

Orange response to Radiocommunications Agency's consultation on Implementing Spectrum Trading

Summary

- Orange supports spectrum trading and believes it has the potential to deliver economic benefits.
- Trading should, in the longer term, result in a reduction of acute spectrum shortages and the ability of the regulator to determine market entry.
- There are associated risks that will need to be carefully managed. The RA should be cautious and only introduce trading “without change of use” initially.
- Trading with change of use can be introduced shortly thereafter, once experience has been gained.
- There is no particular merit in delaying tradability of 3G licences for three years. This is an artificial distortion.
- RA/Government should continue to have (and publish) a strategic view over how much spectrum is devoted to government and private use.
- The State should retain ultimate ownership of the spectrum and sign long term leases with licensees. The RA should continue to develop harmonised blocks of spectrum, where appropriate, as this would be difficult to co-ordinate in the private sector.
- The RA should get trading going by negotiating long term licences with existing licensees, providing they want to convert their licences into being tradable. There is no need for auctions as the licences have already been allocated through a transparent process. Any windfall gains should just be subject to normal tax rules.
- Ofcom should approve “change of use” trades in advance, to check that, from the point of view of interference, third parties have not been adversely affected.
- Where competition issues arise, trades should be subject to approval by the relevant competition authorities, according to general competition law procedures.
- Annual licence fees should be continued but at a level of fees that are designed to cover the administrative costs of the RA (because the promotion of efficient use of spectrum will have been pursued through trading.)
- Ofcom should not act as a broker or market maker or force the financial details of a transaction to be made public.

Introduction

The introduction of spectrum trading has the potential to bring many benefits to the wireless industry – in particular to the major sectors of industry such as mobile telecommunications and broadcasting that are constantly developing new and innovative services for the mass market.

The current licensing approach of central control has led to the industry structure being almost entirely determined by the regulator. Central control has also determined the timing of and the cost of acquiring new blocks of spectrum, rather than producers being able to buy and sell the crucial input of spectrum as required. Even Russia has concluded that central control is not an efficient way of getting the best out of its resources. A more market based approach should also lead to the extinction of artificial spectrum shortages. The very high prices paid for the 3G licences were driven by the relatively low volume of spectrum being offered in relation to the demand for it and by the operators feeling that they were being offered a once in a generation opportunity to secure the future of their businesses. If others had been encouraged through economic mechanisms to use spectrum as efficiently as the mobile operators are able to do, there would never have been this scarcity.

However, spectrum trading will not be straightforward and there are associated risks that need to be managed carefully, if the full benefits of trading are to be realised. Spectrum is the lifeblood of the wireless industry and is easy to pollute to the point where it is useless for all parties. It has to be subjected to rigorous monitoring for misuse. A certain amount of planning control will also be necessary, just as local authorities influence the amount of land that is devoted to community, residential and business use.

An added complication is that there needs to be a degree of co-ordination between the technologies that transmit radio signals and the equipment needed to receive them. If customers are to benefit from low switching costs and high economies of scale, it is often desirable that competitors in the same industry are working to the same standards. The harmonised GSM approach in Europe has been much more successful in establishing mobile telecommunications throughout the world than the fragmented standards and proprietary technologies used in the United States. The use of industry developed standards has been hugely beneficial to the growth of open and fair competition. However, it is hard to envisage how the public operators could co-ordinate the acquisition of the harmonised blocks of spectrum. It is therefore likely that it will continue to be beneficial for the regulator to maintain an ongoing interest in the developing these harmonised blocks and making them available to the operators.

Overall, though, Orange favours the introduction of spectrum trading, providing it is done very cautiously and in a way that will not lead to long term pollution of this vital resource. These comments underpin the responses to the detailed questions posed in the consultation document.

Responses to detailed questions:

Question 1 *Do you have any comments on the proposed modes of trade? Are there others that should be considered?*

It is desirable that there are different modes of trading, as this will allow OFCOM to introduce trading gradually, starting with the simpler forms of trading and only moving to the more complex forms once experience has been gained of how trading impacts the overall management of spectrum.

On the specifics, it is hard to imagine that Mode 4 (change of use and ownership) will be useful once Mode 3 (change of use, ownership and reconfiguration) has been introduced.

In addition, it should be specifically recognised that change of use, in all its forms, should be allowed by licensees without a trade having taken place. It would not be logical that licensees can sell an interest in a licence to a third party who can then change the spectrum use but cannot do so itself.

Licensees may also be interested in selling derivatives of interests in spectrum licences, such as options. One of the problems encountered by those considering the development of new products and services is uncertainty over whether spectrum will be available and, if so, in what band. Acquiring options over spectrum would be a good way of giving certainty over spectrum without there needing to be a full cash outlay in advance of a product being ready for deployment.

Question 2 *How should interference disputes be resolved? How far should Ofcom become involved and what should its role be in relation to interference?*

OFCOM should be empowered to resolve interference disputes where there has been a licence breach, as they are today.

As far as interference disputes are concerned where there is no licence breach, it should be incumbent on licensees to try and resolve without recourse to third parties, in the first instance. If interference problems cannot be sorted amicably between the parties, the licensees should ultimately have recourse to the courts to defend their property rights. However, given the technical complexity, courts will be a very expensive way of going about resolving a problem of this nature. The best intermediate step before court action would therefore be to have OFCOM operate a non binding dispute resolution process. OFCOM have the technical expertise needed and could carry out this function cost effectively. It is not appropriate that this type of dispute is put through OFCOM's normal dispute resolution process for determination, because nobody has done anything wrong or illegal.

Question 3 *It is proposed to give scope for trades with as wide as possible a variety of time periods and opportunities for reversion. Which combinations do you think will deliver greatest benefits?*

There should be no restrictions on the time periods or terms of reversion that a licensee can sub-licence, providing it is within the term and terms of their licence.

Question 4 *It is proposed to give scope for trades where the extent of transfer of rights and obligations is complete or concurrent. What is your view on this proposal?*

It should be permissible for companies to make complete transfers of their rights under their licence. The RA should take some precautions to ensure that a licensee does not make hollow transfers to companies of no substance in order to escape unwelcome obligations and where there is no prospect that the transferee will fulfil them. But where there is a genuine transaction, it would be too harsh to hold a transferor liable on a recourse basis for the unmet obligations of the transferee. As things stand today a licence can be revoked if the licensee fails to meet its obligations and this is what should happen in the future.

Partial, or 'concurrent' transfers, whereby only part of the rights and obligations of the licensee are sold/leased should also be allowed. This will allow for the maximum possibilities with trading.

Question 5 *Licence classes from the following sectors are proposed for a first wave of the introduction of spectrum trading: public wireless networks; broadband fixed wireless access, private business systems and terrestrial fixed links. Additionally for the first wave the simplest mode of trading (change of ownership only) is proposed for all other licence sectors and licence classes (with a few exceptions).*

a) What is your view of these proposals?

b) What is your view on the appropriate timing of the introduction of trading for particular licence classes within sectors, and in particular for Third Generation Mobile (3G) licences?

The introduction of spectrum trading brings a large shift in the way that the management of spectrum is conducted in the UK and its impact may be irreversible. It will be beneficial to proceed promptly with this strategy but it will nevertheless be necessary to do so with much caution. Spectrum is the lifeblood of some very large industries and so it is important that such a vital resource is not polluted.

It would be better that trading is introduced in the first instance for all categories, including military users but without change of use. This could perhaps endure for a year, during which the RA could ensure that all the necessary processes delivered an efficiently working market. This approach would have the advantage of being able to introduce the 'simple' form of trading quickly and leave more time for consultation and process development before the more complex forms of trading are introduced.

Once this had been established, change of use trading could be introduced for all categories, providing, of course, that discussions on how to deal with interference and other issues have been satisfactorily concluded.

Orange cannot see any particular merit in a three year moratorium on 3G spectrum trading. These artificial barriers tend to cause more distortions than they prevent. It is almost inconceivable that a part block of spectrum would be traded, as the minimum amount required to engineer a network is 10MHz and none of the operators could sell off this much and remain in business. The only trading that could therefore take place is a merger between two businesses or the sale of an entire business. The absence of spectrum trading will not prevent consolidation if that is what the market demands. The Competition Authorities may require the merged entity to divest some of the combined spectrum if the resultant holding causes concerns about the competitive market. In the case of 3G licences, such divestiture will almost certainly be necessary because the prices paid in the 3G auction were highly dependent on

the number of players in the market (as determined by the regulator) and by the relative sizes of each lot of spectrum.

Question 6 *Licence classes from the following sectors are proposed for a second wave of spectrum trading: sound broadcasting (analogue and digital), television broadcasting (analogue and digital), programme making and special events, and aeronautical and maritime. What is your view of these proposals?*

As outlined in the answer to question 5, it would be better to introduce simple trading without change of use first for all categories and then bring in the more complex forms shortly thereafter, once experience has been gained on how such a market operates.

Practicalities and other market circumstances in the market will determine whether trades take place or not. It is not clear why the two phase approach is suggested.

Question 7 *In your view, what is the best approach for introducing the more complex forms of trading?*

The RA is absolutely right to be very cautious about introducing trading for change of use. It would be disastrous if trading caused the radio spectrum to be polluted and used less efficiently.

Nevertheless, the more flexible trading can be, the more benefits it will bring. The RA's suggestion of carving the country up into spectrum trading units may prove to be a bit too inflexible. As far as possible, the market should be allowed to use its inventiveness to deliver a multiplicity of solutions

Instead, it would be better to lay down some basic policy strategies and principles.

On the policy side, the Government, in conjunction with the regulator, must continue to consult on and publish the overall spectrum strategy, so that the market is aware of the amount of spectrum that will be taken up by Government (for defence, emergency services etc.). There should also be details of the amount that will be set aside for community use (amateur radio etc.) and the amount that will be available for public business use.

With respect to such matters as interference, it would be better to set down some sound principles rather than develop a whole series of pre-defined rules. For example, it could be established that, as a rule of thumb, the interests of existing users have priority over those of incoming users. Secondly, that if an incumbent has to make modifications to its system to accommodate a purchaser of some adjacent spectrum, it should be compensated accordingly.

The RA should continue to be engaged in R&D in this area. The work it does within CEPT on spectrum engineering (e.g. on co-existence, guardbands etc.) is very valuable and should continue. This knowledge base is a useful resource for industry to draw on.

Question 8 *What is your view on the overall timing of the introduction of spectrum trading?*

Simple spectrum trading could be brought in as soon as the necessary legislation and rules are in place. While this has to be done very carefully, there does not seem any need to delay unduly. More complex trading could be introduced shortly thereafter – perhaps within a year – once some experience has been gained in basic trading and the RA is confident that it has the necessary experience, processes and industry confidence to introduce more the more complex forms.

Question 9 *In planning for the introduction of spectrum trading, it would be helpful to have an estimate of the likely volume of trading. For each licence sector and licence class on which you can express a view, what volume of trades would you expect? Would you expect a different volume depending on the available modes of trade?*

A very positive benefit from spectrum trading will be the ability to reconfigure spectrum to meet the needs of the market. As noted previously, it would be logical for existing users to be able reconfigure their spectrum holdings without there having to be a trade. In the not too distant future, the mobile operators will need to finesse the migration of its GSM customer base onto the 3G services. Today it is impossible to estimate the rate at which this will happen. But from an economic efficiency point of view, it will be best to allow the operators to reconfigure the GSM holdings for 3G usage, as the subscriber base for 3G builds. It would not be desirable or even practical to have a big bang switch over date.

With respect to 3G spectrum it is unlikely that there will be trading of the spectrum alone, without the underlying business. 10MHz of paired spectrum is regarded as the minimum sustainable block for engineering a network and only two operators have more than this. Spectrum is the lifeblood of a wireless business and an operator would have to be in extreme distress before it sold radio spectrum.

Question 10 *For the proposed licence sectors from which licence classes will be selected for the first wave of the introduction of spectrum trading with more complex trading modes (ie for the sectors: public wireless networks, broadband fixed wireless access, private business systems and terrestrial fixed links) do you have any views on how extensively change of use or reconfiguration should be permitted?*

The RA will have to retain a role as a planning authority – just as local authorities do for property transactions. The Government, in conjunction with the RA, will have to publish an overall spectrum strategy, ensuring that the needs of the country are met, in terms of military, emergency, community and business use. Within this framework, the maximum amount of change of use and reconfiguration should be permitted. The economic benefits that will flow from spectrum trading will be diminished, if too many restrictions are placed on change of use.

The military is a very large user of radio spectrum. The spectrum using community would very much benefit if the military were also allowed to participate in spectrum trading. The opportunity cost of retaining excess spectrum in a trading environment will encourage them to make efficiencies that will not only be to their benefit but also the wider industry.

Question 11 *For the proposed licence sectors from which licence classes will be selected for the second wave of spectrum trading, do you have any views on how extensively change of use or reconfiguration should be permitted?*

Response as for question 10.

Question 12 *Would having different trading rules for different licence sectors and licence classes have any undesirable impact?*

The whole point of introducing spectrum trading is to bring about an improved economic allocation of the spectrum resource. It would therefore be logical to deduce that if a significant block of spectrum was artificially held back from trading, it would not be beneficial. It could also cause other undesirable distortions, such as artificially driving up the price of spectrum that is tradable.

Question 13 *In what circumstances do you consider it would be appropriate for Ofcom to (a) require prior clearance or consent (ex ante) for competition purposes for a proposed trade and (b) withhold consent for a trade on competition grounds?*

As a rule of thumb, the more spectrum that an operator controls, the lower is the cost of network investment and/or the greater is the network capacity. The ownership of spectrum therefore can confer an advantage on those operators that have larger holdings than their competitors and it would theoretically be possible for an operator to achieve a monopoly/dominant hold on a sector by controlling access to this essential resource.

If a large spectrum trade occurs independent of any underlying business, the Competition Authorities should review the potential impact on competition in the relevant market. The level at which the authorities intervene should be determined using the same principles as for other pre-merger referrals. Where the trade takes place as part of a larger business transaction, then the overall impact on the spectrum position should be included in the assessment as to whether the merger should be allowed. If there is a favourable decision but with conditions, divestment of spectrum holdings should be considered as one of the possible remedies prior to clearance of an otherwise acceptable merger.

Question 14 *How should tradable licences be structured? Views on all aspects of structuring the licences would be appreciated including on the technical construction of boundary conditions.*

The RA have suggested three options for the structuring of licences: reconfiguration on request to Ofcom followed by individual consideration by Ofcom, reconfiguration on request to Ofcom within limits that have been predefined by Ofcom and packaging spectrum into "frequency trading units" (ftu's).

As Orange has stated in its answer to question five, we believe that in the initial period there should be no trading with change of use. But after the initial period, to start with, at least, Orange favour the first option – reconfiguration on request to Ofcom followed by individual consideration by Ofcom, where Ofcom is only checking that the interference impact on third parties is taken properly into account. This approach gives the buyer and seller an opportunity to conduct negotiations in accordance with their needs, rather than tailoring a deal round artificial regulations drawn up by the RA. It may be that, eventually, Ofcom, with experience, are able to set some standard pre-defined limits or even package into ftu's.

The RA, through this consultation and other methods, should of course try to anticipate the type and volume of trading that will take place but Orange believes that extensive studies that set ftu's or pre-defined limits would, as the consultation document suggests, indeed be nugatory.

Question 15 *Are there licence classes, or licence sectors, for which division of spectrum into predefined frequency trading units with fixed boundary conditions would facilitate trading?*

In line with our answer to question 14, Orange does not see that this approach would be helpful for the efficient operation of the spectrum market. Spectrum is more akin to pieces of land than tonnes of coffee.

Question 16 *Are there licence classes, or licence sectors, for which user-negotiable boundaries would facilitate trading?*

Orange would prefer to see that, in the first instance, buyers and sellers negotiated relevant boundaries in all classes of licence. These negotiations may also involve interested third parties, such as neighbouring licence holders, who could be party to the negotiations and benefit financially in the event that he has to make modifications to his system in order to facilitate the execution of the trade.

Once negotiations have reached a satisfactory outcome, Ofcom, acting in a similar way to a local planning authority, could give the go ahead to the trade, having checked that the interests of all affected parties have been properly taken into account from an interference point of view. It should not have any oversight of trades in any commercial or regulatory sense, subject of course to general competition law.

Question 17 *Are there licence classes, or licence sectors, for which spectrum reconfiguration on demand would facilitate trading?*

The RA describes 'reconfiguration on demand' as reconfiguration on request to Ofcom followed by individual consideration by Ofcom. On the basis that this approach would allow for the maximum flexibility for the market to seek out an optimum use for a given part of the spectrum, Orange believes that this is the best option. The other two proposed (reconfiguration within limits pre-set by Ofcom and packaging of units into ftu's) may unnecessarily restrict possibilities.

Question 18 *What changes, if any, do you consider are needed to licence term and security of tenure to promote the successful introduction of spectrum trading? Please be as specific as possible about the licence sector(s) and licence class(es) to which you are referring.*

In order for trading to take place, licensees must have something substantial to trade. As the consultation document points out, most licences at present are revocable by the Secretary of State, without any significant amount of notice and without compensation. Even though long practice and safeguards accorded by the Human Rights Act give licensees a certain security of mind, the rights of tenure accorded these licensees cannot form the basis of the legally binding contracts that will underpin spectrum trades. There will have to be more.

Orange's 3G licence cannot be revoked by the Secretary of State unless there is a serious licence breach, a national security need or requirement for the UK to comply with an international agreement and it has a term of twenty years. This is the type of structure that will have to be accorded to all licences if they are to be tradable. There must be sufficient security of tenure to create substance behind the legal agreement and even to allow the licences to be used as security for bank finance that may be used to acquire licences in the first place.

When trading is introduced, licences will have to be converted from non-tradable to tradable. There is no particular reason that this should be made compulsory and licensees should be able to negotiate a length of licence that meets their needs up to a maximum. The maximum licence length should be set at twenty five years, as this is long enough to get new technologies established and to pay back on the original investment.

Orange agrees that the RA should issue fixed term licences rather than confer a perpetual interest, because the RA will need to retain an interest and incentive in the continued sound management of the radio spectrum. The reason for this is that it is highly likely that the mobile industry will need to acquire additional blocks of spectrum harmonised around an international standard and divisible among a multiple of competing operators. It is hard to envisage how this activity could be co-ordinated among the operators without the RA's assistance.

For example, it is proposed that 2.5GHz be internationally allocated as a UMTS/3G extension band. It would not be desirable that, prior to WRC agreement either an operator or indeed a speculator cornered the whole of the band. Not only does this give speculators incentive to influence the WRC but it may also hinder the evolution of fair and open competition in the mobile market.

In the years to come, as the Independent Review points out, the thrust of spectrum management policy is to ensure that artificial spectrum shortages are eliminated. The sums raised in the 3G auction were very large, driven by a buoyant stock market that would have punished heavily any operator that did not obtain a licence and the feeling that this was "a once in a generation chance" to secure the future of the business. If spectrum had not been so scarce, the RA would have been able to offer more spectrum to those that wanted it at a more reasonable price.

Question 19 *What are your views on continuation of annual licence fees for traded licences?*

Annual licence fees should be continued for traded licences. It will be necessary for the RA to have a continuing source of income to carry out its functions as a spectrum manager – particularly for monitoring but also other administrative functions. However, this implies a level of fees that are designed to recover the administrative cost of the RA rather than fees that try to mimic market value. Indeed, the 1998 Wireless Telegraphy Act requires the regulator only to charge such fees as will promote efficient use of the spectrum. If efficiency is being pursued by other means, through trading, there is no legal basis for charging more.

It will also be necessary for the basis of fee calculation to be well understood and stable, as the capital value of spectrum will in part be determined by the annual cost of retaining it.

Question 20 a) *Ofcom could provide only a minimum level of information for spectrum trading (identification and some description of licensed spectrum, and ability to send a message to the licensee) and leave further information provision to the market, or Ofcom could provide higher levels of information. What is your view on the optimum level for spectrum trading of information by Ofcom?*
b) *What type of information would assist or encourage you to trade?*
c) *Should Ofcom have power to compel disclosure of market information?*

Orange supports the view that Ofcom should provide only the minimum level of information, as described in part a of question 20. Public information should only extend to what spectrum is available to trade and who is willing to trade it. Spectrum trades, however, will essentially be private transactions – perhaps with more than two parties involved. Lack of confidentiality may restrict the ability of parties to engage in spectrum trading. If Ofcom has the power to compel disclosure of information, the information should only be disclosed to Ofcom itself. Ofcom should not be able to force public disclosure of transaction values.

Question 21 *Should Ofcom publish details of potential trades before they take place?*

Orange believes that, as a rule, this would not be helpful. It would make buyers and sellers much more reluctant to engage in negotiations.

Question 22 *Are there topics other than those listed in Table two paragraph 17.1 that will need to be considered before Trading Regulations are finalised and trading is introduced for particular licence sectors and classes?*

The list appears to be comprehensive.

Question 23 *For licence sectors and licence classes in which you have an interest how would you like to see trading start?*

There is no need for an initial auction or an overlay auction. Such a process would be unnecessarily disruptive, complex and time consuming. The best way to get trading off the ground is for the RA to negotiate tradable licences with the existing occupiers of the spectrum. This should be at each individual operator's choice and should not be compulsory. Nor should there be any requirement to "re-award" licences - they have already been awarded through some open and fair award process – there is no reason to do it again. The maximum length of licence should be 25 years but other licences can be made shorter than this, depending on the circumstances and the existing view of spectrum developments. For example, 2.5GHz is marked down as an extension band for IMT- 2000. It would not be appropriate to grant long leases to the Programme Making and Special Events in this band. However, the length of the licences should not be shorter than licensees' current reasonable expectations.

Such an approach may result in some parties realising unexpected windfall gains when licences are traded. But this should not trouble the RA or the Treasury. UK plc will be better off, because a) the spectrum will have passed into the hands of a party that can put it to better economic use and b) the gains will be taxable. The Treasury can collect its share through the tax system.

The granting of long leases in spectrum would be preferable to passing them over in perpetuity because it would mean that the State had a continuing interest in the long term health of the radio spectrum and give it a mechanism for occasional strategic review. It would also allow them to acquire blocks of harmonised spectrum for licensing to operators – something that would be difficult for private industry to coordinate.

Question 24 *What steps, if any, should the Government take to recoup capital gains realised as a consequence of the introduction of spectrum trading?*

Any gains and losses arising from spectrum trading should be treated under the normal taxation rules. There is no need for an extra levy for windfall gains or any other such artificial device.

Question 25 a) *What steps, if any, should Ofcom take to facilitate the start of spectrum trading markets?*

b) How can Ofcom assist the development of successful spectrum trading markets?

c) Do you consider that intermediaries are likely to emerge through the market if there is demand, or will Ofcom need to assist, and if so how?

Orange do not foresee that there will be day to day trading in this commodity that will require a “market”, like the stock market, for example. The market will operate more like the property market, where buyers and sellers are perfectly capable of conducting private negotiations between themselves. It may be that agents emerge from the private sector to assist with marketing and negotiations. That will depend on how pervasive trading becomes. There is certainly no need for the RA to assume this role.

The RA’s role should be restricted to recording transactions on a register of spectrum interests. Only non revocable assignments should be recorded in the register. If Party A leases out a portion of its spectrum for a short period within its overall licence, then it would be unnecessary and cumbersome to keep a public record of this. Any one wishing to trade a block within Party A’s assignment would have them as the point of contact.

The register should not record transaction values. This could impede spectrum trading and unnecessarily intrude on private commercial arrangements.