Notice of proposal to make the Wireless Telegraphy (Mobile Communication Services on Board Vessels) (Exemption) Regulations 2010

Implementing the European Commission Decision

Consultation

Publication date: 19 November 2010

Closing Date for Responses: 22 December 2010

Contents

Section 1

Executive Summary

1.1 This document consults on draft regulations to exempt the use of mobile communication services on board vessels (MCV services). The proposals in this document implement the European Commission Decision of 19 March 2010 on harmonised conditions of use of radio spectrum for MCV services in the European Union (2010/166/EU) (the "MCV Decision") (see Annex 6)[1]. The MCV Decision aims to complement existing mobile connectivity when operating in those areas of the territorial seas of European Union Member States that are not covered by land based mobile networks. Member States have until 12 March 2011 to implement the MCV Decision.

1.2 MCV services consist of one or more pico-cell base stations on board a vessel (vessel-BS) to which mobile terminals used by passengers would connect. In common with our approach to the use of a similar system on aircraft, we propose that the vessel-BS be licensed. We are proposing that this is done by varying the ship licence via a Notice of Variation (NoV) to include the vessel-BS in the same way as other onboard equipment. A copy of the draft NoV is available at Annex 7.

1.3 Under sections 8 and 35(1) of the Wireless Telegraphy Act 2006 (the "WT Act"), it is an offence to establish, install or use radio equipment without holding a licence granted by us, unless the use of such equipment is exempted. Mobile terminals are already licence exempt when connected to terrestrial networks. We are therefore proposing to extend this exemption to also include connecting to MCV services.

1.4 The use of MCV services is subject to a number of technical restrictions outlined in our Interface Requirement IR 2082[2]. In addition to these technical parameters, the following conditions apply:

- The system providing MCV services shall not be used closer than 2 nautical miles from the baseline; and
- Only indoor vessel–BS shall be used between 2 to 12 nautical miles from the baseline.

1.5 In accordance with the requirements of section 122(4) and (5) of the WT Act this document also gives notice of our intention to make the Wireless Telegraphy (Mobile Communication Services on Board Vessels) (Exemption) Regulations 2010 ("the Proposed Regulations"). The Proposed Regulations will exempt the use of handsets from the need to be licensed under the WT Act when connecting to an MCV service.

1.6 An impact assessment for the Proposed Regulations is available at Annex 1 to this document. The Proposed Regulations are included in this document at Annex 6. Further copies may be obtained from www.ofcom.org.uk or from Ofcom at Riverside House, 2a Southwark Bridge Road, London SE1 9HA.

[1] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:072:0038:0041:EN:PDF
[2] http://stakeholders.ofcom.org.uk/binaries/spectrum/spectrum-policy-area/spectrum-management/research-guidelines-tech-info/interface-requirements/Draft_IR_2082.pdf

1.7 Comments on the Proposed Regulations and the draft NoV are invited by **5pm** on **22 December 2010**. Subject to consideration of responses we intend to bring the new Regulations into force by March 2011.

1.8 The document is structured as follows:

- Section 2 provides background on the MCV Decision;
- Ofcom's proposed authorisation approach for MCV is outlined in Section 3;
- Section 4 sets out the general effects of the Proposed Regulations;
- The impact analysis of the options considered is in Annex 1;
- Annexes 2 to 4 provide information on our approach to consultation;
- A summary of all the consultation questions is provided in Annex 5;
- A copy of the MCV Decision can be found in Annex 6;
- In Annex 7 is a copy of the draft Notice of Variation (NoV) for a ship's radio licence; and
- Annex 8 contains a draft of the Proposed Regulations.

Section 2

Mobile Communication Services on Board Vessels

Commission Decision

2.1 On 19 March 2010 the European Commission adopted the Commission Decision on harmonised conditions of use of radio spectrum for mobile communication services on board vessels (MCV services) in the European Union (2010/166/EU) (the "MCV Decision")[3]. In addition to the MCV Decision the European Commission also agreed the Commission Recommendation of 19 March 2010 on authorisation of systems for mobile communication services on board vessels (MCV services) (2010/167/EU) (the "MCV Recommendation")[4].

2.2 MCV services and electronic communication services provided by an undertaking enable persons on board a vessel to communicate via public communication networks using a GSM system without establishing direct connections with land-based mobile networks. The MCV Decision aims to complement existing mobile connectivity when operating in those areas of the territorial seas of the European Union Member States that are not covered by land based mobile networks. Member States have until 12 March 2011 to implement the MCV Decision.

2.3 The MCV Decision provides the frequency bands and technical parameters to be used and complied with when MCV services are operated. The technical and operational conditions are based on the CEPT Report 28[5]. The MCV Decision also refers to the harmonised standard developed by ETSI.

2.4 The adopted system providing MCV services consists of one or more pico-cell base stations on board a vessel (vessel-BS) providing access to a GSM core network via a backhaul link, for example via satellite, which uses different parts of spectrum from the 900 MHz and 1 800 MHz frequency bands. The vessel-BS of such a system serves roaming GSM mobile terminals carried by ship passengers or crew by providing connectivity in the GSM-900 and/or GSM-1 800 frequency band when the vessel is in international waters or in areas of territorial seas where there is no or insufficient land-based mobile network coverage.

2.5 The MCV Decision sets out the following technical conditions for MCV services in order to avoid harmful interference to land based mobile networks:

[3] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:072:0038:0041:EN:PDF
[4] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:072:0042:0045:EN:PDF
[5] On 8 July 2008 the European Commission gave a mandate to the European Conference of Postal and Telecommunications Administrations (CEPT) to identify the technical and operational conditions required to ensure the avoidance of harmful interference from MCV services in the 900 and 1800 MHz frequency bands with the operation of existing land-based mobile networks, also in areas of these territorial seas where services are provided by these networks, and to ensure that land-based mobile terminals are not connected to such a system when it is in use within the territorial seas and that any mobile terminals are not prevented from connecting to land-based networks. They produced a final report to the European Commission in response to the EC Mandate on mobile communication services on board vessels on 1 July 2009 http://ec.europa.eu/information_society/policy/ecomm/radio_spectrum/_document_storage/rsc/rsc28_public_docs/rscom09-27_cept_mcv.pdf

2.5.1 the system providing MCV services shall not be used closer than 2 nautical miles from the baseline, as defined in the United Nations Convention on the Law of the Sea[6];

2.5.2 only indoor vessel-BS antenna(s) shall be used between 2 and 12 nautical miles from the baseline;

2.5.3 limits to be set for mobile terminals when used on board vessel and for vessel-BS as set out in Table 1.

Table 1

Parameter	Description
Transmit power/power density	For mobile terminals used on board vessels and controlled by the vessel-BS in the 900 MHz band[7], maximum radiated output power of 5 dBm.
	For mobile terminals used on board vessels and controlled by the vessel-BS in the 1 800 MHz band[8], maximum radiated output power of 0 dBm.
	For base stations on board vessels, the maximum power density measured in external areas of the vessel, with reference to a 0 dBi measurement antenna gain of – 80 dBm/200 kHz.
Channel access and occupation rules	Techniques to mitigate interference that provide at least equivalent performance to the following mitigation factors based on GSM standards shall be used 1. between 2 and 3 nautical miles from the baseline, the receiver sensitivity and the disconnection threshold (ACCMIN and min RXLEV level) of the mobile terminal used on board vessel shall be equal to or higher than –70 dBm/200 kHz and between 3 and 12 nautical miles from the baseline equal to or higher than –75 dBm/200 kHz, 2. discontinuous transmission shall be activated in the MCV system uplink direction, 3. the timing advance value of the vessel-BS shall be set to the minimum.

[6] http://www.un.org/Depts/los/convention_agreements/texts/unclos/unclos_e.pdf
[7] 'the 900 MHz band' means the 880-915 MHz band for uplink (terminal transmit, base station receive) and 925- 960 MHz band for downlink (base station transmit, terminal receive);
[8] 'the 1 800 MHz band' means the 1 710-1 785 MHz band for uplink (terminal transmit, base station receive) and 1 805- 1 880 MHz band for downlink (base station transmit, terminal receive)

Authorisation of MCV services

2.6 We are responsible for authorising civil use of the radio spectrum and achieve this by granting wireless telegraphy licences under the WT Act and by making regulations exempting users of particular equipment from the requirement to hold such a licence.

2.7 Under sections 8 and 35(1) of the WT Act, it is an offence to establish, install or use radio equipment other than under and in accordance with the terms of a licence granted by us unless the use of such equipment has been exempted from the need for a licence. Under section 8(4) of the WT Act, we must make regulations to exempt equipment if its installation or use is unlikely to cause undue interference.

2.8 This document consults on draft regulations to exempt the use of mobile terminals when connecting to a Mobile Communications on Vessels (MCV) service following the MCV Decision. This notice outlines our intention to make the Wireless Telegraphy (Mobile Communication Services on Vessels) (Exemption) Regulations 2010 ("the Proposed Regulations").

2.9 The MCV Recommendation provides that Member States should take all necessary steps to be able to authorise provision of MCV services on vessels registered within their jurisdiction. Member States should not authorise MCV services unless they satisfy the technical conditions set out in the MCV Decision. Member States are also to recognise authorisation granted to ships registered in other Member States in compliance with the technical parameters set in the MCV Decision.

2.10 To provide MCV services, the following apparatus is required:

2.10.1 A vessel base transceiver station (vessel-BS). This is a mobile pico-cell located on a vessel and supporting GSM services on the 900MHz and/or 1800 MHz bands.

2.10.2 A mobile terminal.

2.11 To implement the MCV Decision, we have split the authorisation of these two apparatus.

Vessel-BS

2.12 The international community agrees how spectrum should be allocated through the International Telecommunication Union (ITU). These agreements are published in the Radio Regulations[9] (the "RRs") and the UK implements the RRs through the WT Act and associated legislation.

2.13 The RRs require the radio apparatus of a vessel be covered by a licence. The licence must be carried on board the vessel and be available for inspection by foreign authorities. So, the installation and use of radio apparatus on board a vessel, must be authorised by a licence issued by Ofcom. This includes a vessel-BS.

2.14 The RRs also provide that the Master of a vessel has ultimate responsibility for the use of any radio apparatus on his vessel[10]. The WT Act provides that if an offence is

[9] http://www.itu.int/opb/sector.aspx?sector=1

[10] Art 46.1 § 1 The service of a vessel station is placed under the supreme authority of the master or of the person responsible for the ship or other vessel carrying the station.

committed relating to the use of radio apparatus on a vessel, then the Master is guilty of the offence, in addition to anyone who is guilty by actually committing the offence.

2.15 In looking to authorise the use of the vessel-BS we considered the following options:

- Licence a network operator;
- Make the installation and use of the vessel-BS for MCV services licence-exempt;
- Authorise the installation and use of the vessel-BS for MCV services by varying the ship radio licence; or
- Do nothing.

2.16 Our analysis of the options can be found in the Regulatory Impact Assessment available in Annex 1.

2.17 We concluded that we should propose to authorise the use of the vessel-BS for MCV services by amending the existing ship radio licence of each vessel that carries this equipment. Vessel operators will therefore need to apply to Ofcom for a variation of their ship radio licence. We believe that this approach enables the Master to control the use of the vessel-BS and to issue instructions to limit its use or turn it off. We adopted this approach for the corresponding equipment on board aircraft[11] .

2.18 To vary a licence, we must follow the procedure in Schedule 1 of the WT Act. This allows us to vary a licence if the licensee requests it. We formally vary a licence by issuing a document called a Notice of Variation (NoV), which becomes part of the licence. This varies the existing licence to allow the licensee to install and use equipment including a vessel-BS within the terms specified for the use of MCV services. A copy of the proposed NoV for MCV services can be found in Annex 7. To obtain a NoV a licensee should write to Ofcom with the formal request, which we can then consider.

2.19 The technical requirements of the vessel-BS are set out in IR 2082[12].

Question 1) Do you agree with our proposal to license the vessel-BS by varying the ship radio licence? Do you agree that the Notice of Variation (NOV) in Annex 7 is suitable?

Mobile terminals

2.20 In looking to authorise the use of mobile terminals for MCV services we considered the following options:

- Make the use of the mobile terminals licence-exempt;
- License mobile terminals; or
- Do nothing.

[11] http://stakeholders.ofcom.org.uk/binaries/consultations/mca/statement/mca.pdf
[12] http://stakeholders.ofcom.org.uk/binaries/spectrum/spectrum-policy-area/spectrum-management/research-guidelines-tech-info/interface-requirements/Draft_IR_2082.pdf

2.21 As mobile terminals are already licence-exempt when connected to terrestrial network, we believe that requiring a user to obtain a licence in order to connect to an MCV service is not appropriate and therefore should be made exempt. Our analysis of the options can be found in the Impact Assessment available in Annex 1.

2.22 We propose to make the Proposed Regulations that will create a new exemption to allow terminals to connect to an MCV service on a licence-exempt basis providing they meet the technical requirement as set out in IR 2082 and the usage restrictions set out in the MCV Decision. A copy of the Proposed Regulations are contained in Annex 8.

2.23 The general effects of the Proposed Regulations are set out in Section 4.

Question 2) Do you agree with our proposal to licence-exempt mobile terminals when connecting to an MCV base station?

Territorial extent of the Proposed Regulations

2.24 The MCV Recommendation provides that Member States shall authorise provision of MCV services for vessels registered within their jurisdiction. No additional authorisation should be required for operation of MCV services for vessels registered in other Member States.

2.25 We are responsible for authorising the use of vessel-BS for vessels registered in the UK. As explained above this will be achieved by variation of the wireless telegraphy licence already issued to UK registered ships. This authorisation will follow the requirement set in the MCV Decision, so that following the MCV Recommendation, it should be recognised by other Member States when UK registered vessels operate MCV services in their territory.

Section 4

General effect of the Wireless Telegraphy (Mobile Communication Services on Board Vessels) (Exemption) Regulations 2010

The legislative framework

3.1 We can exempt the establishment, installation and use of wireless telegraphy equipment and stations by making Regulations under section 8(3) of the WT Act. We propose to implement the changes in this document by making the Proposed Regulations. The Proposed Regulations are included in Annex 8 of this document.

3.2 The Proposed Regulations on which we are consulting on will exempt the use of mobile terminals for MCV services pursuant to section 8(4) of the WT Act. The Proposed Regulations mirror the technical parameters and standards set out in the MCV Decision. They set the terms, provisions and limitations with which the operation of the mobile terminals for MCV services must comply.

Extent of application

3.3 The Proposed Regulations will apply in the United Kingdom, the Channel Islands and the Isle of Man, subject to formal agreement of the Island Authorities.

Regulations to exempt mobile terminals

3.4 Regulation 3 sets out the territorial extent of the Proposed Regulations and to what vessels they will be applied to.

3.5 Regulation 4 outlines that mobile terminals (apparatus) must comply with GSM standard EN 301 511 published by ETSI or other mitigation techniques that provide an equivalent level of protection. This reflects Article 3 of the MCV Decision.

3.6 Regulation 4(1) implements Article 3 of the MCV Decision by requiring that the apparatus only operates in the 880 to 915, 925 to 960, 1710 to 1785 and 1805 to 1880 MHz bands.

3.7 Regulation 4(2) stipulates that the apparatus should only be used for MCV services and mirrors the Annex of the MCV Decision. It stipulates the following conditions:

- 3.7.1 systems providing MCV services are not to be used closer than 2 nautical miles from the baseline;
- 3.7.2 only indoor vessel-BS antenna(s) shall be used within 2 to 12 nautical miles from the baseline; and
- 3.7.3 certain limits set for mobile terminals when used on board vessel and for vessel-BS in relation to transmit power/power density and channel access and occupation rules.

3.8 Regulations 4(3) and 4(4) outline that the service is authorised on a non-interference and non-protection basis in line with Article 3 of the MCV Decision.

Question 3) Do you agree that our draft regulations implement the mobile terminal licence-exemption as per our proposals?

Annex 1

Impact Assessment

Introduction

A1.1 In accordance with Government practice, where a statutory regulation is proposed, a Regulatory Impact Assessment ("RIA") must be undertaken. The analysis presented here, when read in conjunction with the rest of this document, represents an RIA as defined by section 7 of the Communications Act 2003 ("the Communications Act").

A1.2 You should send us any comments on this RIA by the closing date for this consultation. We will consider all comments before deciding whether to implement our proposals.

A1.3 RIAs 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 and are commonly used by other regulators. This is reflected in section 7 of the Communications Act, which means that we will generally carry out impact assessments where 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. In accordance with section 7 of the Communications Act, in producing this RIA, we have had regard to such general guidance as we consider appropriate including related Cabinet Office guidance. For further information about our approach to impact assessments, see the guidelines, Better policy-making: Ofcom's approach to impact assessment, which are on our website: http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf.

The citizen and/or consumer interest

A1.4 Our principal duty under section 3 of the Communications Act 2003 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 to the principle under which all regulatory activities should be targeted only at cases in which action is needed.

A1.5 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. Mobile communication on board vessels (MCV services) represents a potentially valuable innovation and the development of a new market for mobile communications.

A1.6 In light of the Commission Decision on harmonised conditions of use of radio spectrum for mobile communication services on board vessels (MCV services) in the European Union (2010/166/EU)" (the "MCV Decision")[13], we are proposing to authorise the use of spectrum on board vessels so that passengers can use their

[13] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:072:0038:0041:EN:PDF

mobile phones to make and receive calls while out of range of land-based transmitters. The business opportunity seen by proponents of MCV services for operators and the mobile phone networks is based on the expectation that customers will find the service sufficiently valuable to use and pay for it.

A1.7 Establishing a regulatory framework in which MCV services can be deployed is in line with the development of a co-ordinated approach to MCV services across Europe which follows the adoption of the MCV Decision. This allows for the mutual recognition of Member States' authorisations for MCV services on the basis of common technical and authorisation requirements.

A1.8 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 our 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.

A1.9 In addition, we noted that there is no available evidence to suggest the proposals to make the changes to the licensing regime or the Wireless Telegraphy (Mobile Communication Services on Board Vessels) (Exemption) Regulations 2010 (the "Proposed Regulations") would have any greater direct impact on certain groups, including groups based on gender, race or disability, or for consumers in Northern Ireland relative to consumers in the UK more generally. We did not consider that there was evidence to suggest that costs imposed on operators, would differ significantly across these aforementioned groups of consumers and citizens relative to consumers in general. This was because we would not expect the impact of supplying these groups of consumers and citizens to differ significantly from the impact of supplying consumers in general. Nor would cost reflective end-user prices therefore be expected to impact significantly differently on these groups as a result of these proposals.

A1.10 We have not carried out a full Equality Impact Assessment in relation to race equality, equality schemes in Northern Ireland and disability equality schemes. This is because, following our initial assessment, we do not believe that the decision here is 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.

Ofcom's policy objective

A1.11 We are required to implement MCV Decision by law. Therefore, our analysis of measures that involve implementation of European Commission (EC) decisions is less detailed than for our own policy initiatives. Each of the measures required are associated with costs and benefits. However, if we did not implement an EC decision, the EC and others could begin legal proceedings against the UK, the costs of which we deem to be potentially very high both quantitatively and qualitatively, outweighing the costs we consider would be associated with correct implementation.

A1.12 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. In line with section 8 of the Wireless Telegraphy Act 2006 (the "WT Act"), the use of wireless telegraphy equipment in

the UK and Crown Dependencies is authorised either by a WT Act licence or by exemption from the need to hold such a licence. Under section 8(4) of the WT Act 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.

Implementing the MCV Decision

A1.13 Mobile phone use on vessels has not been widely adopted because of concerns about potential interference to land-based systems. At the EU level, the technical work has now been done which sets out the technical criteria that would prevent land-based systems from being interfered with.

A1.14 European bodies have set out the common technical requirements for MCV services and have developed a set of technical parameters to reduce the risk of possible interference to terrestrial network. We believe that these will be adequate to reduce the risk of harmful interference.

A1.15 Supporters of MCV services argue that such systems offer additional value to passengers. Their business cases rest on the assumption that passengers will pay for the service. If MCV services are not valued by consumers, they will not be used and few installations will be made. We can therefore rely on the market to determine the degree to which MCV services are rolled out.

A1.16 EU Member States and the European Commission have now defined the technical and authorisation parameters which will allow MCV services to be installed across Europe. The outcome of this initiative is a mandatory requirement for Member States to make the 900 and 1800 MHz bands available for MCV services. This requirement cannot be disregarded and Member States are expected to authorise MCV services by 12 March 2011. Further, if the UK did not participate in this approach, it might be argued that UK businesses and consumers would be disadvantaged in not having access to these innovative services.

A1.17 In light of the MCV Decision, we believe that the authorisation of MCV services should be based on the common EU regulatory framework.

A1.18 To provide MCV services, the following apparatus is required:

1.18.1 A vessel Base Station (vessel-BS). This is a mobile pico-cell located on a vessel and supporting GSM services on the 900MHz and/or 1800 MHz bands.

1.18.2 A mobile terminal.

Vessel-BS

Options considered

A1.19 In looking to authorise the use of vessel-BS we considered the following options:

- Licence a network operator;
- Make the installation and use of the base station licence-exempt;

- Authorise the installation and use of the base station by varying the existing ship radio licence; or

- Do nothing.

Analysis of the different options

Licensing the network operator

A1.20 This option would enable us to authorise a network operator to install equipment on board a vessel. This would enable the operator to deploy such services and would therefore comply with the MCV Decision.

A1.21 Businesses would face administrative costs associated with applying for the licence and annual renewal. In addition we would incur additional costs in setting up a licensing system and handling licensing transactions.

A1.22 The Radio Regulations ("RRs") and the WT Act both vest ultimate authority for radio apparatus on a vessel in the ship's Master. To license a network operator would blur this authority and may lead to breaches of the MCV Decision, over which the Master had no control.

Licence exemption

A1.23 This option would require us to make regulations that would exempt the vessel-BS from the need to hold a WT Act licence. Operators would be free to install vessel-BS equipment on vessels without the need to apply for or amend an existing licence.

A1.24 There are one-off administrative costs associated with making a Statutory Instrument. We consider the implementation costs to be low, both in absolute terms and in comparison to licensing alternatives that might require an auction or the maintenance of an annually renewable licence scheme if licences are awarded on a first come first served basis.

A1.25 Costs to business are likely to be lower under a licence-exemption approach than the alternative of a licensed approach, since licence-exemption represents the least cost regulatory approach to the authorisation of spectrum use. For example if use of spectrum is authorised through a WT Act licence, businesses face administrative costs associated with applying for the licence and annual renewal.

A1.26 However by doing this it would weaken the Master's ability to control what was used on his vessel. The RRs also require a vessel to have a licence for all of its radio apparatus. If a UK ship radio station were to be inspected overseas, the surveyors would expect to see on the licence all of the radio apparatus installed on the vessel. As the equipment would be exempt from licensing it would not be on the licence causing a breach of the RRs.

License as part of the ship's existing licence

A1.27 We would authorise the vessel-BS as part of the ship's existing radio licence. We already have a formal Notice of Variation (NoV), which we issue on request, to vary the licence to authorise the installation and use of GSM base stations on vessels. Varying a licence in this manner is provided for by Schedule 1 of the WT Act.

A1.28 It would be easy for us to adapt this NoV to accommodate the MCV Decision, while noting that some vessels will not be sailing anywhere near the waters of EU Member States. As we already have a licensing process set up we do not expect that the additional costs of modifying this to be significant.

A1.29 There would be a slight administrative cost to businesses associated with requesting the NoV. We do not charge a fee for this nor does the cost of the licence increase, therefore we believe that any costs associated with the initial request would be minor.

A1.30 Authorising the vessel-BS by amending the ship radio licence would mean that the Master retains control of the radio apparatus used on his vessel and for which he is ultimately answerable. The NoV, taken with the ship's radio licence would show a vessel-BS as part of the equipment installed on the vessel thus providing documentation for any foreign surveyors. This would be fully compliant with the MCV Decision and RRs.

Do nothing

A1.31 We could choose not to authorise the use of vessel-BS as outlined by the MCV Decision.

A1.32 By doing nothing, we would have been in breach of our European obligations and the UK could be open to infraction proceedings initiated by the EC.

The preferred option

A1.33 Based on the analysis of the options above, we propose to authorise the use of vessel-BS by amending the ship radio licence of each vessel that carries this equipment. We believe that this approach enables the Master to control the use of the MCV base station and to issue instructions to limit its use or turn it off. Vessel operators will therefore need to apply to Ofcom for a variation of their ship radio licence. We adopted this approach for the corresponding equipment on board aircraft[14]. A copy of the proposed NoV can be found in Annex 7.

Mobile terminals

Options considered

A1.34 In looking to authorise the use of mobile terminals connecting to MCV services we considered the following options:

- Make the use of the mobile terminals licence-exempt;
- Authorise the use of the mobile terminals by issuing a licence; or
- Do nothing.

[14] http://stakeholders.ofcom.org.uk/binaries/consultations/mca/statement/mca.pdf

Analysis of the different options

Licence exemption

A1.35 Mobile terminals are already licence exempt when connected to terrestrial networks. As the MCV service effectively replicates the operation of a terrestrial base station but on a ship most consumers would not be aware of the regulations. It would therefore be sensible to extend the current authorisation regime. Consumers could use their existing terminal without any additional requirements in order to access the MCV service enable easy access to the network making enforcement of a licensing regime difficult.

A1.36 There are one-off administrative costs associated with making a Statutory Instrument. We consider the implementation costs to be low, both in absolute terms and in comparison to licensing alternatives that might require an auction or the maintenance of an annually renewable licence scheme if licences are awarded on a first come first served basis. Consumers and businesses would not incur a charge to access such as system. In addition it supports of our objectives of deregulation and administrative simplification when we exempt radio equipment.

Licence mobile terminal

A1.37 This proposal would require the owner of the mobile terminal to hold a licence before they connect to a MCV service.

A1.38 Due to the number of licences that we would probably need to issue, the costs of administrating such a system would be passed onto consumers and businesses. As there exists no suitable licensing product, there would be a regulatory burden onus as the regulator to develop, implement and run a licensing regime. This additional cost and administrative burden would almost certainly deter users from utilising such a service which would go against the aims of the MCV Decision.

A1.39 As there is no requirement on mobile terminal users to hold a WT Act licence when using it terrestrially, to require a licence when using the same equipment on board a ship would be disproportionate. In addition, due to the volume of equipment it would be impractical and unfeasible to issue individual licences. Any such requirement would be almost impossible to enforce by Ofcom or the ship's Master.

Do nothing

A1.40 We could choose not to authorise the use of mobile terminals for MCV services as outlined by the MCV Decision.

A1.41 By doing nothing, we would have been in breach of our European obligations and the UK could be open to infraction proceedings initiated by the EC.

The preferred option

A1.42 The preferred option is to make a Statutory Instrument to licence-exempt to use of mobile terminals when connecting to MCV services. The benefit of this option are that we remain compliant with our statutory obligations. For this reason it would be more effective and straightforward for terminals connecting to a MCV service to follow the same authorisations regime as when connecting to terrestrial systems.

Conclusion

A1.43 We consider that the mobile terminal should be licence-exempt and treated the same way as when connecting to a terrestrial network.

Question 4) Do you have any comments on the impact assessment carried out to authorise the use of MCV services?

Annex 2

Responding to this consultation

How to respond

A2.1 We invite written views and comments on the issues raised in this document, to be made **by 5pm on 22 December 2010**.

A2.2 We strongly prefer to receive responses using the online web form at http://stakeholders.ofcom.org.uk/consultations/notice-wireless-telegraphy-2010/, 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 4), to indicate whether or not there are confidentiality issues. This response coversheet is incorporated into the online web form questionnaire.

A2.3 For larger consultation responses - particularly those with supporting charts, tables or other data – please email licence.exemption@ofcom.org.uk attaching your response in Microsoft Word format, together with a consultation response coversheet.

A2.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.

Paul Chapman
Floor 3
Spectrum Policy Group
Riverside House
2A Southwark Bridge Road
London SE1 9HA

Fax: 020 7981 3921

A2.5 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.

A2.6 It would be helpful if your response could include direct answers to the questions asked in this document, which are listed together in annex 3. It would also help if you can explain why you hold your views and how our proposals would impact on you.

Further information

A2.7 If you want to discuss the issues and questions raised in this consultation, or need advice on the appropriate form of response, please contact Paul Chapman on 020 7981 3069.

Confidentiality

A2.8 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.

A2.9 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.

A2.10 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Our approach on intellectual property rights is explained further on its website at http://www.ofcom.org.uk/about/accoun/disclaimer/

Next steps

A2.11 Following the end of the consultation period, we intend to publish a statement by March 2011.

A2.12 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

A2.13 We seek to ensure that responding to a consultation is easy as possible. For more information please see our consultation principles in Annex 3.

A2.14 If you have any comments or suggestions on how we conduct our 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.

A2.15 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 3

Ofcom's consultation principles

A3.1 Ofcom has published the following seven principles that it will follow for each public written consultation:

Before the consultation

A3.2 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

A3.3 We will be clear about who we are consulting, why, on what questions and for how long.

A3.4 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.

A3.5 We will consult for up to 10 weeks depending on the potential impact of our proposals.

A3.6 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.

A3.7 If we are not able to follow one of these principles, we will explain why.

After the consultation

A3.8 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 4

Consultation response cover sheet

A4.1 In the interests of transparency and good regulatory practice, we will publish all consultation responses in full on our website, www.ofcom.org.uk.

A4.2 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.

A4.3 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.

A4.4 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 www.ofcom.org.uk/consult/.

A4.5 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 5

Consultation questions

Implementing the MCV Decision

A5.1 A summary of the consultation questions is outlined below.

Question 1) Do you agree with our proposal to license the vessel-BS by varying the ship radio licence? Do you agree that the Notice of Variation (NOV) in Annex 7 is suitable?

Question 2) Do you agree with our proposal to licence-exempt mobile terminals when connecting to an MCV base station?

Question 3) Do you agree that our draft regulations implement the mobile terminal licence-exemption as per our proposals?

Question 4) Do you have any comments on the impact assessment carried out to authorise the use of MCV services?

Annex 6

EC Decision

L 72/38 EN Official Journal of the European Union 20.3.2010

DECISIONS

COMMISSION DECISION

of 19 March 2010

on harmonised conditions of use of radio spectrum for mobile communication services on board vessels (MCV services) in the European Union

(notified under document C(2010) 1644)

(Text with EEA relevance)

(2010/166/EU)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Decision No 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision) [1], and in particular Article 4(3) thereof,

Whereas:

(1) The i2010 policy, as the strategic framework for a European Information Society [2], promotes an open and competitive digital economy in the European Union and emphasises information and communication technologies as a driver of inclusion and quality of life. The development of additional means of communicating could be beneficial for work productivity and for growth in the mobile telephony market.

(2) Maritime connectivity applications are used on board freight and passenger ships sailing within territorial seas and international waters in the European Union and are often pan-European or inter-State in nature. Systems providing mobile communication services on board vessels ('MCV services') aim to complement existing mobile connectivity when operating in those areas of the territorial seas of the European Union Member States, as defined in the United Nations Convention on the Law of the Sea, that are not covered by land-based mobile networks, which are subject to Commission Decision 2009/766/EC of 16 October 2009 on the harmonisation of the 900 MHz and 1 800 MHz frequency bands for terrestrial systems capable of providing pan-European electronic communications service in the Community [3]. A coordinated approach to the regulation of such MCV services should support the objectives of the single market and potentially improve the availability of GSM services within the European Union.

(3) Harmonisation of the rules on the use of radio spectrum across the European Union should facilitate the deployment and uptake of MCV services within the European Union, the main aims being to avoid harmful interference towards land-based mobile networks and to prevent connection to systems providing MCV services when connection to land-based mobile networks is possible.

(4) Pursuant to Article 4(2) of Decision No 676/2002/EC, the European Commission has given a mandate [4] to the European Conference of Postal and Telecommunications Administrations (hereinafter CEPT) to identify the technical and operational conditions required to ensure the avoidance of harmful interference from GSM systems used on board vessels in the 900 MHz and 1 800 MHz frequency bands in the territorial seas of Member States with the operation of existing land-based mobile networks, also in areas of these territorial seas where services are provided by these networks, and to ensure that land-based mobile terminals are not connected to such a system when it is in use within the territorial seas and that any mobile terminals are not prevented from connecting to land-based networks. This Decision is based on the technical studies undertaken by CEPT under the European Commission mandate, as presented in CEPT Report 28 [5].

[1] OJ L 108, 24.4.2002, p. 1.
[2] COM(2005) 229 final of 1 June 2005.
[3] OJ L 274, 20.10.2009, p. 32.
[4] Mandate to the CEPT on mobile communication services on vessels, 8 July 2008.
[5] Final report from CEPT to the European Commission in response to the EC Mandate on mobile communication services on board vessels (MCV), 1 July 2009.

(5) The system providing MCV services considered in the CEPT Report consists of one or more pico-cell base stations (vessel-BS) on board a vessel, providing access to a GSM core network via a backhaul link, for example via satellite, which uses different parts of spectrum than the 900 MHz and 1 800 MHz frequency bands. The vessel-BS of such a system serve roaming GSM mobile terminals carried by ship passengers or crew by providing connectivity in the GSM-900 and/or GSM-1 800 frequency band when the vessel is in international waters or in areas of territorial seas where there is no or insufficient land-based mobile network coverage.

(6) The CEPT Report concludes that systems providing MCV services are not to be used closer than two nautical miles (NM) from the baseline of a coastal state. It lists a number of technical and operational conditions for the usage of such systems within territorial seas between 2 and 12 NM from the baseline.

(7) Equipment for MCV services covered by this Decision falls within the scope of Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity [1]. Compliance with the pertinent Harmonised Standards for GSM-900 and/or GSM-1 800 referred to in that Directive entails the presumption of conformity with its requirements, hence allowing the placing of such equipment on the market.

(8) While there are European Telecommunications Standards Institute harmonised standards setting technical requirements to allow GSM equipment conforming to these requirements to be placed on the market, and while such GSM equipment may be used by systems providing MCV services, it is nevertheless necessary to set the specific operational values to be met by systems providing MCV services operating in territorial seas to avoid harmful interference with land-based networks.

(9) Therefore, the Annex to this Decision contains all the technical and operational requirements listed in the CEPT report. These requirements which are within the ranges of the adaptable parameters of the GSM standards are expected to ensure coexistence between systems providing MCV services and land-based GSM/UMTS networks in the 900 and 1 800 MHz bands, as well as short-range aeronautical radio navigation systems (RSBN systems) operating in the 862-960 MHz band. These requirements include mitigation techniques based on specific operational GSM system parameters, but other means or other mitigation techniques may be used if they provide an equivalent level of protection.

(10) This Decision cannot be considered to impose obligations on Member States that do not have territorial seas. This is without prejudice to the authorisation of MCV services, which is outside the scope of this Decision, but which may require action by Member States in conformity with EU law in regard to vessels of their nationality.

(11) Member States should strive to make available, as early as possible, the entire 900 MHz and 1 800 MHz frequency bands for systems providing MCV services on a non-interference and non-protected basis in their territorial seas in order, for example, to avoid discrimination between rights holders in these bands. However, if national circumstances prevent the entire bands from being made available, Member States may make available a smaller amount of spectrum, but should at least make available 2 MHz of spectrum in the uplink direction and 2 MHz of spectrum in the downlink direction, as such an amount of spectrum is considered the minimum required for the operation of MCV services.

(12) To ensure that the conditions specified in this Decision continue to be relevant and given the rapid changes in the radio spectrum environment, national administrations should monitor, where possible, the use of the radio spectrum by equipment for MCV services, so as to subject this Decision to active review. Such a review should take into account technological development and verify that the initial assumptions for the operation of MCV services are still relevant.

(13) The measures provided for in this Decision are in accordance with the opinion of the Radio Spectrum Committee,

HAS ADOPTED THIS DECISION:

Article 1

The purpose of this Decision is to harmonise the technical conditions for the availability and efficient use of the 900 MHz and 1 800 MHz bands for systems providing mobile communications on board vessels services within territorial seas in the European Union.

[1] OJ L 91, 7.4.1999, p. 10.

Article 2

For the purposes of this Decision:

1. 'mobile communication services on board vessels (MCV services)' means electronic communication services, as defined in Article 2(c) of Directive 2002/21/EC of the European Parliament and of the Council [1], provided by an undertaking to enable persons on board a vessel to communicate via public communication networks using a GSM system without establishing direct connections with land-based mobile networks;

2. 'the 900 MHz band' means the 880-915 MHz band for uplink (terminal transmit, base station receive) and 925-960 MHz band for downlink (base station transmit, terminal receive);

3. 'the 1 800 MHz band' means the 1 710-1 785 MHz band for uplink (terminal transmit, base station receive) and 1 805-1 880 MHz band for downlink (base station transmit, terminal receive);

4. 'GSM system' means an electronic communications network, that complies with the GSM standards, as published by European Telecommunications Standards Institute, in particular EN 301 502 and EN 301 511;

5. 'on a non-interference and non-protected basis' means that no harmful interference may be caused to any radio-communication service and that no claim may be made for protection of these services against harmful interference originating from other radio-communication services;

6. 'territorial sea' is to be understood in the meaning of the United Nations Convention on the Law of the Sea;

7. 'vessel base transceiver station (vessel-BS)' means a mobile pico-cell located on a vessel and supporting GSM services in the 900 MHz and/or 1 800 MHz bands.

Article 3

Member States shall, no later than 12 months following the entry into force of this Decision, make available at least 2 MHz of spectrum in the uplink direction and 2 MHz of corresponding paired spectrum in the downlink direction within the 900 MHz and/or 1 800 MHz bands for systems providing MCV services on a non-interference and non-protected basis in their territorial seas, and ensure that these systems comply with the conditions set out in the Annex to this Decision.

Article 4

Member States shall keep the use of the 900 MHz and 1 800 MHz bands by systems providing MCV services in their territorial seas under review, in particular with regard to the continued relevance of all the conditions specified in Article 3 of this Decision and to instances of harmful interference.

Article 5

Member States shall submit to the European Commission a report on their findings with regard to the review referred to in Article 4 of this Decision. The European Commission shall, where appropriate, proceed to a review of this Decision.

Article 6

This Decision is addressed to the Member States.

Done at Brussels, 19 March 2010.

For the Commission

Neelie KROES

Vice-President

[1] OJ L 108, 24.4.2002, p. 33.

ANNEX

Conditions to be met by a system providing MCV services in the territorial seas of the Member States of the European Union, in order to avoid harmful interference to land-based mobile networks

The following conditions shall be met:

1. the system providing MCV services shall not be used closer than 2 nautical miles (1) from the baseline, as defined in the United Nations Convention on the Law of the Sea;
2. only indoor vessel-BS antenna(s) shall be used between 2 and 12 nautical miles from the baseline;
3. limits to be set for mobile terminals when used on board vessel and for vessel-BS:

Parameter	Description
Transmit power/power density	For mobile terminals used on board vessels and controlled by the vessel-BS in the 900 MHz band, maximum radiated output power: 5 dBm
	For mobile terminals used on board vessels and controlled by the vessel-BS in the 1 800 MHz band, maximum radiated output power: 0 dBm
	For base stations on board vessels, the maximum power density measured in external areas of the vessel, with reference to a 0 dBi measurement antenna gain: – 80 dBm/200 kHz
Channel access and occupation rules	Techniques to mitigate interference that provide at least equivalent performance to the following mitigation factors based on GSM standards shall be used: — between 2 and 3 nautical miles from the baseline, the receiver sensitivity and the disconnection threshold (ACCMIN (1) and min RXLEV (2) level) of the mobile terminal used on board vessel shall be equal to or higher than – 70 dBm/200 kHz and between 3 and 12 nautical miles from the baseline equal to or higher than – 75 dBm/200 kHz, — discontinuous transmission (3) shall be activated in the MCV system uplink direction, — the timing advance (4) value of the vessel-BS shall be set to the minimum.

(1) ACCMIN (RX_LEV_ACCESS_MIN): as described in GSM standard ETSI TS 144 018.
(2) RXLEV (RXLEV-FULL-SERVING-CELL): as described in GSM standard ETSI TS 148 008.
(3) Discontinuous transmission, or DTX: as described in GSM standard ETSI TS 148 008.
(4) Timing advance: as described in GSM standard ETSI TS 144 018.

(1) One nautical mile = 1 852 metres.

Annex 7

Notice of Variation (NoV)

WIRELESS TELEGRAPHY ACT 2006
NOTICE OF VARIATION OF A SHIP RADIO LICENCE FOR THE PURPOSE OF THE INSTALLATION AND USE OF A PUBLIC CELLULAR BASE STATION ON BOARD A VESSEL (MOBILE COMMUNICATION SERVICES ON BOARD VESSELS)

Ofcom, in exercise of the power conferred by Schedule 1, paragraph 6 of the Wireless Telegraphy Act 2006 (as amended) ("the Act"), in accordance with Schedule 1, paragraph 7 of the Act, hereby varies the Ship Radio Licence (the "Licence") granted to:

Name of Licensee or Organisation

on:

Date of issue of Licence in respect of the vessel identified below:

Vessel	
Licence №	
Call Sign	
MMSI №	
Date of issue of this Notice of Variation:	

1 Terms and expressions defined in the Licence shall have the same meaning herein except where the context requires otherwise or where otherwise stated.

2 This Notice of Variation replaces any notice of variation of the Licence for the purpose of the installation and use of a public cellular base station on board a vessel.

3 As and from the Date of Issue of this Notice of Variation, the Licence shall be varied so that the following radio equipment, may, in addition to that already set out in the Licence, be established, installed and used on the Vessel subject to the terms set out in the Licence as varied by paragraphs 5 to 7 below:

(a) a Vessel Base Transceiver Station (Vessel B-S) used for supporting GSM services in the 900 MHz and/or 1 800 MHz bands.

4 The radio equipment described in paragraph 3(a) above shall be read as an integral part of the Licence and the following additional terms shall apply in respect of the establishment, installation and use of this radio equipment.

(a) A Vessel B-S shall be operated on a 'non-interference non-protected' basis. That is, that no harmful interference may be caused to any radio communication service and that no claim may be made for protection of

these services against harmful interference originating from other radio communication services;

(b) A Vessel B-S shall not be used closer than two nautical miles from the baseline;

(c) Only indoor Vessel-BS antenna(s) shall be used between two and twelve nautical miles from the baseline.

(d) The following limits apply to any use of the Vessel B-S :

Parameter	*Description*
Transmit Power / Power Density	For base stations on board vessels, the maximum power density measured in external areas of the vessel, with reference to a 0dBi measurement antenna gain: -80 dBm/kHz
Channel access and occupation rules	Techniques to mitigate interference that provide at least equivalent performance to the following mitigation factors based on GSM standards shall be used: — between 2 and 3 nautical miles from the baseline, the receiver sensitivity and the disconnection threshold (ACCMIN[15] and min RXLEV[16)] level) of the mobile terminal used on board vessel shall be equal to or higher than -70 dBm/200 kHz and between 3 and 12 nautical miles from the baseline equal to or higher than -75 dBm/200 kHz, — discontinuous transmission[17] shall be activated in the mobile communication services on board vessels system uplink direction, — the timing advance[18] value of the vessel base transceiver station shall be set to the minimum.

(e) A Vessel-BS must at all times comply with the technical and operational criteria contained within the UK Interface Requirement 2082 for Mobile Communication Service on board vessels, as varied from time to time;

(f) Operation of a Vessel-BS within the territorial waters of administrations other than the UK or any other EU Member State is subject to the regulation and authorisation of those administrations.

5 In this Notice of Variation to the Licence:

[15] ACCMIN (RX_LEV_ACCESS_MIN); as described in GSM standard ETSI TS 144 018
[16] RXLEV (RXLEV-FULL-SERVING-CELL); as described in GSM standard ETSI TS 148 008
[17] Discontinuous transmission, or DTX; as described in GSM standard ETSI TS 148 008
[18] Timing advance; as described in GSM standard ETSI TS 144 018

(a) "baseline" is to be understood in the meaning of the Territorial Sea Act 1987[19];

(b) "the Commission Decision" means Decision 2010/166/EU of the European Commission of 19 March 2010 on harmonised conditions of use of radio spectrum for mobile communication services on board vessels in the European Union[20];

(c) "MHz" means megahertz;

(d) "GSM system" means an electronic communications network, that complies with the GSM standards, as published by European Telecommunications Standards Institute;

(e) "Mobile Communication Services on Board Vessels (MCV Services)" means electronic communication services, as defined in Article 2(c) of Directive 2002/21/EC of the European Parliament and of the Council[21], provided by an undertaking to enable persons on board a vessel to communicate via public communication networks using a GSM system without establishing direct connections with land-based mobile networks;

(f) "Radio Regulations" means the 2008 edition of the Radio Regulations made under Article 13 of the Constitution of the International Telecommunication Union as amended from time to time;

(g) "Vessel Base Transceiver Station" or "Vessel-BS" means a mobile pico-cell located on a vessel and supporting GSM services in the 900 MHz and/or 1 800 MHz bands;

(h) "the 900 MHz band" means the 880-915 MHz band for uplink (terminal transmit, base station receive) and 925- 960 MHz band for downlink (base station transmit, terminal receive);

(i) "the 1 800 MHz band" means the 1 710-1 785 MHz band for uplink (terminal transmit, base station receive) and 1 805-1 880 MHz band for downlink (base station transmit, terminal receive); and

(j) all technical terms, unless the contrary intention appears, shall have the meaning assigned to them in the Radio Regulations.

6 This Notice of Variation forms part of the Licence and must be attached to the Licence.

7 This Notice of Variation shall take immediate effect.

Issued by Ofcom

[19] http://www.legislation.gov.uk/ukpga/1987/49
[20] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:072:0038:0041:EN:PDF
[21] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:108:0033:0050:EN:PDF

Notes for Licensees:

1. This Notice of Variation does not affect the requirement, where necessary, to obtain licences or authorisations under other legislation or from other countries prior to the installation or operation of a Vessel Base Transceiver Station, in particular outside UK territorial waters. The Licensee is encouraged to seek its own independent professional advice in this respect.

2. This NoV implements the Commission Decision insofar as it relates to authorising the Vessel Base Transceiver Station.

3. Further guidance and information can be obtained from:

Ofcom Licensing Centre
Riverside House
2a Southwark Bridge Road
London, SE1 9HA

Tel. +44 (0)300 123 1000 or +44 (0)20 7981 3131
Fax. +44 (0)20 7981 3333
http://www.ofcom.org.uk

and, in respect of any ship survey and certification requirements:

The Maritime and Coastguard Agency
Survey and Certification
Spring Place
105 Commercial Road,
Southampton SO15 1EG.

Tel: +44 (0) 2380 329100
Fax: +44 (0) 2380 329466
http://www.mcga.gov.uk

Annex 8

Proposed Regulations

DRAFT STATUTORY INSTRUMENTS

2010 No. [XXX]

ELECTRONIC COMMUNICATIONS

The Wireless Telegraphy (Mobile Communication Services on Board Vessels) (Exemption) Regulations 2010

Made - - - -	***
Coming into force - -	***

The Office of Communications ("OFCOM"), in exercise of the powers conferred by section 8(3) of the Wireless Telegraphy Act 2006 ("the Act")([22]), makes the following Regulations.

Before making these Regulations OFCOM have given notice of their proposal to do so in accordance with section 122(4)(a) of the Act, published notice of their proposal in accordance with section 122(4)(b) of the Act and have considered the representations made to them before the time specified in that notice in accordance with section 122(4)(c) of the Act.

Citation, commencement and extent

1. These Regulations may be cited as the Wireless Telegraphy (Mobile Communication Services on Board Vessels) (Exemption) Regulations 2010 and shall come into force on [XXX].

Interpretation

2. In these Regulations—

"apparatus" means wireless telegraphy apparatus;

"dBm" means decibels of power referenced to one milliWatt;

"baseline" is to be understood in the meaning of the Territorial Sea Act 1987([23]);

"e.i.r.p." means equivalent isotropic radiated power;

"ETSI" means the European Telecommunications Standards Institute;

"kHz" means kilohertz;

"MHz" means megahertz;

"GSM system" means an electronic communications network, that complies with the GSM standards, as published by European Telecommunications Standards Institute;

([22]) 2006 c.36
([23]) 1987 c.49

"mobile communication services on board vessels" means electronic communications services provided by an undertaking to enable persons on board a vessel to communicate via public communication networks using a GSM system without establishing direct connections with land-based mobile networks;

"the 900 MHz band" means the 880-915 MHz band for uplink (terminal transmit, base station receive) and 925- 960 MHz band for downlink (base station transmit, terminal receive);

"the 1 800 MHz band" means the 1 710-1 785 MHz band for uplink (terminal transmit, base station receive) and 1 805-1 880 MHz band for downlink (base station transmit, terminal receive); and

"vessel base transceiver station" means a mobile pico-cell located on a vessel and supporting GSM services in the 900 MHz and/or 1 800 MHz bands.

Exemption

3. The use of any apparatus on board a vessel which is—

(a) a ship registered in the United Kingdom, the Isle of Man, or any of the Channel Islands; and

(b) within the limits of the British Islands and the territorial waters adjacent thereto, or, for the time being, beyond the British Islands and the territorial waters adjacent thereto;

is hereby exempt from the provisions of section 8(1) of the Act where the terms, provisions and limitations in regulation 4 are met.

Terms, provisions and limitations

4. The apparatus shall comply with the GSM standard EN 301 511 published by ETSI([24]) (or equivalent specification).

(1) The apparatus shall only operate in the 900 MHz band and the 1800 MHz band.

(2) The apparatus shall only be used—

(a) for mobile communication services on board vessels;

(b) where the vessel is 2 nautical miles([25]) or more from the baseline;

(c) where, to mitigate interference (providing at least equivalent performance based on GSM standards), the receiver sensitivity and the disconnection threshold (ACCMIN([26]) and min RXLEV([27]) level) of the apparatus is equal to or higher than—

(i) –70 dBm/200 kHz between 2 and 3 nautical miles from the baseline; and

(ii) –75 dBm/200 kHz between 3 and 12 nautical miles from the baseline.

(d) where the maximum radiated output power of the apparatus is of—

(i) 5 dBm in the 900 MHz band;

(ii) 0 dBm in the 1 800 MHz band.

(3) The apparatus shall not cause or contribute to undue interference to any wireless telegraphy.

(4) The apparatus shall be offered no protection against harmful interference from other authorised radiocommunication services.

;

Ed Richards
Chief Executive of the Office of Communications
XXX 2010 For and by authority of the Office of Communications

([24]) EN 301 511 (version 9.0.2) was published 20 March 2003
([25]) One nautical mile = 1852 metres
([26]) ACCMIN (RX_LEV_ACCESS_MIN); as described in GSM standard ETSI TS 144 018
([27]) RXLEV (RXLEV-FULL-SERVING-CELL); as described in GSM standard ETSI TS 148 008