



Wireless Public Address Systems (WPAS) Licensing

Information Briefing
Westbury Hotel, Dublin
26th July 2006

Agenda

WPAS: Wireless Public Address System

- 1. Background to WPAS Licensing Scheme**
- 2. Details of WPAS Licensing Scheme**
- 3. ComReg's Spectrum Compliance Team**

Lunch - 12:30/1pm

www.comreg.ie



Commission for
Communications Regulation

Background to WPAS Licensing Scheme

Kevin Kennedy

Licensing Operations Manager

26th July 2006

What does ComReg Do?

- **ComReg is the statutory body responsible for the regulation of the Electronic Communications Sector (Telecommunications, Radiocommunications and Broadcasting Transmission) and the postal sector.**

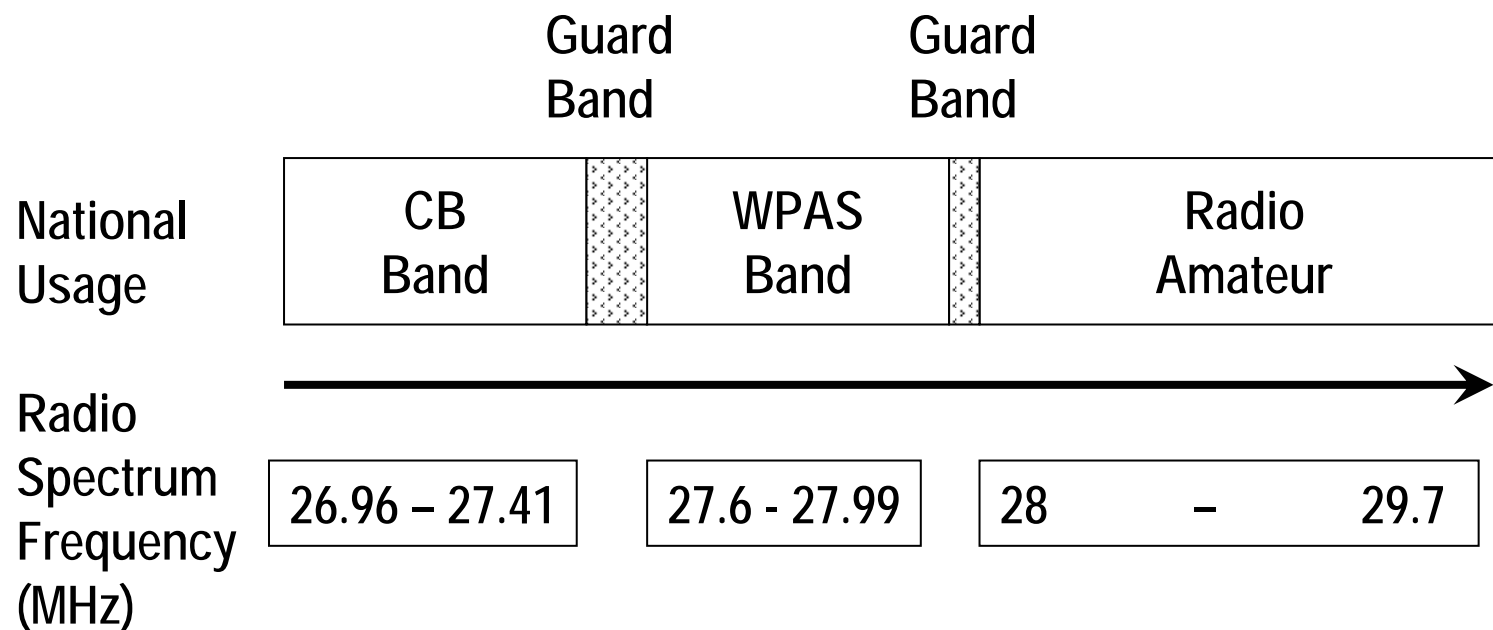
- **ComReg manages the radio spectrum, which includes**
 - The granting of a Licence to a Licensee and
 - Spectrum Compliance Activities

- **Currently there are approx. 18,000 Live Radio Spectrum Licences divided into different categories e.g.**
 - Aircraft Radio, Ships Radio, Fixed Point to Point Links, Private Mobile radio (e.g. Government Services, Crane Control, Taxis etc.), Etc.
 - Now WPAS Licences

Background to WPAS Licensing Scheme

- **Approx every 2 years ComReg consults with industry on its spectrum management strategy.**
- **In Jan 2005, ComReg proposed the WPAS scheme.**
 - A similar scheme is being trialled in the UK – The Community Audio Distribution Scheme
- **ComReg received considerable interest and comment from respondents to this proposal**
 - All respondents to this issue were broadly supportive of the proposal
- **Between Jan and May 2005 ComReg consulted with the Broadcasting Commission of Ireland (BCI)**
 - Confirmed that WPAS licensing scheme is not a broadcasting service.
- **In September 2005, ComReg published its decision to implement the WPAS licensing scheme.**
- **On 30 June 2006, the WPAS licensing scheme was launched**

Where is the WPAS Radio Spectrum Band?



2 Banks (interleaved) of 40 Channels in the WPAS band

Broadcasting Radio Spectrum

- **Under current legislation, ComReg can only licence the BCI and RTÉ in the Broadcasting (e.g. FM and AM) Frequency bands.**
- **Broadcasting Commission of Ireland (B.C.I.) is an**
 - independent statutory organisation responsible for a number of key areas of activity with regard to television and radio services in Ireland including the
 - licensing of independent broadcasting services
- **BCI has a process for selecting suitable applications for radio licence**
- **Successful applicants get an Award of Sound Broadcasting Contract from BCI , provided radio spectrum available.**
- **ComReg issues a radio spectrum licence to the BCI allowing the Sound Broadcasting Contractor to operate on licensed frequency(s)**

Where is Broadcasting (FM) Radio Spectrum Band?

National Usage	PMR including Gov Services	Broadcasting (FM) band	Aeronautical Radionavigation
Radio Spectrum Frequency (MHz)	68 - 87.5 MHz	87.5 - 108 MHz	108 - 117.975 MHz

Under current legislation, ComReg can only licence the BCI and RTÉ in the Broadcasting (e.g. FM and AM) Frequency bands.



Details of WPAS Licensing Scheme

Brian Whelan

Radio Spectrum Engineer - Licensing

26th July 2006

WPAS Guidelines Overview

- **WPAS Definition**
- **Radio Spectrum available for WPAS**
- **Licence details**
- **Technical conditions**
- **Example WPAS Coverage**
- **Glossary of Terms**

WPAS Definition

- **ComReg consulted with the Broadcasting Commission of Ireland (BCI) and established that the WPAS service is not a broadcasting service as**
 - Spectrum will be allocated on a non-exclusive and non-interference basis in a frequency band not used by BCI Sound Broadcasting Contractors.
 - System to be used for unabridged wireless retransmission of audio from a public address system that is associated with a public event.
 - Non-commercial service basis (local community users)
 - Not available for reception on standard domestic broadcast receivers
- **As WPAS is not a broadcast service, applicants can apply directly to ComReg for a WPAS Licence.**

Radio Spectrum available for WPAS

- **ComReg has made Radio Spectrum available for the WPAS service between 27.60 MHz and 27.99 MHz**
 - 2 banks (interleaved) of 40 simplex 10 KHz Channels
- **Licensees, or suppliers applying on behalf of the Licensee, will be responsible for choosing the channel that they wish to operate on.**
- **All radio equipment used to deliver WPAS services must comply with the Radio & Telecommunications Terminal Equipment Directive 1999/5/EC (R&TTE Directive-CE marked)**

WPAS Licensing Details

▪ **WPAS Licence Application**

- All applications for a WPAS licence must be made on the appropriate form (ComReg 06/26a)
- A WPAS licence is granted under the Wireless Telegraphy (Wireless Public Address System Licence) Regulations, 2006 (S.I. 304 of 2006)
- A WPAS licence allows the Licensee to operate a WPAS transmitter at a single location on one 10 kHz channel
- Licensee (or supplier) will be responsible for channel operation selection
- Duration of a WPAS licence is 5 years. Licensee may apply for licence renewal
- Licence fee of €100 is applicable (€30 fee for transfer and amendments)

WPAS Technical Conditions

- **ComReg's intention is that the frequencies identified for WPAS services are available for local use, subject to these conditions:**
 - Maximum ERP (power output) for Amplitude Modulation in WPAS band will be 1 watt
 - Maximum ERP (power output) for Frequency Modulation In WPAS band will be 4 watts
 - No ancillary RF equipment can be connected to the transmitter, such as linear power amplifiers.

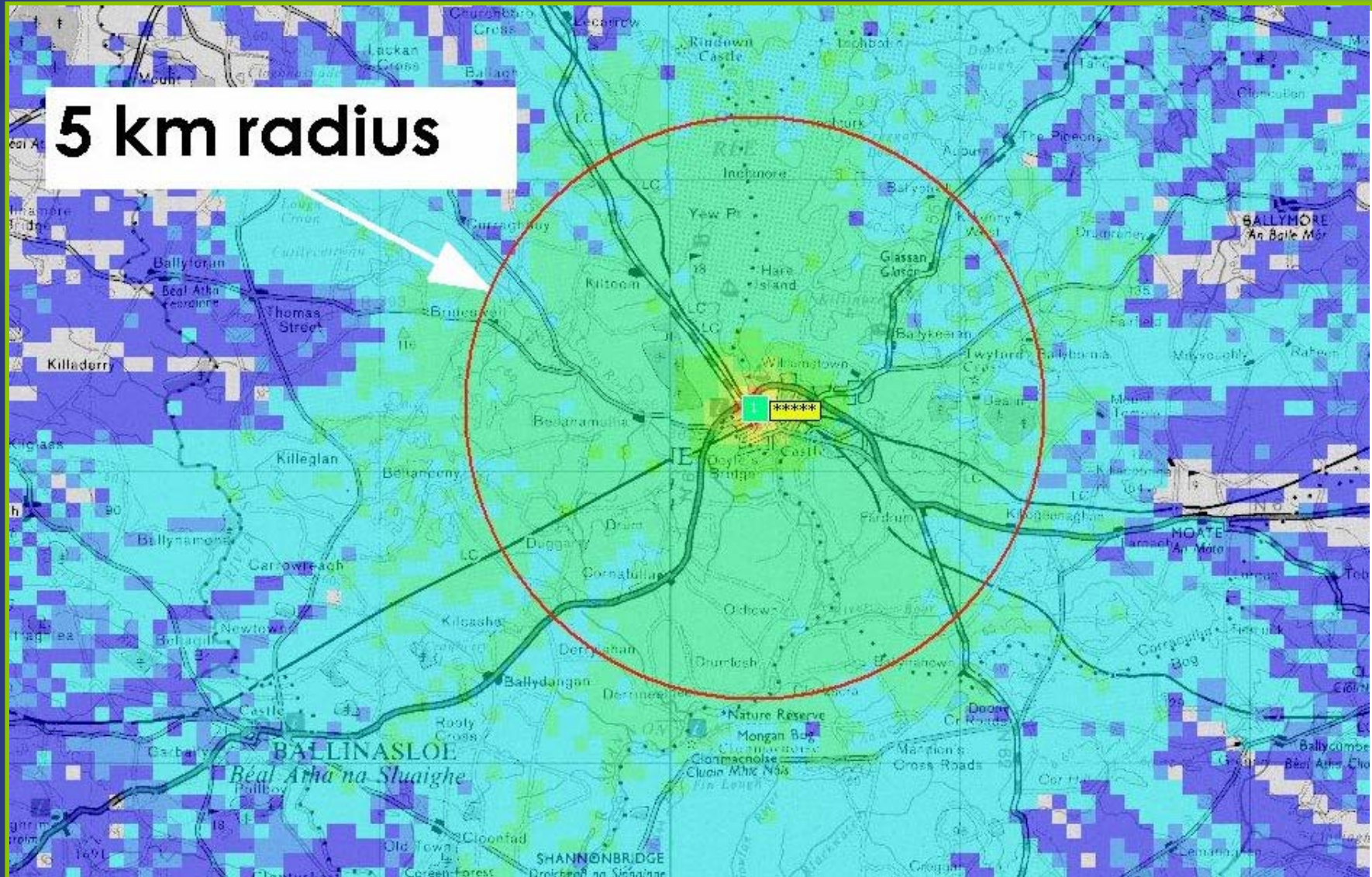
- **Non-ionising radiation emissions are within limits of International Commission for Non-Ionising Radiation Protection ("ICNIRP") guidelines.**

Technical Recommendations

- **To minimise potential interference, Licensees should adhere to the following best practice guidelines**
 - Antenna polarisation should be vertical
 - Antenna mounting height should not exceed 2 metres above the highest point on the building on which the antenna is mounted
 - Antennas should be non-directional
 - Antennas with a low angle of radiation (gain) are favourable

- **Site installation should be best practice to reduce harmful interference to other users**

Example WPAS Coverage – Athlone Area



Glossary of Terms

AM	Amplitude Modulation – A method for carrying voice on a radio signal
CB	Citizen's Band – A radio system that allows public users to use two way communications
DSB	Double Side Band – A method for carrying voice on a radio signal
ERP	Effective Radiated Power – The power of a radio signal emitted from an antenna
ETSI	European Telecommunications Standards Institute
FM	Frequency Modulation – A method for carrying voice on a radio signal
HF	High Frequency (Radio spectrum between 3 and 30 MHz)
kHz	A measurement of frequency
MHz	A measurement of frequency
SSB	Single Side Band – A method for carrying voice on a radio signal
WPAS	Wireless Public Address System



ComReg's Spectrum Compliance Team

What is the role of Spectrum Compliance in WPAS

Ivan Kiely

26th July 2006

What We Do...

- **Investigation of Interference Complaints**
- **Conduct Site Inspections of Radio Installations**
- **Ensure Proper and Efficient Use of the Radio Spectrum**
- **Enforce the Wireless Telegraphy legislation**

Complaints

We deal with complaints from a number of areas. All complaints are classified under the following headings:

- **Business Radio/PMR**
- **CB Related Matters**
- **Domestic Reception**
- **Amateur/Experimenter Related Complaints**
- **Unlicensed Broadcasting**
- **R&TTE Directive/EMC Directive**
- **Satellite and Fixed Links**
- **Fixed Wireless Access**
- **Telephone Related Matters**
- **And now we deal with WPAS issues.**

Sources Of Complaints

- **From ComReg Licensing Unit**
- **From Licensees Regarding Interference**
- **From Members of the Public Regarding Interference**

Complaint Classification

- When a complaint is received, it is classified on a scale of 1 to 5. The circumstances surrounding the complaint determine the priority it receives, with 1 being the highest.
- 1) Possible Threat to Life /Serious Interference to Emergency Services (Garda Channels, Ambulance and Fire Brigade frequencies), Interference to frequencies allocated for Aeronautical and Marine usage (communications, radar, navigation systems etc.).
 - 2) Interference that has serious detrimental effects or damages the interests of a Business Radio Licensee, Licensed Broadcaster or any other License holder, e.g. constantly blocked frequency rendering it unusable.

Complaint Classification

- 3) **Interference that causes nuisance to a licensee but does have serious or detrimental effects to the proper usage of the system. Also, serious reports of interference to domestic broadcast reception and/or Radio Amateurs**
- 4) **Occasional or minor interference to a licensee. Also, nuisance interference to domestic broadcast reception and/or Radio Amateurs., e.g. interference rendering the sound or vision to be rendered unwatchable/unlistenable for short periods..**
- 5) **Minor and/or spurious complaints that do not warrant the intervention of ComReg. E.g. a fault in the complainants own equipment or system.**

How Will Spectrum Compliance Support WPAS?

- **A licensee under the WPAS scheme is afforded the same service as any other licensee with regard to the investigation of interference to the system in use.**
- **Spectrum Compliance can offer guidance and advice on issues regarding interference and other matters of a technical nature.**

What Do I Do If I Suffer Interference?

If you are receiving interference on your WPAS system,

- contact your installer to see if the installation needs adjustment.**
- Contact ComReg if interference persists.**

The licensee can contact ComReg directly or have their equipment supplier do so on their behalf to report interference.

How To Make A Complaint..

A complaint of interference can be made to any of the following members of the Spectrum Compliance Team:

- **Tom Boyce – Manager (01 804 9605)**
- **Ivan Kiely – Analyst (01 804 9774)**
- **Tom Hurley – Analyst (01 804 9625)**
- **Gerard Costello – Analyst (01 804 9610)**