEN ]</a>	Report of JCA-IMT2020 meeting	<a href="#">JCA-IMT2020 Chairman</a>	<a href="#">ALL/13</a>	Noted.
<a href="#">[ 70-PLEN ]</a>	Establishment of ad-hoc group to develop ToR for new Focus Group on AI&ML	<a href="#">SG13 Management Team</a>	<a href="#">ALL/13</a>	Important to monitor ToR for FGAIML.
<a href="#">[ 69-PLEN ]</a>	Report of the 29 June 2017 SG13RG-AFR e-meeting	<a href="#">SG13RG-AFR, Vice-Chairman</a>	<a href="#">ALL/13</a>	Noted.
<a href="#">[ 68-PLEN ]</a>	Report of the third meeting of the SG13 ad hoc group on "Guidelines for development of technical Recommendations", e-meeting, Wednesday 18 October 2017, 9:00-10:30 Geneva time	<a href="#">Co-Convenors of the SG13 ad hoc group</a>	<a href="#">QALL/13</a>	Sessions of the ad hoc group at the Nov SG13 meeting are proposed.
<a href="#">[ 67-PLEN ]</a>	Report of the second meeting of the SG13 ad hoc group on "Guidelines for development of technical Recommendations", Wednesday 12 July 2017, 13:30-14:30	<a href="#">Co-Convenors of the SG13 ad hoc group</a>	<a href="#">QALL/13</a>	Noted.
<b>CONTRIBUTIONS</b>				

<a href="#">[ 342 ]</a> (Rev.1)	Support for creating a new Focus Group "Machine Learning in Communications" (FG-MLCOM)	<a href="#">Hankuk University of Foreign Studies</a> , <a href="#">Korea Advanced Institute of Science and Technology (KAIST)</a>	<a href="#">QALL/13</a>	Noted.
<a href="#">[ 339 ]</a>	The proposal on the roadmap on IMT-2020	<a href="#">Ministry of Telecom and Mass Communication s of the Russian Fede</a>	<a href="#">QALL/13</a>	Noted.
<a href="#">[ 337 ]</a>	Proposal to establish a new Focus Group on "Artificial Intelligence and Machine Learning"	<a href="#">Tunisie Télécom</a>	<a href="#">QALL/13</a>	Noted.
<a href="#">[ 332 ]</a>	Proposal of new focus group on AI/Machine Learning-related study	<a href="#">KT Corporation</a>	<a href="#">QALL/13</a>	Noted.
<a href="#">[ 289 ]</a>	Support to have the Focus Group MLCOM set up	<a href="#">Zambia Information &amp; Communication s Technology Authority (ZICTA)</a>	<a href="#">QALL/13</a>	Noted.
<a href="#">[ 264 ]</a>	Propose to establish a new ITU-T Focus Group on Network and Application Artificial Intelligence	<a href="#">Ministry of Industry and Information Technology (MIIT)</a>	<a href="#">QALL/13</a>	Noted.
<a href="#">[ 259 ]</a> (Rev.1)	Technical Issues of Multipath Transmission Control Protocol	<a href="#">Electronics and Telecommunicat ions Research Institute (ETRI)</a>	<a href="#">QALL/13</a>	Noted.
<a href="#">[ 257 ]</a> (Rev.1-2)	Overview of Multi-path Transmission Control Protocol	<a href="#">Electronics and Telecommunicat ions Research Institute (ETRI)</a>	<a href="#">QALL/13</a>	Noted.
<a href="#">[ 227 ]</a>	Creation of the FG MLCOM	<a href="#">RURA Rwanda</a>	<a href="#">QALL/13</a>	Noted.
<a href="#">[ 220 ]</a>	Supporting set up the Focus Group MLCOM	<a href="#">Ministère du Développement de l'Economie numérique et des Postes</a>	<a href="#">QALL/13</a>	Noted.
<a href="#">[ 207 ]</a>	Proposal to set up a new Focus Group "Machine Learning in Communications" (FG-MLCOM)	<a href="#">Fraunhofer- Institut für Nachrichtentech nik Heinrich-Hertz-Institut</a>	<a href="#">QALL/13</a>	Noted.

<a href="#">[ 204 ]</a> (Rev.1) +Add.1	Contribution to Future Networks, focusing on Frequency Spectrum, Digital Confidence, Infrastructure, Awareness	<a href="#">Ministère de la Communication, des Télécommunications, des Postes et de l'Economie numérique</a>	<a href="#">QALL/13, Q5/13</a>	Noted.
<a href="#">[ 202 ]</a> (Rev.1)	Cloud computing, information-centric networking ICN and NGN multimedia, NGN-evolution	<a href="#">Ministère des Postes et Télécommunications</a>	<a href="#">QALL/13, Q5/13, Q2/13</a>	Noted.

## 5.2 Documents for Question 19/13

The following documents were reviewed and noted.

Document	Subject	Source	Questions	Disposition
<b>GENERAL</b>				
<a href="#">[ 180-GEN ]</a>	LS/i on the progress of draft Recommendation Y.IoT-BoT-fw "Framework of blockchain of things as decentralized service platform" [from ITU-T SG20]	<a href="#">ITU-T SG20</a>	<a href="#">Q2/13, Q19/13, Q18/13, Q17/13</a>	Noted.
<a href="#">[ 178-GEN ]</a>	LS/i on Distributed Ledger Technologies Security [from ITU-T SG17]	<a href="#">ITU-T SG17</a>	<a href="#">Q7/13, Q2/13, Q19/13, Q18/13, Q17/13, Q16/13</a>	Noted.
<a href="#">[ 174-GEN ]</a>	LS/i on the first meeting of ITU-T Focus Group on Data Processing and Management to support IoT and Smart Cities & Communities [from FG-DPM]	<a href="#">FG DPM</a>	<a href="#">Q7/13, Q22/13, Q21/13, Q20/13, Q19/13, Q18/13, Q17/13</a>	WP2/13 suggests to put more attention on DPM aspects.
<a href="#">[ 172-GEN ]</a>	LS/i on future networks including mobile and NGN [from ISO/IEC JTC 1/SC 27]	<a href="#">ISO/IEC JTC 1/SC 27</a>	<a href="#">Q22/13, Q2/13, Q19/13, Q18/13, Q17/13, Q16/13</a>	Noted.
<a href="#">[ 171-GEN ]</a>	LS on MEF Forum Work on 5G [from MEF]	<a href="#">MEF</a>	<a href="#">Q6/13, Q23/13, Q21/13, Q20/13, Q19/13, Q18/13, Q17/13</a>	Noted.
<b>WP2</b>				

<a href="#">[ 133-WP2 ]</a>	LS/i on Intelligent network analytics and diagnostics Project Plan [from ITU-T SG12]	<a href="#">ITU-T SG12</a>	<a href="#">Q7/13, Q19/13, Q18/13, Q17/13</a>	Noted.
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### 5.3 Y.CCICDM-Req

Base document: [\[ TD 129-WP2/13 \]](#)

Number	Title	Source	Qs	Disposition
<a href="#">[ C-357 ]</a>	Proposal for additions and modifications in Y.CCICDM-Req	<a href="#">China Unicom</a>	<a href="#">Q19/13</a>	Accepted with modification.
<a href="#">[ C-344 ]</a>	Proposal of update clause "8. Requirements for inter-cloud data annotation, processing and usage" of draft Rec. Y.CCICDM-Req	<a href="#">ORANGE POLSKA S.A.</a>	<a href="#">Q19/13</a>	Accepted with modification.
<a href="#">[ C-343 ]</a>	Proposal of update use case of inter-cloud data policy decision point (I.7.) for draft Rec. Y.CCICDM-Req.	<a href="#">ORANGE POLSKA S.A.</a>	<a href="#">Q19/13</a>	Accepted with modification.
<a href="#">[ C-320 ]</a>	Proposal to update a figure for clause 6.2 (Relationship among DPDP, DPEP, DPIP, and DPAP in inter-cloud data policy-based management) in Y.CCICDM-Req	<a href="#">Kyung Hee University , ORANGE POLSKA S.A.</a>	<a href="#">Q19/13</a>	Accepted with modification.

### 5.4 Y.BDDP-reqts

Base document: [\[ TD 105-WP2/13 \]](#)

Number	Title	Source	Qs	Disposition
<a href="#">[ C-248 ]</a>	Proposed a new use case for draft Rec. Y.BDDP-reqts	<a href="#">DaTang Telecommunication Technology &amp; Industry Holding Co. Ltd</a>	<a href="#">Q19/13</a>	Accepted with modification.
<a href="#">[ C-246 ]</a>	Proposed to add a new sub-clause 6.3 for draft Rec. Y.BDDP-reqts	<a href="#">DaTang Telecommunication Technology &amp; Industry Holding Co. Ltd</a>	<a href="#">Q19/13</a>	Accepted with modification.

### 5.5 Y.CCICTM

Base document: [\[ TD 24-WP2/13 \]](#)

Number	Title	Source	Qs	Disposition
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<a href="#">[ C-305 ]</a>	Proposal to add description for managing isolation and security mechanism as well as the requirements for inter-cloud trust management in the draft recommendation Y.CCICTM	<a href="#">Ministry of Industry and Information Technology (MIIT)</a> , <a href="#">China Telecom</a>	<a href="#">Q19/13</a>	Accepted with modification. Part related to terms and abbreviations are accepted. Part related to requirements proposed in clause 8 and 9 are decided to put on living list.
<a href="#">[ C-250 ]</a>	Gap analysis for cloud service evaluation between ITU-T and other SDOs	<a href="#">DaTang Telecommunication Technology &amp; Industry Holding Co. Ltd</a>	<a href="#">Q19/13</a>	Accepted. Future work related to evaluation, reputation and scoring should be harmonize with ISO/IEC 19086.

## 5.6 Y. cslm-metadata

Base document: [\[ TD 106-WP2/13 \]](#)

Number	Title	Source	Qs	Disposition
<a href="#">[ C-358 ]</a>	Proposal for a new metadata applicability scenario and other detailed changes in Y.cslm-metadata	<a href="#">China Unicom</a>	<a href="#">Q19/13</a>	Accepted this modification.

## 5.7 Others

Number	Title	Source	Qs	Disposition
<a href="#">[TD-139/WP2]</a>	Predictive Fault and performance management to ensure carrier grade reliability and availability of virtual network services on multiple clouds	TEC, DoT, Ministry of Communications, Government of India.	<a href="#">Q19/13</a>	This provides inspiration for thoughts towards a potential new work for Q19/13.

## 5.8 New Work Item Proposals

Number	Title	Source	Qs	Disposition
<a href="#">[ C-229 ]</a>	Proposal for new work item on "Private Cloud Computing Capability Maturity Proposal for new work item on Evaluation Guidelines"	<a href="#">China Mobile Communications Corporation</a> , <a href="#">China Unicom</a>	<a href="#">Q19/13</a>	Accepted with modifications. The meeting agreed to focus on general cloud maturity aspects without

				limitation to implementation (public/private/enterprise etc.). The scope of work was updated to focus on requirements and framework.
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## 6 Review the Work Program

The work program of Q19/13 was reviewed and updated according to new work item proposed after [\[ C-229 \]](#). The current work program for Q19/13 can be found in Annex A.

## 7 Roadmap for Q19/13

The roadmap of Q19/13 was reviewed and updated according to new work item proposed after contribution [\[ C-229 \]](#). At the moment Q19/13 is working on topics which are resulting in different baseline texts for current and future draft Recs: cloud service lifecycle management, big data, data management, trust management and cloud maturity. The current roadmap for Q19/13 can be found in [TD 180 \(WP2/13\)](#).

## 8 Review Living Lists

The living list for Q19/13 was reviewed and updated according to disposition for contribution [\[ C-305 \]](#). This contribution proposed content for clause 8 and 9 of Y.CCICTM as functionalities for managing isolation and security mechanism, and requirements for inter-cloud trust management. But currently there are no use cases to support these requirements. Use cases should be provided in the future to move this content to the draft Y.CCICTM. The current Living List for Q19/13 can be found in [TD 179 \(WP2/13\)](#).

## 9 Contributions for other Questions

None identified.

## 10 Drafting

### 10.1 Draft Rec. Y.CCICDM-req

The draft Rec. was enriched through the update of use cases related to implementation CSC data policy in inter-cloud and relevant requirements derived from this use cases. Additionally, aspects of relationship of main elements in inter-cloud data policy-based management was positioned and addressed. Finally, several editorial changes was proposed and accepted.

### 10.2 Draft Rec. Y.CCICTM

This draft Rec. was editorial updated only by adding terms and abbreviations, but based on gap analysis for cloud service evaluation between ITU-T and other SDOs meeting agreed future work related to evaluation, reputation and scoring, which should be should be harmonized with ISO/IEC 19086. Some material proposed for clause 8 and 9 by C-305 are decided to put on living list as use cases should be provided in the future to support requirements provided by this contribution.



### 10.3 Draft Rec. **Y.BDDP-reqts**

This draft Rec. was updated by adding a new use case on tiering preserved data and derived requirements relevant to this use case.

### 10.4 Draft Rec. **Y.cslm-metadata**

This draft Rec. was update by several editorial and technical modifications for the draft Rec. text as was as new NaaS applicability on instant VPN was proposed to enrich Appendix I.

### 11 IPR statement

No IPR statement was received during the meeting.

### 12 Review and approval of meeting outputs

The Q19/13 meeting approved the following output temporary documents (TDs):

TD 174 (WP2/13)	Output draft Rec. "Cloud computing - Requirements for inter-cloud data management" (Y.CCICDM-Req)
TD 175 (WP2/13)	Output draft Rec. "Cloud computing - Overview of inter-cloud trust management" (Y.CCICTM)
TD 176 (WP2/13)	Output draft Rec. "Big data – Overview and requirements for data preservation " (Y.BDDP-reqts)
TD 177 (WP2/13)	Output draft Rec. "Metadata framework for cloud service lifecycle management " (Y.cslm-metadata)
TD 178 (WP2/13)	Proposed NWI - " Cloud computing maturity requirements and framework" (Y.CCM-reqts)
TD 179 (WP2/13)	Living list for Q19/13
TD 180 (WP2/13)	Roadmap for Q19/13
TD 183 (WP2/13)	Rapport of Q19/13, 6-17 November 2017

### 13 Approval of Outgoing Liaisons, if any

The Q19/13 meeting approve the following Outgoing Liaisons:

<a href="#">TD 181 (WP2/13)</a>	LS/o on response to SG13-LS21 and SG13-LS22 from ISO/IEC JTC1/SC32 WG 3 ITU-T Study Group 13, Question 19/13, propose open an official communication channel with ISO/IEC JTC1 SC32 WG3 and solicit their feedback as a group on Q19/13 newly started work.
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### 14 Future Plan/Meetings

The Q19/13 will meet during the next SG13 Rapporteur groups meeting, **9 - 18 April 2018, Geneva**. Main objectives for this meeting include:

- Progress on Q19/13 work items:
  - o draft Rec. “Cloud Computing - Overview of Inter-Cloud Trust Management”
  - o draft Rec. “Cloud Computing - Requirements for Inter-Cloud Data Management”
  - o draft Rec. “Big data – Overview and requirements for data preservation”
  - o draft Rec. “Metadata framework for cloud service lifecycle management”
  - o draft Rec. “Cloud computing maturity requirements and framework”
- Discuss any new work items proposals

The follows Question 19/13 meetings are planned in time of SG13 Plenary meeting , 16 – 27 July 2018 and SG13 Rapporteur groups, 22 October - 2 November 2018.

### **15 Other Business/Miscellaneous**

In time of this Q19/13 was inspired for thoughts towards a potential new work is aspects of predictive fault and performance management to ensure carrier grade reliability and availability of virtual network services on multiple clouds ([\[TD-139/WP2\]](#) ). This material becomes discussion about fault detection (single or cascade) in network softwarisation. It occurs, that precisely detection source of fault and area affected by faults are key aspects in telecommunication’s software infrastructure. Contribution proposed start new work item are invited.

### **16 Review and approval of the meeting report**

The Q19/13 reviewed and approved the meeting report ([TD 183 \(WP2/13\)](#))

### **17 Closing of the meeting**

Rapporteur Q19/13, Dr. Emil Kowalczyk showed his thanks and appreciations for all the participants who had devoted so much on the work of Q19/13 and expressed his wishes to meet again during SG13 RGM in April 2018.

### Annex A – Q19/13 Work Program

<b>Rec.</b>	<b>Q</b>	<b>Short Title</b>	<b>Status</b>	<b>Approval process</b>	<b>Priority</b>	<b>Target for Consent / Determination / Approval</b>	<b>Revised / New Text Location</b>	<b>Editors</b>	<b>Liaisons</b>
Y.ccictm	19/13	Cloud Computing - Overview of Inter-Cloud Trust Management	N	AAP	H	Q4 2018		<b>Yan Lei</b> Datang Software	SG17
Y.ccicdm-req	19/13	Cloud Computing - Requirements for Inter-Cloud Data Management	N	AAP	H	Q3 2018		<b>Ying Cheng,</b> China Unicom	ISO/IEC SC38
Y.BDDP-reqts	19/13	Big data – Overview and requirements for data preservation	N	AAP	H	Q1 2019		<b>Yan Lei</b> Datang Software, <b>Ying Cheng,</b> China Unicom	
Y.cslm-metadata	19/13	Metadata framework for cloud service lifecycle management	N	AAP	M	Q1 2019		<b>Ying Cheng,</b> China Unicom, <b>Yan Lei</b> Datang Software	
Y.ccm-reqts	19/13	Cloud computing maturity requirements and framework	N	AAP	M	Q4 2019		<b>Tingting Zhang,</b> China Mobile, <b>Zhiqiang Hou,</b> China Mobile, <b>Ying Chen,</b> China Unicom,	

Legend: H – high; M – medium; L – low; N - new; R - revised, D – deleted

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