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| logogreen | ASIA-PACIFIC TELECOMMUNITY |  |
| **The APT Standardization Program (ASTAP)** |
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**Work Plan of ASTAP**(as of ASTAP-29, August 2017)

| **No.** | **EG** | **Work Plan no.** | **Title** | **Expected Deliverable** | **Duration** | | **Contributions at  ASTAP-29** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Start** | **End** |
| **WG PSC** | | | | | | | |
| 1 | BSG | BSG-1 | Handbook to Introduce ICT Solution for the Community in Rural Areas | Report | ASTAP-24 | ASTAP-30 | INP-29, 30, 31, 57 |
| 2 | BSG-2 | Guideline on referencing Int’l Standards in developing National Standards in the field of ICT | Guideline | ASTAP-28 | ASTAP-32 | INP-33, 37 |
| 3 | BSG-3 | Guideline on setting up National ICT Standardization Regime | Guideline | ASTAP-29 | ASTAP-33 | N/A |
| 4 | PRS | PRS-1 | ICT Standardization and Conformity Assessment System in Asia Pacific | Report | ASTAP-26 | ASTAP-30 | N/A |
| 5 | PRS-2 | Telecommunication Numbering Charges | Report | ASTAP-28 | ASTAP-30 | N/A |
| 6 | PRS-3 | Regulatory matter and Implementation Practice on Quality of Experience (QoE) in Mobile Communications. | Report | ASTAP-29 | ASTAP-31 | INP-32 |
| 7 | ITU-T | ITU-T-1 | Conformance and Interoperability (C&I) | Report | ASTAP-22 | ASTAP-30 | INP-69 |
| 8 | GICT&EMF | GICT&EMF-1 | Status Report on Efforts to Green Data Centres in the ICT/Telecommunication Sector in the APT member countries | Report | ASTAP-26 | ASTAP-31 | N/A |
| 9 | GICT&EMF-2 | Status report for Standardization Activities on e-waste and rare metals | Report | ASTAP-26 | ASTAP-31 | INP-41, 66 |
| 10 | GICT&EMF-3 | Status Report of Asia Pacific Regional Activities on Human Exposure to EMF (EMF impact) | Report | ASTAP-26 | ASTAP-29 | INP-65 |
| 11 | GICT&EMF-4 | APT members’ status on the Deployment of Green or Environment friendly ICT project | Report | ASTAP-28 | ASTAP-31 | INP-17 |
| 12 |  | GICT&EMF-5 | EMF Information Platform using EMF Area Monitoring System for the better Awareness of General Public | Report | ASTAP-29 | ASTAP-32 | INP-40 |
| **WG NS** | | | | | | | |
| 11 | FN& NGN | FN& NGN-1 | VoLTE Interoperability | Report | ASTAP-28 | ASTAP-32 | INF-11 |
| 13 |  | FN& NGN-2 | Future Transport Network Technologies | Report | ASTAP-27 | ASTAP-30 | INP-21, 22 |
| 14 | DRMRS | DRMRS-1 | Case Studies and Guidelines for Implementing Emergency Telecommunication Systems in APT Region | Report | ASTAP-29 | ASTAP-32 | INP-25 |
| 15 | SACS | SACS-1 | Seamless Access Communication Systems | Report | ASTAP-27 | ASTAP-30 | INP-28 |
| 16 | SACS-2 | Broadband Train Communication Network using RoF Technologies | Report | ASTAP-27 | ASTAP-32 | INP-54 |
| 17 | SACS-3 | Overview of Broadband Access Network in APT member countries | Report | ASTAP-27 | ASTAP-31 | N/A |
| 18 | SACS-4 | Requirement of Transceiver in Coherent Radio over Fiber System | Report | ASTAP-28 | ASTAP-31 | N/A |
| 19 |  | SACS-5 | Revision of APT Report on Radio-over-Fiber Relay Link for Indoor Communication System | Report | ASTAP-29 | ASTAP-32 | INP-53 |
| 20 | SACS-6 | Power over Fiber System for Radio-over-Fiber Network | Report | ASTAP-29 | ASTAP-32 | INF-08 |
| 21 | SACS-7 | Field Trial of Wireless Access WDM-PON Deployment based on Radio-over-Fiber Technology | Report | ASTAP-29 | ASTAP-31 | INF-09 |
| **WG SA** | | | | | | | |
| 22 | IOT | IOT-1 | Smart Cities Use Cases and Technologies in APT region | Report | ASTAP-28 | ASTAP-30 | INP-14, 15, 19, 23, 36, 49 |
| 23 | IOT-2 | Other M2M/ IoT Applications/Services | Report | ASTAP-28 | ASTAP-32 | INP-57, 59 |
| 24 | IS | IS-1 | Framework of 4-tier Cloud Access Security Broker for cloud service security | Recommendation | ASTAP-28 | ASTAP-32 | INP-42, 43, 44 |
| 25 | IS-2 | Revision of Security Guideline (Secure use of IT Devices and services – Protect your data (Rev.1)) | Report | ASTAP-29 | ASTAP-31 | INP-56 |
| 26 | MA | MA-1 | Survey of IPTV services in APT region | Report | ASTAP-28 | ASTAP-32 | INP-07, 63 |
| 27 | MA-2 | Harmonization of S2ST (Speech-to-Speech Translation) Standardization | Report/ Recommendation | ASTAP-28 | N/A | INP-07, 10 |
| 28 | AU | AU-1 | Survey on the Status of Mobile Application Accessibility in the APT Region | Report | ASTAP-27 | ASTAP-30 | INP-35 |
| **TOTAL CONTRIBUTION TO WORKPLAN** | | | | | | | **38 out of 76 INP/INF Documents** |

**work plan of asTap (As of astap-28)**

**eg bsg**

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| **Number** | BSG-1 |
| **Title** | Handbook to introduce ICT Solutions for the Community in Rural Areas |
| **Output Document Type** | Report |
| **Relevant EG** | EG BSG, WG PSC |
| **Editor(s)** | Hideyuki IWATA (iwata.hideyuki@lab.ntt.co.jp) |
| **Scope** | Collecting ICT pilot project cases including e-Agriculture and Aquaculture, e-Education, e-Environment, e-Healthcare, e-Disaster risk management projects, and so on in rural communities and generalizing the knowledge of them. |
| **Purpose** | Providing the actual and useful information to start the related new ICT application projects |
| **Related Documents** | [APT/ASTAP/REPT-13]. The APT Report on Handbook to introduce ICT solutions for the community in rural area (August 2014). |
| **Related Organization** | Telecommunication Technology Committee |
| **Timelines** | Aug. 2014: Approval of [APT/ASTAP/REPT-13]  Sept. 2015: Approval of [APT/ASTAP/REPT-13 (Rev.1)]  ASTAP-28: Issuing a questionnaire on smart city applications case study  ASTAP-29: (1) Addition of the e-aquaculture project to APT/ASTAP/REPT-13(Rev.1)  (2) Discussion of updates to include smart city applications case study in [APT/ASTAP/REPT-13 (Rev.1)]  ASTAP-30: Approval of [APT/ASTAP/REPT-13 (Rev.2)] that includes smart city case study |

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| **Number** | BSG-2 |
| **Title** | Guideline on referencing int’l standards in developing national standards in the field of ICT |
| **Output Document Type** | Guideline |
| **Group/Chair** | EG BSG / Mrs. Nguyen Thi Khanh Thuan |
| **Editor(s)** | Mr. Kihun Kim, TTA, Korea |
| **Scope** | The guideline describes type (category) of ICT standards, definition of standards, and general procedure of development of standards as well as general principles in referencing ICT int’l standards when developing standards. This guideline will also provide various cases of national ICT standards of some countries which refers int’l standards. |
| **Purpose** | One of objectives of EG BSG is to assist developing countries in applying ITU-T Recommendations/int’t standards. The purpose of this work item is to provide basic principle and cases of referencing international standards including ITU-T recommendations when developing national standards.  This work item is related to the Strategic Plan of the Asia-Pacific Telecommunity 2015-2017, specifically, 1.4\* of Strategic Actions of the Strategic Plan  \*1.4 Share best practices, skills, regulations, and technologies to reduce the ICT development gap and to further develop ICT infrastructure so as to promote the innovation growth in the region; |
| **Related Documents** |  |
| **Timelines** | ASTAP-28: Initiation of the project  ASTAP-29: Survey and selection standards list which developing countries have high interests to develop as their national standards  ASTAP-29 : Submission of a table of contents of the guideline  ASTAP-30 : Collecting cases on various countries  ASTAP-31: Discussion on a draft guideline  ASTAP-31: Submission of the draft guideline  ASTAP-32 : Revision of the draft guideline  ASTAP-32: Submission of the final output to the Plenary meeting |

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| **Number** | BSG-3 |
| **Title** | Guideline on setting up national ICT standardization regime |
| **Output Document Type** | Guideline |
| **Group/Chair** | EG BSG / Mrs. Nguyen Thi Khanh Thuan |
| **Editor(s)** | *Standard Development Organizations in the region (TBD)* |
| **Scope** | The Guideline will provide:   * Rationale for establishing a national standardization regime such as national standard development organization/ committee; * Various models of SDOs/committee to be considered and recommended for APT Members which would suit to their circumstance; * Role and mission of the organization/committee * Role and responsibilities of various stakeholders such as government, industry, academia, etc.; * Practical recommendations to operate the organization/committee.   In order to develop the Guideline, this Work Plan will commence with examining the real needs of developing countries in standardization in particular, setting up national regime for standardization. |
| **Purpose** | This Work Plan and the Guideline will facilitate the understanding of the needs of standardization framework as well as assist APT Members in setting up a national regime in particular a standard development organization or committee. |
| **Related Documents** | <http://www.itu.int/en/ITU-T/gap/Documents/NSSGuidelines.pdf> |
| **Timelines** | ASTAP-29: Initiation of the work plan;  ASTAP-30: Determining the questionnaire of a survey to identify needs of developing countries and determining the components of the Guideline;  ASTAP-31 : Reviewing the outcome of the Survey; reviewing the reference documents including ITU and other SDOs;  ASTAP-32 : Determining the first draft of the Guideline;  ASTAP-33: Holing a Standardization Workshop to get feedback from SDOs and Finalizing the draft of the Guideline and publication. |

**EG PRS**

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| **Number** | PRS-1 |
| **Title** | ICT Standardization and Conformity Assessment System in Asia Pacific |
| **Output Document Type** | Report |
| **Chairman** | Mr. Felix Rupokei |
| **Rapporteur(s)** | Ms. Nguyen Thi Thu Phuong, MIC, Viet Nam, [phuongnt@*mic*.gov.vn](mailto:phuongnt@mic.gov.vn) |
| **Scope** | The scope of this report is to cover standardization and conformity assessment systems, policy and strategy of APT member countries. |
| **Purpose** | The purpose of this activity is to collect information on ICT standardization and conformity assessment systems, policy and strategy of APT Member countries. |
| **Related Document** | ASTAP-26/OUT-22, ASTAP-27/OUT-10 |
| **Timelines** | ASTAP-26: Draft and confirm the questionnaire  ASTAP-26-27: Send the questionnaire to APT countries  ASTAP-27: Finalize report and present to ASTAP.  ASTAP-28: Continue improvement of the report to add more information of other countries within the region.  ASTAP-29: Continue improvement of the report to add more information from other countries within the region  ASTAP-30: Approval of the updated report |

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| **Number** | PRS-2 |
| **Title** | Telecommunication Numbering Charges |
| **Working Group /  Expert Group** | WG PSC/EG PRS |
| **Objectives** | This study intends to provide survey result on annual numbering charges, limitations and challenges overcome if any, by regulators and/or Numbering administrators in AP region. |
| **Focus Area** | Tariff scheme for numbering resources. |
| **Expected Output and type of output document** | Report |
| **Use of the Output** | Reference for Regulatory Bodies and/or Numbering administrators on the necessary of number charging. |
| **Work Plan/ Time Frame** | ASTAP 29 - Study  ASTAP 30 - Report |
| **Rapporteur/**  **Assistant Rapporteur and contact addresses** | Mr. Gava Lakau.  Phone: +675 3033220, Fax: +675 3004829  Email: glakau@nicta.gov.pg |
| **Proposed Administration/ Organization** | National Information and Communications Technology Authority (NICTA)  Papua New Guinea |

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| **Number** | PRS-3 |
| **Title** | Regulatory matter and implementation practice on quality of experience (QoE) in mobile communications. |
| **Output Document Type** | Report |
| **Chair** | Felix Rupokei |
| **Editor(s)** | Mr. Binh VUONG THE ([vtbinh@mic.gov.vn](mailto:vtbinh@mic.gov.vn) )  Mr. Khoa NGUYEN VAN ([nvkhoa@mic.gov.vn](mailto:nvkhoa@mic.gov.vn) ) |
| **Scope** | The report presents regulatory matter and implementation practice on quality of experience in mobile communications. The scope of the report is as follows:   * Ensuring Quality of service (QoS) in mobile communications. * Regulatory matter of Quality of Experience (QoE) in mobile communications * Example cases within APT members in QoE implementation * Conclusions (best practices, learnt lessons …) |
| **Purpose** | The purpose of this work item is to raise regulatory matter and to share implementation practices on QoE in mobile communications among APT members |
| **Related Documents** | ITU-T Recommendation E.804 |
| **Timelines** | ASTAP-29: Initiation of the work item  ASTAP-30:   * Submission of draft of the report skeleton. * Conduct a survey to collect QoE case examples from APT countries   ASTAP-30 to ASTAP 31: Collect and analyse survey data  ASTAP-31: Submission of report. |

**EG ITU-T**

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| **Number** | ITU-T-1 |
| **Title** | Conformance and interoperability (C&I) |
| **Output Document Type** | APT Report |
| **Group/Chair** | EG ITU / Mr. Kaoru Kenyoshi |
| **Editor(s)** | Mr. Kaoru Kenyoshi, Mr. Nguyen Van Khoa |
| **Scope** | The scope of this work plan is developing an APT report on C&I relating to ITU C&I programme in four pillars   * Pillar1: conformity assessment * Pillar2: interoperability event * Pillar3: capacity building * Pillar4: assistance in the establishment of test centres and C&I programmes in developing countries |
| **Purpose** | This work plan aims to share the information and foster understanding and promote activities on C&I in the APT member countries. And it also supports to build the capability and find the resolution for interoperability issues of APT member countries.  Related items in the matrix to follow up APT strategic plan 2015-2017   * 1.2, 1.4, 2.2, 2.8, 6.1, 6.2, 7.3, 7.4, 7.5, 8.1, 8.3, 8.4, 8.5, 8.6 |
| **Related Document** | ASTAP-22/INP-65 Report of the 1st APT/ITU C&I Event 2013  ASTAP-24/INP-43(Rev.1) Report of the 2nd APT/ITU C&I Event 2014  ASTAP-26/INP-46(Rev.1) Report of the 3rd APT/ITU C&I Event 2015  ASTAP-28/INP-67 Report of the 4th APT/ITU C&I Event 2016 |
| **Timelines** | Expected approval time is 2018 |

**EG GICT & EMF**

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| **No.** | GICT&EMF-1 |
| **Title** | Status Report on Efforts to Green Data Centres in the ICT/Telecommunication sector in the APT member countries |
| **Output Document Type** | Status report |
| **Relevant EG** | EG GICT & EMF |
| **Editor(s)** | Mr. Alex Kuik/ MTSFB, Malaysia  Mr. Nur Akbar Said/ MCIT, Indonesia |
| **Scope** | The scope of this report covers efforts in Asia Pacific region such as policies and activities on the Green Data Centre in the ICT/Telecommunication sector. |
| **Purpose** | The purpose of this report is to share existing regional green data centre efforts and best practices in the ICT/Telecommunication sector; as a reference and baseline document for future standardization work on green data centre. |
| **Related Documents** | ASTAP-26-INF-16, [ASTAP-27/INP-23](http://www.apt.int/sites/default/files/2016/02/ASTAP-27-INP-23-NTT-Datacenter.docx), [ASTAP-27/INP-38](http://www.apt.int/sites/default/files/2016/03/ASTAP-27-INP-38-MTSFB_-_Malaysia_Govt_Data_Centre_Baseline_Study.docx)  [ASTAP-27/INP-39](http://www.apt.int/sites/default/files/2016/03/ASTAP-27-INP-39-MTSFB_-_Malaysia_Technical_Code_Green_Data_Centre.docx), [ASTAP-27/INF-13](http://www.apt.int/sites/default/files/2016/03/ASTAP-27-INF-13-Indonesia-GreenDataCenter.docx) |
| **Related Organization** | APT Member countries |
| **Timelines** | ASTAP-26: Draft (skeleton) Status Report presented and endorsed  Request for members’ contribution  ASTAP-27: Member countries contributions and presentations  Update on the progress of the report  Request for members’ contribution  ASTAP-28: Update and present First Draft Document.  Member countries contribution and presentations  ASTAP-29: Update and present Second Draft Document body.  Finalize the report  ASTAP-30: Update and present draft report on the base of input documents  ASTAP-31: Update the working draft report on green data centre and Finalize the report |

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| **No** | GICT & EMF -2 |
| **Title** | Status report for standardization activities on e-waste and rare metals |
| **Output Document Type** | Status report |
| **Relevant EG** | EG GICT & EMF |
| **Editor(s)** | Dr. Bum Sung Kim/ KITECH, Republic of Korea  Dr. Artprecha Rugsachart/NBTC, Thailand |
| **Scope** | The scope of this report introduces e-waste & rare metal related strategies, activities & management systems of international organizations as well as APT member countries. |
| **Purpose** | The purpose of this report is to share information related to E-waste & rare metals in order to raise awareness on the possible hazards & values of E-waste and rare metals. |
| **Related Documents** | ASTAP-23-OUT-14Rev.2  ASTAP-24-OUT-25  ASTAP-25-OUT-06Rev.1  ASTAP-28/INP-45 |
| **Related Organization** | APT member countries |
| **Timelines** | ASTAP-26: Request for members’ contribution  ASTAP-27: Member countries contributions and presentations  update on the progress of the report  ASTAP-28: Member countries contributions and presentations  request for members’ contribution and draft status report  ASTAP-29: Member countries contributions and presentations  case study and best practices  ASTAP-30: Member countries contributions and presentations  update on the progress of the report  ASTAP-31: Finalize the report |

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| **No.** | GICT&EMF-3 |
| **Title** | Status report of Asia Pacific regional activities on human exposure to EMF (EMF impact) |
| **Output Document Type** | Status Report |
| **Relevant EG** | EG GICT&EMF |
| **Editor(s)** | Mr. Alex Kuik/ MTSFB, Malaysia  Dr.Juno An/IFRE, Republic of Korea |
| **Scope** | The scope of this Status Report cover international regulations and guidelines, related international activities of EMF exposure, national policy, regulation and guideline for EMF exposure, awareness and education outreach activities of EMF exposure in the APT member countries. |
| **Purpose** | The purpose of this Status Report is to share existing regional activities and best practices in order to raise awareness on the human exposure to EMF. This document can be a reference for future standardization activities. |
| **Related Documents** | ASTAP-24-OUT-25, ASTAP-25-TMP-16, ASTAP-26-INF-15, ASTAP27/INP46, ASTAP27/INP-47, ASTAP27/INP-09, ASTAP27/TMP-05 |
| **Related Organization** | APT member countries |
| **Timelines** | ASTAP-26: Request for members’ contribution  ASTAP-27: Member countries contributions and presentations  Update on the progress of the report  ASTAP-28: Member countries contribution and presentations, draft the status report  ASTAP-29: Finalize the report |

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| **No** | GICT & EMF – 4 |
| **Title** | APT members’ status on the deployment of green or environment friendly ICT project |
| **Output Document Type** | Report |
| **Relevant EG** | EG GICT&EMF |
| **Editor(s)** | Mr. Ratnam N. A./ MTSFB, Malaysia  Mr. Nguyen Van Khoa/ MIC, Vietnam |
| **Scope** | To collect use cases from any implementation of green ICT projects or applications from APT members and affiliate members including green ICT policies and strategies with key successful factors or challenges. |
| **Purpose** | To develop a report which will be a reference to prepare APT guideline for best practices and environment friendly policies for effective ICT deployment methods. |
| **Related Documents** | WTSA-16 Res. 73, ASTAP-28-INF-10, Presentations at Industry Workshop "Rare metal and e-waste" held at ASTAP-23, APT Report #1 "Introduction to Green ICT activities" |
| **Related Organization** | APT members and affiliate members |
| **Timelines** | ASTAP-28: Propose work plan  Request for members’ contribution  ASTAP-29: Member countries contributions and presentations  Update on the progress of the report  Request for members’ contribution  ASTAP-30: Update and present 1st draft report  Member countries contribution and presentations  ASTAP-31: Update and present 2nd draft report  Finalize the report |

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| **No.** | GICT & EMF – 5 |
| **Title** | EMF information platform using EMF area monitoring system for the better Awareness of general public |
| **Output Document Type** | Technical report |
| **Group/Chair** | EG GIST & EMF / Mr. Samyoung Chung |
| **Editor(s)** | Mr. Sungwon Moon, Mr. Samyoung Chung (Republic of Korea)  Mr. Abdullah AL Amin (Bangladesh)  Mr. Borvorn Marknaka (Thailadesh) |
| **Scope** | This report specifies the method and characteristics of RF-EMF area monitoring system to be used for spatial and continuous monitoring of electromagnetic fields emitted by radio transmitters.  In the area scanning, broadband and frequency selective measurement system, it specifies to assess the long-term exposure of people to electromagnetic fields in the band of 9kHz – 300GHz.  Especially, this report specifies for the general radio transmitters, mobile stations (GSM, WCDMA, LTE monitoring and with extrapolation), radar transmitters.  The method of Web and App information platform for the general public awareness. |
| **Purpose** | Guide to the methods of measurement and assessment for the long-term exposure in vicinity of the radio transmitters.  To provide the better way for risk communication for EMF issue from vicinity of wireless communication tower in residence and many sensitive areas, it guides the EMF exposure level information platform.  Guide to the method of area EMF monitoring system. |
| **Related Documents** | ASTAP-28/INF-16, 08 March 2017  (Introduction to the EMF monitoring system to survey and manage the EM environment of radio stations and power line system)  ASTAP-29/INP-40, Proposal on EMF information platform using area monitoring system for the better awareness of general public |
| **Timelines** | ASTAP-29: Initiation of the project & submission of a table of contents of technical report  ASTAP-30 : Collecting cases on various countries  ASTAP-31: Discussion on a draft of the report  ASTAP-31: Submission of the draft of the report  ASTAP-32 : Revision of the draft of the report  ASTAP-32: Submission of the final output to the Plenary meeting |

**work plans of wg ns**

**EG FN&NGN**

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| **No.** | FN&NGN – 1 |
| **Title** | VoLTE interoperability |
| **Document Type** | Report |
| **Group/Chair** | FN&NGN-EG / Dr. Joon Won LEE |
| **Editor(s)** | Mr. Kaoru Kenyoshi (NEC)  Co-editor: Ms. H.Y.Lee (TTA) |
| **Scope** | To draft and complete the APT report on the use cases and deployment scenarios for VoLTE Interoperability in APT members.  (focus on network and protocol aspects) |
| **Purpose** | Study a status of VoLTE interoperability:   1. To provide information on status of VoLTE services in APT member countries. 2. To facilitate maturity and interoperability of VoLTE service 3. To study possible common interfaces for the implementation of global VoLTE interoperability; |
| **Related Documents** | [**[ 142-GEN ]**](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-SG11-170206-TD-GEN-0142)  Draft New Recommendation ITU-T Q.30xx\_VoLTE\_Interconnection\_FW Framework of interconnection of VoLTE/ViLTE-based networks  ASTP29/INF11 |
| **Related Organization** | ITU-T Q2/11, Q11/11  GSMA  3GPP  ETSI |
| **Timelines** | ASTAP28: Initiate a work item  ASTAP29: Introduction of ITU-T SG11 activities  ASTAP30: Dispatching Questionnaire  ASTAP31: Draft APT report  ASTAP32: Final APT report |

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| **No.** | FN&NGN – 2 |
| **Title** | Future Transport Network Technologies |
| **Document Type** | Report |
| **Group/Chair** | FN&NGN-EG / Dr. Joon Won LEE |
| **Editor(s)** | Mr. Kaoru Arai, Dr. Makoto Murakami |
| **Scope** | Future transport network technologies including transport SDN, and synchronization over transport. |
| **Purpose** | To promote to clarify APT member countries’ use cases and requirements for transport network using future transport technologies including transport SDN and synchronization over transport to provide useful information to APT member countries to deploy transport network technologies. |
| **Related Documents** | ASTAP26/INF4, INF5  ASTAP27/INP51, INP57  ASTAP28/INP39, INP40  ASTAP29/INP21, INP22 |
| **Related Organization** | ITU-T Q9/15  ITU-T Q10/15  ITU-T Q11/15  ITU-T Q12/15  ITU-T Q13/15  ITU-T Q14/15 |
| **Timelines** | ASTAP27: Dispatch questionnaires to collect information  July 2016: Response to the questionnaires  ASTAP28: Outline of APT report  ASTAP29: Update the outline based on questionnaires  ASTAP30: Final APT report |

**EG DRMRS**

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| **No.** | | DRMRS – 1 |
| **Title** | Case studies and guidelines for implementing emergency telecommunication systems in APT region | |
| **Output Document Type** | APT Report | |
| **Group/Chair** | EG DRMRS / Mr. Yasubumi CHIMURA | |
| **Editor(s)** | Dr. Hideo Imanaka | |
| **Scope** | The scope of this work item is followings:  1) to summarize information on:   * Actual case studies on implementing portable/movable emergency telecommunication systems in APT member countries * Actual case studies for emergency drills using portable/movable emergency telecommunication systems for disaster scenarios in APT member countries * Standardization activities of emergency telecommunication systems in ASTAP and ITU;   2) and to show guidelines for implementing emergency telecommunication systems in APT member countries, derived by case studies | |
| **Purpose** | In order to introduce or implement suitable emergency telecommunication systems in each APT member country, especially encountered by disaster risks, the purposes of this APT report are:   * Report on actual case studies of portable/movable emergency telecommunication systems in APT member countries * Report on actual case studies of emergency drills using portable/movable emergency telecommunication systems for disaster scenarios in APT member countries * Report of standardization activities regarding emergency telecommunication systems * Report of guidelines for implementing portable/movable emergency telecommunication systems, so that APT member counties encountered disaster risks can easily adopt or select the systems | |
| **Related Document** | ASTAP-29/INP-25, ASTAP-29/TMP-05 (Rev.1) | |
| **Timelines** | ASTAP-32 | |

**EG SACS**

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| **No.** | SACS-1 |
| **Title** | Seamless access communication systems |
| **Document Type** | Report |
| **Group/Chair** | SACS-EG / Dr. Hiroyo Ogawa |
| **Editor(s)** | Dr. Tetsuya Kawanishi and Dr. Hiroyo Ogawa |
| **Scope** | To address APT members the architectures, features, technical characteristics and applications of RoF technologies for seamless access communication systems. |
| **Purpose** | To provide some guidance to implement of RoF technologies in the millimeter-wave access communication systems for APT members.  To develop as necessary liaison documents to external organization. |
| **Related Documents** | APT/ASTAP/REPT-03: Characteristics and requirements of optical and electrical components for millimetre wave Radio on Fiber systems  APT/ASTAP/REPT-04: Technology trends of telecommunications above 100 GHz  APT/ASTAP/REPT-11: Wired and wireless seamless connections using millimeter-wave Radio over Fiber technology for resilient access networks  APT/ASTAP/REPT-19: Integration of radio-over-fiber with WDM PON for seamless access communication system  APT/ASTAP/REPT-20: Radio-over-fiber relay link for Indoor communication system  APT/ASTAP/REPT-25, APT Report on Fronthaul/ Backhaul using Millimeter-wave Radio over Fiber Technologies  APT/ASTAP/REPT-26, APT Report on Multiservice Signal Transmission using Radio over Fiber Technology  ITU-T G. Sup. 55: Radio-over-fiber (RoF) technologies and their applications |
| **Related Organization** | ITU-T Q2/15 |
| **Timelines** | ASTAP-29   * + - Consider the input contributions     - Continue drafting a working document of a draft new APT Report     - Review and update work plan as appropriate   ASTAP-30   * + - Finalize the draft new APT Report on seamless access communication systems and submit to the plenary |

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| **No.** | SACS-2 |
| **Title** | Broadband train communication network using RoF technologies |
| **Document Type** | Report |
| **Group/Chair** | SACS-EG / Dr. Hiroyo Ogawa |
| **Editor(s)** | Dr. Tetsuya Kawanishi |
| **Scope** | To provide APT member countries one of use cases using RoF technologies in the seamless access communication systems and to address deployment scenario of broadband train communication network using RoF technologies. |
| **Purpose** | To develop an APT/ASTAP Report on broadband train communication networks with RoF technologies.  To develop as necessary liaison documents to external organization. |
| **Related Documents** | APT/ASTAP/REPT-03: Characteristics and requirements of optical and electrical components for millimetre wave Radio on Fiber systems  APT/ASTAP/REPT-04: Technology trends of telecommunications above 100 GHz  APT/ASTAP/REPT-11: Wired and wireless seamless connections using millimeter-wave Radio over Fiber technology for resilient access networks  APT/ASTAP/REPT-19: Integration of radio-over-fiber with WDM PON for seamless access communication system  APT/ASTAP/REPT-20: Radio-over-fiber relay link for Indoor communication system  ITU-T G. Sup. 55: Radio-over-fiber (RoF) technologies and their applications |
| **Related Organization** | ITU-T Q2/15  IEC TC 103 WG6 |
| **Timelines** | ASTAP-29: Consider the input contributions  Continue drafting a working document of a draft new APT Report  Review and update work plan as appropriate  ASTAP-30: Consider the input contributions  Continue drafting a working document of a draft new APT Report  Review and update work plan as appropriate  Draft liaison documents to external organization as necessary  ASTAP-31: Consider the input contributions  Continue drafting a working document of a draft new APT Report  Review and update work plan as appropriate  Draft liaison documents to external organization as necessary  ASTAP-32: Finalize the draft new APT Report on broadband train communication network using RoF and submit to the plenary |

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| **No.** | SACS-3 |
| **Title** | Overview of broadband access network in APT member countries |
| **Document Type** | Report |
| **Group/Chair** | SACS-EG / Dr. Hiroyo Ogawa |
| **Editor(s)** | Dr. Ukrit Mankong |
| **Scope** | To provide APT member countries the situation and trend of broadband access network. |
| **Purpose** | To develop an APT/ASTAP Report on overview of access network in APT member countries. |
| **Related Documents** | APT/ASTAP/REPT-03: Characteristics and requirements of optical and electrical components for millimetre wave Radio on Fiber systems  APT/ASTAP/REPT-04: Technology trends of telecommunications above 100 GHz  APT/ASTAP/REPT-11: Wired and wireless seamless connections using millimeter-wave Radio over Fiber technology for resilient access networks  APT/ASTAP/REPT-19: Integration of radio-over-fiber with WDM PON for seamless access communication system  APT/ASTAP/REPT-20: Radio-over-fiber relay link for Indoor communication system  ITU-T G. Sup. 55: Radio-over-fiber (RoF) technologies and their applications |
| **Related Organization** | ITU-T Q2/15 |
| **Timelines** | ASTAP-29: Carrier forward to the next meting  ASTAP-30: Consider the input contributions  Continue drafting a working document of a draft new APT Report  Review and update work plan as appropriate  ASTAP-31: Finalize the draft new APT report on overview of broadband access network in APT member countries and submit to the plenary |

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| **No.** | SACS-4 |
| **Title** | Requirement of transceiver in coherent radio over fiber system |
| **Document Type** | Report |
| **Group/Chair** | SACS-EG / Dr. Hiroyo Ogawa |
| **Editor(s)** | Dr. Ukrit Mankong |
| **Scope** | To provide APT member countries technical guidance and requirement of a transmitter unit to configure coherent radio over fiber system. |
| **Purpose** | To develop an APT/ASTAP Report on requirement of transceiver in coherent radio over fiber system.  To develop as necessary liaison documents to external organization. |
| **Related Documents** | APT/ASTAP/REPT-03: Characteristics and requirements of optical and electrical components for millimetre wave Radio on Fiber systems  APT/ASTAP/REPT-11: Wired and wireless seamless connections using millimeter-wave Radio over Fiber technology for resilient access networks  APT/ASTAP/REPT-20: Radio-over-fiber relay link for Indoor communication system  ITU-T G. Sup. 55: Radio-over-fiber (RoF) technologies and their applications |
| **Related Organization** | ITU-T Q2/15  IEC TC 103 WG6 |
| **Timelines** | ASTAP-29: Carrier forward to the next meeting  ASTAP-30: Consider the input contributions  Continue drafting a working document of a draft new APT Report  Review and update work plan as appropriate  Draft liaison documents to external organization as necessary  ASTAP-31: Finalize the draft new APT Report on requirement of transceiver in coherent radio over fiber system and submit to the plenary |

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| **No.** | SACS-5 |
| **Title** | Revision of APT Report on Radio-over-Fiber Relay Link for Indoor Communication System |
| **Document Type** | Report |
| **Group/Chair** | EG SACS / Dr. Hiroyo Ogawa |
| **Editor(s)** | Dr. Atsushi Kanno |
| **Scope** | This Report provides the technical guideline of RoF relay links which connect wireless devices located at wirelessly disconnected areas, and their characteristics at millimeter-wave frequencies |
| **Purpose** | To revise an APT/ASTAP Report on radio-over-fiber relay link for indoor communication system and provide guidance to APT member countries to implement RoF transmission links in the seamless access communication systems. |
| **Related Documents** | APT/ASTAP/REPT-03: Characteristics and requirements of optical and electrical components for millimetre wave Radio on Fiber systems  APT/ASTAP/REPT-11: Wired and wireless seamless connections using millimeter-wave Radio over Fiber technology for resilient access networks  APT/ASTAP/REPT-20: Radio-over-fiber relay link for Indoor communication system  ITU-T G. Sup. 55: Radio-over-fiber (RoF) technologies and their applications |
| **Related Organization** | ITU-T Q2/15  IEC TC 103 WG6 |
| **Timelines** | ASTAP-29: Propose of revision of APT/ASTAP/REPT-20  Start drafting a working document of a draft APT Report  Review work plan as appropriate  ASTAP-30: Consider the input contributions  Continue drafting a working document of a draft revision of APT Report  Review and update work plan as appropriate  ASTAP-31: Consider the input contributions  Continue drafting a working document of a draft revision of APT Report  Review and update work plan as appropriate   Draft liaison documents to external organization as necessary  ASTAP-32: Finalize the draft new APT Report on radio-over-fiber relay link for indoor communication system and submit to the plenary |

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| **No.** | SACS-6 |
| **Title** | Power over fiber system for radio over fiber network |
| **Document Type** | Report |
| **Group/Chair** | EG SACS / Dr. Hiroyo Ogawa |
| **Editor(s)** | Dr. Ashaari Yusof |
| **Scope** | This Report provides technical guidance and requirement of PoF in RoF network, which is part of the wired and wireless seamless access communication systems. PoF components, configurations, applications, key parameters and specifications are also addressed as examples. |
| **Purpose** | To propose Power over Fiber (RoF) component evaluation, system requirement and application for Radio over Fiber (RoF) network communication systems. |
| **Related Documents** | APT/ASTAP/REPT-03(Rev.4): APT Report (2015), Characteristics and requirement of optical and electrical components for millimeter-wave Radio on Fiber systems  APT/ASTAP/REPT-04: APT Report (2011), Technology trends of telecommunications above 100 GHz  APT/ASTAP/REPT-11: APT Report (2013), Wired and wireless seamless connections using millimeter-wave Radio over Fiber technology for resilient access networks  APT/ASTAP/REPT-19: APT Report (2015), Integration of Radio over Fiber with WDM PON for seamless access communication system  APT/ASTAP/REPT-20: APT Report (2015), RoF relay link for indoor communication systems  APT/ASTAP/REPT-25: APT Report (2017) Fronthaul/backhaul using millimeter-wave radio over fiber technologies  APT/ASTAP/REPT-26: APT Report (2017) Multiservice signal transmission using radio over fiber technology  ITU-T G. Suppl.55: ITU-T G-series Supplement RoF on Radio-over-fiber (RoF) technologies and their applications  Draft new Recommendation ITU-T G.RoF, Radio over fiber systems. |
| **Related Organization** | ITU-T Q2/15 |
| **Timelines** | ASTAP-29: Proposal on new work item and work plan  Drafting a working document of a draft new APT Report  ASTAP-30: Consider the input contributions  Continue drafting a working document of a draft new APT Report  ASTAP-31: Consider the input contributions  Continue drafting a working document of a draft new APT Report  ASTAP-32: Finalize the draft new APT Report on power over fiber system for radio over fiber network and submit to the plenary |
| **No.** | SACS-7 |
| **Title** | Field trial of wireless access WDM-PON deployment based on radio over fiber technology |
| **Document Type** | Report |
| **Group/Chair** | EG SACS / Dr. Hiroyo Ogawa |
| **Editor(s)** | Dr. Ashaari Yusof |
| **Scope** | This Report provides the system design and configuration for wireless access WDM-PON field trial for Point to Multipoint (PtmP) wireless UniFi service distribution. |
| **Purpose** | To propose technical guidance, system design and configuration for field trial of wireless access WDM-PON deployment using Radio over Fiber (RoF) technology. |
| **Related Documents** | APT/ASTAP/REPT-03(Rev.4): APT Report (2015), Characteristics and requirement of optical and electrical components for millimeter-wave Radio on Fiber systems  APT/ASTAP/REPT-04: APT Report (2011), Technology trends of telecommunications above 100 GHz  APT/ASTAP/REPT-11: APT Report (2013), Wired and wireless seamless connections using millimeter-wave Radio over Fiber technology for resilient access networks  APT/ASTAP/REPT-19: APT Report (2015), Integration of Radio over Fiber with WDM PON for seamless access communication system  APT/ASTAP/REPT-20: APT Report (2015), RoF relay link for indoor communication systems  APT/ASTAP/REPT-25: APT Report (2017) Fronthaul/backhaul using millimeter-wave radio over fiber technologies  APT/ASTAP/REPT-26: APT Report (2017) Multiservice signal transmission using radio over fiber technology  ITU-T G. Suppl.55: ITU-T G-series Supplement RoF on Radio-over-fiber (RoF) technologies and their applications  Draft new Recommendation ITU-T G.RoF, Radio over fiber systems. |
| **Related Organization** | ITU-T Q2/15  IEC TC 103 WG6 |
| **Timelines** | 2017   * ASTAP-29   + - Proposal on new work item and work plan     - Drafting a working document of a draft new APT Report   2018   * ASTAP-30   + - Consider the input contributions     - Continue drafting a working document of a draft new APT Report     - Prepare a liaison statement to SG15 Q2 if necessary * ASTAP-31   + - Finalize the draft new APT Report on field trial of wireless WDM-PON deployment based on radio over fiber technology and submit to the plenary |

**work plans of wg SA**

**EG IOT**

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| **No.** | IOT-1 |
| **Title** | Report on Smart Cities Use Cases and Technologies in APT region |
| **Output Document Type** | APT Report |
| **Group/Chair** | EG IOT / Dr. Hideo IMANAKA |
| **Editor(s)** | Dr. Gopinath Rao Sinniah |
| **Scope** | The scope of this work item is followings:   * Report of standardization activities regarding ICT/telecommunication networks on Smart Cities * Report on use cases of Smart Cities that can be used to derive requirements on ICT/telecommunication networks in APT member countries |
| **Purpose** | The purpose of this work plan is to develop an APT report which includes information such as use case, technologies, solutions, ecosystem, and standard activities of SDOs etc. relating to Smart Cities. This work item aims to collect information related to Smart Cities of each APT member country such as best practice, and to share them among APT member countries. It also aims to support build up Smart Cities in APT member countries. |
| **Related Document** | ASTAP-29/TMP-04 (Rev.2) |
| **Timelines** | Expected approval time is 2018 |

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| **No.** | IOT-2 |
| **Title** | Other IoT Applications and Services |
| **Output Document Type** | APT report |
| **Group/Chair** | EG IOT/ Dr. Hideo IMANAKA |
| **Editor(s)** | TBD |
| **Scope** | Specific topic on IoT-related applications and /or services such as **Agriculture/Smart Farm** and **Autonomous Vehicle/Connected Car**. |
| **Purpose** | * **Report of standardization activities** regarding on IoT applications and services such as IoT-based Agriculture/Smart Farm and Autonomous Vehicle/Connected Car. * **Report on use cases** of IoT applications and services that can be used to derive requirements on the deployment in APT member countries * **Report of survey results and recommendations** on regional interests of the APT member countries |
| **Related Document** | TBD |
| **Timelines** | Expected approval time is 2019 |

**EG IS**

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| **No.** | IS-1 |
| **Title** | Framework of 4-tier Cloud Access Security Broker for cloud service security |
| **Output Document Type** | Draft recommendation |
| **Group/Chair** | EG IS / Miho Naganuma |
| **Rapporteur (s)** | Kihyo Nam and Heuisu Ryu |
| **Scope** | This document is to provide a framework of 4-tier CASB with following below. Here are some of the following, including what to include in the future.   * Introduction to gap analysis of standard activity * Access Control Protocol for Cloud Service Security in 4-tier CASB * Security control process for efficient cloud service security in 4-tier CASB environments * Secure communication protocols between CASBs in 4-tier CASB settings * Methods to manage security control for CASB and non-CASB secure devices in BYOD(Bring Your Own Device) environments * Simulation and performance evaluation of the framework |
| **Purpose** | This draft document is to propose the framework that has to be included in 4-tier cloud access security broker (CASB), consisted of secure agent, CASB proxy, CASB inline gateway, and CASB secure API.  The discussion and the outcome of this work item are related to efficiency of cloud service security. Many security companies around the world are developing and selling CASB products. CASB products can be divided by four types, but many problems may arise in a heterogeneous CASB environment, such as overlapping security control and inconsistency or desynchronizing of security policy. This document provides the framework of 4-tier CASB solving these problems. |
| **Related Document** | [ASTAP-29/TMP-03](http://www.apt.int/sites/default/files/2017/08/ASTAP-29-TMP-03-Base_text_of_Framework_of_Cloud_Security_Broker_for_cloud_service_security_1.1.docx) |
| **Timelines** | Final output: ASTAP-32 (2019) |

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| **No.** | IS-2 |
| **Title** | Revision of the security guideline (Secure use of IT Devices and services – Protect your data Rev.1) |
| **Output Document Type** | Guideline (Secure use of IT Devices and services – Protect your data Rev.1) |
| **Group/Chair** | EG IS / Miho Naganuma |
| **Rapporteur (s)** | Miho Naganuma, Heuisu Ryu, and Dongil Seo |
| **Scope** | This document is to guide minimum security points that have to be noticed by ICT users. It can be applied to general situation and all ICT users – it is worth understanding that users can protect their data with careful attention and basic knowledge.  The guidelines in this document are for all users of ICT devices such as smartphone, PC, tablet PC, and services such as electronic bank transfer and SNS. |
| **Purpose** | EGIS published this first guideline at the ASTAP-28 meeting.  In ASTAP-29, it was also agreed to revise it to update recent technologies and solutions for security issues/topics accordingly. |
| **Related Document** | [ASTAP-28/OUT-18](http://www.apt.int/sites/default/files/2017/03/ASTAP-28-OUT-18-Final_text_of_the_security_guideline.docx), [ASTAP-29/TMP-23](http://www.apt.int/sites/default/files/2017/08/ASTAP-29-TMP-23-Revised_work_plan_of_EG_IS.docx) |
| **Timelines** | Final output: ASTAP-31 |

**EG MA**

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| **No.** | MA-1 |
| **Title** | Survey of IPTV services in APT region |
| **Output Document Type** | Report, liaison statement |
| **Group/Chair** | EG MA / Hideki Yamamoto |
| **Editor(s)** | Jee-in Kim, Konkuk University, KOREA (Republic of)  Email: jeeink@gmail.com  Hideki Yamamoto, Oki Electric Industry Co., Ltd., Japan  Email: yamamoto436@oki.com |
| **Scope** | Survey of IPTV commercial and/or prototype service. |
| **Purpose** | To assist the basic design of deployment of IPTV services in Asia Pacific region |
| **Related Document** | ASTAP-25/INP-25,  ASTAP-28/TMP-18 “Draft Liaison statements of EG MA” (ASTAP-28/OUT-17 “Liaison Statement to ITU-T SG16, and ITU-T SG9 on IPTV Survey Study”)  ASTAP-29/INP-07 (SG9-LS17) “Reply liaison statement from ITU-T SG9 “  ASTAP-29/INP-07 (SG16-LS37) “Reply liaison statement from ITU-T SG16” |
| **Timelines** | ASTAP-28: Discussion of draft Questionnaire, issuing liaison statement on call for contribution on questionnaire.  ASTAP-29: Approval of Questionnaire  ASTAP-32: Approval of the report |

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| **No.** | MA-2 |
| **Title** | Harmonization of S2ST(Speech-to-Speech Translation) Standardization |
| **Output Document Type** | Recommendation/Report/ Liaison Statement |
| **Relevant EG** | SNLP⇒MA |
| **Editor(s)** | Mr. Shoichi Senda |
| **Scope** | The initial work of S2ST standardization has already completed in ITU-T SG16. It is a question whether additional standardization is required. If additional standardization needs are recognized, appropriate action to keep harmonization with existing standards will be clarified in this work item. |
| **Purpose** | EG SNLP(\*1) was a pioneer of S2ST standardization. The group has been contributed ITU-T SG16 standardization based on various needs in Asia Pacific Region where so many languages are spoken. The purpose of this workplan is reflecting the needs in Asia and Pacific region to all standardization activity relating S2ST service and technology through the harmonization of S2ST standardization. |
| **Related Documents** | LIAISON STATEMENT TO ITU-T SG2 (ASTAP-24/OUT-18)  Liaison Statement from ITU-T SG2 (ASTAP-27/INP-40) |
| **Related Organization** | ITU-T Q21/16, Q24/16 |
| **Timelines** | Issues recognition: any time  Solution study: 1-2 meetings after the issues recognition  Action: depending the solution agreed |

**EG AU**

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| **No.** | AU-1 |
| **Title** | Survey on the Status of Mobile Application Accessibility in the APT Region |
| **Output Document Type** | Report |
| **Relevant EG** | Accessibility & Usability |
| **Editor(s)** | Jee-In Kim, Konkuk University, Hark Sohn and Yong Lee, SCE Inc.  (Republic of Korea) |
| **Scope** | The report describes the current status of mobile application accessibility and its standardization activity in the APT region. It should be discussed that the report can be used to promote the international standardization activities. The definitions of terms - such as mobile application accessibility - are discussed. The problems with the mobile application accessibility and its improvement are discussed. The current status and work plans of the APT countries in the mobile application accessibility are also discussed. |
| **Purpose** | The report aims to provide with general understanding of the current status of the standardization activities for mobile application accessibility in the APT countries. It is also aimed to identify standardization issues of mobile application accessibility in the region. The mobile application developers can have information for their design and implementation of mobile applications which is accessible by people with special needs in the APT countries. The standard developers, who deal with national as well as international standards, are also able to utilize the report. |
| **Related Documents** | [ASTAP-29/TMP-35](http://www.apt.int/sites/default/files/2017/08/ASTAP-29-TMP-35-Questionnaire_on_the_current_status_of_the_APT_countries_mobile_accessibility_final.docx) |
| **Related Organization** | TTA, KATS and NIA, Korea  TTC, JBMIA and JISC, Japan  TISI, NECTEC and NBTC Thailand and the APT countries  ITU-T Q26/16 |
| **Timelines** | ASTAP-27: Initiation and Discussion on the direction of the report  ASTAP-28: Detailed planning and preparing a draft.  e-mail correspondence group: Discussion on the draft  ASTAP-29: Start the survey process  ASTAP-29, ASTAP-30: e-mail correspondence group: Collecting data and preparing the report  ASTAP-30: Discussion and Submission of the report |