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| ITU logo | INTERNATIONAL TELECOMMUNICATION UNION**TELECOMMUNICATIONSTANDARDIZATION SECTOR**STUDY PERIOD 2017-2020 | TSAG-TD1042 |
| **TSAG** |
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| **TD** |
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| **Purpose:** | Information |
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| **Abstract:** | This TD provides the SG9 report for lead study group activities on integrated broadband cable and television networks. |

# Lead study group activities on integrated broadband cable and television networks

Since the last TSAG meeting in January 2021, SG9 organized its sixth Study Group meeting on 19‑28 April 2021 fully virtual. The SG9 meeting was attended by 65 participants from 18 countries. All sessions were held using MyMeetings remote participation tool.

Co-located with the SG9 meeting, the ITU organized a workshop on “[The Future of Television for Asia & Pacific](https://www.itu.int/en/ITU-T/Workshops-and-Seminars/202004/Pages/default.aspx)” on 23 April 2021, which was earlier planned in October 2020 in Tokyo and further postponed due to the epidemic situation of COVID-19. This event, which was jointly organized by the ITU Standardization Sector (ITU-T), the ITU-Radiocommunication Sector (ITU-R), the ITU Development Sector (ITU-D) and the ITU Regional office for Asia & Pacific, focused on the diverse emerging broadband and broadcast technologies, including cable TV, with the aim to assist countries in the region of Asia & Pacific to assess challenges, dynamics and opportunities. The workshop was attended by 320 participants and discussed the future of television in the region with relevant stakeholders including the Asia Pacific Broadcasting Union (ABU) and the Asia-Pacific Institute for Broadcasting Development (AIBD). It also provided an opportunity to discuss TV-related regional and international standardization. Full recorded presentations on related standardization activities from ITU-T SG9, ITU-R SG6, ITU-T SG16 and ITU-D Q2/1 were made available on the event webpage for offline access. The full event was recorded and it can be watched offline ([Watch Recording here](https://itu.zoom.us/rec/play/uaUrhi6GW41dQdBVLxfYil4H5UMWSR05_TlL0vY5up6rG6IsWuPHsPt0_hKhVYfBVYRSU4CC6fi1GSMt.80YH7N8yMCHCaqGd?autoplay=true&startTime=1619157405000)).

In addition, an IRG-IBB meeting "Intersector Rapporteur Group on Integrated Broadcast-Broadband (IBB)" was held under the auspices of ITU-T SG9. IRG-IBB meeting took place on 21 April 2021 (13:15-14:45) and discussed smart TV Operating System Recommendations under development by Q5/9. It was agreed to organize an interim meeting of Q5/9, under the auspices of IRG-IBB, to discuss with various parties the revision of the TVOS-related Recommendations, especially in view to clarify its scope. The meeting took place in July 2021 and an agreement was reached to revise TVOS-related Recommendations.

During the SG9 meeting in April 2021 a total of three draft Recommendations were finalized and agreed for AAP Consent. Also, one consented draft Recommendation in the previous WP2/9 meeting in November 2020 was AAP approved. In addition, the meeting agreed three draft Supplements and one draft Implementor’s Guide for publication. The following reproduces these eight (8) deliverables agreed or approved at the SG9 meeting in April 2021.

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| **Q** | **AAP/TAP**  | **Rec**  | **Status**  | **Title**  | **Final TD**  | **A.5 justification** |
| Q7  | AAP  | **J.1110** (ex.J.fdx-fspec)  | New  | Functional specification for in-band full-duplex in HFC based network  | [SG9-TD1110](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-SG09-210419-TD-GEN-1110) | N/A  |
| Q8  | AAP  | **J.1032** (ex. J.CBCMS-part2)  | New  | The specification of cloud-based converged media service to support IP and Broadcast Cable TV - System Architecture  | [SG9-TD1103-R2](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-SG09-210419-TD-GEN-1103) | N/A  |
| Q9  | AAP  | **J.1631** (ex J.cloud-vr-req)  | New  | Requirements of E2E Network Platform for Cloud-VR Services  | [SG9-TD1127](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-SG09-210419-TD-GEN-1127) | N/A  |
| Q1  | AAP  | **J.481**(ex J.cable-rf-ip)  | Consented 2021-01-26  | Requirements of cable network for RF and IP secondary distribution of television programmes  | [SG9-TD1118](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-SG09-210419-TD-GEN-1118) | N/A |
| Q2  | N/A | J.Sup7-rev (Supplement)  | Revised  | Embedded common interface (ECI) for exchangeable CA/DRM solutions; Guidelines for the implementation of ECI  | [SG9-TD1101](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-SG09-210419-TD-GEN-1101) | N/A |
| Q2  | N/A | J.Sup8-rev (Supplement) | Revised  | Embedded common interface for exchangeable CA/DRM solutions; Trust environment  | [SG9-TD1102](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-SG09-210419-TD-GEN-1102)  | N/A |
| Q4  | N/A | J Sup.11(ex. Sup-DigTV) (Supplement) | New  | Installing a digital TV service for cable networks and relating Recommendations  | [SG9-TD1122-R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-SG09-210419-TD-GEN-1122) | N/A |
| Q2 | N/A | IG-J.1012 (Implementers’ Guide) | New | Embedded common interface for exchangeable CA/DRM solutions; CA/DRM container, loader, interfaces, revocation | [SG9-TD1100](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-SG09-210419-TD-GEN-1100) | N/A |

# SG9 Structure for the current Study Period

ITU-T SG9 Working Party structure and leadership was reviewed in view of the recent TSAG deliberation on SG9 study Questions, which were endorsed by recent TSAG meeting (January 2021), see also clause [2.1](#SG9Questions) below. The new ITU-T SG9 WP structure, as contained in [SG9-TD998](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-SG09-210419-TD-GEN-0998), was approved and reported below as follows:

- WP1 “***Cable transport and terminals, including video and data***” (Q1, 2, 4, 6 & 7), and
- WP2 “***Cable-related platforms and applications***” (Q5, 8, 9, 11 & 12).

In addition, Q10 and the established Intersector Rapporteur Groups (IRGs) will report to the SG9 Plenary. See the table below for more details.

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|  | WP titles and MGT | Q/IRG | Titles |
| **WP1** | **Cable transport and terminals, including video and data****Zhifan SHENG***(WP1/9 Chairman)**ABS, China***Blaise MAMADOU** *(WP1/9 Vice-chair)**Central African Republic* | Q1 | Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution |
| Q2 | Methods and practices for conditional access and content protection |
| Q4 | Guidelines for implementations and deployment of transmission of multichannel digital television signals over optical access networks and Hybrid Fibre-Coaxial (HFC) |
| Q6 | Functional requirements for terminal devices of the integrated broadband cable network |
| Q7 | Transmission control and interfaces (MAC layer) for IP and/or packet-based data over integrated broadband cable networks |
| **WP2** | **Cable-related platforms and applications****Taekyoon KIM***(WP2/9 Chairman)**ETRI, Korea* **Eric WANG***(WP2/9 Vice-chair)**Huawei, China* | Q5 | Software components application programming interfaces (APIs), frameworks and overall software architecture for advanced content distribution services within the scope of Study Group 9 |
| Q8 | The Internet protocol (IP) enabled multimedia applications and services for cable television networks enabled by converged platforms |
| Q9 | Requirements, methods, and interfaces of the advanced service platforms to enhance the delivery of audiovisual content, and other multimedia interactive services over integrated broadband cable networks |
| Q11 | Accessibility to cable systems and services |
| Q12 | AI-enabled enhanced functions over integrated broadband cable network |
| **SG9 PLEN** | **Plenary of SG9****Satoshi MIYAJI***(SG9 Chairman)**KDDI, Japan* | Q10 | Work programme, coordination and planning |
| IRG-IBB | Integrated Broadcast-Broadband systems |
| IRG-AVA | Audiovisual Media Accessibility |

Table 1 - ITU-T SG9 WP structure and leadership as approved by SG9 Meeting (April 2021)

## SG9 Questions texts

At the last TSAG meeting on 11-18 January 2021, TSAG endorsed the set of Questions for all the ITU-T study groups, as found in TSAG-R12 to TSAG-R22.

Accordingly, in addition to revision of some of the Questions texts and titles, SG9 established a new Question 12/9 dedicated to AI:

– Q12/9 “*AI-enabled enhanced functions over integrated broadband cable network*”.

## Preparation to WTSA-20 (see [TSAG-TD1094](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-211025-TD-GEN-1094))

To follow up on TSAG liaison on WTSA-20 preparations (TSAG-LS42), SG9 agreed to continue the preparatory process for WTSA-20 for the next study period 2022-2024 and will reserve a session on this purpose at next SG9 meeting scheduled in November 2021. SG9 plans to provide its final view of SG9 Questions and mandate for next Study Period, after its last meeting in November 2021. Therefore, TSAG will receive it at their ninth TSAG meeting (10-14 January 2022).

# Comment Resolution on draft Recommendation J.1631 (ex. J.cloud-vr-req)

The sixth SG9 meeting held in April 2021 consented, among others, draft Recommendation ITU-T J.1631 (ex. J.cloud-vr-req). During the last call period (16 May – 12 June 2021), there were four comments submitted by Huawei Technologies Co., Ltd., Deutsche Telekom AG, Orange, Nippon Telegraph and Telephone Corporation (NTT).

SG9 Chairman organized a Comment Resolution meeting on 20 August 2021 as per 4.4.2 of Recommendation A.8. Based on consensus reached at the meeting, the compromised text of ITU-T J.1631 was drafted and circulated to the relevant delegates for two weeks. After the reviewing period, on 15 September 2021, it was agreed that the Comment Resolution was concluded (see Report at [SG9-TD1212](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-SG09-211115-TD-GEN-1212)) and the latest draft of ITU-T J.1631 will be proposed for Approval at the next SG9 meeting planned on 15-24 November 2021 (see latest text of ITU-T J.1631 at [SG9-TD1170](https://www.itu.int/md/T17-SG09-211115-TD-GEN-1170/en)).

# Next meeting

SG9 plans to organize its seventh meeting on 15-24 November 2021 fully virtual.

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