

Ofcom Spectrum Advisory Board (OSAB)

Input to Ofcom Spectrum Framework Review

This document represents OSAB's views on the questions posed by the Framework Review Document (SFR), but in this respect we have tried to avoid stepping beyond our advisory remit, most directly related to spectrum and research.

Generally, OSAB support the direction of this SFR document, even if we have some questions around details, process, linkage to other policies and some gaps. OSAB are generally surprised that the linkage to other major consultations was not stronger. This also conveys the impression that it is more linked to a telecommunications approach, as opposed to a broader communications or spectrum management review.

We have also highlighted areas of concern associated with:

- a) the need for wholesale or backhaul choice as it relates to spectrum policy and;
- b) international benchmarking of both spectrum policy and GDP impact

as key drivers/enablers for ongoing UK communications choice where spectrum and related "standards" play a critical part.

OSAB would like to see greater engagement by Ofcom with the rest of the EU in respect of spectrum trading. We believe there is more to EU engagement than the "level playing field argument". For example, "what spectrum is best opened up to trading on a purely UK basis and what would be better opened up to trading on a wider EU basis".

The thesis is that there are legacy spectrum issues where UK national solutions are the most appropriate way forward. There may be wider European or international opportunities where the UK being first to move would offer a competitive advantage. But there are likely to be spectrum opportunities, particularly for mobile, best done on a grander scale than just the UK, if we are to avoid "penny packeting" services (sub scale economies) or resulting in a substantial consumer burden equivalent of "left hand drive cars". For example, if extension bands were to be auctioned in a trading environment together with 3 or 4 other large EU countries at the same time, there would be a much bigger bang of innovation and investment than just the UK going forward alone and more likely industry/consumer benefits would flow.

OSAB will be pleased to support more detailed "next steps" within this ongoing consultation cycle.

Annex D

Consultation Questions

Q1: Are there any other major medium- to long-term spectrum management issues that this review should be considering? Are there any other significant technological or market developments that this review should be aware of when developing its thinking?

A1. Yes. For medium and long term spectrum management, OSAB would prefer to see more international benchmarking of spectrum strategies with major EU countries, plus Japan/Korea/USA as providing evidence to support spectrum strategy initiatives.

The EU 2004 study “Rethinking the European ICT Agenda” (<http://www.ictstrategy-eu2004.nl/>), published by the Dutch Ministry of Economic Affairs in conjunction with PriceWaterhouseCoopers in August 2004, is also a timely reminder of the need to put spectrum strategy in an economic context. The EU report identified Breakthrough No. 8 as a “move to a new and flexible model of spectrum allocation”, and this needs to be promoted by Ofcom to assure longer term spectrum compatibility (at least) on an EU level.

The review is rather light on the importance of the following:

- a) Spectrum/GDP relationship, for UK competitiveness;
- b) the importance of maintaining international standards for economies of scale, and cost reduction in the spectrum based industries;
- c) the significance of agreement within the EU/CEPT and the ITU on consistent and compatible spectrum based policies. Where flexibility is needed it should be based on well defined standards and spectrum boundaries, with the avoidance of UK-centric spectrum policies.

The balance of requirements between the public sector and commercial business interests will need further attention, as part of the CAVE public sector spectrum review. This cannot be viewed as simply assets that can be released without longer term planning and clear transition timescales, against a spectrum trading backdrop.

Ofcom could be doing more work to publish both spectrum assignments and relative availability, coupled with interference indicators. These should be seen as relevant information to encourage the start of better spectrum management and spectrum trading.

It is important to put more spectrum management information online, and to ensure that better customer care can arise, which is web based and interactive. This could be coupled with delegated spectrum management powers to

responsible licensees - mainly the bigger licensees who today take their spectrum management responsibilities very seriously. This does not imply that they have the automatic right to trade spectrum, unless they are authorised to do so.

Ofcom should also be doing more to ensure that the spectrum management and trading agenda is opened up on an EU basis, to avoid the accusation that opening up spectrum in the UK will tilt the playing field against UK based companies who are not granted equivalent access to spectrum or spectrum information elsewhere in the EU. This applies equally to telecoms, broadcast and defence spectrum which in some countries is handled quite remotely and in a closed fashion by different national regulators.

Finally , as referred to in the OSAB response to Phase 2 of the Strategic Review of Telecoms, we are concerned that “wholesale choice” for Network Carriers may be limited by current spectrum (as well as other) policies. This may be a strong candidate for a separate but related review. This partly relates to the potential BT 21ST CENTURY NETWORK and its impact on communications competition.

Q2: Do you believe it is useful to publish a compendium of issues? How frequently should it be published? What information should be included?

A2. Yes. Publishing every 3 years would seem advisable, but with an ongoing review process, before web updates. Separate challenges should also be taken on board to review the impact (positive or negative) of “disruptive technologies”.

The Spectrum Management Advisory Group (SMAG), the predecessor organisation to OSAB, had asked that the spectrum assignments become both more open and more of a DIRECTORY or guide to availability than exists today, but with more emphasis on today with an indication of future release dates – if this is what is really meant by COMPENDIUM then OSAB welcome this progress.

Q3: Are there any other issues of sufficient significance to merit mention in this document?

A3. See above. The impact of digital switchover and the Cave public sector spectrum review seem the most critical significant activities beyond the SFR, but leave the impression that this SFR is telecoms centric.

There is also an issue that does not seem to have been fully addressed and that is the resolution of disputes in a spectrum traded environment. When buying spectrum rights, a level of protection is assumed against harmful interference (otherwise use of the licence-exempt bands is free of charge?). Ofcom needs to carefully evaluate how disputes over harmful interference will be resolved. If Ofcom have in mind to step out of this role, they will need to ensure that the

Courts have the expertise and powers to do the job, including dealing with aggregated harmful interference from a number of sources (eg interference from France, Benelux and Ireland and anomalous radio propagation (eg signals suddenly bouncing off faces of new buildings)). The OSAB view is that industry would be better served by Ofcom playing an arbitration role, than by leaving matters to the Courts that will be slow, expensive and uncertain. (See also Answer 12).

Ofcom discuss in their document “rational” auctions. It may also be worth Ofcom considering rational payment “terms and conditions”. A point not often commented upon with the infamous 3G auction is that a lot of the economic damage to the European telecommunications sector came from the Finance Ministries demanding all the money up front or at punitive rates.

Q4: Are there important lessons to be learnt from experience in other countries that is not addressed here?

A4. Yes. See above, but also see the recent Korean 8-3-9 Strategy in particular.

Q5: Do you agree with Ofcom’s intent to maximise the use of trading and liberalisation?

A5. Generally this is going in the right direction. Ofcom do need to retain a balance of evolution rather than revolution, coupled with pragmatism and progress. This objective is important to be maintained to retain the right mix of investment and innovation, whilst reducing interference and spectrum inefficiency.

It is also clear that Ofcom’s intention to “maximise” must keep the UK spectrum management “in step” with the EU.

Where other international comparisons may cause deviation it may be important to look at other factors beyond spectrum management that are contributory policy drivers (eg population density, broadband push).

Q6: Are there other areas, apart from those identified above, where trading and liberalisation should be restricted? Are there areas identified above where you believe the trading and liberalisation could be fully implemented?

A6. Trading should be watched to assure that landlords of major public sites do not invoke restrictive terms or punitive prices for spectrum- some arbitrations should be offered to minimise this risk. This may not be a direct spectrum charge but an indirect one. This could also link to the Ofcom sitefinder database.

Restrictions or liberalisation on public sector spectrum use, reassignment and shared usage should also be considered in line with the CAVE recommendations.

OSAB would be concerned if regulatory impact analysis was not factored in to each major release of spectrum. RIA should be used partly to avoid the real difficulty in retrieving spectrum “after the horse has bolted” or “flooding the market “ with spectrum .

The ISM band coupled with licence exemption should be monitored for congestion, but retain its use for experimentation and innovation.

The biggest other areas where trading and liberalisation could be restricted relate to the traditional bigger blocks of spectrum held in the defence and broadcast arena – but these should be strong candidates for liberalisation provided that there are agreed transition timescales.

Q7: Do you agree with Ofcom’s approach to providing spectrum for licence-exempt use?

A7. This seems to be the right initial approach, but should be coupled with congestion analysis and indicators for current licence-exempt bands, and with a consideration of the potential benefits of opening up new licence-exempt bands when the opportunity arises.

Q8: Is Ofcom’s proposed methodology to estimate the amount of spectrum provided for licence-exempt use likely to deliver the right results?

A8. This methodology is a good start, but a published congestion indicator should be included as an ongoing monitor of usage. Interference and investment benefits should also be reviewed from time to time.

A major limitation with the methodology as currently set out by Ofcom is that it only considers congestion in current licence-exempt bands and the overall amount of spectrum that may be required in total for short-range communication. It does not recognise the individual characteristics of different frequency bands or their potential for different types of new application. OSAB considers that a portfolio of different bands should be available for licence-exempt use, rather than concentrating all potential expansion around 5 GHz.

Q9: What is the appropriate timing and frequency bands for making available any additional spectrum needed for licence-exempt use?

A9. In the absence of more specific evidence of congestion in current licence-exempt bands, or of new applications demanding the licence-exempt use of other frequency bands, OSAB cannot comment on timing. However, Ofcom should as

a matter of principle consider when the opportunity arises, whether a proportion of any newly available or refarmed spectrum (such as that resulting from digital switchover) should be made available on a licence-exempt basis.

Q10: Do you agree with Ofcom’s longer term proposals for spectrum trading?

A10. Generally the proposals are in the right direction, but there does not appear enough emphasis on the delegation of powers outside Ofcom. This could include the recognition and appointment of “responsible operators” and “spectrum brokers”.

Q11: Is the approach set out here, and in Annex H, for developing technology-neutral spectrum usage rights appropriate? Are there alternatives?

A11. This is a good start but as spectrum rights are largely unexplored internationally, these need to be kept under on-going review and managed for simplicity. It may also be better to limit the bands to which spectrum rights actually apply – in other words not the complete radio spectrum to start with but just the tradable bands

Annex H does not seem to reflect some activities that may arise as follows:

- a) spectrum sharing , where a full “trade” may not be required ; and
- b) issues arising associated with power levels and “alleged health” effects. This may be best dealt with as a general Ofcom /NRPB set of guidelines which whilst technology neutral relate to power levels / frequency; and
- c) environmental /landlords rights – these need to be excluded from spectrum rights more explicitly, but could impact future spectrum rights owners – perhaps a caveat emptor or “buyer beware” statement should be expressly included .

Ofcom – could also encourage infrastructure site sharing in the spectrum based industries to best environmental effect, by promoting the Ofcom Sites Database for wider use beyond the cellular community.

Q12: Should Ofcom do more to resolve interference?

A12. Ofcom could be publicising more openly those it finds “guilty” of interference. This is important as a deterrent as well as explaining one of the roles of Ofcom. It could also find additional legal powers being required in order to fine and impose legal sentence before some Ofcom steps are taken. It would also seem logical to delegate more powers to reduce interference to certified licensees or “responsible operators “.

The whole basis for trading relies on having clear responsibilities. In this respect Ofcom has NOT stated what it will and can do about “jammers”. In this area more high profile action is likely to be needed to stop the use/import of jammers, or leaving the burden of proof on the person interfered with. There is nothing to be found on the Ofcom site on this subject today, and the lack of reference in SFR to “jammers” is of concern. Ofcom need to be proactive with an anti-jammer policy if trading is to be successful.

Q13: To what extent should Ofcom intervene in promoting innovation?

A13. Ofcom’s primary role is NOT to promote innovation, but needs to provide a pragmatic framework in which many others can offer innovative solutions. Ofcom is most likely to be successful if it avoids detailed or prescriptive approaches. It also needs to actively promote bands “open for innovation”, perhaps linked to case study success stories.

T&D licensees should be surveyed for their feedback, before changing the current regime. This may lead to a published index of activity which today OSAB suspects is quite low in this area

Whilst retaining technology neutrality, it is also advisable to undertake better benchmarking of the best ideas in spectrum management policies and technologies. In the area of technology innovation ongoing involvement in selected standards bodies could assist Ofcom staying abreast of new technologies.

OSAB also recommend that Ofcom should be working more closely with the DTI Foresight program and other relevant spectrum based collaborative programmes.

OSAB sense that Ofcom may be doing more to promote innovation in the more typical telecoms bands, but need to balance this better with innovation in the broadcast and defence Bands.

Q14: Do you agree with Ofcom’s proposed approach to harmonisation?

A14. Ofcom’s approach to harmonisation seems incomplete as it does not seem to include strategic country benchmarking (ie to establish what is in the best interests of the UK first).

The approach also seems to be insufficient on standards /spectrum harmonisation eg analogue/digital switchover - options for a digital dividend; public/ private convergence around IEEE standards. This may be better dealt with as harmonisation by band activity. OSAB envisage that some of the shared bands (4.7.3) could be managed by 3rd parties, but the barrier to this seems to be the definition of “management” .

It is also dangerous to talk “harmonisation“ without fuller reference to power levels and “health effects” assurance processes.

Q15: Can you foresee any problems with the proposed approach to harmonisation other than those listed above?

A15. Mainly as listed under A14 above.

Q16: Do you agree with Ofcom’s proposal to continue with division by frequency as the primary method of dividing the spectrum?

A16. Ofcom’s proposal gives the right priority to frequency, but power levels remain important as well. A fundamental change in this area does require EU consensus and an agreed approach to ratification and publication where exceptions to this rule are proposed.

Q17: Is Ofcom’s approach of not Intervening to mandate entitlements in time appropriate?

Assuming frequency remains the primary method of spectrum division and management, then all other forms of usage beyond the licensee are “squatters” or (sub) tenants of the licensee. In order to manage the spectrum effectively it is far more logical to put control closer to the market, and in the hands of the licensee who can best control the interference / rent mix .

The SFR wording and proposal is quite difficult to follow in this area

Q18: Do you agree with the RIA?

This is one of the most difficult areas of Ofcom policy to provide a RIA, so OSAB applaud the attempt !

However, it is difficult to prove the following....

Whether:

- a) the RIA £1 Billion impact on GDP is high or low , particularly when the word “speculative” is used in the RIA text !
- b) all the risks have been quantified – eg interference ; “alleged health effects” ; UK competitiveness;
- c) in practice, greater harmonisation shall result; and
- d) “reduce regulation, and little cost to users“ will apply – on this latter point it is expected that indirect costs will arise , and that Ofcom have NOT delegated as much (eg responsibility) as they could.