

INDEPENDENT REVIEW OF RADIO SPECTRUM MANAGEMENT

Comments by BSkyB

1. Sky is grateful for the opportunity to respond to Government's consultation on the recommendations made by the Independent Review of Spectrum Management¹ (the "Cave Review"). As Government is aware, Sky submitted comments to the Review Team following a meeting in October 2001. Many of the concerns expressed in those comments, which focussed on the proposals relating to satellite, remain valid.
2. Sky supports the key aims of the Review - in particular, the objective of ensuring that radio spectrum is employed in its most effective and efficient use in the UK, subject to other public policy objectives. Nevertheless, Sky has a number of significant concerns with the analysis and recommendations in the Review report. These are of both a general nature, and specifically in relation to the Review report's approach to satellite broadcasting. The following sections set out Sky's comments on the Review report's (a) analysis and recommendation relating to satellite broadcasting, and (b) analysis and recommendations relating to broadcasting more generally.

¹ Review of Radio Spectrum Management, DTI/HM Treasury, March 2002 (Cave Review).

SATELLITE BROADCASTING

Background

3. Satellite broadcasting involves the transmission of a radio frequency signal to satellites located in orbit around the earth ("uplinking"). By co-ordinating satellites' orbits with the rotation of the earth, satellites are able to be established in geostationary positions above particular parts of the earth. Uplinked signals are then broadcast ("down-linked") from satellites to the regions covered by the satellite's "footprint", i.e., the area in which the broadcast from the satellite may be received. Satellite signals are received by end-users by means of a satellite receiving dish.
4. Satellite down-linking is extremely low powered. Each satellite transponder, for example, has the same power as a 100 Watt light bulb.
5. The spectrum used for satellite broadcasting to the UK is allocated under international agreements administered by the International Telecommunications Union (ITU). The frequency band allocated for use by satellite broadcasters has two parts. The first is the so-called "Broadcasting Satellite Service" (BSS) band (11.7 to 12.75 GHz) which is **reserved exclusively** for satellite broadcasting downlinks. The second is the so-called "Fixed Satellite Service" (FSS) band (10.7 to 11.7 GHz) that is shared between satellite downlinks

and terrestrial microwave (point-to-point) links (for example, telecommunications links from shops to head offices, military communications links, links from TV studios to remote transmitter sites, outside broadcast links, etc).

6. Satellites may be used to broadcast a wide range of different types of services, including voice telephony, internet services, television channels, radio channels, and digital interactive television services.
7. Satellite broadcasting is a highly successful sector of the UK broadcasting market. Nearly one quarter of homes in the UK receive digital television, radio and interactive services broadcast via satellite. There are now 330 different services supplied to the UK via digital satellite. These include pay television services broadcast by Sky and other broadcasters, but also a significant and increasing number of free to air television and radio services. The variety of interactive television services available is also increasing. Such services offer not only commercial opportunities, but also the ability to be used by government and community bodies to reach into peoples' homes; e.g., UK Online.
8. The plethora of choice that satellite transmission enables has been a significant driving factor behind the take-up of digital television services. It has, therefore, increased the prospect that analogue terrestrial transmissions will be switched off, with

the efficiency gains from the release of that spectrum being achieved sooner.

9. Proposals which may have an adverse impact on the continued development and success of satellite broadcasting need to take into account any consequential impact on the ability to release significant amounts of analogue terrestrial spectrum in the future, e.g., as a consequence of inhibiting satellite penetration and, hence, increasing the requirement for DTT coverage, or slowing down the date by which analogue switch-off can be achieved. Sky considers that this issue has been entirely overlooked in the Review report.

PROPOSALS IN RELATION TO SATELLITE BROADCASTING

10. The Review report's analysis of spectrum used by satellite broadcasters is set out in Section 8 of the report, and its recommendation relating to satellite broadcasting is set out in Recommendation 8.5. In summary, the Review recommends:

- (a) the introduction of licensing of transmissions from "user/interactive terminals";
- (b) charging for satellite uplinking (which are currently licensed under the Wireless Telegraphy Act) on the basis of "full opportunity cost levels";
- (c) the development of a licensing system for broadcasting to the UK via satellite, and;

(d) the introduction of charges for broadcasting to the UK via satellite where such broadcasting shares spectrum with, and constrains the deployment of, UK-based terrestrial services.

11. Sky's comments focus on (c) and (d) of these proposals. Sky may wish to comment on (a) and (b) in response to the consultation on the draft Communications Bill. It is Sky's view that these proposals (i.e., (c) and (d)) are:

- (i) incompatible with the UK's international obligations; and
- (ii) unnecessary, and, therefore, inconsistent with good regulatory practice.

These concerns are explained further in the following sections.

Licensing Satellite Downlinks

12. It should be noted that the Review report does not provide any concrete details as to how it envisages the licensing of satellite down-linking would occur. It is, for example, not stated whether the licence would be the satellite operator itself (e.g. SES), the 30 or so satellites which have downlink spotbeams covering the UK, or the users of the transponders.
13. Nor is it clear how the proposed solution would remedy the one problem the Review report purports to identify – the inhibition of the expansion of terrestrial uses of shared spectrum by satellite broadcasts in order to avoid interference between the two services. As discussed below, Sky does not agree that this is a significant problem. However, even if it were, it is entirely unclear how a system of charging for satellite downlinks would in any way alleviate the issue allegedly identified in the Review report.

Incompatibility of the Review report's proposals with international obligations

14. The spectrum allocated for satellite broadcasting to the UK is underpinned by extensive international co-ordination of frequency planning in order to avoid harmful interference in the use of radio spectrum. This is essentially an administrative planning process which involves trade-offs between autonomous national spectrum use and global efficiency in spectrum use.

Within this international framework it is accepted that there will be some constraints, caused by the international planning regime, on the maximisation of efficiency at the national level. Since such constraints are already recognised in the frequency planning process, Government should not introduce spectrum management policies which operate as if the international planning process did not exist.

15. Moreover, the proposals do not, on the face of them, appear to be consistent with the EC Treaty as they create an obstacle to free movement and may distort competition in the internal market. The thrust of EU legislation and policy² over the past decade has been to reduce and eliminate barriers to the transmission of satellite services and to facilitate transfrontier broadcasting as a means of achieving the Treaty's objectives. The Review's recommendations fly in the face of that.

² Directive 89/552/EEC and Directive 97/36/EEC Concerning the Pursuit of Television Broadcasting Activities.
Directive 93/83/EEC concerning copyright and rights related to copyright applicable to satellite broadcasting and cable retransmissions
Directive 95/47/EC on the use of standards for the transmission of television signals.
Directive 99/7/EEC on general authorisations and licences for Telecommunications Networks and Services.
EC Communication on the Application of the General Principles of Free Movement of Goods and Services - Articles 28 and 29 EC - Concerning the Use of Satellite Dishes.
European Court of Justice Case C-17/00 François De Coster v Collège des bourgmestre et écherins de Watermael.
Decision No 676/202/EC of the European Parliament and of the Council on a regulatory framework for radio spectrum in the European Community (Radio Spectrum Decision).

There is no need for UK government regulation in the case of spectrum used for transmissions from satellites

16. In the recently published draft Communications Bill, Government confirmed that it intends future regulation of spectrum (as well as broadcasting and electronic communications) in the UK to be "light touch", ie that any regulation is kept to the minimum necessary to remedy clearly identified problems, and that regulation is removed if it is no longer necessary. Indeed, the Government intends that Ofcom will have a duty to regulate in this manner³.

17. The Review report's proposals with regard to satellite broadcasting are not aimed at clearly identified problems and are entirely disproportionate to the extent that any problems may exist. Their implementation would, therefore, send entirely the wrong signals at the outset of the new regime of broadcasting and telecommunications regulation in the UK.

18. The rationale for Government intervention in radio spectrum allocation is, in essence, based on the finite nature of the spectrum allocated to the UK under WARC 1977. This gives rise to competing demands for scarce spectrum, which must be reconciled. This includes ensuring that different users of spectrum do not interfere with each others' services. **These issues,**

³ Draft Communications Bill, clause 5.

however, do not arise with regard to the spectrum used by transmissions from satellites.

19. **Potential** arguments as to usage conflicts that may arise with regard to satellite broadcasting to the UK may be divided into three categories:

- (a) a scarcity of capacity for satellite broadcasting, such that there is a need to choose between different broadcasting uses/users of such capacity;
- (b) current interference between satellite broadcasting downlinks and terrestrial uses, where these activities share spectrum; and
- (c) a restriction on the expansion of either satellite broadcasting or terrestrial uses in order to avoid further interference arising.

Each of these is discussed below.

(a) *Constraints on expansion of satellite broadcast services*

20. There is no spectrum constraint on the transmissions from satellites to the UK. This is demonstrated by the enormous and continuing expansion in the number of digital services broadcast via satellite to the UK. As noted above, there are now around 330 different services provided via satellite to the UK. The expansion of such services is affected only by the availability of transponder capacity on satellites. At

present there is excess capacity - and a very healthy secondary market in transponder capacity - and therefore an ability to continue to expand the range of services using satellite broadcasting. Moreover, satellite transponder capacity can be expanded if there is sufficient demand, in response to normal commercial incentives. There is, therefore, no justification for licensing, or charging, based on an argument of capacity scarcity for digital satellite broadcasting.

(b) Current interference between satellite downlinks and terrestrial services

21. It is technically impossible for geostationary satellite transmissions to cause interference to terrestrial point-to-point links. As Sky advised the Review Team, satellite transmissions are extremely low powered and come from a different direction to terrestrial microwave links. In terms of terrestrial point-to-point links causing interference with transmissions from satellites, there has been only a handful of such instances and they are of limited consequence. Such occurrences can be easily remedied by re-siting a customer's satellite receiving dish - a far more cost-effective solution than instituting a system of statutory licensing and charging.

22. In fact, the Review report is inconclusive as to whether such interference is a problem. Paragraph 8.55 the Review report states that it would be "useful" for RA/Ofcom to clarify the extent to which such

interference occurs in practice, **before** any licensing system or charging is introduced. Recommendation 8.5 merely states that if interference is identified:

"Spectrum access licensing could be used to clarify the rights and responsibilities of satellite transmissions into the UK and, where appropriate, to apply opportunity cost pricing to such spectrum use."

23. Principles of good regulation make it not only "useful" to establish whether there is a problem to be resolved through government regulation, they make it essential. The starting point of all regulatory analysis is whether there is a problem that may require a regulatory solution. It is Sky's view that there is, in fact, no need at all to institute a licensing system for transmissions from satellites to the UK arising from current levels of interference between satellite downlinks and terrestrial services which use shared spectrum.

(c) restriction on the expansion of either satellite broadcasting or terrestrial uses in order to avoid further interference arising

24. The main justification put forward by the Review report for the proposal of licensing and charging for satellite downlinks is an assertion that the expansion of terrestrial point to point uses of radio spectrum is being inhibited by the need to avoid interference with

satellite downlinks. It is argued that licensing will provide those using satellite downlinks with "certainty" of protection against increased interference from an increase in terrestrial uses.

25. No evidence is presented in the Review report to support the proposition that the expansion of terrestrial usage of shared spectrum is being inhibited. To Sky's knowledge, there is no evidence of terrestrial fixed links not being exploited because of potential interference with satellite downlinks. A significant number of terrestrial fixed links have been deployed across the UK. This, together with the absence of any noticeable interference currently, suggests that the alleged problem which the Review recommendations are intended to address are purely hypothetical, or at most, very marginal.
26. Again, it is essential that Government examines critically whether there is a problem that requires a remedy, and, if so, whether any system of licensing and charging is necessary to deal with it. Then Government must consider whether the proposed system is appropriate before it commits to the implementation of Recommendation 8.5 of the Review report.
27. It seems apparent that the general presumption in the Review report that opportunity cost-based incentives are a "good thing" may have led the authors to lose sight of the wood for the trees in this instance. The need to create such incentives through government

intervention arises only where their absence leads to significant inefficiencies or problems; they are a means to an end, not an end in themselves. In this case, there are no such problems to be remedied and therefore no need for government intervention.

28. The Review report is also unclear about whether licences for satellite downlinks would, in fact, be auctioned. In any case, such a proposal (that any licences created could be auctioned) can only be described as bizarre. If an auction system were to apply, what would happen to the satellite broadcasters who lost out in that auction? Further what would happen to the winner? Can the protection afforded by these licenses be technically carved up so precisely that, in practice, the only broadcaster benefiting from such protection is the one who won the auction? Would not other unlicensed broadcasters benefit from the protection afforded under the licence paid for by the winning broadcaster, without any payment being required from them?

29. The principal purpose of an auction is to allocate a scarce resource to those who value it most highly. In this case, as described above, there is no scarcity constraint on the development of new satellite services and, therefore, no need to allocate capacity among competing users. In such circumstances there is no need to auction licences - if licences exist, they should be provided to all applicants.

30. On the contrary, such licensing, whether accompanied by the auction of licences or charging, would simply increase the costs of existing broadcasters and raise a significant barrier to entry to new satellite broadcasters, without any corresponding value to them. Such a policy approach is inherently undesirable.
31. Sky contends that, particularly in view of the contribution of satellite broadcasting to analogue terrestrial switch-off, any proposals that might have a detrimental impact on satellite broadcasting need to be considered very carefully. In the current case, however, it is clear from even a cursory examination, that the Review report's proposals are seriously flawed and should not be adopted. Sky contends that Government should commission OFCOM and the RA to examine further the Review report's proposals and report back to Government.

GENERAL ISSUES

32. This section sets out a number of general concerns Sky has with the analysis and recommendations in the Review report.

Compatibility of analysis with good regulatory practice

33. The Review report adopts a common approach to spectrum usage which involves the establishment of spectrum licensing, spectrum trading and, where spectrum trading is not feasible, administratively determined taxes⁴ on spectrum holders.

34. In Sky's view, the Review report's general presumption that licensing, spectrum trading and/or spectrum taxation is necessary does not conform to the principles of good regulatory practice, or "light touch regulation". In particular, it is Sky's view that the Review report fails to recognise adequately the following general issues associated with licensing, spectrum trading and/or spectrum taxation:

- these instruments may not always be the best available to deal with spectrum use conflicts, particularly where such conflicts are negligible. Good regulatory practice should examine all possible

⁴ The Review report refers to the proposed spectrum taxes as "spectrum pricing" and refers to such taxes as a "market mechanism". Spectrum pricing is simply a form of government taxation in which the level of tax or levy is determined (in theory) according to some measure of the economic benefit derived in the next best alternative use. It is not a market mechanism.

ways of dealing with an identified problem. The cost-effectiveness of private solutions and administrative actions should not be discounted simply on the basis of an attachment to the theoretical superiority of spectrum trading or taxation;

- the Review report does not give due weight to the practical realities of implementing its proposals. Both spectrum trading and spectrum taxation are likely to be extremely complex to set up and administer. There is a significant risk that any economic gains in the use of spectrum from the proposed measures will be swallowed up by the costs to both business and Government of running the system⁵.
- the Review report does not give due weight to the practical difficulty in setting taxes on the basis of "opportunity cost". The opportunity cost of any activity is extremely difficult to establish for a number of reasons, and will vary significantly over time. Over-optimistic estimates of opportunity cost by a regulator would have the potential to be extremely damaging.
- the Review report does not take sufficient account of the likelihood of regulatory inertia and

⁵ This is unlikely to be revealed effectively in a Regulatory Impact Assessment. Such assessments typically downplay the costs that will arise, and overplay the benefits.

regulatory creep. For example, spectrum taxes are proposed in some cases as a "stop-gap" measure in the period before a full spectrum trading system is implemented. The reality, however, is that regulators are loathe to give up powers, particularly when such powers are revenue generating. The very implementation of spectrum taxation, therefore, may reduce regulatory incentives to move towards spectrum trading in a timely and effective manner.

Impacts on businesses and consumers

35. The Review report seeks to down-play, or dismiss, arguments by respondents that its proposals have the potential to have a significant adverse impact on businesses and consumers. In the longer term, the Review report is, of course, theoretically correct that the contraction of existing businesses, and the withdrawal of particular services is justified if it leads to them being superseded by more highly valued services. It does not, however, address the fundamental concern that there is a real potential for significant impacts on existing businesses which use radio spectrum in the short to medium term. These impacts are likely to result in reductions in investment and employment within those businesses, the withdrawal of services with marginal profitability, and increases in prices to consumers.

36. In relation to the longer-term, it is also hard to see why, if a service exits the market as a result of the spectrum tax, it would be "replaced" in any way, particularly by a more highly-valued service. First, as explained above, satellite capacity is not scarce so entrants do not "displace" existing services. And, secondly, why would a more highly valued service be incentivised to enter the market when the available "protection" has been granted to an incumbent operator?

Effects of proposals on competition

37. The Review report does not take sufficient account of potential impacts on competition arising from the application of different policy instruments, and different approaches (eg discrimination in the phasing in of charges), between competing operators⁶. In addition, the Review report does not give due weight to the effect of licensing regimes as a barrier to entry. In relation to satellite broadcasting, for example, the establishment of a licensing regime risks stemming future entry to the market.

38. Government should ensure that:

- (i) any proposals which act to the advantage or disadvantage of competing broadcasters are applied

⁶ Such an outcome may well now arise since, on 22 May 2002, Government announced that successful applicants for DTT multiplexes would not be subject to administrative spectrum pricing before the date of licence renewal in 2014.

in a non-discriminatory manner, so as not to distort competition between them; and

(ii) ensure that any such proposals are tested against the OFT's guidance on the competition impact of new regulation⁷ and publish the results of such analysis.

Spectrum planning for DTT

39. Sky supports the Review's recommendation that Government should "give full and proper consideration to the costs and benefits involved"⁸ in spectrum planning for digital television. In particular, Sky agrees that the costs and benefits of delivering public service broadcasting via cable and satellite, rather than DTT, must be explored **before** decisions on the allocation of spectrum for DTT are made. It appears, however, that Government may have already decided to dispense with the rigours of a full cost benefit analysis⁹; thereby prejudging its response to the Review.¹⁰

Publication of spectrum valuations

40. Sky also supports the Review Team's recommendation that the spectrum used for terrestrial broadcasting should

⁷ OFT 355, Guidelines for competition assessment, A guide for policy makers completing Regulatory Impact Assessments, (Feb 2002).

⁸ *ibid*, para 11.60.

⁹ Digital Television: The Principles for Spectrum Planning, Consultation Document, DTI/DCMS.

¹⁰ See footnote 8 above.

be valued and the valuations made public¹¹. Together with an assessment of the benefits of public service broadcasting this would enable Government to take informed decisions about the scope of public service broadcasting. This process would have to be undertaken regularly, recognising that the valuation of spectrum will change over time.

Other issues

41. Sky has seen and supports the submission made by Satellite Action Plan Regulatory Group (SAP REG).
42. This submission does not include Sky's comments on the relevant provisions in draft Communications Bill.

BSkyB

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¹¹ Review, Recommendation 11.3.