

Executive summary of ITU-T SG21 meeting (Geneva, 13-24 January 2025)

The inaugural and first meeting of ITU-T Study Group 21 (Technologies for multimedia, content delivery and cable television) in the study period 2025-2028 was held in ITU headquarters, Geneva, from 13 to 24 January 2025. The SG21 meeting was chaired by Mr Noah Luo (Huawei Technologies, China), who was assisted by his vice-chair Mr Shin-Gak Kang (ETRI, Rep. of Korea) and Mr Stefano Polidori (ITU/TSB Counsellor) and was attended by 499 participants from 39 countries. All sessions were held physically and supported by remote participation using [MyMeetings](#) platform.

SG21 was collocated with ISO/IEC JTC 1/SC 29 "*Coding of audio, picture, multimedia and hypermedia information*" and its [MPEG-related WGs](#).

A joint workshop between SG21 and ISO/IEC JTC 1/SC 29 on [“Future video coding – advanced signal processing, AI and standards”](#) was organised in co-location in Geneva, Switzerland on 17 January 2025. The workshop focused on **advanced signal processing, AI, and standards**. The workshop had over **500 participants** and featured three sessions:

1. **Requirements and Use Cases** – Industry and user perspectives.
2. **Towards H.267/MPEG-Next** – Current status and future timeline.
3. **Practicalities** – Hardware capabilities and software implementations.

The workshop also hosted a demonstration by Tencent and Alibaba. Find the full [workshop programme](#) for more info and the related [photo album](#).

See clause [5.3.2.1](#) for more details on the workshop follow up.

1 List of Consented/Determined Recommendations and other finalized deliverables

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

#	Question	Rec	Version	Title	Final TD	A.5 just.
1	Q1/21	F.792 (ex F.ACC-AMCS)	New	Requirements on accessible moveable communication systems in rural and out-of-home environments	TD68R1/PLEN	N/A
2	Q2/21	H.862.8 (ex F.OHSP-req)	New	Requirements and framework of occupational health service platform	TD42R1/PLEN	TD48/PLEN
3	Q2/21	F.780.6 (ex F.UHD-Req-Colour)	New	Requirements on colorimetry for telemedicine systems using ultra-high definition imaging	TD40/PLEN	N/A
4	Q3/21	F.740.10 (F.CDA-RP)	New	Requirements and procedure for cultural data annotation	TD95R1/PLEN	N/A

#	Question	Rec	Version	Title	Final TD	A.5 just.
5	Q4/21	F.760.3 (ex F.MDI)	New	Metadata for disaster information presentation with human factors	TD43R1/PLEN	N/A
6	Q5/21	F.748.53 (ex F.AIM-RCM)	New	Representation and compression methods of artificial intelligence models	TD72/PLEN	TD100/Plen
7	Q5/21	F.748.55 (ex F.AI-RPAS)	New	Technical requirements and evaluation methods for a robotic process automation system	TD75/PLEN	N/A
8	Q5/21	F.748.41 (ex F.DBDA)	New	Technical requirements and evaluation methods of AI-based driver behaviour detection application	TD73R1/PLEN	N/A
9	Q5/21	F.748.51 (ex F.AI-TRSMT)	New	Requirements for artificial intelligence based tactile rendering system in multimedia terminals	TD66R1/PLEN	N/A
10	Q5/21	F.748.50 (ex F.DHAI)	New	Framework and requirements of digital human access interfaces	TD65R2/PLEN	N/A
11	Q5/21	F.748.42 (ex F.VTIS-req-frame)	New	Requirements and framework for virtual tactile interaction systems	TD57R1/PLEN	N/A
12	Q5/21	F.748.44 (ex F.FDM-AC-BK)	New	Assessment criteria for foundation models: Benchmark	TD59/PLEN	N/A
13	Q5/21	F.748.46 (ex F.TE-AIA)	New	Requirements and evaluation methods of artificial intelligence agents based on large scale pre-trained model	TD61R1/PLEN	N/A
14	Q5/21	F.748.45 (ex F.TE-CG)	New	Technical requirements and evaluation methods of AI based code generation in multimedia applications	TD60R1/PLEN	N/A
15	Q5/21	F.748.52 (ex F.TE-RAG)	New	Requirements and evaluation methods for retrieval augmented generation of large scale pre-trained model	TD70R1/PLEN	N/A
16	Q5/21	F.748.48 (ex F.AICP-MDep)	New	Technical specification for artificial intelligence cloud platform: AI model deployment	TD63R1/PLEN	N/A
17	Q5/21	F.748.47 (ex F.FC-AM)	New	Functional capabilities for artificial intelligence development within the AI cloud platform: Automated machine learning	TD62/PLEN	N/A
18	Q5/21	F.748.43 (ex F.FFMP)	New	Framework for the foundation model platform	TD58R1/PLEN	N/A
19	Q5/21	H.626.8 (ex H.FDISprot)	New	Protocols for feature-based distributed intelligent systems	TD76R1/PLEN	TD83/Plen
20	Q5/21	F.748.49 (ex H.MAS-AP)	New	Architecture and protocols of multi-algorithm scheduling systems	TD64/PLEN	TD98/Plen

#	Question	Rec	Version	Title	Final TD	A.5 just.
21	Q5/21	F.748.6 (ex F.IMCSI)	New	Requirements and framework for interactive multimedia communication of Internet of thing (IoT) devices	TD67R1/PLEN	TD99/Plen
22	Q6/21	T.815 (V3) (ISO/IEC 15444-16 v3)	Rev.	Information technology - JPEG 2000 image coding system - Encapsulation of JPEG 2000 images into ISO/IEC 23008-12	TD45R1/PLEN	N/A
23	Q6/21	T.840.1 ISO/IEC 6048-1 (ex T.JPEG-AI)	New	Information technology - JPEG AI learning-based image coding system	TD93R1/PLEN	N/A
24	Q7/21	F.747.16 (ex F.3D-DDSReqs)	New	Requirements for 3D machine vision-based surface defect detection service of industrial products	TD36R2/PLEN	N/A
25	Q7/21	F.743.29 (ex F.MGSReqs)	New	Requirements and framework of model generalization system in intelligent video surveillance	TD37R2/PLEN	N/A
26	Q7/21	F.743.30 (ex H.CCVS)	New	Architecture for cloud computing platform supporting a video surveillance system	TD35R2/PLEN	N/A
27	Q9/21	F.740.11(F.CAR-reqs)	New	Requirements and framework of cloud-based augmented reality systems	TD79R2/PLEN	N/A
28	Q9/21	F.743.31 (ex F.DADOCM)	New	Requirements for data asset development and operations capability in multimedia	TD81R1/PLEN	N/A
29	Q9/21	F.743.32 (ex F.FMDAV)	New	Framework for multimedia data asset valuation	TD80R2/PLEN	N/A
30	Q9/21	F.742 (V2)	Rev	Service description and requirements for distance learning services	TD82R1/PLEN	N/A
31	Q11/21	H.222.0 13818-1 Amd.1	AMD	Information technology - Generic coding of moving pictures and associated audio information: Systems: Codec parameter clarifications and other improvements	TD90R1/PLEN	N/A
32	Q12/21	ITU-T F.751.24 (H.DLT-AGFAS)	New	Application guideline for authorization services based on distributed ledger technology	TD85R1/PLEN	N/A
33	Q12/21	ITU-T F.751.26 (H.DLT-ESSS)	New	Framework of distributed ledger technology-based energy storage sharing systems	TD89R2/PLEN	N/A
34	Q12/21	ITU-T F.751.25 (H.DLT-SGDRF)	New	Framework of distributed ledger technology-based smart grid demand response	TD88R1/PLEN	N/A

#	Question	Rec	Version	Title	Final TD	A.5 just.
35	Q12/21	ITU-T F.751.23 (ex H.DLT-TFI)	New	Technical Framework for distributed ledger technology (DLT) Interoperability	TD86R1/PLEN	N/A
36	Q12/12	F.751.27 (ex H.DLT-DAS)	New	Technical framework for distributed ledger technology-based multimedia data asset services	TD87/PLEN	N/A
37	Q13/21	ITU-T F.740.9 (ex F.IPTV-VRSReqs)	New	Requirements for enabling VR services based on IPTV architecture	TD46R1/PLEN	N/A
38	Q18/21	J.1305 Cor.2	Cor	Requirements of microservice architecture for audio-visual media in the converged media cloud	TD50/PLEN	N/A
39	Q18/21	J.1306 Cor.2	Cor	Specification of microservice architecture for audio-visual media in the converged media cloud	TD51/PLEN	N/A
40	Q19/21	J.1312 (J.cloud-game-sia)	New	Cloud gaming service infrastructure architecture	TD91R1/PLEN	N/A
41	Q21/21	J.157 (ex J.wtv-req)	New	Functional Requirements for secondary distribution of digital television and audiovisual content to portable devices using the wireless local area network	TD52/PLEN	TD94/PLEN
42	Q22/21	J.1041 (J.DRMVA-arch)	New	Digital rights management for video and audio content distribution - System Architecture	TD53R2/PLEN	TD84/PLEN
43	Q22/21	J.1042 (J.DRMVA-client)	New	Digital rights management for video and audio content distribution - Client	TD54R2/PLEN	N/A

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

#	Question	Rec	Version	Title	Final TD	A.5 just.
1	Q5/21	F.748.56 (ex F.AIGC-GFR)	New	Artificial intelligence generated content: General framework and requirements	TD78R1/PLEN	N/A
2	Q5/21	F.748.57 (ex F.RA-GAI)	New	Technical requirements and assessment methods of generative artificial intelligence enabled multimedia applications	TD77R1/PLEN	N/A

1.3 List of approved draft Recommendations

#	Question	Rec	Version	Title	Final TD	A.5 just.
1	Q7/21	F.743.27 (ex F.IVSP-PGI)	New	Requirements and framework of intelligent video surveillance platform for power grid infrastructure	TD32R1/PLEN	N/A
2	Q7/21	F.743.28 (ex F.RIIS-CEC)	New	Functional framework and requirements for intelligent inspection system based on cloud-edge-device collaboration in smart grids	TD33R1/PLEN	N/A

2 List of agreed draft Supplements, Technical Reports, Technical Papers or other documents

2.1 Technical Reports/Papers

#	Question	Work item	Version	Title	Final TD
1	Q21/21	JSTR.atsc-imatv (Technical Report)	New	ATSC 3.0 and 1.0 integrated-MATV system over digital terrestrial television broadcasting	TD55/PLEN

2.2 Supplements

#	Question	Work item	Version	Title	Final TD
1	Q6/21	H Supplement 21 (ex H.Sup-FGST)	New	Film grain synthesis technology for video coding applications	TD44R1/PLEN
2	Q18/21	J Supplement 14 to the Recommendations ITU-T J.1305-J.1306 (ex J.Sup.mma-uc)	New	Use cases of microservices architecture for audiovisual media in the converged media cloud	TD47R1/PLEN

3 New and deleted work items

3.1 New work items

The meeting agreed to start work on 67 new work items. The agreed new work items per working party is reported below:

- WP1 (4 new work items)

- WP2 (14 new work items)
- WP3 (26 new work items)
- WP4 (23 new work items)

The complete list of new work items is available in [Annex 2](#).

3.2 Discontinued work items

It was agreed to discontinue the following work item:

#	Q.	Acronym (kind of publication)	Title
1	Q2/21	F.Tele-audiology (Draft Rec.)	Framework of tele-health, e-health and m-health in audiology
2	Q3/21	F.DC-MTCPS-MCC (Draft Rec.)	Multi-camera collaboration of mobile terminal computational photography system: Reference architecture and requirements
3	Q3/21	F.DC-MTCPS-PFM (Draft Rec.)	Processing flow and metadata of a mobile terminal computational photography system
4	Q4/21	F.DLIM-AHFS (Draft Rec.)	Requirements of the distributed ledger incentive model for agricultural human factor services
5	Q6/21	G.VADFix (Draft Rec.)	Alignment of G.729 Annex B VAD description and source code
6	Q11/21	H.248.CLOUD (Draft Rec.)	Gateway control protocol: Cloudification of packet gateways
7	Q11/21	H.EMQ (Draft Rec.)	A cooperative architecture for enhanced multimedia QoS/QoE
8	Q13/21	H.761 (V4) (Draft Rec.)	Nested context language (NCL) and Ginga-NCL
9	Q13/21	H.IPTV-TMRAPI (Draft Rec.)	IPTV terminal middleware remote API
10	Q17/21	JSTR.STBN (Technical Report)	The analysis of standards trends for scalable transmission in broadband network

4 SG21 Management for the Study Period 2025-2028

SG21 confirmed the composition of the management of ITU-T Study Group 21, as contained in [SG21-TD3/PLEN](#).

Role	Name
SG21 Chair	Mr Noah LUO (Huawei Technologies, China)
SG21 Vice-chair	Mr Vincent Affleck (DSIT, United Kingdom)
SG21Vice-chair	Mr Avinash AGARWAL (Ministry of Communications, India)
SG21Vice-chair	Mr Shin-Gak KANG (ETRI, Rep. of Korea)
SG21Vice-chair	Mr Kei KAWAMURA (KDDI Corporation, Japan)

Role	Name
SG21Vice-chair	Mr Lukasz LITWIC (Telefon AB - LM Ericsson, Sweden)
SG21Vice-chair	Mr Joseph ONAYA (Communications Authority of Kenya (CA), Kenya)
SG21Vice-chair	Mr Mehmet ÖZDEM (Turk Telekom Group, Turkey)
SG21Vice-chair	Mr Andrey PEREZ (Agência Nacional de Telecomunicações (ANATEL), Brazil)
SG21Vice-chair	Ms Sarra REBHI (National Tunisian Broadcasting Office, Tunisia)
SG21Vice-chair	Mr Justin RIDGE (Nokia Corporation, United States)
SG21Vice-chair	Mr Sirojiddin USMANOV (Ministry of Digital Technologies of the Republic of Uzbekistan, Uzbekistan)
Counsellor	Mr Stefano POLIDORI (SGD, TSB, ITU)
Administrative assistant	Ms Hiba TAHAWI (SGD, TSB, ITU)

5 SG21 Structure for the Study Period 2025-2028

5.1 Working Party structure

ITU-T SG21 Working Party structure and leadership was approved as contained in [SG21-TD4R1/PLEN](#). During the SG21 meeting, the proposal of the management team was endorsed with only one update to the title of WP3, which now includes the word "authenticity".

- **WP1 “Integrated broadband and cable television systems”** (Q14, 15, 16, 17, 18, 19, 20, 21, 22).
- **WP2 “Multimedia digital services and human aspects”** (Q1, 2, 3, 4),
- **WP3 “Media authenticity, processing and AI-enabled applications”** (Q5, 6, 7),
- **WP4 “Infrastructure for multimedia systems, services and applications, including metaverse”** (Q8, 9, 10, 11, 12, 13)

Acronym	SG21 Structure	Q./9	Q./16	Q./21 (WTSA-24)	Titles
PLEN	PLENARY of SG21	Q10/9	Q1/16	Q0/21 (Q.Coord/C)	Coordination and planning
	– Noah Luo <i>(SG21 Chair)</i> <i>(Huawei Technologies, China)</i>	–	AHG-MV	AHG-MV	Ad hoc Group on metaverse

				AHG-MMA	Ad hoc Group on coded multimedia authenticity
				AHG-FQS	Ad hoc Group on future questions structure
WP1/21	Integrated broadband and cable television systems – Kei Kawamura (<i>WP1/21 Chair</i>) (KDDI, Japan) – Avinash Agarwal (<i>WP1/21 vice-Chair</i>) (DOT, India) – Ouyang Feng (<i>WP1/21 vice-Chair</i>) (ABS, China)	Q4/9	-	Q14/21 (D/9)	Guidelines for developing countries to implement and deploy digital cable television networks
		Q5/9	-	Q15/21 (E/9)	Software frameworks and architectures for advanced content distribution services over integrated broadband cable networks
		Q6/9	-	Q16/21 (F/9)	Functional requirements for terminal devices of the integrated broadband cable networks
		Q7/9	-	Q17/21 (G/9)	Transmission control and interfaces (MAC layer) for IP and/or packet-based data over integrated broadband cable networks
		Q8/9	-	Q18/21 (H/9)	IP-enabled multimedia applications and services for cable television networks enabled by converged platforms
		Q9/9	-	Q19/21 (I/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
		Q3/9	-	Q20/21 (C/9)	AI-enabled enhanced functions over integrated broadband cable network
		Q1/9	-	Q21/21 (A/9)	Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution
		Q2/9	-	Q22/21 (B/9)	Methods and practices for conditional access and content protection
WP2/21	Multimedia digital services and human aspects	Q11/9	Q26/16	Q1/21 (Q.Acc/C)	Multimedia system, service and application accessibility for digital inclusion

	– Hideki Yamamoto (<i>WP2/21 Chair</i>) (OKI, Japan) – Miran Choi (<i>WP2/21 vice-Chair</i>) (ETRI, Rep. of Korea) – Wei Kai (<i>WP2/21 vice-Chair</i>) (CAICT, China)		Q28/16	Q2/21 (N/16)	Multimedia framework for digital health applications
			Q23/16	Q3/21 (J/16)	Digital culture-related systems and services
			Q24/16	Q4/21 (K/16)	Human factors for intelligent user interfaces and services
WP3/21	Media authenticity, processing and AI-enabled applications – Justin Ridge (<i>WP3/21 co-Chair</i>) (Nokia, USA) – Yuan Zhang (<i>WP3/21 co-Chair</i>) (China Telecom, China)		Q5/16	Q5/21 (B/16)	AI-enabled multimedia applications
			Q6/16	Q6/21 (C/16)	Visual, audio and signal coding
			Q12/16	Q7/21 (F/16)	Intelligent visual systems and services
WP4/21	Infrastructure for multimedia systems, services and applications, including metaverse – Shin-Gak Kang (<i>WP4/21 co-Chair</i>) (ETRI, Rep. of Korea) – Hideo Imanaka (<i>WP4/21 co-Chair</i>) (NICT, Japan)		Q8/16	Q8/21 (D/16)	Immersive live experience systems and services
			Q21/16	Q9/21 (H/16)	Multimedia framework, applications and services
			Q27/16	Q10/21 (M/16)	Vehicular multimedia communications, systems, networks, and applications
			Q11/16	Q11/21 (E/16)	Multimedia systems, terminals, gateways and data conferencing
			Q22/16	Q12/21 (I/16)	Multimedia aspects of distributed ledger technologies and related services
			Q13/16	Q13/21 (G/16)	Multimedia streaming-related systems and services including content delivery, application platforms and end systems

5.2 Ad hoc groups of SG21

- **AHG-MV**: The ITU-T SG21 has agreed to extend the terms of reference of the ad hoc group on **metaverse** (AHG-MV), which was previously established by SG16. The main objective of the renewed SG21 AHG-MV is to monitor the progress of metaverse related work in SG21 and carefully analyse advantages and disadvantages of establishing a new Question, along with analysing the workload of existing Q9/21. The results of the AHG-MV will be reviewed in October 2025. Mr Shin Gak Kang will act as AHG-MV Chair. The AHG-MV updated terms of reference are found online [here](#). (Ref. [SG21-TD69/PLEN Annex E](#))
- **AHG-FQS**: The ITU-T SG21 has established a new ad hoc group on **future questions structure** (AHG-FQS), which aims to support and complement the consolidation process of SG9 and SG16 as follow up to WTSA-24. The main purpose of the ad hoc group is to discuss and coordinate proposals for the refinement of Questions text and/or structure within ITU-T SG21 with the goal to provide a possible improved structure within two years timeframe. This process will also support the following preparation of SG21 towards WTSA-28. The AHG-FQS will report the AHG activities to SG21 Plenary. Mr Noah Luo will act as AHG-FQS Chair. The AHG-FQS terms of reference are found online [here](#). (Ref. Annex to [SG21-TD39R1/PLEN](#)).
- **AHG-MMA**: The ITU-T SG21 has established a new ad hoc group on **coded multimedia authenticity** (AHG-MMA), which will coordinate discussion around standards development work on the authenticity of coded multimedia within ITU-T SG21 until the next meeting of SG21 in October 2025. The objective of this AHG is to finalize the scope, study items, and tasks needed for establishing a new Question on the authenticity of coded multimedia. This will involve studying existing and emerging technologies. Thomas Wiegand (Fraunhofer HHI, Germany) will act as AHG-MMA Chair, assisted by two vice chairs: Xin Kang (Huawei Technologies Co., Ltd., China) and Iraj Sodagar (Dolby Laboratories, US). The AHG-MMA terms of reference are found online [here](#) (Ref. [SG21-TD49/PLEN](#)).

5.3 Other groups under SG21

5.3.1 [IRG-AVA](#) - ITU Intersector Rapporteur Group on Audiovisual Media Accessibility

IRG-AVA had one meeting, during SG21 meeting on 21 January 2025, session 4. The meeting of the IRG-AVA was instrumental to continue collaboration and review of related work programme between ITU-T SG21 and ITU-R SG6. The opening Plenary of SG21 approved the revised terms of reference for IRG-AVA, as submitted in [TD118/GEN](#). SG21 will act as a parent study group for IRG-AVA (Audiovisual Media Accessibility), as mentioned in the table below.

IRG	Title	Co-chair from SG21	Parent Groups	Website
IRG-AVA	Audiovisual Media Accessibility	Masahito Kawamori (Tokyo University, Japan)	ITU-T SG21 ITU-R SG6	https://itu.int/en/irg/ava

5.3.2 [JVET](#) - Joint Video Experts Team

The video coding work conducted collaboratively by SG21 WP3/Q6 with ISO/IEC JTC 1 SC29/WG5 as the **Joint Video Experts Team (JVET)** has been very active, attracting about 400 participants (including about 200 in-person and another 200 remotely) and approximately

200 technical contributions (not counting reports and crosschecks) for the recent and current meetings. A meeting of JVET was held along with the current ITU-T SG21 meeting at ITU facilities in Geneva, Switzerland. The activities in JVET are managed on the ITU-T side by Q6/21. JVET is tasked with the development, maintenance and extension of the jointly developed video coding standards in the domain of SG21 and SC29, and with exploration work on potential additional such future standards development projects relating to video coding. It also maintains the specification of Versatile Supplemental Enhancement Information (VSEI, Rec. ITU-T H.274, twin text with ISO/IEC 23002-7) and Coding-Independent Code Points for Video Signal Type Identification (CICP, Rec. ITU-T H.273, twin text with ISO/IEC 23091-2) and develops reports on non-normative topics relating to video coding (including H.Sup15, H.Sup18, H.Sup19, HSTP-VID-WPOM, H.Sup-FGST, and H.Sup-MACVC, which are twin texts with ISO/IEC technical reports) and reference software and conformance testing specifications relating to the jointly developed video coding specifications.

At this meeting, the development of the supplement H.Sup-FGST providing information about film grain synthesis technology for video coding applications was completed and the text was forwarded for agreement by SG21. Since further work on this subject is ongoing, a future V2 edition of this supplement was added to the work programme.

5.3.2.1 Joint ITU-T SG21 and ISO/IEC JTC 1/SC 29 Workshop on [“Future video coding”](#)

As follow up to the joint workshop on video coding (see [introduction](#) above), a joint session with ISO/IEC JTC 1/SC 29/WG 2 and JVET reviewed and refined draft requirements for a next-generation video coding standard beyond VVC, incorporating input on market needs. Also, a joint Ad Hoc Group was established with WG2 to further study these requirements until the next meetings. The AHG will:

- Summarize workshop input.
- Refine draft requirements.
- Review specific WG2 and JVET documents.
- Collect additional contributions.

Teleconferences may be held for further discussions. **JVET** is expected to develop **non-CTC video test sequences** for a **Call for Evidence (CfE)**, targeting a final CfE issuance by **April or July 2025**, with responses due for evaluation in **October 2025**.

At this meeting, the development of the JPEG AI core coding system for AI learning-based image coding, **T.840.1** (T.JPEG-AI, ISO/IEC 6048-1), was completed and the text was forwarded for consent as common text. Work on other parts of JPEG AI continued.

For the JPEG 2000 family of standards that has been a longstanding subject of joint standardization, **T.815 v3** (ISO/IEC 15444-16 v3) was completed and the text was forwarded for consent. A new work item was added for updating of T.808 | ISO/IEC 15444-9.

6 New/revised Questions texts

SG21 agreed to revise the Question text for Question 6/21 to clarify the scope of **coded multimedia authenticity**, and for Question 9/21 to clarify the scope of **metaverse interoperability**. The two steps approval process foresees for SG21 to send a liaison statement to TSAG to request comments, if

any. The texts of the revised terms of reference for Q6/21 is found in [SG21-TD105R1/PLEN](#), while the revised terms of reference for Q9/21 is found in [SG21-TD106/PLEN](#).

7 SG21 Management, Rapporteurs and Associate Rapporteurs

SG21 agreed on the list of Rapporteurs and Associate Rapporteurs for the Study Period 2025-2028 as found in [SG21-TD5/PLEN](#);

8 Liaison officers to external groups

SG21 agreed on the list of liaison officers for the Study Period 2025-2028 as found in [SG21-TD6R1/PLEN](#);

9 Outgoing Liaison Statements

The meeting agreed on 79 outgoing liaison statements, one of which jointly developed with SG20, as listed in [Annex 3](#).

10 SG21 results per Question

The results of each Question under SG21 are provided in detail in [Annex 1](#).

11 Work plan for interim Rapporteur meetings and working party meetings

11.1 Working party meetings

WP2/21 plans to meet before the next SG21 meeting, Geneva, around June/July 2025. The terms of references for this interim WP2/21 meeting are provided below:

WP	Date	Place / Host	Terms of reference	Contact
2/21	June/July 2025 (TBC)	Geneva	Consent (AAP) on F.MEMgt, F.MESafFra (*)	Hideki Yamamoto (yamamoto436@oki.com)

(*) The listed two WI are being studied in Q2/21. More WIs may be proposed for Consent if they will become mature in the interim Rapporteur meetings.

WP4/21 plans to meet before the next SG21 meeting, (exact date and place are TBD), 2025. The terms of references for this interim WP4/21 meeting are provided below:

WP	Date	Place / Host	Terms of reference	Contact
4/21	June/July 2025 (TBC)	TBD	Consent (AAP) on F.VG-DS Approve new WIs	Shin-Gak Kang (sgkang@etri.re.kr) Hideo Imanaka (h.imanaka@nict.go.jp)

11.2 Interim Rapporteurs' groups meetings

The following interim Rapporteurs' groups meetings are agreed by SG21. For updates, please see the Rapporteur meetings webpage:
<https://www.itu.int/net/ITU-T/lists/rgm.aspx?Group=21>

Q/SG	Date	Place / Host	Terms of reference	Contact
1/21	June 2025 (dates TBD)	Virtual	- Progress on stale work items. Other existing work items.	Avinash Agarwal (avinash.70@gov.in)

Q/SG	Date	Place / Host	Terms of reference	Contact
2/21	Early March 2025 (dates TBD)	Virtual	Progress on ○ MESafRA ○ MEmgt ○ F.HR-AP ○ F.PGHR ○ H.SL-AD ○ F.FAST ○ F.HR-AP ○ F.HPP-Req ○ F.RFS-FH ○ F.mMRI-Rural ○ F.Med-VHN ○ F.PreTG: ○ FSTP.UHD-Colour-UC ○ HSTP.BHQ-UC and others as needed. Consider new work items.	Masahito Kawamori (kawamori@g.ecc.u-tokyo.ac.jp)
2/21	3-6 April 2025	Geneva/ WHO	Progress on Safe-listening.	Masahito Kawamori (kawamori@g.ecc.u-tokyo.ac.jp)
2/21	Early May 2025 (dates TBD)	Virtual	Progress on ○ MESafRA ○ MEmgt ○ F.HR-AP ○ F.PGHR ○ H.SL-AD ○ F.FAST ○ F.HR-AP ○ F.HPP-Req ○ F.RFS-FH ○ F.mMRI-Rural	Masahito Kawamori (kawamori@g.ecc.u-tokyo.ac.jp)

Q/SG	Date	Place / Host	Terms of reference	Contact
			○ F.Med-VHN ○ F.PreTG: ○ FSTP.UHD-Colour-UC ○ HSTP.BHQ-UC and others as needed. Consider new work items.	
2/21	Early June 2025 (dates TBD)	Virtual	Progress on ○ MESafRA ○ MEmgt ○ F.HR-AP ○ F.PGHR ○ H.SL-AD ○ F.FAST ○ F.HR-AP ○ F.HPP-Req ○ F.RFS-FH ○ F.mMRI-Rural ○ F.Med-VHN ○ F.PreTG: ○ FSTP.UHD-Colour-UC ○ HSTP.BHQ-UC and others as needed. Consider new work items.	Masahito Kawamori (kawamori@g.ecc.u-tokyo.ac.jp)
2/21	End August 2025 (dates TBD)	Virtual	Progress on ○ MESafRA ○ MEmgt ○ F.HR-AP ○ F.PGHR ○ H.SL-AD ○ F.FAST	Masahito Kawamori (kawamori@g.ecc.u-tokyo.ac.jp)

Q/SG	Date	Place / Host	Terms of reference	Contact
			○ F.HR-AP ○ F.HPP-Req ○ F.RFS-FH ○ F.mMRI-Rural ○ F.Med-VHN ○ F.PreTG: ○ FSTP.UHD-Colour-UC ○ HSTP.BHQ-UC and others as needed. Consider new work items.	
3/21	April 2025 (dates TBD)	Virtual	Progress on F.MRN-CHS, F.MRCH, F.MDAH, F.DEC-RM, etc Consider new work items	Hong (Norman) Chen (norman_chen2020@163.com) ShiZhong Xu (xsz@uestc.edu.cn)
3/21	June 2025 (dates TBD)	Virtual	Progress on F.MRN-CHS, F.MRCH, F.MDAH, F.DEC-RM, F.DICHE-RC, etc Consider new work items	Hong (Norman) Chen (norman_chen2020@163.com) ShiZhong Xu (xsz@uestc.edu.cn)
4/21	April 2025 (dates TBD)	Virtual	Progress on F.FDHC, F.EDMS, etc.	Miran Choi (miranc@etri.re.kr)
4/21	June 2025 (dates TBD)	Virtual	Progress on F.FLDH, F.FW-AGQA, etc.	Miran Choi (miranc@etri.re.kr)
5/21	3-4 June 2025	Virtual	Progress on existing work items, Workshop & new things.	WANG Yuntao (wangyuntao@caict.ac.cn)
5/21	5-6 August 2025	Virtual	Progress on existing work items, Workshop & new things.	WANG Yuntao (wangyuntao@caict.ac.cn)

Q/SG	Date	Place / Host	Terms of reference	Contact
6/21 & JVET	26 March – 4 April 2025	Virtual	• Maintenance and extensions of VVC, VSEI, HEVC, AVC, and CICC video coding standards, associated reference software and conformance, and non-normative guidance • Project planning and exploration toward a next generation video coding standard beyond VVC capability • Progress on H.BWC biomedical waveform coding • Oversight of the JVET collaborative team • Coordination of work with JTC1/SC29 and its JPEG and MPEG working groups Requirements studies, exploration experiments, and organizational preparations for standardization of new coding technology for video, images, audio, and biomedical and other waveform signals	Gary Sullivan (gary.sullivan@dolby.com)
6/21 & JVET	26 June – 4 July 2025	Daejeon, South Korea (with MPEG & JPEG)	Appendix A. continuation of the topics listed for 6/21 & JVET interim meeting (26 March – 4 April 2025)	Gary Sullivan (gary.sullivan@dolby.com)
7/21	July 2025 (dates TBD)	Virtual (TBD)	Appendix B. Progress on - H.VESCArch, H.P2PVSProt, H.VSDTAS-Arch, F.FIISReqs, F.VRVs, H.ATS-P, F.VIIReqs, F.CVADS, F.TSSDC, F.MCSReqs,	Yuan Zhang (zhangy666@chinatelecom.cn), Haitao Zhang (zht@bupt.edu.cn)

Q/SG	Date	Place / Host	Terms of reference	Contact
			F.ADSL MV, H.VII Arch, F.IVSReqs, H.626.2 (V2), H.SMGarch, F.VIS-FML, F.SIVIS, F.SPReqs, F.RFVFMP, F.VASO, H.VSBD-P, H.CEC-AP, F.IGreqs, H.VADS, F. AIVSSPGC, F. MVBIS, H.EV-SYSarch, H.MFSV-arch, Roadmap, Workshop & new things	
8/21	June-July 2025 (dates TBD)	Virtual or F2F (TBD)	Progress on existing WIs: H. ILE-3DIT, H. ILE-3DINR, H. ILE-AMR, H. ILE-AR, H. ILE-FT, H. ISAC-req, H. PwD-req, and H. ILE-QR Discuss new proposals Appendix C. Discuss future plan	Hideo IMANAKA (h.imanaka@nict.go.jp)
9/21	June 2025 (dates TBD)	Virtual (TBD)	Progress on H.OIMS Arch, H.USM Arch, F.ACSMRF, F. DPLM-REM, H.CAR-FA, F.NRCRS-FAR, H.CVR-OP, F.HIM, F.AIMMSM-RF, H.MV-HIA, H.MV-FRAVI, H.MV-PIOP, H.MV-MAMA, etc. New work item proposals; Work items for consent.	Miaoqiong Wang (wangmiaoqiong@caict.ac.cn)
10/21	Late May or early June 2025 (dates TBD)	China (TBD)	Progress on existing work items, new work item proposals, any other issues, Items scheduled for consent in the interim WP4/21 (before Oct. 2025) - F.VG-DS	Hideki Yamamoto (yamamoto436@oki.com)

Q/SG	Date	Place / Host	Terms of reference	Contact
10/21	August or September 2025 (dates TBD)	Virtual	Progress on existing work items, new work item proposals, any other issues, Items scheduled for consent in the SG 21 (Oct. 2025) - F.PB-ADS-DV, H.MVIS	Hideki Yamamoto (yamamoto436@oki.com)
12/21	May or early June 2025 (dates TBD)	Virtual	Progress on the on-going work items, new WIs	Wei Kai (weikai@caict.ac.cn) Liangliang Zhang (liangliang.zhang@huawei.com)
13/21	June 2025 (dates TBD)	Virtual (TBD)	Progress on F.CDN-AINW, H.ILMTS-arch, H.IPTV-EASarch, H.CDN-MECptl, H.AMR-ARCH, H.IPTV-TDES.7, F.CDN-SCreqs, F.IMTS-reqs, F.CDHT-reqs; Consider new work items;	Chuanyang Miao (miao.chuanyang@zte.com.cn) Sarrah Rebhi (rebhi.sarra@telediffusion.net.tn) Xin Shen (shenxin_sx@migu.chinamobile.com)
16/21	8 April 2025 (10:00-11:00 Geneva time)	Virtual	Progress on J.cloud-game-trr	Xin Zhang (xin.zhang@skyworth.com)
16/21	6 June 2025 (10:00-11:00 Geneva time)	Virtual	Progress on J.cloud-game-trr	Xin Zhang (xin.zhang@skyworth.com)
17/21	29 April 2025 (09:30-10:45 Geneva time)	Virtual	Progress on J.DVCS.spec, J.DAS-REQ etc.	TaeKyoong KIM (tkkim@etri.re.kr)
17/21	19 June 2025 (09:30-10:45 Geneva time)	Virtual	Progress on J.DVCS.spec, J.DAS-REQ etc.	TaeKyoong KIM (tkkim@etri.re.kr)
17/21	8 August 2025 (09:30-10:45 Geneva time)	Virtual	Progress on J.DVCS.spec, J.DAS-REQ etc.	TaeKyoong KIM (tkkim@etri.re.kr)

Q/SG	Date	Place / Host	Terms of reference	Contact
18/21	15 May 2025 (09:30-12:30 Geneva time)	Virtual	Brainstorm on the future of Q18/21 work items. Discuss any additional contribution.	Qiong YAO (yaoqiong@drft.com.cn)
19/21	6 June 2025 (09:30-11:00 Geneva time)	Virtual	Progress on potential work item of subscriber management system	Yanhua Niu (niuyanhua@abs.ac.cn)
20/21	5 June 2025 (09:15-11:00 Geneva time)	Virtual	The discussion on potential work item of AI enhanced television system.	Feng Ouyang (ouyangfeng@abs.ac.cn)
Joint 21/21 and 14/21	23 June 2025 (09:00-11:00 Geneva time)	Virtual	Progress on J.sup11-rev, J.cable-rf-to-ip, and J.ibs-req.	Kei Kawamura (ki-kawamura@kddi.com)
22/21	25 June 2025 (09:30-11:30 Geneva Time)	Virtual	Progress on J.DRMVA-rbst, J.VAA and J.BDP	Han-Seung KOO (koohs@etri.re.kr)

12 Next Study Group 21 meeting

Next ITU-T SG21 meeting is scheduled to be held from 6 to 17 October 2025 in Geneva, Switzerland, hosted by ITU. More information will be provided on the SG21 website: <https://www.itu.int/en/ITU-T/studygroups/2025-2028/21/Pages/default.aspx>.

Annexes: 3

Annex 1 – Results of SG21 meeting per Questions

Annex 2 – List of New Work Items

Annex 3 – List of Outgoing liaison statements

Annex 1 – Results of SG21 meeting per Questions

10.0 Question 0/21 “Coordination and planning”

The report of Q0/21 can be found in [SG21-TD96/PLEN](#). It was approved.

Executive summary:

Q0/21 held three sessions: the first on Tuesday 13 January 2025, the second on Wednesday 14 January 2025 and the last session on Monday 20 January 2025. The target of these sessions was to review the incoming liaison statements, identify the ones that need reply and facilitate coordination among Questions to prepare joint liaison statements. Nine outgoing liaison statements were produced ([TD92R3/PLEN](#)).

During this SG21 meeting, Q0/21 achieved the following results:

- Nine outgoing liaison statements were produced,
- Five (05) liaison officers were nominated,
- A new work item J.1-rev was started.

10.1 Question 1/21 “Multimedia system, service and application accessibility for digital inclusion”

The report of Q1/21 can be found in [SG21-TD31R1/WP2](#). It was approved.

Executive summary:

Q1/21 achieved the following results:

- One (1) draft Recommendation was updated by this meeting for a possible consent during the WP2/21 plenary meeting: F.ACC-AMCS;
- Two (2) draft Recommendations were updated by this meeting for progressing at future meetings: J.acc-us-prof, and F.930-rev (V2);
- Three (3) informative texts were updated by this meeting for progressing at future meetings: FSTP-ACC-AI, F.ACC-RSC, and H.MD-DiDRR;
- Three (3) new work items were agreed to be started including two new Recommendations and one new Technical Report;
- Two (2) liaison statements were drafted and agreed to be sent to IRG-AVA and ISO/IEC JTC1 SC35;
- One (1) interim meeting is planned before next SG21 meeting;
- No changes were suggested by Q1/21 for the liaison officers already nominated
- No changes were suggested by Q1/21 for the associate rapporteur already nominated
- No changes were proposed for editors of ongoing work items. New editors were proposed for the three new work items recommended for creation during this meeting.

10.2 Question 2/21 “Multimedia framework for digital health applications”

The report of Q2/21 can be found in [SG21-TD32R2/WP2](#). It was approved.

Executive summary:

Q2/21 achieved the following results:

- Two Recommendations, draft new Recommendation ITU-T F.780.6 (ex F.UHD-Req-Colour) “Requirements on colorimetry for telemedicine systems using ultra-high definition imaging” and draft new Recommendation ITU-T H.862.8 (ex F.OHSP-req) “Requirements and framework of occupational health service platform”, were finalized and proposed for consent;
- No informative texts (e.g Supplements, technical reports, etc.) were finalized and proposed for agreement;
- Eight draft Recommendations were updated by this meeting for progressing at future meetings;
- 6 new work items were agreed to be started;
- 6 liaison statements were drafted and agreed to be sent to ITU-T SGs 5, 12, 17; ITU-R WP6C; IEC TC108, CENELEC 108X, ISO TC43, TC159, TC173, ISO/IEC JTC1 SC35, IAEA;
- 5 interim meetings were planned before next SG21meeting;
- The meeting decided to stop working on the following work item: F.Tele-audiology “Framework of tele-health, e-health and m-health in audiology”
- Mr Wu Jia (China Unicom) was nominated as an editor;

In addition, Q2/21 continued its collaboration with WHO at this meeting and created a new work item on “safe-viewing systems and devices”, in a similar manner how H.870 “guideline on safe-listening devices/systems” was developed. It also updated the draft Recommendation H.SL-AD “Accurate dosimetry for safe-listening transducers”, also in the safe-listening series.

The attention of the Rapporteur was drawn to the following patent, which may be applicable to the implementation of the draft standard H.SL-AD.

- US-9055363-B2, “Headset system comprising a noise dosimeter”

<<https://portal.unifiedpatents.com/patents/patent/US-9055363-B2>>

10.3 Question 3/21 “Digital culture-related systems and services”

The report of Q3/21 can be found in [SG21-TD33R1/WP2](#). It was approved.

Executive summary:

Q3/21 achieved the following results:

- one work item was finalized and proposed for consent:
 - F.CDA-RP
- four draft Recommendations were updated by this meeting for progressing at future meetings
 - F.DICHE-RC
 - F.ARMSOR
 - F.MRCH
 - J.cloud-game-sia (in collaboration with Q19/21)
- four new work item were agreed to be started:
 - F.DC-EMES-SMS-FR
 - F.MRN-CHS
 - F.MDAH
 - F.LVR-CHS(agreed in RGM)
- one liaison statement was drafted and agreed to be sent to ISO/IEC JTC 1/SC 24.
- The meeting decided to discontinue working on the following work items:
 - F.DC-MTCPS-MCC “Multi-camera collaboration of mobile terminal computational photography system: Reference architecture and requirements”
 - F.DC-MTCPS-PFM “Processing flow and metadata of a mobile terminal computational photography system”
- Q3/21 plan to hold two interim meetings before next SG21 meeting.

10.4 Question 4/21 “Human factors for intelligent user interfaces and services”

The report of Q4/21 can be found in [SG21-TD34R1/WP2](#). It was approved.

Executive summary:

Q4/21 achieved the following results for 6 sessions during the SG21 meeting, under the chairmanship of Miran Choi (ETRI, Rep. of Korea):

- ITU-T Recommendation 760.3 (ex. F.MDI) was finalized and proposed for Consent;
- The following 5 draft Recommendations were updated by this meeting for progressing at future meetings: F.ECHO, F.FDHC, F.FLDH, F.EDMS, F.FW-AGQA;

- One liaison statement was drafted and agreed to be sent to ITU-T SG11 and IEEE SA on the creation of a new work item on draft ITU-T Rec F.FW-AGQA;
- Two interim e-meetings were planned in April and August, 2025 before the next SG21 meeting;
- Q4/21 agreed to discontinue working on [F.DLIM-AHFS](#) (Draft Rec.) “Requirements of the distributed ledger incentive model for agricultural human factor services”

10.5 Question 5/21 “AI-enabled multimedia applications”

The report of Q5/21 can be found in [SG21-TD35R1/WP3](#). It was approved.

Executive summary:

During this SG21 meeting, Q5/21 achieved the following results:

- 2 draft Recommendations are proposed for determination, including: F.RA-GAI, F.AIGC-GFR.
- 16 draft Recommendations are proposed for consent, including: F.VTIS-req-frame, F.FFMP, F.FDM-AC-BK, F.TE-CG, F.TE-AIA, F.FC-AM, F.AICP-MDep, H.MAS-AP, F.DHAI, F.AI-TRSMT, F.IMCSI, F.TE-RAG, F.DBDA, H.FDISprot, F.AIM-RCM, F.AI-RPAS.
- 13 on-going work items were updated by this meeting for progressing at future meetings, including: F.DH-LM, F.DH-PE, F.MEMVT, F.FML-TS-arc, F.MFCReqs, F.MTTIR, F.FLC-Heter-Arch, F.DEC-CFL, F.AI-RFSSMA, F.CEC-MDG, H.FDM-AC-GEN, F.AICP-FRRC
- 19 new work items were agreed to be started, including: TR-MIS-AI, TR.AIDTM, F.AIBASPDN-RF, F.AIAP, F.MFMM-MCEES, H.FDM-AC-TS, F.DCHU, F.AFLS, F.MMFM, F.EDS, F.IDTR, F.FMCS, F.LLMO, F.RA-EAI, F.AICP-HA, F.AICP-IO, F.RF-AIAC-FM, TR.HAI, F.FMD.
- 13 outgoing liaison statements were drafted and agreed to be sent.

10.6 Question 6/21 “Visual, audio and signal coding”

The report of Q6/21 can be found in [SG21-TD36R1/WP3](#). It was approved.

Executive summary:

During this SG21 meeting, Q6/21 (a.k.a. VCEG) achieved the following results:

- proposed 2 Recommendations for consent:
 - Rec. ITU-T T.815 | ISO/IEC 15444-16 Ed.3 "Information technology – JPEG 2000 image coding system: Enhanced encapsulation of JPEG 2000 images into ISO/IEC 14496-12";
 - Rec. ITU-T T.840.1 (ex T.JPEG-AI) | ISO/IEC 6048-1 "Information technology – JPEG AI learning-based image coding system: Core coding system";

- finalized and proposed one Supplement for agreement:
 - ITU-T H Supplement 21 (ex H.Sup-FGST);
- prepared and proposed a revision of the Terms of Reference for the Question;
- agreed to start two work items
 - Rec. ITU-T T.808 | ISO/IEC 15444-9 v3 “Information technology - JPEG 2000 image coding system: Interactivity tools, APIs and protocols”
 - H.Sup-FGST (V2) (twin ISO/IEC TR 23002-9) “Film grain synthesis technology for video applications”
- agreed to cancel one stale work item
 - G.VADFix “Alignment of G.7129 Annex B VAD description and source code”;
- agreed on a draft text, algorithm, and reference software codebase for the H.BWC biomedical waveform coding project for progressing at future meetings;
- agreed on a joint requirements document for a future generation of video coding with capabilities beyond the capabilities of the VVC (Rec. H.266) standard
- drafted and agreed on 6 liaison statements to be sent in the following subject areas:
 - To ISO/IEC JTC 1/SC 29 on multimedia authentication and on JVET administrative arrangements
 - To ISO/IEC JTC 1/SC 29/WG 1 (JPEG) on JPEG AI, JPEG 2000 and JPEG XE image coding;
 - To ISO/IEC JTC 1/SC 29/WG 2 (MPEG Requirements) on potential work on object wave compression for holographic communication;
 - To ISO/IEC JTC 1/SC 29/WG 6 (MPEG Audio) and DICOM WG32 on the work on H.BWC for compression of biomedical waveform data;
- two interim meetings were planned before the next SG21 meeting, consisting of meetings of Q6/21 and JVET held in a coordinated fashion with MPEG groups;
- a JVET meeting was held together with the current SG21 meeting to progress the work on video subjects (and the meeting report of this JVET meeting will be provided for approval at the next meeting of SG21 or WP3/21).

10.7 Question 7/21 “Intelligent visual systems and services”

The report of Q7/21 can be found in [SG21-TD37R1/WP3](#). It was approved.

Executive summary:

Question 7/21 met for 13 sessions during the SG21 meeting, under the chairmanship of Ms Yuan Zhang (China Telecom, China) and Dr Haitao Zhang (BUPT, China). The Question received 21 contributions. During the sessions:

- Two draft Recommendations are proposed for approval, including ITU-T F.743.27 (ex F.IVSP-PGI) and ITU-T F.743.28 (ex F.RIIS-CEC).
- Three draft Recommendations are proposed for consent, including H.CCVS, F.3D-DDSReqs, and F.MGSReqs.
- Ten on-going work items were updated by this meeting and will be progressed at future meetings, including F.MCSReqs, H.VSBD-P, H.VSECArch, F.VRVS, F.IGreqs, H.SMGarch, F.CVADS, F.ADSLMLV, F.VIS-FML, F.SIVIS.
- Five new work items were agreed to be started, including H.VADS, F.AIVSSPGC, F.MVBIS, H.EV-SYSarch, H.MFSV-arch.
- Seven outgoing liaison statements were drafted and agreed to be sent.
- ITU-T Q7/21 had a special session “Overview on JPEG XE” with ISO/IEC JTC 1/SC 29/WG 1 (JPEG) during the first session of on 16 January 2025, and proposed to establish a joint AHG with JPEG with the mandate to establish a joint project on event-based vision standardization. As agreed during the meeting, Hang Zou (China Telecom) was appointed as the co-chair for this joint AHG.

10.8 Question 8/21 “Immersive live experience systems and services”

The report of Q8 /21 can be found in [SG21-TD38R1/WP4](#). It was approved.

Executive summary:

Question 8/21 (Q8/21) met during eight (8) sessions in this SG21 meeting, and discussed 16 input contributions and several incoming liaison statements. Q8/21 was chaired by the Rapporteur, Mr Hideo Imanaka (NICT, Japan), and associate rapporteurs, Ms Jungha Hong (ETRI, Rep. of Korea) and Mr Jiro Nagao (NTT, Japan). As the result, draft Recommendations H.ILE-FT, H.ILE-3DIT, H.ILE-AR, H.ILE-3DINR, H.ILE-ISAC-req, H.ILE-PwD-req, and H.ILE-QR were updated according to the discussion results of contributions. No existing items were discontinued and no new work items were agreed to be established.

During this SG21 meeting, Q8/21 achieved the following results:

- No Recommendations were finalized nor proposed for consent nor for determination;
- No informative texts (e.g Supplements, technical reports, etc.) were finalized and proposed for agreement;
- Seven (7) draft Recommendations were updated by this meeting for progressing at future meetings;
- No new work items were agreed to be started;
- One (1) liaison statement was drafted and agreed to be sent to ITU-D SG1
- One (1) interim meeting was planned before next SG21 meeting;
- One additional editor of H.ILE-3DINR, Jiaqi Zhang (jiaqi.zhang@zju.edu.cn), was agreed.

Q8/21 experts will have one interim meeting before the next SG21 meeting and will meet during the next SG meeting in October 2025.

10.9 Question 9/21 “Multimedia framework, applications and services”

The report of Q9/21 can be found in [SG21-TD39R1/WP4](#). It was approved.

Executive summary:

During this SG21 meeting, Q9/21 achieved the following results:

- 4 draft Recommendations were finalized and proposed for consent, including F.742 (V2), F.FADOCM, F.FMDAV, F.CAR-reqs.
- 9 ongoing work items were updated by this meeting for progressing at future meetings, including, H.OIMSArch, H.USMArch, F.ACSMRF, F.DPLM-REM, H.CAR-FA, F.NRCRS-FAR, H.CVR-OP, F.HIM, F.AIMMSM-RF.
- 13 new work items were agreed to be started, including H.MV-HIA, H.MV-FRAVI, H.MV-PIOP, H.CVR-IF, F.MDA-RSM, F.AICSS, F.MDQA, F.DMMS-Reqs, F.MDDSP, F.AugDataReqs, F.ASMSN, H.MV-MAMA, H.LVR. 1 new work item F.3DPF-MD was postponed and suggested to be discussed again with Q8/21.
- 9 liaison statements were drafted and agreed to be sent;
- 1 interim meetings were planned in June before next SG21 meeting;
- Q9/21 nominated 1 new associate rapporteur Mr. Wook Hyun (ETRI, Rep. of Korea).

10.10 Question 10/21 “Vehicular multimedia communications, systems, networks, and applications”

The report of Q10/21 can be found in [SG21-TD40R1/WP4](#). It was approved.

Executive summary:

During this SG21 meeting, Q10/21 achieved the following results:

- No Recommendations were finalized and proposed for consent and for determination;
- One informative text, a technical paper, was finalized and proposed for agreement;
- Fifteen draft Recommendations were updated by this meeting for progressing at future meetings;
- Five new work items were agreed to be started (one was agreed in RGM in 2024 and four were agreed based on Contributions at this SG21) ;
- Four liaison statements were drafted and agreed to be sent and to which standard body are addressed;
- Two interim meetings were planned before next SG21 meeting;
- One interim WP4/21 was requested to be held before next SG21 meeting;

- Five liaison officers were nominated.

10.11 Question 11/21 “Multimedia systems, terminals, gateways and data conferencing”

The report of Q11/21 can be found in [SG21-TD41R1/WP4](#). It was approved.

Executive summary:

Q11/21 had a successful meeting, reviewed open work items and final text for a new amendment to the common text ITU-T Rec. H.222.0 | ISO/IEC 13818-1. Q11/21 proposed this one amendment for Consent. TSB is kindly requested to allow a six-week delay for start of Last Call, to allow the editors to integrate AMD1 into the baseline text and address other editorial adjustments that may be needed.

Q11/21 agreed to stop the work on the following two work items:

- H.248.CLOUD “Gateway control protocol: Cloudification of packet gateways”
- H.EMQ “A cooperative architecture for enhanced multimedia QoS/QoE”

Q11/21 does not plan to hold any interim Rapporteurs meeting and did not produce any outgoing LSs.

Q11/21 noted the open items remaining in the living list, and made no changes to the list at this meeting. The living list appears in Annex to Q11 report.

10.12 Question 12/21 “Multimedia aspects of distributed ledger technologies and related services”

The report of Q12/21 can be found in [SG21-TD42R1/WP4](#). It was approved.

Executive summary:

During this SG21 meeting, Q12/21 achieved the following results:

- 5 Recommendations were finalized and proposed for consent, including ITU-T F.751.26 (ex H.DLT-ESSS), F.751.25 (ex H.DLT-SGDRF), F.751.27 (ex. H.DLT-DAS), F.751.23 (ex H.DLT-TFI), and F.751.24 (ex H.DLT-AGFAS).
- 10 on-going work items were updated by this meeting for progressing at future meetings, including H.DLT-FMD, F.DLT-DCMP, H. DLT-ETR, H.DLT-DE, F.DLT-VPPO, H.DLT-DMESB, H.DLT-RFCSP, HSTP.DLT-PCP, F.DLT-SCAI, H.DLT-MMPA;
- 4 new work items were agreed to be started, including F.DLT-RECC, F.DLT-DMPSSC, F.DLT-DAT, F.DLT-CDMCM;
- New editors are nominated for F.DLT-RECC, F.DLT-DAT, F.DLT-CDMCM, F.DLT-DMPSSC, H.DLT-DAS, H.DLT-TFI.

10.13 Question 13/21 “Multimedia streaming-related systems and services including content delivery, application platforms and end systems”

The report of Q13/21 can be found in [SG21-TD43R1/WP4](#). It was approved.

Executive summary:

During this SG21 meeting, Q13/21 achieved the following results:

- One draft Recommendations, ITU-T F.740.9 (ex. F.IPTV-VRSReqs), was proposed for consent;
- Eight on-going work items were updated by this meeting for progressing at future meetings, including F.CDN-AINW, H.ILMTS-arch, H.IPTV-EASarch, H.CDN-MECptl, H.AMR-ARCH, H.IPTV-TDES.7, F.CDN-SCreqs, F.IMTS-reqs;
- One new work items, F.CDHT-reqs, was agreed to be started;
- Three outgoing liaison statements were drafted and agreed to be sent to [DVB TM-I], [FG-AINN] and [ITU-T SG13];
- Two stale work items were agreed to be discontinued: H.761 (V4) and H.IPTV-TMRAPL.
- One interim meeting was planned before next SG21 meeting;
- Several new editors were nominated for new work item F.CDHT-reqs: Qimiao Zeng (China Telecommunications Corporation), Ge Chen (China Telecommunications Corporation), Chuanyang Miao (ZTE Corporation), Xin Shen (China Mobile Communications), Xiuying Nie (China Academy of Information and Communications Technology).

10.14 Question 14/21 “Guidelines for developing countries to implement and deploy digital cable television networks”

The report of Q14/21 can be found in [SG21-TD34R1/WP1](#). It was approved.

Executive summary:

During this SG21 meeting, Q14/21 achieved the following results:

- No Recommendation or informative texts were finalised.
- One work item was updated.
 - Supplement ITU-T J.sup11-rev "Guidelines for installing a digital television service for cable networks based on ITU-T Recommendations," found in [TD33/WP1](#).
- One work item was agreed to be started jointly with Q21/21.
- One liaison statement was drafted and agreed, found in [TD29/WP1](#);
 - LS on the progress to update ITU-T J. Supplement 11 “Guidelines for installing a digital television service for cable networks based on ITU-T Recommendations” [to ITU-D SG1]
- One joint interim meeting with Q21/21 was planned.
- Mr Faly David HERARD was nominated for the editor of Supplement ITU-T J.sup11-rev.

10.15 Question 15/21 “Software frameworks and architectures for advanced content distribution services over integrated broadband cable networks”

The report of Q15/21 can be found in [SG21-TD35R1/WP1](#). It was approved.

Executive summary:

During this SG21 meeting, Q15/21 achieved the following results:

- The group reviewed 2 contributions regarding "SMS scenario in cable networks domain" in the joint session of Q15, Q16, Q19 and Q22.
- The group reviewed the comments received by TSB Editor to facilitate publication process for ITU-T J.1207 and provided feedback
- No output documents were agreed at this meeting and there are no interim rapporteur meetings planned.

During the closing plenary of WP1/21, the following discussion was held:

Two potential directions were discussed.

- The first was to revise the existing Recommendations that may so require, suggesting that there might be gap that should be incorporated. The second direction was to develop of another type of STB API framework that already exists outside ITU-T. Q15/21 would continue to explore the possibilities of developing these Recommendations and would propose them at the next SG21 meeting.
- Q15/21 would further consider harmonization and collaboration with Questions under other WPs developing STB-related Recommendations for IPTV.

10.16 Question 16/21 “Functional requirements for terminal devices of the integrated broadband cable networks”

The report of Q16/21 can be found in [SG21-TD36R1/WP1](#). It was approved.

Executive summary:

During this SG21 meeting, Q16/21 achieved the following results:

- **J.cloud-game-trr:**

The document [C82](#) was presented and reviewed. It includes updates based on [TD12/WP1](#). The output document is agreed for progressing in [TD43/WP1](#)

Experts were expected to continue adding more details on it. There was a plan to consent it during the next SG21 meeting.

- Two interim meetings were planned before next SG21 meeting;
 - on 8th April 2025 (1000-1100 Geneva time) for the purpose of Progress on J.cloud-game-trr.
 - on 6th June 2025 (1000-1100 Geneva time) for the purpose of Progress on J.cloud-game-trr.

During the closing plenary, the following discussion was held:

- Q16/21 would further consider requirements of AI chips for the set-top-box, collaborating with Questions under other WPs developing STB-related Recommendations for IPTV.

10.17 Question 17/21 “Transmission control and interfaces (MAC layer) for IP and/or packet-based data over integrated broadband cable networks”

The report of Q17/21 can be found in [SG21-TD37R1/WP1](#). It was approved.

Executive summary:

During this SG21 meeting, Q17/21 achieved the following results:

- Two draft new Recommendations were updated by this meeting for progressing at future meetings;
 - J.DAS-REQ, the output draft new Recommendation is available in [SG21-TD25/WP1](#)
[SG21-TD25/WP1](#): Draft new Recommendation ITU-T J.DAS-REQ “Requirements for IP-based smart digital audio services”
 - J.DVCS.spec, the output draft new Recommendation is available in [SG21-TD26/WP1](#)
[SG21-TD26/WP1](#): Draft new Recommendation ITU-T J.DVCS.spec “Specification for IP-based Digital Video Convergence Service”
- One new work item was agreed to be started;
 - J.DAS-FRQ, the output draft was available in [SG21-TD27/WP1](#)
[SG21-TD27/WP1](#): Draft new Recommendation ITU-T J.DAS-FRQ “Functional Requirements for IP-based Smart Digital Audio Services”
- One new work item was agreed **to be deleted** from the work programme:
 - JSTR.STBN (Technical Report) “The analysis of standards trends for scalable transmission in broadband network”
- One outgoing liaison statement was agreed;
 - [SG21-TD24/WP1](#): LS/o on the new work item ITU-T J. DAS-FRQ “Functional Requirement for IP-based smart Digital Audio Service” [to ETSI TC Cable, TTA for information]
- Three interim meetings were planned before next SG21 meeting;
 - on 29th April 2025 (09:30 ~ 10:45 CEST) for the purpose of Progress on J.DVCS.spec, J.DAS-REQ etc.
 - on 19th June 2025 (9:30~10:45 CEST) for the purpose of Progress on J.DVCS.spec, J.DAS-REQ etc.
 - on 8th August 2025 (9:30~10:45 CEST) for the purpose of Progress on J.DVCS.spec, J.DAS-REQ etc.

- one liaison officers were nominated;
 - ETSI TC CABLE: Mr. TaeKyoon KIM (Liaison Officier)
- two work items editors nominated;
 - J.DAS-FRQ: Mr. TaeKyoon KIM, Ms. HyeJu OH (editors)
 - J.DAS-REQ: Mr. TaeKyoon KIM, Mr. Jae Y LEE (editors)

10.18 Question 18/21 “IP-enabled multimedia applications and services for cable television networks enabled by converged platforms”

The report of Q18/21 can be found in [SG21-TD38R1/WP1](#). It was approved.

Executive summary:

During this SG21 meeting, Q18/21 achieved the following results:

- One informative text was finalized and proposed for agreement:
 - Draft new J Supplement 14 to the Recommendations ITU-T J.1305-J.1306 (ex J.sup.mma-uc) “Use cases of microservices architecture for audiovisual media in the converged media cloud”, the output is available in [TD47R1/PLEN](#).
- Two corrigenda of the following Recommendations were produced based on the incoming liaison statement from SCV;CCV, agreed to start new work items as corrigenda, finalized and immediately proposed for consent:
 - Draft new Recommendation ITU-T J.1305 Cor.2 “Requirements of microservice architecture for audio-visual media in the converged media cloud”, the output is available in [TD50/PLEN](#).
 - Draft new Recommendation ITU-T J.1306 Cor.2 “Specification of microservice architecture for audio-visual media in the converged media cloud”, the output is available in [TD51/PLEN](#).
- One outgoing liaison statement was drafted and agreed:
 - [TD28/WP1](#): LS on agreement of J Supplement 14 to the Recommendations ITU-T J.1305-J.1306 (ex J.sup.mma-uc) “Use cases of microservices architecture for audiovisual media in the converged media cloud” [to ITU-T SG13].
- One interim meeting was planned before next SG21 meeting: 15 May 2025.

10.19 Question 19/21 “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 Q19/21 can be found in [SG21-TD39R1/WP1](#). It was approved.

Executive summary:

During this SG21 meeting, Q19/21 achieved the following results:

- One draft new Recommendation was proposed for consent;
 - J.cloud-game-sia “Infrastructure architecture requirements for cloud gaming service” as found in [TD91R1/PLEN](#). Additionally, Q3 and Q19 agreed to expand the scope from cable network to IP-based network in future contributions
- No new work items were agreed to be started. However, a potential work item related to Subscriber Management System was agreed to be processed in Q19;
- Three outgoing liaison statements were drafted and agreed as found in [SG21-TD30/WP1](#);
 - LS/r on the use case on object wave transmission (Ref.: ETSI ISG F5G-F5G(24)020033r2) [to ETSI ISG F5G]
 - LS/r on object wave compression for holographic communication (Ref. SC 29/WG 2 N 398) [to ISO/IEC JTC1/SC29/WG2]
 - LS on AAP consent of draft new Recommendation ITU-T J.1312 (ex. J.cloud-game-sia) “Infrastructure architecture requirements for cloud gaming service” [to ITU-T SG13]
- One virtual interim meeting was planned before next SG21 meeting
 - on 6 June 2025 (Geneva time 9:30-11:00) for the purpose of progress on potential work item of subscriber management system
- One additional editor, Mr. Kawamura Kei, was nominated for J.cloud-game-sia.

10.20 Question 20/21 “AI-enabled enhanced functions over integrated broadband cable network”

The report of Q20/21 can be found in [SG21-TD40/WP1](#). It was approved.

Executive summary:

During this SG21 meeting, Q20/21 achieved the following results:

- Six incoming liaison statements were discussed;
- No output documents were agreed at this meeting;

During the closing plenary of WP1/21, the following discussion was held:

- One interim rapporteur group meeting was proposed and agreed at WP1 level.

10.21 Question 21/21 “Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution”

The report of Q21/21 can be found in [SG21-TD41R1/WP1](#). It was approved.

Executive summary:

During this SG21 meeting, Q21/21 achieved the following results:

- One draft Recommendation was finalized and proposed for consent:
 - Recommendation ITU-T J.157 (ex J.wtv-req) “Functional Requirements for secondary distribution of digital television and audiovisual content to portable devices using the wireless local area network,” as found in [TD52/PLEN](#).
- One informative text was finalized and proposed for agreement:
 - J series Technical Report ITU-T JSTR.atssc-imatv (ex. J.TR.atssc-imatv) “ATSC 3.0 and 1.0 integrated-MATV system over digital terrestrial television broadcasting,” as found in [TD55/PLEN](#).
- No work item was updated.
- One work item was agreed to be started jointly with Q14/21:
 - Recommendation ITU-T J.ipb-req “Functional requirements for IP broadcast services in cable television by using multiple-input-multiple-output (MIMO) in IMT-2020 radio system,” as its A.1 justification form was found in [Annex C](#).
- Three liaison statements were drafted and agreed, as found in [TD31R1/WP1](#):
 - LS on AAP consent of draft new Recommendation ITU-T J.157 (ex. J.wtv-req) “Functional Requirements for secondary distribution of digital television and audiovisual content to portable devices using the wireless local area network” [to ITU-R SG6]
 - LS on agreement of draft new Technical Report ITU-T JSTR.atssc-imatv (ex. J.TR.atssc-imatv) “ATSC 3.0 and 1.0 integrated-MATV system over digital terrestrial television broadcasting” [to ITU-R SG6, ATSC]
 - LS on start of the new work item on the draft new Recommendation ITU-T J.ibs-req “Functional requirements for IP broadcast services in cable television by using multiple-input-multiple-output (MIMO) in IMT-2020 radio system” [to ITU-R SG6, ITU-T SG15, JCA-IMT2020]
- One joint interim meeting with Q14/21 was planned.
 - On 23 June 2025 (9h00-11h00) for the purpose of progress on J.cable-rf-to-ip and J.ibp-req.
- DOCSIS specifications were no updated, as confirmed by CableLabs liaison representative.

During the closing plenary of WP1/21, the following discussion was held:

- It was emphasized that the further information on DOCSIS was captured in the Q21 meeting report.

10.22 Question 22/21 “Methods and practices for conditional access and content protection”

The report of Q22/21 can be found in [SG21-TD42R1/WP1](#). It was approved.

Executive summary:

During this SG21 meeting, Q22/21 achieved the following results:

- Two draft new Recommendations were finalized and proposed for consent; J.1041 (ex. J.DRMVA-arch), J.1042 (ex. J.DRMVA-client), available in [TD53R2/PLEN](#) and [TD54R2/PLEN](#).
- One draft new Recommendation was updated by this meeting for progressing at future meetings; J.DRMVA-rbst, available in [TD44/WP1](#)
- One interim meeting is planned for progress of J.DRMVA-rbst, J.VAA and J.BDP; 25 June 2025 (09h30 – 11h30)

Annex 2 – List of New Work Items

#	Q.	Acronym (Kind of publication)	Version	Title	Editor	TD	A.1 /A.13 Justification template
1	Q1/21	F.ACC-MV-SD (Recommendation)	New	Requirements of accessible products and services in the metaverse – Part I System design perspective	Ms Estel·la Oncins (estella.oncins@uab.cat), Ms Anna Matamala (anna.matamala.uab.cat), Ms Sarah McDonagh (sarahanne.mcdonagh@uab.cat)	TD52R1-WP2	Annex Q1.A of TD102R1/PLEN (A.1)
2	Q1/21	F.ACC-MV-UP (Recommendation)	New	Requirements of accessible products and services in the metaverse – Part II User perspective	Ms Anna Matamala (anna.matamala.uab.cat), Ms Sarah McDonagh (sarahanne.mcdonagh@uab.cat), Ms Estel·la Oncins (estella.oncins@uab.cat).	TD53R1-WP2	Annex Q1.B of TD102R1/PLEN (A.1)
3	Q1/21	FSTR.GM-CAP (Technical report)	New	Guiding mechanisms for captioning/subtitling and sign language interpreting in immersive media	Ms Anna Matamala (anna.matamala.uab.cat), Ms Estel·la Oncins (estella.oncins@uab.cat), Ms Pilar Orero (pilar.orero@uab.cat)	TD51-WP2	Annex Q1.C of TD102R1/PLEN (A.13)
4	Q2/21	H.SV-DS (Draft Rec.)	New	Safe-viewing Devices and Systems	Stuart Keel (keels@who.int), Masahito Kawamori (kawamori@g.ecc.u-tokyo.ac.jp)	TD48/WP2	Annex Q2.A of TD102R1/PLEN (A.1)
5	Q2/21	F.TP-IHA (Draft Rec.)	New	Requirements and framework for telehealth platform for institutional healthy ageing	Zhengpeng You (youzhengpeng@cmii.chinamobile.com)	TD21/WP2	Annex Q2.B of TD102R1/PLEN (A.1)
6	Q2/21	F.PGHR (Draft Rec.)	New	Framework for management of person-generated health record	Kyoungjae SUN (kjsun@etri.re.kr), Hyoungcho Do (hhdoo@healthall.co.kr)	TD15/WP2	Annex Q2.C of TD102R1/PLEN (A.1)

#	Q.	Acronym (Kind of publication)	Version	Title	Editor	TD	A.1 /A.13 Justification template
				in digital health platforms			
7	Q2/21	F.CarePlatReqs (Draft Rec.)	New	Requirements for critical care monitoring service platform	Wu Jia (jiawu9@chinaunicom.cn)	TD47/WP2	Annex Q2.D of TD102R1/PLEN (A.1)
8	Q2/21	F.Med-MTS (Draft Rec.)	New	Requirements on Maritime Telehealth System	Masahito Kawamori (kawamori@g.ecc.u-tokyo.ac.jp)	TD43/WP2	Annex Q2.E of TD102R1/PLEN (A.1)
9	Q2/21	FSTP.CONF-UHD- Colour (Technical Paper)	New	Conformance Specification for colorimetry for telemedicine systems using ultra-high definition imaging	Masahito Kawamori (kawamori@g.ecc.u-tokyo.ac.jp)	TD41/WP2	Annex Q2.F of TD102R1/PLEN (A.13)
10	Q3/21	F.MDAH	New	Monitoring metadata for damage detection system of architectural heritage via intelligent videos analysis	Jeongmin YU (jmyu@knuh.ac.kr), Sang-Yun Lee (syllee@etri.re.kr)	TD60/WP2	Annex Q3.A of TD102R1/PLEN (A.1)
11	Q3/21	F.MRN-CHS	New	Requirements and framework of mixed reality navigation system for cultural heritage sites	Hong Chen (norman_chen2020@163.com) Jing Zhang (zhangjingde@bupt.edu.cn) Jiwei Zhang (jwzhang666@bupt.edu.cn) Ping Zhou (zhouping@digiculture.com.cn)	TD62/WP2	Annex Q3.B of TD102R1/PLEN (A.1)
12	Q3/21	F.DC-EMES-SMS- FR	New	reference framework and requirements for service management subsystem of early	Lin Li (lilin@migu.chinamobile.com) Jianxin Liao (liaojax@bupt.edu.cn)	TD50/WP2	Annex Q3.C of TD102R1/PLEN (A.1)

#	Q.	Acronym (Kind of publication)	Version	Title	Editor	TD	A.1 /A.13 Justification template
				media and extension service systems	Yong Zhong (zhongyong@migu.chinamobile.com) Qiufen Zhang (zhangqiufen@migu.chinamobile.com) Huaqi Shan (shanhuaqi@migu.chinamobile.com)		
13	Q3/21	F.LVR-CHS	New	Requirements and reference framework for large-scale virtual reality system of cultural heritage sites	Hong (Norman) Chen (norman_chen2020@163.com) Lin Shi (shilin1@caict.ac.cn) Mei Yan (yanmei@caict.ac.cn) Jiwei Zhang (jwzhang666@bupt.edu.cn) Jing Zhang (zhangjingde@bupt.edu.cn)	TD70/WP2	Annex Q3.D of TD102R1/PLEN (A.1)
14	Q4/21	ITU-T F.FW-AGQA	New	Framework for testing human factors in quality assurance of AI-based online games	Sung-June Chang (dyad@etri.re.kr), Seong-Il yang (siyang@etri.re.kr), Dae-Wook Kim (dwkim@etri.re.kr), Si-Hwan Jang (jjangshan@etri.re.kr)	TD11R1/WP2	Annex Q4.A of TD102R1/PLEN (A.1)
15	Q5/21	TR-MIS-AI (Technical Report)	New	Methodologies for mitigating misinformation and disinformation with Artificial Intelligence	Roberto Mitsuke Hirayama (hirayama@anatel.gov.br), Andrey Ribeiro Perez Nunes (andreyperes@anatel.gov.br) , Guilherme Novaes Ramos (grramos@unb.br) Eduardo Adilo Pelinson Alchieri (alchieri@unb.br), Priscila America Solis Mendez, (pris@unb.br)	TD39/WP3	Annex Q5.C of TD103/PLEN (A.13)

#	Q.	Acronym (Kind of publication)	Version	Title	Editor	TD	A.1 /A.13 Justification template
16	Q5/21	TR.HAI (Technical Report)	New	Holistic AI: A survey about a technical framework for AI services and AI capacities	Xiaojia SONG (songxiaojia@chinamobile.com) Junlan FENG (fengjunlan@chinamobile.com) Jin DI (jindi@chinamobile.com)	TD55/WP3	Annex Q5.D of TD103/PLEN (A.1)
17	Q5/21	F.dlamo (Technical Report)	New	Functional requirements and framework of Model Orchestration for data traffic monitoring and incident report systems	Young Yoon (young.yoon@hongik.ac.kr) Youngjoo Lee (web7@sogang.ac.kr)	TD70/WP3	Annex Q5.E of TD103/PLEN (A.13)
18	Q5/21	F.AIASSPDN-RF (Draft Rec.)	New	Requirements and framework of AI-enabled analysis service system for power distribution network	Zhijun Zhou (2276377001@qq.com), Ye Chen (joey_chenye@foxmail.com), Yuwei Wang (ywwang@ict.ac.cn), Qing Liu (liuqing6@chinatelecom.cn), Jinming Chen (cjm_nju@163.com)	TD40/WP3	Annex Q5.F of TD103/PLEN (A.1)
19	Q5/21	F.AIAP (Draft Rec.)	New	Framework and requirements for AI agents platform	Qing Liu (liuqing6@chinatelecom.cn), Jiangyong Ying (yingjiangyong@chinatelecom.cn) Yuwei Wang (ywwang@ict.ac.cn), Xinhui Ding (dingxinhui@caict.ac.cn) Xiaojun Mu (muxj@chinaunicom.cn)	TD41/WP3	Annex Q5.G of TD103/PLEN (A.1)
20	Q5/21	F.MFMM-MCEES (Draft Rec.)	New	functional framework of media content enhancement and editing system based on multimodal	Xiaobo Yu (shibo.yxb@alibaba-inc.com) Juan Zou (zoujuan.zj@alibaba-inc.com) Yahong Weng (wengyahong@cnii.com.cn)	TD42/WP3	Annex Q5.H of TD103/PLEN (A.1)

#	Q.	Acronym (Kind of publication)	Version	Title	Editor	TD	A.1 /A.13 Justification template
				foundation model for media	Feng Cao (caofeng@caict.ac.cn) Qing Liu (liuqing6@chinatelecom.cn)		
21	Q5/21	H.FDM-AC-TS (Draft Rec.)	New	Assessment criteria for foundation models: Time series	Wenjing Zhang (wenjingsilver@163.com) Jian Xiao (xiaojianhn@163.com) Xianyong Xu (93615073@qq.com) Shuai Liu (76342904@qq.com) Yuntao Wang (wangyuntao@caict.ac.cn) Feng Cao (caofeng@caict.ac.cn)	TD43/WP3	Annex Q5.I of TD103/PLEN (A.1)
22	Q5/21	F.DCHU (Draft Rec.)	New	Requirements for construction of home user profile ontology knowledge base for robot interaction in intelligent space	Wei Li (liwei6@chinatelecom.cn) Ye Tao (ye.tao@qust.edu.cn) Guoliang Liu (liuguoliang@sdu.edu.cn) Guohui Tian (g.h.tian@sdu.edu.cn)	TD44/WP3	Annex Q5.J of TD103/PLEN (A.1)
23	Q5/21	F.AFLS (Draft Rec.)	New	Framework and requirements of electric equipment fault localization system based on computer audition	Xiaoning Li (lixiaoning1@sgitg.sgcc.com.cn) Qiang Li (liqiang@sgitg.sgcc.com.cn) Zhen Qiu (qiuzhen@sgitg.sgcc.com.cn) Qing Liu (liuqing6@chinatelecom.cn) Yuwei Wang (ywwang@ict.ac.c)	TD45/WP3	Annex Q5.K of TD103/PLEN (A.1)
24	Q5/21	F.FDM-AC-MM (Draft Rec.)	New	Assessment criteria for foundation models: multimodal	Gege Qi (qigege@caict.ac.cn) Siqi Wu (wusiqi@caict.ac.cn) Xiaofei Dong (dongxiaofei@caict.ac.cn) Xueqiang Zhang (zhangxueqiang@ngai.ac.cn)	TD46/WP3	Annex Q5.L of TD103/PLEN (A.1)

#	Q.	Acronym (Kind of publication)	Version	Title	Editor	TD	A.1 /A.13 Justification template
					Yuntao Wang (wangyuntao@caict.ac.cn) Qing Liu (liuqing6@chinatelecom.cn)		
25	Q5/21	F.EDS (Draft Rec.)	New	Requirements of edge domain inference hardware and software systems for foundation models	Lun Li (lilun@caict.ac.cn) Yuhang Hu (huyuhang@caict.ac.cn) Yuwei Wang (ywwang@ict.ac.cn) Xi Chen (xc@ieee.org)	TD47/WP3	Annex Q5.M of TD103/PLEN (A.1)
26	Q5/21	F.IDTR (Draft Rec.)	New	Technical requirements of intelligent development tools for multimedia applications	Sisi Qin (qinsisi@caict.ac.cn) Dongwei Yan (yandongwei@caict.ac.cn) Feng Cao (caofeng@caict.ac.cn) Yigang Huang (yigang.huang@huawei.com)	TD48/WP3	Annex Q5.N of TD103/PLEN (A.1)
27	Q5/21	F.FMCS (Draft Rec.)	New	Requirements for foundation model training and inference cluster systems	Lun Li (lilun@caict.ac.cn) Yahan Wang (wangyahan@caict.ac.cn) Xi Chen (xc@ieee.org)	TD49/WP3	Annex Q5.O of TD103/PLEN (A.1)
28	Q5/21	F.LLMO (Draft Rec.)	New	Requirements and evaluation metrics for large language model operators	Lun Li (lilun@caict.ac.cn) Mengyang Wang (wangmengyang@caict.ac.cn) Xiaojun Mu (muxj@chinaunicom.cn) Xi Chen (xc@ieee.org)	TD50/WP3	Annex Q5.P of TD103/PLEN (A.1)
29	Q5/21	F.RF-EAI (Draft Rec.)	New	Requirements and framework for embodied artificial intelligence systems	Weimin Zhang (zhangweimin@caict.ac.cn) Ruwen Bai (bairuwen@caict.ac.cn) Jing Jin (jinhit@hit.edu.cn)	TD51/WP3	Annex Q5.Q of TD103/PLEN (A.1)

#	Q.	Acronym (Kind of publication)	Version	Title	Editor	TD	A.1 /A.13 Justification template
30	Q5/21	F.AICP-HA (Draft Rec.)	New	Technical specification for artificial intelligence cloud platform - high availability requirements	Xiaofeng Cao (caoxiaofeng@caict.ac.cn) Yi Zhuang (zhuangyi@caict.ac.cn) Yuntao Wang (donghao@caict.ac.cn) Pei Li (lipei@h3c.com)	TD52/WP3	Annex Q5.R of TD103/PLEN (A.1)
31	Q5/21	F.AICP-IO (Draft Rec.)	New	Technical specification for artificial intelligence cloud platform - Inference optimization	Mengke Yuwen (yuwenmengke@caict.ac.cn) Yixin Ding (dingyixin@caict.ac.cn) Yi Zhuang (zhuangyi@caict.ac.cn) Yuntao Wang (wangyuntao@caict.ac.cn)	TD53/WP3	Annex Q5.S of TD103/PLEN (A.1)
32	Q5/21	F.RF-AIAC-FM (Draft Rec.)	New	Requirements and Framework for AI Agent Collaboration for Foundation Models	Xiongwei Jia (jiawx9@chinaunicom.cn); Xiaojun Mu (muxj@chinaunicom.cn) Xiaojia Song (songxiaojia@chinamobile.com) Qing Liu (liuqing6@chinatelecom.cn); Yuwei Wang (ywwang@ict.ac.cn); Xingyu Shang (shangxy1@chinatelecom.cn);	TD54/WP3	Annex Q5.T of TD103/PLEN (A.13)
33	Q5/21	F.FMD (Draft Rec.)	New	Technical requirements of foundation model for mobile device	Dan Zhang (zhangdan@ngai.ac.cn) Xiaofei Dong (dongxiaofei@caict.ac.cn) Xueqiang Zhang (zhangxueqiang@ngai.ac.cn) Qianna Wang (wangqianna@ngai.ac.cn) Feng Cao (caofeng@caict.ac.cn) Yuwei Wang (ywwang@ict.ac.cn)	TD56/WP3	Annex Q5.U of TD103/PLEN (A.1)

#	Q.	Acronym (Kind of publication)	Version	Title	Editor	TD	A.1 /A.13 Justification template
34	Q6/21	H.Sup-FGST (H Supplement 21) (V2)	Rev.	Film grain synthesis technology for video applications	Walt Husak (wjh@dolby.com) Philippe de Lagrange (philippe.delagrang@interdigital.com) Andrey Norkin (anorkin@netflix.com) Alexis Tourapis (alexismt@apple.com)	TD44/PLEN	N/A
35	Q6/21	T.808 (V3) ISO/IEC 15444-9	Rev.	Information technology – JPEG 2000 image coding system: Interactivity tools, APIs and protocols	Junichi Hara (waver.jp@outlook.jp) David Taubman (d.taubman@unsw.edu.au)	Published T.808	N/A
36	Q7/21	H.VADS (Draft Rec.)	New	Assessment criteria for video authenticity detection services	Qing Liu (liuqing6@chinatelecom.cn) Yuan Zhang (zhangy666@chinatelecom.cn) Meng Han (mhan@zju.edu.cn) Rongchang Li (lirongchang@zju-bj.com) Wei He (hew3@zhejianglab.com)	TD18/WP3	Annex Q7.C of TD103/PLEN (A.1)
37	Q7/21	F.AIVSSPGC (Draft Rec.)	New	Requirements and framework of artificial intelligence-based visual surveillance system for power grid construction	Ti Guan (guan-ti@sd.sgcc.com.cn) Yimeng Wang (13698637810@163.com) Chao Yuan (18663403521@163.com) Yuan Zhang (zhangy666@chinatelecom.cn); Wook HYUN (whyun@etri.re.kr)	TD21/WP3	Annex Q7.D of TD103/PLEN (A.1)
38	Q7/21	F.MVBIS (Draft Rec.)	New	Requirements and Framework for Machine Vision-Based Inspection Services in	Jianbing Xu (China.jianbingxu@126.com) Jianrong Zhang (sket@sina.com) Siming Wei (waysiming@163.com)	TD22/WP3	Annex Q7.E of TD103/PLEN (A.1)

#	Q.	Acronym (Kind of publication)	Version	Title	Editor	TD	A.1 /A.13 Justification template
				Underground Cable Channels	Qiusi Cui (qcui@cqu.edu.cn) Yuan Zhang (zhangy666@chinatelecom.cn)		
39	Q7/21	H.EV-SYSarch: (Draft Rec.)	New	Architecture for event-based vision systems	Hang Zou (zouh3@chinatelecom.cn) Yuan Zhang (zhangy666@chinatelecom.cn) Jianheng Chen (chenjh189@chinatelecom.cn) Fan Li (lifan@mail.xjtu.edu.cn) Haoji Hu (haoji_hu@zju.edu.cn)	TD19/WP3	Annex Q7.F of TD103/PLEN (A.1)
40	Q7/21	H.MFSV-arch (Draft Rec.)	New	Architecture of the multimodal fusion system for vision	Huifen Wang (wanghf10@chinatelecom.cn) Minrui Shi (shimr@chinatelecom.cn) Yuan Zhang (zhangy666@chinatelecom.cn)	TD20/WP3	Annex Q7.G of TD103/PLEN (A.1)
41	Q9/21	H.LVR (Draft Rec.)	New	Requirements and reference framework for large-scale virtual reality system	Hong Chen (norman_chen2020@163.com) Jing Zhang (zhangjingde@bupt.edu.cn) Jiwei Zhang (jwzhang666@bupt.edu.cn) Lin Shi (shilin1@caict.ac.cn) Mei Yan (yanmei@caict.ac.cn)	TD46/WP4	Annex Q9.C of TD104/PLEN (A.1)
42	Q9/21	H.MV-MAMA(Draft Rec.)	New	Multimedia aspect of metaverse architecture	Hideki Yamamoto (yamamoto436@oki.com) Wook Hyun (whyun@etri.re.kr)	TD47/WP4	Annex Q9.D of TD104/PLEN (A.1)

#	Q.	Acronym (Kind of publication)	Version	Title	Editor	TD	A.1 /A.13 Justification template
43	Q9/21	F.DMMS-Reqs(Draft Rec.)	New	Functional requirements for data matrix for multimedia services	Xiongwei Jia (jiawx9@chinaunicom.cn) Xiaojun Mu (muxj@chinaunicom.cn) Qing Liu (liuqing6@chinatelecom.cn) Sunghan Kim (sh-kim@etri.re.kr)	TD48/WP4	Annex Q9.E of TD104/PLEN (A.1)
44	Q9/21	F.ASMNS(Draft Rec.)	New	Requirements and framework of self-adaption system for multimedia service in the aspect of network	Bei Li (libei@chinaunicom.cn); Rui Xia (xiar3@chinaunicom.cn) ; Nijingnan Zhang (zhangnjin@chinaunicom.cn) Bowen Cai (caibw@chinatelecom.cn)	TD49/WP4	Annex Q9.F of TD104/PLEN (A.1)
45	Q9/21	F.AugDataReqs(Draft Rec.)	New	Requirements for multimedia data augmentation system in the industrial Internet	Jinbo LI (lijb7213@chinaunicom.cn) Wu JIA (jiawu9@chinaunicom.cn) Xiaolong ZHOU (zhouxl50@chinaunicom.cn) Qing LIU (liuqing6@chinatelecom.cn) Chuanyang MIAO (miao.chuanyang@zte.com.cn)	TD50/WP4	Annex Q9.G of TD104/PLEN (A.1)
46	Q9/21	F.MDDSP(Draft Rec.)	New	Architecture and functional requirements for the multimedia data delivery service platform	Wenjing Nie (niewenjing@chinamobile.com) Haoyue Zheng (zhenghaoyue@chinamobile.com) Yuwei Wang (ywwang@ict.ac.cn) Zheng Yin (yinzheng@caict.ac.cn) Nijingnan Zhang (zhangnjin@chinaunicom.cn)	TD51/WP4	Annex Q9.H of TD104/PLEN (A.1)

#	Q.	Acronym (Kind of publication)	Version	Title	Editor	TD	A.1 /A.13 Justification template
47	Q9/21	F.MDQA(Draft Rec.)	New	Framework for multimedia data quality assessment	Hui yan (yanhui@chinatelecom.cn) Wenhong Zhou (Zhouwh@chinatelecom.cn) Xinchi Li (lix66@chinatelecom.cn) Zheng Yin (yinzheng@caict.ac.cn) Sun Li (lisun@caict.ac.cn)	TD52/WP4	Annex Q9.I of TD104/PLEN (A.1)
48	Q9/21	F.MDA-RSM(Draft Rec.)	New	Requirements for sharing management of multimedia data asset	WANG Zhili, BUPT, China (zlwang@bupt.edu.cn) GUO Shaoyong, BUPT, China (syguo@bupt.edu.cn) YANG Ruiyu, BUPT, China (yangruiyu@bupt.edu.cn)	TD54/WP4	Annex Q9.K of TD104/PLEN (A.1)
49	Q9/21	H.CVR-IF(Draft Rec.)	New	Interfaces for interaction in cloud virtual reality systems	XiaoJun Liu (liuxiaoj6@chinatelecom.cn) Younghwan Choi (yhc@etri.re.kr) Liuyihui QIAN (qianlyh@chinatelecom.cn) Lei Yang (yangleiyj@chinamobile.com) XiaoQing Xu (xuxq@chinatelecom.cn)	TD55/WP4	Annex Q9.L of TD104/PLEN (A.1)
50	Q9/21	H.MV-PIOP(Draft Rec.)	New	Service scenarios and high-level requirements for metaverse cross-platform interoperability	Jungha Hong (jhong@etri.re.kr) Wook Hyun (whyun@etri.re.kr) Miyoungh Huh (myhuh@etri.re.kr) Hideo Imanaka (h.imanaka@nict.go.jp)	TD56/WP4	Annex Q9.M of TD104/PLEN (A.1)
51	Q9/21	H.MV-HIA(Draft Rec.)	New	High-level interoperability	Wook Hyun (whyun@etri.re.kr) Hideo Imanaka (h.imanaka@nict.go.jp)	TD57/WP4	Annex Q9.N of TD104/PLEN (A.1)

#	Q.	Acronym (Kind of publication)	Version	Title	Editor	TD	A.1 /A.13 Justification template
				architecture for cross- platform metaverse	Xiongwei Jia (jiawx9@chinaunicom.cn) Hideki Yamamoto (yamamoto436@oki.com)		
52	Q9/21	H.MV-FRAVI(Draft Rec.)	New	Functional requirements and architecture for avatar interoperability in cross-platform metaverse	MiYoung Huh (myhuh@etri.re.kr) Jungha Hong (jhong@etri.re.kr) Wook Hyun (whyun@etri.re.kr) Hideo Imanaka (h.imanaka@nict.go.jp)	TD58/WP4	Annex Q9.O of TD104/PLEN (A.1)
53	Q9/21	F.AICSS(Draft Rec.)	New	Requirements and framework for advanced intelligent customer service system	Yalan Zhang (zhangyalan@huawei.com) Zhen Yang (yangzhen.sh@chinatelecom.cn) Xi Cao (caoxi@chinamobile.com) Yuwei Wang (wangyuwei@ict.ac.cn) Jie Li (lijie_dys.sh@chinatelecom.cn)	TD59/WP4	Annex Q9.P of TD104/PLEN (A.1)
54	Q10/21	F.CAV-MEMSF (Draft Rec.)	New	Metrics and evaluation methods for the robustness of multi- sensor fusion-based perception in connected and automated vehicles	Zheng Gong (gongzheng@caict.ac.cn), Yuming Ge (geyuming@caict.ac.cn), Feng Li(lifeng1@caict.ac.cn) Xiangyun Ren (renxy2@changan.com.cn), Guo Pu (puguo@changan.com.cn) Jinling Hu (hujinling@cictci.com), Jiayi Fang(fangjiayi@cictci.com)	TD74/WP4	Annex Q10.A of TD104/PLEN (A.1)
55	Q10/21	F.CV-SDTIreqs (Draft Rec.)	New	Sensor data transmission and interface requirements for driving domain controller in intelligent connected vehicles	Yonggang Luo (luoyg3@changan.com.cn) Yuming Ge (geyuming@caict.ac.cn) Bisheng Yang (bshyang@whu.edu.cn)	TD78/WP4	Annex Q10.B of TD104/PLEN (A.1)

#	Q.	Acronym (Kind of publication)	Version	Title	Editor	TD	A.1 /A.13 Justification template
56	Q10/21	FSTP-SDV (Tech. Paper)	New	Overview of Software-Defined Vehicles	Jungha Hong (jhong@etri.re.kr) Sunghan Kim (sh-kim@etri.re.kr) Hongki Cha (cha8476@etri.re.kr) Jiantao Ji (jiit@changan.com.cn)	TD85/WP4	Annex 10.D of TD104/PLEN (A.13)
57	Q10/21	F.CV-FARSI (Draft Rec.)	New	Functional architecture and requirements of connected vehicles supporting satellite internet services	Boxiong Li (liboxiong@caict.ac.cn), Yuming Ge (geyuming@caict.ac.cn), Feng Li (lifeng1@caict.ac.cn), Zengwen Li (lizw@changan.com.cn) Jinling Hu (hujinling@cictci.com), Hui Deng (denghui@cictci.com)	TD77/WP4	Annex Q10.C of TD104/PLEN (A.1)\
58	Q10/21	H.522(V2) (Draft Rec.)	Rev	Implementation of vehicle multimedia systems	Zehui Cheng (chengzh@changan.com.cn) Can Huang (huangcan4@changan.com.cn) Francois Fischer (francois.fischer.ext@huawei.com)	TD86/WP4	
59	Q12/21	F.DLT-RECC (Draft Rec.)	New	Framework and Requirements for Renewable Energy Consumption Certification based on Distributed Ledger Technology	Yong Yan (55682381@qq.com) Ziqiang Zhou (jx_zzq@sina.com) Shaoyong Guo (syguo@bupt.edu.cn) Weiwei Pang (pangweiwei@caict.ac.cn) Jungsoo Park (pjs@etri.re.kr)	TD36 /WP4	Annex Q12.C of TD104/PLEN (A.1)
60	Q12/21	F.DLT-DMPSSC (Draft Rec.)	New	Reference framework for DLT-based data management platform of software supply chain	Zhimin Gu (guzmdw@163.com) Tingting Liu (liutingting3@caict.ac.cn) Jing Guo (guojing5126@163.com) Yajuan Guo (mandy_guo@163.com) Yi Pan (1049628257@qq.com)	TD37/WP4	Annex Q12.D of TD104/PLEN (A.1)

#	Q.	Acronym (Kind of publication)	Version	Title	Editor	TD	A.1 /A.13 Justification template
61	Q12/21	F.DLT-DAT (Draft Rec.)	New	Framework and requirements for tracking of digital assets based on distributed ledger technology	Xiaofeng Chen (chenxiaofeng@hyperchain.cn) Jingyi Du (dujingyi@bcds.org.cn) Xiaohu Yang (yangxh@zju.edu.cn) Lizhong Kuang (lizhong.kuang@hyperchain.cn), Yi Sun (sunyi@ict.ac.cn), Ismael Arribas (kunfud@gmail.com)	TD44/WP4	Annex Q12.E of TD104/PLEN (A.1)
62	Q12/21	F.DLT-CDMCM (Draft Rec.)	New	Framework and requirements for distributed ledger technology-based carbon data management of construction materials	Lu Zhang (zhanglu@hyperchain.cn), Gang Chen (cg@zju.edu.cn), Kui Ren (kui ren@zju.edu.cn), Yi Sun (sunyi@ict.ac.cn), Xiaofeng Chen (chenxf.alfred@zju.edu.cn), Ismael Arribas (kunfud@gmail.com)	TD45/WP4	ANNEXQ12.F of TD104/PLEN (A.1)
63	Q13/21	F.CDHT-req (Draft Rec.)	New	Requirements and Framework for Content Delivery Systems Supporting High-Throughput Services	Qimiao Zeng (zengqm@chinatelecom.cn) Ge Chen (chengg55@chinatelecom.cn) Chuanyang Miao (miao.chuanyang@zte.com.cn) Xin Shen (shenxin_sx@migu.cn) Xiuying Nie (niexiuying@caict.ac.cn)	TD24R1/WP4	Annex Q13.C of TD104/PLEN (A.1)
64	Q17/21	J.DAS-FRQ (Draft Rec.)	New	Functional Requirements for IP-based smart Digital Audio Service	TaeKyo Kim (tkkim@etri.re.kr) HyeJu Oh (feeler@etri.re.kr)	TD27/WP1	Annex C of TD101/PLEN (A.1)

#	Q.	Acronym (Kind of publication)	Version	Title	Editor	TD	A.1 /A.13 Justification template
65	Q18/21	ITU-T J.1305 Cor. 2 (Corrigendum)	New	Requirements of microservice architecture for audio- visual media in the converged media cloud	Jia Tao (jiatao@abp2003.cn)	TD50/PLEN	N/A
66	Q18/21	ITU-T J.1306 Cor. 2 (Corrigendum)	New	Specification of microservice architecture for audio- visual media in the converged media cloud	Jia Tao (jiatao@abp2003.cn)	TD51/PLEN	N/A
67	Q21/21	J.ibs-req (Draft Rec.)	New	Functional requirements for IP broadcast services in cable television by using multiple-input- multiple-output (MIMO) in IMT-2020 radio system	Hideo OHNO (ohno.hideki@nesic.com)	N/A	Annex D of TD101/PLEN (A.1)

Annex 3

List of Outgoing liaison statements

#	Questions	WP	To	For	Title	TD
1	Q0/21	PLEN	JCA-ML	Information	LS/r on Invitation to nominate the representative to the ITU-T JCA-ML (JCA-ML-LS11)	TD92R3/PLEN
2	Q0/21	PLEN	SCV	Information	LS/r on the appointment of a vocabulary rapporteur (SCV-LS1)	TD92R3/PLEN
3	Q0/21	PLEN	ITU-T SG17	Information	LS/r on Coordination for Identity Management (SG17-LS139)	TD92R3/PLEN
4	Q0/21	PLEN	SCV	Action	LS/r on the definitions for term smartphone from ITU-T Study Group 17 (SCV-LS8)	TD92R3/PLEN
			ITU-T SG17, ITU-T SG11	Information		
5	Q0/21	PLEN	IRG-AVA, ITU-R SG6	Information	LS/r on consideration of updating Terms of Reference for IRG-AVA (IRG-AVA-2411-024)	TD92R3/PLEN
6	Q0/21	PLEN	SCV/CCV	Action	LS/r on the validation of terms and definitions developed by ITU-T Study Group 21 (Ref. SCV-LS2)	TD92R3/PLEN
7	Q0/21	PLEN	ITU-T SG15	Action	LS/r on the new version of the Access Network Transport (ANT) / Home Network Transport (HNT) Standards Overview and Workplan (Ref.: SG15-LS115 and SG15-LS116)	TD92R3/PLEN
8	Q0/21	PLEN	JCA-ML	Action	LS/r on Invitation to provide inputs to the “Glossary of terms and definitions for machine learning” (JCA-ML-LS10)	TD92R3/PLEN
			All ITU-T SGs	information		
9	Q0/21	PLEN	SCV/CCT	Action	LS/r on terms contained in ITU-T SG16 draft Recommendations	TD92R3/PLEN
			All ITU-T SGs	information		
10	Q1/21	WP2	IRG-AVA, ISO/IEC JTC1 SC35	Information	LS on creation of new work item on a draft new Technical report ITU FSTR.GM-CAP “Guiding mechanisms for captioning/subtitling and sign language interpreting in immersive media”	TD66R1/WP2
11	Q1/21	WP2	IRG-AVA, ISO/IEC JTC1 SC35	Information	LS on creation of new work items on two draft new recommendations, ITU-T F.ACC-MV-SD “Requirements of accessible products and services in the metaverse- Part I System design perspective” and ITU-T F.ACC-MV-UP “Requirements of accessible products and services in the metaverse-Part II User perspective”	TD66R1/WP2

12	Q2/21	WP2	ITU-R WP6C	Action	LS on work items related to UHD	TD49R1/WP2
13	Q2/21	WP2	ITU-T SG12; IEC TC108, CENELEC 108X, ISO TC43	Action	LS on accurate dosimetry	TD49R1/WP2
14	Q2/21	WP2	ISO/IEC JTC1 SC35, ISO/TC 159, ISO/TC 172, ISO/TC 173	Action	LS on safe-viewing	TD49R1/WP2
15	Q2/21	WP2	IAEA	Action	LS on mobile MRI and AI	TD49R1/WP2
16	Q2/21	WP2	ITU-T SG5,	Action	LS on EMC of medical equipment	TD49R1/WP2
17	Q2/21	WP2	ITU-T SG17,	Action	LS on medical equipment security	TD49R1/WP2
18	Q3/21	WP2	ISO/IEC JTC 1/SC 24	Information	LS on initiation of new work item ITU-T F.MRN-CHS: "Requirements and framework of mixed reality navigation system for cultural heritage sites"	TD68/WP2
19	Q4/21	WP2	ITU-T SG11, IEEE SA	Information	LS on creation of new work item on draft ITU-T Rec F.FW-AGQA "Framework for testing human factors in quality assurance of AI-based online games "	TD67R1/WP2
20	Q5/21	WP3	ISO/IEC/JTC1 SC29/WG4	Information	LS on work item that was agreed to submit for Consent: F.AIM.RCM: "Representation and Compression Methods of Artificial Intelligence Models"	TD73/WP3
21	Q5/21	WP3	ISO/IEC JTC 1/SC 42, IEEE C/AISC	Information	LS on initiation of new work item ITU-T H.FDM-AC-TS "Assessment criteria for foundation models: Time series "	TD73/WP3
22	Q5/21	WP3	ISO/IEC JTC 1/SC 42	Information	LS on new work item ITU-T F.AIASSPDN-RF "Requirements and framework of AI-enabled analysis service system for power distribution network"	TD73/WP3
23	Q5/21	WP3	SG17	Information	LS on current status of Q5/21	TD73/WP3
24	Q5/21	WP3	ISO/IEC JTC1 SC29/WG4	Information	LS on progress of work item ITU-T H.FDISprot: Protocols of the feature-based intelligent systems	TD73/WP3
25	Q5/21	WP3	ISO/IEC JTC1 SC42	Information	LS on initiation of new work item ITU-T F.AFLS "Framework and requirements of electric equipment fault localization system based on computer audition"	TD73/WP3
26	Q5/21	WP3	ISO/IEC JTC1 SC42	Information	LS on initiation of new work item ITU-T F.AIAP "Framework and requirements for AI agents platform"	TD73/WP3

27	Q5/21	WP3	ITU-T SG20, IEEE C/AISC	Information	LS on new work item ITU-T F.RF-AIAC-FM “Requirements and Framework for AI Agent Collaboration for Foundation Models”	TD73/WP3
28	Q5/21	WP3	ITU-T SG13, SG17	Information	LS on new work item ITU-T F.AICP-HA "Technical specification for artificial intelligence cloud platform - high availability requirements"	TD73/WP3
29	Q5/21	WP3	ITU-T SG13, SG17	Information	LS on new work item ITU-T F.AICP-IO “Technical specification for artificial intelligence cloud platform - Inference optimization”	TD73/WP3
30	Q5/21	WP3	IEEE 3303	Information	LS on new work item ITU-T F.FDM-AC-MM “Assessment criteria for foundation models: multimodal”	TD73/WP3
31	Q5/21	WP3	ITU-T SG20, IEEE	Information	LS on new work item ITU-T F.FMD “Technical requirements of foundation model for mobile device”	TD73/WP3
32	Q5/21	WP3	ITU-T SG13	Information	LS on new work item ITU-T F.IDTR “Technical requirements of intelligent development tools for multimedia applications”	TD73/WP3
33	Q6/21	WP3	ISO/IEC JTC 1/SC 29/WG 6.	Action	LS/r on the compression of biomedical waveform data	TD72R1/WP3
34	Q6/21	WP3	DICOM WG32.	Action	LS on selecting a DICOM biomedical waveform codec	TD72R1/WP3
35	Q6/21	WP3	ISO/IEC JTC 1/SC 29/WG 2.	Information	LS on object wave compression for holographic communication	TD72R1/WP3
36	Q6/21	WP3	ISO/IEC JTC 1/SC 29/WG 1.	Information	LS/r on JPEG AI, JPEG 2000 and JPEG XE	TD72R1/WP3
37	Q6/21	WP3	ISO/IEC JTC 1/SC 29	Information	LS/r on Multimedia authentication and JPEG Trust	TD72R1/WP3
38	Q6/21	WP3	ISO/IEC JTC 1/SC 29	Action	LS/r on JVET administrative arrangements	TD72R1/WP3
39	Q7/21	WP3	ISO/IEC JTC1 SC42, ITU-T SG17,	Action	LS on initiation of new work item ITU-T H.VADS: Assessment criteria for video authenticity detection services	TD33R2/WP3
			AI and Multimedia Authenticity Standards Collaboration	Information		
40	Q7/21	WP3	ITU-T SG20, IEC TC79	Information	LS on initiation of new work item F. AIVSSPGC "Requirements and framework of artificial intelligence-based video surveillance system for power grid construction"	TD33R2/WP3

41	Q7/21	WP3	ITU-T SG20, IEEE C/AISC	Information	LS on initiation of new work item ITU-T F.MVBIS "Requirements and framework for machine vision-based inspection services in underground cable channels"	TD33R2/WP3
42	Q7/21	WP3	ISO/IEC JTC 1/SC 29/WG 1 (JPEG), ITU-T SG20	Information	LS on initiation of new work item H.EV-SYSarch "Architecture for event-based vision systems"	TD33R2/WP3
43	Q7/21	WP3	ITU-T SG20, ISO/IEC JTC1 SC29 WG4, ISO/IEC JTC1 SC27 WG5.	Information	LS on initiation of new work item ITU-T H.MFSV-arch "Architecture of the multimodal fusion system for vision"	TD33R2/WP3
44	Q7/21	WP3	ITU-T SG11	Information	LS on initiation of new work item ITU-T H.VSBD-P "Protocols for big data application in video surveillance systems"	TD33R2/WP3
45	Q7/21	WP3	ISO/IEC JTC 1/SC 29/WG 1 (JPEG)	Action	LS about proposing to establish a joint AHG on event-based vision	TD33R2/WP3
46	Q8/21	WP4	ITU-D SG1	Information	LS/r on Liaison statement from ITU-D Study Group 1 Question 3/1 to ITU-T Study Groups, ITU-R Working Parties, APT ASTAP and ETSI (ITU-D SG1-Doc 1/461- LS69)	TD72R1/WP4
47	Q9/21	WP4	ITU-T SG2	Action	LS/r on the initiation of a new work item M.dam-gim "Generic information model for data asset management" (SG2-LS126)	TD69R2/WP4
48	Q9/21	WP4	ITU-T SG11, SG13, SG20	Action	LS on initiation of new work items regarding metaverse architecture and interoperability	TD69R2/WP4
			MPAI, ISO/IEC JTC 1/SC 6, ISO/IEC JTC 1/SC 24, ISO/IEC JTC 1/SC 38, 3GPP TSG SA, OMI, ETSI ISG-ARF, MSF	Information		
49	Q9/21	WP4	ITU-T SG20, ISO/IEC JTC 1/SC 24	Information	LS on initiation of new work item ITU-T H.LVR "Requirements and reference framework for large-scale virtual reality system"	TD69R2/WP4
50	Q9/21	WP4	ITU-T SG13, SG20	Information	LS on initiation of new work item ITU-T F.MDDSP "Architecture and functional requirements for the multimedia data delivery service platform"	TD69R2/WP4

51	Q9/21	WP4	ITU-T SG17, SG20, ISO/IEC JTC1/SC42/WG2	Information	LS on the creation of a new work item F.MDA-RSM "Requirements for sharing management of multimedia data asset"	TD69R2/WP4
52	Q9/21	WP4	ITU-T SG13, SG17, SG20, IEEE C/SABSC	Information	LS on new work item ITU-T F.DMMS-Req: Functional requirements for data matrix for multimedia services	TD69R2/WP4
53	Q9/21	WP4	ITU-T SG13	Information	LS on the creation of a new work item ITU-T F.ASMNS "Requirements and framework of the self-adaption system for multimedia service in the aspect of network"	TD69R2/WP4
54	Q9/21	WP4	ITU-T SG12, SG13; ETSI ISG; ISO/IEC JTC 1/SC38, ISO/IEC JTC 1/SC 42	Information	LS on initiation of new work item on the draft ITU-T H.CVR- IF " Interfaces for interaction in cloud virtual reality systems "	TD69R2/WP4
55	Q9/21	WP4	ITU-T SG13; ISO/IEC JTC 1/SC35	Information	LS on initiation of new work item F.AICSS "Requirements and framework for advanced intelligent customer service system"	TD69R2/WP4
56	Q10/21	WP4	ITU-T SG17	Information	LS/r on liaison statement from ITU-T SG17 on the progress of CG-AISEC by ITU-T SG16 LS91	TD91R1/WP4
57	Q10/21	WP4	ISO/TC22/SC31	Information	LS on initiation of new work item on the draft ITU-T F.CAV- MEMSF"Metrics and evaluation methods for the robustness of multi-sensor fusion-based perception in connected and automated vehicles"	TD91R1/WP4
58	Q10/21	WP4	CITS, ITU-R SG4, ITU-T SG13, SG17	Information	LS on initiation of new work item on the draft ITU-T F. CV- FARSI "Functional Architecture and Requirements of Satellite Internet for Intelligent Connected Vehicle"	TD91R1/WP4
59	Q10/21	WP4	CITS EG-ComAD	Information	LS/r on liaison statement from CITS EG ComAD to ITU-T SG16 on the establishment of the Working Group on Vehicular communications for advanced emergency braking, including to protect VRUs by ITU-T SG21 TD93/GEN (Your EG- ComAD-LS5)	TD91R1/WP4
60	Q13/21	WP4	DVB TM-I	Information	LS/r on updates to signalling of accessibility services and application in DVB Bluebook A177 (DVB-I)	TD25R1/WP4
61	Q13/21	WP4	FG-AINN	Information	LS/r on call for contributions to new Focus Group on Artificial Intelligence Native for Telecommunication Networks (FG- AINN)	TD25R1/WP4

62	Q13/21	WP4	ITU-T SG13	Information	LS on the initiation of new work item on the draft Recommendation F.CDHT-reqs "Requirements and Framework for Content Delivery Systems Supporting High-Throughput Services"	TD25R1/WP4
63	Q14/21	WP1	ITU-D SG1	Information	LS on the progress to update ITU-T J. Supplement 11 "Guidelines for installing a digital television service for cable networks based on ITU-T Recommendations"	TD29/WP1
64	Q17/21	WP1	ETSI TC Cable, TTA	Information	LS on the new work item ITU-T J. DAS-FRQ "Functional Requirement for IP-based smart Digital Audio Service"	TD24R1/WP1
65	Q18/21	WP1	ITU-T Study Group 13	Information	LS on Agreement of J Supplement 14 to the Recommendations ITU-T J.1305-J.1306 (ex J.sup.mma-uc) "Use cases of microservices architecture for audiovisual media in the converged media cloud"	TD28R1/WP1
66	Q19/21	WP1	ETSI ISG F5G	Information	LS/r on the use case on object wave transmission (Ref.: ETSI ISG F5G-F5G(24)020033r2)	TD30R1/WP1
67	Q19/21	WP1	ISO/IEC JTC1/SC29/WG2	Information	LS/r on object wave compression for holographic communication (Ref. SC 29/WG 2 N 398)	TD30R1/WP1
68	Q19/21	WP1	SG13	Information	LS on AAP consent of draft new Recommendation ITU-T J.1312 (ex. J.cloud-game-sia) "Infrastructure architecture requirements for cloud gaming service"	TD30R1/WP1
69	Q21/21	WP1	ITU-R SG6	Information	LS on AAP consent of draft new Recommendation ITU-T J.157 (ex. J.wtv-req) "Functional Requirements for secondary distribution of digital television and audiovisual content to portable devices using the wireless local area network"	TD31R1/WP1
70	Q21/21	WP1	ITU-R SG6, ATSC	Information	LS on agreement of draft new Technical Report ITU-T JSTR.atssc-imatv (ex. J.TR.atssc-imatv) "ATSC 3.0 and 1.0 integrated-MATV system over digital terrestrial television broadcasting"	TD31R1/WP1
71	Q21/21	WP1	ITU-R SG6, ITU-T SG15, JCA-IMT2020	Information	LS on initiation of the new work item on the draft new Recommendation ITU-T J.ibs-req "Functional requirements for IP broadcast services in cable television by using multiple-input-multiple-output (MIMO) in IMT-2020 radio system"	TD31R1/WP1
72	WP2/21	WP2	ILO	Action	LS on collaboration to ILO	TD71/WP2
73	WP2/21	WP2	UNHCR	Action	LS on collaboration to UNHCR	TD71/WP2

74	WP2/21	WP2	ITU-T SG11	Information	LS on initiation of new work item ITU-T F.DC-EMES-SMS-FR: " Reference framework and requirements for service management subsystem of early media and extension service systems"	TD71/WP2
75	AHG-MV	PLEN	ITU-T TSAG	Action	LS/r on work program of ITU-T SG21 on metaverse based on FG-MV deliverables (Ref.: TSAG-LS46)	TD107/PLEN
			ITU-T SGs	Information		
76	AHG-MV	PLEN -	ITU-T TSAG	Action	LS on the revised ToR text of ITU-T SG21 Question 9 on metaverse	TD107/PLEN
			ITU-T SGs	Information		
77	PLEN	PLEN	TSAG	Action	LS on revised text of Question 6/21	N/A
78	PLEN	PLEN	ITU-D SG1	Information	LS on consent of draft new Recommendation ITU-T F.792 (ex F.ACC-AMCS) "Requirements on accessible moveable communication systems in rural and out-of-home environments"	N/A

Additional LS developed jointly with SG20

#	Questions	WP	To	For	Title	TD
1	ALL/21	PLEN	ITU-T TSAG	Action	LS on Draft Terms of Reference of the Joint Coordination Activities on metaverse standardization	Annex to Add5 to SG21-TD28/PLEN
			All ITU-T Study Groups	Information		