

## Executive summary of ITU-T SG9 meeting (24-31 May 2017, Hangzhou, China)

The first Study Group 9 meeting in the Study period 2017-2020 was held in Hangzhou, China from 24 to 31 May 2017, at the kind invitation of the Academy of Broadcasting Science (ABS), State Administration of Press, Publication, Radio, Film and Television of the People's Republic of China (SAPPRFT), China. The SG9 meeting was attended by 44 participants from 10 countries. Along with face-to-face meetings a few sessions were supported by remote participation, as requested by SG9 Management.

Co-located with the SG9 meeting, the ITU hosted a **workshop** on "[\*TV and content delivery on Integrated Broadband Cable Networks\*](#)" on 26 May 2017. The workshop was attended by 74 participants from 14 countries. Remote participation was available to attend the workshop. All presentations given at the workshop are available from the programme website at: <http://www.itu.int/en/ITU-T/Workshops-and-Seminars/201705/Pages/programme.aspx>.

### 1. List of Consented/Determined Recommendations and other deliverables for approval

During the SG9 meeting in May 2017, two draft Recommendations were consented (AAP).

#### 1.1 List of two Consented Recommendations using AAP (ITU-T A.8)

#	Question	Rec	Status	Title	Final TD	A.5 justification
1	Q2/9	ITU-T J.1020 (J.dmobile-sma)	New	Downloadable System for Multi-CA/DRM service of mobile broadcasting; Service Model and Architecture	TD147	N/A
2	Q7/9	ITU-T J.1106 (J.roip-req)	New	Requirement for Radio over IP transmission system	TD144-R1	N/A

### 2. Supplements, Amendments, Corrigenda and other deliverables

#### 2.1 Supplements

No Supplement was proposed for agreement at this meeting.

#### 2.2 Amendments

No Supplement was proposed for agreement at this meeting.

#### 2.3 Corrigenda

No Corrigenda was proposed for agreement at this meeting.

### 3. New and deleted work items

#### 3.1 SG9 agreed to start the following 13 new work items:

#	Question	Work item (kind of publication)	Status	Title	Editor	TD	A.1 Justification template
1	Joint Q1 Q7	J.docsis31-gen (Draft Rec.)	New	Fourth Generation Transmission Systems for Interactive Cable Television Services - IP Cable Modems: General	Tomoyuki Shimizu, TaeKyoon Kim	<a href="#">TD29</a>	<a href="#">Annex C of TD121</a>
2	Q1	J.docsis31-phy (Draft Rec.)	New	Fourth Generation Transmission Systems for Interactive Cable Television Services - IP Cable Modems: Physical Layer Specification	Tomoyuki Shimizu	<a href="#">TD29</a>	<a href="#">Annex D of TD121</a>
3	Q2	J.dmcd-vm (Draft Rec.)	New	Embedded Common Interface (ECI) for exchangeable CA/DRM solutions; The Virtual Machine	Qiang Wang Peter Mann Han-Seung Koo	N/A	<a href="#">Annex C of TD122-R1</a>
4	Q2	J.dmcd-eci-as (Draft Rec.)	New	Embedded Common Interface (ECI) for exchangeable CA/DRM solutions; Advanced Security – ECI-specific functionalities	Qiang Wang Peter Mann Han-Seung Koo	N/A	<a href="#">Annex D of TD122-R1</a>
5	Q2	J.dmcd-kl-as (Draft Rec.)	New	Embedded Common Interface (ECI) for exchangeable CA/DRM solutions; The Advanced Security system – Key Ladder	Qiang Wang Peter Mann Han-Seung Koo	N/a	<a href="#">Annex E of TD122-R1</a>
6	Q4	J.dtt-dist-req (Draft Rec.)	New	DTT Platforms: Requirements for Open Access and Signal Quality	Burama Jammeh	<a href="#">TD116</a>	<a href="#">Annex C of TD124</a>
7	Q5	J.stvos-spec (Draft Rec.)	New	Specification for the architecture and functional requirement of smart TV operating system	Haifeng Yan	N/a	<a href="#">Annex C of TD125</a>
8	Q6	J.297-rev (Draft Rec.)	Rev	Requirements and functional specification of cable set top box for 4K ultra high definition television	Kenji Obata	N/a	<a href="#">ANNEX C of TD126-R1</a>
9	Q6	J.stb-cts (Draft Rec.)	New	Requirements and technical specifications of cable TV hybrid set-top box that has the compatibility with terrestrial and satellite TV transport	Noel G. Gatete Long Shizhu	N/a	<a href="#">ANNEX D of TD126-R1</a>
10	Q7	J.roip-arch (Draft Rec.)	New	Architecture and specification for Radio over IP transmission systems	TaeKyoon KIM	N/a	<a href="#">Annex C of TD127-R1</a>
11	Q7	J.fdx-req (Draft Rec.)	New	Requirement for in-band full-duplex in HFC based networks	TaeKyoon KIM	N/a	<a href="#">Annex D of TD127-R1</a>
12	Q7	J.docsis31-mac (Draft Rec.)	New	Fourth Generation Transmission Systems for Interactive Cable Television Services - IP Cable Modems: MAC and Upper Layer Protocols Interface	TaeKyoon Kim	<a href="#">TD29</a>	<a href="#">Annex C of TD127-R1</a>
13	Q9	J.302amd-1 (draft Rec.)	Amd	System specifications of augmented reality smart television service Amd #1	Xiang (Eric) Wang	<a href="#">TD129-R1</a>	<a href="#">Annex C of TD129-R1</a>

### 3.2 SG9 agreed to stop working on the following work items at this meeting:

Question	Work item	Title
Q8	<a href="#">J.multi-man</a>	Requirements for the Management of services and applications provided via the integration of the differing infrastructures of Multi-Providers

## 4. SG9 Management for the Study Period 2017-2020

SG9 took note of [TD101](#) which contains the composition of the management of ITU-T Study Group 9.

Role	Name
Chairman:	Mr Satoshi MIYAJI (KDDI, Japan)
Vice-chairman:	Mr Blaise Corsaire MAMADOU (Central African Rep.)
Vice-chairman:	Mr Tae Kyoon KIM (ETRI, Korea Rep. of)
Vice-chairman:	Mr Zhifan SHENG (ABS, China)
Advisor	Mr Stefano POLIDORI (SGD, TSB)
Administrative assistant	Ms Rosa ANGELES-LEON DE VIVERO (SGD, TSB)

## 5. SG9 Structure for the Study Period 2017-2020

SG9 noted the list of 10 Questions and related terms of reference as approved by WTSA-16 and available in [Contribution 1](#).

SG9 discussed and agreed on its structure and leadership for the Study Period 2017-2020 as proposed in [TD14](#). SG9 is composed of two Working Parties reporting to the SG9 Plenary: WP1 (Q1, 2, 3 and 4) and WP2 (Q5, 6, 7, 8, 9). In addition, Q10 and three Intersector Rapporteur Groups (IRGs) will also report to the Plenary. See the table below for more details.

	WP titles and MGT	Q/IRG	Titles
<b>WP1</b>	<b>Video transport</b>  <b>Zhifan SHENG</b> <i>(WP1/9 Chairman)</i> ABS, China  <b>Bryant TAN</b> <i>(WP1/9 Vice-chair)</i> Broadcom, USA	Q1	Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution
		Q2	Methods and practices for conditional access, protection against unauthorized copying and against unauthorized redistribution ("redistribution control" for digital cable television distribution to the home)
		Q3	Digital programme delivery controls for multiplexing, switching and insertion in compressed bit streams and/or packet streams
		Q4	Guidelines for implementations and deployment of transmission of multichannel digital television signals over optical access networks

	WP titles and MGT	Q/IRG	Titles
<b>WP2</b>	<b>Cable-related terminals and applications</b>  <b>Taekyoon KIM</b> <i>(WP2/9 Chairman)</i> ETRI, Korea  <b>Blaise MAMADOU</b> <i>(WP2/9 Vice-chair)</i> Central African Republic (RCA)	Q5	Software components application programming interfaces (APIs), frameworks and overall software architecture for advanced content distribution services within the scope of Study Group 9
		Q6	Functional requirements for residential gateway and set-top box for the reception of advanced content distribution services
		Q7	Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks
		Q8	The Internet protocol (IP) enabled multimedia applications and services for cable television networks enabled by converged platforms
		Q9	Requirements, methods, and interfaces of the advanced service platforms to enhance the delivery of sound, television, and other multimedia interactive services over cable television network
<b>SG9 PLEN</b>	<b>Plenary of SG9</b>  <b>Satoshi MIYAJI</b> <i>(SG9 Chairman)</i> KDDI, Japan	Q10	Work programme, coordination and planning
		IRG-IBB	Integrated Broadcast-Broadband systems
		IRG-AVA	Audiovisual Media Accessibility
		IRG-AVQA	Audiovisual Quality Assessment

## 6. SG9 Management, Rapporteurs and Associate Rapporteurs

SG9 has agreed on the initial List of SG9 Rapporteurs and Associate Rapporteurs for the Study Period 2017-2020 as found in [TD15-R3](#). To be noted that one Rapporteur position (Q3/9 “*Digital programme delivery controls for multiplexing, switching and insertion in compressed bit streams and/or packet streams*”) is still vacant. Interested experts are invited to contact the SG9 Management.

## 7. Liaison officers to external groups

SG9 has agreed on the initial List of SG9 liaison officers for the Study Period 2017-2020 as found in [TD16-R1](#). To be noted that a co-chair position for the IRG-AVQA (Intersector Rapporteur Group on Audiovisual Quality Assessment) is still vacant. Interested experts are invited to contact the SG9 Management.

## 8. Intersector Rapporteur Groups (IRG-AVQA; IRG-AVA; IRG-IBB)

SG9 has agreed to continue its involvement with the three Intersector Rapporteur Groups between ITU-T and ITU-R. The appointment of co-chairs was also agreed as follows.

IRG	Title	Co-chair from SG9	Parent Groups	Website
IRG-IBB	Integrated Broadcast-Broadband systems	Masaru TAKECHI (NHK, Japan)	ITU-R SG6 ITU-T SG16	<a href="https://itu.int/en/irg/ibb">https://itu.int/en/irg/ibb</a>
IRG-AVA	Audiovisual Media Accessibility	Amal PUNCHIHEWA (ABU, Malaysia)	ITU-R SG6 ITU-T SG16	<a href="https://itu.int/en/irg/ava">https://itu.int/en/irg/ava</a>
IRG-AVQA	Audiovisual Quality Assessment	Vacant	ITU-R SG6 ITU-T SG12	<a href="https://itu.int/en/irg/avqa">https://itu.int/en/irg/avqa</a>

## 9. Outgoing Liaison Statements

The following table shows the list of the 30 agreed outgoing liaison statements:

#	Questions	WP/ PLEN	To	For	Title	TD
1	Q1/9	WP1	ITU-R WP4C	Information	LS/o/r to ITU-R WP4C on Recommendation ITU-T J.HiNoC2-PHY	<a href="#">TD149</a>
2	Q1/9, Q7/9	WP1, WP2	ETSI TC CABLE, SCTE, ITU-T SG15	Information	LS/o/r to ETSI TC CABLE on status of work items related to DOCSIS	<a href="#">TD148</a>
3	Q2/9	WP1	ITU-T SG17, ARIB, CCSA	Information	LS/o on AAP Consent of draft new Recommendation ITU-T J.1020 (ex J.dmobile-sma) "Downloadable System for Multi-CA/DRM service of mobile broadcasting; Service Model and Architecture"	<a href="#">TD146-R1</a>
4	Q4/9	WP1	ITU-D SG1 and SG2	Action	LS/o on Request for information on ITU-D events and interest in possible collocation of ITU-T SG9 workshop on Digital Cable Television	<a href="#">TD112-R1</a>
5	Q5/9	WP2	ITU-R WP6B, ITU-T SG16	Information	LS/o/r on update to terms of reference of Intersector Rapporteur Group on Integrated Broadcast-Broadband systems (IRG-IBB)	<a href="#">TD115-R1</a>
6	Q5/9	WP2	ITU-R WP6B	Information	LS/o/r on development of recommendation ITU-T J.230	<a href="#">TD153</a>
7	Q6/9	WP2	ITU-T SG16	Information	LS/o/r on the comments on AAP Consent of draft new Recommendation ITU-T J.297 (COM16-LS240)	<a href="#">TD154</a>
8	Q6/9	WP2	ITU-T Q1/15	Information	LS/o/r on new version of the Access Network Transport (ANT) Standards Overview and Work Plan	<a href="#">TD155-R2</a>
9	Q6/9	WP2	ITU-T Q1/15	Information	L S/o/r on new version of the Home Network Transport (HNT) Standards Overview and Work Plan	<a href="#">TD156-R1</a>
10	Q6/9	WP2	ITU-R WP6C, IRG-AVA, ITU-T SG16	Information	LS/o/r on Update to Terms of Reference of Intersector Rapporteur Group on Audiovisual Media Accessibility (IRG-AVA)	<a href="#">TD157-R2</a>

11	Q7/9	WP2	SCTE, ETSI TC CABLE, RRA	Information	LS/o on AAP Consent of draft new Recommendations	<a href="#">TD143</a>
12	Q7/9	WP2	SCTE, ETSI TC-cable, RRA	Comments	LS/o new work programme for J.roip-arch and J.fdx-req	<a href="#">TD145-R1</a>
13	Q9/9	WP2	ITU-R WP6C, ITU-T SG16	Information	LS on the status of J.301 (ex J.arstv-req) and J.302 (ex J.arstv-spec)	<a href="#">TD131-R1</a>
14	Q9/9	WP2	IEEE Digital Senses Initiative, IEEE VR/AR Working Group	Information	LS on the status of J.301 (ex J.arstv-req) and J.302 (ex J.arstv-spec)	<a href="#">TD132-R1</a>
15	Q10/9	PLEN	ITU-T SG11	Information	Reply LS on appointment of SGs Focal Points to CASC and outcome of CASC meeting	<a href="#">TD118 -R1</a>
16	Q10/9	PLEN	SCV	Information	Reply on appointment of Vocabulary Rapporteur to the SCV	<a href="#">TD133-R1</a>
17	Q10/9	PLEN	APT ASTAP	information	Reply on call for comments on the concepts of questionnaire about the survey on IPTVCATV and related services in Asia-Pacific region	<a href="#">TD134</a>
18	Q10/9	PLEN	ITU-T SG2	Information	Reply LS on Terms and Definitions harmonization	<a href="#">TD135</a>
19	Q10/9	PLEN	ITU-T SG17	information	Reply LS on JCA-IdM	<a href="#">TD136</a>
20	Q10/9	PLEN	ITU-D SG2	Information	LS/o/r on ongoing collaboration	<a href="#">TD137</a>
21	Q10/9	PLEN	ITU-T JCA-IoT SC&C	Information	Reply LS on recent work	<a href="#">TD138-R1</a>
22	Q10/9	PLEN	ITU-R SG1, ITU-T SG5	Information	Reply LS on ITU-R SM.2093-0	<a href="#">TD139</a>
23	Q10/9	PLEN	ITU-R WP4C, ITU-T SG5	Information	LS/o/r on ITU-T K.106	<a href="#">TD140</a>
24	Q10/9	PLEN	ITU-T SG17	Information	Reply LS on Security Contacts List of ITU-T SG17 lead Study Group on security	<a href="#">TD141</a>
25	Q10/9	PLEN	ITU-T SG16	Information	Reply LS on the creation of JCA on multimedia aspects of e-services	<a href="#">TD142</a>
26	Q10/9	PLEN	TSAG	Information	Reply LS on stale work items and SG Reports on lead study group activities	<a href="#">TD159</a>
27	Q10/9	PLEN	TSAG	Information	Reply LS on Open Sourcee	<a href="#">TD158</a>
28	Q10/9	PLEN	ITU-T SG2	Information	Reply on Telecommunication Management and OAM Project Plan	<a href="#">TD160-R1</a>
29	PLEN	PLEN	ITU-T SG12, VQEG, ITU-R WP 6C, TSAG	Information	LS/o/r on continuation of joint activities under Intersector Rapporteurs Group on Audio-Visual Quality Assessment (IRG-AVQA)	<a href="#">TD161-R1</a>
30	PLEN	PLEN	ITU-T SG12, ITU-R WP6C	Information	LS/o/r on Draft update to Terms of Reference of Intersector Rapporteur Group on Audiovisual Quality Assessment (IRG-AVQA)	<a href="#">TD162-R1</a>

## 10. SG9 results per Question

### 10.1 Question 1/9 “Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution”

The report of Q1/9 can be found in [TD121-R1](#).

Question 1/9 agreed to defer the planned Consent (AAP) of ITU-T **J.382-rev** “Advanced digital downstream transmission systems for television, sound and data services for cable distribution” until the next SG9 meeting, because it was found that further effort on TLV-to-GSE mapping is necessary. Question 1/9 and 7/9 agreed to initiate three new work items that aim to provide the specifications of DOCSIS 3.1, as defined in ETSI TS 103 311-series: **J.docsis31-gen** (joint Q1 and Q7), **J.docsis31-phy** (Q1) and **J.docsis31-mac** (Q7), see §3.1 for more details. ETSI TC CABLE was informed via liaison statement on progresses related to DOCSIS 3.1. Question 1/9 also provided an analysis on radio interference for HiNoC 2.0/1.0 to MSS and RNSS on and reported its findings to ITU-R WP4C. Finally, Question 1/9 agreed on an **action plan** for this Study Period which should include, but not limited to, the following study items:

- Video transport with and without upscaling/downscaling technology applicable to the emerging advanced television experiences such as UHD TV and HDR.
- Combination of the high realistic television technology elements to provide immersive experiences to users.
- Maintenance and updating of the existing Recommendations in order to be consistent with the latest context of the cable television industry.
- Considerations of deployment of the cable television fundamental technologies particularly to the developing countries by collaboration with Question 4/9.

## **10.2 Question 2/9 “Methods and practices for conditional access, protection against unauthorized copying and against unauthorized redistribution (“redistribution control” for digital cable television distribution to the home)”**

The report of Q2/9 can be found in [TD122-R1](#).

Question 2/9 achieved the Consent (AAP) for draft new Recommendation **ITU-T J.1020** (ex. *J.dmobile-sma*) “Downloadable System for Multi-CA/DRM service of mobile broadcasting; Service model and architecture” see [TD147](#). ITU-T SG17, ARIB and CCSA were informed via liaison statement on progresses related to ITU-T J.1020 ([TD146-R1](#)). The group also agreed to start three new work items:

**J.dmcd-vm**, **J.dmcd-eci-as**, and **J.dmcd-kl-as**, see §3.1 for more details. Mr Qiang Wang was appointed as an additional Associated Rapporteur of Q2/9. Finally, Q2/9 will organize two interim meetings to progress all the work items in the J.dmcd-series .

Finally, Question 2/9 agreed on an **action plan** for this Study Period, as follows:

- Progress all draft new Recommendations in the J.dmcd-series (J.dmcd-part3, J.dmcd-vm, J.dmcd-eci-as and J.dmcd-kl-as) which are the current work items of Q2/9.
- Consider starting new work items regarding ‘Switchable CAS’ specifications. The merging of J.dmcd-series and ‘Switchable CAS’ might be considered.

- Consider starting new work items regarding security issues such as authentication related to IoT at cable platform and terminals such as GW and STB.
- Consider starting new work items regarding forensic watermarking technologies for rich contents such as UHD TV.

### **10.3 Question 3/9 “Digital programme delivery controls for multiplexing, switching and insertion in compressed bit streams and/or packet streams”**

Q3/9 meeting was cancelled due to lack of Contributions.

### **10.4 Question 4/9 “Guidelines for implementations and deployment of transmission of multichannel digital television signals over optical access networks”**

The report of Q4/9 can be found in [TD124](#).

Q4 discussed contributions [C2](#) and [C6](#) from Central African Republic, [C3-R2](#) from Haiti, and [C4](#) and [C5-R1](#) from Gambia, and discussed the proposals keeping in mind WTS Resolution 44 (Rev. Hammamet, 2016) “Bridging the standardization gap between developing and developed countries”.

The meeting agreed to progress work on draft new supplement **Sup-digTV “Installing a digital TV service for cable networks and relating Recommendations”** as proposed by [C6](#) and solicited contributions for the next meeting of SG9. In response to [C4](#) and [C5-R1](#), Q4/9 agreed to start a new work item **J.dtt-dist-req “DTT Platforms: Requirements for Open Access and Signal Quality”** in view of developing a new Recommendation which defines technical requirements for open access and TV signal quality on DTT platforms consisting of national fibre backbone and local loop.

[C2](#) and [C3-R2](#) both proposed a SG9 workshop to be held in each respective region/country. The meeting concluded that it could be best to collocate this workshop with related-events of ITU-D, and agreed to send a liaison statement ([TD112-R1](#)) to ITU-D SG1 and SG2 to ask for information on planned event in the near future.

### **10.5 Question 5/9 “Software components application programming interfaces (APIs), frameworks and overall software architecture for advanced content distribution services within the scope of Study Group 9”**

The report of Q5/9 can be found in [TD125-R2](#).

Q5/9 reviewed TDs 31, 46, 62, 63, 73, 81 and 100.

Thanks to the remote participation of Masaru TAKECHI (NHK, Japan), who is the ex-Rapporteur of this Question and current co-Chair of IRG-IBB, Q5/9 reviewed TDs 100, 73 and 81 and developed a new output draft for the revised Recommendation ITU-T **J.207-rev “Specification for integrated broadcast and broadband digital television application control framework”** ([TD114](#)) and agreed to send an outgoing liaison statement to inform ITU-R WP6B on SG9 continuation in the IRG-IBB and related ToR updates ([TD115-R1](#)).

Q5/9 reviewed and noted TDs 46 and 63. Q5/9 agreed to further analyze the incoming liaison statements from ITU-R WP6B and ITU-T Q13/16 (TDs 31 and 62) to possibly draft a reply and start a revision of ITU-T J.230. A preliminary reply to ITU-R WP6B was developed



(TD153). Finally, as follow up to the co-located workshop on "[TV and content delivery on Integrated Broadband Cable Networks](#)" Q5/9 agreed to start a new work item **J.stvos-spec** "*Specification for the architecture and functional requirement of smart TV operating system*" to develop a new ITU-T Recommendation to respond to the market needs on this technology area. Members were encouraged to submit contributions to advance J.stvos-spec, which may be split in two draft Recs in the future, one to cover functional requirements and the other to cover Architecture issues.

#### **10.6 Question 6/9 "Functional requirements for residential gateway and set-top box for the reception of advanced content distribution services"**

The report of Q6/9 can be found in [TD126-R1](#).

Q6/9 reviewed [C12](#) that provides the summary results of the comments resolution for draft Recommendation ITU-T J.297 (AAP-88). Based on C12, Q6/9 drafted a reply liaison statement to ITU-T SG16 that was interested in such development. After discussing [C13](#), Q6/9 started a new work item **J.297-rev** "*Requirements and functional specification of cable set top box for 4K ultra high definition television*" to add the functional specification and enrich 4K television service. In addition, based on [C18](#), Q6/9 started another new work item **J.STB-cts** "*Requirements and technical specifications of cable TV hybrid set-top box that has the compatibility with terrestrial and satellite TV transport*". Q6/9 reviewed and noted for information TDs 42, 43, 52, 54, 62, 63, 71, 91 and 99. Finally four outgoing liaison statement were drafted to reply to TDs 30, 38, 39 and 82.

#### **10.7 Question 7/9 "Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks"**

The report of Q7/9 can be found in [TD127-R1](#).

Q7/9 discussed 3 contributions and 13 TDs, including 5 incoming liaison statements. Q7/9 achieved the Consent (AAP) for draft new Recommendation **ITU-T J.1106** (*ex J.roip-req*) "*Requirement for Radio over IP transmission system*", see [TD144-R1](#). Q7/9 also agreed to start two new work items: **J.roip-arch** "*Architecture and specification for Radio over IP transmission system*" that aims to provide the architecture according to the J.roip-req, and **J.fdx-req** "*Requirement for in-band full-duplex in HFC based network*" that provides a functional requirement for in-band full duplex service over cable-based network. Q7/9 discussed with Q1/9 how to address the liaison statement from ETSI TC CABLE in relation to the specifications related to DOCSIS 3.1, see §10.1 for more details.

In addition, Q7/9 has drafted two outgoing liaison statement to inform relevant SDOs on these recent achievements.

Finally, Q7 also discussed an **action plan** for this Study Period. As various broadcasting services are rapidly widespread, the available frequency is lacking and there is an increasing need to efficiently provide broadcasting services within this scarce resource of frequency. Therefore, the cable broadcasting system is required to use resources efficiently to easily accommodate the needs of subscribers. In this context Q7/9 will focus on developing:

- efficient transmission services

– system and application standards for those services

#### **10.8 Question 8/9 “The Internet protocol (IP) enabled multimedia applications and services for cable television networks enabled by converged platforms”**

The report of Q8/9 can be found in [TD128](#).

Q8/9 addressed TDs 69 and 91 and noted them. Q8/9 decided to delete the stale work item, **J.multi-man** “*Requirements for the Management of services and applications provided via the integration of the differing infrastructures of Multi-Providers*” since it has been inactive more than 4 years. Q8/9 discussed a possible **action plan** for this Study period and noted that applications using IP are expected to rapidly grow especially in the areas of IoT and machine learning. This was also a topic discussed during the co-located workshop on “[TV and content delivery on Integrated Broadband Cable Networks](#)”, see the presentation in Session 2 from Mr. Tomoyuki Shimizu (KDDI, Japan). Q8/9 concluded that its activities are expected to grow. The next meeting of Q8/9 will take place during SG9 meeting (January 2018).

#### **10.9 Question 9/9 “Requirements, methods, and interfaces of the advanced service platforms to enhance the delivery of sound, television, and other multimedia interactive services over cable television network”**

The report of Q9/9 can be found in [TD129-R1](#).

Q9/9 addressed 1 contribution and 6 incoming liaison statements. It produced 2 outgoing liaison statements. The group discussed an **action plan** for this Study Period and agreed that Q9/9 will work on the platform, cloud and companion devices for enabling the advanced service delivery and better user experience. The Rapporteur proposed to adopt a tool named “issues list” for maintaining a work plan for Q9/9. Q9/9 agreed on a first version of this “issues list”, which is to be found as [TD111-R1](#). Also, Q9/9 agreed to start a new work item **J.302amd-1** “*System specifications of augmented reality smart television service Amd #1*”, this mainly to encourage contributions to next meeting. Q9/9 also sent a liaison statement to the IEEE VR/AR Working Group to start a working relationship on AR/VR standards as discussed during the co-located workshop on “[TV and content delivery on Integrated Broadband Cable Networks](#)”.

#### **10.10 Question 10/9 “Work programme, coordination and planning”**

Q10/9 is responsible for the overall work programme and coordination within SG9. In this regards Q10/9 reviewed twenty-nine (29) incoming liaison statements and produced fourteen (14) outgoing liaison statements on various topics, see §9 for more details.

## 11. Work plan for interim Rapporteur meetings and Working parties meetings

### 11.1 Working Parties meetings

No interim Working Parties meetings will be held before next SG9 meeting (22-26 January 2018).

### 11.2 Interim Rapporteurs' groups meetings

The following interim Rapporteurs' groups meetings are agreed by SG9 meeting. For updates please see the Rapporteur meetings webpage: <https://www.itu.int/net/ITU-T/lists/rgm.aspx?Group=9&type=interim>

Question/WP	Date	Place / Host	Terms of reference	Contact
Q2/9	13-14 July 2017 (TBC)	Geneva (TBC)	Progress on J.dmcd-part3, J.dmcd-vm, J.dmcd-eci-as, J.dmcd-kl-as	Han-seung Koo ( <a href="mailto:koohs@etri.re.kr">koohs@etri.re.kr</a> )
Q2/9	3-6 Nov 2017 (TBC)	Geneva (TBC)	Progress on J.dmcd-part3, J.dmcd-vm, J.dmcd-eci-as, J.dmcd-kl-as	Han-seung Koo ( <a href="mailto:koohs@etri.re.kr">koohs@etri.re.kr</a> )
Q5/9	15 Aug 2017 (TBC)	E-Meeting	Progress on J.207 Rev	Heming Wang ( <a href="mailto:Hermit.wangheming@hisilicon.com">Hermit.wangheming@hisilicon.com</a> )
Q5/9	20 Oct 2017 (TBC)	Beijing/China (TBD)	Progress the new work item J.stvos-spec Consider any other contribution	Heming Wang ( <a href="mailto:Hermit.wangheming@hisilicon.com">Hermit.wangheming@hisilicon.com</a> )
Q6/9	October 2017 (date TBC)	E-meeting	Progress on J.297-rev	Long Shizu ( <a href="mailto:longshizhu@skyworth.com">longshizhu@skyworth.com</a> )
Q6/9	November 2017 (TBC)	E-meeting	Progress on J.stb-cts	Long Shizu ( <a href="mailto:longshizhu@skyworth.com">longshizhu@skyworth.com</a> )
Q7/9	August 2017	Geneva	Progress on J.roip-arch, J.fdx-req Consider new proposed work items	TaeKyoon KIM ( <a href="mailto:tkkim@etri.re.kr">tkkim@etri.re.kr</a> )
Q7/9	October 2017	Geneva	Progress on J.roip-arch, J.fdx-req Consider new proposed work items	TaeKyoon KIM ( <a href="mailto:tkkim@etri.re.kr">tkkim@etri.re.kr</a> )
Q7/9	December 2017	Geneva	Progress on J.roip-arch, J.fdx-req Consider new proposed work items	TaeKyoon KIM ( <a href="mailto:tkkim@etri.re.kr">tkkim@etri.re.kr</a> )

Question/WP	Date	Place / Host	Terms of reference	Contact
Q9/9	2 August 2017 9-11am, Geneva time	e-meeting	Progress on J.302amd-1; Discuss any other contribution; Discuss collaboration with other SDO(s)	Xiang (Eric) Wang ( <a href="mailto:eric.wangxiang@hauwei.com">eric.wangxiang@hauwei.com</a> )
Q9/9	18 October 2017 9-11am, Geneva time	e-meeting	Progress on J.302amd-1; Discuss any other contribution(s); Discuss collaboration with other SDO(s)	Xiang (Eric) Wang ( <a href="mailto:eric.wangxiang@hauwei.com">eric.wangxiang@hauwei.com</a> )

## 12. Next Study Group 9 meeting

Next SG9 meeting is currently scheduled in Geneva, 22-30 January 2018.

---