**SUMMARY OF ASTAP WORK PLANS**

**(As of ASTAP-35)**

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| **Number** | **Title** | **EG** | **Target**  |
| 1 | Handbook to Introduce ICT Solutions for the community in rural areas(Rev. 6) | BSG | ASTAP-36 |
| 2 | Guideline on referencing int’l standards in developing national standards in the field of ICT | BSG | ASTAP-36 |
| 3 | Guideline on setting up national ICT standardization regime | BSG | ASTAP-36 |
| 4 | Practical experience in combating counterfeit and stolen mobile devices | ITU-T | ASTAP-36 |
| 5 | Technical solutions for optical cable rural backhaul connectivity together with relevant ITU-T standards and its implementation | ITU-T | ASTAP-36 |
| 6 | Status report for standardization activities on e-waste and rare metals | GICT&EMF | ASTAP-35 |
| 7 | Status report of Asia Pacific regional activities on human exposure to EMF (EMF impact) | GICT&EMF | ASTAP-35 |
| 8 | APT members’ status on the deployment of green or environment friendly ICT project | GICT&EMF | ASTAP-36 |
| 9 | ICT for the efficient management of Environment incl. e-Waste, Climate Change, and Circular Economy | GICT&EMF | ASTAP-36 |
| 10 | Guidelines on application of ICT Trust index to APT members countries | FN&NGN | ASTAP-37 |
| 11 | APT Report on AI/ML for networking | FN&NGN | ASTAP-36 |
| 12 | Guidelines for 5G Network Sharing and Co-construction | FN&NGN | ASTAP-36 |
| 13 | Future services in beyond 5G era | FN&NGN | ASTAP-37 |
| 14 | Local-area resilient information sharing and communication systems | DRMRS | ASTAP-37 |
| 15 | Cascaded free space optical and millimeter-wave communications system for mobile transport and indoor access network | SACS | ASTAP-36 |
| **Number** | **Title** | **EG** | **Target**  |
| 16 | Seamless access systems for wideband THz services | SACS | ASTAP-37 |
| 17 | Fiber-wireless bridge system for seamless access network in high-frequency band | SACS | ASTAP-38 |
| 18 | Report on High-Priority Targets in Goal 11 of SDGs for Smart Sustainable Cities in the APT Region | IOT | ASTAP-35 |
| 19 | Requirements and Framework of IoT Elderly Care Solution | IOT | ASTAP-36 |
| 20 | Guidance for Emergency Medical Services in the Digital Age | IOT | ASTAP-36 |
| 21 | IoT Ecosystem Development Activities in APT Member Countries  | IOT | ASTAP-37 |
| 22 | The Security Guideline: Guideline for Security use of IT Devices and Services (Revision) | IS | ASTAP-36 |
| 23 | Guidelines for IoT Security (for manager) | IS | ASTAP-37 |
| 24 | Survey of IPTV services in APT region | MA | ASTAP-33 |
| 25 | Guideline of decentralized identity (DID) technology and its application | MA | ASTAP-37 |
| 26 | Problems and requirements on CDN services in COVID-19 in Asia-Pacific region | MA | ASTAP-36 |
| 27 | Metaverse use cases in Asia-Pacific region | MA | ASTAP-36 |
| 28 | Relay Services for Accessible Emergency Communication | AU | ASTAP-37 |
| 29 | Guide on developing accessible mobile application for the APT countries | AU | ASTAP-37 |
| 30 | Accessible IoT Applications and Smart City Services in the AP Region | AU | ASTAP-37 |
| 31 | Framework for Evaluating Usability of Natural User Interactions  | AU | ASTAP-37 |

**Work plans OF 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 |
| **Group/Chairman** | EG BSG / Mr. Dao Ngoc TUYEN |
| **Editor(s)** | Masatoshi Mano, TTC Japan (mano@s.ttc.or.jp) |
| **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 valuable 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 areas [APT/ASTAP/REPT-13 (Rev.4), June 2021] |
| **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-33: Contribution of draft HANDBOOK (Rev.4) to add a case study on the e-Healthcare solution and move to approvalASTAP-35: Contribution of draft HANDBOOK (Rev.5) to add a case study on IoT and RFID and move to approvalASTAP-36: Contribution of draft HANDBOOK (Rev.6) to add a case study on the e-Agriculture solution using IoT and move to approval |

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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/Chairman** | EG BSG / Mr. Dao Ngoc Tuyen |
| **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-33: Discussion of the draft guideline and submission of the final output to the Plenary meetingAfter ASTAP-33: Continue to update the guideline with new case-studies relevant to the scope of work item.ASTAP-36: Finalize of guideline this work item (subject to no input documents this work item will be removed) |

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| **Number** | **BSG-3** |
| **Title** | **Guideline on setting up national ICT standardization regime** |
| **Output Document Type** | Guideline  |
| **Group/Chairman** | EG BSG / Mr. Dao Ngoc TUYEN |
| **Editor(s)** | Mr. Shizhuo ZHAO, CCSA, P.R.China (zhaosz@ccsa.org.cn)Mr.Iwata Hideyuki, TTC, Japan (iwata@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. Ratnam N.A., MTSFB, Malaysia (ratnamna@gmail.com)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-34: Organize Standardization workshop for information from SDOsASTAP-35: Holding a Standardization Workshop under EG BSG to get feedback from developing countries and identify possible way forward ASTAP-36: Developing initial content of the first draft of guideline based on the contributions from APT members |

**Work plans OF EG ITU-T**

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| **Number** | **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-36: Finalize APT report  |

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| **Number** | **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-36: Finalize APT report  |

**WORK PLANs OF EG GICT & EMF**

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| **No.** | **GICT&EMF-1** |
| **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 |
| **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,ASTAP-34/INP-33ASTAP-35/INP-09, 10  |
| **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 presentations case study and best practices ASTAP-30: Final report was approved in the ASTAP30 closing plenary and published as APT-ASTAP-REPT-30-Ewaste and Rare metalsASTAP-33: Discussion to prepare the 1st amendment and agreement to carry it out at the ASTAP 34ASTAP-34: 1st amendment task will be carried out. Contributions are needed to update the contents of the report.ASTAP-35: Draft 1st amendment version of the report 30 was prepared for approval |

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| **No.** | **GICT&EMF-2** |
| **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)** | 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, 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-57ASTAP-34/INP-22, ASTAP-34/INP-23ASTAP-35/INP-11 |
| **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 approved in the ASTAP plenary and published as APT-ASTAP-REPT-29-R1-Human exposure to EMFASTAP-33: Discussion to update the report and agreement to carry it out at the next ASTAP 34 meetingASTAP-34: Develop the draft 2nd amendment of the report based on the input documents from the member countries for approval at the Plenary of ASTAP34 ASTAP-35: Develop the 2.1 revision of the report including the 5GNR EMF measurement result implemented in Korea and sent to ASTAP 35 plenary for approval |

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| **No.** | **GICT&EMF-3** |
| **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 |
| **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-07ASTAP-34/INP-19ASTAP-35/INP-50, 56 |
| **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-34: Presentation on the status of the work itemThe EG meeting agreed to produce a Questionnaire again to circulate it to member countries to collect related case studies and best practicesASTAP-35: Reviewed the responses questionnaireASTAP-36: Draft final report of the WI |

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| **No.** | **GICT&EMF-4** |
| **Title** | **ICT for the efficient management of Environment incl. e-Waste, Climate Change, and Circular Economy** |
| **Output Document Type** | Contributions to ITU-T SG5Survey results from ASTAP membership countries on the issues of Res.73 and Res.79 |
| **Relevant EG** | EG GICT&EMF |
| **Editor(s)** | Dr. Kishik PARK (kishikpark@gmail.com) |
| **Scope** | The scope of this work item is followings:Areas for contributions to ITU-T SG5:- Role of Information and Communication Technologies for the efficient management of Environment incl. e-Waste, Climate Change, and Circular Economy - Common opinion on important issues incl. the circular economy from AP region regarding the Res.73 - Common opinion on important issues incl. the “developing countries” related points from AP region regarding the Res.73 Survey results from ASTAP membership countries on the issues of modified Res.73 and Res.79 in WTSA\_20 |
| **Purpose** | To actively respond to major important issues of the WTSA Res.73 and Res. 79 by promoting regional discussions and collection of opinions on those issues from ASTAP membership countries. regionally on those issues. |
| **Related Documents** | Modified WTSA Res.73 and Res.79WTSA20 Proceedings 2000V2E5 |
| **Timelines** | ASTAP-34: Approvement of setting up a New Work Item on “ICT for the efficient management of Environment incl. e-Waste, Climate Change, and Circular Economy” ASTAP-35: Approvement of draft questionnaire for the survey on the important issues of WTSA Res.73 and Res. 79 ASTAP-36: Survey results report, Contributions to ITU-T |

**WORK PLANs OF EG FN&NGN**

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| **Number** | **FN&NGN-1** |
| **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-TY.3052: Overview of trust provisioning for information and communication technology infrastructure and services.Recommendation Y.3057(ex Y.trust-index) : A trust index model for information and communication technology infrastructures and services(Approved at Dec 2021)Recommendation Y.trust-arch.Functional architecture for trust enabled service provisioning(planed 07/2023) |
| **Related Organization** | ITU-T SG13 (Q16/13) |
| **Timelines** | ASTAP31: Initiate a work itemASTAP32: Follow-up ITU-T SG13 activitiesASTAP33: Follow-up ITU-T SG13 activitiesASTAP34: Review of ITU-T RecommendationsASTAP35: Review of ITU-T Recommendations ASTAP36: Draft reportASTAP37: Final report |

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| **Number** | **FN&NGN-2** |
| **Title** | **APT Report on AI/ML for networking** |
| **Output Document Type** | Report |
| **Relevant EG** | EG FN&NGN |
| **Editor(s)** | Mr. Kazunori TANIKAWA (NICT, kaz.tanikawa@nict.go.jp) |
| **Scope** | The scope of this work item is followings:* 1) to survey information on technical standards on AI/ML for networking, which are mainly in ITU-T. Detailed aspects are;

- Expect use case using AI/ML techniques for networking;- Key technologies for AI/ML for networking;- General architectural frameworks for AI/ML for networking.* 2) and to show guidelines for the usage of AI/ML for networking in APT member countries.
 |
| **Purpose** | The purpose of this work item is to introduce technical standards including use cases on AI/ML for networking for practical usage in APT member countries. |
| **Related Documents** | * ITU-T Y.3172 “Architectural framework for machine learning in future networks including IMT-2020”;
* ITU-T Y.Sup55 : ITU-T Y.3170-series - Machine learning in future networks including IMT-2020: use cases;
* ASTAP-33/INP-16;
* ASTAP-33/INF-03;
* ASTAP-34/INP-29.
 |
| **Related organization** | ITU-T SG2, 5, 9, 11, 12, 13, 15, 16, 20, ISO/IEC, 3GPP |
| **Timelines** | ASTAP-33: Initiation of the work itemASTAP-34: Submission of draft reportASTAP-35: No discussion ASTAP-36: Submission of finalized report |

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| **Number** | **FN&NGN-3** |
| **Title** | **Guidelines for 5G Network Sharing and Co-construction** |
| **Output Document Type** | Report |
| **Relevant EG** | EG FN&NGN |
| **Editor(s)** | Ms. Hua Zhang(China Telecom, zhanghua111@chinatelecom.cn)Mr. Hang SU (China Telecom, suh6@chinatelecom.cn) |
| **Scope** | The scope of this work item is followings:1)Research topic of 5G Network sharing and Co-construction* . Detailed aspects are;

- Shared network standards and classification- Key technologies of 5G network sharing and co-construction - Planning and construction of 5G network sharing and co-construction - Regulation and accounting/settlement of 5G network sharing and co-construction - Operation and optimization of 5G network sharing and co-construction - Prospect of global mobile communications network sharing and co-construction* 2) the usage of network sharing in APT member countries.
 |
| **Purpose** | The purpose of this work item is to introduce 5G Network sharing and Co-construction technologies and relevant standards including use cases on 5G Network sharing and Co-construction for practical usage in APT member countries. |
| **Related Documents** | * ASTAP-34/INP-28;
* ASTSP-35/INP-49(updated one is ASTAP-35/TMP46 )
 |
| **Timelines** | ASTAP-34: Initiation of the work item and submission of draft reportASTAP-35: Continuous surveying of key technologies and operation issues on 5G Network sharing and Co-construction in various APT member countriesASTAP-36: Submission of finalized report |

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| **Number** | **FN&NGN-4** |
| **Title** | **Future services in beyond 5G era**  |
| **Output Document Type** | Report  |
| **Relevant EG** | EG FN&NGN  |
| **Editor(s)** | Hideki Yamamoto (OKI) |
| **Scope** | Collecting use cases of B5G network services and report them. The scope of the first target is about the services by autonomous network, autonomous mobile robots, and CDN functions over B5G using virtualized network infrastructure.43 |
| **Purpose** | Providing the actual and useful information to start the related new standardization project. |
| **Related Documents** | * ASTAP-34/INP-34;
* ASTAP-34/INP-35.
* ASTAP-35/INP54(Questionnaire, Updated one is ASTAP35/TMP43)
 |
| **Related Organization** | ITU-T FG-AN |
| **Timelines** | ASTAP-34 (April 2022): Approval of new work plan.ASTAP-35 (April 2023): Approval of questionnaire ASTAP-36 (TBD 2024/5): Discussion of the draft report based on the answers to questionnaire .ASTAP-37 (TBD 2025/5): Approval of finalized draft APT report |

**WORK PLAN OF EG DRMRS**

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| **Number** | **DRMRS-1** |
| **Title** | **Local-area resilient information sharing and communication systems** |
| **Output Document Type** | APT Report |
| **Relevant EG** | EG DRMRS |
| **Editor(s)** | Dr. Toshiaki KURI (NICT, kuri@nict.go.jp)Dr. Masugi INOUE (NICT, inoue@nict.go.jp) |
| **Scope** | The scope of this work item are follows:1) to survey on technical specifications on local communications and information sharing without public network services. Detailed study points are;* An overview of local-area information sharing and communication system without public network services in peacetime and during/after disaster;
* resilient capabilities and specifications based on both network-layer and information-layer technologies;
* its use cases.

2) and to show guidelines for the usage of the system in APT member countries. |
| **Purpose** | The purpose of this work item is to introduce technical specifications and use cases on local-area resilient information sharing and communication systems for practical usage in APT member countries. |
| **Related Documents** | * ITU-D SG2 Question 5/2 Output Report "Utilization of telecommunications/ICTs for disaster preparedness, mitigation and response"
 |
| **Timelines** | ASTAP-33: Initiation of the work itemASTAP-34: Submission of initial text of draft reportASTAP-35: Submission of updated textASTAP-36: Submission of updated textASTAP-37: Submission of finalized report |

**WORK PLAN OF EG SACS**

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| **Number** | **SACS-1** |
| **Title** | **Cascaded free space optical and millimeter-wave communications system for mobile transport and indoor access network**  |
| **Document Type** | Report |
| **Group/Chairman** | EG SACS / Dr. Hiroyo OGAWA |
| **Editor(s)** | Dr. Pham Tien Dat, Japan (ptdat@nict.go.jp) |
| **Scope** | This report provides the technical specifications and the application use cases of the hybrid wireless system based on free-space optical communication and millimeter-wave communication systems. Specific specification of the transceiver and network is also provided in the transmission of the signals. |
| **Purpose** | To provide technical guidance to APT member countries to implement hybrid wireless system based on free space optical and millimeter-wave communication systems utilized in mobile fronthaul/backhaul and indoor access networks. |
| **Related Documents** | APT/ASTAP/REPT-03: Characteristics and requirements of optical and electrical components for millimeter wave radio on fiber systemsAPT/ASTAP/REPT-09: APT Report on Direct Single-Mode-Fiber Coupled Free Space Optical Communications to Expand the Flexibility in Fiber-Based ServicesAPT/ASTAP/REPT-11: Wired and wireless seamless connections using millimeter-wave radio over fiber technology for resilient access networksITU-T G.640: Co-location longitudinally compatible interfaces for free space optical systemsITU-T G.9803: Radio over fiber systemsITU-T G.9991: High-speed indoor visible light communication transceiver – System architecture, physical layer and data link layer specification |
| **Related Organization** | ITU-T SG15 (Q2/15) |
| **Timelines** | ASTAP-33* + - Develop a new workplan
		- Initiate the work on free space optical and millimeter-wave communication systems

ASTAP-34* + - Consider the input contributions
		- Continue drafting a working document of a draft new APT Report
		- Prepare a liaison statement if necessary

ASTAP-35* + - Consider the input contributions
		- Continue drafting a working document of a draft new APT Report

ASTAP-36* + - Finalize the draft new APT Report and submit to the plenary
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| **Number** | **SACS-2** |
| **Title** | **Seamless access systems for wideband THz services**  |
| **Document Type** | Report |
| **Group/Chairman** | EG SACS / Dr. Hiroyo OGAWA |
| **Editor(s)** | Dr. Tetsuya Kawanishi, Japan (kawanishi@waseda.jp) |
| **Scope** | This report provides the technical specifications of the seamless access systems for wideband THz services. Specific specification of the optical networks or signal processing in the seamless access systems is also provided to mitigate impact of the THz wave interference. |
| **Purpose** | To provide technical guidance to APT member countries to implement seamless access systems for wideband THz services. |
| **Related Documents** | APT/ASTAP/REPT-03: Characteristics and requirements of optical and electrical components for millimeter wave radio on fiber systemsAPT/ASTAP/REPT-04: Technology trends of telecommunications above 100GHzAPT/ASTAP/REPT-11: Wired and wireless seamless connections using millimeter-wave radio over fiber technology for resilient access networksITU-T G.9803: Radio over fiber systems |
| **Related Organization** | ITU-T SG15 (Q2/15) |
| **Timelines** | ASTAP-33* + - Develop a new workplan
		- Initiate the work on seamless access systems for wideband THz services

ASTAP-34* + - Consider the input contributions
		- Continue drafting a working document of a draft new APT Report
		- Prepare a liaison statement if necessary

ASTAP-35* + - Consider the input contributions
		- Continue drafting a working document of a draft new APT Report

ASTAP-36* + - Consider the input contributions
		- Continue drafting a working document of a draft new APT Report
		- Prepare a liaison statement if necessary

ASTAP-37* + - Finalize the draft new APT Report and submit to the plenary
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| **Number** | **SACS-3** |
| **Title** | **[Fiber-wireless bridge system for seamless access network in high-frequency band] or [revision of APT/ASTAP/REP-11 or 20]** |
| **Document Type** | Report |
| **Group/Chairman** | EG SACS / Dr. Hiroyo OGAWA |
| **Editor(s)** | Dr. Pham Tien Dat, Japan (ptdat@nict.go.jp) |
| **Scope** | [This report provides the technical specifications and guidance of the fiber-wireless bridge systems for seamless access systems in high-frequency radio bands such as millimeter-waves and terahertz-waves. Specific specification of the optical networks, signal processing, optical-radio conversion systems in the seamless access systems is also provided to realize millimeter-wave and terahertz-wave radio system with small penalties.] |
| **Purpose** | To provide technical guidance to APT member countries to implement fiber-wireless bridge system in high-frequency radio bands |
| **Related Documents** | APT/ASTAP/REPT-03: Characteristics and requirements of optical and electrical components for millimeter wave radio on fiber systemsAPT/ASTAP/REPT-04: Technology trends of telecommunications above 100GHzAPT/ASTAP/REPT-11: Wired and wireless seamless connections using millimeter-wave radio over fiber technology for resilient access networksITU-T G.9803: Radio over fiber systems |
| **Related Organization** | ITU-T SG15 (Q2/15) |
| **Timelines** | ASTAP-35* + - Proposal of new APT report
		- Initiate the work on fiber-wireless bridge for seamless access systems in high-frequency bands

ASTAP-36* + - Consider the input contributions
		- Continue drafting a working document of a draft new APT Report or a revision of APT/ASTAP/REPT-11 or 20
		- Prepare a liaison statement if necessary

ASTAP-37* + - Consider the input contributions
		- Continue drafting a working document of a draft new APT Report or a revision of APT/ASTAP/REPT-11 or 20
		- Prepare a liaison statement if necessary

ASTAP-38* + - Finalize the draft new APT Report or a revision of APT/ASTAP/REPT-11 or 20 and submit to the plenary
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**WORK PLAN OF EG IOT**

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| **Number** | **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 neighboring regions when it makes policies to achieve the targets. |
| **Related Document** | ASTAP-35/TMP-13 |
| **Timelines** | ASTAP-35, 2023 |
| **Relevance to APT Strategic Plan** | 1.4, 2.1, 2.3, 6.2, 8.1, 8.6 |

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| **Number** | **IOT-2** |
| **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-35/TMP-14 |
| **Timelines** | ASTAP-36 (2024): To ask approval for the final output at plenary |
| **Relevance to APT Strategic Plan** |  |

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| **Number** | **IOT-3** |
| **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-35/TMP-28 |
| **Timelines** | ASTAP-31 (2019) Project initializationASTAP-33 (2021) Survey, collect, and analyze related standards ASTAP-34 (2022) Consider input contributionASTAP-35 (2023) Use case preparationASTAP-36 (2024) Submission of report |
| **Relevance to APT Strategic Plan** |  |

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| **Number** | **IOT-4** |
| **Title** | **IoT Ecosystem Development Activities in APT Member Countries**  |
| **Output Document Type** | APT Report |
| **Group/Chair** | EG IOT / Dr. Toru Yamada |
| **Editor(s)** | Nur Akbar SaidFita Indah Maulani |
| **Scope** | The scope of this work item are follows:* 1) to conduct survey on IoT. Detailed study points are;

An overview of IoT information sharing, education, regulation, standardization and collaboration amongst government, service provider, network provider, system integrator, technology provider, media and community/public for IoT development in the APT member countries; Comprehensive capabilities, coverage and specifications based on sensor/device-layer, network/gateway layer, platform-layer and application-layer technologies; its use cases.2) to show guidelines for the IoT stakeholder collaboration in APT member countries. |
| **Purpose** | The purpose of this work item is to introduce best practice specifications and use cases on IoT ecosystem development for potential vertical industries in APT member countries. |
| **Related Document** |  |
| **Timelines** | ASTAP-34: Initiation of the work itemASTAP-35: Submission of initial text of draft survey reportASTAP-36: Submission of updated reportASTAP-37: Submission of finalized report |
| **Relevance to APT Strategic Plan** |  |

**WORK PLAN OF EG IS**

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| **Number** | **IS-1** |
| **Title** | **The Security Guideline: Guideline for Security use of IT Devices and Services (Revision)** |
| **Output Document Type** | Guideline  |
| **Group/Chair** | EG IS / Hiroshi TAKECHI |
| **Rapporteur (s)** | Dongil Seo and Heuisu Ryu |
| **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. The final revised document is available at ASTAP-31 ([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)). |
| **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) |
| **Timelines** | Final output: ASTAP-36 |

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| **Number** | **IS-2** |
| **Title** | **Guidelines for IoT Security (for manager)** |
| **Output Document Type** | Guideline  |
| **Group/Chair** | EG IS / Hiroshi TAKECHI |
| **Rapporteur (s)** | Heuisu Ryu and Dongil Seo |
| **Scope** | This document summarizes various security technologies, considerations for initiating IoT solutions and IoT solution management which can be included in IoT solution.This document is for better understanding of IoT security technologies for managers using IoT solution. This document provides the technical references of IoT security to IoT solution developing companies. |
| **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-35/TMP-08](https://www.apt.int/sites/default/files/2023/04/ASTAP-35-TMP-08-Base_text_of_the_guideline_Guideline_for_IoT_security_for_manager.docx) |
| **Timelines** | Final output: ASTAP-37 |

**WORK PLAN OF EG MA**

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| **Number** | **MA-1** |
| **Title** | **Survey of IPTV services in APT region** |
| **Output Document Type** | Report |
| **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-33: Approval of the report June 2021 [**APT/ASTAP/REPT-50**](https://www.apt.int/sites/default/files/Upload-files/ASTAP/APT-ASTAP-REPT-50-Report-survey-IPTV.docx)was published. |

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| **Number** | **MA-2** |
| **Title** | **Guideline of decentralized identity (DID) technology and its application** |
| **Output Document Type** | Report |
| **Group/Chair** | EG MA / Hideki Yamamoto  |
| **Editor(s)** | Mr. Yue Jing (CAICT, jingyue@caict.ac.cn)Mr. Xiaoyu YOU (CAICT, youxiaoyu@caict.ac.cn)Ms. Haihua Li (CAICT, lihaihua@caict.ac.cn) Ms. Jingxuan Li (CAICT, lijingxuan@caict.ac.cn)  |
| **Scope** | The scope of this work item is followings:1. To survey information on technical recommendations, specifications, standards etc, on decentralized identity or decentralized identifier (DID) or verifiable credentials (VC), which are mainly in W3C, DIF, IEEE, and ITU-T.  Detailed aspects are:
* General architectural frameworks for decentralized identity and verifiable credential
* Key technologies for DID and VC
* Use cases for DID and VC
1. To survey industries actions on DID and VC
2. To consider suggestions or guidelines for the usage of DID in APT member countries and report them
 |
| **Purpose** | The purpose of this work item is to provide suggestions or guidelines for the usage of DID in APT member countrieswith the survey of technologies, use cases and industrial actions. |
| **Related Documents** | * W3C “Decentralized Identifiers (DIDs) v1.0 Core architecture, data model, and representations”
* W3C “Use Cases and Requirements for Decentralized Identifiers”
* W3C “Verifiable Credentials Data Model v1.1”
* W3C “Verifiable Credentials Use Cases”
* “Self-Sovereign Identity and IoT” , Sovrin Foundation SSI in IoT Task Force, August 2020.
 |
| **Timelines** | ASTAP-34: Initiation of the work itemASTAP-35: Output of Questionnaire to survey DID technology and solutionstASTAP-36: Submission of initial report based on the result of the questionnairASTAP-37: Submission of finalized report |

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| **Number** | **MA-3** |
| **Title** | **Problems and requirements on CDN services in COVID-19 in Asia-Pacific region** |
| **Output Document Type** | Report |
| **Group/Chairman** | EG MA/Hideki Yamamoto  |
| **Editor(s)** | Hideki Yamamoto (OKI) |
| **Scope** | Collecting the status, problems and requirements of CDN services in each county in COVID-19 pandemic. CDN services may be provided by global platformers, local telecommunication service providers or local CDN specific providers.  |
| **Purpose** | Providing the actual and useful information to start the new standardization projects about CDN issues to resolve the problems in Asia-Pacific region when another pandemic will happen. |
| **Related Documents** | Input document in ASTAP-34/INP-36 |
| **Related Organization** | ITU-T SG16 |
| **Timelines** | ASTAP-34 (April 2022): Approval of new work plan and discussion of the draft questionnaire.ASTAP-35: Approval of questionnaireASTAP-36: Discussion of the draft report based on the answers to questionnaire and approval of the report. |

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| **Number** | **MA-4** |
| **Title** | **Metaverse use cases in Asia-Pacific region** |
| **Output Document Type** | Report  |
| **Group/Chairman** | EG MA/ Mr Hideki Yamamoto  |
| **Editor(s)** | Hideo Imanaka (NICT) |
| **Scope** | Collecting use cases of metaverse in Asia-Pacific region and reporting them.  |
| **Purpose** | The objective of this questionnaire is to gather information on the metaverse use cases in APT member countries. It aims to be one of the guidelines for implementing metaverse applications in APT countries. |
| **Related Documents** | Input document in ASTAP-35 |
| **Related Organization** | N/A |
| **Timelines** | ASTAP-35 (April 2023): Approval of this work plan and questionnaire ASTAP-36 (TBD 2024/4): Discussion of the result of questionnaire and decision of the second questionnaireASTAP-36 (TBD 2024/5): Discussion of the draft report based on the answers to questionnaire and approval of the report if the second questionnaire will be not necessary. |

**WORK PLAN OF EG AU**

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| **Number** | **AU-1** |
| **Title** | **Relay Services for Accessible Emergency Communication**  |
| **Output Document Type** | Report |
| **Relevant EG** | Accessibility & Usability |
| **Editor(s)** | Wantanee Phantachat, Nattanun Thatphithakkul, Analanda Chotimongkol, Chatchawarn Hansakunbuntheung, Jessada Jongsukvarakul, 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”**ASTAP-34/INP-12** “**A Proposed Research Survey on the current status of the APT countries' relay services for 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 ~ 2022 ASTAP-34: Initiation and discussion on the direction of the report2023 ASTAP-35: Approval of a questionnaire, detailed planning and preparing a draft. Collection of inputs from the APT countries2024 ASTAP-36: Discussion and submission of the final report2025 ASTAP-37: Publication of final report  |

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| **Number** | **AU-2** |
| **Title** | **Guide on developing accessible mobile application for the APT countries** |
| **Output Document Type** | Guideline |
| **Relevant EG** | Accessibility & Usability |
| **Editor(s)** | Hark Sohn, SCE Inc, Republic of Korea (Email: mediamen@gmail.com)Jee-In Kim, Konkuk University, Republic of Korea (Email: jeeink@gmail.com)Yong Lee, Center for Accessible ICT, Republic of Korea (Email: ylee@caict.re.kr) |
| **Scope** | The report describes the mobile accessibility development guide that APT member countries can use to improve mobile accessibility. The report includes a development guide that reflects the mobile environment and characteristics of member countries by conducting a fact-finding survey. |
| **Purpose** | The target group of the output document is standards developing organizations (SDOs) of each APT member country concerning accessibilities of mobile applications. The outcome of the study shall be used to apply mobile accessibility standards and best practices according to the mobile usage environment and characteristics of APT member countries and to review the mobile app accessibility of each member country. |
| **Related Documents** | ASTAP-33/TMP-15 “Report of surveying mobile accessibility in the AP region”ASTAP-34/INP-25 “A proposal for the project was presented and discussed during the ASTAP-34 meeting”  |
| **Related Organization** | TTA, KATS and NIA, KoreaTTC, JBMIA and JISC, Japan TISI, NECTEC and NBTC, Thailand and the APT countriesITU-T Q26/16 |
| **Timelines** | 2022 ASTAP-34: Proposal for new APT Report2023 ASTAP-35: Initial draft APT Report, Propose and circulate a fact-finding survey questionnaire (Through formal APT email circulation, and EG-AU e-mail correspondence group)2024 ASTAP-36: Revise draft APT Report with analysis of the questionnaire2025 ASTAP-37: Finalize the APT Report |

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| **Number** | **AU-3** |
| **Title** | **Accessible IoT Applications and Smart City Services in the AP Region** |
| **Output Document Type** | Report |
| **Relevant EG** | Accessibility & Usability |
| **Editor(s)** | Yong J. Lee, Center for Accessible ICT, KOREA (Republic of)Email: ylee@caict.re.krJee-In Kim, Konkuk University, KOREA (Republic of)Email: jeeink@gmail.com Hark Sohn, SCE Korea Inc., KOREA (Republic of)Email: mediamen@gmail.com |
| **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 applications and smart city 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 applications and smart city services for persons with disabilities, and also promote and address the necessity and importance of accessibility considerations in IoT applications and smart city services developments. |
| **Related Documents** | ASTAP-31/INP-50 “Overview of ITU-T Recommendation Y.4204 Accessibility Requirements for Internet of Things Applications and Services”ASTAP-33/INP-28 “Accessible IoT Use Case – Preventive Safety Service System of Korea”**ASTAP-34/INP-24** “**Accessible IOT use case - accessible IOT services in a smart classroom for students with hearing disabilities”**  |
| **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: Collection of use cases from the APT countries2021 ASTAP-33: Collection of use cases from the APT countries2022 ASTAP-34: Collection of use cases from the APT countries2023 ASTAP-35: Approval of a template, send call for contribution.2024 ASTAP-36: Collection of use cases from the APT countries, and prepare the draft of the report.2025 ASTAP-37: Approval of the report |

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| **Number** | **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.  |
| **Related Documents** | ASTAP-31/INP-48 “A Framework for Evaluating Usability of Natural User Interactions”ASTAP-33/INP-26 “Use Case for Evaluating Usability of Natural User Interfaces”**ASTAP-34/INP-13 “Progress report on evaluating usability of natural user interfaces”**  |
| **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 ~ 2022 ASTAP-34: Initiation and discussion on the direction of the report2023 ASTAP-35: Detailed planning.2024 ASTAP-36: Preparing a draft and collection of use cases from the APT countries2025 ASTAP-37: Discussion and submission of the final report |