



ASIA-PACIFIC TELECOMMUNITY

1<sup>st</sup> Meeting of SATRC Working Group on Spectrum in  
SAP-IV

10 – 11 October 2012, Dhaka, Bangladesh

Document

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**Chairman, SATRC WG Spectrum**

**REVIEW THE OUTCOMES OF WORKING GROUP SPECTRUM IN  
ACTION PLAN PHASE III**

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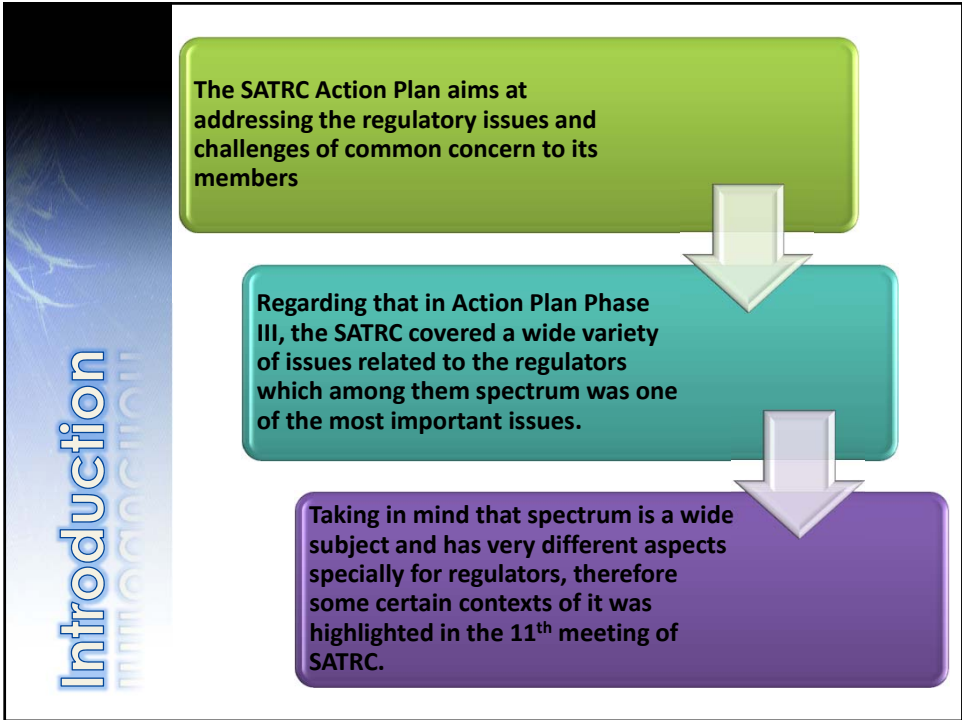
Outcome of the SATRC Action Plan Phase III

**Background**

Working Group on Spectrum is formed

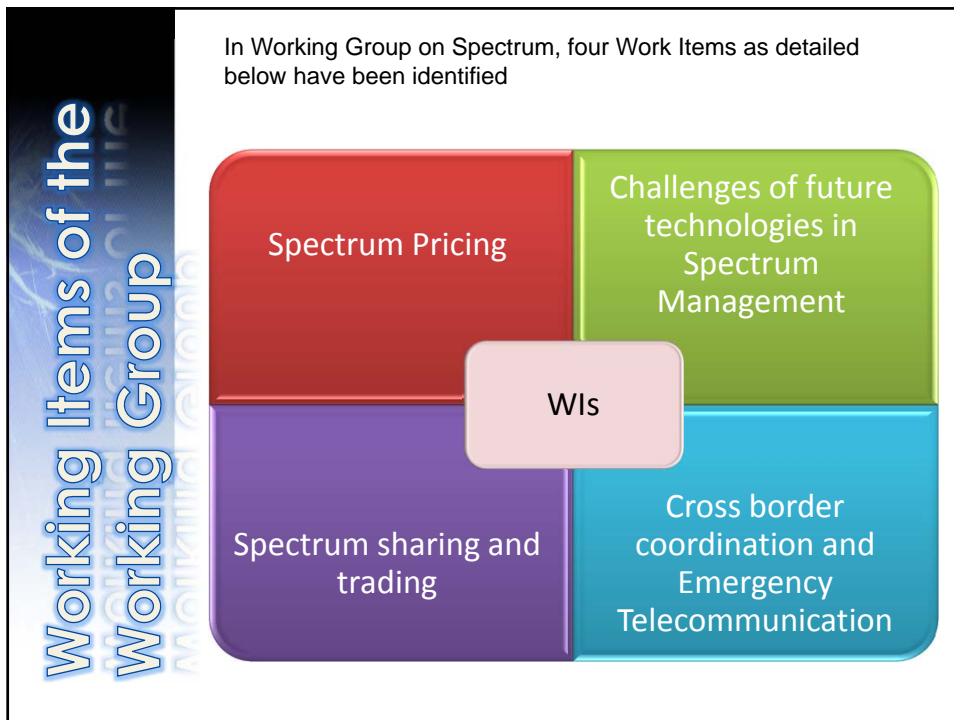
to deal with the issues related to spectrum management, monitoring, sharing and coordinated efficient use of spectrum for different service in the region

Working Group is chaired by I.R of IRAN.



**Events of SATRC WG on Spectrum**

1st Meeting of SATRC WG on Spectrum	<ul style="list-style-type: none"> <li>• 07 – 08 July 2010</li> <li>• Tehran, Islamic Republic of Iran</li> </ul>
SATRC Workshop on Spectrum Management	<ul style="list-style-type: none"> <li>• 19-20 August 2010</li> <li>• Kathmandu, Nepal</li> </ul>
2nd Meeting of the SATRC WG on Spectrum	<ul style="list-style-type: none"> <li>• 12 - 13 December 2011</li> <li>• Colombo, Sri Lanka</li> </ul>



## Sub Working Groups (SWGs)

7 Sub Working Groups (SWG) have been proposed to follow up the common regional issues and implementation of its certain decisions through electronic means.

	SWG subject	Lead	Member
1	Acceding to Tampere Convention	Mr. Ikram alhagh (PAK)	All WG member
2	Identification of harmonized frequency bands for PPDR	Lt. Colonel Tushar bin Yunus (BGD)	All WG member
3	Cross border coordination	Ms. Shayanfar (IRN)	All WG member
4	Spectrum pricing	Mr. Prasad (NPL)	All WG member
5	Cognitive Radio	Ms Dashti (IRN)	All WG member
6	LTE	Mr. Banzal (IND)	All WG member
7	Spectrum sharing and Trading	Mr. Ranatunga (SRL)	All WG member

**Results and Recommendations**

The following table lists the reports which are received from each of the SWG:

Emergency telecommunication - acceding to Tampere convention
Harmonized use of frequency bands for public protection and disaster relief (PPDR)
Spectrum pricing
Cognitive Radio
Efficient use of spectrum using long term evolution(LTE)
Spectrum sharing and Trading

**Emergency telecommunication acceding to Tampere convention**

- The objective of this report was to accelerate the members for joining to Tampere Convention. This reports provides a guideline for members to join this convention.
- Review of Relevant References by ITU and APT
- Review of Tampere Convention
- SATRC Members Signatories to Tampere Convention
- Recommendations

Emergency telecommunication acceding to Tampere convention

- **Key Recommended Actions:**
- All the SATRC member countries should sign/ratify this convention to become the state parties
- any pending steps left in order to make the convention effective for those SATRC members who have already signed the convention, they should make the efforts to complete these steps on priority basis
- SATRC member countries should sign a multinational agreement to facilitate the use of telecommunication resources for disaster mitigation and relief
- SATRC members may share a list of respective authorities, non-State entities, specific telecom resources and emergency plans
- All the members must put efforts to minimize the number of interfaces for the requesting state party during disaster mitigation and relief.

Harmonized use of frequency bands for public protection and disaster relief (PPDR)

- The objective of this report is to provide guideline to SATRC members to harmonize the use of spectrum for the purpose of Public Protection and Disaster Relief (PPDR).
- This reports has analyzed various spectrum bands available for PPDR use in SATRC countries. This has also included recommendation to harmonize the use of the spectrum bands for PPDR for maximum benefits.

Harmonized use of frequency bands  
for public protection and disaster relief  
(PPDR)

- **Key Recommended Actions:**
- Use of 406.1-430 MHz and 440-470 MHz for narrow band PPDR applications
- Use of 806-824/851-869 MHz for wide band PPDR applications
- Use of 4 940-4 990 MHz (to be reviewed in future based on the decision by WRC-15) for broadband PPDR applications

Spectrum Pricing

- Since spectrum is very important vital limited resource, its pricing strategy/techniques should be in such a way that facilitates the effective and efficient management of the spectrum for the development and expansion of telecommunication services.
- Although it seems that the pricing of spectrum in various countries varies according to their national rules and regulation (e.g. Policy, Act, Regulation, National Frequency Allocation Plan) as per the priority sector of the country, it is agreed to have common norms and standards to be adopted for the facilitation of innovative wireless technologies in a timely manner.

- To know the various Spectrum Pricing techniques, principles and methodologies
- Make comparison on different spectrum pricing techniques, approaches and methodologies in different perspectives
- To understand the Spectrum Pricing techniques being used in SATRC
- countries
- Recommendations to have common approach in spectrum Pricing as far as possible

- **Key Recommended Actions:**
- Adopting a common guideline for SATRC countries on spectrum pricing in line with the spectrum pricing objective, principles, methodologies, approaches and criteria as far as applicable.
- Use spectrum pricing as a tool to promote effective and efficient management of spectrum; making spectrum management economic, rational, scientific, & transparent.
- Sharing and coordinating the relevant information on spectrum pricing among the member countries.



- This document overviews the state of art in the regulatory and standardization activities on cognitive radio all over the world, which are deemed to have fundamental influence on the future of wireless communications.
- Additionally, the major functions of cognitive radio and components of cognitive radio and implementation issues are reviewed.
- This report also discuss the Regulatory Issues and Key Concepts.
- Finally, based on conducted survey through the technical and regulatory investigation, a consistent conclusion provided that may help administrations for drawing of their own policy guideline

- **Guidelines and Recommendations**
- Harmonizing the viewpoints, exchanging data and providing guidelines is partially an important role for regulators and standardization bodies, and also for technical community.
- There are regulatory dimensions that need to be considered, and many of those go beyond simple spectrum regulation Including aspects of equipment, conformance (responsibility), cognitive pilot channels, and interface regulation & standardization.
- Further work is needed to analyze tradeoffs and potential risks and benefits that are related to CR and SDR technologies. There are only vague understandings on the scale of costs that may be coming from new technology deployment and increased interference risks. Part of the SWOT analysis should be also to consider a number of different approaches.
- In the near term a regulatory framework should be developed that encourages research and the development of CR. For example, allocating a block of spectrum for CR control and enabling secondary licensing, would achieve this.

Efficient use of spectrum  
using long term evolution(LTE)

- To know the various IMT-advanced techniques including LTE, LTE-Advanced
- Make comparison of their specifications/speed etc
- To understand the technologies(2G, IMT, IMT-Advanced) being used in SATRC countries
- To understand challenges being faced by the SATRC countries due to spectrum shortage

Efficient use of spectrum  
using long term evolution(LTE)

- **Key Recommended Actions:**
- Refarming the spectrum so that existing users may be asked to shift to other bands or they may be asked to start new technologies in the same band.
- Audit the spectrum held by various agencies to check if they are employing spectrum efficient techniques. They may serve same number of subscribers in the smaller chunk of spectrum using spectrum efficient techniques and leaving some of the spectrum for the new technology applications.
- Change the traditional way of spectrum planning and engineering. Spectrum should be assigned to those operators who value it the most.
- Exploring the new bands and shifting applications to the newly explored band if appropriate.

- The objective of this report is to give information to member regulators to explore the possibility of utilizing the scarce spectrum resource more effectively through Spectrum Trading and Sharing.

- **Key Recommended Actions:**
- Spectrum policies should address incentives for innovation, promote flexibility, establish spectrum users' rights, determine practical methods for compliance monitoring, compliance monitoring, and dispute resolution
- Analysis of current and future spectrum uses will be needed to help determine which bands should be included and how and when they should be released,
- Planning needs to involve consultation with various stakeholders and with industry fora.
- Careful review and understanding of recent decisions at WRC and certain leading countries will be both helpful and necessary.
- Ensuring sufficient spectrum is available to satisfy demand and for proper market functioning.



THANK YOU

by:  
Dr. Mina Dashti