

Programme

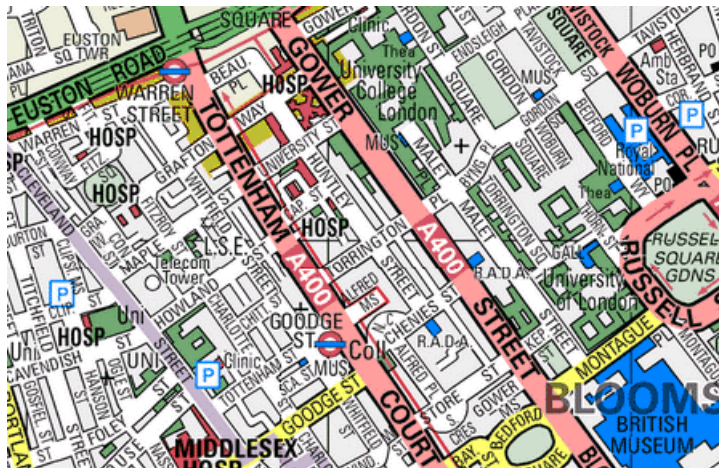
- Spectrum management issues
- Spectrum supply issues
- Summary of threats and opportunities



Spectrum management issues

Spectrum Management Issues

- JFMG specialise in Programme Making and Special Events (PMSE) sector
- PMSE outsourced by RA and Ofcom to JFMG since 1997
- JFMG coordinates ALL programme making users



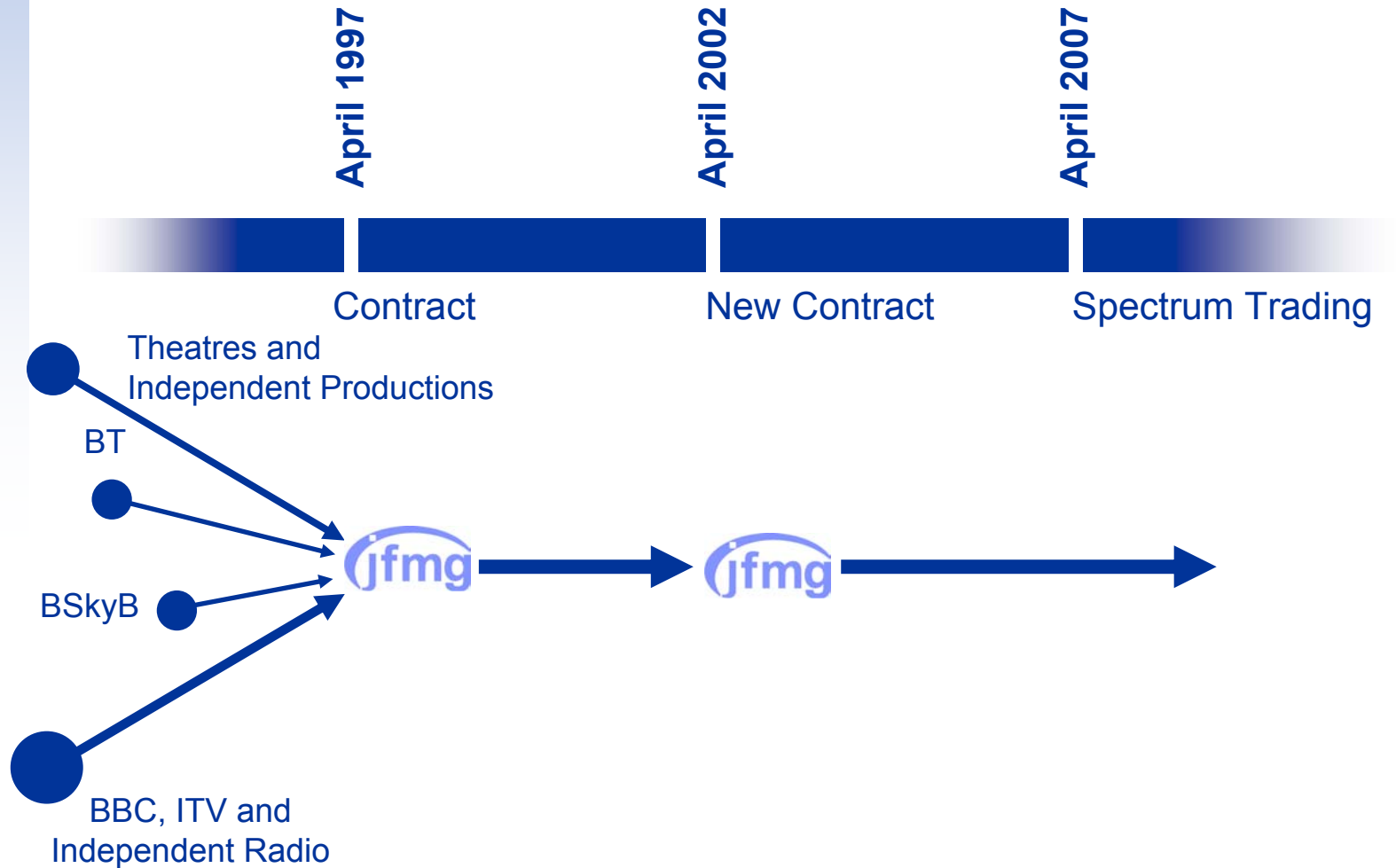
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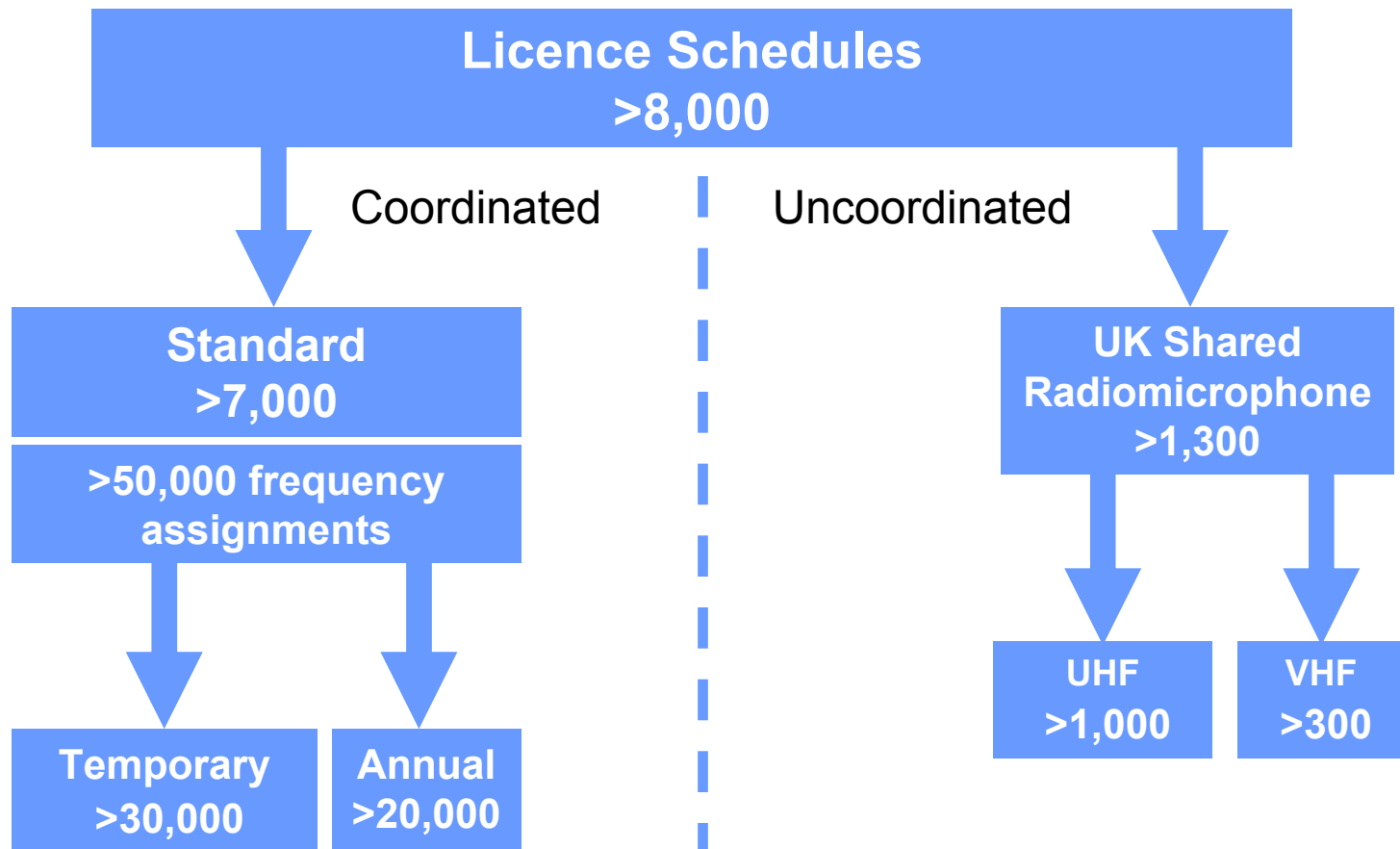




JFMG's roots – Convergence of PMSE



Programme making demand - Annual Volume



Performance achieved

For year to 31 March 2005

Category A Assignments

- 96% within 2 working days
- 99.98% within 5 working days
- 50% demanded within 24 hours!

Coordination of Annual Major Events

Motor Racing: Formula 1 Grand Prix

Golf: Open Championship

Tennis: Wimbledon

Racing: Cheltenham Festival, Grand National

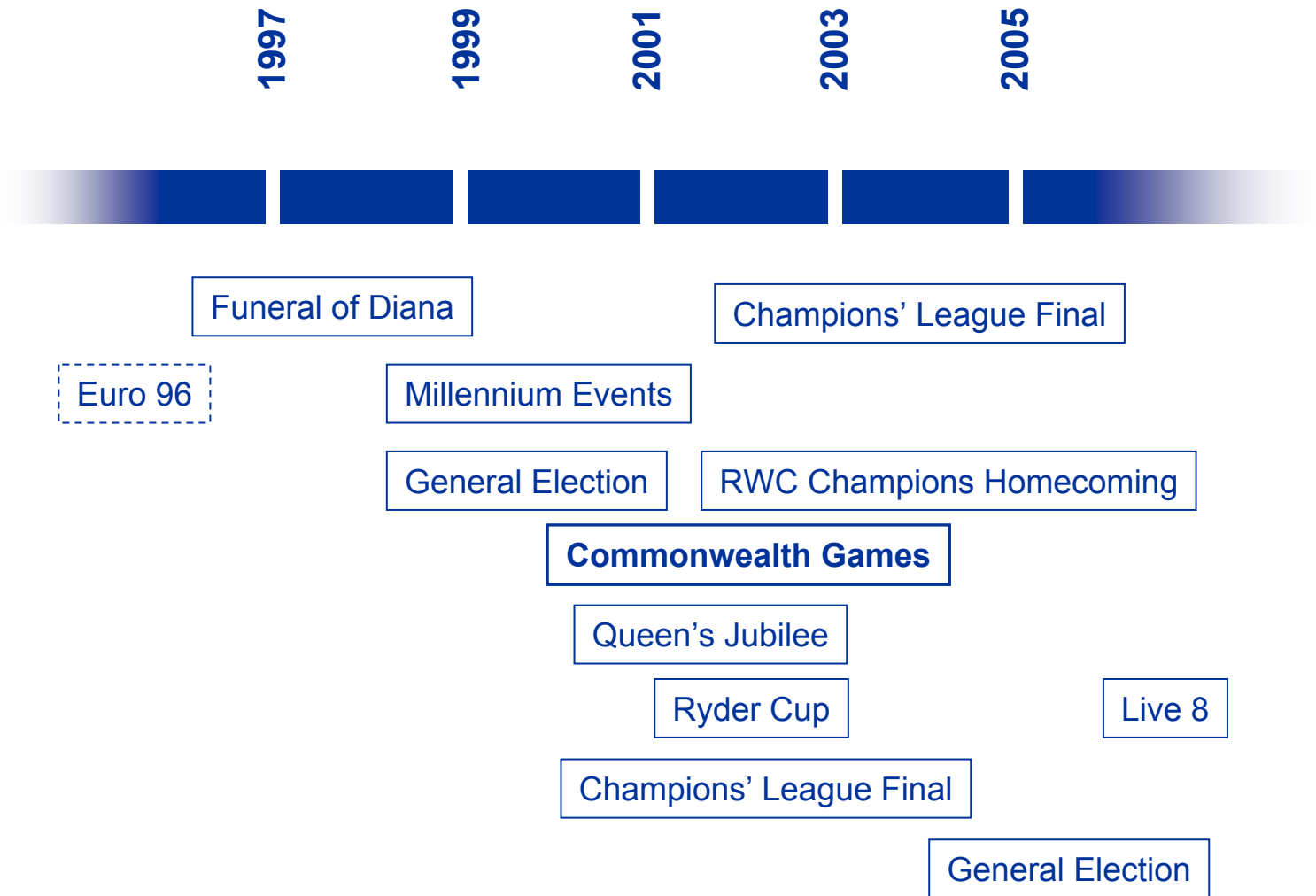
Running: London Marathon

Rock/Pop: Glastonbury

Football: FA Cup Final

Rowing: Boat Race

Coordination of Special Events



The Future - Ofcom's position

- One or more competitive suppliers
- Each supplier to own spectrum rights
- Suppliers gain rights through a 'competition'
- Suppliers can charge users "commercial rates"

The Future – JFMG’s position

- Spectrum rights should be owned by users not by an intermediary
- Spectrum rights should be gifted not auctioned
- In timeshared bands, spectrum rights should be owned by a consortium
- Owners can select their spectrum manager on merit

Spectrum supply issues

Key Issues by application

**UHF Wireless Mics,
Personal Monitors &
Talkback**



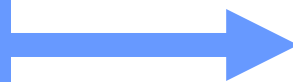
- Digital TV Switchover in 470 – 854 MHz

**VHF Wireless Mics &
Talkback**



- UK DAB extension in 209 – 217 MHz band
- European Digital TV

**Wireless Cameras &
Video links**



- Closure of 2.50 – 2.69 GHz band
- Digital migration in 3.4 – 3.6 GHz band

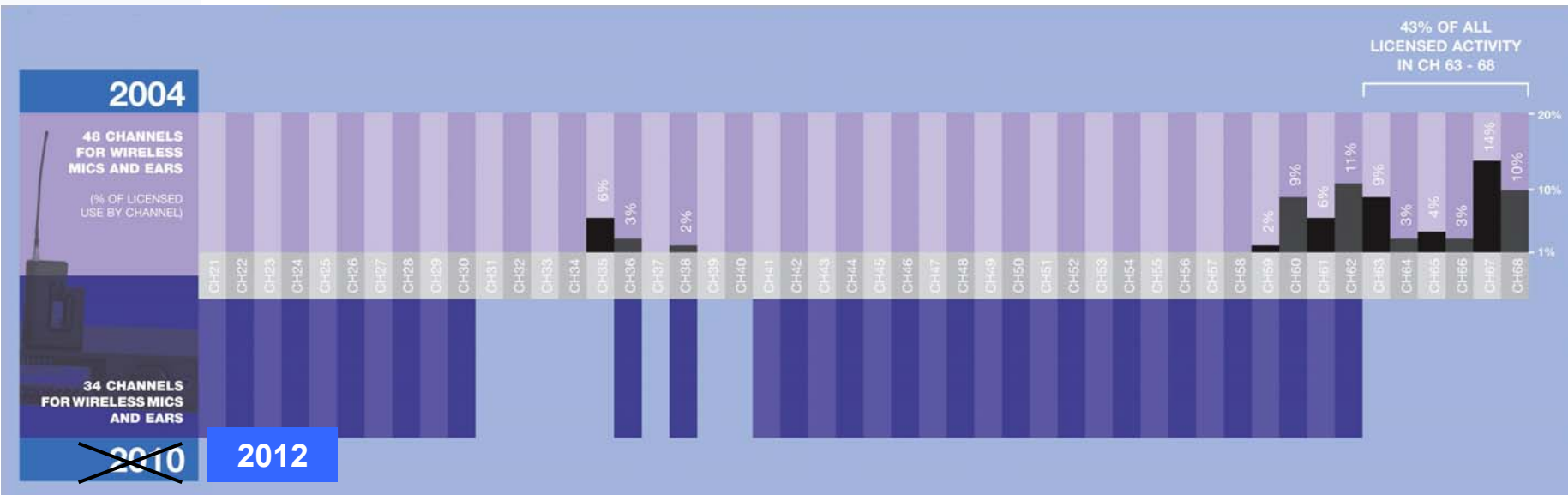
UHF Digital TV Switchover

- 46 channels used for analogue and digital tv
- Plan is to release 14 channels
- Cleared channels are ch31-35, 37, 39-40, 63-68
- Start after 2007, Finish by 2012

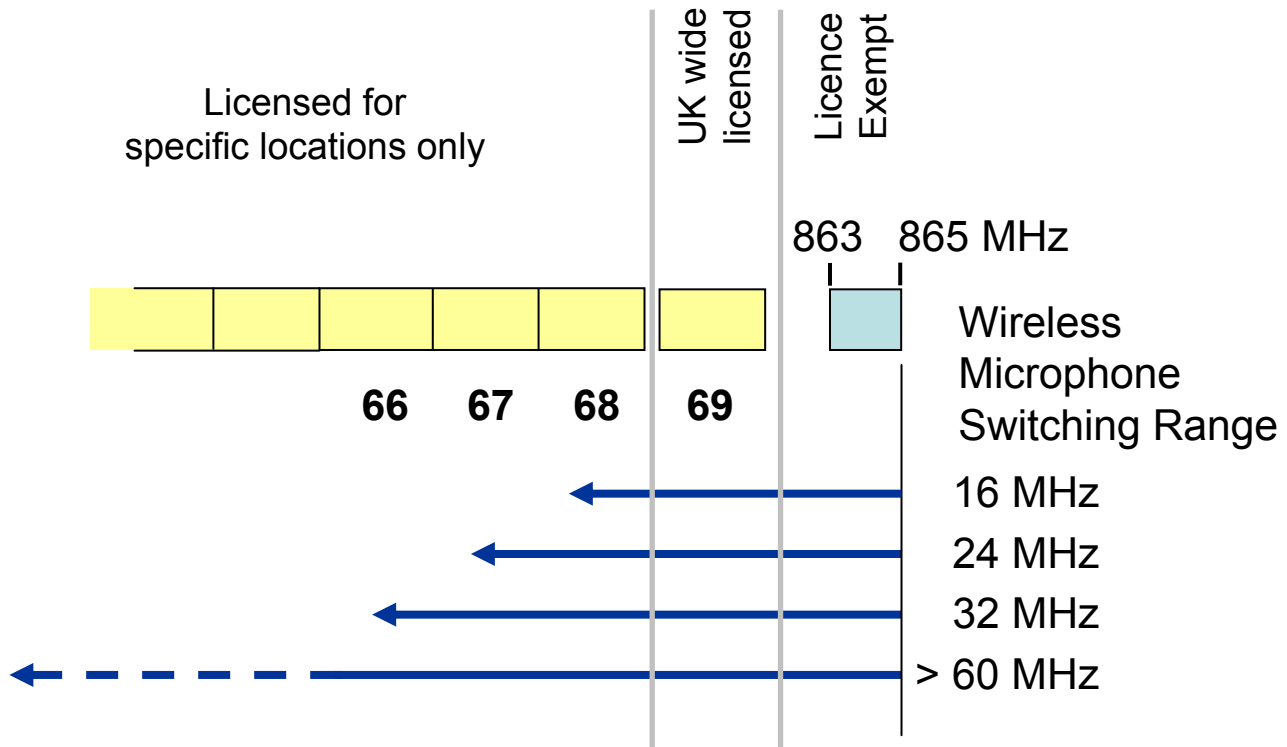


UHF Digital TV Switchover

- 48 tv channels available today for wireless mics
- Only 34 tv channels after switchover
- 43% of licensed activity in ch63 – 68
- 50% of licensed activity in 'released' spectrum



UHF Wireless Microphone Switching Range



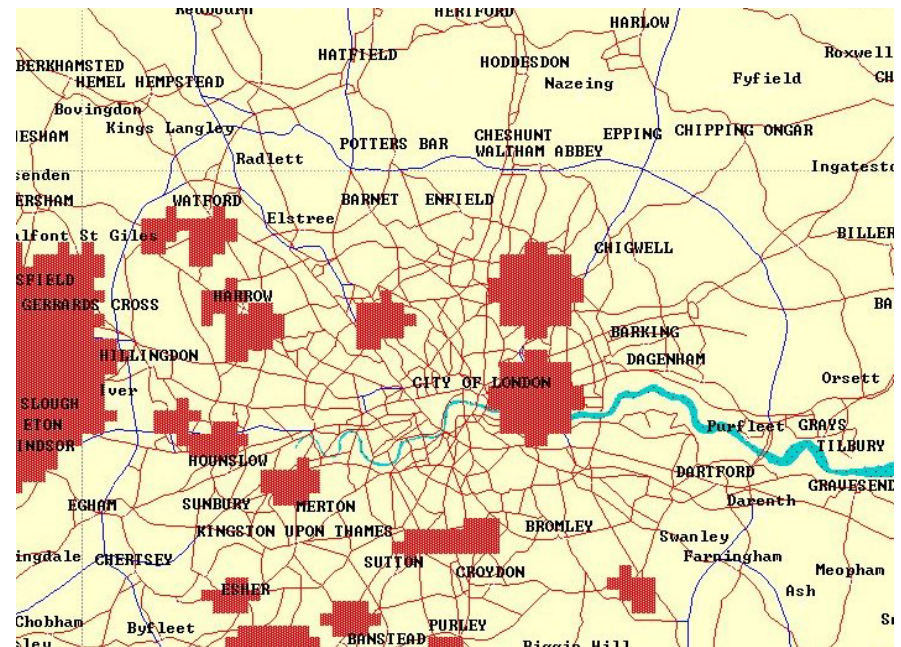
Sharing with Digital TV – Interleaved spectrum

Interleaved spectrum is the “white-space” between zones of interference.

The “white-space” is different for each TV channel.

The “white-space” for digital TV is different to that for analogue TV.

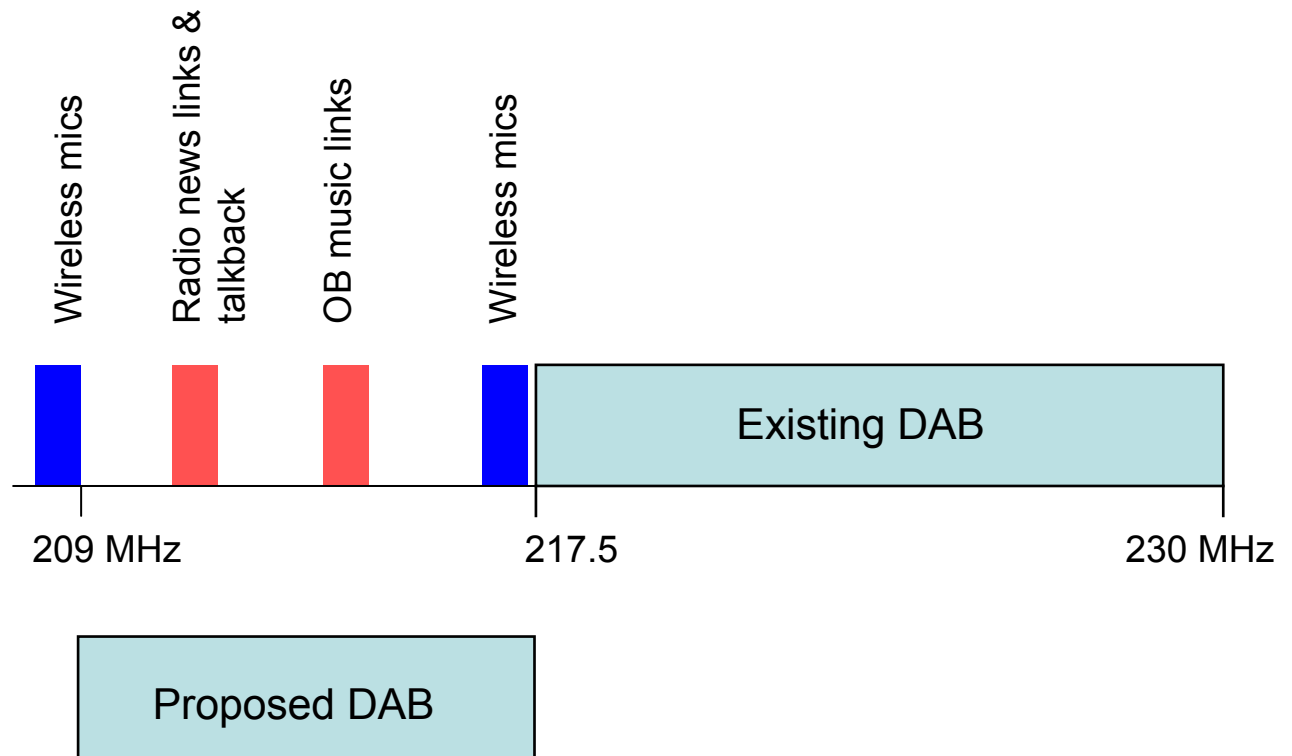
Radiomicrophones in part of TV Ch 66



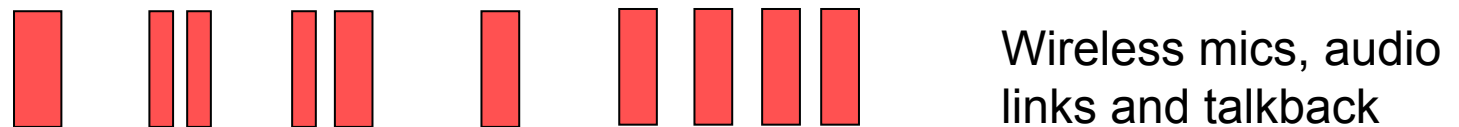
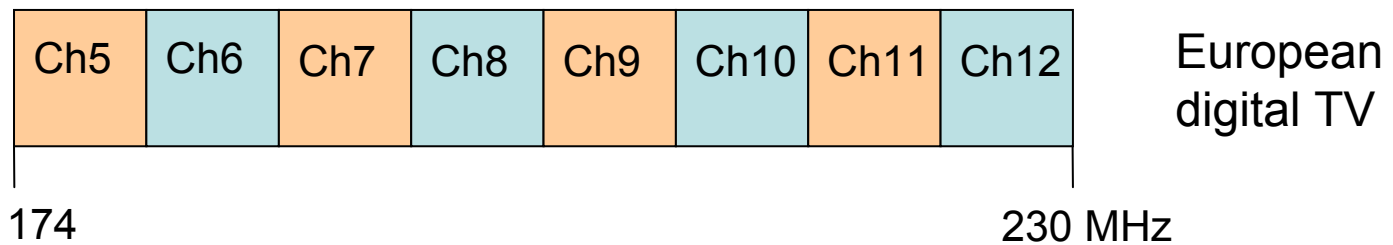
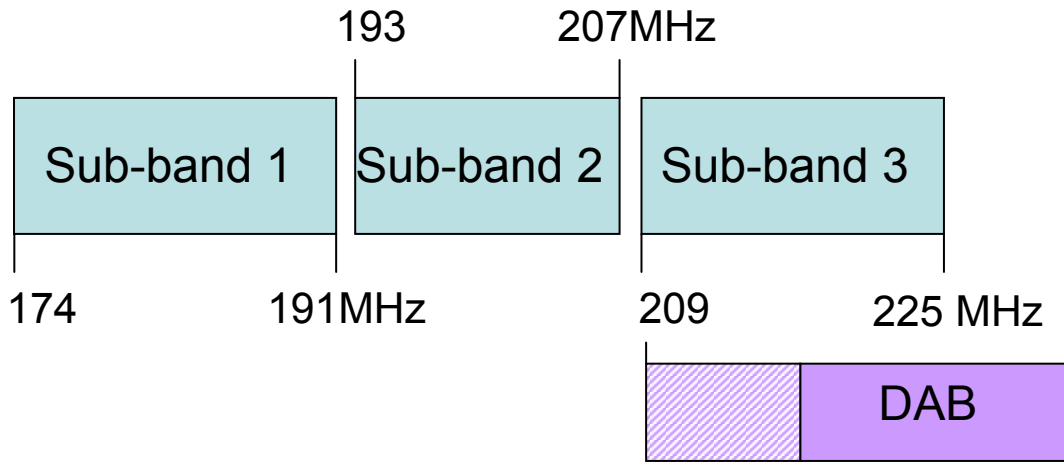
Key

 Interference zone

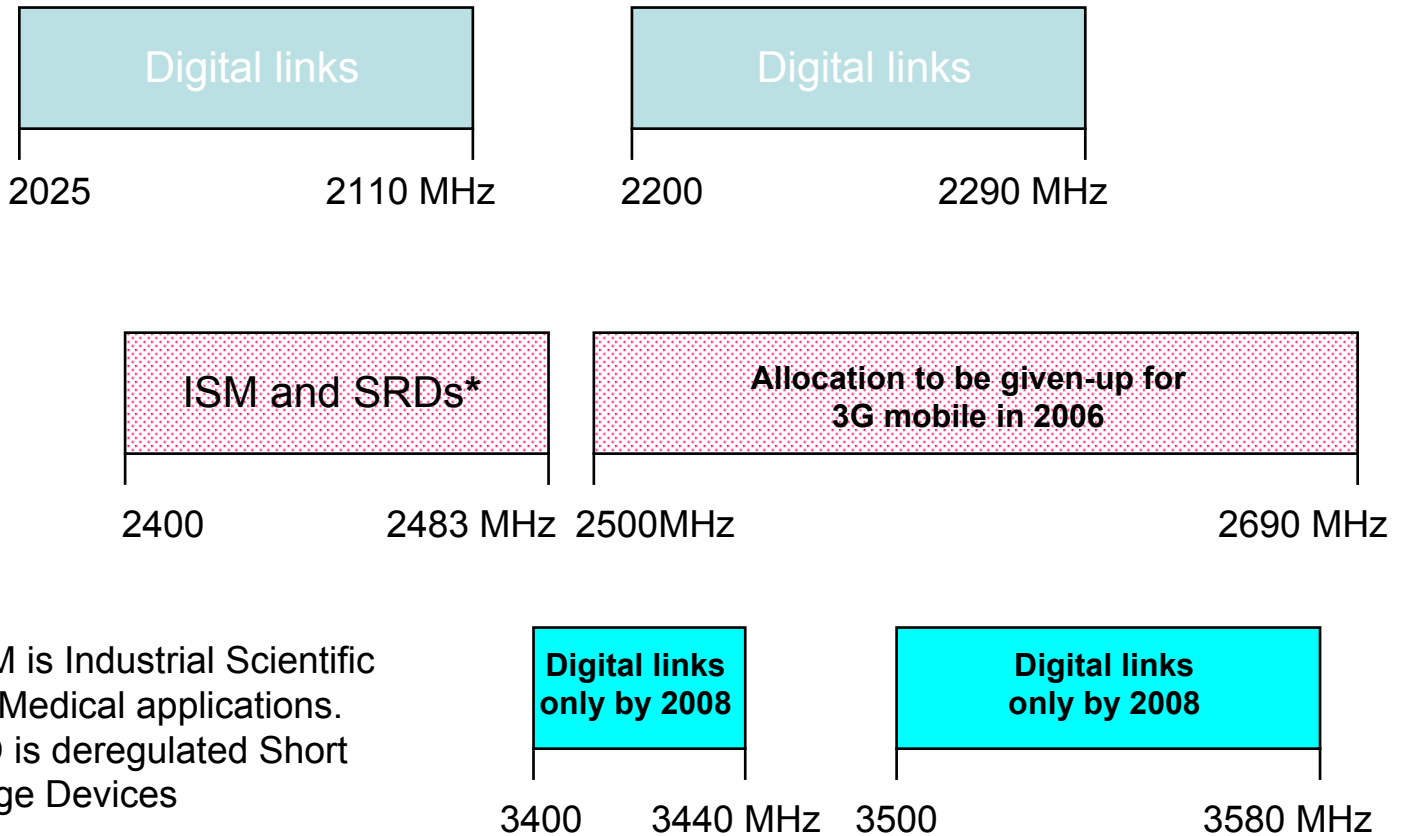
VHF Wireless microphones and talkback



VHF Wireless microphones and talkback

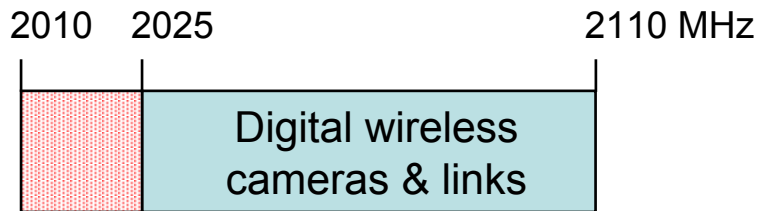


Current spectrum for wireless cameras and mobile video links



* ISM is Industrial Scientific and Medical applications. SRD is deregulated Short Range Devices

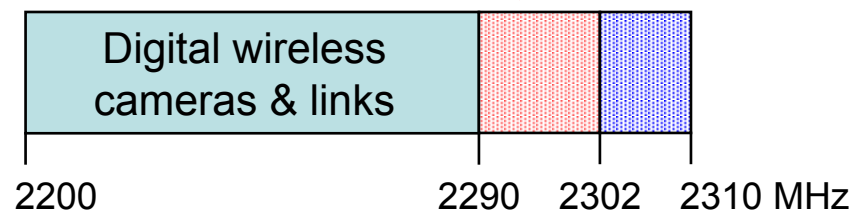
Spectrum Opportunity: Wireless cameras and mobile video links



↑
2010-2025 MHz band is unpaired. Currently identified for 3G cellular mobile and harmonised. Envisaged for 3G, WiMax (IEEE802.16) or similar.

2302-2310 MHz band is currently paired with 1790-1798 MHz but Ofcom will auction as unpaired.

2290-2302 MHz band is unpaired and not harmonised. Envisaged for 3G, WiMax (IEEE802.16) or similar.



Key



Existing programme making allocation



Spectrum for auction 2005 or 2006



Spectrum for auction 2006 or 2007



Summary of threats and opportunities

Threats

- Reduced programme making spectrum
- Increased cost of spectrum
- Increased risk of interference

Opportunities

- Secure programme making spectrum from predators
- Acquire new spectrum (trading and auctions)
- Programme makers benefit from new technologies and services



Discussion