



# **Co-ordinated ComReg/Ofcom Spectrum Award in 1785-1805 MHz**

**ComReg**

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# Seminar outline

**Section 1 – Introduction**

**Section 2 – Coordinated approach**

**Section 3 – Spectrum packaging & rights**

**Section 4 – Technical conditions**

**Questions and answers**

**Section 5 – Auction format and rules**

**Questions and answers**

# Introduction – Purpose of the seminar

- The purpose of this seminar is to present the proposals of ComReg and Ofcom for the co-ordinated award of available spectrum: 1785 – 1805 MHz .
- This is also an opportunity to answer stakeholders' questions on the proposals and receive feedback.
- The consultation document should be taken as the description of ComReg's and Ofcom's proposals and their status.
- These slides will be published on ComReg's and Ofcom's websites.

# Introduction – The awards programme

- A new milestone in co-operation between the Commission for Communications Regulation (ComReg) and the Office of Communications (Ofcom).
- Radio spectrum is a vital input to electronic communications services and networks.
- Radio waves can pass freely across national borders.
- Opportunity to explore innovative approaches to securing optimal use of the radio spectrum for the benefit of citizens and consumers throughout the island of Ireland.
- Potential to create and develop wireless-based electronic communications services throughout the island of Ireland for the benefit of citizens and consumers in both jurisdictions.

# Next Steps



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Section 1 – Introduction

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Section 4 – Technical conditions

Questions and answers

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# Co-ordinated approach

- For jurisdictional reasons the two auctions must be separate legal processes.
- Coordinated approach. This means that, as far as possible, the key elements of the proposed spectrum packaging and licensees' rights and obligations, whilst legally separate in each jurisdiction, will be identical.
- Packaging and rights. The key elements of the proposed spectrum packaging and licensees' rights and obligations are structured to be as similar as possible.
- Potential benefits. In order to provide an opportunity for service providers to use the spectrum as efficiently as possible and to address the largest possible market it is proposed to plan and award wireless telegraphy licences in a co-ordinated way.

# Co-ordinated approach - Common elements

## Spectrum packaging and Licensing

### Spectrum band:

1785 to 1805 MHz: 20 MHz of un-paired spectrum

### Interference to/from other users:

Technology and application neutral 'block edge' spectrum mask

### Application restrictions:

Both licences will be application and technology neutral to the maximum extent possible



# Co-ordinated approach – Common elements

## Spectrum packaging and Licensing

Licence term:

15 years:

- Ireland: minimum 15, review within 3 yrs before end
- Northern Ireland: minimum 15

Licence fees:

Determined by outcomes of legally separate auctions

# Co-ordinated approach – Common elements

## Award mechanisms and Rules

Basic auction format:

Sealed bid

Sequence:

Ireland then Northern Ireland

Winners:

Highest bid. Lots to be drawn in event of ties

# Co-ordinated approach – Common elements

## Award mechanisms and Rules

### Payment terms:

Winners required to pay 100% of fee before licences are issued

### Pricing rule:

Winning bidders will pay the second highest price bid for that licence

### Transparency:

Registration process. Identities of bidders and winners to be made public

# Co-ordinated approach – Common elements

## Award mechanisms and Rules

### Prohibitions:

Rules to prohibit collusion

### Reserve Prices:

- Reserve price for Ireland licence: €150,000
- Reserve price for Northern Ireland licence: £50,000

### Deposits:

Cash deposit equal to 50% of amount bid

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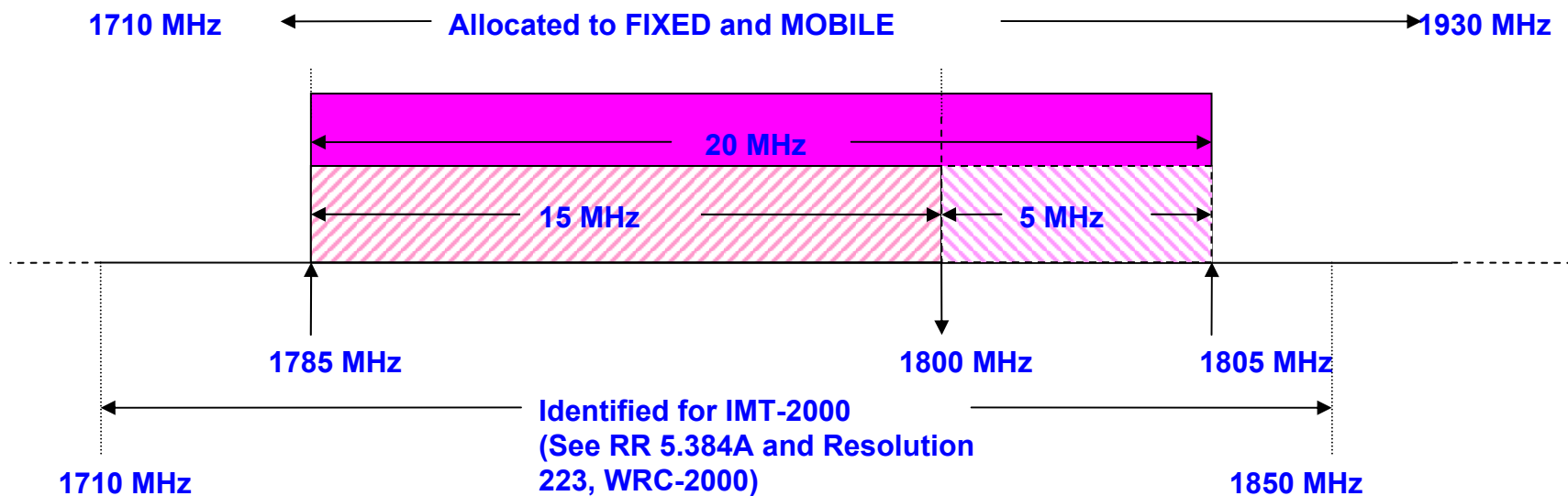
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# The Spectrum Band



## Key

Spectrum Block to be awarded

20 MHz

Former TFTS "air-to-ground" band (RR 5.380)

5 MHz

Short range devices

15 MHz

# Spectrum Packaging & Rights

## The available spectrum

- The spectrum block to be auctioned is 20 MHz from 1785-1805 MHz and is un- paired.
- Transmission rights will include: a maximum equivalent isotropic radiated power (EIRP) of 56 dBm per MHz within the Spectrum Band.
- Licensees will have to adhere to a technology and application neutral block edge mask.
- An out-of-block limit for unwanted emissions of -126 dBm per 100 kHz is proposed.

# Spectrum Packaging & Rights

## Rights and obligations

- The licence will be technology and application neutral.
- The licence in Ireland will not be tradable.
- In Ireland the licence will have an a minimum term of 15 years (see next slide)



# Spectrum Packaging & Rights

## Licence term

- The licence for Ireland would have a minimum term of 15 years. Within 3 years of the end of that term ComReg will conduct a review and may renew the licence for an additional term of 5 years.
- Issues to be considered in the review may include whether the terms and conditions of the licence have been met, delivery of service and whether the spectrum is required for other services.

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# Technical conditions

## Summary

Spectrum transmission rights

- Power levels and out of block emissions.

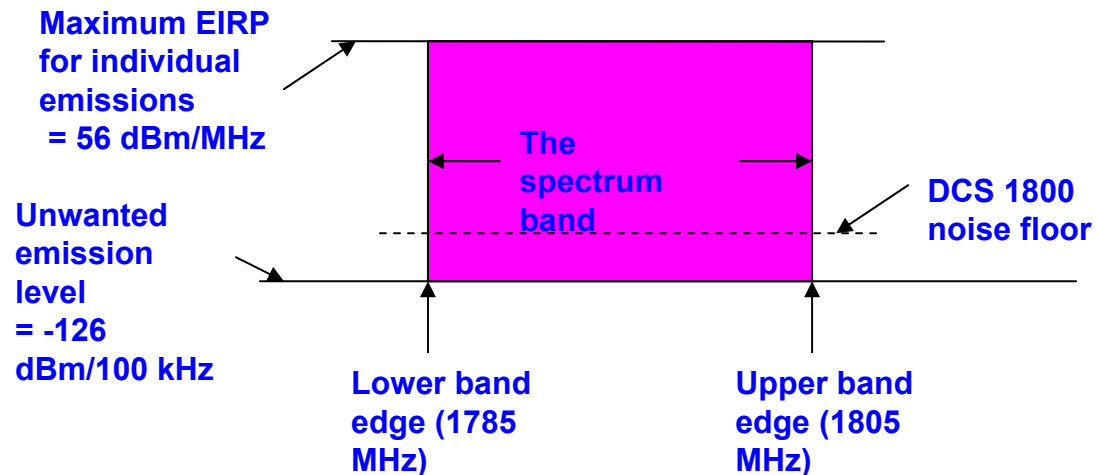
International co-ordination

# Technical conditions

## Basis for proposals

Spectrum rights reflect the need to protect the adjacent users.

- Any technologies permitted provided that they meet the limits defined by the Block Edge Mask:

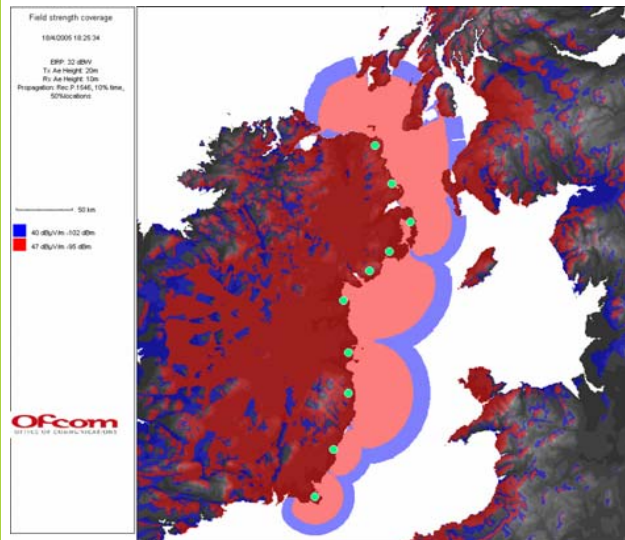
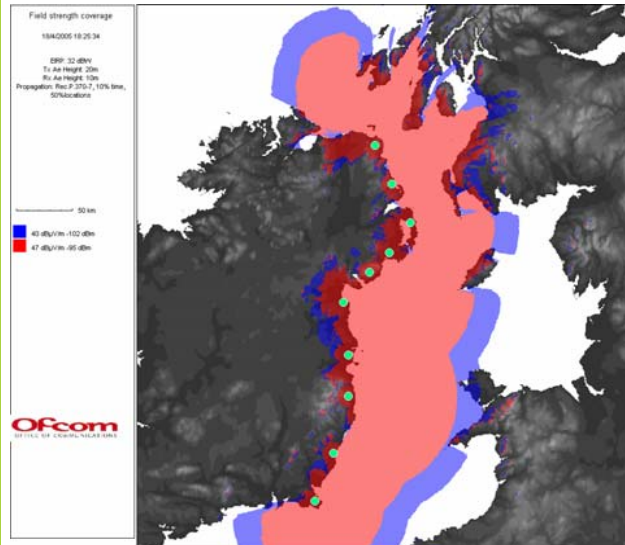


# Technical conditions

## Power level

- It is proposed to set the maximum radiated power that may be used in the Spectrum Band at 56 dBm/MHz EIRP.
- No guard bands will be used outside the Spectrum Band and licensees must meet the block edge mask. The limit of -126 dBm/100 kHz will apply to all unwanted emissions including spurious and out-of-band emissions.

# Technical conditions



## Co-ordination

Reference network developed to illustrate general co-ordination requirements.

Co-ordination will be needed when separate networks are deployed within 50km to 70km of the border and the licences are held by different companies in Ireland and Northern Ireland. Under this circumstance ComReg and Ofcom will require licensees to respect the field strength requirements contained in any co-ordination agreements negotiated between the administrations for the Spectrum Band.

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Section 1 – Introduction

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Section 3 – Spectrum packaging & rights

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Questions and answers

Section 5 – Auction format and rules

Questions and answers

# Questions and answers



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Section 1 – Introduction

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# Auction format and rules

## Key proposals (i)

- **Single round, sealed bid auction.**
- **Winner is bidder submitting highest bid.**
- **‘Second price rule’: Winning bidder pays amount of second highest bid.**
- **Identity of all registered bidders will be published before the auctions start.**
- **Rules dealing with collusion.**
- **Sequenced auctions: Ireland followed in quick succession by Northern Ireland**
- **Reserve price of Ireland licence: €150,000.**

# Auction format and rules

## Key proposals (ii)

- **Deposit required (in cash)**
- **Initial deposit 50% of reserve price – payable with application.**
- **Full deposit 50% of amount bid – payable with bid.**
- **Forfeit in case of breach of auction rules or default on final payment.**
- **Full payment upfront**
- **100% of licence fee (= amount of second highest bid) to be paid by winning bidder before licence issued.**
- **Value of all bids and identity of bidders disclosed at the end of the auction.**

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## Questions and answers

For more details see  
ComReg Document 05/93 & 05/93a  
On [www.comreg.ie/](http://www.comreg.ie/)  
Publications / 2005