

Executive summary of ITU-T SG9 meeting (Bangalore, 9-18 May 2023)

The second Study Group 9 (Broadband cable and TV) meeting in the study period 2022-2024 was held in Bangalore (Bengaluru), India, from 9 to 18 May 2023 at the kind invitation of the Ministry of Communications of the Government of India. The SG9 meeting was chaired by Mr Satoshi Miyaji (KDDI, Japan), who was assisted by Mr Stefano Polidori (TSB Counsellor) and was attended by 69 participants (of which 39 attended remotely) from 18 countries. Along with face-to-face meetings, all sessions were supported by remote participation using [MyMeetings](#) platform.

Co-located with the SG9 meeting, the ITU organized a **workshop** on “[The Future of Television for South Asia, Arab and Africa Regions](#)” on 11 May 2023. This event, which was jointly organized by the ITU Standardization Sector (ITU-T), the ITU-Radiocommunication Sector (ITU-R), the ITU Development Sector (ITU-D) and the ITU Regional offices, discussed the future of television for South Asia, Arab and Africa regions with relevant stakeholders, covering regulatory and policy frameworks, emerging and convergent ICT Infrastructures and services, the future television experience enabled by AI and extended reality technologies as well as content delivery from different viewpoints (broadband, cable, and terrestrial/satellite broadcasting). It also provided an opportunity to discuss TV-related national, regional and international standardization and to share best practices and case studies on TV implementations over various media as well as new TV services. The workshop was well attended by almost 200 participants (among which 75 joined remotely worldwide). The full event can be watched on the online [offline recording](#).

In addition, a virtual meeting of the IRG-AVA was organized under the auspices of ITU-T SG9 on 10 May 2023 and was attended by 21 participants. IRG-AVA serves as a collaborative platform with other ITU Study Groups in ITU-T and ITU-R Sectors to progress the ongoing draft Recommendation from Q11/9 on common user profile format and other accessibility issues, e.g. captioning. The meeting produced an updated draft new Recommendation ITU-T J.acc-us-prof "Requirements for the specific semantics of a Common User Profile used to personalize audiovisual media", posted as [SG9-TD343](#).

1 List of Consented/Determined Recommendations and other deliverables for approval, including eventual modifications to J-series structure

During the SG9 meeting in May 2023 a total of 4 revised and 6 new draft Recommendations were finalized and agreed for AAP Consent.

1.1 List of ten Consented draft Recommendations using AAP (ITU-T A.8)

Question	AAP/TAP	Rec	Status	Title	Final TD	A.5 justification
Q1/9 Q7/9	AAP	ITU-T J.224 (Rev)	Revised	Fifth-generation transmission systems for interactive cable television services - IP cable modems	TD338	TD368

Question	AAP/TAP	Rec	Status	Title	Final TD	A.5 justification
Q1/9 Q7/9	AAP	ITU-T J.225 (Rev)	Revised	Fourth-generation transmission systems for interactive cable television services - IP cable modems	TD339	TD369
Q1/9 Q4/9	AAP	ITU-T J.152 (ex J.cable-5G-req)	New	Requirements for cable television services to use 5G radio system	TD364-R1	TD349
Q2/9	AAP	ITU-T J.1036 (ex J.FSR-REQ)	New	Factual subscriber-base reporting and protected content delivery in conditional access system - Requirements	TD352	N/A
Q6/9	AAP	ITU-T J.299 (Rev)	Revised	Functional requirements for remote management of cable set-top box by auto configuration server	TD355	TD348-R1
Q6/9	AAP	ITU-T J.1612 (Rev)	Revised	The Architecture for Smart Home Gateway	TD357	TD378-R1
Q7/9	AAP	ITU-T J.1112 (ex J.FSPEC-DVCS)	New	Functional Requirements for IP-based Digital Video Convergence Service	TD370	N/A
Q8/9	AAP	ITU-T J.1305 (ex J.mma-req)	New	Requirements of microservice architecture for audio-visual media in the converged media cloud	TD346	N/A
Q8/9	AAP	ITU-T J.1306 (ex J.mma-spec)	New	Specification of microservice architecture for audio-visual media in the converged media cloud	TD347-R1	N/A
Q9/9	AAP	ITU-T J.484 (ex J.cable-mabr)	New	Requirements of multicast adaptive bitrate (M-ABR) IP delivery	TD362	N/A

1.2 List of Determined draft Recommendations using TAP (WTSA Resolution 1, section 9)

No Recommendations were Determined at this meeting.

1.3 List of Draft Recommendations for AAP approval

No Recommendations were AAP approved at this meeting.

1.4 Recommendations for publication

It was agreed to edit the following Recommendation, which was approved on 13 January 2022, to allow TSB to proceed for publication.

Q	Recommendation	Title	Current TD
Q5/9	ITU-T J.1205	Smart television operating system - Hardware abstract layer application programming interface	TD384

1.5 Modification of the category names of J-series Recommendations

It was agreed to create a new sub-series under J-series Recommendations as follows:

- *J.1036 – J.1039: “Factual subscriber-base reporting and protected content delivery in conditional access systems”*

2 List of Draft Supplements, Technical Reports/Papers or other documents for agreement

2.1 Technical Papers

The following Technical Paper was agreed for publication by SG9 at this meeting.

Question	Approval	Document	Kind of document	Title	Final TD
Q2/9	Agreement	ITU-T TR.FSR	Technical Report	Factual subscriber-base reporting and protected content delivery in Conditional Access System (CAS)	TD353

2.2 Supplements

The following Supplements were agreed for publication by SG9 at this meeting.

Question	Approval	Document	Kind of document	Title	Final TD
Q1/9 Q7/9	Agreement	ITU-T J Suppl. 10 (Rev)	Supplement	Correspondence between CableLabs DOCSIS Specifications and ITU-T J-series Recommendations	TD340-R1

2.3 Amendments

No Amendment was proposed for agreement/approval at this meeting.

2.4 Corrigenda

No Corrigenda was proposed for agreement/approval at this meeting.

3 New and deleted work items

3.1 New work items

The meeting agreed to start work on the following 11 new work items, among them draft revised ITU-T J.224, J.225, J.299 and J.Sup10 which were finalized at this meeting.

NOTE: In colour the work items that were immediately consented or agreed.

#	Q.	Acronym	kind of publication	Status (new/revised)	Title	Editor	TD	A.1 /A.13 Justification template
1	Q1/9 Q4/9	J.cable-5G-arch	Recommendation	New	System Architecture for cable television services to use 5G radio system	Mr Tatsuo Shibata (t-shibata@jpabs.or.jp)	TD372	ANNEX C of TD321 (A.1)
2	Q1/9 Q7/9	J.Sup-HiNoC	Supplement	New	Comparison between third-generation HiNoC and second-generation HiNoC	Ms Cui Zhao (zhaocui@abs.ac.cn)	TD375R1	ANNEX D of TD321 (A.13)
3	Q1/9 Q7/9	J.224-rev	Recommendation	Revised	Fifth-generation transmission systems for interactive cable television services - IP cable modems	Mr Kei Kawamura (ki-kawamura@kddi.com) Mr Curtis Knittle (C.Knittle@cablelabs.com)	TD338	N/A
4	Q1/9 Q7/9	J.225-rev	Recommendation	Revised	Fourth-generation transmission systems for interactive cable television services - IP cable modems	Mr Kei Kawamura (ki-kawamura@kddi.com) Mr Curtis Knittle (C.Knittle@cablelabs.com)	TD339	N/A
5	Q1/9 Q7/9	J.Sup10-rev	Supplement	Revised	Correspondence between CableLabs DOCSIS Specifications and ITU-T J-series Recommendations	Mr Kei Kawamura (ki-kawamura@kddi.com) Mr Curtis Knittle (C.Knittle@cablelabs.com)	TD340-R1	N/A
6	Q2/9	J.FSR-TEST	Supplement	New	Factual subscriber-base reporting and protected content delivery in Conditional Access System – Test Methods	Mr Avinash Agarwal (avinash.70@gov.in) Mr Harsh Sharma (dircb2.tec-dot@gov.in)	TD354	ANNEX C of TD322 (A.13)

#	Q.	Acronym	kind of publication	Status (new/revised)	Title	Editor	TD	A.1 /A.13 Justification template
						Mr Han-seung Koo (koohs@etri.re.kr) Mr Zhijian Liang (liangzhijian1@hisilicon.com)		
7	Q5/9	J.stvos-api	Recommendation	New	The application programming interface of smart TV operating system	Mr Haifeng Yan (yanhaifeng@hisilicon.com)	TD383	ANNEX C of TD325 (A.1)
8	Q6/9	J.298 (Rev)	Recommendation	Rev	Requirements and technical specifications of a cable TV hybrid set-top box compatible with terrestrial and satellite TV transport	Ms Meenakshi Singhvi (meenakshi.singhvi@prasarbharati.gov.in)	TD379	ANNEX C of TD326 (A.1)
9	Q6/9	J.299-rev	Recommendation	Rev	Functional requirements for remote management of cable set-top-box by auto configuration server	Mr Tatsuo Shibata (t-shibata@jlabs.or.jp) Mr Ataru Kobayashi (a-kobayashi@jlabs.or.jp)	TD355	N/A
10	Q9/9	J.cloud-holo	Recommendation	New	Requirements of E2E Network Platform for Cloud-based Holography Transmissions	Mr Kei Kawamura (ki-kawamura@kddi.com)	TD363	ANNEX C of TD329 (A.1)
11	Q10/9	J.1 (Rev)	Recommendation	Rev	Terms, definitions and acronyms for television and sound transmission and integrated broadband cable networks	Ms Jingyi Xue (xuejingyi816@126.com)	N/A	Annex C of TD330 (A.1)

3.2 Discontinued work items

The meeting agreed to stop the work on the following work items:

#	Question	Acronym (kind of publication)	Title
1	Q7/9	J.UOC (Draft Rec.)	Unified Optical and Coaxial Platform for Cabinet-DOCSIS

4 SG9 Management for the Study Period 2022-2024

SG9 confirmed 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 TaeKyoon KIM (ETRI, Korea Rep. of)
Vice-chairman	Mr Zhifan SHENG (ABS, China)
Vice-chairman	Mr Pradipta BISWAS (Indian Administration / Indian Institute of Science, India)
Counsellor	Mr Stefano POLIDORI (TSB, ITU)
Administrative assistant	Ms Hiba Tahawi (TSB, ITU)

5 SG9 Structure for the Study Period 2022-2024

ITU-T SG9 Working Party structure and leadership was updated as contained in [SG9-TD200](#), see below:

- **WP1** “*Cable transport and terminals, including video and data*” (Q1, 2, 4, 6 & 7), and
- **WP2** “*Cable-related platforms and applications*” (Q3, 5, 8, 9 & 11).

In addition, **Q10** and **IRG-AVA**, will report to the **SG9 Plenary**.

The update consists in the appointment of Mr Yanbin (Evan) Sun (Huawei, China) as WP2/9 Vice-chair to replace his colleague Mr Xiang (Eric) Wang who couldn't continue in that position.

	SG9 Structure	Q/IRG	Titles
PLEN	PLENARY of SG9 Satoshi MIYAJI (<i>SG9 Chair</i>) <i>(KDDI, Japan)</i>	Q10	Work programme, coordination and planning
		IRG-AVA	Audiovisual Media Accessibility
WP1	WP1/9: Cable transport and terminals, including video and data Zhifan SHENG (<i>WP1/9 Chair</i>) <i>(ABS, China)</i> Tatsuo SHIBATA (<i>WP1/9 Vice-chair</i>) <i>(Japan)</i> Vacant (<i>WP1/9 Vice-chair</i>)	Q1	Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution
		Q2	Methods and practices for conditional access and content protection
		Q4	Guidelines for implementations and deployment of transmission of multichannel digital television signals over optical access networks and Hybrid Fibre-Coaxial (HFC)
		Q6	Functional requirements for terminal devices of the integrated broadband cable network
		Q7	Transmission control and interfaces (MAC layer) for IP and/or packet-based data over integrated broadband cable networks
WP2	WP2/9: Cable-related platforms and applications Taekyoon KIM (<i>WP2/9 Chair</i>) <i>(ETRI, Korea)</i> Yanbin (Evan) SUN (<i>WP2/9 Vice-chair</i>) <i>(Huawei, China)</i> Pradipta BISWAS (<i>WP2/9 Vice-chair</i>) <i>(Indian Institute of Science, India)</i>	Q3	AI-enabled enhanced functions over integrated broadband cable network
		Q5	Software components, application programming interfaces (APIs), frameworks and overall software architecture for advanced content distribution services within the scope of Study Group 9
		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 audiovisual content, and other multimedia interactive services over integrated broadband cable networks
		Q11	Accessibility to cable systems and services

5.1 SG9 Questions texts:

No changes were proposed to the current list of Questions texts.

6 SG9 Management, Rapporteurs and Associate Rapporteurs

SG9 has updated the List of SG9 Rapporteurs and Associate Rapporteurs for the Study Period 2022-2024 as found in [SG9-TD202](#).

The following expert was appointed:

- Ms Yanhua (Willa) Niu (Academy of Broadcasting Science, NRTA, China) was appointed as a Rapporteur for Q9/9, to replace Mr Eric Wang (Huawei, China) who could not continue in that position.

7 Liaison officers to external groups

SG9 agreed on the list of liaison officers for the Study Period 2022-2024, with the following changes as found in [SG9-TD203-R1](#);

- Mr Satoshi Miyaji was appointed as ITU-T SG12 liaison officer, replacing Mr Eric Wang, who could not continue in that position;
- Mr Satoshi Miyaji was appointed as JCA-IMT2020 liaison officer, replacing Mr Eric Wang, who could not continue in that position;
- Mr Evan Sun was appointed as ITU-T SG15 liaison officer, replacing Mr Eric Wang, who could not continue in that position;
- Mr Evan Sun was appointed as JCA-ML liaison officer;
- Mr Kei Kawamura was appointed as ITU-T FG-MV liaison officer.

8 Intersector Rapporteur Groups (IRG-AVA)

A meeting of IRG-AVA was organized on 10 May in co-location with SG9 meeting. IRG-AVA serves as a collaborative platform to progress the ongoing draft Recommendation from Q11/9, which benefit from the collaboration with ITU-T SG16 and ITU-R SG6.

The meeting produced an updated draft new Recommendation ITU-T J.acc-us-prof "Requirements for the specific semantics of a Common User Profile used to personalize audiovisual media", posted as [SG9-TD343](#) and an updated draft of the new Technical Report (JSTR.LCAP) on “Technical advances, challenges, and best practices in live captioning” posted as [SG9-TD342](#).

SG9 continues to act as a parent study group for IRG-AVA (Audiovisual Media Accessibility), as mentioned in the table below.

IRG	Title	Co-chair from SG9	Parent Groups	Website
IRG-AVA	Audiovisual Media Accessibility	Pradipta BISWAS (Indian Institute of Science, India)	ITU-T SG9 ITU-R SG6 ITU-T SG16	https://itu.int/en/irg/ava

9 Outgoing Liaison Statements

The following table shows the list of the 21 agreed outgoing liaison statements, as indicated in [SG9-TD221](#):

#	Q	WP	To	For	Title	TD
1	Q1/9	WP1	ITU-T SG15, ETSI TC Cable, IEC TC100, CableLabs, SCTE, TTA, TTC, IEEE 802.3 Ethernet WG, CCSA	Information	LS/o on DOCSIS-related work items in ITU-T SG9 (Approval of revised Recommendation ITU-T J.224 and ITU-T J.225, and Agreement on the revised Supplement ITU-T J Suppl. 10)	TD341-R2
2	Q1/9, Q7/9	WP1	ITU-T SG15, ETSI TC Cable, IEC TC100, CableLabs, SCTE, TTA, TTC, IEEE 802.3 Ethernet WG, CCSA	Information	LS/o on the new work item on J.Sup-HiNoC and the progress on J.HiNoC3-PHY and J.HiNoC3-MAC	TD376-R1
3	Q1/9, Q7	WP1	IEC TC 100 TA5	Information	LS/o/r on reply to the comments on the draft Recommendations J.HiNoC3-PHY and J.HiNoC3-MAC	TD377-R1
4	Q1/9, Q4/9	WP1	JCA-IMT2020 , ITU-R SG6, ITU-T SG11 and ITU-T SG13	Information	LS/o on draft to inform about AAP consent of new Recommendation ITU-T J.cable-5G-req "Requirements for cable television services to use 5G radio system"	TD381-R1
5	Q1/9, Q4/9	WP1	JCA-IMT2020	Information	LS/o/r on Updating JCA-IMT2020 about SG9 work items on J.cable-5G-req and J.cable-5G-arch (JCA-IMT2020-LS12)	TD380-R1
6	Q1/9	WP1	ITU-T SG16 (Q13/16)	Information	LS/o/r on draft ITU-T Technical Report TR.WiFiTV "Secondary distribution of digital television and audiovisual content to portable devices using the wireless local area network" (SG16-LS24)	TD365-R1
7	Q1/9	WP1	ITU-R WP6A and WP6B	Information	LS/o/r on draft ITU-T Technical Report TR.WiFiTV "Secondary distribution of digital television and audiovisual content to portable devices using the wireless local area network" (ITU-R SG6-6B/TEMP/160)	TD366-R1
8	Q1/9	WP1	ITU-T SG16	Information	LS/o/r on clarification of scope and applicability of draft new Recommendation ITU-T J.cable-rf-to-ip	TD361-R1

#	Q	WP	To	For	Title	TD
					"Requirements of cable television system for migration from RF to IP"	
9	Q4/9	WP1	ITU-D SG1	Action	LS/o on request of hybrid cable network architecture use cases to update ITU-T J. Supplement 11 "Guidelines for installing a digital television service for cable networks based on ITU-T Recommendations"	TD337
10	Q5/9	WP2	ITU-T SG16, TSAG RG-WM	Information	LS/o/r on smart TV Operating System	TD382
11	Q6/9	WP1	ARIB, BBF, ETSI TC Cable, ITU-T Q13/SG16, SCTE	Information	LS/o/r on AAP Consent of draft revised Recommendation ITU-T J.299 "Functional Requirements for remote management of cable STB by Auto Configuration Server (ACS)" (LIAISE-516)	TD356
12	Q7/9	WP1	ETSI TC Cable, TTA	Information	LS/o on AAP consent of draft new Recommendation ITU-T J.1112 (ex J.FSPEC-DVCS) "Functional Requirements for IP-based digital video convergence service"	TD371-R1
13	Q8/9	WP2	ITU-T Study Groups 13, Study Group 16	Information	LS/o on AAP Consent of two new Recommendations ITU-T J.1305 (ex J.mma-req) on "Requirements of microservice architecture for audio-visual media in the converged media cloud" and ITU-T J.1306 (ex J. mma-spec) on "Specification of microservice architecture for audio-visual media in the converged media cloud"	TD385-R1
14	Q9/9	WP2	DVB TM-MCAST, ITU-T SG16, CableLabs	Information	LS/o on AAP Consent of draft new Recommendation ITU-T J.484 "Requirements of multicast adaptive bitrate (M-ABR) IP delivery."	TD358
15	Q9/9	WP2	ITU-T SG16, ETSI ISG F5G	Information	LS/o on new work item on J.cloud-holo.	TD359-R1
16	Q9/9	WP2	ITU-T SG16	Information	LS/o/r on a new work item for ITU-T H.IIS-FA "Functional architecture of interactive immersive services (IIS) system" (SG16-LS18)	TD360-R1

#	Q	WP	To	For	Title	TD
17	Q10/9	PLEN	SCV, CCT and all ITU-T SGs	Action	LS/o/r on comments regarding of new terms and definitions (reply to SCV-LS5)	TD386-R1
18	Q10/9	PLEN	JCA-ML	Information	LS/o/r on the appointment of SG9 representative to JCA-ML (JCA-ML-LS1)	TD387
19	Q10/9	PLEN	FG-MV	Information	LS/o/r on collaboration on metaverse standardization work of SG9 (FG-MV-LS1)	TD388-R1
20	Q10/9	PLEN	ITU-T SG15	Action	LS/o/r on the new version of the Access Network Transport (ANT) Standards Overview and Work Plan (Ref.: SG15-LS45)	TD389-R1
21	Q11/9	WP2	ITU-R SG6; ITU-T SG16 (Q26/16), IRG-AVA	Action	LS/o on progress made on the draft new ITU-T Technical Report JSTR.LCAP "Technical advances, challenges, and best practices in live captioning" during the SG9 meeting held in Bangalore, India (9-18 May 2023)	TD344

10 SG9 results per Question

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

The report of Q1/9 can be found in [SG9-TD321-R1](#). It was approved.

Executive summary:

Question 1/9 discussed 19 contributions and 45 TDs, including 34 incoming liaison statements.

Question 1/9 and Question 4/9 agreed to initiate the new work item on J.cable-5G-arch “System Architecture for cable television services to use 5G radio system”.

Question 1/9 and Question 4/9 decided to reach AAP consent for draft Recommendation ITU-T J.152 (ex J.cable-5G-req) from this SG9 meeting.

Question 1/9 and Question 7/9 decided to reach AAP consent for the draft Recommendations ITU-T J.224 (ex J.224-rev) and ITU-T J.225 (ex J.225-rev) and to reach agreement for the Supplement ITU-T J.Sup10 (ex J.Sup10-rev) in this SG9 meeting.

Question 1/9 and Question 7/9 agreed to initiate the new work item on Supplement ITU-T J.Sup-HiNoC “Comparison between third-generation HiNoC and second-generation HiNoC.”

Question 1/9 reviewed all incoming liaison statements and agreed to send eight outgoing liaison statements as follows:

- to inform ITU-T SG15, ETSI TC Cable, IEC TC100, CableLabs, SCTE, RRATTA, TTC, IEEE 802.3 Ethernet WG and CCSA on the AAP Consent of Recommendation ITU-T J.224 and J.225 as well as agreement of J.Supplement 10, as found in [TD341-R2](#).
- to inform ITU-T SG15, ETSI TC Cable, IEC TC100, CableLabs, SCTE, RRATTA, TTC, IEEE 802.3 Ethernet WG and CCSA on the initiation of the new work item on J.Sup-HiNoC as well as the progress of the draft Recommendation ITU-T J.HiNoC3-PHY and J.HiNoC3-MAC, as found in [TD376-R1](#).
- to reply to IEC TC 100 TA5 on the draft Recommendation ITU-T J.HiNoC3-PHY and J.HiNoC3-MAC for further clarification of their suggestions, as found in [TD377-R1](#).
- to inform JCA-IMT2020, ITU-R SG6, ITU-T SG11, and ITU-T SG13 on the AAP Consent of Recommendation ITU-T J.152 (ex J.cable-5G-req) and the initiating of a new work item J.cable-5G-arch, as found in [TD381-R1](#).
- to reply to ITU-T SG16 and ITU-R WP 6A and 6B on the draft Technical Report ITU-T J.TR.WiFiTV for further development plans and clarifications, as found in [TD365-R1](#) and [TD366-R1](#).
- to reply to ITU-T SG16 on J.cable-rf-to-ip for further clarifications, as found in [TD361-R1](#).
- And to updating JCA-IMT2020 about SG9 work items on J.cable-5G-req and J.cable-5G-arch, as found in [TD380-R1](#).

Question 1/9 plans to organize one interim meeting on 10 August 2023 for the upcoming period.

Question 1/9 and Question 4/9 have no plan to organize any interim meetings for the upcoming period.

Question 1/9 and Question 7/9 plan to organize two interim meetings on 3 July and 4 September 2023 for the upcoming period.

Question 1/9 kindly requested that SG9 experts provide their migration scenarios to J.cable-rf-to-ip.

10.2 Question 2/9 “Methods and practices for conditional access and content protection”

The report of Q2 can be found in [SG9-TD322-R1](#). It was approved.

Executive summary:

One work item (J.FSR-REQ) is approved at Q2/9 level for AAP consent. The assigned Recommendation number for it is J.1036, and TD number is [TD352](#). The group agreed to create a new recommendations subseries:

- J.1036 - J.1039: “Factual subscriber-base reporting and protected content delivery in Conditional Access System”

One work item (TR.FSR) was finalized and proposed for agreement by SG9 closing Plenary. The TD number is [TD353](#).

A new work item J.FSR-TEST was agreed to be studied. It is a new draft Supplement to provide the test methods for the J.1036 (ex. J.FSR-REQ) “Factual subscriber-base reporting and protected content delivery in Conditional Access System”. The current output draft is available in [TD354](#).

The group reviewed the report for the Rapporteur meeting of Question 2/9 (e-meeting, 10 February 2023) and one output document of this meeting.

The group reviewed a liaison statement from Telecommunication Standardization Advisory Group (TSAG) on the JCAs under the responsibility of SG17.

The group reviewed a liaison statement from Telecommunication Standardization Advisory Group (TSAG) on new ITU-T Focus Group on metaverse (FG-MV).

The group reviewed a liaison statement from ITU-T SG20 on new work item proposal ITU-T Y.IoT-MVS “Requirements and functional architecture of IoT based metaverse service”.

The group reviewed a liaison statement from ITU-T SG17 on Coordination for Identity Management.

The group reviewed a liaison statement from ITU-T Focus Group on metaverse (FG-MV) on requesting collaboration on metaverse standardization work.

Question 2/9 plans to organize one interim meeting on 9 August 2023 to progress on J.FSR-TEST.

10.3 Question 3/9 “AI-enabled enhanced functions over integrated broadband cable network”

The report of Q3/9 can be found in [SG9-TD323](#). It was approved.

Executive summary:

In this SG9 plenary meeting, Question 3 reviewed 1 contribution and 17 incoming liaisons.

Q3 used 2 sessions to review the following contributions and TDs

- Contribution: [C77](#)
- TD: [TD224](#), [TD229](#), [TD230](#), [TD236](#), [TD239](#), [TD243](#), [TD245](#), [TD252](#), [TD256](#), [TD259](#), [TD262](#), [TD263](#), [TD267](#), [TD268](#), [TD288](#), [TD293](#), [TD336](#)

In particular, Q3/9 reviewed the contribution C77, which describes the E2E network characteristics requirement for video services. SG9 members from Q3 agreed to this contribution as the new baseline text.

Q3/9 planned one interim meeting on 17 August 2023.

10.4 Question 4/9 “Guidelines for implementations and deployment of transmission of multichannel digital television signals over optical access networks and Hybrid Fibre-Coaxial (HFC)”

The report of Q4 can be found in [SG9-TD324-R1](#). It was approved.

Executive summary:

Q4/9 received two contributions, [C68-R1](#) and [C69](#) from Japan Cable Laboratories. These two contributions relate to J.cable-5G, so they were discussed during the joint session among Q1 and Q4 on 10 May. During the joint discussion, Q4 noted that one of the proposed use cases is applicable to extension of cable television services to remote areas in developing countries. More details on the joint session are found in Q1 meeting report (TD 321).

Regarding Q4's work item to revise J Supplement 11 to add use cases of hybrid cable networks, Q4 received no contribution, but noted a liaison statement from ITU-D (TD247) which informed Q4/9 that ITU-D SG1 is beginning its work and will forward relevant use cases based on contribution received. Q4/9 agreed to draft a reply liaison statement to invite ITU-D Q2/1 to encourage its members to actively contribute to ITU-D or ITU-T SG9 directly by submitting the required use cases. It is proposed to send such a reply liaison statement to ITU-D Q2/1 . The liaison statement is made available in [TD337](#).

In the meantime, to encourage SG9's own activity, Q4 Rapporteur will also invite by e-mail, SG9 members from developing countries to submit contributions on hybrid cable network architecture.

Q4 reviewed TD266 which contains a liaison statement from ITU-T SG3 about the creation of a new ITU-T Focus Group on costing models for affordable data services (FG-CostingData). From the information contained in the liaison statement, Q4 tentatively concluded that there is little relevance to video distribution but will follow the work of the FG to make sure there is no relevance.

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 [SG9-TD325](#). It was approved.

Executive summary:

Q5/9 addressed two contributions, six incoming liaison statements and one TD from TSB.

The group reviewed and noted six liaison statements.

The group agreed to start a new work item J.stvos-api. The A.1 justifications for the draft new Recommendation can be found in [Annex C](#).

The group reviewed the first baseline text of J.stvos-api and expected to make further progress of this draft new Recommendation with more contributions. The output document with the current baseline text can be found in [TD383](#).

The group reviewed one TD from TSB, about the A.5 qualification for Khronos, and agreed to a solution to handle the publication of draft ITU-T J.1205, as found in [TD384](#).

The group produced one outgoing liaison statement, available in [TD382](#).

There is no plan to hold interim rapporteur meetings for Q5/9.

10.6 Question 6/9 “Functional requirements for terminal devices of the integrated broadband cable network”

The report of Q6 can be found in [SG9-TD326-R2](#). It was approved.

Executive summary:

Q6/9 meeting was held according to the agenda [TD317-R1](#):

Contribution:

Four Contributions [C55](#), [C71](#), [C78](#), [C79](#), were reviewed during the four session meetings.

Q6/9 team reviewed [C55](#) (Proposal to revise ITU-T Recommendation J.1612) and agreed for consent it ([TD357](#)).

Q6/9 team reviewed [C71](#) (Proposal to revise and consent ITU-T Recommendation J.299) and agreed to start the related work items and agree for immediate consent it ([TD355](#)).

Q6/9 team reviewed [C78](#) (Proposed A.1 justification for revision in ITU-T Recommendation J.298) and agreed to start revision work, according to the baseline submitted for J.298 in ([C79](#)).

Q6/9 team reviewed [C79](#) (Proposed draft revision of ITU-T Recommendation J.298) and agreed to propose it for consent at next SG9 meeting in November 2023 ([TD379](#)).

Report of interim activities:

One report of interim activities [TD276](#) was reviewed:

This TD is Report of Rapporteur meeting of Question 6/9 (E-meeting, 22 November 2022)

Q6/9 agree to stop ITU-T Recommendation (J.BD2M "Functional requirements for terminal devices of the Broadcast Direct to Mobile (D2M) networks")

Q6/9 confirmed that its meeting on 8-11 February 2023 were cancelled.

Incoming Liaison Statements

Seven Incoming Liaison Statements were reviewed : [TD225](#), [TD245](#), [TD256](#), [TD263](#), [TD268](#), [TD310](#), [TD311](#)

Q6/9 reviewed and noted: [TD216](#), [TD217](#), [TD218](#), [TD225](#), [TD245](#), [TD256](#), [TD263](#), [TD268](#), [TD310](#), [TD311](#)

Planned interim Rapporteurs meetings

One interim Rapporteur meeting of Question 6 was planned on 26 September 2023.

10.7 Question 7/9 “Transmission control and interfaces (MAC layer) for IP and/or packet-based data over integrated broadband cable networks”

The report of Q7 can be found in [SG9-TD327-R1](#). It was approved.

Executive summary:

Q7 achieved the following results:

- Two outgoing liaison statements were approved; [TD341-R1](#) (sent to: ITU-T SG15, ETSI TC Cable, IEC TC100, CableLabs, SCTE, TTA, TTC, IEEE 802.3 Ethernet WG, CCSA) in joint meeting with Q1/9& Q7/9, [TD371-R1](#) (sent to: ETSI TC Cable, TTA) in Q7/9 meeting;
- Three Recommendations were agreed to be proposed to the SG9 Plenary for consent;
 - [TD338](#) (Consent - Draft Revised Recommendation ITU-T J.224 "Fifth-generation transmission systems for interactive cable television services - IP cable modems"),
 - [TD339](#) (Consent - Draft Revised Recommendation ITU-T J.225 "Fourth-generation transmission systems for interactive cable television services - IP cable modems");
 - [TD370](#) (Consent - Draft new Recommendation ITU-T J.1112 (ex.J.FSPEX-DVCS) “Functional Requirements for IP-based Digital Video Convergence Service”);
- One Supplement was agreed to be proposed to the SG9 Plenary for agreement:
 - [TD340](#) (Agreement - Draft Revised Supplement ITU-T J.Sup10 "Correspondence between CableLabs DOCSIS Specifications and ITU-T J-series Recommendations")
- Five interim meetings were planned.
- The group agreed to delete work item J.UOC “Unified Optical and Coaxial Platform for Cabinet-DOCSIS” as a stale work item.

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 [SG9-TD328-R1](#). It was approved.

Executive summary:

Q8/9 achieved the following results:

- Two ongoing work items were agreed for AAP consent:
 - Draft new Recommendation ITU-T J.1305 (ex J.mma-req) on “Requirements of microservice architecture for audio-visual media in the converged media cloud”, the output is available in [TD346](#).

- Draft new Recommendation ITU-T J.1306 (ex J.mma-spec) on “Specification of microservice architecture for audio-visual media in the converged media cloud”, the output is available in [TD347-R1](#).
- One outgoing LS was agreed to be sent to ITU-T SG13 and ITU-T SG16 on AAP consent of the two new draft Recommendations, one ITU-T J.1305 (ex J.mma-req) on “Requirements of microservice architecture for audio-visual media in the converged media cloud”, and the other ITU-T J.1306 (ex J.mma-spec) on “Specification of microservice architecture for audio-visual media in the converged media cloud”, the LS is available in [TD385-R1](#).

One interim e-meeting is planned: 27 July 2023 (TBC).

10.9 Question 9/9 “Requirements, methods, and interfaces of the advanced service platforms to enhance the delivery of audiovisual content, and other multimedia interactive services over integrated broadband cable networks”

The report of Q9/9 can be found in [SG9-TD329-R1](#). It was approved.

Executive summary:

Q9/9 discussed two contributions and fourteen TDs, including nine incoming liaison statements.

Q9/9 reached the status of AAP Consent for the draft Recommendation ITU-T J.484 (ex J.cable-mabr) at this SG9 meeting.

Q9/9 initiated a new work item on the draft Recommendation ITU-T J.cloud-holo and developed an output draft baseline text of J.cloud-holo.

Q9/9 reviewed all incoming liaison statements.

Q9/9 agreed to send three outgoing liaison statements as follows:

- to inform DVB TM-MCAST, ITU-T SG16, CableLabs on the AAP Consent for the new Recommendation ITU-T J.484 (ex. J.cable-mabr),
- to inform ITU-T SG16 and ETSI ISG F5G on the initiation of the new work item to develop a draft new Recommendation ITU-T J.cloud-holo,
- to reply to ITU-T SG16 on a new work item for ITU-T H.IIS-FA "Functional architecture of interactive immersive services (IIS) system".

Question 9/9 has a plan to organize one interim meeting during 24-25 August 2023.

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

The report of Q10/9 can be found in [SG9-TD330-R1](#). It was approved.

Executive summary:

Question 10/9 reviewed twenty-seven (27) inputs, including twenty-three (23) incoming liaison statements.

Question 10/9 agreed to draft four (4) reply liaison statements as follows:

- 1) LS/o/r on comments regarding of new terms and definitions (reply to SCV-LS5) [to SCV, CCT, and all ITU-T SGs], found in [TD386-R1](#).
- 2) LS/o/r on the appointment of SG9 representative to JCA-ML (JCA-ML-LS1) [to JCA-ML], found in [TD387](#).
- 3) LS/o/r on collaboration on metaverse standardization work of SG9 (FG-MV-LS1) [to FG-MV], found in [TD388-R1](#).
- 4) LS/o/r on the new version of the Access Network Transport (ANT) Standards Overview and Work Plan (Ref.: SG15-LS45) [to ITU-T SG15], found in [TD389-R1](#).

Question 10/9 agreed to start a new work item to revise ITU-T J.1 and the editor is Ms Jingyi Xue from ABP, NRTA. An interim meeting of Q10/9 is planned in September to start updating Recommendation ITU-T J.1.

10.11 Question 11/9 “Accessibility to cable systems and services”

The report of Q11/9 can be found in [SG9-TD331-R1](#). It was approved.

Executive summary:

Q11/9 achieved the following results:

- Updated the baseline text of two ongoing work items:
 - Draft new Recommendation ITU-T J.acc-us-prof "Common user profile format for audiovisual content distribution", the output is available in [TD343](#).
 - Draft new ITU-T Technical Report JSTR.LCAP "Technical advances, challenges, and best practices in live captioning", the output is available in [TD342](#).
- Agreed to plan one interim meeting: 28 August 2023, E-meeting.
- Agreed to an outgoing liaison statement to ITU-R SG6, ITU-T SG16, and IRG-AVA, available in [TD344](#).

11 Work plan for interim Rapporteur meetings and working party meetings

11.1 Working party meetings

No interim working party meetings will be held before next SG9 meeting, currently planned in November 2023 (TBC).

11.2 Interim Rapporteurs’ groups meetings

The following interim Rapporteurs’ groups meetings are agreed by SG9. For updates, please see the Rapporteur meetings webpage:

<https://www.itu.int/net/ITU-T/lists/rgm.aspx?Group=9&type=interim>

Q/SG	Date	Place / Host	Terms of reference	Contact
1/9	10 August 2023 06h00-07h30 (Geneva Time)	E-meeting	Progress on J.TR.WiFiTV	Mr Kei Kawamura (ki-kawamura@kddi.com)
Joint 1/9 & 7/9,	3 July 2023 09h00-10h30 (Geneva Time)	E-meeting	Progress on J.HiNoC-sereis.	Mr Kei Kawamura (ki-kawamura@kddi.com) TaeKyoon Kim (tkkim@etri.re.kr)
Joint 1/9 & 7/9,	4 September 2023 09h00-10h30 (Geneva Time)	E-meeting	Progress on J.HiNoC-sereis.	Mr Kei Kawamura (ki-kawamura@kddi.com) Mr TaeKyoon Kim (tkkim@etri.re.kr)
2/9	9 August 2023 09h30-11h00 (Geneva Time)	E-meeting	Progress on J.FSR-TEST	Mr Han-seung Koo (koohs@etri.re.kr)
3/9	17 August 2023 09h00-11h00 (Geneva Time)	E-meeting	Progress on J.pcnp-char (J.1630)	Mr Evan Sun (evan.sun@huawei.com)
6/9	26 September 2023 09h30-12h30 (Geneva Time)	E-meeting	Progress on J.298-rev (Requirements and technical specifications of a cable TV hybrid set-top box compatible with terrestrial and satellite TV transport) Discuss any other new Contributions and incoming liaison statement.	Mr Xin.zhang (xin.zhang@skyworth.com)
7/9	22 June 2023 07h30-09h30 (Geneva Time)	E-meeting	Progress on JSTR-STBN etc.	Mr TaeKyoon Kim (tkkim@etri.re.kr)
7/9	15 and 18 September 2023 07h30-09h30 (Geneva Time)	E-meeting	Progress on JSTR-STBN etc.	Mr TaeKyoon Kim (tkkim@etri.re.kr)
7/9	9-11 October 2023 06h30-08h30 (Geneva time) (TBC)	E-meeting	Progress on JSTR-STBN etc.	Mr TaeKyoon Kim (tkkim@etri.re.kr)
8/9	27 July 2023 09h30-12h30 (Geneva Time)	E-meeting	Brainstorm on the future of Q8 work items Discuss any additional contribution	Mr Rakesh Desai (rakesh.desai@gov.in)
9/9	24-25 August 2023 09h00-10h30 (Geneva Time)	E-meeting	Progress on J.cloud-vr-arch, J.cloud-game-req, and J.cloud-holo.	Ms Yanhua (Willa) Niu (niuyanhua@abs.ac.cn)

Q/SG	Date	Place / Host	Terms of reference	Contact
10/9	8 September 2023 10h00-12h00 (Geneva Time)	E-meeting	Progress on J.1-rev	Ms Jingyi Xue (Xuejingyi816@126.com)
11/9	28 August 2023 09h00-12h00 (Geneva Time)	E-meeting (TBD)	Progress on J.acc-us-prof, JSTR.LCAP	Mr Avinash Agarwal (avinash.70@gov.in)

12 A.5 qualification for KHRONOS

SG9 decided to start the A.5 qualification process for Khronos at the September 2022 meeting. Since then, TSB is analysing the qualification of Khronos according to ITU-T A.5. However, the analysis was still to be completed by TSB due to ongoing consultations, and planned to be submitted to the next SG9 meeting in November 2023 in Colombia (TBC). More information in [SG9-TD307-R1](#). The related issue for the publication of ITU-T J.1205 has been resolved. See clause 1.4.

13 Next Study Group 9 meeting

Next ITU-T SG9 meeting is currently scheduled to be held in Bogota, Colombia, 14-23 November 2023 (TBC). More information will be provided on the SG9 website when available. A co-located workshop on “The Future of TV for the Americas” may be organized on 17 November 2023 in collaboration with ITU-R, ITU-D and ITU regional offices (TBC).
