AGENDA ITEMS UNDER PREPARATION BY SOUTH AFRICA FOR THE WORLD RADIOCOMMUNICATION CONFERENCE 2012
June 2009

Agenda Item 1.2
(Enhancing the international regulatory framework)

CPM CHAPTER 6
FUTURE WORK PROGRAMME AND OTHER ISSUES

Taking into account the ITU-R studies carried out in accordance with Resolution 951 (Rev.WRC-07), to take appropriate action with a view to enhancing the international regulatory framework.

Relevant Resolution/s:
Resolution 951 (Rev.WRC-07): “Enhancing the international regulatory framework

Background
There is growing pressure on spectrum management policies due to convergence and the increasing use of digital technologies. This Agenda item was adopted in order to develop concepts and procedures for enhancing the Radio Regulations to meet the demands of current, emerging and future radio applications, while taking into account existing services and usage. The studies related the above task shall be limited to general allocation or procedural issues relating to general spectrum management solutions, such as those in Annex 1 of Resolution 951 (WRC-07) as indicated below. The process as outlined in Annex 2 of Resolution 951 must be followed.

During the previous study cycle leading towards WRC-07, ITU-R SG1 identified four options to address this matter namely:
1. Keep current practice
2. Revising existing definitions or create new definition
3. Introduce substitution between services
4. Introduce composite services
The identified parties are Altech-Netstar, eTV, NAB, SABC, Sentech, Smile, Vodacom and Multichoice. The draft report will be circulated to these parties to start further discussion.

**Agenda Item 1.6 (Resolution 950(Rev. WRC-07))**

To review No. 5.565 of the Radio Regulations in order to update the spectrum use by the passive services between 275 GHz and 3 000 GHz, in accordance with Resolution 950 (Rev. WRC 07), and to consider possible procedures for free-space optical-links, taking into account the results of ITU R studies, in accordance with Resolution 955 (WRC-07);

**Agenda Item 1.8**

Technical and regulatory issues relative to the fixed services in the bands between 71 and 238 GHz

CPM CHAPTER 3
Fixed, Mobile and Broadcasting Issues

To consider the progress of ITU R studies concerning the technical and regulatory issues relative to the fixed service in the bands between 71 GHz and 238 GHz, taking into account Resolutions 731 (WRC 2000) and 732 (WRC 2000)

Relevant Resolution/s:
Resolution 731 (WRC-2000): “Consideration by a future competent world radiocommunication conference of issues dealing with sharing and adjacent-band compatibility between passive and active services above 71 GHz”

Resolution 732 (WRC-2000): “Consideration by a future competent world radiocommunication conference of issues dealing with sharing between active services above 71 GHz”

Background
Resolutions 731 and 732 were adopted at WRC-2000 as part of the conference decisions on the allocation of frequency bands above 71 GHz to the Earth Exploration-Satellite Service (passive) and Radio Astronomy Services (RAS) resulting in an overall rearrangement of the allocation tables in Article 5 of the
Radio Regulations. These resolutions became necessary because the ITU-R was not able to fully evaluate for the active services (such as for example fixed, mobile, radiolocation, etc.), the new arrangement of their allocations in relation to the passive allocations or each other. Therefore, the conference decided to adopt these two resolutions providing for further study and possible action in the future when active services technology and emerging requirements become better known. Since that time, millimeter wave spectrum above 71 GHz has become the subject of increasing interest for commercial use due to its unique propagation characteristics and the wide bandwidth available for carrying telecommunications traffic. New technologies are now emerging that offer the possibility of using these higher frequency bands for fixed wireless applications, taking advantage of the wide bandwidths available to support applications such as extremely high speed data transmission with data rates in the 1-10 Gbps range, for short distance with 1-2 km hop lengths.

Interested parties involved
No interested parties other than Telkom identified

**Agenda Item 1.9**

CPM CHAPTER I
Maritime and Aeronautical Issues.

*To revise frequencies and channelling arrangements of Appendix 17 to the Radio Regulations, in accordance with Resolution 351 (Rev.WRC 07), in order to implement new digital technologies for the maritime mobile service;*

**Agenda Item 1.10**

CPM CHAPTER I
Maritime and Aeronautical Issues.

*To examine the frequency allocation requirements with regard to operation of safety systems for ships and ports and associated regulatory provisions, in accordance with Resolution 357 (WRC 07);*

**Agenda Item 1.11**

(Science issues)
**CPM CHAPTER 4**
(Radiolocation and amateur Issues)

*To consider a primary allocation to the space research service (Earth-to-space) within the band 22.55-23 GHz, taking into account the results of ITU-R studies, in accordance with Resolution 753 (WRC-07)*

**Relevant Resolution**
Resolution 753 (WRC-07): “Use of the band 22.55-23.55 GHz by the space research service”, calls for consideration of sharing between space research between space research service systems operating in the Earth-to-space direction and the fixed, inter-satellite and mobile services in the band 22.55-23.15 GHz, with a view to consider the inclusion of the sharing criteria within the Radio Regulations and appropriate modifications to the Table of Frequency Allocations.

[In SA this is allocated to and being used for PTP links.]

**Agenda Item 1.12**
(Consideration of modification of the aeronautical component of the mobile service allocation in the 37-38 GHz band for protection of other primary services in the band)

A.I 1.12: to protect the primary services in the band 37-38 GHz from interference resulting from aeronautical mobile service operations, taking into account the results of ITU R studies, in accordance with Resolution 754 (WRC 07);

**Agenda Item 1.14**
(Radiolocation service)

**CPM CHAPTER 2**
RADIOLOCATION AND AMATEUR ISSUES

*To consider requirements for new applications in the radiolocation service and review allocations or regulatory provisions for implementation of the radiolocation service in the band 30-300 MHz, in accordance with Resolution 611 [COM6/14] (WRC-07).*
Agenda Item 1.15
(Oceanographic Radar Applications)

CPM CHAPTER 2
RADIOLOCATION AND AMATEUR ISSUES

To consider the possible allocations in the range of 3-50 MHz to the radiolocation service for oceanographic radar applications, taking into account the results of ITU-R studies, in accordance with Resolution 612 [COM6/15] (WRC-07)

Agenda Item 1.18
(Extending the primary and secondary radiodetermination-satellite (space-to-Earth) service allocations in the 2483.5-2500MHz band for global primary allocation)

CPM CHAPTER 5
SATELLITE ISSUES

To consider extending the existing primary and secondary radiodetermination-satellite service (space-to-Earth) allocations in the band 2483.5 - 2 500 MHz in order to make a global primary allocation, and to determine the necessary regulatory provisions based upon the results of ITU-R studies in accordance with resolution 613 (WRC-07)

Relevant Resolution/s:
Resolution 613: to conduct, and complete in time for WRC-11, the appropriate technical, operational and regulatory studies leading to technical and procedural recommendations to the Conference enabling it to decide whether a global primary allocation for the radiodetermination-satellite service in the frequency band 2 483.5-2 500 MHz (space-to-Earth) is compatible with other services in the band.

Background
This item is largely driven by the CEPT block which supported by the European Commission, which intends this band for the Galileo navigation system. Due to the close frequency proximity to the mobile services in the 2500MHz for the CEPT block, claimed advantages include synergies with terrestrial mobile due to
improved antennas efficiencies and shared hardware, not achievable with other RNSS bands.

**Agenda Item 1.19**

Regulatory measures and their relevance to enable the introduction of software-defined radio and cognitive radio systems

**CPM CHAPTER 6**  
**FUTURE WORK PROGRAM AND OTHER ISSUES**

*To consider regulatory measures and their relevance, in order to enable the introduction of software-defined radio and cognitive radio systems, based on the results of ITU R studies, in accordance with Resolution 956 (WRC 07)*;

**Relevant Resolution/s:**
Resolution 956: Regulatory measures and their relevance to enable the introduction of software-defined radio and cognitive radio systems

**Background**
This agenda item came from proposals made by the Arab States and Europe during WRC-07. WP 1B of SG1 was identified as the Responsible Group for this Agenda item. The motivation for this agenda item is to allow a terminal to select a network in an environment where several technologies, possible provided by several operators, are available. Study results prior to WRC-07 show that cognitive radio systems could be implemented via database which contains information about operational environment (for example, wireless access technologies) or a worldwide harmonized Cognitive supporting Pilot Channel (CPC) with a bandwidth less than 50 kHz.

**Interested parties involved**
CSIR.

**Agenda Item 1.20**

**CPM CHAPTER 3**  
**Fixed, Mobile and Broadcasting Issues**
To consider the results of ITU R studies and spectrum identification for gateway links for high altitude platform stations (HAPS) in the range 5 850 7 075 MHz in order to support operations in the fixed and mobile services, in accordance with Resolution 734 (Rev. WRC 07);

Relevant Resolution/s:
Resolution 734 (Rev.WRC-07): Studies for spectrum identification for gateway links for high altitude platform stations in the range from 5 850 to 7 075 MHz.

Background
The location of the proposed HAPS spectrum allocation within the 6 GHz band will largely be dependent on mutual interference factors amongst the services sharing the spectrum. The HAPS payload architecture and design provides the flexibility to operate the gateway links virtually anywhere in the 6 GHz band.

The band 5 850-6 725 MHz is an FSS uplink band that is heavily used worldwide by GSO FSS applications. The low atmospheric absorption in this band enables highly reliable Earth-to-space communication links with wide service coverage, particularly in, but not limited to, geographical areas with severe rain fade conditions. The wide coverage enables services to be provided in developing countries, including South Africa, to sparsely populated areas and over large distances.

The 5 850-6 725 MHz band has been used by the GSO FSS for over 40 years. The technology is mature and offers equipment at low cost. This, together with the wide coverage, has led to satellites in this band being an important part of the telecommunications infrastructure in many developing countries. Satellites operating in this band are the only efficient means for providing today global satellite coverage of the Earth.

Summary of South African positions
The SKA Project Office is concerned about the effect that any allocation in the 5850 – 7075 MHz band will have on the sensitive astronomical line at 6.67GHz. The astronomical community recommends that the downlink be as far above 6.67GHz as possible. They also recommend that the uplink be either just above 6390 MHz or 6060 MHz.

Telkom C-band FSS uplinks operate in the 6 GHz band. Telkom also has an extensive network of terrestrial FS point-to-point links operating in the 6 GHz band. The HAPS gateway frequencies should be allocated in such a way that they do not interfere with these existing links.

Vodacom is concerned that the gateway frequencies should not unduly constrain the deployment of C-band satellite solutions in Africa.

Agenda Item 1.22
(Protection of radiocommunication services from emissions by short-range radio devices)

CPM CHAPTER 3
Fixed, Mobile and Broadcasting Issues

Examine the effect of emissions from short-range devices on radiocommunication services, in accordance with Resolution 953 (WRC-07)

Relevant Resolution/s:
Resolution 953: The ITU-R is invited to study emissions from Short Range Devices (SRDs) in and outside the frequency bands designated by the Radio Regulation (No. 5.138 and No. 5.150) for ISM applications. Particular attention must be given to Radio Frequency Identification Devices (RFID).

Interested parties involved
Telkom, MNET, NAB, SAMSA, Pygma, SARL

Agenda Item 1.25
Allocation to the MSS in the frequency band 4 -16 GHz

CPM CHAPTER 5
SATTELITE ISSUES

To consider possible additional allocations to the mobile-satellite service, in accordance with Resolution 231 (WRC-07)

Relevant Resolution/s:
Resolution 231 (WRC-07): “Additional allocations to the mobile-satellite service with particular focus on the bands between 4 GHz and 16 GHz”

Background
In many regions and countries, mobile network operators are deploying or plan to deploy a new infrastructure supporting mobile broadband services. However, past experience for fixed and mobile networks has shown that a purely terrestrial deployment implies a step-by-step process where more populated areas are served first. In that context, satellite has the ability to provide a cost-effective solution for an accelerated deployment of mobile broadband services in less populated areas. Systems are proposed with the purpose to complement the coverage of mobile broadband systems.
Interested parties involved
The identified parties are Telkom, SABC, NAB, Vodacom, Orbicom, Sentech, CSIR, Neotel and eTV. The draft report will be circulated to these parties to start further discussion.