

Arqiva response to band manager award consultation

About Arqiva

Arqiva has its headquarters in Hampshire, with other major UK offices in Warwick, London, Buckinghamshire and Yorkshire. It now has 10 international satellite teleports, over 70 other manned locations, and around 9000 shared radio sites throughout the UK and Ireland including masts, towers and rooftops from under 30 to over 300 metres tall.

The company is owned by a consortium of long-term investors led by Macquarie Communications Infrastructure Group and has 3 operating divisions: Terrestrial Broadcast, Satellite & Media and Wireless Access.

Arqiva is technology- and service-neutral and operates at the heart of the broadcast and mobile communications industry. We are at the forefront of network solutions and services in an increasingly digital world. The company provides much of the infrastructure behind television, radio and wireless communications in the UK and has a growing presence in Ireland, mainland Europe and the USA.

For broadcasters, media companies and corporate enterprises Arqiva has end-to-end capability ranging from -

- outside broadcasts (10 trucks including HD, used for such popular programmes as Antiques Roadshow, Question Time, Proms in the Park, a wide range of sporting events and the IIFA Awards 2007 “Bollywood Oscars” watched by 2 billion people worldwide);
- satellite newsgathering (30 international broadcast SNG trucks);
- 10 studios;
- playout (capacity to play out over 70 channels including HD);
- satellite distribution (over 1200 services delivered); to
- terrestrial transmission, the latter including digital switch over and mobile TV development.

In addition we are a licensed operator of 2 of the UK’s 6 Digital Terrestrial Television (DTT) multiplexes and a founder member of Freeview.

In the communications sector the company supports cellular, wireless broadband, video, voice and data solutions for the mobile phone, public safety, public sector, public space and transport markets.

One of Arqiva’s key assets is its Spectrum Planning Group.

Arqiva has purchased spectrum in two Ofcom auctions, has band managed (i.e. sub-leased spectrum to third parties) for the first of those purchases (including making spectrum available for PMSE use during the UK leg of the 2007 Tour de France) and is evaluating the options to do so for the latest purchase.

Furthermore, through our involvement with the two DTT licensed multiplexes we have exploited our technical expertise to enhance the efficiency of this spectrum increasing the number of video streams that can be delivered via a multiplex.

Major customers include the BBC, ITV, Channel 4, Five, BSkyB, Classic FM, the five UK mobile operators, Viacom, Turner Broadcasting, Metropolitan Police and RNLI.

Introduction

Band managers, companies willing and able to sub-lease spectrum geographically and temporally to others who cannot justify purchasing a UK-wide 24x7 licence, will have a crucial role to play as spectrum use becomes more liberalised.

Band managers will make available the “white space” around primary uses of spectrum, increasing the overall efficient use of spectrum and lowering the barrier to entry which access to spectrum would otherwise represent for many potential users.

Arqiva has already band managed spectrum which it has purchased in auction and we are highly aware that the necessary skillset to operate as a band manager includes an appreciation of the potential for secondary users to cause interference, both to other secondary users and to the primary users.

As the licensee for 2 Freeview multiplexes, and the network operator of all 6 multiplexes, Arqiva has serious concerns that the band manager appointed may have neither the skillset nor the inclination to protect Freeview reception as it pursues new uses of interleaved spectrum. We have no doubt that the BBC and the commercial multiplex licensees would share this concern.

In addition, Programme-Making and Special Events (PMSE) access to spectrum is a long-standing and essential input to the broadcasting ecology. There are many programmes, including sports and live news reacting to events such as the Boscastle flooding and the 7/7 London bombings, which would either not be practical to shoot without timely access to suitable spectrum or viewers’ appreciation of the broadcast would be seriously reduced. We also recognise the key role PMSE plays in theatres and touring productions.

Accordingly the appointment of a band manager with special responsibilities for PMSE has significance beyond the long-running esoteric discussions about radio mics between representatives of the disparate PMSE user base and Ofcom.

Arqiva supports the general principle that spectrum allocation should be informed by market signals. But this particular appointment must have regard for matters beyond which company might maximise revenue, and seek out non-PMSE uses of this spectrum, the fastest.

Of course a commercial approach to spectrum utilisation will be essential for the band manager to demonstrate, but a genuine concern for helping PMSE users make the transition and for protecting the Freeview platform largely responsible for delivering the digital dividend must also be key factors in the appointment (a willingness to accommodate local TV, a potential differentiator for Freeview, arguably should also be a consideration).

Arqiva therefore supports both the wide-ranging selection criteria proposed by Ofcom and the proposals to phase in increases in Administered Incentive Pricing (AIP), which will be necessary to avoid serious disruption to PMSE use.

Arqiva looks forward to more detailed proposals from Ofcom on AIP and the trading regulations which will apply, with implications for cost of sales and flexibility for those purchasing spectrum.

Answers to questions

Question 1. The executive summary sets out our proposals for the DDR band manager award. Do you agree with these proposals?

Arqiva strongly agrees that the interests of the appointed band manager should be aligned with those of PMSE users, and that all reasonable steps should be taken to avoid significant disruption to access to spectrum for PMSE as such use is transitioned onto a more market-based footing.

However, as AIP is gradually increased towards opportunity cost for each spectrum band transferred, the band manager will need to be proactively seeking new uses for that spectrum, and balancing demand from those new uses with reasonable demand for PMSE use.

No matter how well the appointed band manager understands the needs of PMSE users, and commits to meeting those needs, rising prices and occasional instances where PMSE use of a particular spectrum band or frequency is constrained by earlier licensing to an alternative use, is likely to lead to a degree of discomfort amongst some long-standing PMSE users.

Such discomfort is a natural outcome of transitioning the current arrangements for spectrum access onto a market-based footing where demand for spectrum is increasing but the amount of spectrum initially available to the band manager will have reduced. With the best will in the world, some existing PMSE users are likely to resist the principle of introducing commercial arrangements for their use of spectrum.

It is essential that the band manager's licence obligations, combined with the proposed reviews, audits and independent dispute resolution process, do not lead to a situation where the band manager's flexibility to adopt new business procedures is unduly contractually restricted or its management unnecessarily distracted with onerous oversight arrangements.

Arqiva is also concerned that the proposed 12 months' notice period for spectrum bands which are currently used for PMSE would provide neither certainty for the PMSE users Ofcom is trying to protect nor the necessary certainty for the band manager to identify and license the new uses which, with an anticipated higher willingness to pay, would enable PMSE use to be cross-subsidised with the result that those new uses disproportionately contributed towards the AIP payments for the bands in question.

Arqiva does not believe that it would be desirable if PMSE users' willingness to react to market signals and invest in new equipment which used alternative, less crowded spectrum were compromised by having to take into account different lengths of tenure for the band manager across the candidate bands.

We would suggest that the notice period for such bands should increase over time, as AIP increases would make the licensing of new uses increasingly desirable, towards the same 5 years proposed for bands with no current PMSE use. If there is evidence of any systemic failure on the part of the band manager, we would expect this to be identified early.

Question 2. Do you agree with our proposal to award access rights to channel 38 that will last as long as we sustain the protection of radioastronomy in the UK?

Yes, although this is academic if Channel 38 is withdrawn from the DDR auction as a partial substitute for any future withdrawal of guaranteed access for PMSE use to Channel 69.

Question 3. Do you agree with our proposal to include the interleaved spectrum in channels 61 and 62 in the cleared award?

Arqiva agrees that the interleaved spectrum in channels 61 and 62 should be awarded during the cleared auction if Ofcom determines not to enable successful bidders for the upper released block to be awarded that spectrum aligned with the CEPT band plan which is becoming *de facto* harmonised across Europe for cellular use.

Arqiva supports Ofcom's current consideration of offering the upper released block in a manner which permitted bidding consistent with the CEPT band plan, but the implications of this would affect both Freeview (current and potential new multiplexes) and PMSE access to Channel 69. Channel 69 offers PMSE UK-wide access and Arqiva would be concerned if guaranteed access to that channel were withdrawn without substitute UK-wide spectrum being then made available to the band manager.

If guaranteed PMSE access to Channel 69 were to be withdrawn, then it would be essential that the band manager appointed had the skillset and inclination to help migrate existing licensed use of Channel 69 to the most appropriate alternative spectrum available to it; in this the band manager should also maintain close contact with relevant equipment manufacturers.

In addition, if Channel 69 were to be included in the cleared award, then Arqiva would suggest that the band manager should continue to have access to that spectrum until it and the corresponding duplex spectrum (if the new use is to be FDD) is cleared UK-wide for re-use by the new licensee; in which case the AIP for Channel 69 until that point should be *de minimis* reflecting the fact that no higher value use had been precluded.

Question 4. Do you have any views on our proposed approach to protecting reception of DTT services?

Arqiva agrees that the "median option" offers an acceptable balance between protecting reception by roof-top aerials of the existing Freeview multiplexes and maximising the potential for use of the geographic interleaved spectrum.

However Arqiva again wishes to express its concern at the suggestion by Ofcom that the JPP Plan for Scotland or Northern Ireland could be re-planned to release more interleaved spectrum.

Question 5. Do you agree with our proposal not to award the bands between 11.7 GHz and 12 GHz to the band manager?

Arqiva agrees with this proposal, although if Ofcom's assumptions about future demand for this spectrum for PMSE or DTH use prove unfounded, then the band manager should be free to apply to Ofcom to gain access to this band.

Question 6. Do you agree with our general approach of awarding the remaining 49 Ofcom-managed bands allocated to PMSE but lying outside the digital dividend to the band manager?

Arqiva agrees with this proposal and, to the extent that any of the packages of geographic interleaved DDR spectrum are not awarded, we believe that these should be offered to the band manager on terms to be agreed on a case-by-case basis with AIP reflecting the lack of alternative interest.

Question 7. Do you agree with our proposal to award key PMSE bands to the band manager?

Yes. Please also see Arqiva's comments in relation to Channel 69 in answer to Question 3.

Question 8. Do you agree with our proposal to award 2290-2300 MHz to the band manager on the same terms as other wireless-camera channels at 2 GHz?

Yes.

Question 9. Do you agree with our proposal to award low-demand PMSE bands to the band manager?

Yes.

Question 10. Do you agree with our proposal to award no-demand PMSE bands to the band manager?

Yes, provided that the level of opportunity cost for such bands does not anticipate them being already licensed for new uses.

Question 11. Are there any other types of DTT transmission that should be protected from potential cognitive devices or other factors that we should take into account?

Question 12. Are there any potential future PMSE applications other than currently available wireless microphones, in-ear monitors and talkback systems that you consider should be protected from potential cognitive devices?

Question 13. Is there sufficient evidence to require protection for other services such as mobile television, bearing in mind the potentially negative implications of such protection for deploying cognitive devices?

Generally speaking, all licensed use should enjoy protection from unlicensed use. If a user has gone to the trouble and expense of obtaining a licence for access to spectrum then, provided that the equipment they are using offers reasonable performance, their use of that spectrum should *prima facie* be assumed to be of higher value than unlicensed use and protected as such.

However Arqiva recognises the dilemma faced by Ofcom in extending protection to a service such as mobile linear television which has yet to be deployed, and we look forward to the forthcoming consultation.

Question 14. Do you have any views on the appropriate notice period for temporary PMSE access to channels 63-68 and/or on whether we should extend temporary access to channels 31-40?

Arqiva agrees that offering the band manager a 12 month notice period, rather than 6 month, for the upper released block would likely be beneficial to PMSE users with limited cost to the new licensees. We do not see any reason why this temporary access should not also apply in the lower block as well.

But if Channel 69 is included in the cleared award, then it should not be withdrawn from the band manager until it and the corresponding duplex spectrum (if the new use is to be FDD) is cleared UK-wide for re-use by the new licensee.

Question 15. Do you agree with our proposal that the licence to be awarded should have an indefinite duration?

Yes. Both PMSE and new users will need certainty of tenure for the band manager to be able to plan their use of relevant spectrum.

Question 16. Do you agree with our proposal that the licence to be awarded in respect of bands currently used for PMSE should be subject to no initial period?

Yes.

Question 17. Do you agree with our proposal that the licence to be awarded in respect of bands currently used for PMSE should be subject to a notice period for variation or revocation on spectrum-management grounds of one year?

Please see our answer to Question 1.

Question 18. Do you agree with our proposed approach to allowing the new institutional arrangements for PMSE spectrum access to bed down?

Arqiva agrees that, in the first instance, the band manager should be permitted to resolve any problems arising.

Question 19. Do you agree with our proposal that the licence to be awarded in respect of bands with no current PMSE use should be subject to no initial period?

Arqiva agrees with this proposal

Question 20. Do you agree with our proposal that the licence to be awarded in respect of bands with no current PMSE use should be subject to a notice period for variation or revocation on spectrum-management grounds of five years?

Arqiva agrees with this proposal

Question 21. Do you agree with our proposals for varying or revoking the band manager's licence during the notice period?

Yes.

Question 22. Are there bands where PMSE users require earlier certainty about longer-term access in the interests of promoting spectrum efficiency than our timetable for the band manager award allows?

Arqiva is not in a position to comment on this at the moment.

Question 23. Do you agree with our proposals for the three selection criteria by which we will assess applications for the licence to be awarded?

Yes, although it is unclear whether Ofcom is proposing each criterion be awarded equal weighting.

Question 24. Do you agree with our proposal to enshrine the commitments to PMSE users made by the successful applicant in the licence awarded to it?

Yes, in principle, but as spectrum use becomes more liberalised; overall demand for spectrum increases; consumer and professional consumption of media becomes increasingly mobile and higher bandwidth; and innovations in wireless technology are launched with increasing frequency; then retailers of spectrum will have to be increasingly dynamic in response. Accordingly Ofcom should recognise that the commitments to PMSE made by the appointed band manager will necessarily reflect conditions prevailing at the time of its application.

Question 25. Do you agree with our proposed approach to assessing applications?

Arqiva agrees with the proposed approach.

Question 26. Do you agree with our proposal to use the block-edge mask approach to determine the technical licence conditions relevant to this award and to base these masks broadly on existing arrangements for PMSE spectrum access?

We agree with the use of block-edge masks, as long as geographical restrictions are applied (as mentioned in para 8.6) to protect other users of the same spectrum. This is particularly important in the case of DTT interleaved spectrum, where the geographical areas to be protected vary from one UHF channel to another.

Question 27. Do you agree with our proposal to set a separate fee for each Ofcom-managed band to be awarded?

Yes.

Question 28. Do you agree with our proposal initially to set fees for access to MOD-managed spectrum on a comparable basis?

Arqiva believes that a discount for MOD-managed spectrum may be warranted to reflect greater uncertainty around ongoing access to such spectrum.

Question 29. Do you agree with our proposal to determine the band manager's licence fee first by deriving estimates of the opportunity costs of the spectrum to be awarded and second by setting band-by-band prices that strike an appropriate balance between our objectives for this award?

Question 30. What are your views on the options for phasing in AIP to full opportunity cost?

Question 31. Do you agree with our proposal to set the band manager's licence fee for three years and to review it after that period?

Arqiva agrees with Ofcom's proposal to determine the band manager's licence fee, provided that the estimates of opportunity cost represent for each band genuine higher value use displaced and are, as proposed, conservative. Arqiva supports a balance being struck which assists PMSE users' transition to a more market-based allocation of spectrum.

Given the fragmented user base, and the large number of very small (often freelance) users, Arqiva feels that 3 years may be too short a phase-in period, however we support the proposal that the period would be longer for spectrum where the impact of AIP will be relatively greatest.

Question 32. Do you agree with our proposal to review the band manager's licence fee periodically but no more frequently than every three years thereafter?

So that certainty is not undermined, Arqiva believes that Ofcom should certainly review the band manager's licence fee no more frequently than every 3 years following the end of the phase-in period. Arguably a period of 5 years, aligning with the traditional cycle for reviews of business rates, may be more appropriate.

Arqiva anticipates that, if PMSE access to spectrum is to be migrated to a more commercial footing without causing serious disruption to PMSE users, then Ofcom should expect the band manager to phase this in over quite a few years. A review of the licence fee a mere 3 years after the end of the phase-in period may result in a sudden hike in access charges with unpredictable impact on PMSE users still coming to terms with commercial terms.

Question 33. Do you agree that where the interleaved spectrum to be awarded to the band manager is used for the operation of a DTT multiplex, we should replicate the ownership restrictions in the Broadcasting Act regime relating to (a) local authorities, (b) political bodies, (c) religious bodies and (d) bodies exerting undue influence but not replicate restrictions relating to (e) broadcasting bodies and (f) advertising agencies?

Arqiva does not believe that there should be any unnecessary restrictions placed on the use of DDR spectrum, whether cleared or interleaved, especially where those restrictions are service-specific.

Question 34. Do you agree that we should facilitate interoperability between existing DTT multiplex operators and new operators using the interleaved spectrum awarded to the band manager?

Yes. It is in the interest of both existing and any new DTT multiplex providers for there to be a considerable degree of interoperability, and in the first instance achieving this should be left to commercial negotiations facilitated as necessary by Ofcom.

Question 35. What are the merits of our proposed approach to providing spectrum information, in particular concerning the type of information that might be helpful and any impact that publishing information might have both on licensees and the wider spectrum market?

Arqiva supports the principle of provision of information to Ofcom by all spectrum licensees, provided the extent and frequency of information requests do not represent an undue burden on those licensees.

As spectrum use becomes more liberalised, and the number and range of potential retailers of spectrum increase, it will be essential for supporting the optimal use of spectrum that those seeking access to spectrum have recourse to a trusted source of information detailing as a minimum ownership (including spectrum, geographical and temporal boundaries), tenure, technical licence conditions and contact details. In this Arqiva envisages Ofcom facilitating the establishment of a Spectrum Registry, a spectrum equivalent of the Land Registry.

Question 36. Do you agree with our assessment of whether our approach to awarding this spectrum appropriately promotes competition and efficiency?

Yes.

Question 37. Do you agree with our proposal that “reasonable” PMSE demand for the spectrum awarded to the band manager should be defined as the actual demand from PMSE users at FRND prices?

Yes.

Question 38. Do you agree with our proposals for ensuring that the band manager meets reasonable PMSE demand on FRND terms?

Arqiva supports the principle that the band manager should be under an obligation to offer spectrum to meet reasonable demand for PMSE use on FRND terms, where the exact terms could differentiate between users by service offering (where the band manager could charge less for access to spectrum in less crowded locations or timeslots), market conditions and timing of request.

Such FRND obligations are a cornerstone of the operation of DTT multiplexes C and D, for which Arqiva is the licensee.

Question 39. Do you agree with our proposal to incorporate a suitable licence condition to enable us to access the spectrum awarded to the band manager to meet the requirements of the London 2012 Olympic Games and Paralympic Games and the Glasgow 2014 Commonwealth Games?

Arqiva is concerned that by implying a certain licence condition to enable Ofcom to access spectrum awarded to the band manager to meet the requirements of the London 2012 Olympic Games and Paralympic Games and the Glasgow 2014 Commonwealth Games, could limit the commercial potential and cause an inconvenience to existing users that could be using the desired spectrum.

Arqiva acknowledges that UK Government made certain commitments and is willing to discuss these further to ensure that a common understanding is arrived at to meet the needs of concerned parties. Furthermore, it is not obvious what the impact of this commitment is likely to be at this point in time and hence it is difficult to respond on a meaningful basis as the exposure is uncertain.

Question 40. Do you agree with our proposed approach to spectrum access for other major events?

Arqiva agrees with the proposed approach, but in order to minimise the potential disruption to existing users of required “major event” spectrum, it is essential that planning is commenced as soon as practically possible for regular and ad-hoc events to provide certainty of access.

Question 41. Do you agree with our proposals concerning disputes between the band manager and PMSE users as a whole?

To maintain the support of PMSE users Arqiva agrees that Ofcom should reserve for itself rights of audit and, *in extremis*, revocation of the band manager’s licence for systemic failure by the band manager (which ought to be identifiable early on).

We also recognise that, with the best will in the world, there are likely to be some existing PMSE users who will object to the principle of moving PMSE access to spectrum onto a commercial basis and hence the definition of a material breach / disagreement will need to be qualified.

Question 42. Do you agree with our proposals concerning disputes between the band manager and individual PMSE users?

Arqiva agrees that any disputes should, in the first instance, be dealt with by the band manager.

Question 43. Do you agree with our estimate that the band manager will require six months from licence award until it begins operating?

This time frame should be achievable for any applicant which satisfies the operational ability criteria.