

**Simplifying spectrum trading:  
Regulatory reform of the spectrum  
trading process and introduction of  
spectrum leasing  
Intellect Response  
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## Introduction

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Intellect is the trade association for the UK technology industry. In 2007, the industries Intellect represents accounted for 8% of UK GDP, £92bn of Gross Added Value and employed 1.2m people.

Intellect provides a collective voice for its members and drives connections with government and business to create a commercial environment in which they can thrive. Intellect represents over 750 companies ranging from SMEs to multinationals. As the hub for this community, Intellect is able to draw upon a wealth of experience and expertise to ensure that its members are best placed to tackle challenges now and in the future.

Our members' products and services enable hundreds of millions of phone calls and emails every day, allow the 60 million people in the UK to watch television and listen to the radio, power London's world leading financial services industry, save thousands of lives through accurate blood matching and screening technology, have made possible the Oyster system, which Londoners use to make 28 million journeys every week, and are pushing Formula One drivers closer to their World Championship goal.

In the past 12 months 14,500 people have visited Intellect's offices to participate in over 550 meetings and 3,900 delegates have attended the external conferences and events we organise.

**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?**

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Ofcom cannot satisfy its principal spectrum-related statutory duty to secure optimal use of spectrum if large swathes of it are left in the hands of those who make little or no use of it while there is considerable unmet demand for spectrum in the market.

Ofcom has made considerable progress towards facilitating a secondary market in spectrum by making an ever-wider range of spectrum licences tradable. And the increasing application of AIP to public sector users is rightly focusing their attention on spectrum which is soon to become an expensive, under-performing asset.

Yet, so far, few spectrum trades have been concluded. Spectrum brokers or traders (as essential for a vibrant, liquid secondary market in spectrum as estate agents are for property) have yet to set up shop in the UK. And band management (although arguably more advanced in the UK than in much of the rest of the EU) remains essentially uncommercial and focused on satisfying demand from specific user groups.

While a contributing factor to this lack of activity must be the availability of substitute spectrum from Ofcom in the form of “new licenses”, sheer unfamiliarity of many companies to accounting for a spectrum licence as a tradable asset similar to a property lease, the current limited information on spectrum licences and actual usage all may contribute to companies not seeking to have their demands met by the secondary market.

Intellect therefore welcomes Ofcom’s proposals to simplify trading, to introduce a form of quasi-leasing and to introduce legal leasing when the relevant EU legislation permits it. These measures are steps in the right direction but, on their own, will not be sufficient to guarantee that the secondary market will play the part it could in reducing the considerable barrier to entry which access to spectrum represents.

Start ups wanting to bring innovative services to market usually have enough problems raising finance (especially at the moment) without additionally having to overcome hurdles to accessing spectrum lying fallow, hurdles created by disproportionate transaction costs and unnecessary regulatory burdens.

So Intellect would urge Ofcom to go further.

### *Trading*

Removing the decision stage (for most licences) in the trading process is a welcome move, but it isn’t clear why Ofcom needs to publish information in advance of a transfer being completed.

While transfers that have taken place must be made public, it is not obvious what the advantages might be of the additional stage currently required by the Trading Regulations of publication of request to transfer. Ofcom states that pre-trade publication increases the information available to the market to assist the direction of spectrum to the use which

generates greatest benefits. That is a possible outcome (although implies prior knowledge of the network the transferee intends to deploy), but carries with it the risk that such publication by Ofcom might:

1. Provide information of commercial benefit to a competitor; or
2. Be made in advance of any announcement to be made post-trade by transferor and/or transferee to a Stock Exchange or other financial authority.

Unless Ofcom removes all unnecessary stages in the trading process, it will remain more attractive for companies to follow the popular U.S. practice of using a non-trading company to hold a spectrum licence, which then creates a lack of visibility for *de facto* trades as those companies are sold.

### *Leasing*

Intellect supports Ofcom's intention to introduce a legal form of spectrum leasing when the Europe permits this, but does not support its initial restriction (without incurring transaction costs equivalent to a trade) to leases of a mere 24 months' duration. This would render leasing unviable for companies wishing to invest in infrastructure. Other than for PMSE users, whose spectrum requirements are generally very different from those of other spectrum users, it is hard to envisage too many users for whom such leasing terms would be of much use, apart from those who wish to test and develop innovative applications in spectrum for period of hours or even minutes.

Within the context of these needs, the imposition of a 24 month limit would lead to a major missed opportunity.

Leasing property is an essential option for both residential and commercial users and, in liberalised markets for the supply of spectrum, there is no reason to assume that leasing won't also be an essential means of meeting demand for many.

Therefore Intellect proposes an initial watershed of 4 years with subsequent reviews (see answer to Question 5c below).

Until spectrum leasing becomes a legal option, Intellect agrees that TWLI could be an interim solution. But we are very surprised that Ofcom is proposing that TWLI should only apply initially to the commercial PMSE band manager (when appointed), favouring that band manager over any others, offering it lower costs of sale than competitors.

Companies which invest in the necessary resources to bid to become the commercial band manager, but which fail to win that contract, shouldn't then be disadvantaged if they nonetheless wish to establish themselves as a band manager serving a wider range of users.

There may also be implications for any band manager(s) the MOD may appoint.

### *Spectrum information*

Although not specifically within the scope of this consultation, one factor which inhibits spectrum trades is the lack of information available to potential purchaser. It is difficult to identify un- and under-used spectrum, whether held by commercial licensees, the public

sector or awaiting award by Ofcom (other than spectrum already identified in the spectrum awards programme).

Presently only basic information is provided by Ofcom on individual spectrum licences. Such information relates more to ownership than to actual usage. As such it is impossible, without reference to the licensee, for a potential purchaser or tenant to identify spectrum which could be suitable for their purposes. Information above and beyond what Ofcom currently provide is needed to allow a potential purchaser to determine whether the application that they may wish to put given spectrum to would be technically feasible within the terms of the license held by 'owner'. This needs to be made available before the two parties enter into negotiations. Such provision would avoid unnecessary use of time and resources by both parties.

Intellect recognises that Ofcom has recently consulted on the provision of spectrum usage information by spectrum licensees in order that such information then be made publicly available. But while Ofcom now considers the extent to which usage information should be made publicly available, Intellect proposes that Ofcom move to publish technical licence conditions and licence expiry dates on the WTR for each spectrum licence, without which a potential purchaser or tenant cannot determine the value to them of some or all of the rights of any tradable spectrum licence.

**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?**

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Intellect believes that the default position should be for spectrum trades to proceed without Ofcom's consent. The lease of spectrum should be seen as essentially a commercial contract between the 'tenant' and the original licensee which embodies a commitment that original license technical restrictions. Other than being notified that a such a 'contract' has been agreed to, we do not see why Ofcom needs to be further involved. If there are to be any exceptions requiring "more rigorous treatment", they would have to be very few and it would have to be very clear to the market what such exceptional circumstances might be (to provide the necessary certainty in advance for potential transferors and transferees) and what the justification for each was.

In the consultation Ofcom has unspecified concerns in relation to policy, competition and spectrum management.

Intellect agrees that competition law should be relied upon to deal with any competition issues arising from a spectrum trade, with the statutory pre-notification providing an opportunity for initial consideration. But other than for roll out or similar non-spectrum obligations, it is far from clear what the policy and spectrum management concerns might be which could justify "more rigorous treatment", especially given that Ofcom hasn't felt the need to withhold consent from any of the (admittedly few) trades conducted thus far.

Interference to third parties will always occur and, given the choice, it can be assumed that victims would rather they received no interference at all, no matter how minimal. As a complete absence of interference would be an impossible goal, Technical Licence Conditions (TLCs) are determined to ensure that outgoing interference wouldn't be unduly harmful to third parties. While a partial trade may increase the risk of interference to third parties, any deployment made by an incoming licensee would still have to be compliant with the TLCs

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prevailing before the partial trade. Obviously if the purchaser wishes to make that purchase conditional upon securing a variation to the TLCs, then spectrum neighbours should be consulted but the decision of Ofcom should final and based on objective technical studies. Any such consultation should be made on confidential basis by Ofcom initially, and the identity of the potential purchaser should be protected until any changes have been agreed and the trade agreed. Such measures are necessary in order to protect commercial confidentiality.

Furthermore, Intellect does not believe that Ofcom should withhold consent to a partial trade, or make such consent conditional upon licence variations agreed with spectrum neighbours, even if the network the purchaser wished to deploy were to be compliant with the prevailing TLCs.

The prospect that Ofcom may seek to block a use of spectrum by a potential new licensee, unless spectrum neighbours (which may be competitors) agreed to it, even if that same use could be legally made by the current licensee needs to be avoided.

Indeed the original spectrum licensees would have been able to deploy different networks to serve different uses within the relevant spectrum provided both networks were compliant with the Terms of the License conditions.

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### **Q3a) 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 exception**

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Yes, although as stated in answer to Question 2 above, such exceptions should be few in number and fully justified. Intellect believes that Ofcom should go further than has done in the current consultation document to explain the basis for such justification. We are concerned over the disproportionate example given. Namely, that the commercial PMSE band manager should obtain Ofcom's consent to any non-PMSE use of the spectrum made available to it - even where there was no PMSE demand for the spectrum in question nor had there been for a prior period.

Such Disproportionate constraints will tend to:

1. Maintain the barrier to entry that is access to spectrum artificially high;
  2. Constrain innovation; and
  3. Undermine market confidence in the essential process of spectrum liberalisation.
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### **Q3b) If the need for prior consent was removed, do you consider that Ofcom should continue to have a power to give ex-post directions?**

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If the exceptional circumstances which required "more rigorous treatment" were appropriately targeted then a power to give ex-post directions should be unnecessary.

### **Question 3c) Do you agree with our proposals to introduce single-transaction time-limited transfers?**

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Yes.

### **Q 4a) Would our proposal for TWLI offer a worthwhile reduction in regulatory burden compared to the status quo? Please provide as much quantitative and**

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### **qualitative evidence as possible of the benefits and the practical seriousness of any drawbacks.**

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A legal form of spectrum leasing is necessary if band management is to be viable. The equivalent in the property market would be that all demand for property would have to be met by sales, which we know is not possible.

Although virtually all demand for spectrum is met by sales, there is no reason to assume that there isn't demand which could otherwise be met, and the absence of a cost- and time-effective means of doing so is having detrimental impact on competition and innovation.

Intellect supports the proposal to introduce TWLI, but is concerned that Ofcom proposes to artificially restrict its value to the market by limiting its application to:

1. transfers between the commercial PMSE band manager and PMSE users; and
2. time-limited transfers of up to 24 months.

Quite apart from the fact that there isn't a clear definition of PMSE use (the existing PMSE band manager, JFMG, licenses some non-PMSE use on Ofcom's behalf), as we have argued in the answer to Question 1 above, this would potentially distort competition amongst band managers and may discourage market entry.

In addition, while the usage patterns and amount of advance notice may make the demand for spectrum by PMSE users very different from that of other potential purchasers of spectrum, it is hard to see why Ofcom should seek to favour a particular source of demand (which would already benefit from the application of FRND rules) over others which may have similar characteristics unless the sole justification for the resources used to introduce TWLI is to ensure that Ofcom could appoint a commercial band manager for PMSE, rather than to address any wider market concerns.

If that were the case, this would not only call into question the proportionality of introducing TWLI but the artificial restrictions governing its application would limit the contribution that this new option could make towards Ofcom satisfying its principal spectrum-related Statutory Duty, to secure optimal use of spectrum.

Ofcom cannot know that TWLI would prove to be a short-lived expedient and should not reduce the positive market impact which TWLI could have by acting as if it did.

Intellect would therefore strongly recommend extending TWLI to other licence classes from its availability and we would further urge Ofcom not to wait until the appointment of the commercial PMSE band manager to launch TWLI.

In respect of the potential drawback of TWLI identified by Ofcom, that contracts may not document the rights well, this is already the case with property leases and, if necessary, contract law is there to resolve disputes.

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### **Q4b) Would TWLI streamline the trading process sufficiently for the band manager with PMSE obligations to operate?**

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There seems no reason why not, but this is a matter only JFMG is likely to be able to comment on in detail.

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**Q4c) 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?**

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There seems no reason why not and consequently no reason for Ofcom to distort competition by discriminating in favour of a single band manager and one use of spectrum.

However Ofcom's current proposal to limit the time-limited transfers to periods of up to 24 months would limit its usefulness to other licence classes, especially where users needed to invest in communications infrastructure to deploy.

Also, as noted above in answer to Question 4a, Intellect would strongly recommend extending TWLI to other licence classes from its availability and we would further urge Ofcom not to wait until the appointment of the commercial PMSE band manager to launch TWLI.

As the 24 months' limit seems to have been arrived at purely to encompass most anticipated demand from PMSE users, Intellect would suggest that TWLI be introduced with a longer maximum period – at least 4 years - which would inhibit less investment in infrastructure by end users.

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**Q5a) Do you agree with our proposal to create a regime for spectrum leases? What do you see as the advantages and disadvantages?**

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Yes.

The small number of spectrum auctions concluded thus far, combined with minimal secondary market liquidity (where there is a lack of spectrum brokers and most commercial companies whose spectrum licences have been made tradable probably still don't view those licences yet as tradable assets to exploit), has created an artificial spectrum scarcity. Artificial because most spectrum is un- or under-used in many locations.

This scarcity is compounded by the continuing absence of a legally secure means of leasing spectrum, with the result that access to spectrum represents an unacceptably high barrier to entry for many smaller companies, the very source of much innovation.

In addition, there is suboptimal exploitation of spectrum as "white spaces" are left scattered all over the country where the current licensees' primary networks haven't been deployed, although there is a need to ensure technical compatibility with existing equipment using bands adjacent to these "white spaces" is assured.

Obviously existing spectrum licences' TLCs will restrict the potential applications for which their white spaces could be used (although geographic separation could help accommodate very different uses), but until a regime for spectrum leases is put in place there could be a considerable opportunity cost as the National Asset which is spectrum isn't as fully utilised as it could be.

One sector which should benefit in particular from the introduction of commercial band managers is the public sector (although recognizing that RSA may be a complication), especially the MOD with its vast spectrum holdings. Intellect has explored the potential for introduction of a band manager, and other options that the MoD could explore, in two

respective papers, *MoD Spectrum Divestment: The Intellect Perspective & Defence Spectrum Forecasting*. Both of these are available on our website.

Intellect strongly supports Ofcom's proposals to introduce spectrum leasing.

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

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Leasing would offer the security of a widely accepted, legally sound and internationally recognised (of benefit to non-UK companies or companies with major non-UK shareholders) means of obtaining access to spectrum, whereas TWLI would be a UK-specific "work around".

In addition, spectrum leasing would enable band managers to provide spectrum to end users with less recourse to Ofcom than is proposed for TWLI, reducing cost of sales and thus lowering barriers to entry.

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**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**

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Intellect recognises that the longer the term in which spectrum rights are leased to end users, the greater the cost a lack of transparency *could* have.

Intellect also agrees, at least initially, that determining a watershed by reference to length of lease would be clear and would avoid the need for subjective judgements and attempts to define spectrum markets.

However the determination of any watershed must balance the *perceived* cost to the market as a whole against the *actual* cost to individual potential end users for whom purchasing spectrum may be impractical, and whose requirements are for a lease of sufficiently short duration that the likelihood must be that a lack of transparency would have minimal market impact.

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**Q5d. 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?**

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Intellect agrees in principle that longer leases should be subject to similar procedural requirements as licence transfers. But where the watershed is drawn will be crucial in determining how much of the potential value arising from introducing spectrum leasing could actually be achieved, particularly in helping small companies test and launch innovative new services.

If, as seems likely, the UK is in the vanguard in introducing leasing then where Ofcom determines the watershed to be would tend to influence what other Member States choose to do. Get the balance right in the UK and the impact could well spread across the EU.

Get the balance wrong and end users will try to work around such disproportionate constraints – however well the anti-evasion provisions appear to be drafted.

A further proposal which could easily become disproportionate is the prohibition on sub-leasing, where there is market demand (and, as more end users enter the market for spectrum rentals, it can be assumed that such demand would increase), but the band manager would always retain the licence obligations to Ofcom providing an incentive to maintain contractual control over sub-tenants of its spectrum (especially if Ofcom charges for investigating complaints of interference).

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**Q5e. Do you agree that spectrum leasing should be available for all tradable licence classes? If not, which should be omitted and why?**

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Yes.

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**Q6. What capital and operational costs would automated trading impose on band managers and customers? Do you agree with our assessment that automated trading would be second-best to leasing but would provide a workable alternative?**

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Intellect agrees that that automated trading would be second-best to leasing, not least as public sector IT projects are some perceived by some as being prone to running late and being over budget (and would those costs be borne solely by those engaging in spectrum trading activity or by all of those who pay towards Ofcom's administrative costs?).

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**Q7b. Do you have further evidence on the benefits, costs or risks of the options?**

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Intellect supports Ofcom's direction of travel, but the constraints proposed will translate into a reduction in costs which won't be as great or as widespread as they should have been.

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**Q7c. Do you agree with the conclusions of this impact assessment, in particular on the preferred options?**

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Intellect agrees that the options considered seem comprehensive and we support the intent to reduce transaction costs, in particular the with introduction of spectrum leasing and TWLI, if necessary as a stop gap