



SUBMISSION IN RESPECT OF GENERAL NOTICE 1114: INTENTION TO MAKE REGULATIONS IN RESPECT OF LICENCE EXEMPTIONS IN TERMS OF SECTION 6 READ WITH SECTION 31(6) AND SECTION 32 IN RESPECT OF RADIO FREQUENCY SPECTRUM, ECS AND/OR ECNS

1. Introduction

WAPA welcomes the recognition by the Authority that the provisions of the Electronic Communications Act 36 of 2005 (ECA) with regard to exclusivity and monopoly rights have a significant impact on General Notice 533 of 2004 (which Notice the draft regulations are intended to replace in their entirety).

WAPA further applauds the authority for the priority given to this aspect of electronic communications regulation, given the potential which unlicensed radio frequency spectrum usage has for

- the addressing of under serviced area policy imperatives, particularly in rural areas
- the development and adoption of innovative and efficient uses for radio frequency spectrum in the face of the recognised scarcity of such resource
- the development of competition in the local market within the constraints of the protection of the interests of licencees and the compatibility of different uses of radio frequency spectrum.

2. About WAPA

The Wireless Access Providers' Association (WAPA) is an association not for gain currently registering as a Nonprofit Organisation under the Nonprofit Organisations Act 71 of 1997 (Reference Number 58776). WAPA strives to ensure the sustainability of the wireless access service industry including WISPS, equipment vendors, access network providers and operators.

Management Committee: David Jarvis (Chair), Eugene van der Merwe (Treasurer), Amelia Van der Vyfer (Secretary), Lucien Paulse, Jacques Loubser, Johann Botha

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WAPA currently has 33 members and is in talks with a large number of operators and local government entities who have expressed an interest in joining.

WAPA's Constitution can be accessed at <http://www.wapa.org.za/about/constitution/> while its current Code of Conduct (under review) is available from <http://www.wapa.org.za/about/code-of-conduct/>.

3. Scope of this Submission

The following frequency bands are of particular interest to WAPA and the ambit of the comments herein is tailored accordingly:

- 2400 - 2483.5 MHz Wideband Wireless Systems WLAN (100 mW eirp)
- 5150 - 5350 MHz Hiperlan: indoor use only (200 mW eirp)
- 5470 - 5725 MHz Hiperlan: indoor+outdoor use (1 W eirp)
- 5725 - 5875 MHz Non-specific SRD (25 mW eirp)
- 17.1 - 17.3 GHz Hiperlan (100 mW eirp)
- 24.00 - 24.25 GHz Non-specific SRD (100 mW eirp)

4. Submissions with regard to radio frequency spectrum licence exemptions

a. Processes with regard to the allocation and awarding of radio frequency spectrum licences

WAPA notes that the Authority has commenced but not completed an investigation into the manner in which radio frequency spectrum is to be allocated and awarded, particularly within the context of frequency bands where there is a high degree of demand in the face of a scarcity of available radio frequency spectrum. The Authority is also seized with an investigation into the manner in which available frequency in the 5720 – 5875 MHz band is to be allocated and awarded.

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In addition a number of the recently finalised Ministerial Policy and Policy Directives relate to the manner in which radio frequency spectrum is to be managed by the Authority.

In the absence of any final clarity on the position to be adopted by the Authority in this regard WAPA finds it extremely difficult to provide comprehensive comment on the draft regulation. In particular the lack of clarity on the relationship between licenced and unlicensed use of the band listed above constitutes an obstacle to proper comment.

b. EIRP limits

WAPA notes that the EIRP limits specified in the draft regulation in respect of the frequency bands listed above are largely unusable.

WAPA submits that the Authority should give due consideration to a relaxation of the power output (EIRP) limitations set out in the draft regulation and notes that the limitations set out in the draft regulation are identical to those in General Notice 533 which the draft regulation is intended to replace. WAPA is concerned that, in some cases, the retention of these limitations has not been properly considered and may constitute a de facto restriction on the crossing public boundaries which is simply replacing the previous de iure restriction.

As an example of the need to review such limitations WAPA points to the amendment by Ofcom in the UK in May 2007 of the EIRP limit in respect of the 5725 – 5850 MHz band from 2 to 4 Watts EIRP for broadband fixed wireless access (FWA). This was done for the specific purpose of addressing the digital divide between rural and urban areas. In this regard please see further:

<http://www.ofcom.org.uk/consult/condocs/powerlimits/power/statement.pdf> &
http://www.ofcom.org.uk/radiocomms/ifi/tech/interface_req/uk_interface_2007.pdf

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WAPA submits that 2.4GHz is currently being utilized to service vast underserved areas, by WAPA members including many projects by research organisations within WAPA, and 100mW EIRP is impractical. We recommend an adoption of the FCC rules to allow 4W EIRP in this band, with restrictions on the use of high gain omni-directional antennas, to preserve the ability to reuse spectrum¹.

WAPA wishes to suggest the following EIRP limits for consideration by the Authority:

- Point-to-Point links: 200W
- Point-to-Multipoint links: 4W (e.g. 17 dBm radio + 19 dBm antenna)

In practice backbone links currently deployed in South Africa by WAPA members and operators like IBURST and Vodacom in this spectrum and as recommended by vendors such as Mikrotik, Pacific Wireless, and Poynting are 200W EIRP (e.g. 23 dBm radio + 31 dBm antenna)

Currently Point-to-Multipoint networks deployed by WAPA members including Municipalities are typically just less than 4W EIRP (e.g. 17 dBm radio + 19 dBm antenna)

WAPA notes further that the 17 GHz and 24 GHz bands are ideally suited towards high capacity unlicensed backhaul operations, particularly in rural areas, but cannot be used for this purpose under the proposed EIRP limitation. WAPA accordingly submits that the EIRP in respect of the unlicensed use of these bands be set at a maximum of 200 Watts.

¹ In this regard the Authority is pointed towards Section 4.2 of the WAPA Code of Conduct which states:
"4.2. Members will conform to basic WAPA high site requirements, including:
4.2.1. Any antenna with a beam width of greater than 120 degrees is restricted to maximum gain of 6dbi in 2400-2483 MHz;
4.2.2. Any antenna with a beam width of greater than 120 degrees is restricted to maximum gain of 10dbi in 5470-5875MHz;
4.2.3. No Amplifiers may be used; and
4.2.4. Power backup system needs to be in place."

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5. WRC07

The ITU World Radio Communication Conference or WRC07 to be held later this year will outline guidelines for further global harmonization of unlicensed bands. WAPA notes that the Republic of South Africa has made certain submissions in this regard and that the Authority has committed to adopting finalised resolutions in this regard in their own band re-planning exercise.

WAPA draws the attention of the Authority in this regard to Resolution 229 [COM5/16] to be debated at WRC07. This resolution refers to the use of the bands between 5 150 and 5 725 by wireless access networks including radio local area networks.

6. Oral hearings

WAPA hereby requests that the Authority allow it the opportunity to make oral representations in the event that hearings are held in connection with this matter.

7. Further information

Should the Authority require any further information it is invited to contact:

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