



# Simplifying spectrum trading

Regulatory reform of the spectrum trading process  
and introduction of spectrum leasing

Consultation

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## Section 1

# Summary

## Introduction

- 1.1 Spectrum trading promotes innovation and growth by opening up opportunities for businesses to gain access to the radio frequencies that they need. This document consults on proposals to streamline the trading process to make the spectrum market more dynamic and efficient. As a result, we expect consumers to benefit from earlier introduction of new services and enhanced competition.
- 1.2 This consultation will be of interest to any organisation that engages, or wishes to engage, in spectrum trading, whether or not this is its main business activity. It will be of particular interest to organisations that already, or would like to, operate as 'band managers', ie to carry out, on a commercial basis, the trading of the rights to the radio frequencies for which they hold Wireless Telegraphy ('WT') licences having planned the assignments to end-users. It is particularly relevant to the band manager we are establishing with obligations towards programme-making and special events ('PMSE').

## Background

- 1.3 Spectrum trading allows spectrum to be transferred through the market to those that can generate the greatest benefits for society and so helps secure optimal use of the limited and valuable spectrum resource. We introduced spectrum trading in the UK at the end of 2004 as a key element in our programme of market-based reform. Since then, we have progressively extended trading to a broader range of licences and plan to continue doing so.
- 1.4 Features of the present spectrum trading regime may be imposing unnecessary regulatory burdens. We have a statutory duty under section 6 of the Communications Act 2003 (the 'Communications Act') to keep regulation under review to avoid imposing unnecessary burdens or maintaining burdens that have become unnecessary.
- 1.5 Trading processes that are excessively burdensome impose transaction costs on stakeholders and may either prevent or delay trades. This is likely to have a negative impact on spectrum users and consumers.
- 1.6 Band managers can play a useful role in helping the spectrum market function more efficiently, offering end-users an alternative source of spectrum to Ofcom.
- 1.7 In particular, we are establishing a band manager as the means by which PMSE users will access spectrum in future. This licensee will operate under a licence that, among other things, will oblige it to meet reasonable demand from PMSE users on fair, reasonable and non-discriminatory terms. So long as these obligations were met, it would be able to allow others to make use of its spectrum. (Such obligations do not apply to other licensees who engage in spectrum trading.) The way in which the band manager allows users access to its spectrum has to be sufficiently dynamic to handle upward of 90,000 requests for PMSE access a year, often arising unpredictably, at short notice and outside office hours. The current trading regime is not sufficiently flexible to support this type of operation.

- 1.8 Models for band manager operations rely on the spectrum trading process. The current process may be unduly onerous or require complex contractual arrangements that add to transaction costs and deter trading activity.

### The current spectrum transfer process

- 1.9 Spectrum transfer is governed by section 30 of the Wireless Telegraphy Act 2006 (the 'WT Act') and the regulations made under it. The Wireless Telegraphy (Spectrum Trading) Regulations 2004 ('the Trading Regulations')<sup>1</sup> specify the basis on which a licensee's rights to use spectrum may be transferred. Section 30 of the WT Act and the Trading Regulations give effect to Article 9 of the EU Framework Directive 2002/21/EC ('the Framework Directive').
- 1.10 The Trading Regulations specify a six-stage process for executing trades. This involves:
- notification to us;
  - publication by us of certain details of the proposed transaction before it takes place;
  - a decision by us whether to consent to the trade;
  - notification of the parties of our decision
  - processing and issue of WT licences to the parties. In particular, a transfer is put into effect through the surrender of the existing licence and our granting new licences; and
  - publication of details of the trade after it has taken place.
- 1.11 This framework may be excessively cumbersome, particularly for transactions that are high-volume and (individually) low-value as for PMSE. There are indications that the resulting delay and costs may be impeding the development and operation of band managers and the spectrum market more generally. The main contributory causes appear to be:
- the need under present legislation for us to:
    - be notified of, and consent to, intended trades; and
    - replace existing WT licences with new ones in order to put transfers into effect;
  - uncertainty about how the legislation applies to certain spectrum business models and the commercial risk that contracts may be declared void by the courts; and
  - lack of a simple process for time-limited trades, that is transactions intended to be of limited duration, at the end of which time the spectrum rights revert to the original holder.

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<sup>1</sup> SI no. 3154/2004 [http://www.opsi.gov.uk/si/si2004/uksi\\_20043154\\_en.pdf](http://www.opsi.gov.uk/si/si2004/uksi_20043154_en.pdf). These Regulations have been amended from time to time and are complemented by the Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) Regulations 2009, SI no.17/2009.

## Our proposals for consultation

- 1.12 We have analysed the trading process in the context of the applicable EU requirements and believe that it could be streamlined to remove unnecessary regulatory burdens without compromising effective spectrum management and while remaining compliant with EU obligations.
- 1.13 Specifically, we are consulting on whether the framework should be simplified for most licence classes by amending the Trading Regulations to omit the requirement for the parties to obtain our consent. However, trading would still not be allowed in certain specified circumstances, such as if licence fees were outstanding or licence revocation or variation proceedings were in progress. The streamlined process would consist of the following stages:
- the parties would notify us of their intention to trade;
  - we would publish information about the proposed transaction;
  - the transfer would be put into effect by the surrender of the existing licence and by our granting new licences; and
  - we would publish information about transfers that have been completed.
- 1.14 The need to obtain our consent would still be imposed on a selective basis for individual licence classes for which we considered it necessary and proportionate, but it would no longer be a blanket requirement.
- 1.15 We also propose to revise the Trading Regulations to make time-limited transfers more straightforward.
- 1.16 We further propose to introduce a variant of spectrum transfer under which transfers could proceed without the surrender of existing licences and our grant of new ones. Under this new process, the original licensee might agree with a transferee to share the rights to use the spectrum for a defined period of time. But the original licence would not be surrendered, nor would the transferee be issued with its own licence document. Instead the transferee would have rights to use the spectrum by virtue of an undocumented licence that has arisen as a result of the transfer. At the expiry of the agreed period, the rights of the transferee would naturally expire, again becoming the exclusive rights of the original licensee. We call this 'transfer without licence issue' ('TWLI'). It could be introduced by making regulations under section 30 of the WT Act.
- 1.17 Like all transfers, those undertaken under TWLI would need to comply with the relevant requirements of Article 9 of the Framework Directive, which means that they would need to be notified to us and that we would need to publish details of them when they had taken place. However, by removing the need for transfers to be put into effect through surrender and reissue of licences, TWLI would enable transfers to occur more quickly and efficiently. At this stage we propose that TWLI would apply only to transfers by the band manager with PMSE obligations.
- 1.18 We also explore further changes that we could make once the Framework Directive is amended as currently planned to allow spectrum leasing. In this document, 'spectrum leasing' is a process that would allow a licensee to authorise another person to use the spectrum for a time-limited period under an expedited trading process. It would avoid the need for us to be notified and to publish details of

transactions and to issue a licence to the end-user. In short, spectrum leasing is a form of time-limited spectrum trading that relies solely on the contract between the parties. At this stage, we envisage that spectrum leasing might apply to transactions that are intended to last for periods of up to 24 months. This would provide a more dynamic alternative to the current trading model and facilitate new market developments. It would give licensees greater flexibility to carry out trading transactions in the way that best suits the parties and would seem particularly suitable for high-volume, individually low-value transactions such as for PMSE. Leases for periods longer than 24 months might also be possible but might be subject to additional procedural requirements in view of their potentially greater impact.

- 1.19 We propose that the leasing process would, like the process for transfers, be subject to regulation by us. For example, we would want licensees to be required to keep records of those to whom they have leased their spectrum rights and to make these available to our authorised personnel so that they may investigate interference.

### **Future changes to the EU legislative framework**

- 1.20 Any changes we make will need to comply with the EU Framework Directive, which requires transfers of spectrum rights to be pre-notified to the national regulatory authority ('NRA') and made public.
- 1.21 The Framework Directive is in the process of being amended as part of the review of the EU framework for electronic communications networks and services ('the Framework Review'). One of the expected changes to the Framework Directive would distinguish spectrum leasing from spectrum transfer with a significantly simpler procedure for leasing than for transfer. Spectrum leasing forms part of our proposals. However, certain aspects of the Framework Review (unrelated to spectrum management or transfers) are still under negotiation and, consequently, it is not currently known when or if it will be possible to introduce spectrum leasing.
- 1.22 On best-case assumptions, it might be possible to introduce spectrum leasing on a timescale broadly in line with the currently expected start date of operation of the band manager with PMSE obligations. On the other hand, there could be a considerable delay. In that case, as TWLI would offer some of the advantages of spectrum leasing and would be consistent with the current framework, we might introduce it on an interim basis.

### **Matters on which we seek views**

- 1.23 This document seeks evidence on whether the present regulation of spectrum trading is impeding desirable market developments or imposing disproportionate transaction costs and on specific proposals for removing unnecessary regulatory burdens. Specifically, we seek views on proposals to streamline the current regime by:
- removing the need for the parties to obtain our consent to transfers of licence rights and obligations;
  - allowing time-limited trading without the need for a separate closing transfer by the parties;
  - introducing a variant of spectrum transfer that could proceed without the need for us to grant a new licence document to the transferee; and

- introducing, when the Framework Directive is amended, a faster and more efficient spectrum leasing process.

### **Next steps: timing and phasing**

- 1.24 We envisage that the details of the processes for both TWLI and leasing, would be specified in regulations made by us. If we decide to proceed in the light of responses to this document, we will consult further on regulations to implement the changes and indicate the timetable for implementation. We would aim to institute the changes in time for the band manager with PMSE obligations to start operating in summer/autumn 2010<sup>2</sup>.
- 1.25 Depending on the outcome of this consultation and progress of the review of the EU framework, we would aim to introduce spectrum leasing following amendment of the Framework Directive. We are considering with the Department for Business, Innovation and Skills (BIS) whether changes to the WT Act would be necessary. Meanwhile, the introduction of TWLI could enable some of the benefits of leasing to be realised sooner.

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<sup>2</sup> [Digital Dividend Review: band manager award | Ofcom](#)



## Section 2

# Introduction and background

### The purpose of this document

- 2.1 We have a duty to keep regulation under review and to remove regulatory burdens that are no longer considered necessary<sup>3</sup>. There is evidence that the current framework for transferring spectrum rights is unnecessarily burdensome. This document seeks views on proposals to simplify the process for transfer that is currently contained in the Trading Regulations. We are interested, in particular, in the process by which band managers, through spectrum trading, may make spectrum available to their customers, and in reducing transaction costs of spectrum trading.
- 2.2 Our overall aim is to enhance the development of a market in spectrum that maximises the benefits society derives from use of the radio spectrum.
- 2.3 It is possible that we may implement some of the changes under the current legislative framework. Others might require revisions to EU law and amendments to the WT Act as discussed in sections 5 and 6 below. The EU framework is currently under review as mentioned at paragraph 2.39. We will explore any need to amend the legislation with BIS in the light of the outcome of this consultation.

### The value of spectrum and importance of spectrum trading

- 2.4 Spectrum is a valuable and finite resource. Its use underpins about 3% of UK GDP and is worth over £40bn a year to the economy<sup>4</sup>. Spectrum trading is an important mechanism for securing its optimal use for society. Trading allows spectrum to migrate to those that can generate greater benefits for citizens and consumers. In order for the fullest possible advantages to be realised, it is important to keep transaction costs, including those attributable to complying with regulation, to the minimum consistent with our statutory functions and international obligations.

### Setting the scene

#### Spectrum licensing

- 2.5 Spectrum is used by millions of people and a wide range of different services. Without careful planning and management, harmful interference could largely destroy its value as a communications medium. For this reason, the use of spectrum is required to be authorised by us; and unauthorised use is a criminal offence<sup>5</sup>.
- 2.6 Authorisation may be conferred by a WT licence or, if the use is unlikely to cause undue interference, by a general exemption from the need for a licence. Government departments, such as the Ministry of Defence ('MOD'), do not require authorisation as the WT Act does not bind the Crown. Instead, we may grant them 'recognised

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<sup>3</sup> Section 6 of the Communications Act 2003

<sup>4</sup> *Economic Impact of the Use of Radio Spectrum in the UK* by Europe Economics. See [http://www.ofcom.org.uk/research/radiocomms/reports/economic\\_spectrum\\_use/](http://www.ofcom.org.uk/research/radiocomms/reports/economic_spectrum_use/)

<sup>5</sup> Section 8 of the WT Act

spectrum access' ('RSA')<sup>6</sup>. RSA formalises their rights and obligations and defines those that may be traded.

## Spectrum trading

- 2.7 'Spectrum trading' is currently understood to involve the transfer of rights and obligations under a WT licence or a grant of RSA. Trading currently involves agreement between an existing holder (the 'transferor') and another person (the 'transferee') to transfer the transferor's rights under its licence or grant of RSA and is put into effect by surrender of the original licence or RSA to us and the grant of a new licence or RSA by us. Trading may also involve conversion between a WT licence and RSA<sup>7</sup> so that a Crown body may trade spectrum to a commercial organisation and vice versa<sup>8</sup>.
- 2.8 Our proposals in this document might apply to trading of RSA and, in order to avoid excessive repetition, we do not refer separately in the rest of this document to RSA. One exception is with regard to leasing, which would not be applicable where the lessee wished to hold transmission rights (see paragraph 6.29 below).
- 2.9 There are different 'modes' or types of transfer as described in paragraphs 2.26 onwards below.

## Band managers

- 2.10 There is no precise definition of a 'band manager'. Any licensee may commercially exploit its spectrum holding through spectrum trading. However, a 'band manager' is generally understood to be an organisation that engages in activities that go beyond simply trading spectrum.
- 2.11 These activities include some or all of the following:
- *planning the use* of a block of spectrum, which is defined by the scope of its WT licence;
  - *packaging the spectrum* for disposal through trading but not necessarily exploiting the spectrum operationally itself;
  - *engaging with the market* to dispose of it permanently or temporarily through trading;
  - *serving end-users*, who will be the band manager's customers, with contacts covering their relationship;
  - acting as first port of call to *investigate and resolve interference* caused by its customers.
- 2.12 Any holder of a tradable licence could potentially function as a band manager, even if this was not its main commercial activity. In this document, references to 'band

<sup>6</sup> RSA is a spectrum management instrument introduced by the Communications Act. For a full explanation, see <http://www.ofcom.org.uk/consult/condocs/rsa/> and section 5 of <http://www.ofcom.org.uk/consult/condocs/rsa/>.

<sup>7</sup> The Wireless Telegraphy (Recognised Spectrum Access and Licence) (Spectrum Trading) Regulations 2009 SI No.17/2009 [http://www.opsi.gov.uk/si/si2009/pdf/uksi\\_20090017\\_en.pdf](http://www.opsi.gov.uk/si/si2009/pdf/uksi_20090017_en.pdf)

<sup>8</sup> See Ofcom's consultation and statement on the *Spectrum Framework Review for the Public Sector* at <http://www.ofcom.org.uk/consult/condocs/sfrps/>.

managers' should be understood to cover organisations that engage in the activities set out in paragraph 2.11 above. Band managers and other types of intermediary are likely to add the depth and liquidity needed for a mature secondary market in spectrum and to enhance effectiveness and efficiency in spectrum management.

## The spectrum management framework

2.13 The present legislation on the management and use of the radio spectrum is contained in the WT Act, which consolidated earlier legislation dating back to 1949. We took over responsibility for managing non-military use of the spectrum in the UK in December 2003 with a duty to secure its optimal use. We are required<sup>9</sup> to have regard in particular to the desirability of promoting:

- efficient management and use of the spectrum;
- economic and other benefits;
- innovation; and
- competition.

2.14 We carry out our spectrum management functions within the framework of our general duties set out in section 3 of the Communications Act. These are:

- furthering the interests of citizens in relation to communications matters; and
- furthering the interests of consumers in relevant markets, where appropriate by promoting competition. This includes having regard to choice, price, quality and value for money.

2.15 We are also required to have regard to best regulatory practice, including in particular ensuring that regulatory activities are transparent, accountable, proportionate, consistent and targeted only where needed, and to the opinions of consumers and the public generally.

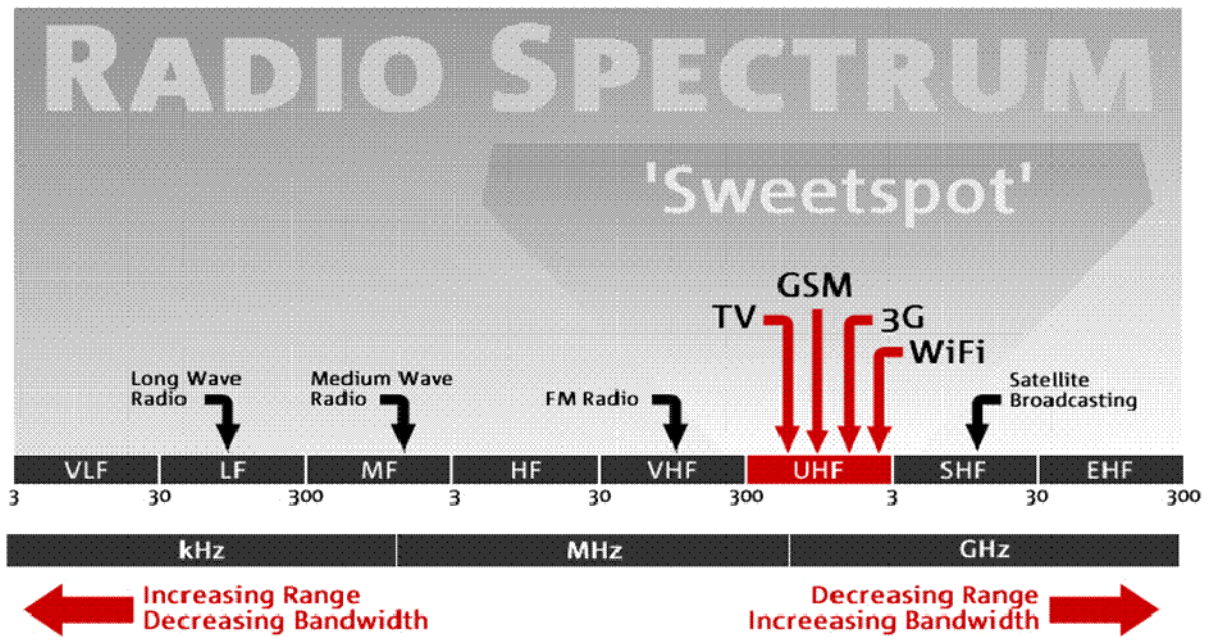
## Spectrum and how we manage it

2.16 The radio spectrum is conventionally taken to comprise frequencies up to 3000 GHz but only frequencies up to about 300 GHz are usable with current technology. Different frequencies have different propagation characteristics and information-carrying capacity (or 'bandwidth') as illustrated in figure 1 below. Lower frequencies can travel longer distances but carry less information. Those in the so-called 'spectrum sweet spot' between about 300 MHz and 3 GHz are most in demand because they are suitable for a variety of applications, including video broadcasting, mobile communications and broadband, and have useful propagation characteristics.

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<sup>9</sup> Section 3 of the WT Act

Figure 1: The 'spectrum sweet spot'



2.17 While there is inevitably uncertainty in such forecasts, there is evidence that demand for spectrum is outstripping availability, especially in the 'spectrum sweet spot' and in urban areas where radio traffic is heaviest<sup>10</sup>. If society is to gain maximum advantage from the radio spectrum, there needs to be a mechanism to ensure that it is used by applications and technologies that will generate the greatest benefits.

### The shift to market mechanisms

2.18 Until relatively recently, spectrum was planned and managed by 'command and control'. A spectrum regulator determined, often in considerable detail, how spectrum should be used and for which services. However, with rapid growth in the use of spectrum and proliferation of different technologies and applications, this approach is increasingly likely to lead to impose considerable costs on society by holding back innovation and competition.

2.19 This is because it is less and less likely that any spectrum regulator can have sufficient information or foresight to predict which technology or application will generate the greatest benefits for society or will be able to react fast enough to the pace of change. This is likely to lead to regulatory failure in which sub-optimal regulatory decisions impose greater costs than benefits. For this reason, and as explained in various documents<sup>11</sup>, we have pursued a policy of making progressively greater use of market mechanisms to allow spectrum to migrate dynamically to the users, services and technologies that will benefit society most.

2.20 Market mechanisms are, in our view, more likely as a general rule to achieve this and secure the optimal use of spectrum. This is because they are more flexible and dynamic than 'command and control'. There will continue to be a need for regulation

<sup>10</sup> See *Spectrum Demand for Non-Government Services 2005-2025* by Analysys Consulting and Mason Communications at [http://www.spectrumaudit.org.uk/pdf/spectrum\\_demand.pdf](http://www.spectrumaudit.org.uk/pdf/spectrum_demand.pdf) and *Estimating the commercial trading value of spectrum | Ofcom*

<sup>11</sup> For example, our *Spectrum Framework Review* at <http://www.ofcom.org.uk/consult/condocs/sfr/>.

to manage interference effectively, ensure compliance with international obligations and, in some cases, remedy market failure but it is important that regulatory intervention is proportionate and no more intrusive than necessary.

## **Spectrum trading is central to the market-based approach**

- 2.21 Simply put, the ability to trade spectrum, as well as to change its use, is critical to securing maximum benefit for society. Trading, therefore, is a key element of our market-based approach to spectrum. Combined with liberalisation, it has potential to deliver substantial benefits. A study for the European Commission estimated these to be of the order of €9bn a year across all EU Member States<sup>12</sup>. There is a full Regulatory Impact Assessment ('RIA') for spectrum trading in our December 2004 statement on *Spectrum Trading and Wireless Telegraphy Register Regulations*<sup>13</sup>.
- 2.22 Spectrum trading is also discussed in depth in a joint Radiocommunications Agency - Ofcom consultation and Ofcom statement<sup>14</sup> and a further consultation and statement on ensuring effective competition following the introduction of spectrum trading<sup>15</sup>.

## **Spectrum trading in the UK**

- 2.23 Spectrum trading was made possible in the UK by section 168 of the Communications Act, now consolidated in section 30 of the WT Act. We made the Trading Regulations in 2004 to introduce spectrum trading for selected licence classes with a view to extending them progressively, as has been done on several occasions. A successful market needs information about whatever is being traded so we also made The Wireless Telegraphy (Register) Regulations 2004 (the 'Register Regulations')<sup>16</sup> that provide for us to publish and maintain a register (the 'WT Register') containing relevant information about tradable WT licences. The Register Regulations were extended to include RSA in January 2009. We also publish details of proposed trades in the Transfer Notification Register ('TNR')<sup>17</sup>.
- 2.24 The Trading Regulations set out the licence classes for which spectrum trading is possible, the types of trading that may be undertaken and the procedure to be followed.

## **The spectrum trading process**

- 2.25 Our consultation and statement on spectrum trading regulations<sup>18</sup> set out the types of trades that are permitted for which licence classes and describe in detail the procedure to be followed in executing trades as summarised in the following paragraphs.
- 2.26 The trading framework permits various different types of transaction or 'modes of trading':

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<sup>12</sup> *Study on conditions and options for introducing secondary trading of radio spectrum in the European Community* (May 2004) by Analysys Consulting Ltd and others for the European Commission at

[http://ec.europa.eu/information\\_society/policy/radio\\_spectrum/docs/ref\\_docs/secontrad\\_study/secontrad\\_final.pdf](http://ec.europa.eu/information_society/policy/radio_spectrum/docs/ref_docs/secontrad_study/secontrad_final.pdf). See exhibit 15.22 on page 223.

<sup>13</sup> [http://www.ofcom.org.uk/consult/condocs/spt\\_wtr/statement/stwtr.pdf](http://www.ofcom.org.uk/consult/condocs/spt_wtr/statement/stwtr.pdf)

<sup>14</sup> [http://www.ofcom.org.uk/consult/condocs/spec\\_trad/](http://www.ofcom.org.uk/consult/condocs/spec_trad/)

<sup>15</sup> <http://www.ofcom.org.uk/consult/condocs/sec/>

<sup>16</sup> SI no.3155/2004 as amended from time to time.

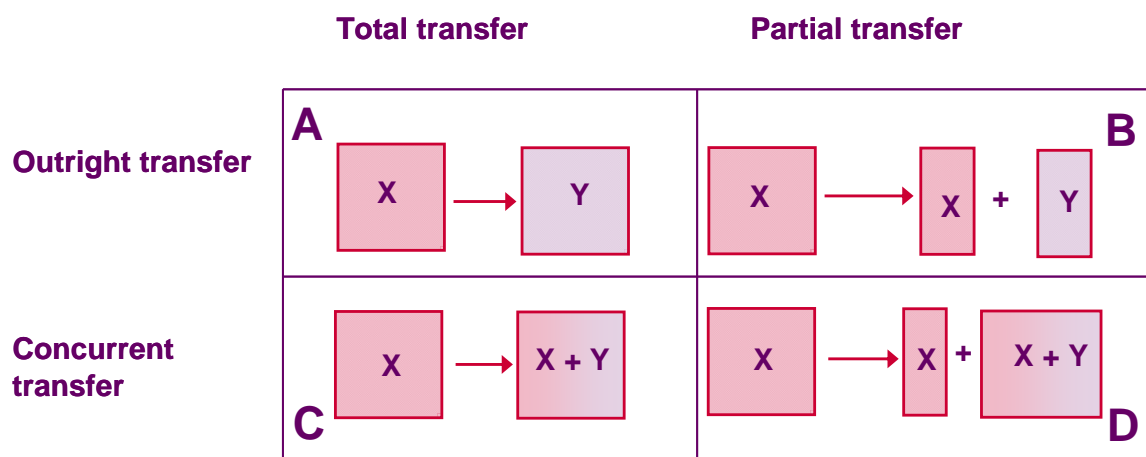
<sup>17</sup> <http://spectruminfo.ofcom.org.uk/spectrumInfo/trades>

<sup>18</sup> [http://www.ofcom.org.uk/consult/condocs/spt\\_wtr/](http://www.ofcom.org.uk/consult/condocs/spt_wtr/)

- outright total transfers - all the rights and obligations under a licence are transferred to a third party;
- outright partial transfers - only some of the rights or obligations are transferred to a third party and the rest remain with the original holder;
- concurrent total transfers - all the licence rights and obligations are transferred to a third party while continuing at the same time to apply also to the original holder; and
- concurrent partial transfers - some of the licence rights and obligations are transferred to a third party while continuing at the same time to apply also to the original holder and the rest of the rights and obligations remain with the original holder.

2.27 The different trading modes are illustrated in figure 2, in which X represents the transferor and Y the transferee. The choice of mode will depend on the requirements of the parties. For example, if the transferor wishes to retain rights to the holding in parallel with the transferee, this will result in a concurrent transfer. The parties can also agree contractually that the spectrum will be vacated by the transferee if a certain contingency arises.

**Figure 2: Modes of trading spectrum**



2.28 The Trading Regulations specify the types of transactions that are permitted for each tradable licence category and the minimum units into which assignments may be subdivided in partial transfers. There are restrictions on partial trading in certain licence classes. We prefer as a general rule to keep these constraints to the minimum necessary so that parties have flexibility to enter into the arrangements that best suit them. However, certain restrictions are needed in order to ensure compatibility with our spectrum planning and frequency assignment processes.

2.29 In partial transfers, the rights or obligations may be divided by frequency band, geographical coverage or time. Sub-division by time is not currently allowed under the present Trading Regulations but it is part of our proposals to change this as discussed in the following paragraph.

## Time-limited transfers

2.30 By 'time-limited transfers' we mean transfers that are intended to be temporary (ie to last for a period less than the duration of the licence). Time-limited transfers can be carried out under the current Trading Regulations but this involves the reversal of the initial trade in a separate transaction after a period agreed by the parties to the transaction. The requirement on the transferee to initiate the reverse trade may be specified contractually. We said in our August 2004 spectrum trading statement referenced above that we intended to provide for trades that unwind automatically after a predetermined time without the need for an additional transaction<sup>19</sup>. That document also stated our view that it would be beneficial to allow short-term spectrum hiring across a wide range of licence classes<sup>20</sup>.

## The transfer process

- 2.31 The process defined in the Trading Regulations involves six distinct stages with procedural checks to ensure, for example, that the parties have consented, that no fees are outstanding and that we have not given notice of revocation or variation of the assignment in question.
- i) The parties notify us under regulation 8(1) of the request to transfer.
  - ii) We publish the request to transfer under regulation 8(2).
  - iii) We decide whether or not to consent to the transfer under regulations 8(3) and 9.
  - iv) We notify the parties under regulation 8(4) of its decision on the proposed transfer.
  - v) We put the transfer into effect under regulation 8(5), subject to any directions it has given under regulation 10. This involves the surrender of existing licences and grant of replacements that reflect the effect of the transfer.
  - vi) We publish information under regulation 8(6) about the transfer after it is effected.

Some of these procedures are embedded in EU or UK legislation. Others could be changed by amending the Trading Regulations.

## Need for Ofcom's consent

- 2.32 The grounds on which we may withhold its consent to a proposed trade have been deliberately circumscribed so as to minimise regulatory uncertainty. Regulation 9 of the Trading Regulations limits them to:
- breach of the licence terms by the holder or holders;
  - inability to meet the terms, provisions and limitations of the post-transfer licence;
  - inability to meet relevant criteria relating to transferees; or
  - in the interests of national security, compliance with EU or other international obligations or compliance with a direction from the Secretary of State.

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<sup>19</sup> Paragraph 3.17 et seq

<sup>20</sup> Paragraph 7.31 et seq

- 2.33 In addition, regulation 7 sets out circumstances in which trading is not authorised. These concern non-payment of licence fees or circumstances in which the licence is in the process of being varied or revoked, as well as where we have not given our consent.

### Consequences of failure to follow the specified procedure

- 2.34 If the holder of a WT licence transfers the rights and obligations under the licence to another by means of a transaction that is not carried out in accordance with the Trading Regulations, subsections 30(4) and (5) of the WT Act provide that the transfer is void unless the licence:
- a) specifically allows the holder to 'confer the benefit' of the licence on another; and
  - b) was granted before 29 December 2003, the date on which the spectrum trading provisions of the Communications Act, now consolidated in section 30 of the WT Act, entered into force.
- 2.35 This could have serious consequences for the parties. For example, the transferor might find that it was unable to enforce payment by the transferee if a dispute arose and a court held that the contract was void because of non-compliance with the Trading Regulations; and the transferee might be at risk of committing the criminal offence of unauthorised use of radio equipment.

### **EU requirements**

- 2.36 The trading process set out in the WT Act and Trading Regulations is subject to EU requirements that are binding on the UK. These are in the process of being renegotiated as part of the review of the overall EU framework for electronic communications networks and services. The current and proposed new framework provisions on spectrum trading are summarised below.

### The current framework

- 2.37 Article 9 of the current Framework Directive<sup>21</sup> allows Member States to provide for the transfer of spectrum rights and imposes certain requirements about the process to be followed:
- the intention to transfer spectrum rights has to be notified to national regulatory authority (NRA). Ofcom is the UK NRA;
  - transfers must take place in accordance with procedures laid down by the NRA;
  - transfers that have taken place must be made public; and
  - the NRA must ensure that transfers do not distort competition or conflict with EU obligations.
- 2.38 The present Trading Regulations are compatible with the current EU framework and impose additional requirements. For example, under the regulations, we publish details of proposed transactions before they are made as well as actual transactions after they take place even though this is not a requirement of the present directive.

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<sup>21</sup> EU Framework Directive 2002/21/EC



Similarly, article 9 does not oblige transfers to be effected by the surrender and issue of WT licences.

### The proposed new framework

2.39 The Framework Directive is under review. One of the changes in the new directive would be to revise article 9 to allow Member States to introduce what is called 'spectrum leasing' with significantly reduced regulatory requirements relative to those currently applied to spectrum trading. Spectrum leasing forms part of our proposals and is described in more detail in section 6 of this document. However, because certain aspects of the review of the Framework Directive (unrelated to spectrum) are still under negotiation, it is not currently known when or if it will be possible to introduce spectrum leasing. This is discussed in paragraphs 6.13-6.15 below.

### **Band manager developments**

2.40 In our 2004 statement on spectrum trading,<sup>22</sup> we said that 'band manager' (the synonymous term we used was 'spectrum management organisation') was a generic term for an operator who undertook the management of certain blocks of spectrum. Such organisations might acquire rights to use blocks of spectrum, which they would then, through trading, allow others to use as required. We considered that they could evolve to offer an important spectrum management role complementary to our own functions. We did not intend to introduce any specific regulation in relation to band managers.

2.41 We subsequently discussed band manager models in our consultation on the spectrum award at 412-414 MHz paired with 422-424 MHz<sup>23</sup>. These models were based on partial, outright trading and total, concurrent trading. However, we accept that the models might not be suitable in all circumstances. The partial, outright model can be cumbersome to implement because of the need for us to issue new licences that reflect the terms of each individual transfer, notably the frequency and coverage area involved. The alternative of total, concurrent trading avoids this. Under that model, the band manager and each of its customers are all licensed by us to use the spectrum. All licensees (ie the band manager and its customers) share identical rights to use the spectrum under the terms of the licence. Individual usage is, in practice, co-ordinated through contractual arrangements between the band manager and each of the other licensees. The problem with this model is that it requires possibly complex types of contract that would increase transaction costs.

2.42 The development of band managers so far has proved slow but there are signs that it is now picking up. Spectrum traders, which may be acting as band managers, are beginning to emerge in the USA and elsewhere. It has been reported in the UK that there are growing expressions of interest in using spectrum trading as the basis of commercial band management services. Furthermore, we will award spectrum to a band manager that will have obligations toward PMSE users<sup>24</sup>.

### **Experience of trading to date in the UK**

2.43 Spectrum trading was initially introduced in December 2004 for the national and regional Business Radio ('BR'), broadband fixed wireless access and terrestrial fixed

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<sup>22</sup> [http://www.ofcom.org.uk/consult/condocs/spec\\_trad/statement/sts.pdf](http://www.ofcom.org.uk/consult/condocs/spec_trad/statement/sts.pdf)

<sup>23</sup> [http://www.ofcom.org.uk/consult/condocs/spectrum\\_award/spectrum.pdf](http://www.ofcom.org.uk/consult/condocs/spectrum_award/spectrum.pdf)

<sup>24</sup> <http://www.ofcom.org.uk/consult/condocs/bandmgr/> and <http://www.ofcom.org.uk/consult/condocs/bandmanager09/>.

links licence classes. Following improvements in our spectrum assignment tools, we extended trading within the BR sector to include Technically Assigned licences that are held by a wide variety of businesses, such as taxi operators and couriers. This took effect in August 2008 and led to a thirty-fold increase in the number of tradable licences from about 1,500 to 50,000. Licences granted under our programme of spectrum awards<sup>25</sup> have also been made tradable.

2.44 Spectrum trading is also being rolled out in the public sector<sup>26</sup> in support of the government's *Forward Look* programme to reform public sector spectrum management by enhancing opportunities and incentives for public bodies to make spectrum available for commercial users. We made the first set of regulations in January 2009 to permit public sector RSA to be traded and converted into WT licences and plan to extend these over time in support of Government departments, such as the MOD, that plan to release and share spectrum through the market<sup>27</sup>.

2.45 Table 2 below sets out the currently tradable licence products.

**Table 1: Currently tradable licence and RSA products**

Licence or RSA class	Frequency bands
BR (Technically Assigned), (Area Defined), (Simple UK), (Suppliers Light) and (Simple Site)	132-134 and 146-148 kHz 26.2-87.5, 136-208, 425-470 MHz
Public mobile operator for public mobile data, non-voice	136-208 MHz
Converted Spectrum Access and RSA for radio astronomy	150.05-152.0 and 1660.5-1670.0 MHz, 42.5-43.5 GHz
Converted Spectrum Access and Crown RSA	406.1-430.0 MHz except for certain sub-bands
Spectrum Access	412-414 MHz 422-424 MHz 542-550 MHz 742-750 MHz 758-766 MHz 1452-1492 MHz 10.125–10.575 GHz 27.8285–29.4525 GHz 31.815–33.383 GHz 40.50–43.50 GHz
Scanning telemetry	457.5-464 MHz
Concurrent Spectrum Access	1781.7-1785.0, 1876.7-1880.0 MHz

<sup>25</sup> <http://www.ofcom.org.uk/radiocomms/spectrumawards/>

<sup>26</sup> <http://www.ofcom.org.uk/consult/condocs/sfrps/> and <http://www.ofcom.org.uk/consult/condocs/sfrps08/>

<sup>27</sup> See for example, <http://www.mod.uk/DefenceInternet/AboutDefence/CorporatePublications/ConsultationsandCommunications/PublicConsultations/UkDefenceSpectrumManagement200812.htm>

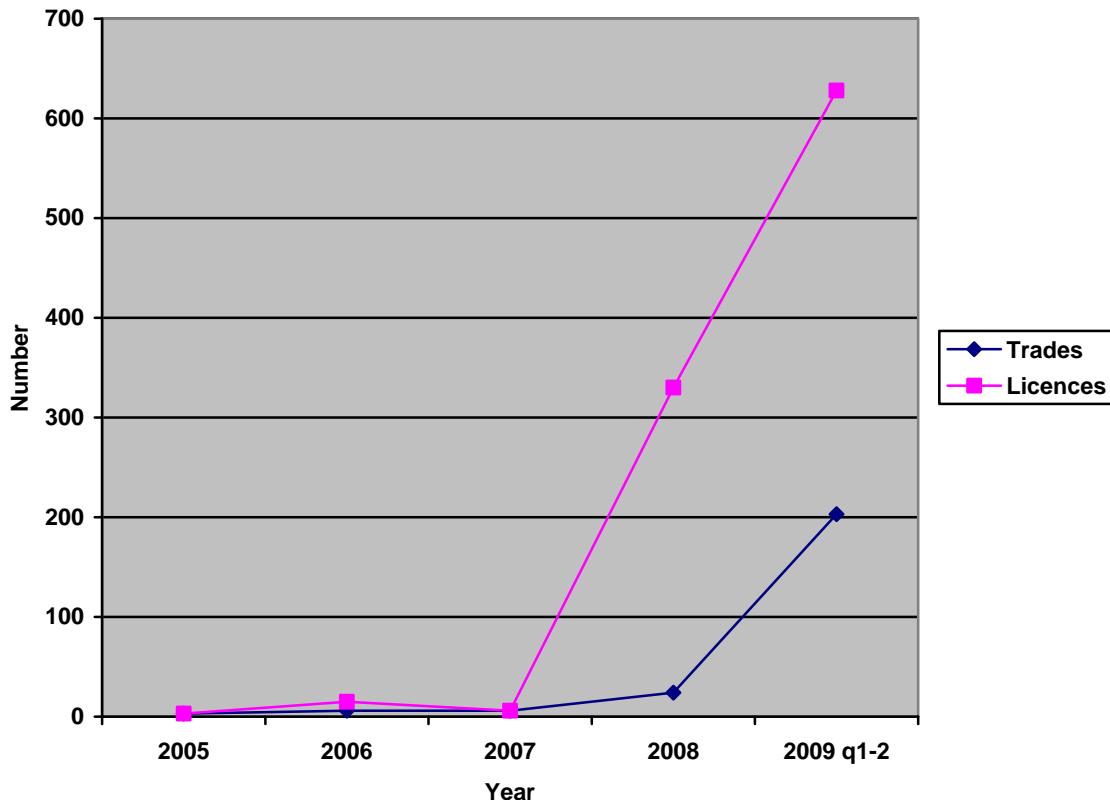
Point-to-point fixed links (including self-coordinated links)	Various frequency bands from 1.35 to 85.875 GHz
Fixed Wireless Access	3480-3600 and 3605-4009 MHz
Broadband Fixed Wireless Access	28.0525-28.4445 GHz 29.0605-29.4525 GHz

### The development of the spectrum market

- 2.46 Spectrum trading is part of a long-term strategic shift in spectrum management. Figure 3 below shows that there has been an accelerating stream of transactions with a clear upward trend, especially since spectrum trading was extended to the large Technically Assigned BR licence class in August 2008.
- 2.47 There is also evidence of a broader variety of transactions. Initially, most seemed linked to corporate reorganisations as they were between companies in the same group or that were merging. More recently, however, there have been indications of significant transactions between unrelated companies. The number of these is still low but they signify that trading is providing a route for new market entrants to gain access to spectrum with resulting benefits for citizens and consumers from increased innovation and competition. It is plausible that the parties would not have undertaken these transfers unless there had been sizeable net gains for both sides<sup>28</sup>.

<sup>28</sup> It has been argued that, if buyers and sellers do not know each other's true valuations, as is likely to be the case for spectrum, there has to be a difference in the buyer's and the seller's valuations of at least 25% for a trade to take place. See *Efficient Mechanisms in Bilateral Trading* by Myerson, Satterthwaite and Mark (1983) *Journal of Economic Theory* 29 (April): pages 265 to 281.

Figure 3: Trend in spectrum trading in the UK



### International experience of spectrum trading

2.48 Procedures for trading vary significantly across countries that have introduced trading. Some countries – Australia, New Zealand and El Salvador - only require trades to be notified in order to maintain a register of spectrum rights holders and do not require the regulator's consent to be obtained for trades. In New Zealand, changes of ownership can be performed electronically to minimise transaction costs. In others, the regulator's approval is needed but the time to approve varies considerably. For example, in Guatemala, the Superintendencia de Telecomunicaciones ('SIT'), has three days to approve trades, the Norwegian Post and Telecommunications Authority ('NPT'), takes about two to three weeks, and the US Federal Communications Commission ('FCC') can process trades within one day in the absence of concerns on eligibility, foreign ownership, designated entities or competition and is required to take no longer than three weeks.

### Summary

2.49 This section has explained the background to, and main features of, the current spectrum trading regime in the UK, including the transfer process and EU context. It has also reviewed experience of spectrum trading in the UK to date since it commenced in December 2004 and in other countries.

2.50 To recap, the present regulatory framework in the UK has the following features.

- Rights and obligations under WT licences may be transferred in accordance with section 30 of the WT Act and the Trading Regulations made under it. We have a

large measure of discretion about the details of the trading process but we must comply with applicable EU requirements and the WT Act.

- The current trading process involves surrender of the transferor's original licence and the grant of a new licence to the transferee and, in the case of a partial trade, to the transferor.
- Sections 30(4) and (5) of the WT Act have the effect that, with limited exceptions, transfers of licence rights and obligations, even if short-term, will be void unless carried out in accordance with trading regulations.
- As required by the EU framework, the transfer process involves advance notification of the intention to transfer and publication of transfers. The latter may take place after the transfer. The new framework under negotiation differentiates between transfer and lease and imposes no requirements on the latter, beyond compliance with national procedures, which are left to NRAs to specify.

## **The Channel Islands and Isle of Man**

- 2.51 We are responsible for managing the radio spectrum, including granting WT licences, in Jersey, Guernsey and the Isle of Man subject to their special constitutional position as self-governing Crown Dependencies. The WT Act has been extended there with local variations by Orders in Council<sup>29</sup>. In line with the island administrations' preferences, section 30 of the Act, which relates to spectrum trading, was not extended to Jersey or the Isle of Man; and, although it was extended to Guernsey, the Trading Regulations were not. Consequently, trading has not yet been introduced in the islands.
- 2.52 The islands' administrations have each indicated that they continue to prefer that spectrum trading should not be introduced there as a general proposition at this time but that they wish to be covered by the arrangements for a band manager with obligations towards PMSE. Accordingly, if we decide following this consultation to proceed with our proposals, we will ask BIS to sponsor the necessary Orders in Council to give effect to the island administrations' wishes so that our proposals may extend to the islands in relation to the band manager with PMSE obligations but not in relation to other licences.

## **The structure of this document**

- 2.53 The rest of this document is structured as follows.
- Section 3 sets out our reasons for the present review and our basic approach.
  - Section 4 describes and seeks views on various changes to the current spectrum trading process.
  - Section 5 describes proposals for transfer without licence issue.
  - Section 6 describes and seeks views on proposals to introduce, when permitted to do so under the Framework Directive, a new form of spectrum trading known as 'spectrum leasing'.

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<sup>29</sup> SI numbers 2006/3324, 2006/3325 and 2007/278

- Section 7 presents an impact assessment to be read in conjunction with the rest of this document.
- Annexes 1-3 explain our consultation principles and how to respond to this consultation
- Annex 4 sets out the consultation questions
- Annex 5 provides a glossary

## Section 3

# Reasons for reviewing the trading regime and options

## Introduction

3.1 This section sets out the reasons for reviewing the spectrum trading regime and introduces the options that are discussed in greater detail in following sections. Developments in the spectrum market make it timely to consider whether the trading regime needs to be revised in order to help the market function more effectively and to remove barriers to trading such as transaction costs. In particular, we are planning to award spectrum to a band manager with obligations to PMSE and want to ensure the trading process allows it to handle a large number of assignment requests at short notice. We also want to facilitate the development of band managers more generally.

## The purpose of this consultation

3.2 This consultation seeks views on proposals that will affect spectrum holders that wish to engage in spectrum trading, the band manager with PMSE obligations and other prospective band managers. In particular, we wish to gather evidence on:

- whether, and which, features of the present trading process are impeding desirable market developments;
- the practical impact on those engaged in, or considering entering, the spectrum market; and
- the level of the costs imposed on businesses by the present regime. These costs could take various forms, including the operational overhead involved in meeting procedural requirements, time taken to process transactions or investment in business systems.

## Trading by band managers and others

3.3 There is growing market interest in using spectrum trading to provide band management services on a commercial basis. We have received questions from various organisations involved, or interested in becoming involved, in operating as commercial band managers.

3.4 Our proposals also aim to simplify trading by WT licensees generally, whether or not they are interested in operating as band managers.

## Future spectrum access for PMSE

3.5 Our August 2004 spectrum trading statement<sup>30</sup> said that we would postpone the introduction of spectrum trading in the PMSE sector until future planning of the Digital Dividend Review interleaved spectrum had become clearer. We have decided to incentivise a band manager to manage spectrum efficiently within a framework of

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<sup>30</sup> [A Statement on Spectrum Trading | Ofcom](#)

obligations to PMSE. Following our consultations on future spectrum access for PMSE and the design of the band manager award, our proposals have now crystallised sufficiently to make it timely to consider in greater detail how the band manager will authorise PMSE and other users to access its spectrum.

- 3.6 It will be necessary to ensure that the process can be sufficiently dynamic to be able to handle upward of 90,000 requests for PMSE access a year, often arising unpredictably, at short notice and outside office hours. It is also necessary to ensure that transaction costs are sufficiently low for the band manager to be commercially viable, given that many individual transactions will likely be relatively low value.

### **Our underlying approach to reviewing the trading process**

- 3.7 The legislation under which we operate requires us to keep regulation under review and to remove any unnecessary regulatory burdens. In accordance with our regulatory principles, we have considered the minimum regulation of spectrum trading that is necessary in order to enable us to manage the spectrum effectively in the interests of securing its optimal use and to comply with applicable EU requirements. We have considered various aspects of the regulation of trading as discussed in following paragraphs, which align with our statutory duties:

- availability of and demand for spectrum
- efficient management and use of spectrum;
- competition and innovation;
- economic and other benefits; and
- compliance with EU obligations.

### **Availability of and demand for spectrum**

- 3.8 As discussed in the preceding section, demand for spectrum is growing and will become increasingly difficult to satisfy in bands that are most in demand below 15 GHz<sup>31</sup>. We are pursuing a programme of spectrum awards<sup>32</sup> and will have less spectrum to make available as that programme progresses. In future, access for new services and technologies will likely need to be increasingly secured through the spectrum market from existing holders in the public or commercial sectors. Enhancing the effectiveness of the spectrum market will help ensure future availability of spectrum to meet rising demand.

### **Efficient management and use of spectrum**

- 3.9 A core function of spectrum management is to avoid harmful interference. To achieve this, technical conditions are included in licences, for example to specify the maximum power levels at various frequencies. These limits may be based on modelling or theoretical calculations. Harmful interference may arise because the user exceeds these limits. It may also arise because of differences between the modelling or calculations and the real world. Radio waves sometimes behave

<sup>31</sup> See, for example, *Spectrum Demand for Non-Government Services 2005-2025* by Analysys and Mason at [http://www.spectrumbaudit.org.uk/pdf/spectrum\\_demand.pdf](http://www.spectrumbaudit.org.uk/pdf/spectrum_demand.pdf).

<sup>32</sup> <http://www.ofcom.org.uk/radiocomms/spectrumawards/>



unpredictably, for example because of the effects of weather conditions or terrain on the transmitted signal.

- 3.10 Spectrum trading does not in itself affect the risk of interference to third parties. That risk is controlled by licence conditions that trading does not alter. However, in order to deal with harmful interference when it arises, we need to know the identity of the person or persons responsible for operating the equipment so that timely investigation or other action can be taken, especially if the interference is affecting a safety-of-life service. At a minimum, our investigation officers need access to accurate and up-to-date information about the identity of the user and contact details for a responsible person who may be contacted to give site access and adjust or close down the equipment if necessary. We aim to cure harmful interference to safety-of-life services within 24 hours.
- 3.11 The requirement in the Trading Regulations for us to be notified of, consent to and issue licences for transfers ensures that we have the information in our licensing database records about licensed equipment and contact details. However, it is not generally necessary for us to hold the information ourselves. It would be sufficient for interference investigation and enforcement purposes for a band manager to hold the information and to make it available on demand on a reasonably timely basis. This is the approach adopted with our contractors JFMG and for certain licences that authorise operation of a continually changing network of transmitters. In such cases, current information about transmitter deployment is held by the licensee and not by us. This has proved to be adequate in practice for us to investigate and deal with harmful interference.

### **Competition and innovation**

- 3.12 As a general rule, trading can be expected to promote competition and innovation as it makes it easier for new market entrants to access spectrum. However, there is also scope for anti-competitive behaviour in the market for spectrum.
- 3.13 Before making the original Trading Regulations, we gave careful consideration to how to ensure effective competition following the introduction of spectrum trading. We consulted on this topic in June 2004<sup>33</sup> and, in particular, on whether it was necessary for trading regulations to empower us to block proposed trades on competition grounds.
- 3.14 Following that consultation, we concluded that general competition law should be sufficient as a general rule and that there was no need to consider the effect on competition in the specific context of decisions on whether to consent to particular spectrum trades, although we keep this conclusion under review. We are not aware of any evidence to date that would invalidate that conclusion; nor would it seem likely to be affected by the changes that we propose in this document.

### **Economic and other benefits**

- 3.15 By allowing spectrum to migrate into the hands of those that can use it best, spectrum trading can in general be expected to promote economic and other benefits. The changes that we propose are intended to enhance the effectiveness of the spectrum market and so may be expected to enhance the benefits derived from spectrum.

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<sup>33</sup> <http://www.ofcom.org.uk/consult/condocs/sec/>

## v) Compliance with EU requirements

3.16 This has been discussed in paragraphs 2.36 onwards in the previous section. The proposals described in the following sections are designed to be compliant with the applicable EU requirements.

### Options to achieve our policy objective

3.17 We consider five main options.

- **Option 1: status quo**

The trading process would remain unchanged. All buyers and sellers, including band managers, would have to notify us of their intention to trade. We would publish details before the trade takes place, decide whether to consent and publish details of completed trades. Time-limited transfers would require separate transactions to close them out at the end of the transfer period.

- **Option 2: modify the current licence transfer trading process**

This would allow certain changes to be made to the trading process within the framework of section 30 of the WT Act in its present form. For the generality of licence classes or types of trade, including all currently tradable licence classes, we would dispense with the need for us to consent to trades. We would also simplify the process for time-limited trades to involve just a single transaction. These proposals are described in section 4 below.

- **Option 3: introduce a variant of spectrum transfer without the surrender and re-issue of licences**

Under this proposal the transferor's licence would not be surrendered, nor would the transferee be issued with its own licence document. Instead the transferee would have rights to use the spectrum by virtue of an undocumented licence that has arisen as a result of the transfer. At the expiry of the agreed period the rights of the transferee would naturally expire and again become the exclusive rights of the original licensee. We call this 'transfer without licence issue' ('TWLI'). TWLI could be introduced by regulations under section 30 of the WT Act. This proposal is described in section 5. We envisage that option 3 would be introduced in conjunction with option 2.

- **Option 4: when the EU legislative framework has changed, introduce a new form of spectrum trading called leasing**

Under option 3 the trading process would be simplified and streamlined but the parties would still have to notify us in advance of a transfer and we would have to publish details after the transfer had been completed. Under option 4, we would simplify the process further by introducing a new form of spectrum trading that we call 'spectrum leasing'. Leasing would enable individuals to make use of a licensee's rights under its licence, but without that licensee having to transfer its rights under the Trading Regulations. This means that a licensee could authorise another person to use its rights to use the spectrum without having to follow the procedure set down in the Trading Regulations. In particular, leasing would not be subject to the requirements that we be notified of the transaction prior to its occurring, that we publish details of it once it has occurred, that the licensee surrenders its licence and that we issue a new licence or licences. At this stage, we envisage that spectrum leasing might apply to transactions that are intended to last for periods of up

to 24 months. Leases for longer periods might also be possible but would be subject to additional procedural requirements. This could be taken forward once the new EU Framework is amended as proposed (see paragraph 2.39). Leasing would make the trading process considerably more dynamic. This proposal is described in section 6. We envisage that option 4 would be introduced in conjunction with option 2.

- **Option 5: automation**

As an alternative to spectrum leasing, it would be possible to automate the present trading process. This would involve investing in business systems so that we could receive notifications by email and process and issue licences on-line. This would enable the process to be made faster without the need to introduce spectrum leasing but require investment in new systems. This is covered in section 6.

- 3.18 A sixth option would be to remove all current procedural obligations for trading except the need to notify minimal information to Ofcom. Notification would enable the licensing database to be kept accurate but there would be no obligation for Ofcom to publish details of trades. This option could lead to reduced transparency and would be incompatible with present and current draft future EU requirements. It is mentioned as a hypothetical prospect but would not be possible without further amendments to the EU framework and WT Act. These are unlikely to be feasible within the next five years so we do not discuss this option in detail in this document.
- 3.19 It would be helpful if stakeholders could provide evidence on the matters discussed in this section as well as in relation to the specific proposals in following sections.

*Question 1: Are there any features of the present spectrum trading regime that need to be changed in order to encourage or facilitate spectrum market developments? If so, have we correctly identified the features that need changing? What features, in addition to those described in following sections, would be advantageous to change? It would be helpful if you would explain the reasons for your suggestions with evidence of practical difficulties being caused at present and estimates of the costs that these impose and the savings that your suggestion would gain.*

## Section 4

# Changes to the licence transfer trading process

## Introduction

4.1 This section describes our proposals to simplify the current licence transfer trading process in order to remove unnecessary regulatory burdens for band managers and others while maintaining essential requirements and complying with EU requirements.

### A targeted approach to spectrum trading rules: potential risk factors and their mitigation

4.2 The present Trading Regulations do not differentiate between trades that are likely to have a significant effect on citizens and consumers and those that are not. A trade arising from a change of ownership of a taxi firm is unlikely to raise policy, competition or spectrum management issues and could be allowed to proceed by a simpler process than the sale of a substantial amount of spectrum covering an appreciable area of the UK. This has led us to review whether, in the light of experience, the present trading process is unduly burdensome for some types of trade. A risk-based approach, in which certain procedural requirements are targeted on specific types of trade, could be more proportionate than applying the same requirements on a blanket basis to all transactions.

4.3 In developing a more targeted and proportionate regime, it is necessary to consider the factors that need to be taken into account in deciding which transactions should be subject to a more rigorous procedure, such as requiring the parties to obtain our consent before entering into a transaction (as discussed at paragraph 4.17 below). Possible factors include:

- the economic and market significance of the transaction;
- the licence class or type or business sector; and
- the risk of harmful interference and technical complexity.

4.4 These are discussed in greater detail in following paragraphs. The identity of the buyer might be a further consideration.

#### i) Economic and market significance

4.5 Spectrum can be an essential input for a new market entrant or for an incumbent to expand its services geographically or otherwise. Acquisition of spectrum might, in some circumstances, have an impact on effective competition. We have, as related above in paragraphs 3.12 to 3.14, considered this issue in detail and concluded that general competition powers should be sufficient to mitigate this risk. Pre-notification of proposed transfers would enable us to consider whether to act under competition legislation in respect of planned or actual transactions. As discussed in the following sections, under our proposals for simplifying and streamlining the transfer process, the parties to a transfer would continue to notify us in advance of transfers. In

addition, publication of planned transfers in the Transfer Notification Register (TNR) would enable third parties to raise with us any concerns they might have on competition grounds.

## ii) The licence class or type or business sector

- 4.6 Certain licence sectors may possess particular characteristics that, exceptionally, require a more rigorous treatment in relation to spectrum trading. This will necessarily need to be assessed on a case-by-case basis. The band manager with PMSE obligations provides a possible example as mentioned in paragraph 4.18 below.

## iii) The risk of interference and technical complexity

- 4.7 Partial trades can in some circumstances give rise to a risk of harmful interference to third parties. We therefore need to extract information from the application in order to construct the new licences arising from the trade. This may involve a collaborative process with the parties in particularly complex cases. We would still aim to process the transaction within 42 working days.
- 4.8 In some cases, the parties might wish for the licence terms and conditions to be varied in advance of the trade in order to provide greater security against harmful interference. This variation might take longer than 42 days to process, especially if there is a need for us to consult third parties that might be affected.

*Question 2: Do you agree with our targeted approach to deciding which trades need to be subject to more rigorous procedures and our specific proposals? Are there other factors that we should take into consideration or particular licence sectors or types of transaction that should be subject to additional procedural requirements?*

## Our specific proposals to amend the current trading process

- 4.9 As described in section 2 above, the current licence transfer trading process involves six stages. The following paragraphs discuss these in turn.

### Step i: notification

- 4.10 Once the parties have agreed to the terms of the transfer, they must notify us about the proposed trade. We must receive a document confirming that all the parties have consented and that is signed on or on behalf of each of them. We also require certain other information in order to process the trade. This requirement seems a sensible procedural step for us to satisfy ourselves that the transfer is legitimate and in order to keep licensing records up to date. It is, moreover, required by the EU framework and this requirement seems likely to remain. We therefore are not proposing now to change it.

### Step ii: ex-ante publication of the intention to transfer

- 4.11 We do not customarily consult on changes in the identity of the person holding a licence as this does not usually affect third parties' interests. Publication of information can help the market function and the fact that a transaction has taken place can help the market function more efficiently. On the other hand, publication has the potential to add to transaction costs and to make the process more cumbersome.

- 4.12 The TNR provides information on licences that have been traded or are the process of being traded. The publication of trading information enables interested parties to find out about the number of transactions that have taken place and the spectrum that is currently being traded.
- 4.13 The TNR can be searched according to the date the proposed transaction was instigated or the trade took place, the buyer's name, seller's name or type of licence. The TNR provides information on the spectrum being traded and who the buyer and sellers are.
- 4.14 Publication of details of proposed transactions increases the amount of information available to the market. It enables interested parties to find out about the number of transactions that are taking place and the spectrum that is being traded and should aid the ability of the market to direct spectrum to the use that generates the greatest benefits for citizens and consumers. The proposed replacement for article 9 of the Framework Directive expressly requires proposed transfers to be made public but does not specify the information that should be made available.
- 4.15 We therefore intend to continue to include details of proposed transfers in the TNR even though routine trades could be processed in a matter of days so there might not be much of an interval between pre-transaction publication and execution.
- 4.16 TNR entries currently include details of the licence type, the identity and contact details of the buyer and seller and the status of the transaction. We are consulting separately on the publication by us of information about spectrum<sup>34</sup>. That consultation seeks views on whether the information that we currently provide, including in the TNR, is sufficient or should be expanded.

### Step iii: Ofcom consent

- 4.17 As explained in section 2 above, the grounds, which are set out in regulation 9 of the Trading Regulations, on which we may withhold consent to a proposed transfer have been deliberately curtailed to the minimum considered necessary. This has been done in order to keep regulatory uncertainty as low as possible. In considering the requirement to obtain our consent to trades, the following factors seem relevant.
- In granting a WT licence, we are entitled to take into consideration the applicant's ability to comply with licence terms and conditions<sup>35</sup>. There are certain licence classes in which licences are granted subject to compliance with particular obligations. It would frustrate the underlying policy intent in such a case if a company could acquire a licence through trading when it would have been ineligible for the initial grant.
  - There are certain legacy licences that contain conditions (known as 'non-spectrum conditions') that are not directly related to the prevention of harmful interference or promotion of technical spectrum efficiency but are, rather, intended to secure wider policy objectives, for example roll-out obligations aimed at ensuring that service is provided to a given proportion of the geographical area or population by a given time. Although as a general rule, we do not favour including such conditions in new awards, it would not be right to allow transfers to persons unlikely to be able to fulfill them where they exist.

<sup>34</sup> [Providing spectrum information | Ofcom](#)

<sup>35</sup> Paragraph 3 of schedule 1 to the WT Act and regulation 4 of the Wireless Telegraphy (Limitation of Number of Licences) Order 2003 SI 2003/1902.

- It might be necessary to prevent a transfer from taking place on grounds of national security or to comply with an international obligation or direction from the Secretary of State.
- 4.18 These grounds may justify a requirement to obtain our consent in some cases but it is doubtful whether this is so for all licence classes as a general rule. For example, relatively few licences contain non-spectrum conditions or raise national security issues; and we have not found it necessary to withhold consent to any trades that have so far taken place. This suggests that, while there may be a need in some licence classes to include a requirement for us to give our consent, it is disproportionate for the generality of cases. We therefore propose that the general requirement to obtain our consent should be lifted for all currently tradable licence classes and reserved in future for selected licence classes for which it is judged necessary and proportionate. For example, we have proposed that the band manager with PMSE obligations should be required to obtain our consent before allowing any non-PMSE use in the spectrum awarded to it<sup>36</sup>.
- 4.19 Dispensing with the requirement to obtain our consent would forego an element of regulatory control. Instead of withholding consent, we would need to rely on exercising our powers of licence variation or revocation against the buyer having first given notice, received representations and given the licensee the opportunity to take remedial steps as laid down in schedule 1 to the WT Act. We consider that this would provide us in the generality of cases with adequate and proportionate scope to take any necessary regulatory action on the grounds set out in the regulation 9 of the Trading Regulations.
- 4.20 The proposal would not be free of risk. However, we think it likely that this would, for the generality of tradable licences, be outweighed by the advantages of faster process and reduced regulatory uncertainty. It would also be consistent with our duty to lift regulatory burdens that are no longer considered necessary.
- 4.21 The circumstances in regulation 7 of the Trading Regulations in which transfers would be forbidden, relating to non-payment of fees, licence variation or licence revocation, would continue to apply. This is necessary to prevent evasion of important aspects of the licensing regime. For example, it could undermine the licensing regime if a licensee could evade pending revocation proceedings or payment of licence fees by transferring the licence to an associate.
- 4.22 We have considered the possibility of mitigating the risk by taking a power of direction, akin to that in regulation 10 of the Trading Regulations, to require the parties to take steps, possibly including reversing the trade, on any of the grounds listed under regulation 9. This would provide a fallback power of intervention. On the other hand, it would increase regulatory uncertainty and the parties might consider it necessary to seek pre-clearance from us, which would require us to fetter our discretion and delay execution, largely defeating the purpose of dispensing with the consent requirement. On balance, we are inclined to believe that it would be unnecessary and undesirable to take this fallback power.
- 4.23 We would welcome views on the proposal to dispense with the requirement for the parties to obtain our consent for the generality of licences including all currently tradable licence classes.

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<sup>36</sup> See paragraph 3.67 of our consultation document *Digital dividend: band manager award– second consultation on detailed award design*, published 22 June 2009 at <http://www.ofcom.org.uk/consult/condocs/bandmanager09/>.

*Question 3a: Do you agree that the requirement for Ofcom's consent to proposed transfers should be dispensed with for the generality of tradable licences subject to justified exceptions?*

*Question 3b: If the need for prior consent was removed, do you consider that Ofcom should continue to have a power to give ex-post directions?*

#### **Step iv: Notification of Ofcom's decision whether to consent to the proposed transfer**

4.24 If we dispensed with the need to obtain our consent, this step would become redundant.

#### **Step v: Ofcom puts the transfer into effect by processing and issuing licences**

4.25 The following section 5 discusses relaxing this requirement by introducing TWLI for the spectrum awarded to the band manager with PMSE obligations. Section 6 discusses the eventual introduction of spectrum leasing, which would also omit this step.

#### **Step vi: Ofcom publishes information about the transfer after it is completed**

4.26 Publication of information about transfers provides useful information to the market and is required by both the current and expected replacement EU frameworks. We therefore do not plan to change this and are not consulting on its removal.

4.27 The EU requirement does not specify the information that should be published. The information that we currently publish is set out in the Register Regulations. In drafting these regulations, we aim to aid transparency without being excessively burdensome or publishing sensitive information. The regulations do not currently require, for example, disclosure of transaction values. Our trading documentation invites parties to disclose price information to us voluntarily but in practice they decline to do so. There is a trade-off between transparency and withholding sensitive commercial or security information. This is explored further in our spectrum information consultation referred to in paragraph 4.16 above.

#### **Overview of the revised trading process**

4.28 Under the above proposals, the streamlined trading process would consist of the following stages for the generality of tradable licences. Omitted steps are shown for completeness in *greyed-out italics*.

- i) Notification of specified information to us by the parties before they trade
- ii) Ex-ante publication of details
- iii) *Our consent*
- iv) *Notification of our decision whether to consent to the proposed transfer*
- v) Putting the transfer into effect by processing and issuing licences
- vi) Ex-post publication by us of information on transfers after completion



- 4.29 This would be significantly simpler than the existing 6-step process and would be suitable for the generality of licences, including all those that have so far been made tradable. However, it may be necessary, as discussed in paragraph 4.2 onwards, to impose additional requirements for selected licence classes where it is necessary and proportionate to do so.

### **Time-limited transfers**

- 4.30 As discussed above, the Trading Regulations do not allow time-limited trades to be easily executed. The need for a separate reversing transaction initiated by the original transferee under contract makes the process more cumbersome and imports uncertainty. For example, the original holder might need to take legal action to force the other party to fulfill its obligation.
- 4.31 It would reduce the regulatory burden and legal uncertainty if time-limited transfers were possible without the need for a separate closing transaction and we remain committed to allowing this. We are studying the feasibility of doing so now for the generality of spectrum transfers although we would hope in any case to begin phasing in the change for certain categories of low-volume transaction, such as trades of public sector RSA. Meanwhile, our proposal to introduce TWLI, which is described in the following section, would provide a viable alternative mechanism for higher volume, temporary transfers between the band manager with PMSE obligations and end-users.

*Question 3c: Do you agree with our proposal to introduce single-transaction time-limited transfers?*

### **Summary and next steps**

- 4.32 This section has discussed possible changes to simplify the current process for transferring licence rights and obligations by the surrender and re-issue of WT licences. The changes discussed in this section could be made by amending our Trading Regulations. We will consider how to proceed in the light of responses to this consultation and, if we decide to change the Trading Regulations, publish a statutory notice consulting on the draft regulations.

## Section 5

# Transfer without licence issue

## Introduction

5.1 This section considers how we might introduce a spectrum transfer process that does not require the surrender and re-issue of WT licences. We refer to this as ‘transfer without licence issue’ (‘TWLI’). This is option 3 summarised in paragraph 3.17 above. It dispenses with the need for us to issue licence documentation to the transferee but it still involves the parties notifying us in advance of a transfer and publication of details of the transfer. We envisage that TWLI would be combined with the changes discussed in the preceding section.

## Description of TWLI and its benefits

- 5.2 TWLI could be introduced under the Framework Directive and section 30 of the WT Act as currently drafted. To recap the legislative position on spectrum trading:
- under section 8 of the WT Act, it is unlawful to establish or use a wireless telegraphy station, or to install or use wireless telegraphy apparatus, except under and in accordance with a licence granted by Ofcom;
  - section 30 of the Act provides for licensees to transfer to others their rights to use the spectrum;
  - such transfers must take place in accordance with the Trading Regulations made under section 30;
  - these regulations provide a comprehensive framework and procedure for transfers to take place as described in section 2 of this document, including, in particular, the manner in which applications must be made, the mechanism by which a transfer must be put into effect, the requirement on the parties to notify us of their intention to transfer rights and the requirement for us to publish the details of transfers that have taken place as required by the Framework Directive; and
  - a transfer may take place in one of four ways as shown in figure 2 above.
- 5.3 As the law currently stands, regulation 8(5) of the Trading Regulations prescribes that transfers must be put into effect by the licence holder surrendering to us its original licence and by us granting either a new licence to the transferee or, in the case of concurrent transfers, new licences to the original licensee and each transferee.
- 5.4 The proposal for TWLI would introduce a new way for a licensee to transfer its spectrum rights in that the original licence would not be surrendered; nor would the transferee be issued with its own licence document. Instead, the transferee would have rights to use the spectrum by virtue of an undocumented licence that had arisen as a result of the transfer.
- 5.5 Transfers under the TWLI process could take place on a time-limited, partial, and/or concurrent basis. Transfers undertaken under the new system, like all transfers, would have to comply with article 9 of the Framework Directive. They would have to

be notified to us in advance and we would publish details of the completed transfers. Aside from that, we would have no other involvement in the transaction.

5.6 TWLI would enable a measure of streamlining, though it would not go as far as the proposals on leasing under the amended EU legislative framework that are described in the next section. It would involve the following steps:

- notification of specified information to us by the transferor in advance of the transaction, which could be done electronically;
- giving effect to the transaction by contract between the transferor and the transferee; and
- publication by us of information about the transaction after its completion. We envisage doing this monthly in a separate section of the WT Register. Transferors making frequent use of TWLI would be required by trading regulations to send us monthly returns of transactions in a specified format for inclusion in the WT Register. Also, under the amended Framework Directive as currently drafted we would have to publish details of the intention to transfer rights.

5.7 It would not be necessary in TWLI for the transferor to surrender its licence or for us to issue a new licence document to the transferee.

5.8 The transferor would be subject to other requirements, for example to give transferees written details of the conditions attached to the use of the spectrum and to make available information about transferees to our personnel investigating harmful interference.

### Potential drawback of TWLI

5.9 Stakeholders should be aware that a potential drawback of the proposal is the loss of certainty and clarity that is currently provided in the grant of a documented licence. Where a transferee is using the spectrum without holding its own written licence from Ofcom, there is some risk if the arrangement is not well-documented in the contract that it will not necessarily have the same degree of clarity over its rights to use spectrum, what the limits of those rights are or when the rights commence or terminate. This could give rise to commercial uncertainty and disputes. The potential uncertainty over who is licensed at any given point in time could also lead to regulatory uncertainty between us and different licensees if it were necessary for us to take regulatory enforcement action.

5.10 As TWLI would be more burdensome than spectrum leasing and might, depending on EU developments, prove a short-lived expedient, we would propose to limit it to time-limited transfers lasting up to 24 months and, initially at least, to transfers made between the band manager with PMSE obligations and PMSE users. This would reflect our priority of facilitating commencement of the new band management arrangements for PMSE and avoid the additional regulatory overhead for stakeholders and us of changing from the present regime to TWLI and then to spectrum leasing, as opposed to moving direct to spectrum leasing. There may, however, be good grounds to extend TWLI to other licence classes as well. We will take into account the views of stakeholders in coming to a final decision.

5.11 We propose that users who held unwritten licences to use the spectrum would not be able to trade their rights under those licences.

- 5.12 We would particularly welcome stakeholders' views on the practical significance of any drawbacks of TWLI. We will take these views into consideration in deciding whether to proceed with TWLI and, if so, in which licence classes.

### The alternative to TWLI

- 5.13 Without TWLI we do not believe it would be operationally practical for the band manager with PMSE obligations to operate on the basis of spectrum trading. Instead, it would be necessary to wait for any necessary legislative changes to be made to allow spectrum leasing to be introduced as described in the next section. We are discussing this with BIS but the practical effect could be to delay the start of operation of the band manager with PMSE obligations. It would be helpful if stakeholders were to provide as much evidence as possible on the benefits and drawbacks of TWLI relative to the present regime and to spectrum leasing as described in the following section.

*Question 4a: Would our proposal for TWLI offer a worthwhile reduction in regulatory burden compared to the status quo? Please provide as much quantitative and qualitative evidence as possible of the benefits and the practical seriousness of any drawbacks.*

*Question 4b: Would TWLI streamline the trading process sufficiently for the band manager with PMSE obligations to operate?*

*Question 4c: Would TWLI generate worthwhile benefits for other licence classes, frequency bands or types of transaction despite the drawbacks? If so, in which other categories should it be introduced and how might the drawbacks be mitigated in practice?*

### Next steps

- 5.14 We will keep the need for TWLI under review in the light of developments on the EU Framework and stakeholders' views. We will clarify our intentions when we publish our statement following this consultation. If changes to EU and UK law are not too long delayed, instead of introducing TWLI it might be preferable to move directly to leasing.

## Section 6

# Spectrum leasing under a future EU legislative framework

## Introduction

- 6.1 Leasing would enable individuals to make use of a licensee's rights under its licence without the licensee having to transfer its rights under the Trading Regulations. The licensee would simply enter into an agreement with an individual (for example, by written contract) whereby the licensee would authorise that individual to use the spectrum for a set period of time. As with TWLI, spectrum leasing would avoid the need for the licensee to surrender its licence and our having to issue any new licences. In addition, transactions would not need to be notified to us; nor would we be required to publish details of those transactions once they had occurred. A leasing transaction would depend totally on a contract between the parties that allows the lessee to use wireless telegraphy equipment under and in accordance with the licence-holder's licence. We envisage that spectrum leasing would be combined with the changes discussed in section 4 to the licence transfer process.
- 6.2 The legislative position as it now stands prevents us from introducing this form of trading. However, we could implement it under the proposed new Framework Directive as currently drafted. This draft refers to the "transfer or lease of individual rights to use radio frequencies". It requires the notification of the intention to transfer of rights and publication of the transfer's completion. But it places no such requirements on leases.
- 6.3 As explained in paragraph 6.14, it is not currently certain when the Framework Review will be completed. We will discuss further with BIS how to take our proposals forward in the light of the outcome of this consultation and progress of the review.
- 6.4 We also consider in this section interference and enforcement matters, including the special arrangements we are considering to ensure effective coordination of wireless users at the London 2012 Olympic Games and Paralympic Games.
- 6.5 Automating the trading process might be an alternative to introducing leasing and we examine the merits of that option in this section.

## What is spectrum leasing?

- 6.6 Spectrum leasing is a mechanism by which a licensee may authorise someone else to exercise its licence rights, without undertaking a 'transfer' of those rights to that user. The way that this would work is that the licence holder would simply agree with another person (for example, by written contract) for the latter to use its rights to use the spectrum for a defined period of time. As with TWLI, there would be no need for the licensee to surrender its licence, or for us to issue any new licences. There are, however, two important distinctions between TWLI and 'leasing':
- First, unlike in a TWLI transaction, those authorised by the licensee to 'lease' the spectrum would not themselves be licensees. This means that they would not have a direct relationship with us. Rather, the licensee would continue to hold the licence solely and exclusively in its name and would continue to be liable to us for

ensuring that it complied with those terms. It would therefore be in the interest of the licensee to make sure that its contractual arrangements required any 'authorised person' to operate WT equipment within the parameters of its own licence.

- Secondly, 'leases' would not be subject to the Trading Regulations or to the article 9 requirements that transactions should be notified to us and details of the transactions published.

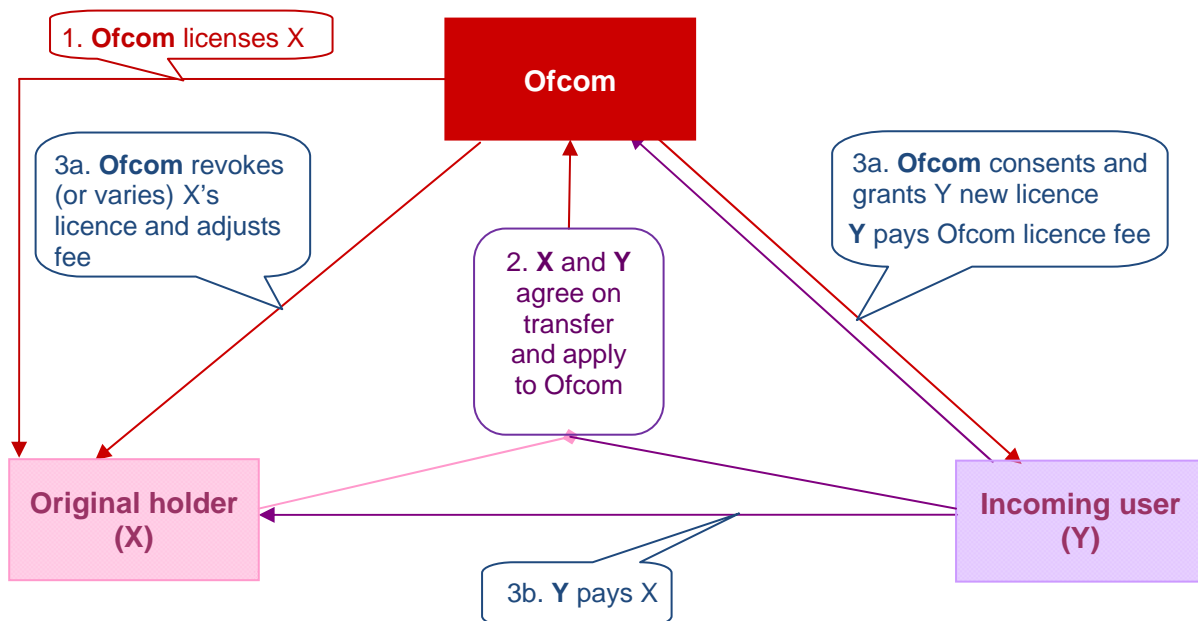
## Comparison of licence transfer and lease

- 6.7 The leasing arrangement, therefore, simplifies and expedites the regulatory process. Figure 4 below illustrates the difference between the transfer process under the current Trading Regulations and the leasing process. TWLI is similar to the transfer process in figure 4a with the exception that step 3a involving surrender or re-issue of the transferor's licence and grant of a new licence to the transferee does not take place. Instead, the transferee benefits from an undocumented licence from Ofcom.
- 6.8 The different natures of licence transfer and lease mean that they offer complementary advantages as outlined below. The introduction of leasing would give the parties flexibility to choose whichever better suits their circumstances, preferences and priorities. This additional flexibility can be expected to strengthen the spectrum market as it would open up new possibilities for trading as well as reducing transaction costs and processing time.
- Spectrum leasing would offer a simpler and more rapid process because, as with TWLI, it could take place without the need for the surrender and issue of WT licences. The terms of the lease would be recorded in the contract or other agreement between the parties without there being a written licence from us. This carries some risk, if matters are not well-documented in the contract, that there will not necessarily be the same degree of clarity over who is licensed at any given point in time, what the limits of those rights are or when each user's rights commence (or terminate). This could give rise to commercial uncertainty and disputes between the band manager and its customers.
  - The new EU framework would allow further flexibility for leases by eliminating the requirements for notifying the NRA or publishing details of lease transactions. This would appear to be especially advantageous for short-term transactions that are individually of low value, for example for PMSE. In such cases, the transaction costs and delay of the statutory transfer procedure can be sufficient to deter beneficial transactions.
  - Spectrum leasing would enable a band manager to retain control over the spectrum by remaining the sole licensee instead of transferring the licence rights to customers or sharing the rights with them under a concurrent arrangement. There might also be higher value or longer term trades in which the parties prefer lease to transfer, for example if the parties agree that the original holder should retain its position as the only person directly authorised or recognised by us.
  - We are considering with BIS whether changes would be necessary to the WT Act in order to allow spectrum leasing to be introduced.
- 6.9 Licence transfer involves a more cumbersome process than leasing but offers the transferee the greater security of holding a licence from us in its own right instead of relying on its agreement with the transferor. This might be important for long-term

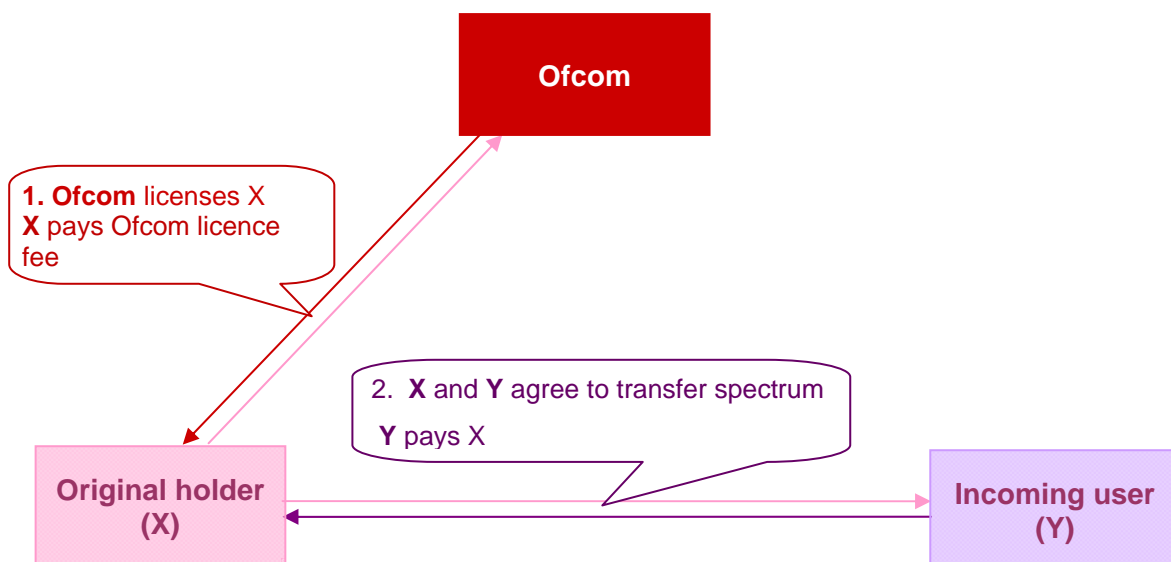
arrangements in which the transferee is intending to make substantial investment in infrastructure and in which transaction costs and execution times are less significant relative to the value and timescale of the transaction. In addition, the transferee's licence will be registered in our licensing database, which may provide a greater degree of certainty about the terms and conditions than a contract between the parties.

**Figure 4: The difference between licence transfer and lease**

**(a) Licence transfer (with licence issue to the transferee)**



**(b) Lease**



**Advantages of spectrum leasing**

6.10 The present trading process may be unnecessarily and disproportionately burdensome for certain transactions, especially those that are short-term, individually

low-value and high-volume. This is because, as described in paragraph 2.31 above, it involves the surrender and issue of WT licences.

- 6.11 Band managers could base their business on spectrum trading in accordance with the current Trading Regulations. The proposals in section 4 for amending the Trading Regulations would reduce the regulatory costs of so doing. However, the simplified procedure proposed there might still be excessively burdensome, cumbersome and expensive, particularly for short-lived and individually low-value transactions. The proposal for TWLI in the previous section would go some way to further streamline the process but it would still involve pre-notification of the intention to trade and post-trade publication. Spectrum leasing would further reduce transaction costs and streamline the trading process.
- 6.12 From the practical spectrum management point of view, we see no necessity for WT licences to be granted to band managers' customers, especially where those customers require spectrum access for short periods only. For example, approximately 90,000 PMSE assignments were made in 2008/09 and many were temporary assignments often for no more than 48 hours. The grant by us of a WT licence to each customer in such circumstances would serve no useful spectrum management purpose provided that certain procedural requirements relating to harmful interference and enforcement are followed (see paragraph 6.30 below). Moreover, the need to grant licences, in addition to the notification requirements, could impose a substantial regulatory overhead on the band manager and its customers.

### **Spectrum leasing and the EU Framework**

- 6.13 It is not possible, under the current law, to introduce the concept of spectrum leasing as described above. This is because it is fundamental to that concept that we would not be involved in such transactions; and that the notification and publication requirements of article 9 of the Framework Directive should not apply. These requirements oblige Member States to put in place procedures that enable undertakings to 'transfer' their rights to use spectrum, provided that certain conditions are met. These are, in particular, that the intention to transfer is notified to the NRA, which in this case is Ofcom; that transfers take place in accordance with procedures laid down by the NRA; and that transfers that have taken place are made public. The Framework Directive does not define what it is meant by 'transfer'. However, the expression has been given a broad meaning in section 30 of the WT Act to apply to all transactions where one person confers on another the benefit of that person's rights to use the spectrum. Accordingly, as the law currently stands, a 'lease' would be regarded as a 'transfer' for the purpose of section 30 of the WT Act. This means that such transactions would, like all other transfers, have to comply with the procedural requirements of article 9 and the Trading Regulations.
- 6.14 The Framework Directive is under review and, on the basis of the current proposals, Article 9 would be replaced by article 9b, which, as mentioned in paragraph 2.39, would give Member States discretion to introduce spectrum leasing without subjecting this to the procedural requirements for transfers. Member States may be required in some bands, and would be permitted in others, to allow both spectrum transfer and lease of individual rights to use radio frequencies. In other words, the new article 9b would add an explicit reference to leasing. It would also replicate the requirements that NRAs must put in place in relation to the transfer process (ie prior notification and publication) and add the further conditions that information must be published about proposed transactions (as well as completed ones) and that the parties should notify us when trades are executed. Importantly though, article 9b



does not specify any particular procedure for leasing. This would give Member States broad discretion about how to define leasing and the process by which leasing is put into effect.

- 6.15 The revision of the Framework Directive was voted on by the European Parliament just before the June 2009 European Parliament elections. However, agreement could not be reached with the Council of Ministers for reasons; discussions continue and will now enter into a process known as 'conciliation'. The timing and outcome of this process are at present uncertain. It is possible that it will be completed by the end of 2010 if it is successful. However, if it is not, the entire review process will start anew and might take another 2 to 3 years to complete.

### **Should there be additional requirements for long-term leases?**

- 6.16 Although spectrum leasing is expected to be of particular benefit for spectrum access for short periods, our analysis suggests that it might also be advantageous for longer term but still temporary arrangements. We would appreciate the views of stakeholders on this issue. However, there are reasons why it could be necessary and proportionate to impose additional requirements, akin to those for licence transfers, on longer leases.

- For long leases, it is of greater importance to ensure that details are published in order to ensure transparency. In the case of short leases, this is of less importance as use of the spectrum by the customer will be short-lived and details of the customer are of less significance in terms of promoting market efficiency or relevance to others.
- Because of its greater permanence, a long lease has the potential to have a similar effect on the market for electronic communications services as a transfer and should, arguably, be subject to a similar degree of oversight by the regulator, for example for reasons of competition or public interest.

### The choice of lease length as the criterion for imposing additional requirements

- 6.17 There might be other criteria that could be adopted, such as the economic value or significance of the assignments being traded. Paragraphs 4.2 onwards discuss some factors that may be relevant in deciding whether a particular transaction requires greater scrutiny. However, this could be difficult to assess objectively in a way that would give regulatory certainty to the parties. Length of lease is both clear and straightforward to apply. However, we are open to alternative suggestions for criteria that are workable, offer regulatory certainty and are not excessively complex to apply.

### The choice of 24 months as the watershed for leases

- 6.18 If lease length were used as the criterion, we would need to decide the watershed that marked the boundary between the different regimes for short-term and long-term leases. Our initial thought is that 24 months would seem an appropriate demarcation. This would be long enough to allow the great majority of PMSE assignments to take place under the simpler lease process while ensuring that transactions likely to have a major market impact continue to be subject to a higher but proportionate degree of transparency and regulation.
- 6.19 If the watershed period was shorter, there might be an appreciable number of beneficial transactions deterred by transaction costs or delay. Extending the

watershed to a longer period would increase the risks but the incremental benefits would be lower. This is because longer leases are likely to be of higher value and so a given absolute increase in transaction costs would be relatively less likely to deter a beneficial transaction; and the greater lease length would mean that process speed would be less critical. However, to provide flexibility, we propose that we should be given power to adjust the watershed by regulation in the light of experience and changing circumstances.

6.20 We would welcome views on whether 24 months would be an appropriate watershed.

### The lease process

6.21 If lease length is adopted as the criterion, we would propose that leases for periods in excess of 24 months should be subject to similar procedural requirements as other licence transfers that involve ex-ante notification and ex-post publication in order to provide sufficient transparency and regulatory supervision. Trades would have to be notified to us so that we are aware of them and can consider taking any necessary action to maintain effective competition; and we would publish details after they had taken place in the interests of market transparency. This is summarised in the following table, which compares licence transfers with short and long leases taking account of the changes that would be made by the amended Framework Directive to the licence transfer process.

**Table 2: Comparison of licence transfer and lease processes**

	Licence transfer	TWLI	Long spectrum lease	Short spectrum lease
<b>Duration</b>	No limit	Up to 24 months	No limit	Up to 24 months
<b>Process</b>				
• <b>Pre-trade notification</b>	✓	✓	✓	✗
• <b>Pre-trade publication</b>	✓	✗	✓	✗
• <b>Grant of new licence(s)</b>	✓	✗	✗	✗
• <b>Post-trade notification</b>	✓	✗	✓	✗
• <b>Post-trade publication</b>	✓	✓	✓	✗
<b>Duty to keep records and make available to Ofcom</b>	✗	✓	✓	✓

6.22 In view of the different characteristics of licence transfer and lease, we see advantage in allowing the parties to a time-limited trade freedom to choose which of the two to use. However, it seems plausible that the relative advantage of leasing would be greatest for short periods as speed of process and transaction costs are then likely to be relatively more significant in practical terms as summarised in the following table.

**Table 3: Characteristics of transfer and lease**

Process \ Length of trade	Up to 24 months	Longer than 24 months
<b>Licence transfer</b>	<p>May be too cumbersome and costly for short-term transactions</p> <p>Greater legal and commercial certainty for purchaser as it holds its own WT licence</p>	<p>Transaction processing time and cost less critical for long-term, high-value transactions</p> <p>Greater legal and commercial certainty for purchaser as it holds its own WT licence</p>
<b>Lease</b>	<p>Simpler process offers particular benefits for low-value short-term transactions</p> <p>Vendor remains sole licensee. Customer does not have security of licence in its own name</p>	<p>Transaction processing time and cost less critical for long-term, high-value transactions</p> <p>Vendor remains sole licensee. Customer does not have security of licence in its own name</p>

### Would the facility for long leases and short-term transfer offer advantages?

6.23 We have considered whether to specify that time-limited trades of up to 24 months should only be executed by lease and longer term trades by licence transfer. The alternative would be to leave it to the parties to decide which process to adopt to put the trade into effect. The first option would be simpler in regulatory terms but less flexible. We incline to favour the more flexible option but would welcome views on whether the benefits of the additional flexibility would justify the additional regulatory complexity and, specifically, whether the ability to undertake short-term time-limited licence transfers and long-term leases would offer practical advantages to stakeholders.

### Leasing would be available in selected licence classes ...

6.24 We envisage that spectrum leasing would initially be made available for all currently tradable licences. This could be implemented by regulations made by us, which would avoid the need to modify large numbers of licences at the same time. However, if only a handful of licences were affected, it might be more convenient to include the conditions in the individual licences rather than to make regulations.

### ... and be subject to conditions

6.25 It would seem to us to be necessary for spectrum management purposes to impose certain requirements on the procedure even for short spectrum leases, for example to ensure that the customer is aware of the licence terms and conditions to which use of the spectrum is subject and that band managers and others keep records of customers' details so that we can effectively investigate and resolve cases of harmful interference.

6.26 The sort of conditions we propose to impose would allow band managers and other licensees to authorise others (referred to as 'customers') to install or use radio equipment in accordance with the terms of their licences subject to complying with various requirements, for example, to:

- give customers written details of the licence conditions of its licence, which apply to customers' own use;
- keep records of customers' details; and
- make these available to us on request.

6.27 We will consult further in due course on the exact nature of those obligations and how they may be met. Meanwhile, we would welcome views on the conditions that should be imposed on band managers or others undertaking spectrum leasing.

### Other characteristics of spectrum leases

6.28 We propose that spectrum leases would have other characteristics as follows:

- Liability to pay licence fees to us would remain with the band manager or other licensee undertaking spectrum leasing. The parties would, of course, be free to take this into account in negotiating the 'rent' paid by the customer to the band manager.
- Sub-leasing by a customer would not be permitted. The facility for the customer of a leasing transaction to sub-lease would be of limited advantage for short leases and would add to the complexity of the regulation. It would also complicate investigation of harmful interference by adding links to the chain between the registered licensee in our records and the end-user. Where the transferee itself is likely to want to trade-on the spectrum, the original trade would have to be arranged via the licence transfer procedure.
- Band managers and other suppliers would be allowed to partition their assignment by frequency or geographical coverage in granting leases. In other words, they would be free to sub-divide their assignments as they wish.
- It would be necessary to include an anti-evasion provision to prevent longer-term transactions being structured as a succession of short leases to the same end-user to take advantage of the lesser degree of regulatory oversight.

### Application to RSA

6.29 RSA is a spectrum management instrument that is available, subject to Ofcom regulations, to users, such as Crown bodies, whose spectrum use is not licensable. We have a duty to take account of the existence of a grant of RSA in the same way as we would in respect of a licence. The grant of RSA does not authorise spectrum use in the way that a WT licence does and so the transfer of an RSA cannot confer on the new holder any right to use the spectrum. The nature of RSA means that contractual leasing would not be suitable for a Crown body wishing to release spectrum to a commercial undertaking, as the RSA holder would not be in a position to authorise the use of the spectrum by that undertaking.

### Investigation of harmful interference

6.30 Band managers will not possess the statutory powers of investigation that we have under the WT Act. However, they will be expected to ensure that their customers operate in accordance with the applicable licence terms and conditions, if harmful interference arises, to make such enquiries as are necessary and to take such steps as they can under the terms of their contract with their customers to resolve the

problem. Should the harmful interference persist, the case might need to be referred to us for investigation and resolution. Information held by the band manager would then be passed on request to us in line with the requirement proposed at paragraph 6.25 above to aid investigation and resolution. In some cases, it might be necessary for us to take enforcement action against the customer or band manager, for example if the band manager had failed to take reasonable steps to prevent or deal with breaches of licence conditions.

- 6.31 Under leasing, we would not have a direct relationship with the lessee and so would not be able to enforce the terms of the leaser's licence against the lessee. However, section 45 of the WT Act allows us to make regulations prescribing the things that are to be done or not done in connection with the use of WT apparatus. This includes, in particular, a provision that requires those who are using WT equipment to stop using it on demand. This may provide a mechanism to regulate a lessee that is operating in breach of the band manager's licence.
- 6.32 We currently charge for investigating complaints of interference from business radio users in certain circumstances. See <http://www.ofcom.org.uk/radiocomms/ifi/enforcement/br> for further details. We would intend to adopt a similar approach in relation to band managers and to charge if our investigation shows that the user's own installation was at fault, the band manager's own band-planning was the cause or the band manager could have resolved the complaint itself as set out in paragraph 6.30 above.

### Uncertainties in timing

- 6.33 As related in paragraphs 6.13-6.15, the timing of the introduction of spectrum leasing would depend on the outcome of the EU Framework Review, which is at present uncertain. The EU package, including the revised Framework Directive that would allow spectrum leasing to be initiated, is undergoing conciliation, which is subject to a strict timetable of 6 to 8 weeks. If agreement is reached in that time, the new framework could be adopted around the end of 2009 and enter into force after a period that is likely to be around 12 to 18 months<sup>37</sup>. If, on the other hand, conciliation fails, the legislative process effectively begins anew and the revision of the EU framework could be set back by 2 to 3 years. This would be too late for the band manager with PMSE obligations, which is expected to become operational in summer/autumn 2010.
- 6.34 Various scenarios are possible. For example, if conciliation is successful and a shorter period of up to 12 months is allowed between adoption of the new EU framework and its transposition into national law, it might be possible to implement our proposals in the previous section for spectrum leasing by the time the band manager with PMSE obligations starts to operate. However, this is speculative at this stage. We will not know until later in the year whether conciliation will be successful, the length of the period that will be allowed for Member States to transpose the Framework Directive into national law or the timetable for transposition in the UK. In light of this spectrum leasing may not be a realistic option for the near future.

### Implications for the band manager with PMSE obligations and others

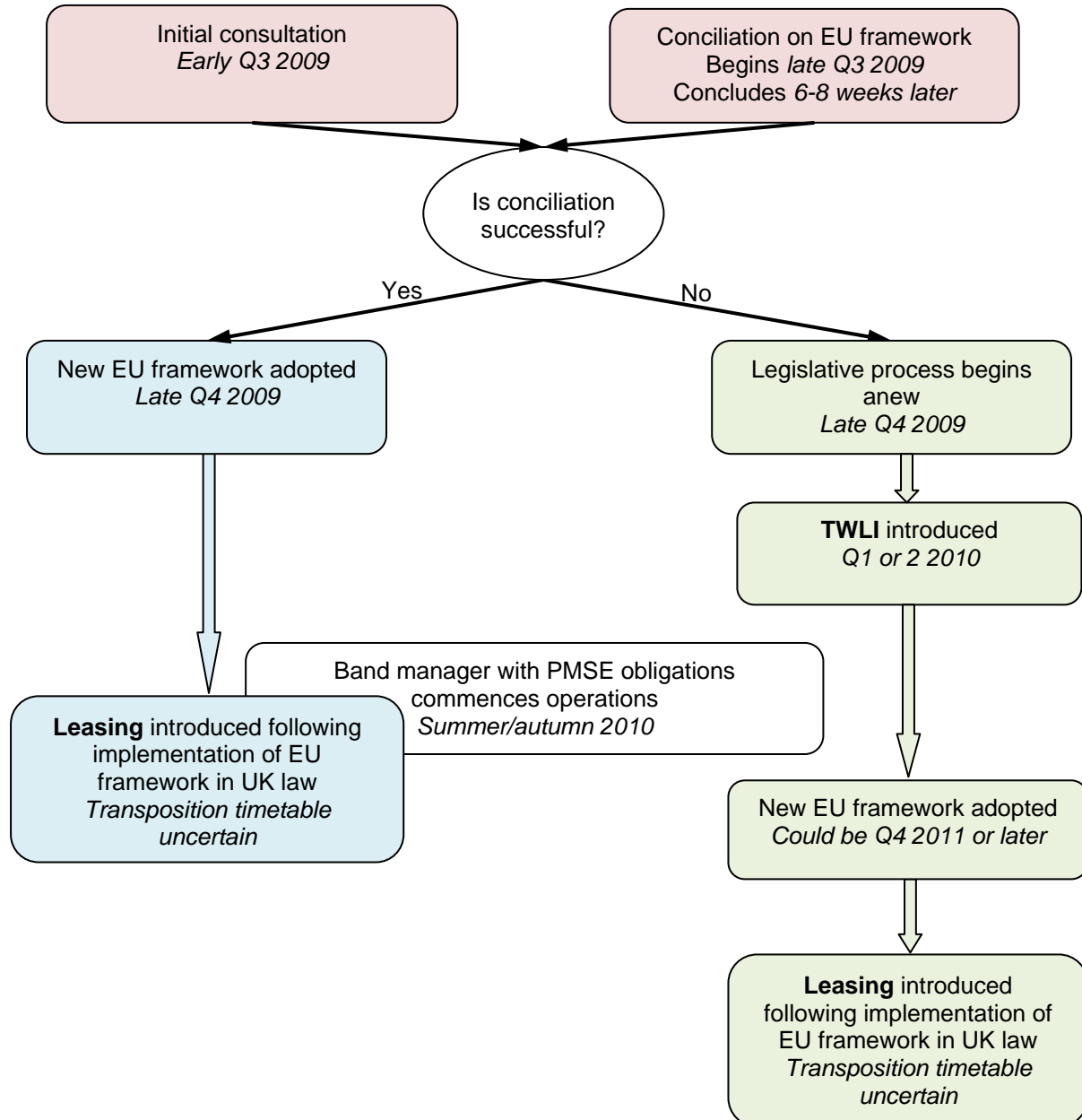
- 6.35 Without spectrum leasing, the band manager with PMSE obligations would have to operate on the basis of current legislation and would face significant additional operating expenses arising from the need for WT licences to be surrendered and

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<sup>37</sup> 18 months from adoption to completion was allowed for the current framework in 2003.

issued in the course of making assignments. In order to avoid this, and possibly to allow some of the benefits of spectrum leasing to be realised as soon as possible, we could introduce TWLI, if only on an interim basis. Figure 5 below illustrates possible alternative timelines depending on the outcome of conciliation.

**Figure 5: Illustrative timelines for simplifying spectrum trading process**



## The London 2012 Olympic Games and Paralympic Games

6.36 The London Games will dramatically increase demand for access to spectrum given the many thousands of wireless devices that will be required to organise and support the Games. We highlighted in our consultation on the draft spectrum plan for the Games<sup>38</sup> that the scale and complexity of this demand might, in certain circumstances, require us to introduce special arrangements to ensure effective coordination between Games use and other users of spectrum.

<sup>38</sup> <http://www.ofcom.org.uk/consult/condocs/london2012/>

- 6.37 We are currently examining a number of ways in which this can best be achieved. Options might include:
- identifying particular channels which are set aside for Games use and not available to normal applications for the duration of the Games.
  - establishing co-ordination zones where we will perform the necessary technical checks on any use to ensure proper coordination between Games and non-Games use. In the context of spectrum-leasing this would require a licensee to clear the details of any use it intends to permit within such a zone through us prior to permitting it; and
  - establishing geographical zones around Games venues where we will need to directly authorise any spectrum use.
- 6.38 In certain circumstances, it might be necessary temporarily to revoke licences to protect spectrum access for the Games. We believe that such circumstance is likely to be very rare and we would endeavour to explore all options to accommodate both Games and non-Games use prior to taking such action.
- 6.39 In our second, June 2009, consultation on the detailed design of the award of spectrum to the band manager with PMSE obligations, we set out our expectation that the licence to be awarded will restrict the band manager's operations around the Games venues during Games time and some associated test events. We expect to set out further details of these arrangements in the information memorandum for that award and subsequent co-ordination guidelines.
- 6.40 We are currently examining how such arrangements would work in practice but we believe that one key element will be a requirement on the band manager to provide high quality information about users who have been authorised to use its spectrum. This would include the terms and conditions on which the authorisations took place.
- 6.41 Similar considerations might also apply to any licensee acting as a band manager in spectrum where special arrangements need to be put in place to support coordination with Games requirements.

*Question 5a: Do you agree with our proposal to create a regime for spectrum leases? What do you see as the advantages and disadvantages?*

*Question 5b: What advantages would spectrum leasing offer over TWLI? Please provide as much quantitative and qualitative evidence as possible to support your view.*

*Question 5c: Do you agree with our proposal to limit the simpler leasing procedure without reference to Ofcom to shorter leases of up to 24 months? Would you suggest a different cut-off or a parameter other than lease length? If you suggest an alternative, it would be helpful if you would describe how this would work in practice.*

*Question 5d: Do you agree with our proposal (i) for longer leases to be subject to similar procedural requirements as licence transfers and (ii) to allow partial leasing but not sub-leasing?*

*Question 5e: Do you agree that spectrum leasing should be available for all tradable licence classes? If not, which should be omitted and why?*

## Automating the trading process

- 6.42 We have considered whether, as an alternative to introducing leasing, it would be possible to streamline the process by automating our and band managers' business systems and processes, for example by installing a system to handle the process electronically and provide on-line licensing. This could, in principle, reduce transaction costs and accelerate the process. However, automation could, as discussed in the impact assessment in section 7 below, require substantial investment in information systems and communications links, incur running costs and be vulnerable to delays and disruption if those systems or links malfunctioned. The capital cost to us alone has been estimated to be in the range £250,000 to £500,000 with £80,000 to £140,000 a year running costs if the Trading Regulations were amended as proposed in the preceding section so as to dispense with the need for our consent. If this was done, the following simplified procedure could be adopted.
- Ex-ante notification could be by email from the band manager to us. This could be a copy of the email from the band manager to the customer agreeing to the latter's application for an assignment. We could send an automated response copied to the customer granting the customer a licence to use the spectrum for the requested period.
  - The band manager would periodically send us a file containing information on trades for the preceding period, together with certification that this is a complete list of transfers. We would publish a read-only version of this file on our website.
- 6.43 We estimate that more complex automation, involving complex technical data capture with authorisation of each transaction by us would cost about twice as much.
- 6.44 These estimates do not include costs to stakeholders of installing and running systems to communicate with us.

## Conclusion on automation

- 6.45 Although automation could improve the efficiency of the process, it would still involve band managers and us in incurring substantial costs that could be avoided were leasing to be introduced as we propose. Amending the regulatory regime to simplify the trading process and thereby eliminate certain costs entirely, seems preferable to automating an intrinsically more cumbersome process and more consistent with our duty to avoid unnecessary regulatory burdens. Automation therefore seems a second-best alternative to instituting leasing. However, it would present a workable fallback that would allow band manager developments to progress in the absence of leasing and if TWLI is judged unsatisfactory.

*Question 6: What capital and operational costs would automated trading impose on band managers and their customers? Do you agree with our assessment that automated trading would be second-best to TWLI or leasing but would provide a workable alternative?*

## Summary and next steps

- 6.46 We suggest that it would be beneficial to introduce a new form of spectrum trading, spectrum leasing, that could proceed without the need for us to process licences and or to be notified of proposed transactions. This would be subject to requirements to



ensure that we can obtain timely access to information needed to investigate and resolve harmful interference.

- 6.47 We will discuss options and timing of any changes to the WT Act with BIS in the light of the outcome of this consultation and progress of the Framework Review. Meanwhile, if spectrum leasing as discussed in this section were for any reason delayed by the need to secure changes to EU or UK law, some of the advantages could be secured under the TWLI process described in the previous section, which could be introduced under current EU and UK law.

## Section 7

# Impact assessment

- 7.1 The analysis presented in this section represents an impact assessment, as defined in section 7 of the Communications Act. We would welcome any comments on it by the closing date for this consultation and will consider all comments before deciding whether to implement our proposals.
- 7.2 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 Communications 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 there is a major change in our activities and, 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*, which are on our website at: [http://www.ofcom.org.uk/consult/policy\\_making/guidelines.pdf](http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf).

### Ofcom's policy objective

- 7.3 The proposals in this document are intended to simplify and clarify the procedures for spectrum trading generally and reduce transaction costs and delays for all transactions. In particular, they aim to simplify the procedures for certain types of transaction, principally, but not solely, those carried out by band managers.

### The citizen and consumer interest

- 7.4 As stated in section 2 above, our primary duty is to further the interests of citizens and consumers. In so doing, we are required to secure in particular a number of objectives including optimal use of the spectrum. A reduction in regulatory obligations will be in the interest of citizens and consumers, as long as it does not prejudice the ability of us to perform our duties and its introduction does not in itself impose significant implementation costs on stakeholders or us.

### Consumers

- 7.5 The reduction in transaction costs for both stakeholders and us that we believe our proposals will make possible is likely to be particularly significant for high-volume and short-duration transactions that are individually of low value, as transaction costs are more likely to account for a higher proportion of the potential gains from such trades. Streamlined processes will make it faster and cheaper to gain access to the spectrum needed for innovation, competition and growth. This will enable new market entrants to acquire spectrum more quickly than if they had to wait for us to make it available and consumers will benefit from the resulting faster availability of new services and the effects of additional competition, including greater choice and lower prices.
- 7.6 The contribution to the efficiency of spectrum secondary markets from both a reduction of procedural rules and the emergence of band managers is particularly important given that spectrum secondary markets are unlikely to be very liquid even under the best circumstances. In addition and more specifically, the proposals will

make it possible for the band manager with PMSE obligations to operate on the basis of spectrum trading, permitting which will have the benefits identified in our consultations on the band manager award.

## Citizens

- 7.7 Citizens will benefit as public sector bodies will also be able to acquire and release spectrum more quickly through the market and our costs per transaction of overseeing spectrum trading will be lower.

## Assessing the effects of our proposals

- 7.8 Before assessing the various options discussed in preceding sections, it may be useful to outline the likely effect of simplifying the regulatory procedures for spectrum trading.

## Benefits

- 7.9 We believe that the set of measures considered and proposed in this consultation document could possibly bring the following benefits.

- **Lower transaction costs for sellers, buyers and intermediaries**  
A reduction in transaction costs can be expected to lead to an enhancement in the efficient use of spectrum as beneficial trades that may have been prevented by current procedural requirements may now take place. This would benefit consumers. It seems reasonable to assume that the lower the procedural obligations, the higher the benefits identified here; and that new band managers would be attracted into the market.
- **Lower administrative and operational per trade costs for Ofcom**  
Some procedural costs that we have to currently incur will be avoided. Even if these costs do not themselves prevent beneficial trades from taking place, their removal nonetheless constitutes a saving for each trade and lowers our average processing cost. As for the above benefits, as procedural requirements are reduced, so are the costs per trade to stakeholders and us.

## Costs and risks

- 7.10 Simplified regulatory procedures could also impose costs and carry risks as follows.

- **One-off costs related to the implementation of the proposed measures**  
As a general, but not universal, rule, more radical change is more expensive to implement.
- **Cost for Ofcom from increased demand**  
The reduction in transaction costs that arises from a simplification of procedures will likely lead to trades taking place that would otherwise not have occurred. This would mean that there would be an increase in the number of trades that we process. Although the average cost per trade would be lower because the procedure would be simpler, the total administrative cost could be higher depending on whether the increase in trading volume was large enough to offset the reduced cost per trade.
- **Unwanted consequences**  
Reduced oversight by us as a result of simpler regulation may impair our ability to

perform our spectrum management functions or have other unintended consequences. Reducing *ex-ante* oversight, for example by reducing the checks imposed by us before trades take place, carries a risk that we will be unable to forestall a particular detrimental outcome, which in some, but not necessarily all, cases could be remedied *ex-post*. Where an individual is using the spectrum without a written licence (either as a transferee under TWLI or as a lessee under the leasing regime), there is some risk that it will not necessarily have the same degree of clarity over its rights of use and this could cause regulatory uncertainty. Furthermore, we might not have as comprehensive information about how spectrum is being used, which may make it more difficult to investigate and deal with disputes involving harmful interference.

- 7.11 We have not undertaken a full quantification of the potential costs and benefits of each of the options. The effect of the proposed changes will heavily depend on the effect of these options on commercial decisions by stakeholders and critically on the impact on the level of trading, both of which are difficult to predict. In this case, quantified estimates would inevitably be subject to a large margin of uncertainty and so be unlikely to aid our decision-making to a material degree. However, we believe that it is important to attempt to understand the costs to stakeholders and to us of the various options in qualitative and relative terms and the following paragraphs present our analysis of these. Therefore, we have attempted a preliminary estimate of the costs of some of the options for us. We would welcome any additional evidence on the likely benefits or costs for stakeholders. We believe that the costs per trade are likely to decline under all options considered in this consultation compared to the *status quo*.
- 7.12 Quantification of benefits is particularly difficult because it would require identifying whether some otherwise valuable trades are being deterred by the current procedures. In this respect it is worth noting that trading volumes, while growing, have so far been comparatively low. However, as we intend to extend trading and liberalisation to other frequencies and licence products, it is likely that more trades will be deterred if procedures are overly complex. This is particularly likely for low-value and time-sensitive transactions such as those for PMSE. In any case, even if the benefits from simplified trading procedures are uncertain, we believe that the potential for deterring even only a few trades might justify the costs of the proposed reforms, especially when lower administrative and operational costs for stakeholders and us are taken into account.

## Analysis of options

- 7.13 Section 3 set out the six options we have considered.
- option 1: *status quo*;
  - option 2: amending the present trading process of transferring WT licences;
  - option 3: introduce a variant of spectrum transfer without the surrender and re-issue of licences;
  - option 4: introduce spectrum leasing;
  - option 5: automation; and

- option 6: either remove all current procedural obligations for trading or remove all obligations except the need to notify minimal information to us to maintain a central registry of spectrum assignments.

7.14 The following paragraphs qualitatively and, where possible, quantitatively compare the various options to Option 1, which represents the *status quo*, in terms of benefits, costs and risks. The *status quo* carries significant costs and risks that are worth outlining at the outset before discussing the other options. Option 2 could be introduced by itself or in conjunction with options 3 or 4.

### Costs and risks of option 1

7.15 Spectrum is a critical input into the provision of wireless services in the communications sector. Simply put, the ability to trade and to change use is critical if the use of spectrum resources is to be flexible enough to meet changes in demand and supply. For example, if the inherited spectrum allocation is inefficient, benefits can only be achieved if trading or change of use occurs.

7.16 The overarching aim of the measures considered under options 2 to 5 is to remove unnecessary restrictions that may hamper the efficient operation of spectrum markets and, hence, the efficient allocation of spectrum. The benefits need to be offset by the costs and risks of removing those restrictions. The presence of transaction costs in the form of overly complex procedural rules may have the effect of preventing a number of trades that otherwise may have occurred. Given the general presumption that trades are in most cases beneficial for citizens and consumers, it follows that overly complex procedures are likely to operate to disadvantage citizens and consumers. The size of this disadvantage will mirror the value of the beneficial trades that are prevented. This is discussed further below in the context of the benefits of the other options.

7.17 It appears to us that there are plausible arguments and some evidence that present trading procedures may be overly burdensome, that this might perhaps be a factor in the slow emergence of band managers and that it is likely to pose considerable logistical or financial obstacles to authorising spectrum access for PMSE in particular. We also believe that the likelihood that the current procedures prevent beneficial trades will increase as trading and liberalisation are further extended. One of the purposes of this consultation is to seek further evidence and views on these matters.

7.18 For example, the band manager with PMSE obligations will need to authorise spectrum access in less than a day and outside office hours in order to meet PMSE users' requirements. Given the volume of this activity, we estimate that we would incur substantial operating expenditure in excess of £1m a year to service this requirement on the basis of current regulatory requirements and manual trading procedures. We also estimate that stakeholder costs could exceed £300,000 a year. If other band managers emerged in the future with similar needs, the total cost would be even greater.

### Benefits of options 2 to 6

7.19 A full analysis of the benefits of spectrum trading was provided in the RIA for the Trading Regulations<sup>39</sup>. This concluded that spectrum trading could generate economic benefits ranging from £53m to £118m if the benefits of competition are

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<sup>39</sup> [http://www.ofcom.org.uk/consult/condocs/spt\\_wtr/statement/stwtr.pdf](http://www.ofcom.org.uk/consult/condocs/spt_wtr/statement/stwtr.pdf)

taken into account. This did not include the synergies with liberalisation, which could multiply those figures by a factor of more than nine based on the study by Analysys et al for the European Commission and referenced in footnote 14. For the purposes of this consultation, we need to assess the contribution to this overall value that simplified procedures could bring about.

- 7.20 Although the above estimates are inevitably speculative as the gains that are realised will depend on decisions by those using spectrum, trading is voluntary in nature and will not be undertaken unless considered by the parties to be mutually advantageous.
- 7.21 It may be useful to explain the potential impact of transaction costs in the form of overly complex procedures. We can distinguish two cases. First, suppose that procedures are so complex that they prevent some trades from taking place altogether. If regulatory procedures are complex or time-consuming, the costs of legal, economic and engineering advice needed by the parties to execute the trade may be sufficiently high to deter trades. If, as seems plausible, a large proportion of the transaction costs is independent of the size of the transaction, this will bear especially heavily on trades of relatively low value that may be prevented entirely as a result. The benefits from these trades, for both consumers and stakeholders, would be totally foregone. For example, new services valued by consumers would not be provided. Second, consider those trades that take place despite the transaction costs. In this case the foregone benefits from overly complex procedures arise because it is more costly to undertake the trade. For example, the transaction may take longer and services may be introduced later with a forgone benefit for consumers and stakeholders. Clearly the forgone benefits are larger when trades are deterred altogether and the underlying services are not offered compared to if their introduction is delayed. In either case, overly complex procedures could give rise to detriment for consumers and stakeholders. Given that spectrum markets are likely to be thin, even a marginal improvement could significantly aid market liquidity and efficiency and increase trading volumes.
- 7.22 This last point is potentially important in the context of the proposed changes. The ability of a newly-established market, such as that for spectrum, to correct historical misallocations may take some time to develop. This is for two main reasons. First, information may be scarce and prospective traders need time to gain sufficient confidence about the real value of spectrum to venture into the market. Second, different frequencies are not widely substitutable and there may, in practice, be a multiplicity of different spectrum markets instead of a single market. This exacerbates the first factor. The available data indicate that trading volumes have been low in other countries that allow spectrum trading, such as Australia.
- 7.23 It is not possible to quantify the direct impact of simplified trading procedures with any degree of accuracy. There is some evidence from the USA that simplifying procedural rules and, hence, reducing transaction costs may allow transactions which otherwise may have not occurred. As part of its Secondary Markets Initiatives, the FCC has simplified the procedures for leasing arrangements. For cellular and Personal Communication Services ('PCS') licences alone, the US Wireless Association has argued that, since simplified secondary markets rules were put in place in 2004, approximately 180 cellular and PCS secondary market arrangements have been accepted or granted by the FCC. This represents about 10% of turnover in two years. However, it is not clear whether or not the increase in secondary trading was solely due to the procedural reforms.
- 7.24 Even if we are not able to quantify the benefits for citizens and consumers from simplified trading procedures, it seems plausible that there is a high likelihood that

these will be significant. This is especially the case if overly complex procedures prevent the emergence of intermediaries such as band managers. Low-value and short-duration trades are those most likely to be hampered by complex procedures. This is particularly relevant in the context of the band manager with PMSE obligations.

- 7.25 In addition, we understand that trading procedures are probably simpler in those countries that have introduced trading. Some countries, Australia, New Zealand and El Salvador, only require trades to be notified in order to maintain a register of spectrum right-holders. In the case of New Zealand, changes of ownership can be executed electronically to minimise transaction costs. In others, the regulator's approval is needed but the time to approve varies considerably. The SIT has three days to approve, the NPT takes about two to three weeks and we understand that the FCC could execute trades in one day in the absence of concerns on eligibility, foreign ownership, designated entities and competition but takes no longer than three weeks. We have no formal deadline but aim to complete trades within 42 calendar days.<sup>40</sup>
- 7.26 Options 2 to 5 would simplify the trading process by removing some of the current steps or by introducing the considerably simpler spectrum leasing procedure for selected licence types. The following paragraphs provide our initial assessment of:
- the possible benefits of each option;
  - the reduction in the administrative costs for us which may lead to a reduction in transaction costs faced by stakeholders, including band managers;
  - the one-off cost of implementation under each option; and
  - the risks of each option and the measures that may be taken to mitigate those.

## **Option 2: amending the present licence transfer trading process**

- 7.27 Our proposals to change the present trading process are described in sections 4 and 5 of this document. Option 2 could be introduced by itself or in conjunction with options 3 or 4 and would involve:
- dispensing with the need for us to consent to trades or power to give directions to the parties; and
  - simplifying the process for time-limited trades.

### Benefits of option 2

- 7.28 Such changes would simplify procedures and are likely to reduce the time necessary to complete a transaction. This will reduce the likelihood that some trades may not take place because procedures are too burdensome. The main advantages would appear to lie in the shorter completion times and the greater legal certainty if time-limited trades do not depend on action by the original transferee to trade the spectrum rights back to the original holder. The former is likely to be particularly important if trades are time-critical.

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<sup>40</sup> See <http://www.ofcom.org.uk/radiocomms/ifi/trading/tradingguide/howdoitrade/> (as of March 2006).

- 7.29 Option 2 could involve some savings for us in terms of lower administrative costs per trade, for example the reduced staff time for us to make our decision, although we do not believe these savings to be substantial. Although the cost per trade for us (and stakeholders) is likely to decline, this reform could also lead to an increase in the volume of trades, which might lead to an increase in total costs. However, we would expect any increase in total costs to be marginal compared to the benefits for citizens and consumers from the larger number of trades, each of which can plausibly be assumed to be beneficial.

### Costs and risks of option 2

- 7.30 The costs for us of implementing these changes seem modest if the volume of time-limited transfers is low. We estimate that catering for higher volumes could require investment of around £100,000 plus annual running costs of about £40,000.
- 7.31 It is also necessary to consider whether there is a risk that they would make it more difficult for us to carry out our supervisory duties. If so, this could be to the detriment of citizens and consumers.
- 7.32 Removing the requirements for *ex-ante* consent under this option would carry some risks, as described below although we believe these may be effectively mitigated.
- We would lose the opportunity to prevent proposed transactions from proceeding by withholding consent. The grounds on which we may withhold consent under the present Trading Regulations were deliberately curtailed in order to minimise regulatory uncertainty and in no case has it proved necessary so far to withhold consent. In addition, even if it was considered that the procedural requirements that we propose to omit were necessary for a particular licence class, we could retain or introduce them for that class.
  - We would be able to maintain effective competition by using general competition law.
- 7.33 Even if we were to implement option 2, a small number of pre-conditions would continue to apply as at present so that, for example, a licence would not be transferable if a licence fee was outstanding or revocation or variation proceedings had commenced.
- 7.34 We would welcome views and evidence from stakeholders on the above potential concerns and mitigating factors.

### Preliminary conclusions on option 2

- 7.35 Our preliminary conclusions are as follows.
- It is unnecessary and disproportionate to apply the current requirements for consent across the board and they should be applied only to types of transaction or licence classes for which they are justified and necessary. We note that, based on experience to date, there has been no need so far to withhold consent to any proposed trade.
  - The risks are acceptable for all licence classes that are currently tradable and may be effectively mitigated.



- 7.36 On balance, we are minded to conclude that the changes in option 2 are likely to bring potential benefits that exceed the likely limited costs and that the risks can be effectively mitigated and are acceptable. On that basis, we are minded to give preference to option 2 over the *status quo*.

### **Option 3: introduce a variant of spectrum transfer without the surrender and re-issue of licences**

- 7.37 Option 3 is the TWLI option discussed in section 5 of this document and would be introduced alongside option 2. This would be a variant of current spectrum transfer process (and the amended process under option 2) and involves some benefits, costs and risks in addition to those set out above. The key difference from option 2 is that transfers would proceed without being put into effect through the surrender of the existing licence and our granting new licences. The original licensee would agree with a transferee to share the rights to use the spectrum for a defined period of time. The original licence would not be surrendered, nor would the transferee be issued with its own licence document. Instead the transferee would have rights to use the spectrum by virtue of an undocumented licence that had arisen as a result of the transfer. At the expiry of the agreed period the rights of the transferee would naturally expire and again become the exclusive rights of the original licensee.
- 7.38 At this stage we propose that option 3 would apply only to transfers by the band manager with PMSE obligations. This reflects the core objective of the proposal, which is to make the transfer process more expeditious for large volumes of short-term, relatively low-value transfers. There may, however, be good grounds to extend it to other licence classes as well. We will take into account the views of stakeholders in coming to a final decision.

#### Benefits of option 3

- 7.39 By removing the need for transfers to be put into effect through licence surrender and reissue, option 3 will reduce transaction times and costs (compared to option 2) and enable large volumes of short-term, relatively low-value transfers to occur more quickly and efficiently. It could be introduced by making regulations under section 30 of the WT Act.
- 7.40 This option would make procedures simpler than the current licence transfer process. The band manager would not need to surrender its licence and we would not need to issue new licence documents to its customers. This would relieve the band manager of the burden of applying for a transfer of rights every time it made an assignment. We estimate that there could be cost savings in the region of £175,000 a year over option 2 for us arising from not having to produce and handle new licence documentation. There might also be some savings for the band manager with PMSE obligations in the administrative costs of handling large volumes of licence documentation.

#### Costs and risks of option 3

- 7.41 Potential drawbacks of option 3 are discussed at paragraphs 5.9 to 5.12.
- 7.42 We propose to limit TWLI to short-term time-limited transfers lasting up to 24 months made by the band manager with PMSE obligations.

### Preliminary conclusions on option 3

- 7.43 Option 3 is something of a halfway house between the current trading process and spectrum leasing (option 4). It would be simpler than the present process but include some steps not required in leasing.
- 7.44 Without option 3, it would be necessary to wait for any necessary legislative changes to be made before introducing spectrum leasing (option 4). This would impact on both our operations and those of the band manager with PMSE obligations. We would have to manage a very large number of transfer requests (currently there are about 90,000 PMSE assignments per annum), each involving the surrender and issuing of licences; and the band manager with PMSE obligations, from its side, would have to process these requests.
- 7.45 Our preliminary conclusion is that option 3 represents a satisfactory way to facilitate the operation of the band manager with PMSE obligations. If and when permissible under the Framework Directive and WT Act, option 4 would offer greater benefits. However, we consider that there could be advantage in introducing option 3 more widely if there were substantial delay in amending the EU framework.

### **Option 4: introduce spectrum leasing**

- 7.46 Option 4 would involve introducing a new form of spectrum trading that could take place without any intervention by us. This would have the following features as described in section 6 above and would be introduced alongside option 2.
- Spectrum leasing would be available for licence classes specified in our regulations.
  - The licensee would be permitted to authorise another person to use its spectrum holding for up to 24 months in accordance with the terms and conditions of its licence without the need to notify us or for us to issue a licence to that other person.
  - The process for longer leases would be akin to that for spectrum transfers as amended under option 2.
  - The process to be followed would be specified in regulations made by us and include safeguards to ensure that customers are aware of the licence terms and that the band manager keeps records of its customers and makes these available to our authorised personnel, for example to aid their investigation of interference.

### Benefits of option 4

- 7.47 The introduction of spectrum leasing in combination with option 2 would further streamline the trading process for certain transactions. This would likely be particularly advantageous for individually low-value and short-lived transactions typified by, but not limited to, PMSE. It is particularly important for these types of transactions that transaction costs are kept to a minimum and transactions are quickly executed. Although option 2 would go some way towards this, there is a risk that it may not be sufficient by itself. Total concurrent trading is in theory an alternative basis for a band manager's operations in such circumstances but, as discussed in paragraph 2.41, seems unlikely to offer a viable and universally satisfactory solution.

- 7.48 Option 4 would allow short-term trades to proceed as leases without reference to, or involvement by, us and would greatly facilitate, and possibly even be essential for, some types of transactions.
- 7.49 One important benefit of option 4 is that the introduction of leases could make it commercially and operationally feasible for band managers and other stakeholders to operate through spectrum trading even for short-term spectrum assignments. The benefits could be substantial given the contribution that band managers could make to the efficient operation of secondary spectrum markets, especially, but not solely, for PMSE. The availability of intermediaries such as band managers may prove important, if not essential, in markets in which individual transactions are either of low value or need to be executed quickly. In the absence of an intermediary such as a band manager, the search costs for buyers and sellers would likely be higher than the gains from trading.
- 7.50 The parties would have flexibility to put their transactions into effect through leasing if that met their needs better than licence transfer.
- 7.51 The introduction of leasing means that we would not have to become involved in processing transactions that would otherwise have been executed as licence transfers. Hence, the introduction of leasing would reduce transaction costs per trade and processing time for both stakeholders and us.

#### Costs and risks of option 4

- 7.52 The most significant risk with introducing leasing is that it will not become a viable option until the Framework Directive is changed. Introducing leasing before then would carry the risk that the UK would be in breach of the current article 9. It is currently uncertain when such changes may be made to the Framework Directive and, on that basis, leasing may not be a realistic option for the near future.
- 7.53 The introduction of leasing could have some implementation costs for us but these are not expected to be significant relative to the potential gains.
- 7.54 As for option 2, there is a risk that our reduced involvement could impair our ability to carry out our spectrum functions and that we will no longer have current information on our licensing database of actual spectrum use. Also, as for option 3, there would be loss of certainty and clarity if the arrangement is not well-documented in the contract (see paragraphs 5.9 to 5.12). However, we believe these risks may be effectively mitigated as follows.
- Leasing will be allowed only in licence classes specified by us. Similar mitigation measures could be taken as described above in relation to option 2.
  - Any concerns related to possible anti-competitive impacts are likely to be modest given the fact that only leases that are shorter than 24 months will be subject to the simplified procedure. Those that are of longer duration are the ones more likely to raise possible competition concerns and the normal procedures, including pre-notification, would apply to those.
  - Leasing will have to be carried out in accordance with procedures specified by us. These will include conditions to ensure that customers have the limitations of the band manager's licence explained to them. There will also be provisions to ensure that the band manager makes information about customers' use available to our authorised personnel and, in an emergency, we will be able to require the

customer to cease operating, for example to prevent serious interference. Such conditions appear in several licence types and seem to operate satisfactorily in practice.

#### Preliminary conclusions on option 4

- 7.55 Our preliminary conclusions are that introducing spectrum leasing would provide the right conditions for band managers, including for PMSE, to operate without imposing a significant cost burden on us or incurring unacceptable regulatory risk.
- 7.56 We are minded to conclude that option 4 would be a better complement than option 3 to option 2 and offer significant and worthwhile additional benefits compared to option 2 by itself. Therefore, options 2 and 4 should be considered together and not as alternative ways of simplifying spectrum trading procedures. Because the marginal costs of implementing option 2 are likely to be modest, we do not believe that it would be sensible to implement option 4 without option 2.

#### **Option 5: automating the trading process**

- 7.57 As an alternative to TWLI or spectrum leasing (options 3 or 4), we have considered the possibility of automating the current trading process, amended in accordance with option 2, so as to allow trades to be processed electronically. This would make the process faster and enable large volumes of applications to be processed more quickly and outside office hours. If option 5 was adopted without option 2, the costs would be greater but we have not quantified by how much.

#### Benefits of option 5

- 7.58 The qualitative and quantitative benefits of option 5 would be broadly comparable to those of option 4.

#### Costs and risks of option 5

- 7.59 The main costs of option 5 would be the additional investment by band managers and us in installing and maintaining information systems. We estimate that the capital cost for us would be substantial.
- 7.60 We estimate that depending of the type of system adopted, we would need to make a capital investment ranging between £250,000 and £500,000 in order to allow automated trading. This does not take into account the possible need for such systems to be periodically redesigned and adjusted to take account of new needs and demands as they emerge. Nor does it take into account the costs that stakeholders may have to incur in order to interface with our system. Estimated annual running costs amount to between £80,000 and £140,000 for us.
- 7.61 Reliance on electronic licensing carries a risk of system malfunction, which could disrupt the issue of the licences that band managers' customers would need in order to operate lawfully.

#### Preliminary conclusions on option 5

- 7.62 Option 5 could deliver comparable benefits to option 4. However, the cost would be significantly higher and the system would be at risk of malfunction. In principle, it seems preferable to simplify the current process rather than incur the expense of installing new systems to operate the present process faster.

- 7.63 Moreover, as discussed in section 2 of this document, the EU framework is being revised and it seems likely that it will include spectrum leasing as a feature of the new regime. If that happens, the investment in new systems might turn out to be unnecessary and might not be recouped if the changes to the EU framework are implemented. The timing of this is at present uncertain but it may take place in less than 2 years.
- 7.64 For these reasons, we are minded to conclude that option 4 would be preferable to option 5, especially given the possibility of TWLI as an interim solution. However, option 5 would provide a possible fallback in the long-term absence of leasing to allow desirable market developments to take place and would be an improvement on the *status quo* in those circumstances if reductions in transaction costs outweighed implementation costs.

### **Option 6: radical deregulation**

- 7.65 As a general rule, we intervene to regulate only when it is necessary to do so to further the interests of citizens and consumers and has a duty to choose the least intrusive means of achieving our objective. Accordingly, we have adopted the practice of considering a deregulatory option in an impact assessment<sup>41</sup>.
- 7.66 A full deregulatory option in which we would not need to be notified of planned or actual trades would be unlikely to be in the interest of citizens and consumers. It is generally recognised that it is useful for any spectrum regulator to maintain a central register with the detail of who holds which licence in order to assist it investigate and deal with harmful interference and this is universally accepted as a core function for spectrum regulators to perform. This information is also needed by prospective buyers to enable them to identify potential trading counterparties. Therefore, at a minimum it appears reasonable that changes in licensees' identities are kept up to date in a central register. Therefore, a fully deregulatory option, in which transfers could take place without reference to us, would seem unlikely to be beneficial as it would hold back the development of an efficient market in spectrum. It would also be incompatible with the applicable EU requirements.
- 7.67 A variation of the full deregulatory option is that we would have to be notified of a trade in order to maintain a central register of assignments. This would be not dissimilar to options 2 and 4 combined and is likely to result in comparable costs and benefits.

### **Preliminary conclusions on option 6**

- 7.68 We do not believe that either full deregulation or its variant would be feasible at the present time or offer further benefits to citizens or consumers relative to options 2 and 4.

### **Stakeholders likely to be affected**

- 7.69 Stakeholders likely to be positively affected by the various option or proposals are likely to include the following:
- consumers who make use of services relying on spectrum;

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<sup>41</sup> See [http://www.ofcom.org.uk/consult/policy\\_making/guidelines.pdf](http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf).

- intermediaries and commercial organisations wishing to operate as band managers, including in particular the band manager with PMSE obligations; commercial and public sector organisations that trade spectrum for their own use and engage with the market directly or through the medium of a band manager; and
- citizens through their interest in efficient spectrum management and use of spectrum by the public sector.

## Equality Impact Assessment

- 7.70 We are required by statute to assess the impact of all our functions, policies, projects and practices on race, disability and gender equality and to carry out an equality assessment of policies relating to Northern Ireland.
- 7.71 The proposals in this document relate to the management of spectrum. Our preliminary assessment is that there is no reason to believe that they would impact differently on, or raise particular issues in relation to, one group of citizens as opposed to another. We do not believe that they would, in practice, have a significant differential effect on particular gender or racial groups, on disabled citizens compared to citizens in general in the UK or on relations between persons of different religious belief, political opinion or racial groups in Northern Ireland.

## Our preferred option

- 7.72 We have looked at the options for simplifying and clarifying the spectrum trading procedures in light of the requirements of the Framework Directive. Our preliminary conclusion is that option 2 should be implemented alongside option 3, at least in relation to PMSE.
- Option 2 would apply to all tradable licences. We consider that it is likely to bring potential benefits that exceed the likely costs, which are limited, and that the risks can be effectively mitigated. On that basis, we are minded to give preference to option 2 over the *status quo*.
  - Option 3 would apply only to short-term time-limited transfers by the band manager with PMSE obligations lasting up to 24 months. We consider that it would facilitate a more dynamic and efficient assignment process than the current licence transfer system by removing the need for the surrender and re-issue of WT licences for each transfer.
- 7.73 Looking to the future, we would, in view of its additional advantages, prefer option 4 over option 3. We consider that option 4 would provide the right conditions for spectrum markets to develop and for band managers, including for PMSE, to operate without imposing a significant cost burden on us or incurring unacceptable regulatory risk. At present it is unclear when any necessary legislative changes may be made so leasing may not be a realistic option for the immediate future. However, we will keep the situation under review in the light of developments.

## Next steps

- 7.74 We will review our preliminary conclusions in the light of the responses to this consultation, decide whether to proceed to amend the Trading Regulations and consult further on draft regulations. We would aim to have the changes in place in

time for the band manager with PMSE obligations to start operating in summer/autumn 2010.

*Question 7a: Are there other options we should consider?*

*Question 7b: Do you have further evidence on the benefits, costs or risks of the options?*

*Question 7c: Do you agree with the conclusions of this impact assessment, in particular on the preferred options?*

## Annex 1

# Responding to this consultation

### How to respond

- A1.1 Ofcom invites written views and comments on the issues raised in this document, to be made **by 5pm on 1 December 2009**.
- A1.2 Ofcom strongly prefers to receive responses using the online web form at <http://www.ofcom.org.uk/consult/condocs/simplify/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 [laurence.green@ofcom.org.uk](mailto:laurence.green@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.
- Laurence Green  
Floor 3  
Spectrum Markets Team  
Riverside House  
2A Southwark Bridge Road  
London SE1 9HA
- Fax: 020 7981 3990
- 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 Ofcom's 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 Laurence Green on 020 7783 4289.

### 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](http://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, Ofcom intends to publish a statement as soon as practicable.
- 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](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](mailto: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](mailto:vicki.nash@ofcom.org.uk)

## Annex 2

# Ofcom's consultation principles

A2.1 Ofcom has published the following seven principles that it 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](http://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 [www.ofcom.org.uk/consult/](http://www.ofcom.org.uk/consult/).
- 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

Name/contact details/job title

Whole response

Organisation

Part of the response

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

## Reasons for reviewing the trading regime and options

*Question 1: Are there any features of the present spectrum trading regime that need to be changed in order to encourage or facilitate spectrum market developments? If so, have we correctly identified the features that need changing? What features, in addition to those described in following sections, would be advantageous to change? It would be helpful if you would explain the reasons for your suggestions with evidence of practical difficulties being caused at present and estimates of the costs that these impose and the savings that your suggestion would gain.*

## Changes to the licence transfer trading process

*Question 2: Do you agree with our targeted approach to deciding which trades need to be subject to more rigorous procedures and our specific proposals? Are there other factors that we should take into consideration or particular licence sectors or types of transaction that should be subject to additional procedural requirements?*

*Question 3a: Do you agree that the requirement for Ofcom's consent to proposed transfers should be dispensed with for the generality of tradable licences subject to justified exceptions?*

*Question 3b: If the need for prior consent was removed, do you consider that Ofcom should continue to have a power to give ex-post directions?*

*Question 3c: Do you agree with our proposal to introduce single-transaction time-limited transfers?*

## Transfer without licence issue

*Question 4a: Would our proposal for TWLI offer a worthwhile reduction in regulatory burden compared to the status quo? Please provide as much quantitative and qualitative evidence as possible of the benefits and the practical seriousness of any drawbacks.*

*Question 4b: Would TWLI streamline the trading process sufficiently for the band manager with PMSE obligations to operate?*

*Question 4c: Would TWLI generate worthwhile benefits for other licence classes, frequency bands or types of transaction despite the drawbacks? If so, in which other categories should it be introduced and how might the drawbacks be mitigated in practice?*

## Spectrum leasing under a future EU legislative framework

*Question 5a: Do you agree with our proposal to create a regime for spectrum leases? What do you see as the advantages and disadvantages?*

*Question 5b: What advantages would spectrum leasing offer over TWLI? Please provide as much quantitative and qualitative evidence as possible to support your view.*

*Question 5c: Do you agree with our proposal to limit the simpler leasing procedure without reference to Ofcom to shorter leases of up to 24 months? Would you suggest a different cut-off or a parameter other than lease length? If you suggest an alternative, it would be helpful if you would describe how this would work in practice.*

*Question 5d: Do you agree with our proposal (i) for longer leases to be subject to similar procedural requirements as licence transfers and (ii) to allow partial leasing but not sub-leasing?*

*Question 5e: Do you agree that spectrum leasing should be available for all tradable licence classes? If not, which should be omitted and why?*

*Question 6: What capital and operational costs would automated trading impose on band managers and their customers? Do you agree with our assessment that automated trading would be second-best to leasing but would provide a workable alternative?*

## **Impact assessment**

*Question 7a: Are there other options we should consider?*

*Question 7b: Do you have further evidence on the benefits, costs or risks of the options?*

*Question 7c: Do you agree with the conclusions of this impact assessment, in particular on the preferred options?*

## Annex 5

# Glossary

<b>Assignment</b>	Authorisation for a radio station to use a radio frequency or radio frequency channel under specified conditions.
<b>BIS</b>	Department for Business, Innovation and Skills, previously Business Enterprise & Regulatory Reform
<b>BR</b>	Business radio
<b>Command and control</b>	A way of managing the radio spectrum in which the regulator makes all the key decisions including what the piece of spectrum is to be used for and who can use it
<b>Communications Act</b>	The Communications Act 2003, which sets out Ofcom's powers, functions and duties
<b>Concurrent</b>	(Of <i>spectrum trading</i> ) a transaction in which rights and obligations are transferred while continuing to be rights and obligations of the transferor, cf <i>outright</i>
<b>GHz</b>	Gigahertz – unit of frequency equal to one thousand <i>MHz</i>
<b>Harmful interference</b>	<i>Interference</i> that creates danger or a risk of danger or degrades, obstructs or repeatedly interrupts a transmission or broadcast
<b>Hz</b>	Basic unit of frequency – one hertz is equivalent to one cycle per second
<b>Interference</b>	Unwanted disturbance caused in a radio receiver or other electrical circuit by electromagnetic radiation emitted from an external source
<b>Licence transfer trading</b>	A form of <i>spectrum trading</i> that is put into effect by the issue of a <i>WT licence</i> document by Ofcom to the transferee (see also <i>spectrum leasing</i> and <i>TWLI</i> )
<b>Market mechanisms</b>	Approach to managing spectrum where key decisions, eg on acquiring or disposing of spectrum and what service to provide, are made by spectrum users rather than by the regulator.
<b>MHz</b>	Megahertz – unit of frequency equal to one million <i>Hz</i>
<b>Outright</b>	(Of <i>spectrum trading</i> ) a transaction in which the transferred rights and obligations pass to the transferee and are no longer rights and obligations of the transferor, cf <i>concurrent</i>
<b>Partial</b>	(Of <i>spectrum trading</i> ) a transaction in which some of the rights and obligations are transferred while others are kept by the transferor, cf <i>total</i>
<b>PMSE</b>	Programme Making and Special Events – a class of radio application that supports a wide range of activities in entertainment, broadcasting, news gathering and community events
<b>Radio spectrum</b>	The portion of the electromagnetic spectrum below 3000 <i>GHz</i> that is used for radiocommunications
<b>RSA</b>	Recognised Spectrum Access - a spectrum management instrument created by the <i>Communications Act</i> to complement <i>WT licences</i>

<b>Spectrum</b>	The electromagnetic <i>spectrum</i> ranging from visible light to x-rays and gamma rays
<b>Spectrum leasing</b>	A form of time-limited <i>spectrum trading</i> that is put into effect on the basis of contract between the parties without the need for Ofcom to grant a <i>WT licence</i> to the transferee (see also <i>spectrum leasing</i> and <i>TWLI</i> )
<b>Spectrum liberalisation</b>	Removal of restrictions from <i>WT licences</i> and <i>RSA</i> to allow holders greater flexibility to change how they use spectrum
<b>Spectrum trading</b>	Ability of spectrum users to transfer rights and obligations under <i>WT licences</i> to another person in accordance with regulations made by Ofcom. Trades may be <i>total</i> , <i>partial</i> , <i>outright</i> or <i>concurrent</i>
<b>TNR</b>	Transfer Notification Register maintained by Ofcom giving information about <i>spectrum trading</i> transactions
<b>Total</b>	(Of <i>spectrum trading</i> ) a transaction in which all of the rights and obligations are transferred from transferor to transferee, cf <i>partial</i>
<b>TWLI</b>	Transfer without licence issue - a form of <i>spectrum trading</i> that involves the transfer of licence rights and obligations but that is put into effect without issue of a new <i>WT licence</i> document to the transferee (see also <i>licence transfer trading</i> and <i>spectrum leasing</i> )
<b>WT Act</b>	The Wireless Telegraphy Act 2006, which sets out the statutory framework for management of the radio spectrum consolidating a number of older Acts dating back to 1949
<b>WT licence</b>	Licence granted by Ofcom to authorise installation or use of radio equipment as required by section 8(1) of the <i>WT Act</i>
<b>WT Register</b>	Register maintained by Ofcom containing information about grant, renewal, transfer, revocation or variation of <i>WT licences</i> and <i>RSA</i>