

UK Spectrum update

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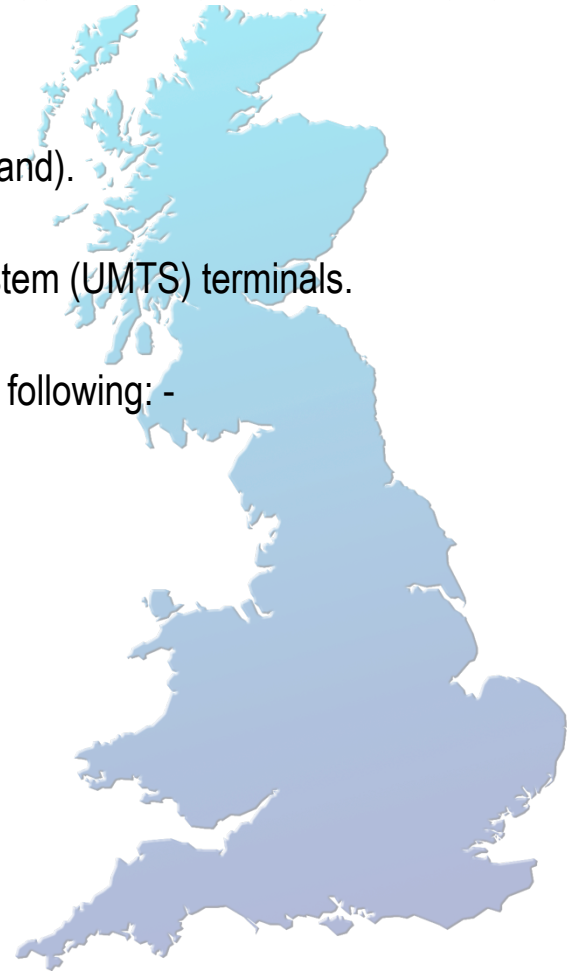
What's happening

- Nov WTA liberalisation
- WiMAX
- Olympic Spectrum
- Transportable Earth Stations
- GSM Refarming
- Digital Switchover / 2.6GHz
- Qualcomm
- Whitespace
- WiMAX v LTE



Nov WTA liberalisation

- Railway level-crossing radars at 24 GHz.
- Fixed Wireless Services (FWS) at 59.1 to 63.9 GHz (60GHz band).
- 900 and 1800 MHz Universal Mobile Telecommunications System (UMTS) terminals.
- The changes also liberalise the technical specifications for the following: -
 - Short Range Devices (SRDs) below 30 MHz when operating underwater.
 - High Density Fixed Satellite Services (HDFSS).



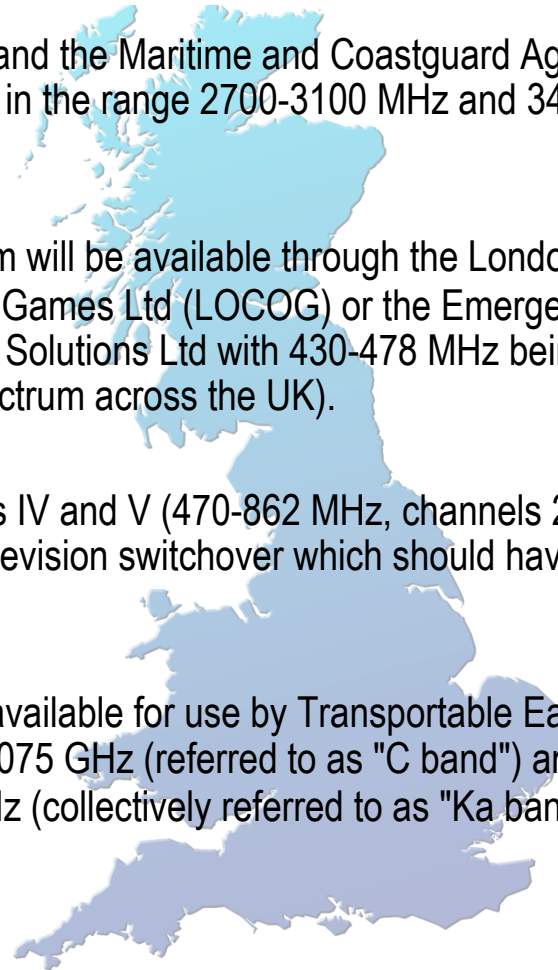
WiMAX

- Freedom4
 - Was Pipex Wireless
 - Now owned by Daisy Telecom (and Intel)
- UK Broadband
 - PCCW
- Backhaul still constraint



Olympic Spectrum

- Ministry of Defence (MOD), the Civil Aviation Authority (CAA) and the Maritime and Coastguard Agency (MCA) arrangements have been made for access to spectrum in the range 2700-3100 MHz and 3400-3600 MHz
- Private Mobile Radio (PMR), Talkback and Telemetry spectrum will be available through the London Organising Committee of the Olympic Games and Paralympic Games Ltd (LOCOG) or the Emergency and Public Safety Services (E&PSS) network operated by Airwave Solutions Ltd with 430-478 MHz being conserved for national use (the Torch procession requires spectrum across the UK).
- Wireless microphones and in-ear monitors will use UHF Bands IV and V (470-862 MHz, channels 21 to 69) which includes the 800MHz band freed up by the the digital television switchover which should have completed by then.
- Satellite News Gathering will have additional spectrum made available for use by Transportable Earth Station (TES) satellite uplinks in the frequency bands 5.925-7.075 GHz (referred to as "C band") and 27.5-27.8185 GHz, 28.4545-28.8265 GHz and 29.4625-30 GHz (collectively referred to as "Ka band").
- The 2.6GHz band (2500-2690 MHz) for wireless cameras etc.



Transportable Earth Stations

- C band: 5925 - 7075 MHz
- Ka band: 27.5 - 27.8185 GHz, 28.4545 - 28.8265 GHz, 29.4625 - 30 GHz
- The pricing for licenses will be equivalent to those in the Ku band (13.78 - 14.5 GHz).
- This follows a previous Ofcom consultation and though most responses were favourable, there were some objections from fixed earth station users, though Ofcom felt that opening up the C and Ka bands was more favourable than doing nothing with them.



GSM Refarming

- Ofcom have allowed GSM refarming
 - In-line with Government Policy
 - Follows EU directive
 - O2 / Vodafone 900MHz
 - Orange / T-Mobile 1800Mhz
- 3/Everything Everywhere/C&W don't much like it
 - Want spectrum caps
 - EE not making too much noise as the combined entity has too much spectrum
 - C&W want to offer 3G (Guard band license not enough spectrum for 3G)
- Everyone wants 900MHz



Digital Switchover / 2.6GHz

- National 800MHz license after Olympics
- National / Regional 2.6GHz licenses?
 - 190MHz of spectrum (more than existing 3G licenses)
 - IMT-2000 band (3G)
- Alcatel-Lucent conducting LTE800 trials in Wales



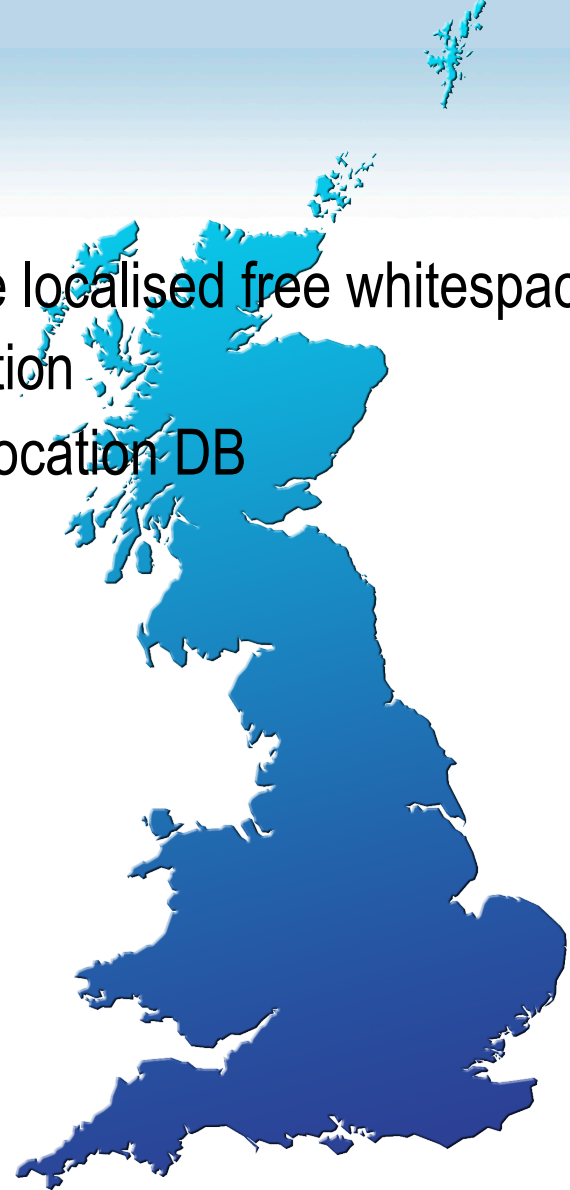
Qualcomm

- Bought a national license 1452-1492 MHz band, known as L-band in May 2008 for their MediaFlo TV technology (though technology neutral license)
- Paid £8,334,000.00
- In late 2010 Qualcomm closed their MediaFlo division.



Whitespace

- Ofcom wants equipment to be able to use localised free whitespace
- Equipment will have to know its own location
- Consults (initially at least) an Ofcom geolocation DB
 - Reports power/frequencies allowed to use
- Requires WTA SI



LTE v WiMAX

- WiMAX is dead
 - Though mature specifications



Thank you for listening!

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