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| **الفريق الاستشاري لتنمية الاتصالات (TDAG)****الاجتماع الثالث والعشرون، جنيف، 11-9 أبريل 2018** | P:\SUP\Logos\Post-150th Anniv\ITU-logo-UNblue.jpg |
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|  | **المراجعة 1للوثيقة TDAG-18/5-A** |
|  | **20 مارس 2018** |
|  | **الأصل: بالإنكليزية** |
| مدير مكتب تنمية الاتصالات |
| فريق التنسيق المشترك بين القطاعات بشأن المسائل ذات الاهتمام المشترك |
|  |
| **ملخص:**أُنشئ فريق التنسيق المشترك بين القطاعات بشأن المسائل ذات الاهتمام المشترك بالاشتراك بين الأفرقة الاستشارية لقطاعات الاتحاد الثلاثة - قطاع الاتصالات الراديوية (ITU‑R) وقطاع تقييس الاتصالات (ITU‑T) وقطاع تنمية الاتصالات (ITU‑D) - من أجل تحسين استخدام الموارد.يقوم الفريق، في معرض تنفيذ مهامه، بتحديد المواضيع المشتركة لدى القطاعات الثلاثة، أو النظر على المستوى الثنائي في قائمة تحتوي على المجالات ذات الاهتمام المشترك للقطاعات الثلاثة وتحديثها وفقاً لما يُسند من اختصاصات من كل جمعية ومؤتمر للاتحاد.ويسلط هذا التقرير الضوء على أنشطة التنسيق المشترك بين القطاعات التي اضطُلع بها في الأفرقة الاستشارية للقطاعات منذ الاجتماع الأخير للفريق الاستشاري لتنمية الاتصالات (TDAG) في مايو 2017.**الإجراء المطلوب:**يُرجى من الفريق الاستشاري لتنمية الاتصالات أن يأخذ علماً بهذا التقرير وأن يقدم توجيهات حسبما يراه مناسباً.**المراجع:**القرار 59 (المراجَع في بوينس آيرس، 2017) للمؤتمر العالمي لتنمية الاتصالات، بيانا الاتصال [TSAG-LS1](http://ifa.itu.int/t/2017/ls/tsag/sp16-tsag-oLS-00001.zip) و[TSAG‑LS11](http://ifa.itu.int/t/2017/ls/tsag/sp16-tsag-oLS-00001.zip) |

# 1 مقدمة

1.1 إن أحد المبادئ الأساسية للتعاون والـتآزر بين قطاعات الاتحاد الثلاثة (قطاع الاتصالات الراديوية وقطاع تقييس الاتصالات وقطاع تنمية الاتصالات) هو الحاجة إلى تحاشي ازدواج أنشطة هذه القطاعات، وضمان أداء العمل على نحو يتسم بالكفاءة والفعالية. ولتحقيق هذا المبدأ، أنشئ فريق التنسيق المشترك بين القطاعات بشأن المسائل ذات الاهتمام المشترك (ISCT) بعد اعتماد القرار 59 (دبي، 2014) بشأن تعزيز التنسيق والتعاون فيما بين القطاعات الثلاثة للاتحاد الدولي للاتصالات بشأن المسائل ذات الاهتمام المشترك.

2.1 ويقوم هذا الفريق بتحديد الآليات اللازمة لتعزيز التعاون والعمل المشترك بين القطاعات الثلاثة أو مع كل قطاع بصدد المسائل ذات الاهتمام المشترك؛ مع إيلاء اهتمام خاص لمصالح البلدان النامية. ويعمل الفريق بالوسائل الإلكترونية، وقد عقد منذ إنشائه أربعة اجتماعات بالاقتران مع اجتماعات الفريق الاستشاري لتنمية الاتصالات (TDAG).

# 2 اجتماعات الأفرقة الاستشارية للقطاعات والتنسيق بين القطاعات

1.2 قام الفريق في اجتماعه الأخير في 10 مايو 2017 بتحديث قائمة المجالات ذات الاهتمام المشترك لتشمل مواضيع مرشحة بشأن أساليب العمل من أجل التنسيق بين قطاعات الاتحاد (انظر **الملحق 1**). وبالإضافة إلى ذلك، استعرض الفريق، ووافق على مطابقات مجالات الاهتمام المشترك للعمل بين لجان دراسات قطاع تنمية الاتصالات وقطاع تقييس الاتصالات وبين لجان دراسات قطاع الاتصالات الراديوية وقطاع تقييس الاتصالات المعروضة في المرفقين التاليين من الفريق الاستشاري لتقييس الاتصالات: المرفق 1 - مطابقة المسائل المنوطة بلجنتي الدراسات 1 و2 لقطاع تنمية الاتصالات التي تهم لجان دراسات قطاع تقييس الاتصالات؛ والمرفق 2 - مطابقة فرق عمل قطاع الاتصالات الراديوية التي تهم لجان دراسات قطاع تقييس الاتصالات.

2.2 ولدى النظر في التقرير المرحلي المقدم من فريق التنسيق المشترك بين القطاعات بشأن المسائل ذات الاهتمام المشترك، أعرب الفريق الاستشاري لتنمية الاتصالات في اجتماعه المعقود في الفترة 13-10 مايو 2017 عن تقديره للمطابقات الواردة في المرفقين، مؤكداً فائدتها في إعداد مقترحات بشأن مسائل الدراسة لقطاع تنمية الاتصالات للفترة 2021-2018. ووافق الفريق الاستشاري أيضاً على مقترح يدعو إلى إضافة إحالة في المرفق 2 إلى المسألة 1/239 المنوطة بلجنة الدراسات 1 لقطاع الاتصالات الراديوية بشأن المجالات الكهرمغنطيسية.

3.2 وفي الفترة التي انقضت منذ الاجتماع الأخير للفريق الاستشاري لتنمية الاتصالات في مايو 2017، اجتمع الفريق الاستشاري لتقييس الاتصالات والفريق الاستشاري للاتصالات الراديوية على النحو التالي:

● الفريق الاستشاري لتقييس الاتصالات، جنيف، 26 فبراير - 2 مارس 2018.

● الفريق الاستشاري للاتصالات الراديوية، جنيف، 29-26 مارس 2018.

4.2 ومن خلال بيان الاتصال 11 (LS11)، قدم الفريق الاستشاري لتقييس الاتصالات تقابلات محدّثة على مُرفقَيْه السابقين، وهما:

● المرفق 1 - مطابقة المسائل المنوطة بلجنتي الدراسات 1 و2 لقطاع تنمية الاتصالات التي تهم لجان دراسات قطاع تقييس الاتصالات

● المرفق 2 - مطابقة فرق عمل قطاع الاتصالات الراديوية التي تهم لجان دراسات قطاع تقييس الاتصالات.

**ملاحظة** – تظهر التحديثات التي أجريت على المرفقين 1 و2 منذ الاجتماع الأخير لفريق التنسيق المشترك بين القطاعات بشأن المسائل ذات الاهتمام المشترك في علامات المراجعة لتيسير الرجوع إليها.

5.2 يلتمس الفريق الاستشاري لتقييس الاتصالات الحصول على مزيد من التعليقات بشأن التقابلات المحدّثة بحلول 30 نوفمبر 2018. تظهر هذه التقابلات التنسيق الذي يجري فعلاً بين القطاعات في الاتحاد، أو تشير إلى إمكانيات تنسيق جديد بين القطاعات. ويشجع الفريق الاستشاري لتقييس الاتصالات الأفرقة على اتخاذ الخطوات التالية للمشاركة في التنسيق الثنائي بين القطاعات. كما يدعو لتقديم أي اقتراحات من شأنها أن تحسّن التعاون والتنسيق بين قطاعات الاتحاد.

6.2 كما قدم الفريق الاستشاري لتقييس الاتصالات بعض المواضيع المرشحة الإضافية بشأن أساليب عمل التنسيق بين القطاعات في الاتحاد. من بين هذه المواضيع معالجة بيانات الاتصال لأفرقة المقررين المشتركة بين القطاعات. ومن الموضوعات الأخرى المشاركة الإقليمية (IRG). ويتطلع الفريق الاستشاري لتقييس الاتصالات إلى تلقي تعليقات على هذه الموضوعات (المبينة في الملحق 1 بالتقرير الحالي بنص تحته خط).

# 3 المؤتمر العالمي لتنمية الاتصالات لعام 2017 (WTDC-17)

1.3 قـرر المؤتمر في الصيغة المراجَعة من القرار 59 (المراجَع في بوينس آيرس، 2017) أن يواصل الفريق الاستشاري لتنمية الاتصالات (TDAG) ومدير مكتب تنمية الاتصالات (BDT) التعاون النشط مع الفريق الاستشاري للاتصالات الراديوية (RAG) ومدير مكتب الاتصالات الراديوية (BR) والفريق الاستشاري لتقييس الاتصالات (TSAG) ومدير مكتب تقييس الاتصالات (TSB) على النحو الذي دعا إليه القرار 191 (بوسان، 2014).

2.3 ويدعى الفريق الاستشاري للاتصالات الراديوية (RAG) والفريق الاستشاري لتقييس الاتصالات (TSAG) والفريق الاستشاري لتنمية الاتصالات (TDAG) إلى الاستمرار في دعم التنسيق المشترك بين القطاعات فيما يخص تحديد المواضيع المشتركة في القطاعات الثلاثة، والآليات اللازمة لتعزيز التعاون والعمل المشترك بين جميع القطاعات بصدد المسائل ذات الاهتمام المشترك. ويدعى مديري مكاتب الاتصالات الراديوية وتقييس الاتصالات وتنمية الاتصالات إلى إبلاغ الأفرقة الاستشارية للقطاعات المعنية بالخيارات المتاحة لتحسين التعاون على مستوى الأمانة من أجل ضمان التنسيق الوثيق إلى أقصى حدٍ ممكن.

3.3 وتكلَّف لجنتا الدراسات في قطاع تنمية الاتصالات بمواصلة التعاون مع لجان الدراسات في القطاعين الآخرين بغية تجنب ازدواجية الجهود والاستفادة من نتائج العمل الذي أنجزته لجان الدراسات في هذين القطاعين.

4.3 ويدعى مدير مكتب تنمية الاتصالات بالتعاون مع مدير مكتب تقييس الاتصالات ومدير مكتب الاتصالات الراديوية إلى تقديم تقرير سنوي إلى لجنتي دراسات قطاع تنمية الاتصالات عن آخر تطورات أنشطة لجان دراسات قطاع تقييس الاتصالات وقطاع الاتصالات الراديوية بالاتحاد.

5.3 وفي ضوء التغييرات والتحديثات المدخلة على القرار 59 (المراجَع في بوينس آيرس، 2017)، يُقترح تحديث اختصاصات فريق التنسيق المشترك بين القطاعات بشأن المسائل ذات الاهتمام المشترك على النحو الوارد في **الملحق 2**.

# 4 جهود التعاون والتنسيق بين القطاعات

1.4 ييسر الجدول الزمني الإلكتروني للأحداث الذي أعده مكتب تنمية الاتصالات للسنوات 2018 و2019 و2020 و2021 التعاون والتنسيق بين مختلف اجتماعات وأحداث قطاعات الاتحاد. وتتاح للأعضاء هذه الجداول الزمنية للأحداث في [الصفحة الرئيسية للفريق الاستشاري لتنمية الاتصالات](http://www.itu.int/en/ITU-D/Conferences/TDAG/Pages/default.aspx) ويجري تحديثها بانتظام. ويتوافق نسق هذه الجداول الزمنية مع نسق الطابعات (انظر **الملحق 3** للاطلاع على الإصدارات الحالية).

2.4 تشكل نافذة تكنولوجيا المعلومات والاتصالات (ICT-Eye) والاستقصاء المرتبط بها أداة أساسية لجمع البيانات من الإدارات عن القياسات الأساسية لتكنولوجيا المعلومات والاتصالات. ويقوم مكتب تنمية الاتصالات بتتبع هذه البيانات على أساس سنوي، ويعرض نتائج البيانات في البوابة الإلكترونية للإحصاءات. وقد شكل مكتب الاتصالات الراديوية فريقاً مع مكتب تنمية الاتصالات لتوسيع نطاق الاستقصاء الحالي كي يشمل فصلاً يتضمن معلومات أساسية خاصة بالطيف (تكنولوجيات أو معايير الخدمة المتنقلة، وترخيص الطيف، مثلاً).

# 5 الفعاليات والأنشطة التي ينظمها مكتب تنمية الاتصالات ومكتب الاتصالات الراديوية ومكتب تقييس الاتصالات بالتعاون مع هيئات أخرى وبدعم من المكاتب الإقليمية ومكاتب المناطق التابعة للاتحاد

1.5 يواصل مكتب الاتصالات الراديوية السعي إلى تحقيق هدفه في إعلام ومساعدة أعضاء الاتحاد، ولا سيما في البلدان النامية، في المسائل المتصلة بالاتصالات الراديوية. ولهذا الغرض، ينظم مكتب الاتصالات الراديوية ورش العمل والحلقات الدراسية والاجتماعات وأنشطة بناء القدرات ذات الصلة بالطيف بالتعاون الوثيق مع مكتب تنمية الاتصالات والمكاتب الإقليمية ومكاتب المناطق التابعة للاتحاد والمنظمات الدولية ذات الصلة والسلطات الوطنية.

2.5 ونظمت الأحداث التالية، من جملة فعاليات:

● أربع حلقات دراسية إقليمية في نيروبي (كينيا)، وليما (بيرو)، وبنوم بنه (كمبوديا)، ومسقط (عُمان).

● اجتماع لتنسيق الترددات نظمه الاتحاد بشأن استعمال نطاق الموجات الديسيمترية (MHz 806‑470) (UHF) في مدينة غواتيمالا، غواتيمالا (28 أغسطس - 1 سبتمبر).

● ندوتان دوليتان عن السواتل في باريلوتشي، الأرجنتين (31-29 مايو) وبانكوك، تايلاند (30 أغسطس - 1 سبتمبر)، على التوالي.

● الحلقة الدراسية الثانية للاتحاد الدولي للاتصالات/المنظمة العالمية للأرصاد الجوية بشأن "استخدام الطيف الراديوي للأرصاد الجوية: مراقبة الطقس والمياه والمناخ والتنبؤ بها" في جنيف، سويسرا يومي 24-23 أكتوبر.

● المؤتمر الخامس لاتصالات أمريكا اللاتينية، قرطاجنة، كولومبيا، 23-20 يونيو.

● المؤتمر الدولي السابع للطيف وورشة عمل الاتحاد الدولي للاتصالات بشأن تنسيق الترددات، في بوغوتا، كولومبيا، 8‑5 سبتمبر 2017.

3.5 وفي إطار سد فجوة التقييس، عُقدت أربعة منتديات للتقييس للبلدان النامية في عام 2017، فغطت طائفة واسعة من المواضيع، بما في ذلك الجوانب التشغيلية والقضايا الاقتصادية والسياساتية وإنترنت الأشياء والذكاء الاصطناعي والأمن السيبراني.

4.5 واعترافاً بأن أن استخدام الهواتف المتنقلة في الخدمات المالية المتنقلة يتيح فرصاً لتعزيز النمو والتنمية، لا سيما في البلدان النامية، فإن الفريق المتخصص التابع لقطاع تقييس الاتصالات والمعني بالعملة الرقمية، بما في ذلك العملة الرسمية الرقمية، سيعمل في تعاون وثيق مع جميع لجان دراسات قطاع تقييس الاتصالات وقطاع تنمية الاتصالات. والعملة الرسمية الرقمية هي مصطلح تستخدمه اللجنة ISO TC68/SC7 لتوزيع رموز العملات.

الملحق 1

قائمة بالمجالات ذات الاهتمام المشترك

1 المشاركة

1.1 المشاركة عن بُعد

2.1 الاجتماعات الإلكترونية وأفرقة العمل بالمراسلة باستعمال الوسائل الإلكترونية

3.1 زيادة إشراك البلدان النامية

4.1 مسائل المشاركة بما في ذلك مهام نواب الرؤساء

○ المسائل المتعلقة بفريق القيادة (الرؤساء ونواب الرؤساء، وكذلك المقررون والمقررون المساعدون)

5.1 مشاركة غير الأعضاء

6.1 المشاركة الإقليمية

2 معالجة الوثائق

1.2 المعالجة الإلكترونية للوثائق

2.2 الموعد النهائي لتقديم مساهمات للأمانة من أجل اتخاذ الإجراء اللازم

3.2 النفاذ الإلكتروني إلى الوثائق بما في ذلك تطبيق سياسة النفاذ إلى الوثائق التي قررها المجلس

3 التسجيل

1.3 التنسيق فيما يخص التسجيل

2.3 التسجيل للمشاركة في الاجتماعات بما في ذلك تسجيل المشاركين عن بُعد

4 تحسين صفحات الموقع الإلكتروني للاتحاد بلغات الاتحاد الست مع مراعاة أفضل الممارسات

1.4 المسائل ذات الصلة باللغات

5 التخطيط للاجتماعات

1.5 التحضير للمؤتمرات والاجتماعات

2.5 مواصلة تحسين الحلقات الدراسية/الندوات/ورش العمل/بناء القدرات والوصول بها إلى المستوى الأمثل

3.5 التعاون والعمل المشترك بشأن الأحداث.

6 تبسيط إجراءات إنشاء فريق المقرر المشترك بين القطاعات (IRG)

1.6 معالجة بيانات الاتصال لأفرقة المقررين المشتركة بين القطاعات

7 تحديد المسائل التقنية ذات الاهتمام المشترك

8 تبادل المعلومات بشأن الأنشطة الدراسية ذات الصلة

1.8 تحسين التفاعل بين فرق العمل ولجان الدراسات التابعة للقطاعات المختلفة

9 أساليب العمل (القرار 1) للقطاعات الثلاثة وتطبيق أفضل الممارسات

10 أعضاء القطاع.

الملحق 2

مشروع الصيغة المراجَعة للاختصاصات

شاركت الأفرقة الاستشارية للقطاعات الثلاثة جميعها في إنشاء فريق التنسيق المشترك بين القطاعات بشأن المسائل ذات الاهتمام المشترك (ISCT) بغية تجنب ازدواجية الجهود وتحقيق الاستخدام الأمثل للموارد. وفي معرض قيامه بوظائفه، سيقوم هذا الفريق بما يلي:

● تحديد المواضيع المشتركة لدى القطاعات الثلاثة، أو النظر على المستوى الثنائي في قائمة محدَّثة (تعدها الأمانة) تحتوي على المجالات ذات الاهتمام المشترك للقطاعات الثلاثة وفقاً لما يُسند من اختصاصات من كل جمعية ومؤتمر للاتحاد؛

● تحديد الآليات اللازمة لتعزيز التعاون والعمل المشترك بين القطاعات الثلاثة أو مع كل قطاع بشأن المسائل ذات الاهتمام المشترك مع إيلاء اهتمام خاص لمصالح البلدان النامية؛

● تقديم تقرير سنوي إلى المجموعات الاستشارية المعنية بشأن التقدم المحرز في العمل المضطلع به.

وثائق المعلومات الأساسية

 أ ) القـرار 191 (بوسان، 2014) لمؤتمر المندوبين المفوضين، بشأن استراتيجية تنسيق الجهود بين قطاعات الاتحاد الثلاثة؛

ب) القرار ITU‑R 6‑2 (المراجَع في جنيف، 2015)، بشأن الاتصال والتعاون مع قطاع تقييس الاتصالات في الاتحاد الدولي للاتصالات (ITU-T)، والقرار ITU‑R 7‑3 (المراجَع في جنيف، 2015)، بشأن تنمية الاتصالات بما في ذلك الاتصال والتعاون مع قطاع تنمية الاتصالات في الاتحاد الدولي للاتصالات (ITU-D) الصادرين عن جمعية الاتصالات الراديوية (RA)؛

ج) القراران 44 و45 (المراجَعان في الحمامات، 2016) للجمعية العالمية لتقييس الاتصالات، بشأن التعاون المشترك بين قطاعي تقييس الاتصالات وتنمية الاتصالات وتكامل أنشطتهما؛

د ) القـرار 5 (المراجَع في بوينس آيرس، 2017) للمؤتمر العالمي لتنمية الاتصالات، بشأن تعزيز مشاركة البلدان النامية في أنشطة الاتحاد؛

ه ) القـرار 18 (الحمامات، 2016) للجمعية العالمية لتقييس الاتصالات، بشأن مبادئ وإجراءات توزيع العمل على قطاعي الاتصالات الراديوية وتقييس الاتصالات للاتحاد الدولي للاتصالات والتنسيق فيما بينهما؛

و ) القـرار 59 (المراجَع في بوينس آيرس، 2017) للمؤتمر العالمي لتنمية الاتصالات، بشأن تعزيز التنسيق والتعاون فيما بين قطاع الاتصالات الراديوية وقطاع تقييس الاتصالات وقطاع تنمية الاتصالات بالاتحاد بشأن المسائل ذات الاهتمام المشترك.

تشكيل فريق التنسيق المشترك بين القطاعات المعني بالقضايا ذات الاهتمام المشترك

1 يتألف فريق التنسيق المشترك بين القطاعات بشأن المسائل ذات الاهتمام المشترك من ممثلين من الأفرقة الاستشارية الثلاثة على أن يؤخذ في الاعتبار ضرورة تحقيق التوازن الإقليمي.

2 ويرأس فريق التنسيق المشترك بين القطاعات المعني بالقضايا ذات الاهتمام المشترك (يؤكد الاسم لاحقاً) وينوب عنه في رئاسة هذا الفريق ممثلون عينهم الفريق الاستشاري للاتصالات الراديوية والفريق الاستشاري لتقييس الاتصالات والفريق الاستشاري لتنمية الاتصالات:

3 ممثلا الفريق الاستشاري للاتصالات الراديوية: السيد بيتر ميجور والسيد ألبرت نالبانديان (نائبا رئيس الفريق الاستشاري للاتصالات الراديوية)؛

4 ممثلا الفريق الاستشاري لتقييس الاتصالات: السيد ماتانو ندارو والسيد فلاديمير مينكين (نائبا رئيس الفريق الاستشاري لتقييس الاتصالات)؛

5 ممثلا الفريق الاستشاري لتنمية الاتصالات: (يؤكد الاسم لاحقاً) و(يؤكد الاسم لاحقاً) (نائبا رئيس الفريق الاستشاري لتنمية الاتصالات).

الدعم المقدَّم من الأمانة

سيقدَّم الدعم لنشاط الفريق وفقاً للقرار 191 (بوسان، 2014).

أساليب العمل

● سيستخدم فريق التنسيق المشترك بين القطاعات بشأن المسائل ذات الاهتمام المشترك قائمة البريد الإلكتروني int-sect-team@lists.itu.int.

● ويجوز أن تتضمن تفاعلات فريق التنسيق المشترك بين القطاعات تبادل رسائل البريد الإلكتروني عبر قائمة البريد الإلكتروني أو من خلال اجتماعات إلكترونية.

● ويجوز عقد اجتماعات حضورية ممكنة إذا لزم الأمر، ويُفضل أن تقام بالتزامن مع اجتماعات الفريق الاستشاري، وفي حدود الموارد المتاحة، لاستكمال العمل.

**Attachment 1**

**Matching of ITU-D SG 1 and SG 2 Questions of interest to ITU-T study groups**

Amendments herein reflect:

* Outcome of WTDC-17.
	+ Added ITU-T Q1/13, Q7/13 for ITU-D Q3/1
	+ Added ITU-T Q9/3 for ITU-D Q3/1
* Hyperlinks to ITU-D SG1 and SG2 Questions pending.
* TSAG ILS TD 187 from ITU-T SG15
* TSAG ILS TD 178 from ITU-T SG5
* TSAG ILS TD 213 from ITU-T SG16.
* Note that proposed additions to former ITU-D Q2/1 could not be incorporated as WTDC-17 merged that Question into ITU-D Q1/1 and into ITU-D Q3/1, and then former ITU-D Q2/1 was deleted and former ITU-D Q8/1 became new ITU-D Q2/1.

It is thus suggested to double-check the mapping of ITU-T SGs and Questions for ITU-D Q1/1 and Q3/1 and submit updates if necessary.

**Table 1 – ITU-D Questions vis-à-vis ITU-T Questions**

| **ITU-D Question** | **ITU-D SG** | **ITU-T SG** | **ITU-T SG Questions** |
| --- | --- | --- | --- |
| Question 1/1: Strategies and policies for the deployment of broadband in developing countries | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2018&stg=1) | [SG2](https://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/default.aspx) | [Q1/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q1.aspx): Application of numbering, naming, addressing and identification plans for fixed and mobile telecommunications services |
| [SG3](https://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/default.aspx) | [Q1/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q1.aspx): Development of charging and accounting/settlement mechanisms for international telecommunications services using the next-generation networks (NGNs), future networks, and any possible future development, including adaptation of existing D-series Recommendations to the evolving user needs[Q2/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q2.aspx): Development of charging and accounting/settlement mechanisms for international telecommunications services, other than those studied in Question 1/3, including adaptation of existing D-series Recommendations to the evolving user needs[Q3/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q3.aspx): Study of economic and policy factors relevant to the efficient provision of international telecommunication services[Q4/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q4.aspx): Regional studies for the development of cost models together with related economic and policy issues[Q11/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q11.aspx): Economic and policy aspects of big data and digital identity in international telecommunications services and networks |
| [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q2/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q2.aspx): Equipment resistibility and protective components[Q4/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q4.aspx): Electromagnetic compatibility (EMC) issues arising in the telecommunication environment[Q6/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q6.aspx): Achieving energy efficiency and smart energy[Q7/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q7.aspx): Circular economy including e-waste[Q9/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx): Climate change and assessment of information and communication technology (ICT) in the framework of the Sustainable Development Goals (SDGs) |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q5/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q5.aspx): Software components application programming interfaces (APIs), frameworks and overall software architecture for advanced content distribution services within the scope of Study Group 9[Q8/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q8.aspx): The Internet protocol (IP) enabled multimedia applications and services for cable television networks enabled by converged platforms[Q9/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q9.aspx): Requirements, methods, and interfaces of the advanced service platforms to enhance the delivery of sound, television, and other multimedia interactive services over cable television network |
| [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q1/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q1.aspx): Signalling and protocol architectures in emerging telecommunication environments and guidelines for implementations[Q2/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q2.aspx): Signalling requirements and protocols for services and applications in emerging telecommunication environments[Q4/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q4.aspx): Protocols for control, management and orchestration of network resources[Q5/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q5.aspx): Protocols and procedures supporting services provided by broadband network gateways[Q15/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q15.aspx): Combating counterfeit and stolen ICT equipment |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx)[QSDG](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/QSDG.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T[Q11/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q11.aspx): Performance considerations for interconnected networks[Q12/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q12.aspx): Operational aspects of telecommunication network service quality[Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspxhttp%3A/www.itu.int/en/ITU-T/studygroups/2013-2016/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies[Q18/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q18.aspx): Measurement and control of the end-to-end quality of service (QoS) for advanced television technologies, from image acquisition to rendering, in contribution, primary distribution and secondary distribution networks[Q19/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q19.aspx): Objective and subjective methods for evaluating perceptual audiovisual quality in multimedia services |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q1/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q1.aspx): Innovative services scenarios, deployment models and migration issues based on Future Networks[Q2/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q2.aspx): Next-generation network (NGN) evolution with innovative technologies including software-defined networking (SDN) and network function virtualization (NFV)[Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx): Applying networks of future and innovation in developing countries[Q22/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q22.aspx): Upcoming network technologies for IMT-2020 and Future Networks |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q16/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q16.aspx): Optical physical infrastructures |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q11/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q11.aspx): Multimedia systems, terminals, gateways and data conferencing[Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV[Q21/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q21.aspx): Multimedia framework, applications and services |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q2/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q2.aspx): Security architecture and framework |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals[Q3/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx): Architectures, management, protocols and Quality of Service[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx): Research and emerging technologies, terminology and definitions[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification[Q7/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx): Evaluation and assessment of Smart Sustainable Cities and Communities |
| Question 2/1: Strategies, policies, regulations and methods of migration and adoption of digital broadcasting and the implementation of new services | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2018&stg=1) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution[Q2/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q2.aspx): Methods and practices for conditional access, protection against unauthorized copying and against unauthorized redistribution ("redistribution control" for digital cable television distribution to the home)[Q4/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q4.aspx): Guidelines for implementations and deployment of transmission of multichannel digital television signals over optical access networks[Q6/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q6.aspx): Functional requirements for residential gateway and set-top box for the reception of advanced content distribution services[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q8/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q8.aspx): The Internet protocol (IP) enabled multimedia applications and services for cable television networks enabled by converged platforms |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV |
|  |  | ~~[SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx)~~ | ~~[Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution~~~~[Q4/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q4.aspx): Guidelines for implementations and deployment of transmission of multichannel digital television signals over optical access networks~~~~[Q7/9:](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx) Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks~~ |
| [~~SG11~~](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [~~Q6/11~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q6.aspx)~~: Protocols supporting control and management technologies for IMT-2020~~[~~Q10/11~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q10.aspx)~~: Testing of emerging IMT-2020 technologies~~ |
| [~~SG12~~](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [~~Q17/12~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspxhttp%3A/www.itu.int/en/ITU-T/studygroups/2013-2016/12/Pages/q17.aspx)~~: Performance of packet-based networks and other networking technologies~~ |
| [~~SG13~~](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [~~Q5/13~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx)~~: Applying networks of future and innovation in developing countries~~ |
| [~~SG15~~](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [~~Q1/15~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx)~~: Coordination of access and home network transport standards~~[~~Q2/15~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q2.aspx)~~: Optical systems for fibre access networks~~[~~Q4/15~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx)~~: Broadband access over metallic conductors~~[~~Q15/15~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q15.aspx)~~: Communications for smart grid~~~~[Q16/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q16.aspx): Optical physical infrastructures~~[~~Q18/15~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q18.aspx)~~: Broadband in-premises networking~~ |
| [~~SG16~~](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | ~~[Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination~~[~~Q21/16~~](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q21.aspx)~~: Multimedia framework, applications and services~~ |
| [~~SG20~~](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [~~Q1/20~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx)~~: End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C~~[~~Q2/20~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx)~~: Requirements, capabilities, and use cases across verticals~~[~~Q3/20~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx)~~: Architectures, management, protocols and Quality of Service~~[~~Q4/20~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx)~~: e/Smart services, applications and supporting platforms~~[~~Q5/20~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx)~~: Research and emerging technologies, terminology and definitions~~[~~Q6/20~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx)~~: Security, privacy, trust and identification~~[~~Q7/20~~](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx)~~: Evaluation and assessment of Smart Sustainable Cities and Communities~~ |
| Question 3/1: Access to emerging technologies, including cloud computing, m-services and Over-the-Top offerings: challenges and opportunities for developing countries | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2018&stg=1) | [SG3](https://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/default.aspx) | [Q9/3](https://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q9.aspx)**:** Economic and regulatory impact of the Internet, convergence (services or infrastructure) and new services, such as over the top (OTT), on international telecommunication services and networks |
| [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q6/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q6.aspx): Achieving energy efficiency and smart energy[Q7/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q7.aspx): Circular economy including e-waste[Q9/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx): Climate change and assessment of information and communication technology (ICT) in the framework of the Sustainable Development Goals (SDGs) |
| [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q14/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q14.aspx): Cloud interoperability testing |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q17/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q17.aspx): Requirements, ecosystem, and general capabilities for cloud computing and big data[Q18/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q18.aspx): Functional architecture for cloud computing and big data[Q19/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q19.aspx): End-to-end Cloud computing management, cloud security and big data governance |
| [SG2](https://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/default.aspx)[SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | JRG-CCM – Joint Rapporteurs Group on Cloud Computing Management |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q8/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q8.aspx): Cloud computing security |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q7/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx): Evaluation and assessment of Smart Sustainable Cities and Communities |
| Question 4/1: Economic policies and methods of determining the costs of services related to national telecommunication/ICT networks, including next-generation networks | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2018&stg=1) | [SG3](https://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/default.aspx) | [Q1/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q1.aspx): Development of charging and accounting/settlement mechanisms for international telecommunications services using the next-generation networks (NGNs), future networks, and any possible future development, including adaptation of existing D-series Recommendations to the evolving user needs[Q2/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q2.aspx): Development of charging and accounting/settlement mechanisms for international telecommunications services, other than those studied in Question 1/3, including adaptation of existing D-series Recommendations to the evolving user needs[Q3/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q3.aspx): Study of economic and policy factors relevant to the efficient provision of international telecommunication services[Q4/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q4.aspx): Regional studies for the development of cost models together with related economic and policy issues[Q11/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q11.aspx): Economic and policy aspects of big data and digital identity in international telecommunications services and networks |
| Question 5/1: Telecommunications/ICTs for rural and remote areas | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2018&stg=1) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q2/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q2.aspx): Equipment resistibility and protective components[Q4/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q4.aspx): Electromagnetic compatibility (EMC) issues arising in the telecommunication environment[Q6/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q6.aspx): Achieving energy efficiency and smart energy[Q7/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q7.aspx): Circular economy including e-waste[Q9/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx) Climate change and assessment of information and communication technology (ICT) in the framework of the Sustainable Development Goals (SDGs) |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q16/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q16.aspx): Optical physical infrastructures |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV[Q21/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q21.aspx): Multimedia framework, applications and services[Q26/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q26.aspx): Accessibility to multimedia systems and services[Q28/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q28.aspx): Multimedia framework for e-health applications |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals[Q3/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx): Architectures, management, protocols and Quality of Service[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx): Research and emerging technologies, terminology and definitions[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification[Q7/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx): Evaluation and assessment of Smart Sustainable Cities and Communities |
| Question 6/1: Consumer information, protection and rights: Laws, regulation, economic bases, consumer networks | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2018&stg=1) | [SG2](https://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/default.aspx) | [Q1/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q1.aspx): Application of numbering, naming, addressing and identification plans for fixed and mobile telecommunications services |
| [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q15/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q15.aspx): Combating counterfeit and stolen ICT equipment |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q24/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q24.aspx): Human factors related issues for improvement of the quality of life through international telecommunications[Q26/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q26.aspx): Accessibility to multimedia systems and services |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx): Research and emerging technologies, terminology and definitions[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification |
| Question 7/1: Access to telecommunication/ICT services by persons with disabilities and other persons with specific needs | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2018&stg=1) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q2/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q2.aspx): Equipment resistibility and protective components[Q4/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q4.aspx): Electromagnetic compatibility (EMC) issues arising in the telecommunication environment[Q6/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q6.aspx): Achieving energy efficiency and smart energy[Q7/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q7.aspx): Circular economy including e-waste[Q9/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx) Climate change and assessment of information and communication technology (ICT) in the framework of the Sustainable Development Goals (SDGs) |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q6/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q6.aspx): Functional requirements for residential gateway and set-top box for the reception of advanced content distribution services |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q24/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q24.aspx): Human factors related issues for improvement of the quality of life through international telecommunications[Q26/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q26.aspx): Accessibility to multimedia systems and services |
| [JCA-AHF](http://www.itu.int/en/ITU-T/jca/ahf/Pages/default.aspx) | Joint Coordination Activity on Accessibility and Human Factors (JCA-AHF) |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms |
| Question 8/1: Strategies, policies, regulations and methods of migration and adoption of digital broadcasting and the implementation of new services | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2018&stg=1) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution[Q2/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q2.aspx): Methods and practices for conditional access, protection against unauthorized copying and against unauthorized redistribution ("redistribution control" for digital cable television distribution to the home)[Q4/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q4.aspx): Guidelines for implementations and deployment of transmission of multichannel digital television signals over optical access networks[Q6/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q6.aspx): Functional requirements for residential gateway and set-top box for the reception of advanced content distribution services[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q8/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q8.aspx): The Internet protocol (IP) enabled multimedia applications and services for cable television networks enabled by converged platforms |
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| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV |
| Question 1/2: Creating the smart cities and society: employing ICTs for sustainable economic development | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2018&stg=2) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q6/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q6.aspx): Achieving energy efficiency and smart energy[Q7/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q7.aspx): Circular economy including e-waste[Q9/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx): Climate change and assessment of information and communication technology (ICT) in the framework of the Sustainable Development Goals (SDGs) |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q16/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q16.aspx): Knowledge-centric trustworthy networking and services |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV[Q21/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q21.aspx): Multimedia framework, applications and services[Q26/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q26.aspx): Accessibility to multimedia systems and services[Q27/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q27.aspx): Vehicle gateway platform for telecommunication/ITS services and applications[Q28/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q28.aspx): Multimedia framework for e-health applications |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q13/17](http://itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q13.aspx): Security aspects for Intelligent Transport System |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification[Q7/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx): Evaluation and assessment of Smart Sustainable Cities and Communities |
| [JCA-IoT and SC&C](http://www.itu.int/en/ITU-T/jca/iot/Pages/default.aspx) | Joint Coordination Activity on Internet of Things and Smart Cities and Communities (JCA-IoT and SC&C) |
| Question 2/2: Telecommunications/ICTs for e-health | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2018&stg=2) | [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q1/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q1.aspx): Signalling and protocol architectures in emerging telecommunication environments and guidelines for implementations |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q2/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q2.aspx): Next-generation network (NGN) evolution with innovative technologies including software-defined networking (SDN) and network function virtualization (NFV) |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q28/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q28.aspx): Multimedia framework for e-health applications |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q9/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q9.aspx): Telebiometrics |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx): Research and emerging technologies, terminology and definitions[Q7/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx): Evaluation and assessment of Smart Sustainable Cities and Communities |
| Question 3/2: Securing information and communication networks: Best practices for developing a culture of cybersecurity | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2018&stg=2) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q2/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q2.aspx): Methods and practices for conditional access, protection against unauthorized copying and against unauthorized redistribution ("redistribution control" for digital cable television distribution to the home) |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q4/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q4.aspx): Cybersecurity |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification |
| Question 4/2: Assistance to developing countries for implementing conformance and interoperability (C&I) programmes and combating counterfeit ICT equipment and theft of mobile devices | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2018&stg=2) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q2/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q2.aspx): Equipment resistibility and protective components[Q3/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx): Human exposure to electromagnetic fields (EMFs) from information and communication technologies (ICTs)[Q4/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q4.aspx): Electromagnetic compatibility (EMC) issues arising in the telecommunication environment[Q6/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q6.aspx): Achieving energy efficiency and smart energy[Q9/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx): Climate change and assessment of information and communication technology (ICT) in the framework of the Sustainable Development Goals (SDGs) |
| [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q9/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q9.aspx): Service and networks benchmark testing, remote testing including Internet related performance measurements[Q11/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q11.aspx): Protocols and networks test specifications; frameworks and methodologies[Q12/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q12.aspx): Testing of Internet of things, its applications and identification systems[Q13/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q13.aspx): Monitoring parameters for protocols used in emerging networks, including cloud computing and software-defined networking/network function virtualization (SDN/NFV)[Q14/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q14.aspx): Cloud interoperability testing[Q15/11:](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q15.aspx) Combating counterfeit and stolen ICT equipment |
| Question 5/2: Utilizing telecommunications/ICTs for disaster risk reduction and management | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2018&stg=2) | [SG2](https://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/default.aspx) | [Q3/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q3.aspx): Service and operational aspects of telecommunications, including service definition |
| [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q9/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx): Climate change and assessment of information and communication technology (ICT) in the framework of the Sustainable Development Goals (SDGs) |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q8/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q8.aspx): The Internet protocol (IP) enabled multimedia applications and services for cable television networks enabled by converged platforms |
| [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q3/11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q3.aspx): Signalling requirements and protocols for emergency telecommunications |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q2/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q2.aspx): Next-generation network (NGN) evolution with innovative technologies including software-defined networking (SDN) and network function virtualization (NFV) |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q16/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q16.aspx): Optical physical infrastructures[Q17/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q17.aspx): Maintenance and operation of optical fibre cable networks |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q8/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q8.aspx): Immersive live experience systems and services[Q11/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q11.aspx): Multimedia systems, terminals, gateways and data conferencing[Q14/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q14.aspx): Digital signage systems and services |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q4/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q4.aspx): Cybersecurity |
| Question 6/2: ICTs and the environment | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2018&stg=2) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q6/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q6.aspx): Achieving energy efficiency and smart energy[Q7/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q7.aspx): Circular economy including e-waste[Q9/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx): Climate change and assessment of information and communication technology (ICT) in the framework of the Sustainable Development Goals (SDGs) |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals[Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx): Research and emerging technologies, terminology and definitions |
| Question 7/2: Strategies and policies concerning human exposure to electromagnetic fields | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2018&stg=2) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q3/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx): Human exposure to electromagnetic fields (EMFs) from information and communication technologies (ICTs) |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals |
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**Table 2 – Matrix of ITU-D Questions and ITU-T Questions**

|  | **ITU-D SG1** | **ITU-D SG2** |
| --- | --- | --- |
| **Q1/1** |  | **Q2/1** | **Q3/1** | **Q4/1** | **Q5/1** | **Q6/1** | **Q7/1** |  | **Q1/2** | **Q2/2** | **Q3/2** | **Q4/2** | **Q5/2** | **Q6/2** | **Q7/2** |  |  |
| **ITU-T SG2** | [Q1/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q1.aspx) | X |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |
| [Q3/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q3.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| **ITU-T SG3** | [Q1/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q1.aspx) | X |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q2/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q2.aspx) | X |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q3/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q3.aspx) | X |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q4/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q4.aspx) | X |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q9/3](https://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q9.aspx) |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q11/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q11.aspx) | X |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ITU-T SG5** | [Q2/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q2.aspx) | X | ~~X~~ |  |  |  | X |  | X |  |  |  |  | X |  |  |  |  |  |
| [Q3/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  | X |  |  |
| [Q4/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q4.aspx) | X | ~~X~~ |  |  |  | X |  | X |  |  |  |  | X |  |  |  |  |  |
| [Q6/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q6.aspx) | X | ~~X~~ |  | X |  | X |  | X |  | X |  |  | X |  | X |  |  |  |
| [Q7/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q7.aspx) | X | ~~X~~ |  | X |  |  |  | X |  | X |  |  |  |  | X |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q9/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx) | X | ~~X~~ |  | X |  | X |  | X |  | X |  |  | X | X | X |  |  |  |
| **ITU-T SG9** | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx) |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q2/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q2.aspx) |  |  | X |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |
| [Q3/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q3.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q4/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q4.aspx) |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q5/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q5.aspx) | X |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |
| [Q6/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q6.aspx) |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx) |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q8/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q8.aspx) | X |  | X |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [Q9/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q9.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ITU-T SG11** | [Q1/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q1.aspx) | X |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| [Q2/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q2.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q3/11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q3.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [Q4/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q4.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q5/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q5.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q6/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q6.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q9/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q9.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [Q10/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q10.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q11/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q11.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [Q12/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q12.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [Q13/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q13.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [Q14/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q14.aspx) |  |  |  | X |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [Q15/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q15.aspx) | X |  |  |  |  |  | X |  |  |  |  |  | X |  |  |  |  |  |
| **ITU-T SG12** | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx) | X |  |  | X |  | X |  | X |  | X | X |  |  | X |  |  |  |  |
| [Q11/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q11.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q12/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q12.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q18/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q18.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q19/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q19.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ITU-T SG13** | [Q1/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q1.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q2/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q2.aspx) | X |  |  |  |  |  |  |  |  |  | X |  |  | X |  |  |  |  |
| [Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q16/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q16.aspx) |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |
| [Q17/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q17.aspx) |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q18/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q18.aspx) |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q19/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q19.aspx) |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q22/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q22.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ITU-T SG15** | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx) | X |  |  | X |  | X |  |  |  | X | X | X |  | X |  |  |  |  |
| [Q2/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q2.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q4/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q12/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q12.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q14/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q14.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q15/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q15.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q16/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q16.aspx) | X | ~~X~~ |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [Q17/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q17.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [Q18/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q18.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q19/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q19.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ITU-T SG16** | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx) | X | ~~X~~ | X |  |  | X | X | X | ~~X~~ | X | X |  |  | X |  |  |  |  |
| [Q8/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q8.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [Q11/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q11.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx) | X |  | X |  |  | X |  |  |  | X |  |  |  |  |  |  |  |  |
| [Q14/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q14.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [Q21/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q21.aspx) | X |  |  |  |  | X |  |  |  | X |  |  |  |  |  |  |  |  |
| [Q24/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q24.aspx) |  |  |  |  |  |  | X | X |  |  |  |  |  |  |  |  |  |  |
| [Q26/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q26.aspx) |  |  |  |  |  | X | X | X |  | X |  |  |  |  |  |  |  |  |
| [Q27/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q27.aspx) |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |
| [Q28/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q28.aspx) |  |  |  |  |  | X |  |  |  | X | X |  |  |  |  |  |  |  |
| **ITU-T SG17** | [Q1/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q1.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q2/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q2.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q4/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q4.aspx) |  |  |  |  |  |  |  |  |  |  |  | X |  | X |  |  |  |  |
| [Q8/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q8.aspx) |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q9/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q9.aspx) |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| [Q13/17](http://itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q13.aspx) |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |
| **ITU-T SG20** | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx) | X |  |  | X |  | X | X | X |  | X |  |  |  |  |  |  |  |  |
| [Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx) | X |  |  |  |  | X |  |  |  |  |  |  |  |  | X | X |  |  |
| [Q3/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx) | X |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx) | X |  |  |  |  | X | X | X |  | X | X |  |  |  |  |  |  |  |
| [Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx) | X |  |  |  |  | X | X |  |  |  | X |  |  |  | X |  |  |  |
| [Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx) | X |  |  |  |  | X | X |  |  | X |  | X |  |  |  |  |  |  |
| [Q7/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx) | X |  |  | X |  | X |  |  |  | X | X |  |  |  |  |  |  |  |

**Attachment 2**

**Matching of ITU-R WPs of interest to ITU-T study groups**

Amendments herein reflect:

* TSAG ILS TD 187 from ITU-T SG15
* TSAG ILS TD 178 from ITU-T SG5
* TSAG ILS TD 210 from ITU-R SG6
* TSAG ILS TD 213 from ITU-T SG16.

**Table 1 – ITU-R WPs vis-à-vis ITU-T Questions**

| ITU-R WP | ITU-R SG | ITU-T SG | ITU-T SG Questions |
| --- | --- | --- | --- |
| [WP 1A](https://www.itu.int/go/ITU-R/wp1a): Spectrum engineering techniques | [SG1](https://www.itu.int/en/ITU-R/study-groups/rsg1/Pages/default.aspx) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q3/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx): Human exposure to electromagnetic fields (EMFs) from information and communication technologies (ICTs) |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q4/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx): Broadband access over metallic conductors[Q15/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q15.aspx): Communications for smart grid[Q18/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q18.aspx): Broadband in-premises networking |
| [WP 1B](https://www.itu.int/go/ITU-R/wp1b): Spectrum management methodologies and economic strategies | [SG1](https://www.itu.int/en/ITU-R/study-groups/rsg1/Pages/default.aspx) | [SG3](https://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/default.aspx) | [Q2/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q2.aspx): Development of charging and accounting/settlement mechanisms for international telecommunications services, other than those studied in Question 1/3, including adaptation of existing D-series Recommendations to the evolving user needs[Q3/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q3.aspx): Study of economic and policy factors relevant to the efficient provision of international telecommunication services |
| [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q3/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx): Human exposure to electromagnetic fields (EMFs) from information and communication technologies (ICTs) |
| [WP 1C](https://www.itu.int/go/ITU-R/wp1c): Spectrum monitoring | [SG1](https://www.itu.int/en/ITU-R/study-groups/rsg1/Pages/default.aspx) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q3/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx): Human exposure to electromagnetic fields (EMFs) from information and communication technologies (ICTs)[Q9/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx): Climate change and assessment of information and communication technology (ICT) in the framework of the Sustainable Development Goals (SDGs) |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [WP 3J](https://www.itu.int/go/ITU-R/wp3j): Propagation fundamentals | [SG3](https://www.itu.int/en/ITU-R/study-groups/rsg3/Pages/default.aspx) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [WP 3K](https://www.itu.int/go/ITU-R/wp3k): Point-to-area propagation |
| [WP 3L](https://www.itu.int/go/ITU-R/wp3l): Ionospheric propagation and radio noise |
| [WP 3M](https://www.itu.int/go/ITU-R/wp3m): Point-to-point and Earth-space propagation | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [WP 4A](https://www.itu.int/go/ITU-R/wp4a): Efficient orbit/spectrum utilization for FSS and BSS | [SG4](https://www.itu.int/en/ITU-R/study-groups/rsg4/Pages/default.aspx) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q3/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx): Human exposure to electromagnetic fields (EMFs) from information and communication technologies (ICTs) |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks |
| [WP 4B](https://www.itu.int/go/ITU-R/wp4b): Systems, air interfaces, performance and availability objectives for FSS, BSS and MSS, including IP-based applications and satellite news gathering | [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T[Q12/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q12.aspx): Operational aspects of telecommunication network service quality[Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx): Applying networks of future and innovation in developing countries[Q23/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q23.aspx): Fixed-Mobile Convergence including IMT-2020 |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals[Q3/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx): Architectures, management, protocols and Quality of Service[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification |
| [WP 4C](https://www.itu.int/go/ITU-R/wp4c): Efficient orbit/spectrum utilization for MSS and RDSS \*\* WP 4C will also deal with the performance issues related to RDSS | [SG2](https://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/default.aspx) | [Q3/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q3.aspx): Service and operational aspects of telecommunications, including service definition |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q24/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q24.aspx): Human factors related issues for improvement of the quality of life through international telecommunications |
| [WP 5A](https://www.itu.int/go/ITU-R/wp5a): Land mobile service above 30 MHz\* (excluding IMT); wireless access in the fixed service; amateur and amateur-satellite services | [SG5](https://www.itu.int/en/ITU-R/study-groups/rsg5/Pages/default.aspx) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q3/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx): Human exposure to electromagnetic fields (EMFs) from information and communication technologies (ICTs) |
| [SG2](https://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/default.aspx) | [Q1/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q1.aspx): Application of numbering, naming, addressing and identification plans for fixed and mobile telecommunications services |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T[Q12/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q12.aspx): Operational aspects of telecommunication network service quality[Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx): Applying networks of future and innovation in developing countries[Q16/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q16.aspx): Knowledge-centric trustworthy networking and services[Q23/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q23.aspx): Fixed-Mobile Convergence including IMT-2020 |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q15/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q15.aspx): Communications for smart grid |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q24/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q24.aspx): Human factors related issues for improvement of the quality of life through international telecommunications[Q27/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q27.aspx): Vehicle gateway platform for telecommunication/ITS services and applications |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q6/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q6.aspx): Security aspects of telecommunication services, networks, and Internet of Things[Q13/17](http://itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q13.aspx): Security aspects for Intelligent Transport System |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals[Q3/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx): Architectures, management, protocols and Quality of Service[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification |
| [CITS](http://www.itu.int/en/ITU-T/extcoop/cits) |  |
| [WP 5B](https://www.itu.int/go/ITU-R/wp5b): Maritime mobile service including Global Maritime Distress and Safety System (GMDSS); aeronautical mobile service and radiodetermination service | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q3/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx): Human exposure to electromagnetic fields (EMFs) from information and communication technologies (ICTs)[Q9/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx): Climate change and assessment of information and communication technology (ICT) in the framework of the Sustainable Development Goals (SDGs) |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T[Q12/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q12.aspx): Operational aspects of telecommunication network service quality[Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx): Applying networks of future and innovation in developing countries[Q16/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q16.aspx): Knowledge-centric trustworthy networking and services[Q22/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q22.aspx): Upcoming network technologies for IMT-2020 and Future Networks[Q23/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q23.aspx): Fixed-Mobile Convergence including IMT-2020 |
| [WP 5C](https://www.itu.int/go/ITU-R/wp5c): Fixed wireless systems; HF and other systems below 30 MHz in the fixed and land mobile services | [SG2](https://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/default.aspx) | [Q3/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q3.aspx): Service and operational aspects of telecommunications, including service definition |
| [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q3/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx): Human exposure to electromagnetic fields (EMFs) from information and communication technologies (ICTs) |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T[Q12/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q12.aspx): Operational aspects of telecommunication network service quality[Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx): Applying networks of future and innovation in developing countries[Q16/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q16.aspx): Knowledge-centric trustworthy networking and services[Q20/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q20.aspx): IMT-2020: Network requirements and functional architecture[Q23/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q23.aspx): Fixed-Mobile Convergence including IMT-2020 |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q3/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q3.aspx): Optical physical infrastructures[Q4/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx): Broadband access over metallic conductors |
| [WP 5D](https://www.itu.int/go/ITU-R/wp5d): IMT Systems | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q2/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q2.aspx): Equipment resistibility and protective components[Q3/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx): Human exposure to electromagnetic fields (EMFs) from information and communication technologies (ICTs)[Q4/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q4.aspx): Electromagnetic compatibility (EMC) issues arising in the telecommunication environment[Q6/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q6.aspx): Achieving energy efficiency and smart energy |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q6/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q6.aspx): Protocols supporting control and management technologies for IMT-2020[Q10/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q10.aspx): Testing of emerging IMT-2020 technologies |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q7/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q7.aspx): Methods, tools and test plans for the subjective assessment of speech, audio and audiovisual quality interactions[Q9/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q9.aspx): Perceptual-based objective methods for voice, audio and visual quality measurements in telecommunication services[Q10/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q10.aspx): Conferencing and telemeeting assessment[Q13/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q13.aspx): Quality of experience (QoE), quality of service (QoS) and performance requirements and assessment methods for multimedia[Q14/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q14.aspx): Development of models and tools for multimedia quality assessment of packet-based video services[Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx): Applying networks of future and innovation in developing countries[Q16/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q16.aspx): Knowledge-centric trustworthy networking and services[Q20/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q20.aspx): IMT-2020: Network requirements and functional architecture[Q23/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q23.aspx): Fixed-Mobile Convergence including IMT-2020 |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q3/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q3.aspx): Optical physical infrastructures[Q4/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx): Broadband access over metallic conductors |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV |
| [Q21/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q21.aspx): Multimedia framework, applications and services |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q6/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q6.aspx): Security aspects of telecommunication services, networks, and Internet of Things |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals[Q3/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx): Architectures, management, protocols and Quality of Service[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx): Research and emerging technologies, terminology and definitions[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification[Q7/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx): Evaluation and assessment of Smart Sustainable Cities and Communities |
| [WP 6A](https://www.itu.int/go/ITU-R/wp6a): Terrestrial broadcasting delivery | [SG6](https://www.itu.int/en/ITU-R/study-groups/rsg6/Pages/default.aspx) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q3/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx): Human exposure to electromagnetic fields (EMFs) from information and communication technologies (ICTs) |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
|  |  |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q4/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx): Broadband access over metallic conductors[Q15/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q15.aspx): Communications for Smart Grid[Q18/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q18.aspx): Broadband in-premises networking |
|  | ~~[Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination~~ |
| [WP 6B](https://www.itu.int/go/ITU-R/wp6b): Broadcast service assembly and access | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution[Q2/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q2.aspx): Methods and practices for conditional access, protection against unauthorized copying and against unauthorized redistribution ("redistribution control" for digital cable television distribution to the home)[Q5/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q5.aspx): Software components application programming interfaces (APIs), frameworks and overall software architecture for advanced content distribution services within the scope of Study Group 9[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q8/9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q8.aspx): The Internet protocol (IP) enabled multimedia applications and services for cable television networks enabled by converged platforms |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q13/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q13.aspx): Quality of experience (QoE), quality of service (QoS) and performance requirements and assessment methods for multimedia[Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q2/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q2.aspx): Next-generation network (NGN) evolution with innovative technologies including software-defined networking (SDN) and network function virtualization (NFV) |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of Access and Home Network Transport Standards[Q4/15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx): Broadband access over metallic conductors[Q12/15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q12.aspx): Transport network architectures[Q18/15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q18.aspx): Broadband in-premises networking |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q6/16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q6.aspx): Visual coding[Q8/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q8.aspx): Immersive live experience systems and services[Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV |
| [WP 6C](https://www.itu.int/go/ITU-R/wp6c): Programme production and quality assessment |  |  |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q7/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q7.aspx): Methods, tools and test plans for the subjective assessment of speech, audio and audiovisual quality interactions[Q9/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q9.aspx): Perceptual-based objective methods for voice, audio and visual quality measurements in telecommunication services[Q14/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q14.aspx): Development of models and tools for multimedia quality assessment of packet-based video services[Q18/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q18.aspx): Measurement and control of the end-to-end quality of service (QoS) for advanced television technologies, from image acquisition to rendering, in contribution, primary distribution and secondary distribution networks[Q19/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q19.aspx): Objective and subjective methods for evaluating perceptual audiovisual quality in multimedia services |
|  |  |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q8/16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q8.aspx): Immersive live experience systems and services[Q26/16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q26.aspx): Accessibility to multimedia systems and services |
|  |  |
| [IRG-AVA](https://www.itu.int/en/irg/ava/Pages/default.aspx): Intersector Rapporteur Group Audiovisual Media Accessibility | [SG6](https://www.itu.int/en/ITU-R/study-groups/rsg6/Pages/default.aspx) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx)[SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [IRG-AVA](https://www.itu.int/en/irg/ava/Pages/default.aspx): Intersector Rapporteur Group Audiovisual Media Accessibility[Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination |
| [IRG-AVQA](http://www.itu.int/en/irg/avqa/Pages/default.aspx): Intersector Rapporteur Group Audiovisual Quality Assessment | [SG6](https://www.itu.int/en/ITU-R/study-groups/rsg6/Pages/default.aspx) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx)[SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [IRG-AVQA](http://www.itu.int/en/irg/avqa/Pages/default.aspx): Intersector Rapporteur Group Audiovisual Quality Assessment |
| [IRG-IBB](https://www.itu.int/en/irg/ibb/Pages/default.aspx): Integrated Broadcast-Broadband (IBB) | [SG6](https://www.itu.int/en/ITU-R/study-groups/rsg6/Pages/default.aspx) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx)[SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [IRG-IBB](https://www.itu.int/en/irg/ibb/Pages/default.aspx): Integrated Broadcast-Broadband (IBB)[Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination |
| [WP 7A](https://www.itu.int/go/ITU-R/wp7a): Time signals and frequency standard emissions: Systems and applications (terrestrial and satellite) for dissemination of standard time and frequency signals | [SG7](https://www.itu.int/en/ITU-R/study-groups/rsg7/Pages/default.aspx) |  |  |
| [WP 7B](https://www.itu.int/go/ITU-R/wp7b): Space radiocommunication applications: Systems for transmission/reception of telecommand, tracking and telemetry data for space operation, space research, Earth exploration-satellite, and meteorological satellite services | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [WP 7C](https://www.itu.int/go/ITU-R/wp7c): Remote sensing systems: active and passive remote sensing applications in the Earth exploration-satellite service and systems of the MetAids service, as well as space research sensors, including planetary sensors | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q9/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx): Climate change and assessment of information and communication technology (ICT) in the framework of the Sustainable Development Goals (SDGs) |
| [WP 7D](https://www.itu.int/go/ITU-R/wp7d): Radio astronomy: radio astronomy and radar astronomy sensors, both Earth-based and space-based, including space very long baseline interferometry (VLBI) |  |  |

**Table 2 – Matrix of ITU-R WPs and ITU-T Questions**

|  | **ITU-R SG1** | **ITU-R SG2** | **ITU-R SG4** | **ITU-R SG5** | **ITU-R SG6** | **ITU-R SG7** |
| --- | --- | --- | --- | --- | --- | --- |
| [WP 1A](https://www.itu.int/go/ITU-R/wp1a) | [WP 1B](https://www.itu.int/go/ITU-R/wp1b) | [WP 1C](https://www.itu.int/go/ITU-R/wp1c) | [WP 3J](https://www.itu.int/go/ITU-R/wp3j) | [WP 3K](https://www.itu.int/go/ITU-R/wp3k) | [WP 3L](https://www.itu.int/go/ITU-R/wp3l) | [WP 3M](https://www.itu.int/go/ITU-R/wp3m) | [WP 4A](https://www.itu.int/go/ITU-R/wp4a) | [WP 4B](https://www.itu.int/go/ITU-R/wp4b) | [WP 4C](https://www.itu.int/go/ITU-R/wp4c) | [WP 5A](https://www.itu.int/go/ITU-R/wp5a) | [WP 5B](https://www.itu.int/go/ITU-R/wp5b) | [WP 5C](https://www.itu.int/go/ITU-R/wp5c) | [WP 5D](https://www.itu.int/go/ITU-R/wp5d) | [WP 6A](https://www.itu.int/go/ITU-R/wp6a) | [WP 6B](https://www.itu.int/go/ITU-R/wp6b) | [WP 6C](https://www.itu.int/go/ITU-R/wp6c) | [WP 7A](https://www.itu.int/go/ITU-R/wp7a) | [WP 7B](https://www.itu.int/go/ITU-R/wp7b) | [WP 7C](https://www.itu.int/go/ITU-R/wp7c) | [WP 7D](https://www.itu.int/go/ITU-R/wp7d) |
| **ITU-T SG2** | [Q1/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q1.aspx) |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |
| [Q3/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q3.aspx) |  |  |  |  |  |  |  |  |  | X |  |  | X |  |  |  |  |  |  |  |  |
| **ITU-T SG3** | [Q2/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q2.aspx) |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q3/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q3.aspx) |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ITU-T SG5** | [Q2/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q2.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| [Q3/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx) | X | X | X |  |  |  |  | X |  |  | X | X | X | X | X |  |  |  |  |  |  |
| [Q4/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q4.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| [Q6/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q6.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| [Q9/5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx) |  |  | X |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  | X |  |
| **ITU-T SG9** | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx) | X |  | X |  |  | X |  | X |  |  | X | X | X | X | X | X |  |  | X |  |  |
| [Q2/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q2.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [Q5/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q5.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx) | X |  | X |  |  | X |  | X |  |  | X | X | X | X | X | X |  |  |  |  |  |
| [Q8/9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q8.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx) | X |  | X |  |  | X | X |  |  | X | X | X | X | X | X |  |  |  | X |  |  |
| **ITU-T SG11** | [Q6/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q6.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| [Q10/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q10.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| **ITU-T SG12** | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx) |  |  |  |  |  |  |  |  | X |  | X | X | X |  |  |  |  |  |  |  |  |
| [Q7/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q7.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  | X |  |  |  |  |
| [Q9/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q9.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  | X |  |  |  |  |
| [Q10/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q10.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| [Q12/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q12.aspx) |  |  |  |  |  |  |  |  | X |  | X | X | X |  |  |  |  |  |  |  |  |
| [Q13/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q13.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  | X |  |  |  |  |  |
| [Q14/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q14.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  | X |  |  |  |  |
| [Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx) |  |  |  |  |  |  |  |  | X |  | X | X | X | X |  | X |  |  |  |  |  |
| [Q18/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q18.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [Q19/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q19.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| **ITU-T SG13** | [Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx) |  |  |  |  |  |  |  |  | X |  | X | X | X | X |  |  |  |  |  |  |  |
| [Q2/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q2.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [Q16/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q16.aspx) |  |  |  |  |  |  |  |  |  |  | X | X | X | X |  |  |  |  |  |  |  |
| [Q20/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q20.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X | X |  |  |  |  |  |  |  |
| [Q22/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q22.aspx) |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |
| [Q23/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q23.aspx) |  |  |  |  |  |  |  |  | X |  | X | X | X | X |  |  |  |  |  |  |  |
| **ITU-T SG15** | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx) | X |  |  |  |  |  |  |  |  |  |  |  | X | X | X | X |  |  |  |  |  |
| [Q3/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q3.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X | X |  |  |  |  |  |  |  |
| [Q4/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx) | X |  |  |  |  |  |  |  |  |  |  |  | X | X | X | X |  |  |  |  |  |
| [Q12/15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q12.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [Q15/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q15.aspx) | X |  |  |  |  |  |  |  |  |  | X |  |  |  | X |  |  |  |  |  |  |
| [Q18/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q18.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  | X | X |  |  |  |  |  |
| **ITU-T SG16** | [Q1/16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx) |  |  |  |  |  |  |  |  | X | X | X |  |  | X | ~~X~~ | X | X |  |  |  |  |
| [Q6/16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q6.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [Q8/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q8.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | X |  |  |  |  |
| [Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx) |  |  |  |  |  |  |  |  | X |  |  |  |  | X |  | X |  |  |  |  |  |
| [Q21/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q21.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| [Q24/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q24.aspx) |  |  |  |  |  |  |  |  |  | X | X |  |  |  |  |  |  |  |  |  |  |
| [Q26/16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q26.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [Q27/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q27.aspx) |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |
| **ITU-T SG17** | [Q6/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q6.aspx) |  |  |  |  |  |  |  |  |  |  | X |  |  | X |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [Q13/17](http://itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q13.aspx) |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |
| **ITU-T SG20** | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx) |  |  |  |  |  |  |  |  | X |  | X |  |  | X |  |  |  |  |  |  |  |
| [Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx) |  |  |  |  |  |  |  |  | X |  | X |  |  | X |  |  |  |  |  |  |  |
| [Q3/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx) |  |  |  |  |  |  |  |  | X |  | X |  |  | X |  |  |  |  |  |  |  |
| [Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx) |  |  |  |  |  |  |  |  | X |  | X |  |  | X |  |  |  |  |  |  |  |
| [Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| [Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx) |  |  |  |  |  |  |  |  | X |  | X |  |  | X |  |  |  |  |  |  |  |
| [Q7/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |

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