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| APTlogogreen3 | **ASIA-PACIFIC TELECOMMUNITY** |
| **The 16th South Asian Telecommunication Regulators’ Council Meeting (SATRC-16)**  | **Document****SATRC-16/OUT-02** |
| 25 – 27 August 2015, Delhi NCR, India | **27 August 2015** |

**Secretary General**

**Summary records OF THE 16th south asian telecommunication regulators’ council**

1. **INTRODUCTION**

The 16th South Asian Telecommunication Regulators’ Council (SATRC-16) was held at Jaypee Greens Golf and Spa Resort, Greater Noida, Delhi NCR, India from 25 to 27 August 2015. The meeting was organized by the Asia-Pacific Telecommunity (APT) and hosted by the Telecom Regulatory Authority of India (TRAI).

The objectives of the meeting were to consider the implementation of SATRC Action Plan Phase V, adopt implementation calendar of SATRC Action Plan Phase V and to share experiences among the regulators. Meeting also included Industry-Regulator Dialog Session for the first day of SATR-16. The meeting was attended by 70 delegates representing SATRC Members, Affiliate Members, and the private sectors of the host country.

1. **OPENING SESSION (10:00 – 10:45, Tuesday, 25 August 2015)**
	1. The opening ceremony began with the Indian Tradition.
	2. **Welcome Address by Mr. R S Sharma, Chairman, Telecom Regulatory Authority of India**

Mr. R S Sharma, Chairman, Telecom Regulatory Authority of India delivered welcome address. Full texts of Mr. Sharma’s address can be found in document INP-01.

* 1. **Opening Address by Ms. Areewan Haorangsi, Secretary General, Asia-Pacific Telecommunity**

Ms. Areewan Haorangsi, Secretary General of APT made an opening address. Full texts of Secretary General’s address can be found in document INP-02.

* 1. **Inaugural Address by H. E. Mr. Ravi Shankar Prasad, Minister of Communications and IT, Government of India**

H. E. Mr. Ravi Shankar Prasad, Minister of Communications and IT, Government of India delivered the inaugural address. Full texts of Minister’s address can be found in document INP-3.

* 1. **Presentation of the Appreciation Plaque**

At the end of opening ceremony an appreciation plaque was handed over to H. E. Mr. Ravi Shankar Prasad, Minister of Communications and IT, Government of India by Ms. Areewan Haorangsi, Secretary General of APT.

1. **SESSION 1 (PLENARY / INDUSTRY-REGULATOR DIALOGUE) (11:15 – 13:00, Tuesday, 25 August 2015)**

In absence of the Mr. Sonam Phuntsho, Chairman of SATRC, the session was chaired by Mr. R S Sharma, Vice-Chairman of SATRC.

* 1. **Approval of agenda and program**

Session Chairman asked comments on the draft agenda and program of the 15th SATRC Meeting which are available in document SATRC-16/ADM-01 and ADM-02(Rev.3). As there was no comment, agenda and program were agreed.

* 1. **Handover the chairmanship of the SATRC**

Secretary General of APT mentioned that according to the Terms of Reference of SATRC, India who is the host of that meeting would take the chairmanship of SATRC for next one year period. She informed the meeting that India had proposed the name of Mr. R S Sharma, Chairman of Telecom Regulatory Authority of India. The chairmanship SATRC was handed over to Mr. R S Sharma Chairman of Telecom Regulatory Authority of India.

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| **Decision no. 1 (SATRC-16)** |
| Council appointed Mr. R S Sharma, Chairman of Telecom Regulatory Authority of India as the Chairman of SATRC until the next SATRC meeting.  |

Mr. R S Sharma, the new Chairman of the SATRC thanked Mr. Sonam Phuntso and Bhutan for the leadership of SATRC for last one year. Mr. R S Sharma said that he was pleased and proud to become the Chairman of SATRC which was the high level council of the regulators of the nine SATRC member countries. He promised that during his chairmanship he would work for the improvement of SATRC and make SATRC as an effective regional platform to discuss the regulatory issue.

**3.3 Outcomes of the Asia-Pacific ICT Ministerial Meeting and the Implementation of the APT Strategic Plan for the year 2015-2017**

Secretary General presented the outcomes of the Asia-Pacific ICT Ministerial Meeting and the implementation of the APT Strategic Plan for the year 2015 – 2017. Secretary General presented the “Brunei Darussalam Statement of the Asia-Pacific ICT Ministers on Building Smart Digital Economy through ICT” and the six key priority areas identified in the Statement. She further explained the Strategic Plan of APT for the year 2015 – 2017 and the main work items under the Strategic Plan. She pointed out the relevancy of the work of SATRC in accordance of the Strategic Plan. She also pointed out the importance of the involvements of industry in the work of APT.

Secretary General’s presentation can be found in document SATRC-16/INP-04(Rev.1).

**3.4 Industry - Regulator Dialogue: Regulatory Trends and Current Business Environments – Issues and Challenges**

This session was chaired by Mr. R S Sharma, newly elected Chairman of STARC. Four high level executives from major telecom operators in India were invited as panelist at this session to express their views on the theme of the discussion. Among them were:

* Mr. Akhil Gupta, Vice-Chairman of Bharti Enterprises
* Mr. Mahendra Nahata, Director, Reliance Jio Infocomm
* Mr. Vivek Sood, CEO, Uninor India
* Mr. Arvind Bali, CEO, Videocon India

In their interventions, the telco leaders pointed out a number of concerns on the current business environments and the role of the regulators to facilitate the business. All the panelist agreed that the world is getting hyper-connected and radically changing people’s lives and society, Smart phone have become integral part of customer life and as a result there is tremendous growth in data traffic. As a result the dynamics of business environment is facing a number of issues and challenges in the aspects of consumers, value chain, technology and regulatory aspects. Telecom business focus is changing to connections and communications. Further, expanding into new areas such as financial services, M2M, online payments, education, e-commerce etc. Hence, regular review of regulations is required to prepare industry to enter into new spaces. Panelist emphasized that a number of initiatives are needed in the policy and regulatory aspects from the side of governments. Among those were:

* Faster decision making
* Policy be simple to execute and shorten time period from policy formulation to implementation
* Light touch regulation and least regulation in order to ensure the industry growth
* Reasonable taxation in the sector compared to other sector in order to provide affordability of the mass market
* Transparent, predictable and consultative regulatory regime
* Long term framework for policies and regulations for investment security
* Equal treatment for all who are providing same kind of services
* Strengthening the relation and partnership between regulatory bodies and the telecom industry

Chairman thanked all the telco leaders in the panelist for the presence and raise the key concerns of the industry. He commented that the situation was more or less similar in all the SATRC Members. Hence, he suggested SATRC Members to note the concerns and consult with their respect industries. He also suggested to make SATRC an effective platform where regular and industry can exchange their views and discuss the way forward for the industry.

1. **SESSION 2 (INDUSTRY-REGULATOR DIALOGUE) (14:00 – 15:20, Tuesday, 25 August 2015)**

This session was chaired by Mr. Anil Kaushal, Member, Telecom Regulatory Authority of India. This session of the Industry-Regulator Dialogue discussed the issues of the current trends regulation of spectrum and for future.

Fours presentations were delivered at this session:

* **Estimation of spectrum for mobile broadband** by Mr. Jitendra Singh, Qualcomm India Ltd. (Doc. SATRC-16/INP-09)

* **Future spectrum for mobile: Creating a sustainable future for mobile broadband** by Dr. Veena Rawat, GSM Association (Doc. SATRC-16/INP-10)
* **Spectrum regulation for future: Regulatory perspective** by Mr. Sanjeev Banzal, Telecom Regulatory Authority of India (Doc. SATRC-16/INP-11)
* **Spectrum regulation for future: Perspective of the industry.** by Ms. Adilah Junid, Axiata Group Berhad, Malaysia (Doc. SATRC-16/INP-12)

Two key aspects were discussed in the session: the requirement of spectrum for mobile broadband and the way that the spectrum should be regulated in future.

On the first point two representatives from industry focused that mobile phone technology is the fastest grown industry of all time and has become an engine of socio-economic development. The data demand through mobile is creasing many folds and expected to be 1000x in few year time. This increasing demand trend is creating challenges for industry and government. To meet the growing demand the mobile technology is evolving towards 5G and it requires additional spectrum. It is mentioned that on an average 1340 – 1960 MHz spectrum will be required for mobile services by 2020 and additional requirement will be 600 – 800 MHz. They emphasized that the regulator take a clear way to estimate the requirements of spectrum and identify additional spectrum for future. They also emphasized the importance of the decision to be taken by WRC-15 regarding the allocation additional spectrum for mobile and requested regulators to look into the matter carefully.

On the issue of spectrum regulation for future, the perspective of regulators and industry were expressed. The perspective of regulators includes increase the supply of spectrum to meet the demand, increase efficiency of the use of spectrum, employ new technology enabler such as spectrum sharing and spectrum reuse; licensing innovation and international coordination. On the industry perspective spectrum regulation for the future requires preparing for and adapting to future needs. Spectrum demand estimation, a roadmap and progressive regulation are critical.

Chairman thanked all the speakers for their expert views and hoped that the discussion would help the regulators to think and take a way forward on this very important matter.

1. **SESSION 3: INDUSTRY-REGULATOR DIALOGUE (15:40 – 17:00 Tuesday, 25 August 2015)**

This session was chaired by Mr. Ilyas Ahmed, Chief Executive, Communication Authority of Maldives. This session of the Industry-Regulator Dialogue discussed the issues of the regulatory trends and current business environments continued from Session 1.

Five presentations were delivered at this session:

* **Mobile network investment: Financial returns and investing for future demand in Asia** by Mr. Vinay Jaisingh, Morgan Stanley India Pvt. Ltd. (Doc. SATRC-16/INP-18);
* **Realization of 5G: Preparation for the regulators** by Mr. Chandan Kumar, Huawei Technologies Ltd. (Doc. SATRC-16/INP-19);
* **Overview of 5G initiatives and activities** by Mr. Nishant Bharat, Ericsson India Ltd. (Doc. SATRC-16/INP-20)
* **The role of the regulators in the context of Internet** byDr. Duangthip Chomprang, ISOC Asia Ltd. (Doc. SATRC-16/INP-21)
* **Internet ecosystem: Policy consideration** byDr. Mani Manimohan, GSM Association (Doc. SATRC-16/INP-13)

In those presentation the speakers focused in three key areas: investment for mobile networks, regulatory perspective of 5G and internet regulation.

On the issue of investment in mobile networks, it was expressed that LTE deployments are gaining traction globally driven by need for speed, however investments continue in 3G as well.

India, Indonesia, Thailand and now China are following tower sharing model to lower the passive tower capex. Most focus will be on backhaul and active infrastructure. In Asia overall data contribution to grow to 40% by 2017. With data becoming lot more important we see voice to start declining. Operators are trying to adopt bundled plans with data and voice. Rising smartphone penetration with cheaper and improving handsets, rising OTT calls and messages coupled with changing user behavior are the key reasons for voice cannibalization. Higher data coupled with competition has led to stagnation of revenues in Asia in 2014. Increasing Capex and related opex has led to lower EBITDA margins and moderated ROCE. Overall FCF to improve from 2016 with improving revenues, once data growth is more than voice decline.

On the issue related to 5G, different aspects, features and expectation of 5G were explained. It was mentioned that 5G would cover many industries and stakeholders benefit. Long tail use cases drive 5G technical requirements. However, there are diversified challenges and gap to reach 5G and it require revolutionary innovations. As a result regulators should be prepared to take the challenges of 5G on the aspects of spectrum, protection and privacy, security and other aspects of regulation.

On the issue of Internet regulation it was expressed that open internet is expected by all. However, there are barriers for internet availability and adoption. Internet ecosystem is evolving based on customer choice, effective competition and investment certainty. A number of key issues need to be considered such as maintain internet as platform for socio-economic growth; encourage infrastructure investment; invest on new technology and service; and shifting in the competitive landscape. Telecom operators are facing challenges due to OTT services. To ensure internet remains open and functional, mobile operators need the flexibility to differentiate between different types of traffic. The high degree of competition in the mobile market provides ample incentives to ensure customers enjoy the benefits of an open internet. Regulation that affects network operators’ handling of mobile traffic is not required.

Chairman thanked all the speakers to point out the key issues for consideration in their presentations.

1. **SESSION 4 : TELECOM REGULATION IN SATRC COUNTRIES – SHARING THE EXPERIENCES OF THE REGULATORS (09:00 – 10:20, Wednesday, 26 August 2015)**

This session was chaired by Mr. Digambar Jha, Chairman, Nepal Telecommunication Authority. The objective of the session was to share the experiences of the SATRC Members.

Five presentations were delivered in the session:

* **Regulatory experience: Bangladesh** by Mr. Sunil Kanti Bose, Chairman, Bangladesh Telecommunication Regulatory Commission (Doc. SATRC-16/INP-14);
* **Sharing regulatory experiences – Challenges and way forward** by Mr. Tarik Sultan, Member, Pakistan Telecommunication Authority (Doc. SATRC-16/INP-22);
* **Iranian regulatory experience** by Mr. Lotfullah Saboohi, Acting President, Communication regulatory Authority, Islamic Republic of Iran (Doc. SATRC-16/INP-23)
* **Iranian regulatory experience** bySunil Kumar Gupta, Principal Advisor, Telecom Regulatory Authority of India (Doc. SATRC-16/INP-24)
* **Regulatory experience of Sri Lanka** byMr. J A S Gunanandana, Telecommunication Regulatory Commission of Sri Lanka (Doc. SATRC-16/INP-17)

In these presentations regulators shared their current regulatory practices, achievements in recent years, challenges they are facing and the way forward to overcome the challenges. There are a number on key issues that were raised by the regulators. Among those are complexity of the licensing regime, scarcity of spectrum for mobile broadband, challenges due to OTT services and regulation of OTT services, maintaining fair and healthy competitions, protection of the consumer interest; mobile financial services and widespread availability and affordability of mobile broadband.

Chairman thanked the regulators to share the information about regulatory experience. He commented that SATRC is providing the platform to share the experience and such practice should continue in future. He also commented that from the presentations of regulators it is easy to identify the common areas where regulators are facing challenges. He hoped regulators would take the opportunity to use SATRC as common platform and discuss the common issues such as licensing regime or scarcity of spectrum.

1. **SESSION 5: PROVISIONS OF BROADBAND SERVICES (10:40–12:00, Wednesday, 26 August 2015)**

This session was chaired by Mr. Sunil Kanti Bose, Chairman, Bangladesh Telecommunication Regulatory Commission. The objective of the session was to discuss the issues related to provisions of broadband services in the context of SATRC.

Five presentations were delivered in the session:

* **Challenges in provision of broadband services** by Mr. Arvind Kumar, Telecom Regulatory Authority of India (Doc. SATRC-16/INP-26);
* **Access for international bandwidth for landlocked countries** by Mr. Digambar Jha, Chairman, Nepal Telecommunication Authority (Doc. SATRC-16/INP-15);
* **Development of broadband in Maldives** by Mr. Ilyas Ahmed, Chief Executive Officer, Communication Authority of Maldives (Doc. SATRC-16/INP-25)
* **Broadband through cable TV network** byMr. S K Singha, Advisor, Telecom Regulatory Authority of India (Doc. SATRC-16/INP-27)
* **Provision of broadband in remote areas** byMr. Michael Ginguld, Rural Broadband Pvt. Ltd., India (Doc. SATRC-16/INP-35)

In these presentations a number of concerned were raised regarding the provisions of broadband services. Developing countries, land-locked developing countries and small island counties are facing different kind of challenges to provide broadband services. In developing countries like India there are a number of barriers for broadband services. Among those are slow broadband penetration, poor broadband speed, affordability and lack of local and attractive contents. Also, due to the lack of fixed line broadband infrastructure, most of the customer based on mobile broadband. However, due to the lack of adequate spectrum more capacity cannot be provided. For the landlocked countries like Nepal, Bhutan and Afghanistan main bottleneck is the lack of international bandwidth and high price for it. Due to the non-connectivity with international submarine cable, the bandwidth cost is very high and a result internet cannot be provided at affordable prices.

Small island developing countries like Maldives facing different kind of challenges to provide broadband service. In small island countries mall number of population lives is large scattered area. As a result it becomes extremely difficult for commercial operators to provide services to those remote places to small number population with business sustainability. Further, government is unable to provide a nationwide broadband infrastructure due to budgetary constraint.

It was expressed that a National Broadband Policy including the participation of all parties can help to overcomes bottleneck. Regional cooperation also a major factor to assure the availability of international bandwidth to landlocked countries. Two innovative examples were presented to increase the penetration of broadband in developing countries:

* delivering broadband through digital cable TV network in city areas where cable TV system is widely used
* delivering broadband in remote and rural areas using innovative and affordable wireless technologies using local resources.

Chairman thanked all the speakers for their valuable presentations. Chairman mentioned that broadband is the key enabler for socio-economic development and access to broadband at affordable price is the right of the citizen. Hence, governments and regulators need to make utmost efforts to provide broadband services at affordable price. Chairman agreed that a well formulated Broadband Policy with the participation of all parties can help to address the challenges. Landlocked countries can be benefitted by having bilateral or multilateral cooperation with their neighbors to get the access to submarine cable and lower the cost of international bandwidth. He hoped that SATRC would be able to address the issue as a region in the spirit of cooperation among members.

1. **SESSION 6: CLOUD COMPUTING (14:00 – 15:20, Wednesday, 26 August 2015)**

This session was chaired by Mr. Tariq Sultan, Member (Finance), Pakistan Telecommunication Authority. The objective of the session was to discuss the overall aspects of cloud computing.

Four presentations were delivered in the session:

* **Technological challenges in cloud computing** by Mr. Manoj Dawane, Ericsson India Ltd. (Doc. SATRC-16/INP-28);
* **Regulatory challenges in cloud computing** by Mr. Robert Ravi, Advisor, Telecom Authority of India (Doc. SATRC-16/INP-29);
* **Data security challenges in cloud computing** by Mr. Lalit Chowdhary, Cisco System India Ltd. (Doc. SATRC-16/INP-30)
* **Business opportunities and service delivery models in cloud computing** byMr. H S Gupta, IBM India Ltd. (Doc. SATRC-16/INP-31)

In these presentations speakers focused on the various aspects of could computing. It was expressed that cloud computing is now becoming popular for enterprises in order to deliver customer demands in speed. It is a kind of utility model of the information technology. It offers a number of advantages such as economy of scale, faster delivery, etc. Governments can leverage could services for effective delivery of e-government services. However, it also posses a number of regulatory challenges. Among those are ensuring availability of data, data security and privacy, jurisdictions, quality of services, interoperability between could service providers, legal framework and licensing of the service providers. Two presentations focused on the various aspects of data security challenges in cloud computing and the business models in cloud computing.

Chairman thanked all the speakers for their expert views on the subject.

1. **SESSION 7: PLENARY - REPORT OF ACTION PLAN PHASE V (15:45 – 17:15, Wednesday, 06 August 2014)**

This session was chaired by Mr. R S Sharma, Chairman, SATRC. The objective of the session was to discuss the progress of implementation of the SATRC Action Plan Phase V.

* 1. ***Report of Implementation of SATRC Action Plan Phase V (Document SATRC-16/INP-05)***

APT Secretariat presented the report of implementation of SATRC Action Plan Phase V. It was reported that the SATRC Action Plan Phase V was adopted at the 15th SATRC Meeting held from 5 to 8 August 2015 in Paro, Bhutan for the implementation period 2015-2016. In included the WG activities and capacity building workshops. It was reported that each of the WGs were assigned with number of work items and WG meetings were held as planned to discuss those work items. A number of experts nominated by SATRC Members are involved in the WG activities.

It was informed that SATRC Workshop on Policy, Regulation and Services was also planned to be held in late June 2015 in Nepal. However, due to the tragic earthquake in Nepal in the month of April, the workshop has been postponed to be held in December 2015.

Secretariat mentioned that the planned activities were implemented according to the timeline approved by the SATRC-15. APT Secretariat would like to thank all Chairs and experts of the working groups as well as SATRC Members for their continuous efforts and contribution to the implementation of the activities under the Action Plan. Member regulators contributed not only by means of the financial resources but also provided a number of working experts and by providing facilities for hosting the events. It was expected that similar cooperative approach would make it easy for the APT secretariat to implement the remaining activities of Action Plan Phase V effectively and efficiently.

Chairman thanked APT Secretariat to present the report of implementation of Action Plan Phase V. He also thanked Secretary General and APT Secretariat for assisting the implementation of Action Plan in the correct direction.

The report was adopted by the meeting.

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| **Decision no. 2 (SATRC-16)** |
| SATRC adopted the report of the implementation of SATRC Action Plan Phase V. |

* 1. ***Report of the Income and Expenditure for Implementation of the SATRC Action Plan Phase V (Document SATRC-16/INP-06)***

Dr. Jongbong Park from APT Secretariat introduced document SATRC-16/INP-06 which contained the report of income and expenditure for implementation of SATRC Action Plan Phase V. Dr. Park mentioned that approved estimated expenses for the implementations was US$ 116,817 and income US$ 110,549. He mentioned that income mainly included the pledges contributions of SATRC Members as extra budgetary contributions. The actual expenditure for the activities in 2015 was US$ 28,568 and income amounts to US$ 131,000. He explained that the income was more than expected as one SATRC Members provided the due contributions in previous phase of Action Plans. He indicated that current balance at the fund US$ 109,268.00**.** He further indicated that approximately US$ 72,168 would be required to complete the remaining activities of SATRC Action Plan Phase V. He sought approval of the SATRC to use the amount to use for the implementation.

Dr. Park also mentioned that a number of SATRC Members had provided the support in kind in various ways during the implementation of SATRC Action Plan Phase V. Nepal and Sri Lanka hosted the events that were planned in Action Plan Phase V until now. All of the hosts provided meeting facilities, luncheon and dinner without any extra expenses to APT Secretariat. APT Secretariat would like to give its heartfelt thanks for those who have provided contribution in kind. Dr. Park also thanked SATRC Members for their commitments for the successful implementation of SATRC Action Plan Phase V and financial contributions as EBC for implementation. He noted that with the current availability of SATRC Fund, APT Secretariat would be able to implement the remaining activities of Action Plan Phase V in time.

Chairman thanked Dr. Park for giving the details of income and expenditure for Action Plan Phase V. He commented that it was encouraging to see that SATRC Members had voluntarily contributed to SATRC activities. He also thanked Secretary General and APT Secretariat for proper management of the fund. He also proposed to give authority to APT Secretariat to spend from balance for the implementation of remaining activities under SATRC Action Plan Phase V. There was no further comment. It was approved by the meeting.

The report was adopted by the meeting.

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|  **Decision no. 3 (SATRC-16)** |
| SATRC adopted the report of the income and expenditure for implementation of SATRC Action Plan Phase V. SATRC also decided to give authority to APT Secretariat to spend from balance for the implementation of remaining activities under SATRC Action Plan Phase V.  |

* 1. ***Report of the Chairman of SATRC Working Group on Policy, Regulation and Services (Document SATRC-15/INP-08)***

In absence of Mr Wangay Dorji, Chairman of SATRC Working Group on Policy, Regulation and Services (WG PRS), Mr. Thinley Dorji from Bhutan Infocomm and Media Authority presented the WG PRS report. Mr. Dorji informed that WG PRS was chaired by Mr. Wangay Dorji, Head of Telecommunication, Bhutan Infocom and Media Authority (BICMA) and consists of 21 experts from all of SATRC Members. The experts were nominated by the member regulators in response to the circular letter sent by APT Secretariat immediately after the 15th SATRC Meeting. Email reflector was established immediately after the formation of the working group. Four work items were assigned to the working group during the implementation of Action Plan Phase V:

1. Measure to protect interests of consumers of telecom services
2. Policy, regulator and technical aspects of OTT services in SATRC countries
3. Emerging licensing framework including exit and relicensing policy
4. International connectivity for the provision of providing broadband services

It was reported that the 1st meeting of the WG was held from 25 to 26 February 2015 in Kathmandu, Nepal. It was hosted by Nepal Telecom Authority. The meeting was attended by the enlisted experts from all nine SATRC Regulators. At the meeting, the working group considered the four work items assigned to the working group. 12 contributions were received from experts on four work items. The meeting defined the scope of work for those work items and developed work plan for each work items. Further, initial discussion was taken place on each work items. Meeting also approved a number of questionnaires for the collection of information on the work items. Meeting also assigned lead expert on each work item to prepare the draft output. After the physical meetings the working group continued to work by electronic means. Second meeting of the working group expected to be held early next year.

Chairman thanked Mr. Dorji to present the progress report of the WG PRS. He thanked the WG chairman and all experts for their valuable contributions to the activities.

The report was noted by the meeting.

* 1. ***Report of the Chairman of SATRC Working Group on Spectrum (Document SATRC-15/INP-07)***

Mr. Sanjeev Banzal, Chairman of SATRC Working Group on Spectrum (WG SPEC) presented the WG SPEC report. Mr. Banzal informed that working Group was chaired by Mr. Sanjeev Banzal from Telecom Regulatory Authority of India (TRAI) and consists of 19 experts from all SATRC Members. Four work items were assigned to the working group under the Action Plan Phase IV:

1. Spectrum re-farming in SATRC Countries
2. Spectrum requirement estimation for IMT in SATRC Countries
3. Increasing role of network sharing regulation for SATRC countries: From passive network sharing to mobile virtual network operation
4. Non-ionizing radiation safety in frequency bands used for mobile telephone

Mr. Banzal informed that the 1st meeting of working group on Spectrum was held from 27 to 28 May 2015 in Colombo. Sri Lanka. The meeting was hosted by the Telecommunication Regulatory Commission of Sri Lanka (TRCSL). The meeting was attended by 29 experts of from eight SATRC Regulators. A number of experts from industry also attended the meeting. At the meeting, the working group considered the four work items assigned to the working group. 15 contributions were received from the experts on four work items. The meeting defined the scope of work for those work items and developed work plan for each work item. Further, initial discussion has taken place on each work item. Meeting also approved a number of questionnaires for the collection of information on the work items. After the physical meetings the working group continued to work by electronic means 2nd meeting of the working group expected to be held early next year.

Chairman thanked Mr. Banzal to present the progress report of the WG SPEC. He thanked the WG chairman and all experts for their valuable contributions to the activities.

The report was noted by the meeting.

* 1. ***General Discussion on the Implementation of SATRC Action Plan Phase V***

Chairman commented that the work items assigned to the two working groups were very much relevant to the practical issues to the SATRC Regulators. He also commented that the work items covered the concern of the regulators that were presented in earlier sessions that day. Hence, he emphasized that the WGs should come out with a good outcomes that can really benefit the SATRC Members. He asked comments from the floor.

Mr. Digambar Jha, Chairman of the Nepal Telecommunication Authority commented that SATRC should do the work in relation to the international roaming among SATRC Members. He mentioned that unexpected high price of roaming among SATRC Members and expected that through bilateral/multilateral agreement among SATRC Members whether it would be brought into reasonable level.

Chairman agreed with the comments of Mr. Jha and suggested that SATRC regulators start dialog with their perspective operators on that issue and come up with a possible way forward. APT Secretariat informed that SATR-15 adopted a Joint Declaration regarding the issue which stated that

“*The mobile roaming market within the intra-SATRC region has shown significant improvement over the last few years. Prices for roaming have declined and the choices in the market provided by alternative service providers have increased. However, such improvement still could not translate into promoting regional mobile roaming due to disparities in tariffs. Taking into account this development and also considering the role that the regulators in the region need to play for a larger good of the people of this region, today, we have endorsed the joint adoption of the regional strategies, including regulatory initiatives in bringing down the price of mobile roaming rates within our region. We reaffirm that the respective regulators will make decisive negotiations with the operators by the end of 2015 in their own countries and implement the recommendations adopted by the Council*.”

Chairman thanked APT Secretariat to mention the Joint Declaration and requested SATRC Members to act accordingly.

Dr. Vijayalakshmy K Gupta, Member TRAI, informed the meeting about the outcomes of GSR which was held in Gabon in early 2015. She informed that as representative of SATRC she presented the activities of SATRC and SATRC Action Plans at the Regulatory Association Meeting at GSR and it was very much appreciated. The activities and outcomes of SATRC Action Plans attracted by other regions very well. She thanked Mr. Parvez from APT Secretariat for the preparation of SATRC presentation for GSR.

Chairman thanked all for the taking part in the discussion. He appreciated the work of Secretary General and APT Secretariat towards the activities of SATRC. He also expressed his thanks to the WG chairs and experts for their valuable contribution. There were no further comment and session was closed.

1. **SESSION 8: EMERGING ISSUES – KEY ISSUES OF CONCERN FOR REGULATORS (09:00 – 10:20, Thursday, 27 August 2015)**

This session was chaired by Mr. Sudhir Gupta, Secretary, Telecom Regulatory Authority of India. The objective of the session was to consider the emerging key issues that need the attention of the regulators. Four key emerging issues were identified for discussion at this session: regulatory challenges of OTT services, mobile financial services, spectrum sharing and trading, and challenges of implementing IoT. Five presentations were delivered on the issues:

* **Policy and regulatory aspects of OTT** by Dr. Duangthip Chomprang, ISOC Asia Ltd. (Doc. SATRC-16/INP-32);
* **Regulatory challenges of OTT services** by Mr. Bijay Kumar Roy, Nepal Telecommunication Authority (Doc. SATRC-16/INP-16);
* **Mobile financial services** by Mr. Stein Erik Nordmo, Telenor (Doc. SATRC-16/INP-33)
* **Spectrum sharing and trading by Mr. N Parameswaran,** Principal Advisor, Telecom Regulatory Authority of India (Doc. SATRC-16/INP-34)
* **Challenges in implementing M2M/IoT** byMr. Amit Marwah, Nokia India Ltd. (Doc. SATRC-16/INP-36)

Speakers expressed their concern on the issues mentioned above. Regarding the regulatory challenges on OTT services it was mentioned that there are number benefit of OTT services. However, Telecommunication Service Providers (TSPs) and Communication OTT service providers are capable of providing real-time voice, video and messaging services to customers and are competing in the same market segment. The TSPs pay for Service License, Spectrum fee, bear the costs for the infrastructure, spectrum management and other operational costs to meet QoS requirements and comply with Universal Services Obligations and roll-out, obligations , Security concerns and many other regulations. However, OTT service providers are not obliged to adhere to any regulatory obligations and do not have to bear any such costs as they do not own or operate/maintain any network. The TSPs fall under a regulatory regime whilst OTT players are not covered by such regime resulting imbalance in the level playing field. Speakers pointed out a number of regulatory questions and requested regulators to think about the issue for future.

Regarding the issue of spectrum sharing and trading, it was mentioned that spectrum sharing provides an opportunity for the telecom operators to pool their spectrum holding and thereby improve spectral efficiency. Spectrum sharing also provide additional network capacities in places where there is network congestion due to spectrum crunch. Hence, regulators need to think to allow the spectrum sharing based on the certain regulatory terms and conditions. Another option to enhance the use of spectrum could be spectrum trading which is referred to handover of the right to use the spectrum to the buyer. Certain regulatory terms and conditions are also needed here for ensuring proper trading. Question was asked regarding the rational of sharing of spectrum among the competitors. It was clarified that sharing in the same band does allow to increase the network capacity to a great extent.

Chairman thanked the speakers to raise the emerging issues. He hoped that the discussion would help the regulators to develop regulatory framework on those aspects.

1. **SESSION 9: PLENARY – THE WAY FORWARD (10:40 – 12:00, Thursday, 27 August 2015)**

This session was chaired by Dr. Vijayalakshmy K Gupta, Member, Telecom Regulatory Authority of India.

* 1. ***Discussion on enhancing cooperation among the regulators in SATRC countries***

Chairman summarized the activities of SATRC-16 and mentioned that the meeting was coming to the end. She mentioned the objective of any regional cooperation is the ability to solve the problem in the region. She mentioned that SATRC was providing a good platform for regulators as well as industry to discuss the challenging issues and exchange opinions to find way forwards or the challenges. She requested SATRC regulators to express their views to enhance the collaboration among the regulators.

Mr. Sunil Kanti Bose, Chairman of Bangladesh Telecommunication Regulatory Commission expressed his opinion that SATRC was working very well and discussing the key issues of concern for the regulators. He appreciated the gather of the head of the regulatory bodies at annual SATRC meetings. He suggested to find a mechanism to interact more among the heads of the regulators to enhance further cooperation through physical meetings or via online mechanism.

Mr. Lotfullah Saboohi, Acting President of Communication Regulatory Authority, Islamic Republic of Iran mentioned that in SATRC meetings regulators share experiences and industry make presentations on various issues. However, he commented that the issues should be more focused for discussion. Mentioning the experience of India for spectrum sharing issue, he expressed that kind of discussion can help other regulators to take actions and way forward accordingly.

Mr. Digambar Jha, Chairman of Nepal Telecommunication Authority appreciated the work of SATRC and mentioned that during the development of regulation Nepal always look into the regulations of other SATRC members on the same aspects. He emphasized SATRC to work on the issue of mobile roaming charges in SATRC countries and the way that the cost of international bandwidth can be reduced for landlocked countries like Nepal.

Mr. Sudhir Gupta, Secretary of TRAI commented that SATRC members should share the new developments in regulation through SATRC webpage. SATRC webpage could be a reference point for sharing information. He sought the help of APT Secretariat in this regard. TRAI also proposed to issue monthly newsletter.

Mr. Ilyas Ahmed, Chief Executive Officer of Communication Authority of Maldives suggested that in addition to the work items that are covered by the WGs, there should be a particular work item for the head of the regulators so that it can get more importance and comes up with definite outcomes. He mentioned that the additional work item should be out of the Action Plan activities and should get focused by the heads of the regulators. He also emphasized the personal level of communications among the head of the regulators. He mentioned that personal level communication can help to figure out the good outcomes of SATRC.

Secretary General commented that APT Secretariat would facilitates the work with the help of SATRC members. She suggested SATRC Members to assign a focal point.

* 1. ***Consideration and Adoption of the Implementation Calendar for SATRC Action Plan Phase V (Document SATRC-16/OUT-01)***

Secretary General presented the Implementation Calendar for SATRC Action Plan Phase V for the year 2015 – 2016. She mentioned that the calendar was prepared based on the outcomes of SATRC-15 and the confirmation at the heads of delegation meeting. She sought approval of the meeting. There was no comment and it was approved.

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| **Decision no. 4 (SATRC-16)** |
| Meeting approved the implementation calendar for SATRC Action Plan Phase V for the year 2015-2016 as presented in document SATRC-16/OUT-01.  |

* 1. ***Date and Venue of 17th SATRC Meeting***

Chairman requested Secretary General to inform the host of the 17th SATRC Meeting. Secretary General informed that APT Secretariat received proposal from Bangladesh and Pakistan for hosting the 17th SATRC Meeting. She further informed that based on the discussion between Bangladesh and Pakistan it was agreed that 17th SATRC would be held in Bangladesh. She requested Chairman to confirm the arrangements with Bangladesh. Chairman requested Bangladesh to confirm the hosting. Mr. Sunil Kanti Bose, Chairman of Bangladesh Telecommunication regulatory Commission commented that it would be the privilege to host the 17th SATRC meeting in Dhaka, Bangladesh. He sought approval of the meeting.

Chairman thanked Mr. Bose for the proposal of hosting the 17th SATRC Meeting. Chairman suggested APT Secretariat to communicate with Bangladesh for the hosting arrangements.

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|  **Decision no. 5 (SATRC-16)** |
| Meeting approved that the 17th SATRC Meeting would be held in Dhaka, Bangladesh hosted by Bangladesh Telecommunication Regulatory Commission. |

* 1. ***Election of Vice-Chairman of SATRC***

Secretary General informed that according to the Working Method of SATRC, the host of the next SATRC Meeting would take the vice-chairmanship of SATRC. Secretary General indicated that as Bangladesh would host the 17th SATRC Meeting, Bangladesh needs to nominate a candidate for the Vice-Chairman of SATRC. Bangladesh thanked Secretary General and proposed the name of Mr. Sunil Kanti Bose, Chairman of Bangladesh Telecommunication Regulatory Commission, as the Vice-Chairman of SATRC. It was approved by the meeting.

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| **Decision no. 6 (SATRC-15)** |
| Meeting elected Mr. Sunil Kanti Bose, Chairman of Bangladesh Telecommunication regulatory Commission as the Vice-Chairman of SATRC. |

Chairman invited Mr. Sunil Kanti Bose to take his seat as the vice-chairman of SATRC.

* 1. ***Closing***

Chairman thanked the head of each delegation for their presence at the meeting and their effort for the successful meeting. He also thanked Secretary General and APT Secretariat for their hard works. He promised that as the Chairman of SATRC, TRAI would try best to enhance the SATRC activities among its members.

Secretary General thanked all the regulators for very successful meeting and for their contribution to SATRC activities. She very much appreciated the commitment and contributions of SATRC Members towards SATRC activities. She mentioned that SATRC was unique sub-regional program which is fully financed by its Members and Members were keen to host and participate in SATRC activities. She congratulated on the new leadership taken by Mr. R S Sharma, SATRC Chairman and Mr. Sunil Kanti Bose, Vice Chairman of SATRC. She thanked the team of TRAI who had successfully provided all the hosting facilities. She assured that APT Secretariat would do its best for the success of SATRC activities.

Chairman declared the meeting closed.

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