



Advisory on the use of the 5600 – 5650 MHz Band

Summary	Members are alerted to the fact that they should not be utilising the 5600 – 5650 MHz band (specifically the 5600, 5620 and 5640MHz channels bands), as this is allocated for use by C-band weather radar systems. Interference caused by WISPs impacts on this use and is a leading cause of enforcement action from ICASA. The WAPA Code of Conduct will be amended to reflect this.
Issued	8 July 2009
Applies to	All members providing ECNS services.

Introduction

A number of WAPA members operate networks which utilise the licence exempt 5470 – 5725MHz band. The purpose of this Advisory is to inform members that interference with weather radar systems in a portion of this band is causing friction both with the operators of these services and ICASA.

WAPA requires that any member using the 5600-5650MHz portion of the band (specifically the 5600, 5620 & 5640MHz channels) operate strictly within the limits set out in the ICASA Frequency Licence Exemption Regulations 2008. This includes the use of Dynamic Frequency Selection (DFS) – see e.g. http://en.wikipedia.org/wiki/Channel_allocation_schemes for more information and Transmitter Power Control (TPC) – see e.g. http://en.wikipedia.org/wiki/Power_control.

Allocation of the 5600-5650MHz band

The relevant entry in the South African Table of Frequency Allocations reads:

ITU Region 1 Allocations	South African Allocations	Applications	Comments
5570 – 5650 MARITIME- RADIONAVIGATION MOBILE except aeronautical mobile 5.446A 5.450A RADIOLOCATION 5.450B 5.450 5.451 5.452	MARITIME- RADIONAVIGATION RADIOLOCATION 5.450B 5.452 Fixed NF1	Maritime Radionavigation and Location (Radar) Ground-based meteorological radars 5600 – 5650 MHz	WAS/RLAN's with conditions. Refer to SRD Gazette.

The entry in the third (Applications) column shows the allocation of the band to weather radar systems. The band is utilised for a number of purposes in the national interest, including measuring actual rainfall on the ground (and flood prediction from this data), aviation safety, severe storm tracking / prediction, civil and industrial disaster mitigation (from the mentioned functions), as well agricultural and environmental management.

The entry in the fourth (Comments) column refers to the technical limitations which are set out in the Frequency Licence Exemption Regulations as below:

5470 – 5725M	Wireless Access Systems/ Radio Local Access Network (WAS & RLAN) : Indoor and outdoor use	1 W eirp. Dynamic Frequency Selection (DFS) & Transmitter Power Control obligatory	EN 301 893 EN 301 489-1,17 EN 60950	ITU-R M.1625
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While the 1W eirp restriction and obligation to use DFS and TPC applies to all use of the 5470 – 5725MHz band it is extremely important that these be absolutely respected where the member is utilising the 5600 – 5650 MHz portion of the band so as not to cause interference to weather radar systems.

Dynamic Frequency Selection (DFS)

It has been WAPA's experience so far that the use of DFS in South Africa is problematic in that it has a definite impact on service levels while DFS also fails to identify certain RF equipment leading to further service level problems.

In the absence of a workable solution to this members are advised to simply not utilise the 5600 – 5650Mhz band at all.

Version history

Date	Document	Revisions
20090705	Version 1.0	