

INTERNATIONAL TELECOMMUNICATION UNION

TELECOMMUNICATION STANDARDIZATION SECTOR

# SG13-TD269-R1/WP2 STUDY GROUP 13 Original: English

STUDY PERIOD 2017-2020

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

Geneva, 16-27 July 2018

TD

| Source:  | Rapporteurs  |   |  |  |
|----------|--|---|--|--|
| Title:   | Meeting report of Q19/13 (Geneva, 16 - 27 July 2018) |   |  |  |
| Purpose: | Admin  | Admin   |  |  |
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| Keywords: | Report, Q19/13   |
|-----------|--|
| Abstract: | This is report of Q.19/13 (Geneva, July, 16-27, 2018). |

#### **1** Opening of the meeting

Rapporteur of Question 19/13, Mr Emil Kowalczyk (Orange Polska) welcomed participants and provided agenda for meeting. The agenda were accepted and approved by Delegates.

#### 2 Previous meeting

The report from the previous Q19/13 meeting hold at Geneva, 9 - 18 April 2018 is at TD 240 (WP2/13) were evoked.

#### **3** Goals of this meeting

The Rapporteur indicated goals of this meeting as follows:

- Progress on-going work as follows :
  - 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"

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- 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-0249-WP2 was presented and approved by the meeting.

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

#### 5.1 Y.CCICDM-Req

Base document: [ TD 235-WP2/13 ]

| Number             | Title  | Source       | Questions     |
|--------------------|--|--------------|---------------|
| [ 525 ]<br>(Rev.1) | Proposal for additions and modifications in Y.CCICDM-Req   | China Unicom | <u>Q19/13</u> |
|                    | Accepted with modification related to<br>enrichment of use case by given example.<br>Additionally, aspects of monitoring validity<br>of regulation was discussed and given<br>derived requirements was proposed. |              |               |

#### 5.2 Y.BDDP-reqts

Base document: [ TD 237-WP2/13 ]

| Number         | Title  | Source   | Questions     |
|----------------|--|--|---------------|
| <u>[ 420 ]</u> | Proposed a new use case for Y.BDDP-<br>reqts<br>Accepted with modifications.           | DaTang Telecommunication<br>Technology & Industry<br>Holding Co. Ltd (China) | <u>Q19/13</u> |
| <u>[ 419 ]</u> | Proposed modifications for clause 7 of<br>Y.BDDP-reqts<br>Accepted with modifications. | DaTang Telecommunication<br>Technology & Industry<br>Holding Co. Ltd (China) | <u>Q19/13</u> |

#### 5.3 Y.CCICTM

Base document: [ TD 236-WP2/13 ]

| Number         | Title   | Source   | Questions     |
|----------------|---|--|---------------|
| <u>[ 418 ]</u> | Proposed some requirements and use<br>cases for Y.CCICTM<br>Accepted with modifications. New<br>requirement was identified. | DaTang Telecommunication<br>Technology & Industry<br>Holding Co. Ltd (China) | <u>Q19/13</u> |
| <u>[ 417 ]</u> | Proposed modification for clause 7 and 8<br>of Y.CCICTM<br>Accepted with modifications.                                     | DaTang Telecommunication<br>Technology & Industry<br>Holding Co. Ltd (China) | <u>Q19/13</u> |
| <u>[ 416 ]</u> | Proposed modifications for clause 6.1 of  | DaTang Telecommunication   | <u>Q19/13</u> |

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| Y.CCICTM                     | Technology & Industry   |  |
|------------------------------|-------------------------|--|
| Accepted with modifications. | Holding Co. Ltd (China) |  |

# 5.4 Y. cslm-metadata

Base document: [ TD 238-WP2/13 ]

| Number             | Title   | Source       | Questions     |
|--------------------|---|--------------|---------------|
| [ 526 ]<br>(Rev.1) | Proposal for additions and modifications in Y.cslm-metadata | China Unicom | <u>Q19/13</u> |
|                    | Accepted with modifications.                                |              |               |

### 5.5 Y.CCM-reqts

### Base document: [ TD 178-WP2/13 ]

| Number         | Title  | Source                                     | Questions     |
|----------------|--|--|---------------|
| <u>[ 529 ]</u> | Update draft Y.ccm.reqts for a use case of capacity management                       | China Mobile<br>Communications Corporation | <u>Q19/13</u> |
|                | Accepted with modification. New requirement should be add to main body of draft Rec. |  |               |
| <u>[ 528 ]</u> | Update draft Y.ccm.reqts of Cloud<br>Computing maturity model and levels             | China Mobile<br>Communications Corporation | <u>Q19/13</u> |
|                | Accepted with modification. Figures should be improved in terms of scaling.          |  |               |
| <u>[ 527 ]</u> | Update draft Y.ccm.reqts of Cloud<br>Computing management Lifecycle                  | China Mobile<br>Communications Corporation | <u>Q19/13</u> |
|                | Accepted with modification. New clause order was proposed. )                         |  |               |

## 5.6 New Work Item Proposals

| Number                    | Title  | Source  | Questions     |
|---------------------------|--|---|---------------|
| [541]<br>(Rev.1)          | A.1 Justification for proposed new work<br>item- "Cloud Computing - End to End<br>Fault & Performance Management<br>Framework of Multi-Cloud Virtual<br>Network Services<br>Accepted with modifications. This<br>contribution were reallocated as<br>temporary document where changes<br>provided during meeting were<br>recorded. | <u>Ministry of Communications</u><br>(India) , Orange Polska S.A. | <u>Q19/13</u> |
| [ <b>540</b> ]<br>(Rev.1) | Proposal on new work item- "Cloud<br>Computing - End to End Fault &  | Ministry of Communications<br>(India), Orange Polska S.A.         | Q19/13        |

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|                | Performance Management Framework of<br>Multi-Cloud Virtual Network Services "Accepted with modifications. This<br>contribution were reallocated as<br>temporary document where changes<br>provided during meeting were<br>recorded.  |   |               |
|----------------|--|---|---------------|
| <u>[ 440 ]</u> | <ul> <li>Proposal for initiating a new work item on<br/>"Overview and Functional requirements<br/>of DevOps ".</li> <li>Accepted with modifications. This<br/>contribution were reallocated as<br/>temporary documents where changes<br/>provided during meeting were<br/>recorded.</li> </ul> | <u>China Mobile</u><br><u>Communications Corporation</u> ,<br><u>China Unicom</u> , <u>Ministry of</u><br><u>Industry and Information</u><br><u>Technology (MIIT)</u> | <u>Q19/13</u> |

# 5.7 Other contributions related to cloud computing and big data

None.

# 5.8 Contributions for all Questions

The following documents were reviewed and noted.

| Document             | Subject   | Source  | Questio<br>ns                            | Preliminary<br>decision                                 |
|----------------------|---|---|--|---|
| <u>[ 531 ]</u>       | The proposal to support the establishing of the FG on network 2030  | <u>Russian</u><br><u>Federation</u>   | <u>QALL/1</u><br><u>3</u>                | Noted.  |
| <u>[ 479 ]</u>       | General Data Protection Regulation<br>Issues and Network Equipment Scope  | Electronics and<br>Telecommunicati<br>ons Research<br>Institute (ETRI)  | <u>QALL/1</u><br><u>3</u>                | Overview on<br>PII, GDPR and<br>data privacy.<br>Noted. |
| [ 434 ]              | Proposal for creating a new Focus<br>Group on future networks technologies<br>in the period of 2025-2035 in ITU-T<br>SG13 | <u>Ministry of</u><br><u>Industry and</u><br><u>Information</u><br><u>Technology</u><br><u>(MIIT)</u>   | <u>QALL/1</u><br><u>3</u>                | Noted.  |
| <u>[ 407 ]</u>       | Support to the creation of the new FG on<br>Technologies for Networks 2030  | Rostelecom  | <u>QALL/1</u><br><u>3</u>                | Noted.  |
| [ 405 ]<br>(Rev.1-2) | Proposal of Initializing a New Focus<br>Group on Network 2030 (FG-NET-<br>2030)   | Electronics and<br><u>Telecommunicati</u><br>ons Research<br>Institute (ETRI),<br><u>Huawei China</u> ,<br><u>Verizon</u><br><u>Communication</u><br><u>Corporation</u> | QALL/1<br>3                              | Noted.  |
| <u>[ 401 ]</u>       | Emerging 5G Mobile Services: the<br>opptunity of the technological leap for<br>Africa                                     | Benin, <u>Ministère</u><br><u>de l'Economie</u><br><u>Numérique et de</u><br><u>la</u>  | <u>QALL/1</u><br><u>3</u> , <u>Q5/13</u> | Noted.  |

Communication

# 5.9 Incoming liaisons, others for Cloud/Big data for Q19/13

The following documents were reviewed and noted.

| Document              | Subject  | Source   | Questions   | Preliminary<br>decision   |
|-----------------------|--|--|---|---|
| [ 251-GEN ]           | LS/i on progress of M.somm:<br>framework of smart operations,<br>management and maintenance [from<br>ITU-SG2]  | ITU-SG2  | <u>7/13, 23/13,</u><br><u>22/13, 21/13,</u><br><u>20/13, 2/13,</u><br><u>19/13, 18/13,</u><br><u>17/13, 16/13,</u><br><u>1/13</u> | Noted.  |
| [ 244-WP2 ]           | LS/i/r on terms and definitions<br>harmonization (reply to SG13-LS035)<br>[from SCV]   | <u>SCV</u>                                     | <u>19/13</u>  | Accepted as<br>state.<br>Corrigendum 1<br>of Y.3514 is<br>started as NWI. |
| [ 242-GEN ]           | LS/i on new ITU-T SG2 terms and definitions [from SCV]   | <u>SCV</u>                                     | <u>7/13, 6/13,</u><br><u>23/13, 22/13,</u><br><u>21/13, 20/13,</u><br><u>2/13, 19/13,</u><br><u>18/13, 17/13,</u><br><u>16/13</u> | New definition proposed. Noted.   |
| [238-GEN]             | LS/i on topics 1-3-4-5 201805 [from<br>ISO/IEC JTC 1/SC 27/WG4]  | ISO/IEC<br>JTC 1/SC<br>27/WG4                  | <u>19/13, 18/13,</u><br><u>17/13, 16/13</u>   | ISO/IEC<br>statement on ICT<br>security<br>operations.<br>Noted.          |
| [234-GEN]             | LS/i on Question 3/1 "Emerging<br>technologies, including cloud<br>computing: m-services, and OTTs:<br>Challenges and opportunities, economic<br>and policy impact for developing<br>countries" [from ITU-D SG1] | ITU-D SG1                                      | <u>5/13, 19/13,</u><br><u>18/13, 17/13</u>  | Noted.  |
| [ 232-GEN ]<br>+Add.1 | LS/i on Identity Management, Privacy<br>Technology, and Biometrics [from<br>ISO/IEC JTC 1/SC 27]   | ISO/IEC<br>JTC 1/SC<br>27                      | <u>Q7/13,</u><br><u>Q22/13,</u><br><u>Q19/13,</u><br><u>Q18/13,</u><br><u>Q17/13</u>  | Noted.  |
| [244-GEN]             | ITU Kaleidoscope 2017 - Papers of<br>interest to ITU-T Study Group 13  | <u>TSB</u>                                     | <u>QALL/13</u>  | Noted.  |
| [231-GEN]             | LS/i on matching of ITU-D SG1 and<br>SG2 Questions of interest to ITU-T<br>Study Groups [from ITU-D SG2]   | <u>ITU-D</u><br><u>SG2]</u>                    | <u>QALL/13</u>  | Noted.  |
| [228-GEN]             | ITU Kaleidoscope academic conference<br>2018 "Machine learning for a 5G future"  | <u>Director,</u><br><u>TSB</u>                 | <u>QALL/13</u>  | Noted.  |
| [ <u>117-PLEN</u> ]   | Report of the ITU-T SG13RG-AFR<br>meeting (Abidjan, Côte d'Ivoire, 28-29<br>March 2018)  | <u>SG13RG</u><br><u>AFR</u><br><u>Chairman</u> | <u>QALL/13</u>  | Noted.  |
| [114-PLEN]            | LS/i on hot topics [from TSAG]   | <u>TSAG</u>                                    | <u>QALL/13</u>  | Noted.  |

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| [113-PLEN]   | LS/i on ITU inter-Sector coordination<br>(to ISCT, TDAG, ITU-D SGs, RAG,<br>ITU-R SGs, ITU-T SGs) [from TSAG] | <u>TSAG</u> | <u>QALL/13</u> | Noted. |
|--------------|---|-------------|----------------|--------|
| [111-PLEN]   | CTO Meeting Communiqué, 9 May 2018, California, United States   | <u>TSB</u>  | QALL/13        | Noted. |
| [ 109-PLEN ] | List of contributions   | <u>TSB</u>  | <u>QALL/13</u> | Noted. |

### 6 Review the Work Program

The work program of Q19/13 was reviewed and updated. In particular, targets for Consent for all on-going draft Recs. were wildly discussed are modified based on current state of these documents. The current work program for Q19/13 can be found in Annex A.

### 7 Review Roadmap for Q19/13

The roadmap of Q19/13 was updated according to new work item proposed. The current roadmap for Q19/13 can be found in [SG13-TD-297/WP2].

### 8 Review Living Lists

The Living list for Q19/13 were reviewed without any modification. The current Living List for Q19/13 can be found in [TD 239-WP2/13]

#### **9** Contributions for other Questions

None identified.

#### **10 Drafting**

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

The draft Rec. was updated by material improved cover page including summary and keywords. The scope in Clause 1 based on the current content of the whole draft were updated as well. New definition of DPEP, DPIP, and DPAP were added. New use case of data regulation across different countries in inter-cloud environment in was added to Appendix I.9 and derive the corresponding functional requirement in 8.2. were proposed. The interim e-meeting is proposed to prepare this draft Rec. for Consent process planed for 4Q2018.

#### 10.2 Draft Rec. Y.CCICTM

This draft Rec. was updated by modification the content of clause 6.1 "Relationship inter-cloud trust management with cloud computing reference architecture" and content of clause 7 "Inter-cloud trust management model". Two new use cases were added to Appendix I. The interim e-meeting is proposed to prepare this draft Rec. for Consent process planed for 4Q2018.

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

This draft Rec. was updated by providing a new use case I.4 on "Data preservation policy management" into Appendix I and new requirements were derived and provided into clause 7 "Functional requirements of big data preservation". Several important editor's notes were provided based on discussion under Joint sessions Q17/13 and Q19/13. The Q17/13 experts recommended

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harmonising this draft with other existing big data recommendations and on-going work items under Q17/13. More details on this joint session is elaborated in section 15.1 of this Report.

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

This draft Rec. was update by several editorial changes preparing this document for Consent process. Several editor's note were removed as no longer valid.

### 10.5 Draft Rec. Y.CCM-req

This draft Rec. was updated by several editorial and technical changes. The skeleton of clause 6 was changed according to material provided by contribution. The new use case I.2 "Use case on cloud capacity management" were implemented into Appendix I and new requirements to cause 7.1.1 Cloud capacity management were proposed, accordingly.

### **11 IPR statement**

No IPR statement was received during the meeting.

### 12 Approval of Outgoing Liaisons, if any

The Q19/13 meeting identified reply to the liaison statement SG13 received from SCV on terms and definitions harmonization (your <u>SCV - SG13-LS035</u>, our <u>SG13-TD244/WP2</u>). LS/o/r on terms and definitions harmonization – dependability [to SCV] can be found [TD 295-WP2/13].

#### 13 Review and approval of meeting outputs

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

a) temporary documents of Question 19/13:

| <u>TD-256/WP2</u> | Drafting proposal NWI - " Cloud Computing - End to End Fault &<br>Performance Management Framework of Multi-Cloud Virtual Network<br>Services" (Y.cce2efpm-req)      |
|-------------------|--|
| <u>TD-257/WP2</u> | Drafting A.1. form for NWI - " Cloud Computing - End to End Fault &<br>Performance Management Framework of Multi-Cloud Virtual Network<br>Services" (Y.cce2efpm-req) |
| <u>TD-258/WP2</u> | Drafting proposal NWI - " End-to-end cloud service development and operation management requirements" (Y.e2ecsm-req)   |
| <u>TD-259/WP2</u> | Drafting A.1. form for NWI - " End-to-end cloud service development and operation management requirements" (Y.e2ecsm-req)  |

b) output documents of Question 19/13:

| <u>SG13-TD-260/WP2</u> | Output draft Rec. "Cloud computing - Requirements for inter-cloud data management" (Y.CCICDM-Req) |
|------------------------|---|
| <u>SG13-TD-261/WP2</u> | Output draft Rec. "Cloud computing - Overview of inter-cloud trust management" (Y.CCICTM)         |

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| <u>SG13-TD-262/WP2</u> | Output draft Rec. "Big data – Overview and requirements for data preservation " (Y.BDDP-reqts)  |
|------------------------|---|
| <u>SG13-TD-263/WP2</u> | Output draft Rec. "Metadata framework for cloud service lifecycle management " (Y.cslm-metadata)  |
| <u>SG13-TD-264/WP2</u> | Output draft Rec. "Cloud computing maturity requirements and framework (Y.ccm-reqts)"   |
| <u>SG13-TD-295/WP2</u> | LS/o/r on terms and definitions harmonization – dependability [to SCV]  |
| <u>SG13-TD-296/WP2</u> | Proposed NWI on Corrigendum 1 of ITU-T Y.3514 – "Cloud computing - Trusted inter-cloud computing framework and requirements"                            |
| <u>SG13-TD265/WP2</u>  | Proposed NWI - "Cloud Computing - End-to-end fault and<br>performance management framework of inter-cloud virtual network<br>services" (Y.e2efapm)      |
| <u>SG13-TD266/WP2</u>  | A.1. form for NWI - "Cloud Computing - End-to-end fault and<br>performance management framework of inter-cloud virtual network<br>services" (Y.e2efapm) |
| <u>SG13-TD-267/WP2</u> | Proposed NWI - "Cloud computing – Requirements for cloud service development and operation management" (Y.cccsdaom-req)                                 |
| <u>SG13-TD-268/WP2</u> | A.1. form for NWI - "Cloud computing – Requirements for cloud service development and operation management" (Y.cccsdaom-req)                            |
| <u>SG13-TD-297/WP2</u> | Roadmap of Q19/13, 16 – 27 July 2018, Geneve  |
| <u>SG13-TD-269/WP2</u> | Report of Q19/13, 16 – 27 July 2018, Geneve   |

### 14 Future Plan/Meetings

- The Question 19/13 agreed to ask for interim e-meeting on 5 -7 September 2018, which will starts from 9:00 11:00 (Geneva Time) for each day. The main objective is to prepare draft Rec. Y.ccicdm-req and draft Rec. Y.ccictm for Consent process planned for 4Q2018. Therefore, the contributions propose technical material to clarify all potential doubts are welcome on first priority. Contributions should be provided before <u>due date: 31<sup>st</sup> August</u> 2018 (23:59 Geneva Time) directly to Rapporteur of Question 19/13 by email to Emil.Kowalczyk@orange.com. Remote participation facilities will be provided by TSB, details about this will be announced by Rapporteur of Question 19/13.
- The Q19/13 will also meet during the next SG13 Rapporteur groups, 22 October 2 November 2018, Geneve, Switzerland. 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"

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- 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"
- draft Rec. "Cloud Computing End-to-end fault and performance management framework of inter-cloud virtual network services"
- draft Rec. "Cloud computing Requirements for cloud service development and operation management"
- Discuss any new work items proposals
- 3) The follows Question 19/13 meeting is planned in time of SG13 Plenary meeting, 4 15 March 2019.

#### 15 Other Business/Miscellaneous

#### 15.1 Harmonisation of definition "dependability" within ITU Data Base.

The Recommendation "Cloud computing – Trusted inter-cloud computing framework and requirements" (ITU-T Y.3514) was developed under Question 19/13 and consented in 05.2017. According to ITU roles, the new definitions developed in this Recommendation were provided to Standardization Committee for Vocabulary (SCV) to harmonized understanding of these terms and definitions used in standardization. SCV discovered similarity between definition of "dependability" proposed in ITU-T Y.3514 and ITU-R M.1224, ITU-T L.1202, ITU-T E.800, respectively. In consequences, SCV propose to unify all definitions of "dependability" in Recommendations mentioned above as follows:

"**dependability:** The collective term used to describe the availability performance and its influencing factors on reliability performance, maintainability performance and maintenance support performance.".

After discussions in time of Q19/13 meetings, Q19/13 accepted this change and ask SCV and TSB to support to provide Corrigendum 1 to ITU-T Y3514 in form of new work item as SCV proposed. New work item proposal for Corrigendum 1 of ITU-T Y.3514 – "Cloud computing - Trusted intercloud computing framework and requirements" can be found in [TD 296-WP2/13].

#### 15.2 Joint session of Questions 17/13 and Question 19/13 on big data – data preservation

According to discussion taken under Question 19/13 during former ITU-T SG13 RGM Meeting held 9 - 20 April 2018 on draft Rec. Y.BDDP-reqts (see sub-clause 10.3 of TD 240 (WP2/13)), the meeting proposed to invite experts from Question 17/13 for harmonization draft Rec. Y.BDDP-reqts with big data concept developed under Question 17/13. The joint meeting was hosted under Question 19/13 on 19<sup>th</sup> July, sessions S3. In time of meeting, several comments and opinion were collected and considered. In consequences, it was identified that in Y.BDDP-reqts need to revise terminology and harmonize it with ones provided in Q17/13. Additionally, the aspect of "data/big data preservation" is some part of document is mixed and should be verified. The aspects type of data should be introduced in this draft to avoid doubts related to kind of data we are talking in given part of document. This is critical in case of application "policy" to data while "policy" depends of context and type of data. The harmonization with ITU-T Y.3600 and activities provided in Q17/13 was recommended. Detailed disposition can be found in output draft Rec. Y.BDDP-reqts.

Question 19/13 would like to kindly appreciate Question 17/13 for their effort and fruitful discussion during this session.

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

The Q19/13 reviewed and approved this meeting report.

#### **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 22 October - 2 November 2018, Geneve, Switzerland.

# Annex A – Q19/13 Work Program

| Rec.                | Q     | Short Title   | Status | Approval<br>process | Priority | Target for<br>Consent /<br>Determinat<br>ion /<br>Approval | Revised /<br>New Text<br>Location | Editors  | Liaisons |
|---------------------|-------|---|--------|---------------------|----------|--|-----------------------------------|--|----------|
| Y.ccictm            | 19/13 | Cloud Computing - Overview of<br>Inter-Cloud Trust Management                               | N      | AAP                 | Н        | Q4 2018  |                                   | Yan Lei<br>Datang Software   |          |
| Y.ccicdm-req        | 19/13 | Cloud Computing - Requirements<br>for Inter-Cloud Data Management                           | N      | AAP                 | Н        | Q4 2018  |                                   | <b>Ying Cheng,</b><br>China Unicom   |          |
| Y.BDDP-reqts        | 19/13 | Big data – Overview and requirements for data preservation                                  | N      | AAP                 | Н        | Q1 2019  |                                   | Yan Lei<br>Datang Software,<br>Ying Cheng,<br>China Unicom   |          |
| Y.cslm-<br>metadata | 19/13 | Metadata framework for cloud service lifecycle management                                   | N      | AAP                 | М        | Q1 2019  |                                   | Ying Cheng,<br>China Unicom,<br>Yan Lei<br>Datang Software   |          |
| Y.ccm-reqts         | 19/13 | Cloud computing maturity requirements and framework   | N      | AAP                 | М        | Q4 2019  |                                   | Tingting Zhang,<br>China Mobile,<br>Zhiqiang Hou,<br>China Mobile,<br>Ying Cheng,<br>China Unicom,     |          |
| Y.cccsdaom-req      | 19/13 | Cloud computing – Requirements<br>for cloud service development and<br>operation management | N      | AAP                 | М        | Q3 2020  |                                   | XiaoLing Niu,<br>MIIT<br>Ying Cheng,<br>China Unicom<br><u>Tingting Zhang,</u><br><u>China Mobile,</u> |          |

| Rec.      | Q     | Short Title   | Status | Approval<br>process | Priority | Target for<br>Consent /<br>Determinat<br>ion /<br>Approval | Revised /<br>New Text<br>Location | Editors   | Liaisons |
|-----------|-------|---|--------|---------------------|----------|--|-----------------------------------|---|----------|
| Y.e2efapm | 19/13 | Cloud Computing – End-to-end<br>fault and performance<br>management framework of virtual<br>network services in inter-cloud | N      | AAP                 | М        | Q3 2020  |                                   | Arvind Chawla,<br>DOT India,<br>Sridhar<br>Sapparapu,<br>TEC DOT<br>Yan Lei,<br>Datang Software |          |

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