SUMMARY REPORT

27th Asia Pacific Telecommunity Standardization Program Forum (ASTAP-27)
7-11 March 2016

Pattaya, Thailand

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On Behalf,
MALAYSIAN TECHNICAL STANDARDS FORUM BHD

INTRODUCTION

1. The Twenty-seventh Asia-Pacific Telecommunity Standardization Program Forum (ASTAP-27) was held from 7 to 11 March 2016 in Pattaya, Thailand.

2. The Forum was attended by 128 participants representing APT Members, Associate Members, Affiliate Members and other organizations.

3. Members of the Malaysian delegation to the forum include:
   - En Aiman Hilmi Azhar (MCMC)
   - Ms. Adeline Chee (MTSFB/MDeC)
   - Mr. Alex Kuik (MTSFB/DiGi)
   - Dr Gopinath Rao Sinniah (MTSFB/RedTone)
   - Dr Wahidah (MTSFB/Uniten)

4. The following delegates were present in the ASTAP-27 in particular to carry out the following duties/roles:

1) Adeline Chee:
   - Vice Chairperson, ASTAP Policy and Strategic Coordination Working Group
   - ASTAP-27 7th Industry Workshop Committee for "IoT and Smart Cities" Workshop
   - Reporting on ITU-T SG5 updates in ITU Expert Group

2) Mr. Alex Kuik:
   - Vice Chairperson, ASTAP GICT & EMF Exposure Expert Group
   - Moderator for Industry Workshop, Use cases and best practices for IoT & Smart Cities
   - Rapporteur for Green Data Centre, GICT & EMF Exposure Expert Group, ASTAP
   - Rapporteur for EMF, GICT & EMF Exposure Expert Group, ASTAP

3) Dr. Gopinath Rao Sinniah:
   - Speaker in Industry Workshop, Standards and Initiatives for IoT & Smart Cities. Title of presentation, "Smart City & IOT Initiatives in Malaysia".

PROCEEDINGS

1. The ASTAP-27 7th Industry Workshop was held on 7 March 2016 and focused on 2 topics ie. (1) Resilient ICT Systems for Disaster Management (2) IoT and Smart Cities.

2. In the workshop, 13 presentations were made. Summary of the presentations in the workshop is as follows:

3.1 Industry Workshop for Resilient ICT Systems for Disaster Management - Best practices of resilient ICT systems for disaster management

3.1.1 Title: Resiliency of ICT systems during disasters in the Philippines

- Speaker: Bgen. Nicolas D. Ojeda, Jr. (Ret.)
- Summary:
  - Recent mishaps in the Philippines, ICT had been recognized as a salient component in developing resiliency in the course of Disasters in the Philippines.
  - Resilience by UNISDR is defined as "the ability of a system, community, or society exposed to hazards to resist, absorb, accommodate to, and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions".
  - However, with progress in technology gave rise to the concept of E-resilience, where ICTs role in Disaster Response Management is recognized.
  - The significance of E-resilience not only in the technological but as well as in the communication facet during disasters was explored in the presentation.
  - There was also a discussion on the recent developments on the use of ICT not limited to disasters caused by weather phenomenon but

also with other disasters occurring because of ecological and man-made consequences in the Philippines.

3.1.2 Title: Best Practice of resilient ICT system for Disaster Management in Japan

- Speaker: Mr. Takeya Isobe, Executive Manager, International Business Division CTI Engineering Co., Ltd.
- Summary:
  - Two types of services provided with resilient ICT systems in Japan are introduced. One is "Citizens' services", and another one is "Services for administrative agencies".
  - Terrestrial digital media broadcasting and Multiple-address wireless communications are introduced as representative service for Citizens.
  - J-Alert and L-Alert are introduced as representative service for administrative agencies.
  - Important points are highlighted for both "Citizens' services" and "Services for administrative agencies" in the presentation.

3.2 Industry Workshop for Resilient ICT Systems for Disaster Management - Newly proposed ICT systems for disaster management

3.2.1 Title: Vehicle as a new social infrastructure

- Speaker: Dr. Yuji Inoue (Chairman of the Board, Toyota Info Technology Center Co., Ltd., IEEE Fellow, IEICE Fellow & Honorary Member)
- Summary:

- Vehicle technologies have been advancing rapidly toward the automated/autonomous driving by applying ICT, Information and communication Technologies.
- ICT together with electric energy storage will create new capability not only for automated driving but to serve human society in various aspects, one of which is to provide resilient information services in disaster situations.

3.2.2 Title: Trials on disaster management system based on PS-LTE in Korea

- Speaker: Mr. Hyoungiel Park (Director, KT)
- Summary:
  - Korean government recently started the trial project for LTE based public safety network.
  - In this presentation the status of this project and standardization including key technologies are discussed.
  - This trial is currently under way and the project member will share the challenges and lessons from LTE based PS-LTE network deployment in Korea.

3.2.3 Title: NTT West's Activities for Disaster Prevention

- Speaker: Ms. Mai Imoto (Manager of Global Business Office, Technology Innovation Department of NTT West)
- Summary:
  - Since Japan has experienced a number of natural disasters, NTT West has been actively engaging in variety of disaster prevention activities by using ICT.
  - The activities in Japan are presented and one of which is awarded by Smart City EXPO World Congress 2014 for its uniqueness of

how to involve residents and raise their awareness of disaster prevention.

3.2.4 Title: Use of Smart Devices on Disaster Management System Complying Universal Accessibility Requirements

- Speaker: Dr. Yong-Jick Lee (COO, SCE Inc.)
- Summary:
  - An increasing number of natural and artificial disasters that have caused significant damage around the world have drawn the attention of countries and firms to invest in disaster management systems with the aid of information and communication technology (ICT).
  - This presentation discussed about use of mobile devices in disaster management systems and importance of universal accessibility on the disaster management systems as it is critical to the people with disabilities.

3.3 Industry Workshop for IoT and Smart Sustainable Cities - Standards and Initiatives for IoT & Smart Cities (Chair: Dr. HyoungJun Kim, ETRI, Republic of Korea)

3.3.1 Title: IoT and Smart Cities: Challenges and Opportunities for Regulators

- Speaker: Mr. Harin Grewal, IDA, Singapore
- Summary:
  - The presentation was on Singapore's Smart Nation vision and some of the on-going initiatives, focusing on the challenges faced

to regulate IoT - the key enabler to Singapore's Smart Nation vision.

3.3.2 Title: Smart City & IOT Initiatives in Malaysia: Use cases and Standards

- Speaker: Dr. Gopinath Rao Sinniah, Malaysia
- Summary:
  - It has been estimated that cities would host more than 65% of population in near future. Cities must be ready to accommodate this large inflow of people in various ways to make cities more livable. Various efforts have been strategized from formation of framework to creating application that will ensure that cities are sustainable.
  - In Malaysia, numerous efforts from various sectors are being addressed to ensure that Smart City is properly deployed and benefits everyone.
  - Standards are being adopted and created, new smart city use cases are being tested and deployed in various parts of the Malaysian Cities.
  - The coordinated effort from various organisations ensures the smooth deployment and sustainability of the Smart Cities.
  - This presentation focuses on the various Smart City initiatives and deployment use cases in Malaysia. The standards work in line with the smart city initiatives will also be highlighted.

3.3.3 Title: IoT standardization promotion initiatives

- Speaker: Ms. Yuki Naruse (MIC, Japan)
- Summary:

- The presentation explains IoT dissemination in Japan and Japanese government's policy to promote IoT R&D and standardization.
- By reviewing the Japanese efforts, challenges for national and international IoT promotion will be analyzed.

3.3.4 Title: IoT and Smart City in Indonesia

- Speaker: Mr. Henry F. Jusuf (iBLOZ, Indonesia)
- Summary:
  - The presentation discussed in some detail the state of Smart City initiatives in several cities in Indonesia.
  - It will delve into its issues, challenges and success, and provide some future direction.
  - It will mention some implemented technologies and specifically touch on effort in facilitating citizens' participation (e-participation) to make them part of and gain the benefits from a smart city.

3.4 Industry Workshop for IoT and Smart Sustainable Cities - Use cases and best practices for IoT & Smart Cities (Chair: Mr. Alex Kuik, MTSFB, Malaysia)

3.4.1 Title: IoT and Smart City in China industries

- Speaker: Ms. Haihua Li, CAICT, China
- Summary:
  - The presentation explains Chinese latest policy related to IoT, gave the concept and overview of Smart manufacturing and Industrial internet of things, described the lastest development

and shown some typical instances corresponding to IoT and smart city.

- In summary, it suggested to keep researching on IoT and smart city, especially on some key topics, such as industrial IoT and Connected Vehicle.

3.4.2 Title: IoT technologies for Smart City

- Speaker: Mr. Akihiro Kanazawa, NTT West, Japan
- Summary:
  - Some of our Smart City activities were presented in Japan, relating to IoT.
  - It is expected that IoT technologies to expand Smart City business
  - It was also introduced NTT-West R& D center's IoT Lab and its activities.

3.4.3 Title: Introduction to Busan Smart City Project in Korea

- Speaker: Mr. Eunkwang Kim, SK Telecom, Rep. of Korea
- Summary:
  - Current IoT strategy of Korean government was shared in the presentation.
  - A government funded Smart city test-bed project in Busan City of Korea was also presented.
  - Major approach and selective smart city services was shared.

4.   Following that, from 8-11 March 2016, the ASTAP-27 continued its Plenary Session as well as work on various topics under study by the ASTAP Working Groups (WG) and Expert Groups (EG), as follows:
- WG on Policy and Strategic Coordination (PSC)
- WG on Network and System (WG NS)
- WG on Service and Application (WG SA)

- EG on ITU-T issues (ITU-T)
- EG on Bridging the Standardization Gap (BSG)
- EG on Policies, Regulatory and Strategies (PRS)
- EG on Green ICT & EMF Exposure (GICT&EMF)
- EG on Future Network and NGN (FN & NGN)
- EG on Seamless Access Communication System (SACS)
- EG on Disaster Risk Management and Relief System (DRMRS)
- EG on Machine to Machine Applications/Services (M2M)
- EG on Security (IS)
- EG on Speech and Natural Language Processing (SNLP)
- EG on Multimedia Application (MA)
- EG on Accessibility and Usability (AU)

5. On 11 March 2016, the ASTAP-27 concluded with:
- Adoption of report of the ASTAP Advisory Board
- Adoption of report of the Ad-hoc Group on Industry Workshop
- Adoption of reports and output documents of the three WGs
- Confirmation and Approval of ASTAP Office Bearers

KEY OUTCOMES

1. The WG Policy, Strategy and Coordination meetings were chaired by the WG Chairperson Ms Thuan with the assistance of Vice Chairperson Adeline. The WG PRS oversees 4 Expert Groups, namely:
    i.   EG on Bridging the Standardization Gap (BSG)
    ii.   EG on ITU-T issues (ITU-T)
    iii. EG on Policies, Regulatory and Strategies (PRS)
    iv.   EG on Green ICT & EMF Exposure (GICT&EMF)

2. Matters related to the 4 EGs under WG PRS such as Office Bearers, ToR, Workplans, output papers, etc were discussed and approved.

3. Summary of the discussions for the 4 EGs under WG PRS are as follows:
   i. EG BSG

      Three main issues were discussed and approved in the PSC WG:

      - Presentations of the APT J2 project "Heterogeneous Wireless Sensor Network Monitoring Water Condition for Strengthening Aquaculture Industry in Viet Nam" and a new Work to Create the new Handbook to "Introduce ICT Solutions for the Community in Rural Areas were presented followed by an active discussion.

      - A presentation of "TTA Activity on Bridging Standardization Gap" was given, leading to a discussion on the potential document on some

case studies of the current standardization situations in developing countries and possible solutions. The meeting showed the high interest of this expected document from TTA for more discussion and contributing from members at next meetings.

- Mr. Uchiyama, KDDI Japan gave a detailed presentation on the handbook for "***Guideline for Management of Deploying ICT solutions***". There was no comment on the document at this meeting except the request from chairperson to double check and correct the editorial mistakes in the document. The meeting agreed to approve the handbook as an output document of the EG BSG.

- The BSG EG discussed and contributed to the APT Strategic Plan Matrix 2015-2017 with activities related to the EG. There was only 1 item to be inserted to the matrix in section 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": "APT Report on Guideline to introduce ICT solutions for the community in rural area" was agreed to be added as an outcome of this strategy action.

ii. EG ITU-T

The meeting achieved three key results as follows:

- The seven presentations were provided to introduce the latest activities of APT WTSA-16-2, ITU-T TSAG, RevCom, SG5, SG11, SG15, SG16 and SG20 by request from the chairman of EG ITU. Adeline presented the status updates on SG5 focusing on relevant areas to ASTAP and, also strongly encouraged members to participate in the upcoming SG5 Meeting in April, Kuala Lumpur. Some questions and discussion were exchanged in the meeting. It is noted that importance of study on Open Source was emphasized and encouraged EGs in ASTAP to initiate the study of it. The chairman of RevCom suggested that activities monitoring can be applicable to ASTAP and ASTAP secretary would consider to introduce monitoring work plan. The chair of EG ITU requested APT members to provide their view on the restructuring of ITU-T work organization for the next study period to the APT WTSA16-3 (June 2016). These presentations were very helpful for APT member and the chair of EG ITU requested them to continue to participate in the consequent meetings of ASTAP and provide their presentations.

- EG ITU reviewed the report of the third C&I event which was held in September 2015 and the report of EG ITU of the ASTAP-26. The meeting discussed the future plan of the event and agreed to create

C&I coordination committee to discuss the detailed plan of the next action on APT C&I event. The meeting also agreed to assign Mr. Kaoru Kenyoshi as the chair of the coordination committee. APT secretary will circulate an invitation letter to all APT members and invite member to the coordination committee. The first meeting of the C&I coordination committee is going to be held in the middle of April.

iii. EG PRS

The meeting discussed on the following items:

- Response to the Questionnaire on ICT Standardization and Conformity Assessment

  o EG PRS reviewed the responses by Nepal, Thailand and Japan. Nepal in response to the questionnaire also did a presentation on the current Scenario of ICT Standardization and Conformity Assessment System in Nepal. Some questions and discussions were exchanged between delegates and the presenters.

- Report on Standardization Policy and System of countries in AP region

  o A questionnaire on ICT Standardization and Conformity Assessment in Asia Pacific region was adopted by ASTAP 26 and circulated by the APT secretariat after the ASTAP 26. At this meeting, the rapporteur presented a report based on the responses received. There were seven (7) APT member countries responded to the questionnaire.

  o The meeting reached to the consensus that this report will provide very useful information to capture the whole picture of standardization system in Asia Pacific region and therefore it requires additional responses on the issue from other member countries.

  o The meeting agreed to extend request for APT member countries to provide input on the standardization systems of their countries to improve the report and requested APT secretariat to circulate again the questionnaire to member countries who did not responded.

  o The meeting agreed to adopt this report as a final report of work item under EG PRS based on understanding that the report will to improve in the future depending on the number of additional responses received from APT member countries.

iv. EG GICT & EMF

- Adeline presented the status updates on SG5 emphasizing on relevant areas to EG GICT & EMF and, also strongly encouraged members to participate in the upcoming SG5 Meeting in April, Kuala Lumpur.

- Alex presented 2 papers under the study question on "Green Data Centre Best Practices" ie. (1) Malaysia's Technical Code - Specification For Green Data Centres (2) Carbon Footprint Baseline Study on Sample Data Centres in Malaysian Government Offices.

- The meeting achieved five key results and produced six output documents.

  - The working draft status report of Asia-Pacific regional activities on human exposure to EMFs was updated. The meeting has reviewed and discussed the contribution documents on EMF safety and agreed to incorporate them into the status report of EMF safety, which appears to be completed in the next meeting.

  - The working draft status report on green date centre was updated by Alex and Adeline. The meeting has reviewed and discussed the contributions on green data centre related contribution documents and agreed to incorporate them into the status report. The draft status report requires more contributions from member countries and/or sector members to complete it in the target year. The Rapporteurs Alex and Akbar were requested to further explore and collaborate with member countries and/or sector members to further develop the report accordingly.

  - The meeting reviewed and discussed the WTSA-12 Res. 72 and 73 to hear the opinions and comments of the meeting participants and agreed to develop a reply liaison statement, which includes the comments and opinions of the participants in the EG on GICT&EMF exposure, to send it to the APT preparatory meeting for WTSA-16.

  - The meeting reviewed and discussed the work plans of GICT&EMF EG, on the topics of e-waste, green data centre and EMF exposure. The updated work plan was submitted, by including the contribution documents for the work items in the ASTAP 27 meeting and minor text changes in the time lines. The meeting agreed to encourage the members to contribute more actively in order to update the status report and complete the publication in the target years.

  - The meeting reviewed the APT strategic plans reflecting the EG GICT&EMF activities in ASTAP-27 and to include the term sustainability in the action plans for standardization of draft APT strategic plan for 2018-2020.

4. Key Output Documents from the WG PSC

The meeting discussed the outcomes/deliverables from each Expert Group as following:

- "*Report on ICT Standardization and Conformity Assessment System in AP region*": some delegates showed their willing to contribute more for the report and share the case studies from their countries. APT Secretariat proposed to make a mailling list for interested participants to contribute for the report in later time. The report was approved.

- "*Guidelines for Management of Deploying ICT solutions*": Mr. Maeda, chairman of ASTAP, raised a question on the document category whether it will be considered as a report or a guideline. Some participants commented on editorial and numbering mistakes in the document and showed their cooperation to improve the document. After some discussion including the instruction from APT Secretariat, the document was approved with the notice that the editor Mr. Uchiyama from KDDI Japan with assistance from Ms. Adeline, vice-chair of WG PSC, and other interested delegates to correct all the editorial mistakes of the document within a time frame of one month after ASTAP-27.

- "*Reply for the liaison statement to APT preparatory group for WTSA-16*": after some comments from delegates, the meeting approved the liaison statement with some small changes.

Document Types	Title of Document	Action at WG PSC	Action at Plenary
Meeting report	Meeting Report of WG PSC	-	Approved
Work plan	Consolidated Work plan for EGs under WG PSC	-	Approved
Report	Report on ICT Standardization and Conformity Assessment System in AP region	Approved	Approved
Guideline	Guideline for Management of Deploying ICT solutions	Approved	Approved
Liaison Statement	Reply for the liaison statement (WTSA16-2/OUT-03) to APT preparatory group for WTSA-16	Approved	Approved

Document Types	Title of Document	Action at WG PSC	Action at Plenary
Working document	Working draft Status Report on Human Exposure to EMF (EMF impact to human) for APT (Rev.2)	-	-
	Working Draft Status Report on Green Data Centres in ICT/ Teecommunications Sector in the APT Member Countries	-	-

5. Other relevant outcomes

i) Contributions of MTSFB representatives in the ASTAP-25 6th Industry Workshop were recognized and acknowledged; and Adeline was re-appointed as the coordinator for the next Industry Workshop in ASTAP-28 under the theme of "IoT and Smart Cities". Under the theme of "IoT and Smart Cities", the sub-themes for each session will be discussed by the coordinators for the next industry workshop.

ii) EG M2M

Dr. Seungyun Lee, chaired the meeting as an acting chairman of EG-M2M on behalf of Dr. Hideo Imanaka, a Chairman. Ms. Haihua Li supported the meeting as a vice-chairman of EG- M2M.

- Discussion on the "APT Report on Smart Cities"

  According the last EG-M2M meeting results, Malaysia introduces contribution that proposed to initiate the development of APT report on Smart Cities which consists of Smart Cities use cases in APT member countries with the focus on the ICT and Telecommunication and other related technologies.

  As the result of the discussions, it was decided to establish the ad-hoc group (based on the Industry Workshop presenter list) with following ToR:

  Title: Ad-hoc group on 'Smart Cities Use Cases and Technologies'

  - Leader: Dr. Gopinath Rao Sinniah (Malaysia)

- Member: Haihua Li (China), (TBD)Henry F. Jusuf (Indonesia), (TBD)Leck Leng Chye (Singapore), (TBD)Akihiro Kanazawa (Japan), (TBD)HyoungJun Kim (Korea) (6 countries in total)
- Terms of Reference
– Study on the Smart Cities Use Cases from Asia-Pacific Region
– Study on the ICT and the related technologies for Smart Cities
– Develop the APT report based the relevant studies
- Duration: ~ 2017

The chairman of EG-M2M instructed the ad-hoc leader (Dr. Gopinath) to prepare the template of report based on the proposed table of contents and to provide a work schedule, then suggested to circulate it to the ad-hoc members by April 10, 2016.

- Following up of ASTAP industry workshop on IoT and Smart Cities

The meeting reviewed the report of the 7th ASTAP Industry Workshop on IoT and Smart Cities which was held on 7 March, 2016.

The EG-M2M recognizes the importance of collaboration on IoT and Smart Cities studies in APT member countries including its relevant common framework and technologies as well.

In particular, the meeting agreed to support the proposed recommendations from the industry workshop report and discussed how to follow-up with the relevant actions from EG-M2M point of view. For this purpose, the meeting agreed to share the relevant standards activities in several organizations including fora/consortia.

During the meeting, the following information is shared to the EG-M2M members:

– ITU-T Internet of Things Global Standards Initiatives (IoT GSI): http://www.itu.int/en/ITU-T/gsi/iot/Pages/default.aspx
– ITU-T Joint Coordination Activity on Internet of Things and Smart Cities and Communities (JCA-IoT and SC&C): http://www.itu.int/en/ITU-T/jca/iot/Pages/default.aspx
– 'IoT and SC&C standards roadmap' (free download: http://www.itu.int/en/ITU-T/jca/iot/Documents/deliverables/Free-download-IoT-roadmap.doc)
– Global Standards Collaboration, GSC-19: http://www.itu.int/en/ITU-T/gsc/19/Pages/default.aspx

The chairman of EG-M2M requested to ask all relevant organizations in APT members including TTC Japan, CCSA China and TTA Korea to

provide the relevant information (e.g., workshop presentation materials for status and activity of SDOs) on IoT and Smart Cities in the next ASTAP-28 meeting.

- Future plans

  The next meeting is planned during the next ASTAP-28 meeting. The followings are the candidate items to be discussed at the next ASTAP meeting, but not limited to:

  - Smart Cities use cases and its technologies in APT countries
  - Smart Cities standardization status in ITU-T and other SDOs
  - e-Health situation in APT countries
  - e-Health standardization status in ITU-T and other SDOs
  - Draft report on e-Health in APT region
  - Draft report on Smart Cities in APT region
  - Study on IoT/ M2M services and applications
  - Review of title and ToR

CONCLUSION

ASTAP serves as an important platform for relevant, interested and dedicated Malaysian delegates to gain latest insights on the key standardization topics and regional issues as well as best practices discussed in the ITU and APT.

Malaysian delegation with national interest, specifically, the MTSFB GICT WG's continued active participation in the future ASTAP meetings, is very important in order to ensure Malaysian's strategic intervention in the regional collaborative efforts and sharing of best practices with the other member countries.

In view of that, it is imperative for MTSFB and SKMM to continue providing the necessary support to the relevant ASTAP Office Bearers and Editors in carrying out their roles effectively to ASTAP contribute to the future activities. Furthermore, it is also useful and relevant to participate in other international standardization activities such as ITU-T SG meetings (especially SG5 – Environment and Climate Change; and, SG20 – IoT and its applications including smart cities and communities) to gain more international exposure and insights for the Malaysian participants to enhance knowledge and expertise for the standardization works.

ASTAP-27 Participants Group Photo

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