**Work Plan of ASTAP**(as of ASTAP-31, June 2019)

| **No.** | **EG** | **Work Plan no.** | **Title** | **Expected Deliverable** | **Duration** | **Contributions at ASTAP-31** |
| --- | --- | --- | --- | --- | --- | --- |
| **Start** | **End** |
| **WG PSC** |
| 1 | BSG | BSG-1 | Handbook to Introduce ICT Solution for the Community in Rural Areas  | Report | ASTAP-28 | ASTAP-31 | INP-37, 38 |
| 2 | BSG-2 | Guideline on referencing Int’l Standards in developing National Standards in the field of ICT | Guideline  | ASTAP-28 | ASTAP-32 | INP-64 |
| 3 | BSG-3 | Guideline on setting up National ICT Standardization Regime | Guideline | ASTAP-29 | ASTAP-34 | N/A |
| 4 | PRS | PRS-1 | Measurement Scenarios and Sampling Methodologies to Assess Quality of Popular Mobile Services | Report  | ASTAP-30 | ASTAP-32 | INP-13 |
| 5 | PRS-2 | Compliance Label of Communication Devices Implemented by APT Member Countries | Report | ASTAP-29 | ASTAP-32 | INP-25 |
| 6 | 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 | INP-45 |
| 7 | GICT&EMF-2 | Status report for standardization activities on e-waste and rare metals | Report  | ASTAP-26 | ASTAP-32 | INP-51, 52 |
| 8 | GICT&EMF-3 | Status Report of Asia Pacific Regional Activities on Human Exposure to EMF (EMF impact) | Report  | ASTAP-26 | ASTAP-32 | INP-54 |
| 9 | GICT&EMF-4 | APT members’ status on the Deployment of Green or Environment friendly ICT project | Report  | ASTAP-28 | ASTAP-32 | INP-30 |

| **No.** | **EG** | **Work Plan no.** | **Title** | **Expected Deliverable** | **Duration** | **Contributions at ASTAP-31** |
| --- | --- | --- | --- | --- | --- | --- |
| 10 |  | GICT&EMF-5 | EMF Information Platform using EMF Area Monitoring System for the better Awareness of General Public | Report | ASTAP-29 | ASTAP-31 | INP-53 |
| 11 | ITU-T | ITU-T-1 | Practical experience in combating counterfeit and stolen mobile devices | Report | ASTAP-31 | ASTAP-34 | INP-09 |
| 12 | ITU-T-2 | Technical solutions for optical cable rural backhaul connectivity together with relevant ITU-T standards and its implementation | Report  | ASTAP-31 | ASTAP-34 | INF-15 |
| **WG NS** |
| 13 | FN&NGN | FN&NGN-1 | VoLTE Interoperability | Report | ASTAP-28 | ASTAP-32 | INP-14 |
| 14 | FN&NGN-2 | Guidelines on application of ICT Trust index to APT Member countries | Report | ASTAP-31 | ASTAP-34 | INP-47 |
| 15 | SACS | SACS-1 | Requirement of Transceiver in Coherent Radio over Fiber System | Report | ASTAP-30 | ASTAP-32 | INP-76 |
| 16 |  | SACS-2 | Revision of APT Report on Radio-over-Fiber Relay Link for Indoor Communication System  | Report | ASTAP-29 | ASTAP-32 | INP-36 |
| 17 |  | SACS-3 | Airport Runway foreign object debris detection system using radio over fiber technologies | Report | ASTAP-31 | ASTAP-33 | INP-10 |
| **WG SA** |
| 18 | IOT | IOT-1 | High-priority Targets in Goal 11 of SDGS for Smart Sustainable Cities in the APT Region | Report | ASTAP-30 | ASTAP-32 | INP-16,17 |
| 19 | IOT-2 | Traffic Accident Record and its Analysis Method’s Guidelines in Asia | Report | ASTAP-30 | ASTAP-32 | INP-39 |
| 20 | IOT-3 | Requirements and Framework of IoT Elderly Care Solutions  | Report | ASTAP-32 | ASTAP-33 | INP-32, 34 |
| 21 | IOT-4 | Guidance for Emergency Medical Services in the Digital Age | Report | ASTAP-31 | ASTAP-34 | INP-06 |
| 22 | IS | IS-1 | Framework of 4-tier Cloud Access Security Broker for cloud service security | Guideline | ASTAP-28 | ASTAP-32 | TMP-13 |
| 23 | IS-3 | Security Guideline for Information and Network Security Management | Guideline | ASTAP-30 | ASTAP-32 | INP-31 |
| 24 | IS-4 | Security Guideline for Open source Software | Guideline | ASTAP-30 | ASTAP-33 | INP-61 |
| 25 | IS-5 | Guideline for IoT Security (for manager) | Guideline | ASTAP-30 | ASTAP-33 | INP-60 |
| 26 | MA | MA-1 | Survey of IPTV services in APT region | Report | ASTAP-28 | ASTAP-32 | N/A |
| 27 | MA-2 | Harmonization of S2ST (Speech-to-Speech Translation) Standardization  | Report/ Recomm/LS | ASTAP-28 | ASTAP-32 | INP-66 |
| 28 | AU | AU-1 | Survey on the Status of Mobile Application Accessibility in the APT Region | Report | ASTAP-27 | ASTAP-32 | INP-49 |
| 29 | AU-2 | Relay Services for Accessible Emergency Communications | Report | ASTAP-31 | ASTAP-34 | INF-21 |
| 30 | AU-3 | Accessible IoT Services in the AP Region | Report | ASTAP-31 | ASTAP-34 | INP-50 |
| 31 | AU-4 | Framework for Evaluating Usability of Natural User Interactions | Report | ASTAP-31 | ASTAP-34 | INP-48 |
| **TOTAL CONTRIBUTIONS TO WORK PLAN** | **32**  |

**DETAIL WORK PLAN OF EG BSG**

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| --- | --- |
| **No.** | BSG-1 |
| **Title** | HANDBOOK TO INTRODUCE ICT SOLUTIONS FOR THE COMMUNITY IN RURAL AREAS |
| **Output Document Type** | Report |
| **Group/Chairman** | EG BSG / Mrs. Nguyen Thi Khanh THUAN |
| **Editor(s)** | Dr. Hideyuki IWATA, NTT, Japan (iwata.hideyuki@lab.ntt.co.jp)Mayumi KOBAYASHI (kobayashi.mayu@jp.fujitsu.com) |
| **Scope** | Collecting ICT pilot project cases including e-Agriculture and Aquaculture, e-Education, e-Environment, e-Healthcare, e-Disaster risk management, Smart City, 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** | The APT Report on Handbook to introduce ICT solutions for the community in rural area (APT/ASTAP/REPT-13 (Rev.2), August 2017) |
| **Related Organization** | The Telecommunication Technology Committee (Working Group on BSG) |
| **Timelines** | Aug. 2014: Approval of APT/ASTAP/REPT-13Sept. 2015: Approval of APT/ASTAP/REPT-13 (Rev.1)ASTAP-28: Issuing a questionnaire on smart city application case studiesASTAP-29: (1) Approval to add the e-aquaculture project (APT/ASTAP/REPT-13 (Rev.2))(2) Postponement of questionnaire on Smart City use case deadlineASTAP-30: Report on summary of Smart City use case responseASTAP-31: Contribution of draft revised HANDBOOK (Rev.3) and move to approvalASTAP-32: Contribution of draft HANDBOOK (Rev.4) to add a case study on e-Healthcare solution and move to approvalAfter ASTAP-32: Continue to update the report with new case-studies relevant to the scope of work item. |

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| **No.**  | BSG-2 |
| **Title** | Guideline on referencing int’l standards in developing national standards in the field of ICT |
| **Output Document Type** | Guideline |
| **Group/Chairman** | EG BSG / Mrs. Nguyen Thi Khanh THUAN |
| **Editor(s)** | Mr. Kihun KIM, TTA, Rep. of Korea (channel@tta.or.kr) |
| **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** | ASTAP-30/INP-33, ASTAP-30/INP-37 |
| **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 standardsASTAP-29 : Submission of a table of contents of the guidelineASTAP-30 : Collecting cases on various countriesASTAP-31: Discussion on a draft guidelineASTAP-31: Submission of the draft guidelineASTAP-32 : Revision of the draft guidelineASTAP-32: Submission of the final output to the Plenary meeting |

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| **No.** | BSG-3 |
| **Title** | Guideline on setting up national ICT standardization regime |
| **Output Document Type** | Guideline |
| **Group/Chairman** | EG BSG / Mrs. Nguyen Thi Khanh THUAN |
| **Editor(s)** | Mr. Shizhuo ZHAO, CCSA, P.R.China (zhaosz@ccsa.org.cn)Mr. Yochi MAEDA, TTC, Japan (yoichi.maeda@s.ttc.or.jp)Mr. Ken SUGAWARA, ARIB, Japan (k-sugawara@arib.or.jp)Mr. Yoshiaki KUMAGAI, ARIB, Japan (y-kumagai@arib.or.jp)Mr. Kihun KIM TTA, Rep. of Korea (channel@tta.or.kr)Mr. Thaib Mustafa, MTSFB, Malaysia (thaibmus@tm.com.my) (**Leader of editors**) |
| **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: Nominating editorASTAP-31: Improving the editors members. Send templates to SDOs to get contribution on establishing and running SDO. ASTAP-32 : Discuss the commonalities and differences of SDO’s models. Develop the framework for the Guideline;ASTAP-33 : Determining the first draft of the Guideline;ASTAP-34: Holding a Standardization Workshop to get feedback from SDOs and Finalizing the draft of the Guideline and publication. |

**DETAIL WORK PLAN OF EG PRS**

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| **No.** | **PRS-1** |
| **Title** | Measurement scenarios and sampling methodologies to assess quality of popular mobile services. |
| **Output Document Type** | Report |
| **Group/Chair** | EG PRS |
| **Editor(s)** | Mr. Binh VUONG THE (vtbinh@mic.gov.vn)Mr. Khoa NGUYEN VAN (nvkhoa@mic.gov.vn) |
| **Scope** | The report presents best practice of measurement scenarios and sampling methodologies to assess quality of popular mobile services. This report covers the following:* Key performance parameters used for end-to-end mobile popular services QoS assessment.
* Case studies of APT regulators policies of QoS measurement.
* Best practices of measurement scenarios used for field testing (includes but not limited to indoor, outdoor, drive-test), sampling methodologies; general requirements for testing systems used in scenarios.
 |
| **Purpose** | The purpose of this work item is to provide best practice of measurement scenarios and sampling methodologies for regulator to assess quality of popular services in the mobile network among APT members. |
| **Related Documents** | - ITU-T E.804 “Quality of service aspects for popular services in mobile networks”.- ITU-T P.863 “Perceptual objective listening quality assessment”.- ITU-T Q.3691 “Framework for Internet related performance measurements”.ASTAP-30/IN-13 |
| **Timelines** | ASTAP-30: Initiation of the work itemASTAP-31:* Conduct survey to collect case examples from APT countries.

ASTAP-32: * Submission of draft of the report skeleton.

ASSTAP-32 to ASTAP 33: Collect and analyse survey data; draft reportASTAP-33: Submission of report. |

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| **No.** | **PRS-2** |
| **Title** | Compliance Label of Communication Devices Implemented by APT Member Countries |
| **Output Document Type** | Report |
| **Expert Group / Chairman** | EG PRS / Mr. Felix Rupokei |
| **Rapporteur(s)** | Ms. Nadia Hazwani Yaakob, MCMC, Malaysia, nadiahazwani.yaakob@cmc.goc.my Mr Ahmad Zulhelmi Ab Hamid, MCMC, Malaysiazulhelmi.hamid@cmc.gov.my  |
| **Scope** | The scope of this report is to cover the implementation of compliance label of communications devices in APT member countries. |
| **Purpose** | The purpose of this work item is to produce a report on the implementation of compliance label of communications devices in APT member countries. |
| **Related Document** | ASTAP-29/IN-58ASTAP-30/IN-29 |
| **Related Organization** | APT Member countries |
| **Timelines** | ASTAP-30: Seek approval and initiation of the new work itemASTAP-31: Seek approval of the draft questionnaireASTAP-32: Finalize the report and present to ASTAP |

**DETAIL WORK PLAN OF 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, MalaysiaMr. 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), ASTAP-31/INP-45, ASTAP-31/TMP-06 |
| **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 presentationsASTAP-29: Update and present Second Draft Document body. Finalize the reportASTAP-30: Update and present draft report on the base of input documentsASTAP-31: Update the working draft report on green data centre and finalize the report. The final draft document was completed.ASTAP-32: Amendment work will be available based on the contribution documents |

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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 KoreaDr. 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.2ASTAP-24-OUT-25ASTAP-25-OUT-06Rev.1ASTAP-28/INP-45ASTAP-29-INP-41, ASTAP-29-INP-66, ASTAP-29-TMP-37ASTAP-30/INP-50. ASTAP-30/TMP-04ASTAP-31/INP-51, ASTAP-31/INP-52, |
| **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 reportASTAP-28: Member countries contributions and presentations request for members’ contribution and draft status report ASTAP-29: Member countries contributions and presentationscase study and best practices ASTAP-30: Member countries contributions and presentations update on the progress of the report Final report was approved in the ASTAP30 closing plenaryASTAP-32: 1st amendment work will be carried out based on the contribution documents and it was agreed in the meeting of EG GICT&EMF, ASTAP31 |

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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, MalaysiaDr.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, ASTAP-27/INP-46, ASTAP-27/INP-47, ASTAP27/INP-09, ASTAP27/TMP-05ASTAP-30/INP-51, ASTAP-30/INP-47, ASTAP-30/INP-49ASTAP-31/INP-54, ASTAP-31/INF-08, ASTAP-31/TMP-57 |
| **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 reportASTAP-28: Member countries contribution and presentations, draft the status reportASTAP-29: Finalize the report and approved in the ASTAP 29ASTAP-31: 1st amendment draft report was prepared and agreed to have an approval ASTAP-32: Presentation and discussion based on the contribution documents  |

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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, MalaysiaMr. 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"ASTAP-29-TMP-10ASTAP-30/INF-12,ASTAP-31/INP-30, ASTAP-31/TMP-07 |
| **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 presentationsASTAP-31: Update and present 2nd draft report  Finalize the report. Extend the deadline to ASTAP-32ASTAP-32: Finalize the report. Require to get contribution documents regarding green and environment friendly ICT project, case studies and best practices |

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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 (Korea)Mr. Abdullah AL Amin (Bangladesh)Mr. Borvorn Marknaka (Thailand) |
| **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 genera public
* ASTAP-30/INP-46, ASTAP-30/INP-48, ASTAP-30/INP-52
* ASTAP-31/INP-53, ASTAP-31/TMP-09-R1
 |
| **Timelines** | * ASTAP-29: Initiation of the project & submission of a table of contents of technical report
* By 2018 ASTAP-30 : Collecting cases on various countries
* By 2019 ASTAP-31: Submission of the final output to the Plenary meeting for approval
* ASTAP-31: Final draft report was agreed to send to the plenary meeting for approval
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**DETAIL WORK PLAN OF EG ITU-T**

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| **No.** | ITU-T-1 |
| **Title** | Practical experience in combating counterfeit and stolen mobile devices |
| **Output Document Type** | Report |
| **Relevant EG** | WG PSC, EG BSG  |
| **Editor(s)** | Kaoru Kenyoshi (kaoru.kenyoshi@nict.go.jp) |
| **Scope** | Collect information challenges faced by APT member countries and share technical and legal solutions and best practices to combat counterfeit and stolen mobile devices among APT member countries. |
| **Purpose** | Providing practical and useful information to mitigate negative impact of counterfeit and stolen mobile devices.  |
| **Related Documents** | Solution for Combating Counterfeit Mobile Handsets: A case of Nepal (ASTAP-31/INP-09) |
| **Related Organization** | ITU-T SG11 |
| **Timelines** | ASTAP-31: Initiate a new work itemASTAP-32: Introduction of ITU-T SG11 activities with regards to combating counterfeit and stolen mobile devicesASTAP-33: Revise draft APT report with contributionsASTAP-34: Finalize APT report  |

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| **No.** | ITU-T-2 |
| **Title** | Technical solutions for optical cable rural backhaul connectivity together with relevant ITU-T standards and its implementation |
| **Output Document Type** | Report |
| **Relevant EG** | WG PSC, EG BSG |
| **Editor(s)** | Kaoru Kenyoshi (kaoru.kenyoshi@nict.go.jp) |
| **Scope** | Collect and share use cases in ASTAP member countries regarding implementation of affordable optical cable broadband connectivity in rural area. |
| **Purpose** | Providing practical and useful information to facilitate local community’s toward getting broadband connectivity in an affordable manner. |
| **Related Documents** | Development of new ITU Standards on High-speed Broadband Services for Rural communities, Global Plan Inc., Japan ([ASTAP-31/INF-15](https://www.apt.int/sites/default/files/2019/06/ASTAP-31-INF-15-_Okamura.docx)) |
| **Related Organization** | ITU-T SG15 |
| **Timelines** | ASTAP-31: Initiate a new work itemASTAP-32: Introduction of ITU-T SG15 activitiesASTAP-33: Revise draft APT report with contributionsASTAP-34: Finalize APT report  |

**DETAIL WORK PLAN OF 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 (NICT)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 networksASTP29/INF11ASAP30/INF20 |
| **Related Organization** | ITU-T Q2/11, Q11/11GSMA3GPPETSI |
| **Timelines** | ASTAP28: Initiate a work itemASTAP29: Introduction of ITU-T SG11 activitiesASTAP31: Draft APT reportASTAP32: Final APT report |

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| **No.** | FN&NGN-2 |
| **Title** | Guidelines on application of ICT Trust index to APT members countries |
| **Document Type** | Report |
| **Group/Chair** | FN&NGN-EG / Dr. Joon Won LEE  |
| **Editor(s)** | Dr. Joon Won LEE |
| **Scope** | To make the guidelines of ICT trust index application to APT members countries. |
| **Purpose** | To emphasize the importance of ICT trust area.To facilitate the application of trust index to APT member countries. |
| **Related Documents** | Recommendation ITU-T Y.3052 : Overview of trust provisioning for information and communication technology infrastructure and servicesDraft Recommendation Y.trust-index: Trust index for ICT infrastructures and services |
| **Related Organization** | ITU-T SG13 (Q16/13) |
| **Timelines** | ASTAP31: Initiate a work itemASTAP32: Follow-up ITU-T SG13 activitiesASTAP33: Draft APT reportASTAP34: Final APT report |

**DETAIL WORK PLAN OF EG SACS**

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| **No.** | SACS-1 |
| **Title** | Requirement of transceiver in coherent radio over fiber system |
| **Document Type** | Report |
| **Group/Chairman** | SACS-EG / Dr. Hiroyo OGAWA |
| **Editor(s)** | Dr. Ukrit MANKONG, Thailand (drukrit@gmail.com) |
| **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 systemsAPT/ASTAP/REPT-11: Wired and wireless seamless connections using millimeter-wave Radio over Fiber technology for resilient access networksAPT/ASTAP/REPT-20: Radio-over-fiber relay link for Indoor communication systemITU-T G. Sup. 55: Radio-over-fiber (RoF) technologies and their applications |
| **Related Organization** | ITU-T SG15 (Q2/15)IEC (TC 103 WG6) |
| **Timelines** | 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

ASTAP-32* 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-2 |
| **Title** | Revision of APT Report on Radio-over-Fiber Relay Link for Indoor Communication System |
| **Document Type** | Report |
| **Group/Chairman** | EG SACS / Dr. Hiroyo OGAWA |
| **Editor(s)** | Dr. Atsushi KANNO, NICT, JAPAN (kanno@nict.go.jp) |
| **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 millimeter wave Radio on Fiber systemsAPT/ASTAP/REPT-11: Wired and wireless seamless connections using millimeter-wave Radio over Fiber technology for resilient access networksAPT/ASTAP/REPT-20: Radio-over-fiber relay link for Indoor communication systemITU-T G. Sup. 55: Radio-over-fiber (RoF) technologies and their applications |
| **Related Organization** | ITU-T SG15 (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-3 |
| **Title** | AIRPORT RUNWAY FOREIGN OBJECT DEBRIS DETECTION SYSTEMS USING RADIO OVER FIBER TECHNOLOGIES |
| **Document Type** | Report |
| **Group/Chairman** | EG SACS / Dr. Hiroyo OGAWA |
| **Editor(s)** | Dr. Sevia Mahdaliza Idrus, Malaysia (sevia@utm.my) |
| **Scope** | This report provides the technical specifications of the RoF network for the FOD detection system. Specific specification of the network in the FOD detection system is also provided to detect the small FODs under tropical weather conditions. |
| **Purpose** | To provide technical guidance to APT member countries to implement RoF transmission links in the FOD detection system. |
| **Related Documents** | APT/ASTAP/REPT-03: Characteristics and requirements of optical and electrical components for millimeter wave Radio on Fiber systemsAPT/ASTAP/REPT-11: Wired and wireless seamless connections using millimeter-wave Radio over Fiber technology for resilient access networksRecommendation ITU-T G.9803: Radio over Fiber Systems |
| **Related Organization** | ITU-T SG15 (Q2/15) |
| **Timelines** | ASTAP-31* + - Proposal on new work item and work plan
		- Drafting a working document of a draft new APT Report

ASTAP-32* + - 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-33* + - Finalize the draft new APT Report and submit to the plenary
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**DETAILS Work plan OF EG IOT**

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| **No.** | IOT-1 |
| **Title** | Report on High-Priority Targets in Goal 11 of SDGs for Smart Sustainable Cities in the APT Region |
| **Output Document Type** | APT Report |
| **Group/Chair** | EG IOT / Dr. Toru Yamada |
| **Editor(s)** | Dr. Masahiro Serizawa |
| **Scope** | The scope of this work item is followings:- This document reports high-priority targets in the 11th goal of Sustainable Development Goals (SDGs) for APT member countries. - This document reports specific actions and policies of the member countries toward the high-priority targets. |
| **Purpose** | A lot of cities have introduced Smart Sustainable City solutions in order to solve social issues. Since the social issues are different from city to city, various Smart Sustainable City solutions have been developed for the different social issues.The Sustainable Development Goals (SDGs) identify 17 goals and 169 targets for social and economic development issues to be solved by 2030. The 11th goal of the SDGs identifies ten targets for sustainability of cities and humans.In the APT region, there are a lot of countries with various social issues. It is considered that each country has different priority levels regarding the targets defined by SDGs. For providers of Smart Sustainable City solutions, it will be important to recognize high-priority targets of countries when they consider to develop optimal solutions for each country. It is also useful for country/city government to know status of neighbouring regions when it makes policies to achieve the targets. |
| **Related Document** | ASTAP-30/TMP-10 |
| **Timelines** | ASTAP-32, 2020 |
| **Relevance to APT Strategic Plan** | 1.4, 2.1, 2.3, 6.2, 8.1, 8.6 |

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| **No.** | IOT-2 |
| **Title** | Traffic Accident Record and its Analysis Method’s Guidelines in Asia |
| **Output Document Type** | Report |
| **Relevant EG** | EG IoT |
| **Editor(s)** | Dr. Chang-Yi Luo (TTC, cy-luo@jp.toyota-itc.com) |
| **Scope** | The scope of this work item is followings:1) to survey information on:- Traffic accident record status in APT member countries- Expect use case to analysis and analysis methods in APT member countries;2) and to show guidelines for necessary record field of traffic accident record and its analysis methodsThe guideline describes the necessary record field of traffic accident and its analysis methods. With the necessary record field, counter-measure for traffic accident is able to be identified through analysis methods of guideline. The guideline will provide common record and analysis approach for traffic accident in Asia, and counter-measure is thus able to be shared among APT member countries.  |
| **Purpose** | In order to introduce Traffic Accident Record and its Analysis Method’s Guidelines in each APT member country, the purposes of this APT report are: - Report on traffic accident record status in APT member countries- Report on use case to analysis and analysis methods in APT member countries- Report of traffic accident record and its analysis method’s Guidelines in APT member countries |
| **Related Documents** | [ASTAP-30/TEP-09] The Draft APT Report on Traffic Accident Record and its Analysis Method’s Guidelines in Asia |
| **Related Organization** | The Telecommunication Technology Committee |
| **Timelines** | ASTAP-30 (2018): Initiation of the projectASTAP-31 (2019): Submission of the draft guidelineASTAP-31 (2019): Surveying traffic accident record from various countries, and discussing the necessary common field of record for analysis methods into guidelineASTAP-32 (2020): Submission of the revised draft guidelineASTAP-32 (2020): To ask approval for the final output at plenary |

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|  **No.** | IOT-3 |
| **Title** | Requirements and Framework of IoT Elderly Care Solution |
| **Output Document Type** | APT Report |
| **Group/Chair** | EG IOT / Dr. Toru Yamada |
| **Editor(s)** | Dr. Gopinath Rao Sinniah |
| **Scope** | The scope of this work item is followings:* Introduction to Elderly care ecosystem including the need for elderly care solutions
* Use cases of elderly care solution
* Requirements of the elderly care solution
* Existing elderly care solutions that have been deployed and challenges within the scope of implementation
 |
| **Purpose** | Monitoring of elderly people remotely would reduce the anxiety of the family members. As the aging nations are increasing, it is crucial that a proper system is in place to monitor the elderly people. As such, it is important to provide the requirements and framework of an IoT elderly care use case that will benefit countries. The purpose of this are* Provide report on the use cases of Elderly care solution
* Provide report on the requirements of Elderly care solution
* Provide report on existing solutions from APT member countries
 |
| **Related Document** | ASTAP-31/TMP : The Draft APT Report on Requirements and Framework of IOT Elderly Care Solutions |
| **Timelines** | ASTAP-32 (2020): Submission of the revised draftASTAP-33 (2021): To ask approval for the final output at plenary |
| **Relevance to APT Strategic Plan** |  |

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|  **No.** | IOT-4 |
| **Title** | Guidance for Emergency Medical Services in the Digital Age  |
| **Output Document Type** | APT Report |
| **Group/Chair** | EG IOT / Dr. Toru Yamada |
| **Editor(s)** | Dr. Teerawat Issariyakul |
| **Scope** | The scope of this work item is followings:Provide information of Emergency Medical Service in member countries. The EMS policy makers can use the blueprint as a starting point, and customize the blueprint according to the context of their countries.  |
| **Purpose** | To providing a best practice for integrating digital technology into pre-hospital emergency care. |
| **Related Document** | ASTAP-31/INP-06 : An Enterprise Architecture for Emergency Medical Services in the Digital Age |
| **Timelines** | ASTAP-31 (2019) Project initializationASTAP-32 (2020) Survey, collect, and analyze related standards ASTAP-33 (2021) Consider input contributionASTAP-34 (2022) Submission of report |
| **Relevance to APT Strategic Plan** |  |

**DETAILS WORK PLAN OF EG IS**

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| **No.** | IS-1 |
| **Title** | Guidelines for Framework of 4-tier Cloud Access Security Broker for cloud service security |
| **Output Document Type** | Guideline |
| **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 and overload of security control, inconsistency or desynchronizing of security policy, and bypassing. This document provides the framework of 4-tier CASB solving these problems. |
| **Related Document** | [ASTAP-31/TMP-13](https://www.apt.int/sites/default/files/2019/06/ASTAP-31-TMP-13-4th_document_version_of_Framework_of_Cloud_Security_Broker_for_cloud_service_security_2_0.docx) |
| **Timelines** | Final output: ASTAP-32 (2020)  |

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| **No.** | IS-2 |
| **Title** | The Security Guideline: Guideline for Security use of IT Devices and Services (Version 2.0) |
| **Output Document Type** | Guideline  |
| **Group/Chair** | EG IS / Miho Naganuma |
| **Rapporteur (s)** | Dongil Seo, Heuisu Ryu and Miho Naganuma, |
| **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-31/TMP-51](https://www.apt.int/sites/default/files/2019/06/ASTAP-31-TMP-51-Base_text_of_security_guidelines_for_ITdevices__services-revision.docx)ASTAP-31/OUT- |
| **Timelines** | ASTAP-31 (2019) |

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| **No.** | IS-3 |
| **Title** | Security Guidelines for Information and Network Security Management |
| **Output Document Type** | Guideline |
| **Group/Chair** | EG IS / Miho Naganuma |
| **Rapporteur (s)** | Thaib Mustafa and Rafeah Omar |
| **Scope** | The scope covers the security guideline for establishing, implementing, maintaining and continually improving an information and network security management within the context of an organization. |
| **Purpose** | The purpose of this work item is to provide a security guidelines that are generic and intended to be applicable to all organizations, regardless of size, type or nature. This guideline also includes the assessment and treatment of information security risks tailored to the needs of the organization. |
| **Related Document** | ASTAP-31/TMP- |
| **Timelines** | ASTAP-32 (2020) |

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| **No.** | IS-4 |
| **Title** | Security guidelines for Open Source Software  |
| **Output Document Type** | Guideline  |
| **Group/Chair** | EG IS / Miho Naganuma |
| **Rapporteur (s)** | YongJoon Joe and DongMyung Shin |
| **Scope** | This document summarizes and arranges various information security technologies, which can be included in OSS, and security management guideline. |
| **Purpose** | This document is to enhance technically understanding level of developers who use OSS. It also provides references on OSS security to organizations that develop and provide software solution.  |
| **Related Document** | [ASTAP-31/TMP-32](https://www.apt.int/sites/default/files/2019/06/ASTAP-31-TMP-32-OpenSourceGuideline.docx) |
| **Timelines** | ASTAP-33 (2021) |

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| **No.** | IS-5 |
| **Title** | Guidelines for IoT Security (for manager) |
| **Output Document Type** | Guideline  |
| **Group/Chair** | EG IS / Miho Naganuma |
| **Rapporteur (s)** | Heuisu Ryu and Dongil Seo |
| **Scope** | This document summarizes the IoT international organizations and associations and IoT security threats. Besides, this document summarizes various security technologies, considerations for initiating IoT solutions and IoT solution management which can be included in IoT solution. |
| **Purpose** | This document is for better understanding of IoT security technologies for managers using IoT solution. Besides, this document is for providing the technical references of IoT security to IoT solution developing companies. |
| **Related Document** | ASTAP-29/INP-45, ASTAP-30/INP-53 and ASTAP-31/INP-60 |
| **Timelines** | Final output: ASTAP-33 (2021) |

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**DETAILS WORK PLAN OF 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.comHideki 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 QuestionnaireASTAP-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
* APT Report preparation:
1. ASTAP-30: Initial draft
2. ASTAP-31: Update based on addressed comments
3. ASTAP-32: Approval for publication
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(\*1) EG SNLP was merged into EG MA during ASTAP-27.

**DETAILS WORK PLAN OF EG AU**

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| **No.** | AU-1 |
| **Title** | Survey on the Status of Mobile Application Accessibility in the AP Region |
| **Output Document Type** | Report |
| **Relevant EG** | Accessibility & Usability |
| **Editor(s)** | Yong Lee, Center for Accessible ICT, Hark Sohn, SCE Inc, and Jee-In Kim, Konkuk University (Republic of Korea) |
| **Scope** | The report describes the status of mobile application accessibility and its standardization activity in the APT region. The report can be used to promote the mobile accessibility strategies of the APT countries and the international standardization activities. The current issues with the mobile application accessibility and its improvement are discussed. The 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 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 persons with disabilities 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-31/INP-49 “Draft Report of Surveying Mobile Accessibility in the APT Region” |
| **Related Organization** | TTA, KATS and NIA, KoreaTTC, JBMIA and JISC, Japan TISI, NECTEC and NBTC, Thailand and the APT countriesITU-T Q26/16 |
| **Timelines** | 2016 ASTAP-27: Initiation and discussion on the direction of the report2017 ASTAP-28: Detailed planning and preparing a draft.2017 e-mail correspondence group: Discussion on the draft2017 ASTAP-29: Start the survey process2017 – 18: e-mail correspondence group: Collecting data and preparing the report2018 ASTAP-30: Discussion and submission of the preliminary report2018 – 19: Collecting data from more APT countries and preparing the final report2019 ASTAP-31: Discussion and revision of the report 2020 ASTAP-32: Submission of the final report |

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| **No.** | AU-2 |
| **Title** | Relay Services for Accessible Emergency Communication  |
| **Output Document Type** | Report |
| **Relevant EG** | Accessibility & Usability |
| **Editor(s)** | Wantanee Phantachat, Nattanun Thatphithakkul, Analanda Chotimongkol, NSTDA (Thailand), Yong Lee, Center for Accessible ICT (Republic of Korea) and Jee-In Kim, Konkuk University (Republic of Korea) |
| **Scope** | The report describes the status and the use cases of relay services for accessible emergency communication in the AP region. The report can be used to promote relay services for accessible emergency communication in the APT countries. The current issues, use cases and their improvement are discussed. The status and work plans of the APT countries in relay services for accessible emergency communication are also discussed. |
| **Purpose** | The report aims to provide with general understanding of the status and the use cases of relay services for accessible emergency communication in the AP countries. It is also aimed to identify standardization issues of the relay services for accessible emergency communication in the region. The relay service for accessible emergency communication providers can have information for their operations and improvements of the relay services for emergency communication accessible by persons with hearing and speaking impairments 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-31/INF-21 “Relay Service with Accessible Emergency Communication” |
| **Related Organization** | TTA, KATS and NIA, KoreaTTC, JBMIA and JISC, Japan TISI, NECTEC and NBTC, Thailand and the APT countriesITU-T Q26/16 |
| **Timelines** | 2019 ASTAP-31: Initiation and discussion on the direction of the report2020 ASTAP-32: Approval of a questionnaire, detailed planning and preparing a draft.2021 ASTAP-33: Collection of inputs from the AP countries2022 ASTAP-34: Discussion and submission of the final report |

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| **No.** | AU-3 |
| **Title** | Accessible IoT Services in the AP Region |
| **Output Document Type** | Report |
| **Relevant EG** | Accessibility & Usability |
| **Editor(s)** | Yong Lee, Center for Accessible ICT, Hark Sohn, SCE Inc., and Jee-In Kim, Konkuk University (Republic of Korea) |
| **Scope** | The report describes examples of accessible Internet of Things (IoT) and Smart Cities applications that provides useful services to citizens including persons with disabilities, those with age-related disabilities and those with specific needs. The use cases may include specific services for persons with disabilities as well as services for everyone that provides accessibility features for persons with disabilities. |
| **Purpose** | The report aims to provide use cases of possible application that provide accessibility services. There are many possible IoT services in various environments that provide accessibility services such as home automation services, IoT for work environments, transportation services, etc. For example, home automation services can increase the capacity for independent living for persons with disabilities, persons with age related disabilities and those with specific needs. The report shall provide understanding IoT services for persons with disabilities, and also promote and address the necessity and importance of accessibility considerations in IoT services developments. |
| **Related Documents** | ASTAP-31/INP-50 “Overview of ITU-T Recommendation Y.4204 Accessibility Requirements for Internet of Things Applications and Services” |
| **Related Organization** | ETRI, TTA and NIA, KoreaTTC, JBMIA and JISC, Japan TISI, NECTEC and NBTC, Thailand and other APT countriesITU-T SG20/Q2, SG16/Q26 |
| **Timelines** | 2019 ASTAP-31: Initiation and discussion on the direction of the report2020 ASTAP-32: Approval of a questionnaire, detailed planning and preparing a draft.2021 ASTAP-33: Collection of use cases from the APT countries2022 ASTAP-34: Publication of final report |

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| **No.** | AU-4 |
| **Title** | Framework for Evaluating Usability of Natural User Interactions  |
| **Output Document Type** | Report |
| **Relevant EG** | Accessibility & Usability |
| **Editor(s)** | Jamil Hussain, Fahad Ahmed Satti, Muhmmand Asif Razzaq, Cam-Hao Hua, Sungyoung Lee, Kyung Hee University and Jee-In Kim, Konkuk University (Republic of Korea) |
| **Scope** | The report describes a framework, which effectively incorporates the usability evaluation aspects for efficiency, effectiveness, and satisfaction, in order to produce a holistic usability index for any natural user interactions (NUI). Although this framework may be applicable in most general contexts, it is specially focused on evaluating usability of NUIs |
| **Purpose** | The report aims to provide with a framework for evaluating usability of NUI. The usability determines the measure of successful completion of pre-specified tasks, by some specific users, in a controlled environment. The usability evaluations typically, focus on the “efficiency,” “effectiveness,” and “satisfaction”. * “Efficiency” measures resources to perform a specific task such as time taken by participants to complete each task.
* “Effectiveness” is universally considered as the ability to complete the tasks by the participants and termed as the fundamental usability metric.
* “Satisfaction” measures the user’s comfort level experience along with participants’ acceptance.

While each one of these is critically important and provides a stable measure, there is a lack of any standardized methodology for identifying and applying the relationship between these aspects especially in terms of categorizing and amalgamating user and system perspectives. The framework of usability evaluation should be standardized to improve performance and quality of NUI. If policy makers would like to make guidelines or requirements of an IoT environment or a smart city, the framework for evaluating usability of NUI should be necessary. |
| **Related Documents** | ASTAP-31/INP-48 “A Framework for Evaluating Usability of Natural User Interactions” |
| **Related Organization** | TTA, KATS and ETRI, KoreaTTC, JBMIA and JISC, Japan TISI, NECTEC and NBTC, Thailand and the APT countriesITU-T Q26/16ISO/IEC JTC1 SC35 |
| **Timelines** | 2019 ASTAP-31: Initiation and discussion on the direction of the report2020 ASTAP-32: Detailed planning and preparing a draft.2021 ASTAP-33: Collection of use cases from the APT countries2022 ASTAP-34: Discussion and submission of the final report |