Licence Exemption of Wireless Telegraphy Devices

Candidates for 2011

Consultation

Publication date:	7 April 2011
Closing Date for Responses:	16 June 2011

Contents

Section 1

Executive Summary

1.1 Every day, most of us use radio devices that do not need a Wireless Telegraphy licence. These licence-exempt devices range from mobile phone handsets, car key-fobs and baby monitors to garage door openers and WiFi systems. Licence-exempt applications are also used in industry, including anti-theft systems in shops, identity cards that activate doors and in sensors used in industrial processes.

1.2 This consultation sets out a range of proposals to extend and modify the existing arrangements for licence exemption in the UK. These proposals include allowing the use of certain types of wireless applications without the need to hold a licence and removing restrictions that are no longer required for existing licence-exempt devices.

1.3 Under section 8(1) of the Wireless Telegraphy Act 2006 (the "WT Act"), it is an offence to establish, install or use equipment to transmit without holding a licence granted by us, unless the use of such equipment is exempted. Under section 8(4) of the WT Act, we are required to exempt the establishment, installation and use of a station or apparatus if it is not likely to involve undue interference.

1.4 To reflect developments in the radiocommunications industry we regularly review our regulations to ensure that citizens and consumers can benefit from the use of certain wireless applications on a licence exempt basis where applicable. This consultation document proposes to exempt the following equipment from the need to hold a Wireless Telegraphy licence:

- personal locator beacons (PLBs) for use on land;
- Wireless access terminals in the 3400 to 3800 MHz band;
- Safety related Intelligent transport systems (ITS) infrastructure ;
- 2 GHz Mobile Satellite Services (MSS terminals); and
- Terminals connecting to the 2012 London Games Tetra Network.

1.5 In addition to the changes listed above, we are also making stakeholders aware of potential upcoming European Commission (EC) and other Ofcom proposals that may be included in the revised licence exemption regulations. These include:

- EC Decision on short range devices (SRDs);
- EC Decision on further changes to the 900/1800 MHz band;
- EC Decision on 24 GHz Automotive Short Range Radar (SRR); and
- White space devices.

1.6 The analysis presented in this document represents an Impact Assessment, as defined in section 7 of the Communications Act 2003 (the Act). Further copies may be obtained from www.ofcom.org.uk or from Ofcom at Riverside House, 2a Southwark Bridge Road, London SE1 9HA. Comments on the proposals outlined in this document are invited by **5pm 16 June 2011**. We expect to release a Statement

on this consultation in July 2011, having taken into account stakeholder responses to our proposals.

Section 2

Introduction

What is licence exemption

2.1 We are responsible for authorising civil use of the radio spectrum and achieve this by granting wireless telegraphy licences under the WT Act or by making regulations exempting users of particular equipment from the requirement to hold such a licence. Under section 8(1) of the WT Act, it is an offence to establish, install or use equipment to transmit without holding a licence granted by us unless the use of such equipment is exempted. We can exempt users from the need to hold a licence for the establishment, installation or use of wireless telegraphy equipment by making regulations under section 8(3) of the WT Act. Under section 8(4) of the WT Act, we must make regulations to exempt equipment from licensing if its use is unlikely to involve undue interference to other users.

2.2 In making a device exempt from licensing we specify the characteristics of the equipment that can be used. A key issue is a device's transmitting power. Radio signals from high-powered devices travel further, increasing the chances of interference with others using the same frequencies. If this occurs, the frequencies will become of limited use to other users in the geographic area. Licence-exempt devices are commonly low power or short range devices (SRDs). Large numbers of SRDs can use the same frequencies due to their low transmitting power and limited range.

2.3 Users of licence-exempt devices need to be aware that there are no guarantees that the spectrum will be free of interference. However, by defining the maximum transmit power, along with other characteristics, we can keep the probability of undue interference low.

Licence exemption proposals

2.4 When appropriate we introduce measures to permit the use of a range of new technologies and applications without the need for users to obtain a licence from us. Qualification for exemption is related to the nature of the equipment and frequencies it uses. A number of factors influence whether undue interference occurs, these include:

- the frequency of transmission;
- the power of transmission;
- the use of the equipment; and
- the existence of relevant technical standards.

2.5 Most of the technical studies undertaken to understand whether devices can share frequencies with one another are carried out by the Conference of Postal and Telecommunications Administrations (CEPT). CEPT is the European regional organisation dealing with postal and telecommunications issues and presently has members from 47 countries. It is made up of representatives of the postal and telecommunications administrations of European countries including Ofcom for UK

radio matters. In addition to its role advising the EC on radio spectrum matters, CEPT produces a range of other outputs that inform the development of spectrum management across CEPT member countries. The work done in CEPT is also used by European Standardisation Organizations such as the European Telecommunications Standards Institute (ETSI)[1] and European Committee for Electrotechnical Standardisation (CENELEC)[2] to develop harmonised European standards for equipment. It is on the basis of much of this work that devices can be considered for licence exemption.

2.6 We are proposing to allow new types of equipment to operate on a licence-exempt basis or to amend arrangements for frequency bands and equipment that are already subject to licence exemption. This consultation contains proposals to change the existing regulations for a number of reasons:

- to support the introduction of innovative radio technologies and applications;
- to reflect the evolution of existing technologies; and
- to implement, on a voluntary basis, measures to harmonise the UK regulations with the European region.

2.7 The detail of, and rationale for, each of the new exemption propositions is explained more fully in sections 3 to 7 of this document. In addition further detailed technical information is provided, where appropriate, in additional supporting documents.

Impact assessment

2.8 The analysis presented in this document represents an impact assessment, as defined in section 7 of the Act[3]. Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best-practice policy-making. This is reflected in section 7 of the Act, which means that generally we have to carry out impact assessments where our proposals would be likely to have a significant effect on businesses or the general public or when there is a major change in our activities. However, as a matter of policy, we are committed to carrying out and publishing impact assessments in relation to the great majority of our policy decisions. For further information about our approach to impact assessments, see the guidelines "Better policy-making: Ofcom's approach to impact assessment"[4].

The citizen and/or consumer interest

2.9 Our principal duty under section 3 of the Act is to further the interests of citizens in relation to communications matters; and of consumers in relevant markets, where appropriate by promoting competition. We take account of the impact of our decisions upon both citizen and consumer interests in the markets we regulate. We must, in particular, secure the optimal use for wireless telegraphy of spectrum and have regard to the principle under which all regulatory activities should be targeted only at cases in which action is needed.

[1] http://www.etsi.org/WebSite/AboutETSI/AboutEtsi.aspx
[2] http://www.cenelec.eu/Cenelec/About+CENELEC/default.htm
[3] www.opsi.gov.uk/acts/acts2003/pdf/ukpga_20030021_en.pdf .
[4] Which are on our website at http://www.ofcom.org.uk/about/policies-and-guidelines/better-policy-making-ofcoms-approach-to-impact-assessment/

2.10 In addition to section 3 we must have regard to the desirability of encouraging investment and innovation in relevant markets as well as to further the interests of citizens and consumers.

Our policy objective

2.11 We seek wherever possible, to reduce the regulatory burden upon our stakeholders, in this instance users of the radio spectrum. One way in which we can do this is to remove the need for spectrum users to apply for individual licences to authorise the use of radio equipment.

2.12 As stated in paragraph 2.1 we must exempt equipment if it is unlikely to cause undue interference. Exemption is realised by describing the details of equipment and the parameters under which it may be used in a Statutory Instrument (secondary legislation called regulations) that exempts users of such equipment from the need to hold a WT Act licence provided they comply with the terms of the regulations.

2.13 There are one-off administrative costs associated with making a Statutory Instrument. We considered the implementation costs to be low and offset by the potential benefits. There may be a slight reduction in spectrum management costs in certain areas.

Equality Impact Assessment

2.14 Following an initial assessment of our policy proposals we considered that it was reasonable to assume that any impacts on consumers and citizens arising from these proposals would not differ significantly between groups or classes of UK consumers and citizens, all of whom would have access to these services, potentially at end-user prices reflective of all general input costs, including opportunity costs of spectrum used.

2.15 We do not consider that there is evidence to suggest that costs imposed on stakeholders, would differ significantly by these aforementioned groups of consumers and citizens relative to consumers in general. This is because one would not expect the impact of supplying these consumers and citizens to differ significantly between these groups and consumers in general.

2.16 Therefore we have not carried out a full Equality Impact Assessment in relation to race equality or equality schemes under the Northern Ireland and disability equality schemes. This was because we were not aware that our decision was intended (or would, in practice) have a significant differential impact on different gender or racial groups, on consumers in Northern Ireland or on disabled consumers compared to consumers in general.

Document Structure

2.17 The document is structured as follows:

- Sections 3 to 8 outline our proposals to modify the current regulations for licence exemption;
- Section 9 relates to EC and Ofcom policy work that may require changes to exemption regulations;

- Annexes 1 – 3 explain our consultation principles and how to respond to this consultation;
- Annex 4 sets out the consultation questions; and
- Annex 5 contains a glossary of abbreviations.

Next steps

2.18 We welcome stakeholder feedback to this consultation document. The deadline to submit responses to us is **5pm** on **16 June 2011**. We expect to release a Statement on this consultation in July 2011, having taken into account stakeholder responses to our proposals.

2.19 It is a statutory requirement that we give one month's notice of any proposed regulations. It is our current expectation that we will publish our draft regulations in July 2011. We hope to have the new regulations in place by November 2011.

Section 3

Land use of Personal Locator Beacons (PLB)

Background

3.1 Following a number of requests for Ofcom to allow the use of personal locator beacons (PLBs) on land, we are proposing to permit their licence-exempt use on land in the UK. The proposal has the consent of the United Kingdom Search and Rescue Operators Group (UKSAR[5]), including the Association of Chief Police Officers (ACPO), the Association of Chief Police Officers in Scotland (ACPOS), the Ministry of Defence (MoD), the Maritime and Coastguard Agency (MCA) and the Civil Aviation Authority (CAA). Similar types of emergency radio beacons have already been authorised for use onboard ships and aircraft for a number of years and other devices for notifying distress on land via satellite networks are already permitted in the UK.

3.2 A PLB is a type of radio device that can be carried on a person. When activated, the signal of the PLB is transmitted via satellites, processed and used for determining the location of the PLB together with other information such as the unique identity of the beacon. A homing (secondary) signal from the PLB where relevant, aids rescue services for near or 'on-scene' homing to the precise location.

3.3 In many remote areas there is limited mobile telephone network coverage which can present a serious risk in an emergency or serious distress situation e.g. a lone worker operating in difficult and remote terrain who is badly injured, a mountaineer requiring rescue or a hiker in the hills who has lost his map or navigation tools and is in danger. In these situations a PLB transmitting location information could be triggered which would greatly assist search and rescue services in locating the individual quickly.

Proposal detail

3.4 There are various types of beacons using different frequencies. The type of PLB that Ofcom is considering in this consultation is the Cospas-Sarsat PLB that uses globally harmonised emergency frequencies in the range 406 to 406.1 MHz (satellite uplink) and commonly, the secondary frequency of 121.5 MHz (and sometimes 243 MHz). Beacons using these frequencies operate within the framework of the Cospas-Sarsat International Programme[6].

3.5 Each PLB is programmed with a unique identity in the form of a 15 character hexadecimal code and registered with a UK competent authority. All PLBs should be registered in order to ensure the efficient and quick handling of alerts. When registering a PLB, the user provides the owner's name, address, 24 hour emergency contact number and other information. This information is used for assisting in the rescue by the search and rescue authorities. The MCA already carries out registration functions for maritime PLBs. Our understanding is that a similar system may be used for PLBs on land.

[5] http://www.dft.gov.uk/pgr/shippingports/uksar/
[6] http://www.cospas-sarsat.org/index.php?lang=en

3.6 A European Commission Decision (2005/631/EC[7]) specifies additional essential requirements for PLBs to ensure they function correctly under exposure to the environment in which they may be used. Under distress conditions they must provide clear and robust communication to meet all the requirements of the Cospas-Sarsat system.

3.7 We are proposing to permit on a licence-exempt basis the use of PLBs that;

- operate between 406 to 406.1MHz;
- use an additional secondary homing beacon of 121.5 MHz (and 243 MHz if this is present) where applicable;
- comply with the R&TTE Directive (including the additional essential requirements of EC Decision 2005/631/EC); and
- Comply with technical parameters set out in IR 2084[8].

3.8 The effect of this proposal would be to licence-exempt the use of PLBs on land. This would not affect the requirement for PLBs for use on aircraft or ships to be covered by the appropriate licence.

3.9 As advised in paragraph 3.5 all beacons should be registered. It is also strongly recommended, by organisations involved in search and rescue operations, that users also have the ability to transmit their location. Significant advantages are conferred by the integration of a Global Navigation Satellite System (GNSS) e.g. Global Positioning System (GPS). Equipment deploying only the primary signal via satellite provides an accuracy of perhaps 5 km whereas GNSS substantially improves this to within a few tens of metres. This can significantly reduce the time required to locate those in need. This should assist in minimising the potential for loss of life in such circumstances, while potentially reducing the need for lengthy, large-scale and expensive search operations and other costs associated with search and rescue operations over a wider area.

Impact

3.10 Permitting the use of PLBs on land will affect the services that provide search and rescue in the UK. Primary responsibility for co-ordinating search and rescue activity on land rests with the police services, but a number of other organisations such as the MoD, the MCA, mountain rescue teams and other relevant teams may all play a part. A potential increase in the number of PLB devices in the UK raises the risk in the number of false alerts. If a PLB is activated a cost may be incurred by public authorities and search and rescue organisations, in ascertaining whether or not it is a false alert. Nevertheless, as noted in paragraph 3.1, the main organisations which would be impacted support our proposal to licence exempt the use of PLBs on land.

Benefits

3.11 The ability to identify and locate people quickly in an emergency has a number of benefits. A PLB can enable search and rescue organisations to reduce the time taken to search for the distressed party and to make a measured response, thereby

[7] http://ec.europa.eu/enterprise/sectors/rtte/files/commdec_cospas_sarsat_en.pdf
[8] http://stakeholders.ofcom.org.uk/spectrum/spectrum-management/research-guidelines-tech-info/interface-requirements/draft_ir/

making more efficient use of valuable SAR resources. This can reduce the risk of loss of life or serious harm. In addition, the ability to determine the search location can save significant costs for search and rescue organisations when carrying out such an operation.

3.12 Although additional costs may be incurred by search and rescue organisations we believe that the benefits to citizens overall will outweigh these costs.

Question 1) Do you agree with our proposal to exempt the land use of 406 MHz PLBs from the need to hold a Wireless Telegraphy Act licence?

Section 4

Intelligent Transport Systems (ITS) infrastructure

Background

4.1 "Intelligent Transport Systems" (ITS) is an umbrella term used to describe a number of transport supporting services, ranging from driver aids intended to mitigate against accidents through to commercial services for drivers and passengers. These systems are intended to provide drivers with additional information and give an early warning of potential dangers. ITS include equipment able to communicate between cars and between the car and any roadside infrastructure.

4.2 On 4 February 2009 we made the Wireless Telegraphy (Vehicle Based Intelligent Transport Systems) (Exemption) Regulations 2009[9]. These regulations exempted the use of vehicle based equipment, as required by the Commission Decision of 5 August 2008 on the harmonised use of radio spectrum in the 5875 to 5905 MHz frequency band for safety-related applications of Intelligent Transport Systems (ITS) 2008/671/EC[10] (the "ITS Decision"). The Decision aims to support the European Union's *e*Safety Initiative with its goal to reduce the number of road fatalities each year.

4.3 At the same time the then Department for Business Enterprise and Regulatory Reform (BERR) made regulations[11] requiring Ofcom to carry out our functions so as to give effect to the UK's obligations under the Decision. This included a requirement to designate the 5875 to 5905 MHz frequency band for use for safety-related applications of Intelligent Transport Systems, in accordance with the parameters set out in the Annex to the ITS Decision.

4.4 When we made the regulations we considered it appropriate to licence exempt the vehicle based safety-related ITS immediately. However for safety-related ITS infrastructure we decided that this approach was not appropriate. Instead we advised that ITS infrastructure would be authorised by a WT Act licence. We made this decision to enable different ITS operators to coexist without causing a significant loss in the effectiveness of the networks, as we believed that a coordinated approach for infrastructure would be necessary.

4.5 Technical studies carried out by CEPT, and detailed in CEPT Report 20, that underpinned the ITS Decision, were based on channel access technology, where only one device is active on a channel at the same point in time in a given area and all units are operating in the same network[12]. If there were more than one infrastructure network and those networks were not coordinated, there would be a likelihood of harmful interference which may prevent the safety-related aims of the ITS Decision from being fully realised.

[9] http://www.legislation.gov.uk/uksi/2009/65/contents/made
[10] http://www.erodocdb.dk/docs/doc98/official/pdf/2008671EC.pdf
[11] http://www.legislation.gov.uk/uksi/2009/11/introduction/made
[12] CEPT Report 20, to the European Commission in response to the Mandate on "the harmonised radio spectrum use for safety critical applications of ITS in the European Union" dated 21 December 2007 section 7. http://www.erodocdb.dk/Docs/doc98/official/pdf/CEPTREP020.PDF

4.6 Subsequent to the CEPT Report 20, on 6th October 2009 the European Commission published the standardisation mandate on ITS (M/453[13]):

- "the standardisation mandate addressed to CEN, CENELEC and ETSI in the field of information and communication technologies to support the interoperability of co-operative systems for Intelligent Transport in the European Community" (the "EC Mandate").

4.7 As a consequence of the EC Mandate, in September 2010 ETSI published EN 302 665[14] describing ITS Communications Architecture. The standard adopts and defines the ITS station model. This means that from a technical point of view there is no difference between the on board unit and the roadside / infrastructure unit. All units are just ITS stations that will have the same capabilities. Further, EN 302 571[15], the European harmonised radio standard for ITS in the 5.9 GHz band, has been published by ETSI and is referenced in the official journal of the European Union (OJEU[16]). This standard therefore provides a presumption of conformity for equipment with the R&TTE Directive[17]. The standard provides manufacturers with the most straightforward route to market for their products.

4.8 The consequence of this standardisation action by ETSI is that all compliant ITS apparatus is now cooperative. The coordination mechanism envisaged in CEPT Report 20 is unnecessary when the communications architecture of EN 302 665 is deployed.

Proposal detail

4.9 We are proposing to exempt infrastructure based safety-related ITS equipment from licensing where it deploys a coordination mechanism that achieves an equivalent effect to that specified in EN 302 665. Our proposals mirror the technical parameters and standards set out in the ITS Decision. The ITS Decision sets the terms, provisions and limitations to be complied with for the safety-related ITS. We propose that the exemption shall apply if:

- the wireless telegraphy station is for safety-related intelligent transport systems or a part thereof;
- the wireless telegraphy station transmission power has at its highest point:
    - a maximum mean e.i.r.p. density no greater than 23 dBm per MHz; and
    - a maximum mean e.i.r.p. no greater than 33 dBm.
- the wireless telegraphy station uses techniques to mitigate interference providing at least equivalent performance to ETSI standards EN 302 571and EN 302 665.

[13] http://ec.europa.eu/enterprise/sectors/ict/files/standardisation_mandate_en.pdf
[14] http://www.etsi.org/deliver/etsi_en/302600_302699/302665/01.01.01_60/en_302665v010101p.pdf
[15] http://www.etsi.org/deliver/etsi_en/302500_302599/302571/01.01.01_60/en_302571v010101p.pdf
[16] http://ec.europa.eu/enterprise/policies/european-standards/documents/harmonised-standards-legislation/list-references/rtte/
[17] http://ec.europa.eu/enterprise/sectors/rtte/index_en.htm

- the wireless telegraphy station complies with technical parameters set out in IR 2086[18].

Impact

4.10 Identical transmitters are already authorised for this use, so the impact of extending this to safety-related infrastructure is expected to be limited. However, the proposal will probably increase the number of users of the band and in particular at the same location.

4.11 The band 5850 to 5925 MHz has been allocated for use by Programme Making & and Special Events (PMSE), who are allowed to use wireless cameras in these frequencies. However, there is only limited PMSE use in this band, so we do not expect undue interference for these users.

Benefits

4.12 The introduction of safety-related ITS is intended to improve road safety. The EC stated[19] that in 2006 alone, approximately 42,000 people were killed on Europe's roads. The impact assessment included at Annex 2 of CEPT Report 20,[20] concluded that even a marginal reduction in road casualties would provide greater benefits than alternative uses of the 5875 to 5905 MHz band. The report suggests that just a 1% reduction in casualties would be of very significant benefit to society.

4.13 By making a general authorisation for all compliant ITS apparatus we will be removing unnecessary regulatory burdens and fulfilling the statutory requirements placed on us by BERR.

Question 2) Do you agree with our proposal to exempt the use equipment for safety-related ITS infrastructure from the need to hold a Wireless Telegraphy Act licence?

[18] http://stakeholders.ofcom.org.uk/spectrum/spectrum-management/research-guidelines-tech-info/interface-requirements/draft_ir/

[19] Press notice http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/1240&format=HTML&aged=0&language=EN&guiLanguage=en

[20] CEPT Report 20. Report from CEPT to EC in response to the Mandate on "the harmonised radio spectrum use for safety critical applications of Intelligent Transport Systems (ITS) in the European Union" http://www.erodocdb.dk/Docs/doc98/Official/Pdf/CEPTRep020.pdf

Section 5

Wireless access terminals in the 3400 to 3800 MHz band

Background

5.1 We have recently concluded our consultation on the granting of Crown Recognised Spectrum Access (RSA)[21]. In that statement we set out technical parameters for equipment operating in the 3400 to 3600 MHz band. The band is currently utilitsed by a number of users, with the MoD being the largest user. The MoD has indicated that it may release spectrum in the 3400 to 3600 MHz band.

5.2 At present, UK Broadband Ltd holds two Spectrum Access licences in the 3 GHz band, Spectrum Access 3.5 GHz (3480 to 3500 MHz paired with 3580 to 3600 MHz) and Spectrum Access 3.6 GHz (3605 to 3689 MHz paired with 3925 to 4009 MHz). The technical conditions in these licences place constraints on the out of band emissions from UK Broadband's blocks into the frequencies below 3480 MHz, above 3500 MHz and below 3580 MHz which are covered by the prospective RSA.

5.3 In its response to the RSA consultation UK Broadband asked that terminal stations operating in the RSA block should be exempted from the need for licensing[22]. As referred to in the RSA Statement, we are minded to grant that request subject to the technical limits set out in this consultation.

5.4 The 3400 to 3800 MHz band is also subject to Commission Decision of 21 2008 on the harmonisation of the 3400 to 3800 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community (2008/411/EC)[23]. This harmonised the technical conditions for use in these bands across Europe.

5.5 Ofcom has not yet granted Crown RSA within the 3400 to 3600 MHz band (and thus has not granted licences from the conversion of RSA), neither have we reviewed the overall policy for spectrum from 3600 to 4200 MHz. While the proposal to make exemption regulations will therefore facilitate the authorisation of terminals for any future licensed networks anywhere within the harmonised band, this is entirely without prejudice to future review or licensing of spectrum.

Proposal detail

5.6 We are proposing that terminal stations operating under the following conditions be exempt from the need to hold a WT Act licence:

- only connect to an authorised network;
- operate only in the frequency bands 3400 to 3800 MHz;

[21] http://stakeholders.ofcom.org.uk/binaries/consultations/crown-rsa/summary/crown-rsa.pdf
[22] http://stakeholders.ofcom.org.uk/binaries/consultations/3_4ghz/responses/UKB.pdf

[23] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:144:0077:0081:EN:PDF

- have a maximum total in-block emission e.i.r.p. of 25 dBm/MHz; and
- meet technical parameters set out in IR 2015.3[24].

5.7 We have limited the terminal in-block power emission for licence exempt devices to 25 dBm/MHz. We do not believe that this will cause undue interference to other spectrum users. The use of some higher power fixed and nomadic terminals is permitted via the network licence.

Impact

5.8 We consider that there will be no practical impact on the way terminal stations are managed by the networks at present. This is because the base stations are subject to coordination and terminal stations do not transmit except when they are within the coverage of a base station.

Benefits

5.9 The advent of apparatus in these bands gives rise to the possibility that the service may be accessed by devices used by visitors to the UK who may not have a direct contractual relationship with the host network. The exemption of such devices from licensing will therefore recognise a situation that in practice may already occur, addressing a potential inconsistency in regulation and reducing an administrative burden on licensees.

Question 3) Do you agree with our proposal to exempt the use of terminals operating in the 3400 to 3800 MHz band from the need to hold a Wireless Telegraphy Act licence?

[24] http://stakeholders.ofcom.org.uk/spectrum/spectrum-management/research-guidelines-tech-info/interface-requirements/draft_ir/

Section 6

2 GHz Mobile Satellite Services (MSS) terminals

Background

6.1 This section of our consultation relates to the use in the UK of 2 GHz user terminals that are used to access services via mobile satellite systems or the satellite systems' integrated complementary ground component base station network.

6.2 Mobile satellite services (MSS) enable communication by mobile users, via "user terminals" (e.g. satellite phones) connected to a visible satellite and the related network, and other users, fixed or mobile, at different locations. Besides the satellite(s), a MSS network may also include ground-based base stations known as "Complementary Ground Components" (or "CGC"s). User terminals may connect to either the satellite or a CGC base station.

6.3 The use of the frequency band 1980 to 2010 MHz has been the subject of European Union Decisions seeking to enable new MSS for Europe:

i) RSC Decision 2007/98/EC[25], on the harmonised use of radio spectrum in the 2 GHz frequency bands for systems providing MSS;

ii) Decision 626/ 2008/EC[26], adopted jointly by the European Parliament and Council, provided a process for the selection and authorisation of would-be providers of MSS;

iii) Decision 2009/449/EC[27] completed this process by selecting two operators – Inmarsat Ventures Limited and Solaris Mobile Limited (the "MSS operators") - and assigning frequencies to each for the provision of mobile satellite services at 2 GHz.

6.4 The Decisions were fully implemented in the UK by the Authorisation of Frequency Use for the Provision of Mobile Satellite Services (European Union) Regulations 2010, under which Ofcom has issued authorisations to each of Inmarsat Ventures Limited and Solaris Mobile Limited.

6.5 Ofcom is required to exercise its functions in order to give effect to the Decisions[28]. We have consulted and produced a statement on the terms and conditions for licensing of the CGC base stations[29]. To date, however, neither MSS operator has requested an authorisation for operations in the UK.

6.6 This consultation relates to the authorisation of user terminals for use with the MSS network. Such terminals are likely to circulate freely within the EC. The Electronic

[25] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:043:0032:0034:EN:PDF
[26] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:172:0015:0024:EN:PDF
[27] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:149:0065:0068:EN:PDF
[28] Regulation 13 of SI 2010/672
http://www.legislation.gov.uk/uksi/2010/672/pdfs/uksi_20100672_en.pdf
[29] A Statement on the licensing of 2 GHz MSS Complementary Ground Components
http://stakeholders.ofcom.org.uk/binaries/consultations/cgcs2/statement/2ghzstatement.pdf

Communications Committee (ECC), which is part of CEPT, has recently begun work to prepare a Report on the adjacent band compatibility of MSS against 3G mobile services below 1980 MHz and other services above 2010 MHz. We expect CEPT to complete this report by late 2012 / early 2013 and anticipate that it will be used as the basis for the EC to harmonise European wide authorisation conditions for the new user terminals.

6.7 Because of these CEPT studies, we may check if the ETSI standards of the 2GHz terminal require a maintenance update and, if so, propose this to ETSI.

6.8 We understand that it is unlikely that the MSS operators will be in a position to operate user terminals in advance of these common technical conditions. However, it is difficult to be precise about future timings so it is conceivable that MSS operators will wish to provide services before a European-wide regime has been adopted.

6.9 Therefore, we consider it appropriate to propose an "interim" basis for exemption now, which would exist only until the CEPT has completed its work and a European-wide approach has been adopted.

Proposal detail

6.10 In developing an interim basis for exemption of 2 GHz MSS user terminals, we have considered the risk that their use may interfere with services in adjacent bandwidths.

6.11 2 GHz MSS user terminals would operate in the 1980 to 2010 MHz band. Below 1980 MHz are 3G mobile services. Above 2010 MHz is the 2010 to 2025 MHz band. Ofcom have recently made a statement on the release of this band[30].

6.12 We looked at existing exemptions for other user terminals, in particular the terminal exemption standard for a 2GHz non-Geostationary mobile satellite system, that uses ETSI standard EN 301 442 referenced in UK IR 2016[31] and also looked at IR 2019[32], which relates to 3G mobile services. The EN 301 442 standard (originally published as ETSI TBR 042 in 1998) has different technical parameters from the more recent 2GHz standards published (in 2010) as EN 302 574-2 and EN 302 574-3.

6.13 We here propose an interim authorisation for 2 GHz MSS user terminals based on emission levels given the Tables 1 and 2 below, which would allow unlicensed use of these user terminals while protecting services below 1980 MHz and above 2010 MHz.

6.14 2GHz MSS user terminals may operate in either (1) single mode, i.e. satellite only or terrestrial only; or (2) in dual mode, i.e. both satellite and terrestrial modes, possibly quickly switching between the two. In either case, when a user terminal is operating in the terrestrial mode ("CGC mode"), transmission occurs between the user terminal and a CGC base station. When it is operating in "satellite mode", transmission occurs between the user terminal and a satellite.

[30] Statement on release of 2010-2025 MHz
http://stakeholders.ofcom.org.uk/binaries/consultations/release_2010_2025/statement/statement.pdf
[31] http://stakeholders.ofcom.org.uk/spectrum/spectrum-management/research-guidelines-tech-info/interface-requirements/draft_ir/
[32] http://stakeholders.ofcom.org.uk/binaries/spectrum/spectrum-policy-area/spectrum-management/research-guidelines-tech-info/interface-requirements/3gm.pdf

6.15 CGC Mode - We have considered our earlier consultation on CGC base station network licences, where we defined the licensing parameters of the complementary base station networks[33]. This also considered our earlier information memorandum for 3G type services[34], where we placed conditions on adjacent services above 2010 MHz, which we reflected into our other 2010 to 2025 MHz consultations[35] and statement[36].

6.16 We consider that 2GHz MSS user terminals operating in a CGC mode across the band 1980 to 2010 MHz should be subject to the same terminal power conditions and limitations as those of similar user terminals that operate below 1980 MHz and above 2010 MHz.

6.17 3G systems operate immediately below the band 1980 MHz. To manage interference between 3G mobile networks in their adjacent frequency blocks, the maximum transmit power of licence exempt 3G user terminals is 24 dBm37.

6.18 Within the frequency band 2010 to 2025 MHz, user terminals of any license award were expected to operate up to a TRP38 of 31 dBm / 5 MHz; see Ofcom's 2010 to 2025 MHz Information Memorandum of 4th April 200839.

6.19 The release of the band 2010 to 2025 MHz is still under review. As a working assumption based on the 2010 to 2025 MHz Information Memorandum, terminals in this band might radiate at about 31 dBm / 5MHz. In practice, it is less likely for a terminal immediately above 2010 MHz to actually operate at that level because the base stations, when operating immediately adjacent to 2010 MHz, will have to meet the unwanted emission levels of -45 dBm/MHz as given in our statement40. To do this a reduced base station power level and filtering is necessary (meaning the cell size would be smaller). Hence, we consider that in practice the maximum operating power of any adjacent terminals above 2010 MHz are less likely to use the maximum 31dBm/5MHz and therefore operate nearer to 24 dBm / 5MHz. Therefore, it is appropriate to propose that CGC user terminals operate with a maximum power of up to 24 dBm / 5 MHz within 1980 to 2010 MHz.

6.20 Satellite mode – we believe that user terminals operating in satellite mode may have antenna gains similar to those of mobile satellite terminals operating within the 1.5/1.6 GHz mobile satellite bands. Hence, (satellite mode) user terminals with an e.i.r.p of 40 dBm might use an antenna gain of up to 10 dB and user terminals with an e.i.r.p of 51dBm might use an antenna gain of up to 15 dB. However, the existing UK IR 2016 document for 2GHz user terminals authorises operation up to 39.8 dBm. Hence, we propose that this interim authorisation should be for user terminals operating in satellite mode to 40 dBm.

[33] A Statement on the licensing of 2 GHz MSS Complementary Ground Components
http://stakeholders.ofcom.org.uk/binaries/consultations/cgcs2/statement/2ghzstatement.pdf
[34] Auction of spectrum: 2500–2690MHz, 2010–2025MHz information memorandum
http://stakeholders.ofcom.org.uk/binaries/consultations/2ghzrules/im.pdf
[35] Consultation on the release of 2010-2025 MHz
http://stakeholders.ofcom.org.uk/binaries/consultations/release_2010_2025/summary/20102025.pdf
[36] Statement on the Release of 2010-2025 MHz
http://stakeholders.ofcom.org.uk/binaries/consultations/release_2010_2025/statement/statement.pdf
[37] UK interface requirement IR 2019
[38] TRP is equal to the total input power to the antenna, as the integral of the antenna gain over the sphere equals 1.
[39] Auction of spectrum: 2500–2690MHz, 2010–2025MHz information memorandum
[40] Release of 2010-2025 MHz

6.21 As set out above, the ECC/CEPT are considering the compatibility of 2GHz MSS user terminals with services in adjacent bands, but is not expected to report until 2012/2013. In the meantime, we cannot be confident that the use of 2GHz MSS user terminals when using high powers (and high data rates) will not cause undue interference to base stations in adjacent frequency bands, such as the 3G mobile services below 1980 MHz. We therefore propose in the interim to authorise by licence exemption the deployment of satellite mode user terminals with power levels higher than 24dBm to the central part of the band 1980 to 2010 MHz range, with an interim requirement of a 5 MHz frequency separation from the band edges (see Tables 1 and 2). When the CEPT studies are concluded in 2012/2013, we intend to adopt new conditions based on such studies.

6.22 We have taken the frequency separation from the band edge from a conservative analysis of the relative level of in-band and out-of-band emissions, taken from the informative user terminal 2GHz standards EN 302 574. Then using the above power levels, we compared the resultant in-band and out-of band levels to the existing exemption regulations. A conservative analysis in the interim is in our view the appropriate basis to carry out this assessment because an alternative basis may lead us to authorise user terminals that cause undue interference to adjacent services.

6.23 Our aim, in these interim exemption regulations, is to allow the use of 2GHz MSS user terminals, while protecting existing adjacent systems. In developing the parameters in Table 1 below, we have used the emission levels of the existing UK IR 2016 2GHz user terminal for the 0 kHz to 2 MHz frequency offsets from the upper or lower channel edge. For the frequency offset from 2 to 10 MHz we have used section 4.6.2 of CEPT Report 39 [41] on “least restrictive conditions for 2GHz ECN”.

[41] CEPT 39 Report. http://www.erodocdb.dk/Docs/doc98/official/pdf/CEPTREP039.PDF

Table 1: Interim technical limitations for satellite user terminals

Frequency Range of emissions (note 1)	Maximum mean power dBm	Measurement bandwidth
-10 to -5 MHz from lower channel edge	-6	5 MHz (note 2)
-5 to -2 MHz from lower channel edge	-6	5 MHz (note 2)
-2000 to -1525 kHz from lower channel edge	-25	30 kHz (note 2)
-1525 to - 1175 kHz from lower channel edge	-20 -((offset - 1 175) × 5/350)	30 kHz (note 2)
-1175 to - 575 kHz from lower channel edge	-30	3 kHz
- 575 to - 166 kHz from lower channel edge	-25	3 kHz
166 to 0 kHz from lower channel edge	0 - (offset × 25/166)	3 kHz
0 kHz to 166 from upper channel edge	0 - (offset × 25/166)	3 kHz
166 kHz to 575 kHz from upper channel edge	-25	3 kHz
575 kHz to 1175 kHz from upper channel edge	-30	3 kHz
1175 kHz to 1525 kHz from upper channel edge	-20 -((offset - 1 175) × 5/350)	30 kHz (note 2)
1525 kHz to 2000 kHz from upper channel edge	-25	30 kHz (note 2)
2 to 5 MHz from upper channel edge	-6	5 MHz (note 2)
5 to 10 MHz from upper channel edge	-27dBm (against unsynchronised TDD)	5 MHz (note 2)

Table 2: Interim in-band technical limitations for satellite user terminals

Frequency Range of emissions (note 1)	Maximum mean power dBm	Measurement bandwidth
In-Band Power 1980.1- 2009.9 MHz (Note 3)	+24dBm	55kHz to 5 MHz (note 2)
In-Band Power 1985- 2005 MHz (Note 4)	+40dBm	55kHz to 5 MHz (note 2)

Note 1: Lower channel edge 1980.1 MHz and Upper Channel Edge 2009.9 MHz
Note 2: The measurement bandwidth used may be 3 kHz if the EIRP limits are reduced correspondingly.
Note 3: The user terminal is transmitting to a CGC base station, or a satellite, at a power level not exceeding 24dBm.
Note 4: The user terminal is transmitting to a satellite at a power level in excess of 24dBm.

6.24 A draft revised version of IR 2016, which incorporates these proposals as well as updates to reflect the CGC licensing regime, has been notified to the European Commission and is available on our website [42] .

Impact

6.25 We consider that in the UK there is a need to limit the potential effects of interference from MSS user terminals' operation to radio services that operate below 1980 MHz and above 2010 MHz. Power control and frequency assignment management are core elements of any mobile or satellite system. Consumers have no control over the power used by user terminals; it is managed by the satellite system operator to ensure correct system operation. We believe our e.i.r.p/frequency proposals for license exempt 2GHz MSS user terminals should allow free circulation of such terminals, while controlling the risk of harmful interference to other services and their users in the UK.

6.26 We consider that our interim proposals are sufficiently liberal to allow MSS network operators to adopt flexible spectrum management arrangements, pending an EU-wide understanding of the basis on which 2GHz MSS user terminals should be authorised.

6.27 There is no competition issue associated with the use of these terminals. Any terminals offering a service will be to the EU selected operator, or to the CGC base station network operator(s) contracted to supply terrestrial services by that operator in that country.

6.28 Other EU member states provide licence exempt authorisations for MSS terminals in different ways. It is up to the satellite operator to carefully manage the operation of its network, according to the national authorisations of those countries, so called "landing rights".

Costs

6.29 Licence exemption represents the least cost regulatory approach to the authorisation of spectrum use. If we licensed MSS user terminals, each user of such a terminal would have to have a WT licence, leading to a large administrative regulatory burden. The UK would also have difficulty enforcing such a licence regime as many thousands of devices may exist.

6.30 There is a one-off administrative cost associated with making a statutory instrument. We consider the implementation costs to be low, both in absolute terms and in comparison to licensing. Costs are offset by the benefits to stakeholders.

6.31 We do not consider that the proposals are likely to impose costs on other users.

6.32 While there may be a cost to user terminal manufacturers and to the MSS operators in complying with our interim proposal, e.g. in relation to frequency separation, we expect this will be more than offset by the cost in terms of undue interference to other users and to service providers in adjacent frequency bands were the handsets to be authorised on a basis which did not require this. We consider the proposal to represent the minimum necessary conditions of authorisation, having regard to the risk of undue interference.

[42] http://stakeholders.ofcom.org.uk/spectrum/spectrum-management/research-guidelines-tech-info/interface-requirements/draft_ir/

Benefits

6.33 The benefits of our proposals are that they facilitate the provision of MSS services to consumers and citizens in the European Community while also protecting other radio telecom services in adjacent bands which are important to consumers and citizens. We expect the authorisation to be of value in that it may increase the availability of telecommunications, broadband and multimedia services in rural and urban areas, as well as providing an alternative network for public protection and disaster relief communications.

Question 4) Do you agree with our proposals for the authorisation of 2 GHz MSS user terminals from licensing?

Section 7

Terminal Authorisation for the London 2012 Games Tetra Network (Apollo)

Background

7.1 London will host the Games of the XXX Olympiad and XIV Paralympiad (the "Games") between 27 July and 9 September 2012. The UK Government has guaranteed, to the International Olympic Committee, the allocation of the spectrum required for the organisation of the Games and to waive fees payable for those allocated frequencies[43]. Ofcom is responsible for organising a full spectrum plan for the Games, for arranging all the licences in good time in support of the plan, and for ensuring wireless services are free from harmful interference.

7.2 We published our spectrum plan to meet the Government's spectrum guarantees in October 2009[44] and updated this document in October 2010[45]. In relation to private mobile radio (PMR), we said that most of the demand from stakeholders covered by the Government's spectrum guarantees will be met by the network provided for the London Organising Committee of the Olympic Games and Paralympic Games Ltd (LOCOG) by Airwave Solutions Ltd (the "Apollo network").

7.3 The Apollo network became operational in March 2011 in order to provide PMR services in support of preparations for the Games. The network will operate up until and during the Games, and remain in operation until 31st December 2012 in order to support site decommissioning activity.

7.4 WT Act licences have been issued to authorise both the use of the network infrastructure and of terminals (handsets) operating as part of the network. Network terminal licences have been issued solely to Airwave and LOCOG at this time. However, as the Games approaches and during the Games, terminals will be provided to, and operated by, stakeholders from a wide range of organisations covered by the Government's spectrum guarantees in support of the Games. For this reason we propose to exempt use of terminals forming part of the Apollo network under a *network station user* exemption. This will remove the need for individual network users to obtain a WT Act licence to operate a terminal forming part of the Apollo network.

Proposal detail

7.5 The use of terminals forming a part of a licensed network requires authorisation or exemption under the WT Act as each terminal transmits. Where a network is used by a range of different users but the terminals remain under the control of the network infrastructure (i.e. the terminal does not transmit except when it is within the coverage of a base station with which it communicates), Ofcom may exempt users of the terminals from the requirement to hold a licence by means of a "network station

[43] Details of the UK Government's guarantees are set out in Annex 1 of our October 2009 Statement at http://stakeholders.ofcom.org.uk/consultations/london2012/statement/
[44] http://stakeholders.ofcom.org.uk/consultations/london2012/statement/
[45] http://stakeholders.ofcom.org.uk/consultations/london2012/london2012-spectrum-plan-update/

user" exemption under the WT Act. It is this type of exemption that applies to terminals forming part of public networks such as the cellular networks. By making such an exemption, we enable individual terminal users to avoid the administrative burden of obtaining a WT Act licence. The exemption covers only the operation of a terminal connected to an identified and licensed network. It is this type of exemption we propose to use to exempt terminals on the Apollo network.

7.6 Specifically, we propose to exempt terminals operating as part of the Apollo network. The following technical constraints would apply to the exemption:

- Terminals would only be permitted to operate on frequencies licensed to the Apollo network. The WT Act licence for the Apollo network details exactly which frequencies are authorised to be used by the network and during what period. These frequencies are within the range 385 to 399.9 MHz.

- Equipment would be required to operate in accordance with the technical constraints detailed in IR2085.2[46].

- The exemption would only be valid in relation to terminals on the Apollo network and would be revoked when the licence for that network terminates in December 2012.

Impact

7.7 This proposal deals solely with the exemption of terminals forming part of the Apollo network. The use of the Apollo network to meet the extremely high demand for PMR during the Games, and related spectrum management issues, has been subject to consultation as part of Ofcom's development of the spectrum plan for the Games. A full impact assessment of our spectrum plan for the Games is provided in Annex 3 to our October 2009 Statement.[47]

Benefits

7.8 Exempting terminals on the Apollo network removes the administrative burden on users covered by the Government's spectrum guarantees to obtain WT Act licences for the terminals with which they will be provided to use the Apollo network for activities in support of the Games.

Question 5) Do you agree with our proposal to exempt the use of terminals forming part of the Apollo network by a network station user exemption?

[46] http://stakeholders.ofcom.org.uk/binaries/spectrum/spectrum-policy-area/spectrum-management/research-guidelines-tech-info/interface-requirements/ir20441.pdf
[47] http://stakeholders.ofcom.org.uk/binaries/consultations/london2012/statement/statement.pdf

Section 8

Changes to current exemption regulations

Introduction

8.1 As part of our review of licence exemption we look at the technical restrictions currently placed on devices and see if it is possible to remove or reduce them. Any decision taken to alter technical restrictions is based on a better understanding of the technologies involved and how they can share with other users.

Background

8.2 The 138.2 to 138.45 MHz band has been listed in the Non-Specific SRD Annex of the CEPT Recommendation[48] for SRD, for many years.

8.3 In 2010 we received requests to open his spectrum allocation in the UK as radio apparatus is becoming available for this band. In determining whether it is right to make a proposal for SRD licence exemption, we need to first establish that there is little likelihood of interference from the new SRD allocation into other radiocommunications equipment.

8.4 The CEPT recommendation is for non-specific SRDs in the frequency range 138.20 to 138.45 MHz at a power of 10 mW e.r.p. and a duty cycle of less than 1%, the duty cycle being measured over any single one hour period. The relevant ETSI harmonised standard is EN 300 220. Any unwanted emissions are limited to typically -30 dBm in the immediate adjacent channels and with the spurious domain emissions less than 250 nW.

8.5 The spectrum surrounding the 138 MHz band is allocated to Sonobuoys (channel 38), Space Research, and military systems. There is however no Space Research or other Ofcom authorisation for UK based radio communications apparatus in the 138.2 to 138.45 MHz band. Subject to consultation responses, we consider therefore that there is little chance of harmful interference from the proposed use.

Proposal details

8.6 We are proposing to licence exempt equipment that meets the following criteria:

- operates between 138.20 to 138.45 MHz;
- emits emissions of no more than 10 mW e.r.p; and
- uses a duty cycle of less than 1%.

8.7 Full technical details for this non-specific SRD are listed in IR2030/1/26[49].

[48] http://www.erodocdb.dk/Docs/doc98/official/pdf/REC7003E.PDF
[49] http://stakeholders.ofcom.org.uk/spectrum/spectrum-management/research-guidelines-tech-info/interface-requirements/draft_ir/

Impact

8.8 We expect little, if any, impact on other radiocommunications from this proposal. The wide separation distance between existing services and the proposed SRD emission are inherently low making the prospect of harmful interference unlikely.

Benefits

8.9 Section 8 of the WT Act 2006 requires that if Ofcom are satisfied that undue interference is unlikely, we must make regulations to exempt the apparatus from licensing. Given the technical characteristics of the equipment we believe that exempting the equipment from holding a WT Act licence would be in line with our statutory obligations.

8.10 This non-specific SRD allocation at Very high frequency (VHF) could be used for such systems as radio fire alarms in buildings, in instances where it could be complementary to Ultra high frequency (UHF) systems in ensuring complete coverage within the building. This may bring about a number of public safety benefits.

8.11 In addition, harmonisation of spectrum use across Europe has a number of benefits. It supports the competitiveness of manufacturing industry by increasing economies of scale and lower costs for consumers.

Question 6) Do you agree with our proposed changes to the current exemption regulations to permit use of non-specific SRDs at 138.2 to 138.45 MHz?

Section 9

EC Decisions and White Space Devices

9.1 The following section contains information relating to EC Decisions that we expect, subject to timing, to include in the revised exemption regulations. Because implementation is mandatory, the details include here are for information only and we are not seeking responses in this consultation on these proposals.

9.2 In this section we also provide a brief update on licence exemption of "white space" devices.

EC Decision on short range devices (SRDs)

9.3 Most EC harmonisation measures are normally prepared in collaboration with CEPT and adopted by the EC with the assistance of the Radio Spectrum Committee (RSC).

9.4 The CEPT have developed CEPT Report 38[50] on SRDs. CEPT Report 38 makes a number of suggestions to the EC for mandatory harmonisation across all Member States. These include:

- the bands 122 to123 and 244 to 246 GHz for non specific short range devices. This is a new spectrum allocation for SRD within these internationally recognised industrial, scientific and medical (ISM) bands;
- the band 63 to 64 GHz for ITS. This is a new authorisation for SRD, although the UK Frequency Allocation Table (FAT) has for some considerable time now listed the allocation of this band to Road Transport and Traffic Telematics (RTTT), RTTT being a form of ITS;
- the band 127 to 135 kHz making a minor change to the power limit for Inductive Applications amounting to a change of under 0.4 dB increase in power.
- for the existing licence exempt vehicular radar in the frequency range 24.050-24.250 GHz, an additional statement noting that "Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under the R&TTE Directive must be used."
- In the 87.5 to 108 MHz band amending the title of the permitted devices from Wireless Audio Applications to Low Power FM Transmitters.

9.5 The RSC of the EC has yet to bring forward these proposals for mandatory harmonisation. However, they are expected broadly to follow the proposals in CEPT Report 38. The UK is required to implement such decisions into UK law. When finalised, we will bring forward proposals to transpose the EC Decision into UK regulations. Firm proposals from the EC are expected to be forthcoming in May 2011.

[50] http://www.ero.dk/AB34B5D2-2CA7-4CCB-B3F3-E8049A6B6F2F?frames=no& http://www.erodocdb.dk/Docs/doc98/official/pdf/CEPTREP038.PDF

EC Decision on 900/1800 MHz band

9.6 The EC is considering amending Decision 2009/766/EC on the harmonisation of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in the Community[51]. This decision harmonised the technical conditions for the 900 and 1800 MHz bands permitting the use of Universal Mobile Telecommunications System (UMTS) in addition to GSM. As part of its implementation measures, the UK exempted from licensing UMTS terminals operating in these bands by making the Wireless Telegraphy (Exemption and Amendment) Regulations 2010[52].

9.7 On 15 June 2009 the EC mandated CEPT to define technical conditions for allowing LTE and other technologies in these bands. CEPT Reports 40 and 41 concluded that LTE and WiMAX could be introduced. At the same time ETSI began work on finalising harmonised standards EN 301908-21 and EN 301908-22 which relate to these technologies.

9.8 The proposed amendment to Decision 2009/766/EC would require Member States to allow the use of LTE and WiMAX by 1 December 2011. If this decision is agreed, we are likely to bring forward proposals to exempt LTE and WiMAX terminals operating in these bands as part of our transposition of this decision into UK law.

EC Decision on 24 GHz Automotive Short Range Radar (SRR)

9.9 The EC is considering an amendment to Decision 2005/50/EC on the harmonisation of the 24 GHz range radio spectrum band for time-limited use by automotive short-range radar equipment in the Community53. This decision permitted the use of automotive radar from 21.65 to 26.65 GHz until 30 June 2013. We implemented this decision by making the Wireless Telegraphy (Automotive Short Range Radar) (Exemption) (No. 2) Regulations 2005[54].

9.10 The EC is now proposing to extend access to the 24.25 to 26.65 GHz part of the band until 1 January 2018. This date would be extended by a further 4 years for automotive short-range radar equipment mounted on motor vehicles for which a type approval application had been submitted pursuant to Article 6.6 of Directive 2007/46/EC and granted before 1 January 2018.

9.11 Access to the 21.65 to 24.25 GHz band would not be extended due to the need to protect radio astronomy, earth exploration satellite and space research passive services in the 23.60 GHz to 24 GHz band.

9.12 We will review our current regulations when a decision is published.

White Space Devices (WSD)

9.1 White space is the name given to bands of spectrum that are unused by the licence holder in a particular location. Under certain conditions, access to this spectrum could be granted provided that harmful interference is not caused the existing services.

[51] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:274:0032:0035:EN:PDF
[52] http://www.legislation.gov.uk/uksi/2010/2512/pdfs/uksi_20102512_en.pdf
[53] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:021:0015:0020:EN:PDF
[54] http://www.legislation.gov.uk/uksi/2005/1585/pdfs/uksi_20051585_en.pdf

9.2 Ofcom recently concluded a consultation on proposals for implementing a framework based on one or more geolocation databases, which will enable devices to access white space on a licence-exempt basis. We will shortly publish the outcomes of this consultation.

9.3 Throughout 2011/12, we intend to work closely with stakeholders and potential service providers on the specification, implementation and testing of geolocation databases. We will work with existing licensees to ensure that the introduction of white space devices does not cause harmful interference to their services. We will also continue our proactive involvement in European regulatory bodies to develop a common approach to enabling white space access.

Annex 1

Responding to this consultation

How to respond

A1.1 We invite written views and comments on the issues raised in this document, to be made **by 5pm** on **16 June 2011**.

A1.2 We strongly prefer to receive responses using the online web form at https://stakeholders.ofcom.org.uk/consultations/licence-exemption-candidates-11/howtorespond/form, as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response cover sheet (see Annex 3), to indicate whether or not there are confidentiality issues. This response coversheet is incorporated into the online web form questionnaire.

A1.3 For larger consultation responses - particularly those with supporting charts, tables or other data - please email David.Donachie@ofcom.org.uk attaching your response in Microsoft Word format, together with a consultation response coversheet.

A1.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.

David Donachie
Spectrum Policy Group
Ofcom
Riverside House
2A Southwark Bridge Road
London SE1 9HA

A1.5 Note that we do not need a hard copy in addition to an electronic version. Ofcom will acknowledge receipt of responses if they are submitted using the online web form but not otherwise.

A1.6 It would be helpful if your response could include direct answers to the questions asked in this document, which are listed together at Annex 4. It would also help if you can explain why you hold your views and how our proposals would impact on you.

Further information

A1.7 If you want to discuss the issues and questions raised in this consultation, or need advice on the appropriate form of response, please contact David Donachie on 020 7981 3173.

Confidentiality

A1.8 We believe it is important for everyone interested in an issue to see the views expressed by consultation respondents. We will therefore usually publish all responses on our website, www.ofcom.org.uk, ideally on receipt. If you think your

response should be kept confidential, can you please specify what part or whether all of your response should be kept confidential, and specify why. Please also place such parts in a separate annex.

A1.9 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and will try to respect this. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.

A1.10 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's approach on intellectual property rights is explained further on its website at http://www.ofcom.org.uk/about/accoun/disclaimer/

Next steps

A1.11 Following the end of the consultation period, we intend to publish a statement in July 2011.

A1.12 Please note that you can register to receive free mail Updates alerting you to the publications of relevant Ofcom documents. For more details please see: http://www.ofcom.org.uk/static/subscribe/select_list.htm

Ofcom's consultation processes

A1.13 Ofcom seeks to ensure that responding to a consultation is easy as possible. For more information please see our consultation principles in Annex 2.

A1.14 If you have any comments or suggestions on how Ofcom conducts its consultations, please call our consultation helpdesk on 020 7981 3003 or e-mail us at consult@ofcom.org.uk . We would particularly welcome thoughts on how Ofcom could more effectively seek the views of those groups or individuals, such as small businesses or particular types of residential consumers, who are less likely to give their opinions through a formal consultation.

A1.15 If you would like to discuss these issues or Ofcom's consultation processes more generally you can alternatively contact Vicki Nash, Director Scotland, who is Ofcom's consultation champion:

Vicki Nash
Ofcom
Sutherland House
149 St. Vincent Street
Glasgow G2 5NW

Tel: 0141 229 7401
Fax: 0141 229 7433

Email vicki.nash@ofcom.org.uk

Annex 2

Our consultation principles

A2.1 We have published the following seven principles that we will follow for each public written consultation:

Before the consultation

A2.2 Where possible, we will hold informal talks with people and organisations before announcing a big consultation to find out whether we are thinking in the right direction. If we do not have enough time to do this, we will hold an open meeting to explain our proposals shortly after announcing the consultation.

During the consultation

A2.3 We will be clear about who we are consulting, why, on what questions and for how long.

A2.4 We will make the consultation document as short and simple as possible with a summary of no more than two pages. We will try to make it as easy as possible to give us a written response. If the consultation is complicated, we may provide a shortened Plain English Guide for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.

A2.5 We will consult for up to 10 weeks depending on the potential impact of our proposals.

A2.6 A person within Ofcom will be in charge of making sure we follow our own guidelines and reach out to the largest number of people and organisations interested in the outcome of our decisions. Ofcom's 'Consultation Champion' will also be the main person to contact with views on the way we run our consultations.

A2.7 If we are not able to follow one of these principles, we will explain why.

After the consultation

A2.8 We think it is important for everyone interested in an issue to see the views of others during a consultation. We would usually publish all the responses we have received on our website. In our statement, we will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.

Annex 3

Consultation response cover sheet

A3.1 In the interests of transparency and good regulatory practice, we will publish all consultation responses in full on our website, www.ofcom.org.uk.

A3.2 We have produced a coversheet for responses (see below) and would be very grateful if you could send one with your response (this is incorporated into the online web form if you respond in this way). This will speed up our processing of responses, and help to maintain confidentiality where appropriate.

A3.3 The quality of consultation can be enhanced by publishing responses before the consultation period closes. In particular, this can help those individuals and organisations with limited resources or familiarity with the issues to respond in a more informed way. Therefore Ofcom would encourage respondents to complete their coversheet in a way that allows Ofcom to publish their responses upon receipt, rather than waiting until the consultation period has ended.

A3.4 We strongly prefer to receive responses via the online web form which incorporates the coversheet. If you are responding via email, post or fax you can download an electronic copy of this coversheet in Word or RTF format from the 'Consultations' section of our website at http://stakeholders.ofcom.org.uk/consultations/consultation-response-coversheet/.

A3.5 Please put any parts of your response you consider should be kept confidential in a separate annex to your response and include your reasons why this part of your response should not be published. This can include information such as your personal background and experience. If you want your name, address, other contact details, or job title to remain confidential, please provide them in your cover sheet only, so that we don't have to edit your response.

Cover sheet for response to an Ofcom consultation

BASIC DETAILS

Consultation title:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

CONFIDENTIALITY

Please tick below what part of your response you consider is confidential, giving your reasons why

Nothing ☐

Whole response ☐

Part of the response ☐

Name/contact details/job title ☐

Organisation ☐

If there is no separate annex, which parts?

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here. ☐

Name

Signed (if hard copy)

Annex 4

Consultation questions

A4.1 A list of the questions proposed in this consultation can be found below:

Question 1) Do you agree with our proposal to exempt the land use of 406 MHz PLBs from the need to hold a Wireless Telegraphy Act licence?

Question 2) Do you agree with our proposal to exempt the use equipment for safety-related ITS infrastructure from the need to hold a Wireless Telegraphy Act licence?

Question 3) Do you agree with our proposal to exempt the use of terminals operating in the 3400 to 3800 MHz band from the need to hold a Wireless Telegraphy Act licence?

Question 4) Do you agree with our proposals for the authorisation of 2 GHz MSS user terminals from licensing?

Question 5) Do you agree with our proposal to exempt the use of terminals forming part of the Apollo network by a network station user exemption?

Question 6) Do you agree with our proposed changes to the current exemption regulations to permit use of non-specific SRDs at 138.2 to 138.45 MHz?

Annex 5

Glossary of abbreviations

ACPO	Association of Chief Police Officers
BERR	Business Enterprise and Regulatory Reform
CAA	Civil Aviation Authority
CENELEC	European Committee for Electrotechnical Standardisation
CEPT	European Conference of Postal and Telecommunications Administrations
CGC	Complementary ground components
dBm	Decibels relative to one Milliwatt (0 dBm is equivalent to one Milliwatt)
EC	European Commission
ECC	Electronic Communications Committee
EIRP	Equivalent isotropic radiated power
ERP	Effective radiated power
ETSI	European Technical Standards Institute
EU	European Union
FAT	Frequency Allocation Table
FSS	Fixed Satellite Service
GHz	Gigahertz (a frequency of one billion Hz)
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
Hz	Hertz (one complete cycle of a radio signal per second)
IR	UK Radio Interface Requirement
IOC	International Olympic Committee
ITS	Intelligent Transport System
kHz	Kilohertz (a frequency of one thousand Hz)
LMSS	Land Mobile Satellite Service
LOCOG	LOCOGLondon Organising Committee of the Olympic Games and Paralympic Games Ltd
LTE	Long Term Evolution
MCA	Maritime and Coastguard Agency
MHz	Megahertz (a frequency of one million Hz)
MoD	Ministry of Defence
MSS	Mobile Satellite Service
mW	Milliwatt (one thousandth of a watt)
nW	Nanowatt (one billionth of a watt)
OJEU	Official Journal of the European Union
PLB	Personal locator beacon
PMR	Private mobile radio
PMSE	Programme Making & and Special Events
R&TTE	Radio and Telecommunications Terminal Equipment
RSA	Recognised Spectrum Access
RSC	Radio Spectrum Committee
RTTT	Road Transport and Traffic Telematics
SRD	Short Range Device
SRR	Short Range Radar
UHF	Ultra high frequency
UKSAR	United Kingdom Search and Rescue Operators Group
UMTS	Universal Mobile Telecommunications System
VHF	Very high frequency
WiMAX	Worldwide Interoperability for Microwave Access

WSD	White Space Device
WT Act	Wireless Telegraphy Act 2006