

# ITC RESPONSE TO THE REVIEW OF RADIO SPECTRUM

## MANAGEMENT ('THE CAVE REPORT')

### Introduction

1. The ITC supports and endorses the core analysis and thrust of the Cave Report. That analysis and the use of market-based tools should enable a more efficient use of spectrum as a key national resource, whilst also permitting the delivery of necessary public policy objectives.
2. The ITC response focuses on:
  - The application of the key principles in the Report to the broadcasting sector.
  - Recommendations on the implementation of the Report as it relates to individual broadcasting players.

### Summary of Conclusions

3. The ITC supports the Cave Report's approach to opportunity cost pricing. We agree that digital switchover is the most valuable contribution the TV broadcasting sector can make to spectrum efficiency. Switchover will release significant spectrum to which full trading/market mechanisms can apply.
4. We believe that core principles for implementing Cave successfully will be:
  - Transparency in the pricing process – traded prices rather than administrative pricing will best establish transparent market signals. There needs to be an effective independent appeals mechanism where administrative pricing is used.
  - Certainty for investors, which requires a consistent set of ground rules throughout their Licence period.
  - Greater devolution of responsibility for spectrum management to users. Switchover will significantly increase scope for devolution to the broadcasters, though the shared and interdependent nature of broadcast spectrum allocation means that backstop planning will be necessary to deal with national and international priorities.

5. We look at the implications of Cave conclusions for the Broadcast sector. Broadcasting is an 'information good', characterised by major economies of scale, with high fixed costs and low marginal cost for each extra home served. The Government is concerned to ensure that UK audiences have access to high quality public service broadcasting delivered by national networks free at the point of delivery. Since these aims cannot be realised by services solely available on satellite or wired services, there is no alternative to terrestrial free-to-air delivery for public service broadcasting for the foreseeable future.
6. Subscription based channels, especially premium channels which charge substantially for a service, are able to trade their modes of distribution and use of spectrum against the number of homes they need to reach for profitability. Free-to-air public service broadcasters, with a universal service obligation do not have this freedom of manoeuvre. Unlike most other users of spectrum, free-to-air broadcasters do not control end to end use of the spectrum. Receiver purchase is an individual consumer decision. Free-to-air, public service broadcasters can encourage digital take-up by providing and cross promoting attractive digital programming but they cannot themselves choose not to provide an analogue service until the overwhelming majority of homes have finally acquired digital receivers. Consequently, economic incentives on them, through spectrum pricing, will be ineffective, at least until switch-over. Thereafter, they will be effective in so far as price mechanisms can be made compatible with providing the required (universal) level of public service.
7. For Channels 3 and 5 we support the Cave Report recommendation of separating the charge for an 'exclusive public service licence' and the charge for spectrum. The costs of spectrum charging can then be factored in to the prices paid for the broadcast licence. In this way, the spectrum market can work without creating an additional cost. Independent work, being commissioned by the ITC, on the costs and benefits of public service broadcasting should assist this process.
8. For the BBC and Channel 4, the ITC response suggests a number of options:
  - To acknowledge that the BBC and Channel 4 as non-profit-making bodies contribute in kind for their use of spectrum (through investment in public service) and to regard that investment as meeting the 'spectrum charge';
  - To adopt a 'charge, plus offsetting grant', though this would set up incentives to disenfranchise audiences

inconsistent with universal public service, amongst other difficulties, or

- To postpone spectrum pricing until switchover, when broadcasters may have greater flexibility than now to respond to price incentives.

### **Key ‘Cave’ principles and their application**

9. The Cave Report identifies a number of key principles which should govern spectrum allocation and assignment based, increasingly over time, on market mechanisms. In the broadcasting sector these seem to the ITC to be:
  - (a) Clear distinctions between strategic allocation decisions – which raise public policy issues – which should rest with Ministers; and detailed assignment which should be conducted, transparently by RA/OFCOM. The ITC endorses this division of responsibilities.
  - (b) Opportunity cost-based pricing. The ITC supports the Cave Report’s approach and welcomes the Report’s recognition that ‘Opportunity Cost’ represents a range dependent on the characteristics of the spectrum involved. This can range from zero where international constraints prevent any alternative use of the spectrum (Cave, paragraph 66). At the other end of the scale “any use” spectrum will find its full market value.
    - Most bands will – at present – fall between those two extremes. RA/OFCOM will need to set the administrative price for such bands in the light of alternative uses available at the time. In the case of television and radio broadcasting the currently available alternative uses are:
      - Services ancillary to broadcasting (SAB)
      - Datacasting
      - Other uses compatible with the Digital Video Broadcast-Terrestrial (DVB-T) standard.
    - The current ‘per MHz’ values for SAB are well established. Datacasting may increase in value over time, but it is notable that neither ITV Digital nor SDN have found sufficient, high value, datacast users to occupy the 10 per cent of capacity they are currently permitted under their Broadcasting Act Multiplex Licences. Open

auctions of capacity by the ITC for “Additional Services” within the VBI within the analogue spectrum have yielded values in the low tens of thousands of pounds per annum.

- Combined DVB-T/mobile telephony networks offer the highest value potential alternative use of the spectrum. But as the independent Aegis/Indepen report commissioned for the ITC noted, such networks require considerable advances in mobile battery technology. This, coupled with existing international constraints on spectrum use, suggests that combined DVB-T/ mobile telephony networks will not be a feasible alternative use until c.2010 at the earliest.

(c) The importance of digital switchover. The Cave Report acknowledges the public policy importance of switchover; and that switchover is much the most valuable contribution the TV broadcasting sector can make to spectrum efficiency (by releasing significant amounts of analogue spectrum for alternative uses) (Cave, paragraph. 11.5.) The Government’s Spectrum Planning Consultation assumes the release of between 96 MHz and 160 MHz of spectrum at switchover. This has a number of implications for Cave implementation:

- In the ITC’s view, the full benefits of Cave depend on achieving switchover and, therefore, on effective economic incentives on the broadcasters to work towards switchover. Those economic incentives need to be proportionate and focus on the activities which are within the gift of the broadcasters to deliver. These are: digital infrastructure investment, digital on-air promotion and attractive digital programming.
- In line with sound economic principles, economic incentives should be applied only to those bodies capable of responding to them. The date for switchover is a decision for Ministers on the advice of OFCOM, not the broadcasters. The purity of the Cave Report’s logic suggests that the economic incentives should, therefore, be applied to Ministers/OFCOM, on the basis that they are the people who can act upon them. Since this is unlikely to be practical politics, it becomes the more important to ensure that the implementation of Cave in respect of the broadcasters does not simply become a spectrum tax which would dis-incentivise their investment in driving towards switchover.

- Unlike most other users of spectrum, the free-to-air broadcasters do not control end-to-end use. In the case of television, consumers purchase their own free-to-air receivers. Unlike users who control their applications end-to-end (eg, the MOD) the broadcasters have no direct control over the purchase decision. Nor – unlike mobile telephony or pay television operators – can they influence end-consumer decisions through the subsidy of new types of receiver in the expectation of higher service revenues in future. Therefore they cannot directly determine the pace at which consumers switch to digital.
  - The Cave Report’s suggestion (paragraph 11.43) of differential pricing between analogue and digital spectrum is thus likely to be of only limited value in promoting switchover. It is the change in the stock of consumer receiver equipment to digital capable TV sets which is the critical determinant of how soon switchover can occur. In the ITC’s view, that is where effort and economic incentives need to be focused so that consumers are encouraged directly to adopt digital. Securing EU-wide agreement to mandate that only digital-capable TV receivers are sold from some future date, for example, would be one such mechanism, though it is not without drawbacks.
- (d) The introduction across the public sector/not-for-profit sector of spectrum pricing matched by grants/offsets to ensure that the charges do not damage the public service concerned. In essence, the users are charged a full rate for their spectrum but then given a grant to cover that cost. The more spectrum the user can release or sub-let, the more of that grant they have to use for their main public services. This is an ingenious approach. Its application in broadcasting needs, as the Cave Report recognises, to take into account: (a) the Government’s stated desire for continued universal service from the BBC and Channel 4; and (b) the Report’s own recommendation (11.7) that responsibility for detailed spectrum planning – including for the BBC – should rest with OFCOM and (c) the constraint on use imposed by international treaty obligations.

This suggests that in the short to medium term at least, the scope for releasing spectrum which can be traded for other uses will exist only at the margins. In the longer term, the Cave Report suggests that there may be substitutability of other delivery platforms (eg, cable and satellite) for terrestrial transmission. Possibly. But as noted above: (a) the adoption

of different platforms is an independent consumer decision not one for broadcasters (b) only where, in an entire geographic area, nearly all consumers have migrated to other platforms is there scope to cease the terrestrial signal.

This suggests that the Government may need to consider how best to square the circle in the light of considerations listed below, leading to a range of options. These options are discussed in paragraphs 16 and 17 below.

## Considerations

- (e) The process of economic allocation, costs and benefits should be transparent. The ITC endorses the Cave Report's approach. Full market-based allocative mechanisms provide the most transparent system. Determining opportunity cost centrally and using it to set administrative prices, is almost as big a challenge as central planning. (It depends on knowing about consumer demand for alternative services, technological developments and costs over time etc.) There are real risks that it can send the wrong price signals to spectrum users. The ITC therefore sees considerable merit in the Cave Report's approach of using traded spectrum prices, increasingly, as the benchmark for prices where administrative pricing is used. This needs to be coupled with an effective, expert and independent appeals mechanism able to judge on the facts of the case and not simply the 'reasonableness' of OFCOM's decisions. The ITC supports the work being done in drafting the Communications Bill to provide such a mechanism in this case.
  
- (f) Certainty for investors. Equipment and technological innovation, to produce more efficient spectrum use, require certainty for the principal economic actors to make the investment necessary for such change. The RA has to date been among the world's most enlightened spectrum authorities in recognising this. It will be critical in implementing Cave successfully for this sound foundation to be built upon. This implies 'reasonable' periods of certainty for investors, knowing the regulatory ground rules, to be able to invest. In the case of 3G the licence period is 25 years. In the case of DTT the period is 12 years. The period may be shorter in some spectrum uses for quick pay-back investments. But in each case, the leading economic actors need to know that the regulatory ground rules will remain constant through the period of investment and payback. The market is best placed in each instance to determine how long that period will be. OFCOM may propose but the market

should dispose. OFCOM must then respect the market's decisions throughout that 'contract' period.

- (g) More responsibility for managing the spectrum should be devolved to the broadcasters. The ITC agrees. The Cave Report acknowledges the success of the ITC and RAU in acting as (in effect) public sector Spectrum Management Organisations. In television, since the UHF band was first assigned, careful planning has allowed the analogue services within the Band to be increased by the addition of Channel 5 as well as adding six digital multiplexes carrying some 35 digital television channels. Greater flexibility to respond to economic incentives requires greater devolution to those broadcasters who will hold both the Broadcasting and Wireless Telegraphy Act licences. There is, however, a balance to be drawn with interdependent resources between incentives and financial gain for individual players and the ability of others to deploy services. **The shared nature of the spectrum and the common transmission repeater pattern limits the scope for devolution before switchover. Afterwards the users of clear spectrum should have more devolved planning responsibility.** But there will need to be mechanisms for backstop planning to deal with international issues and externalities to avoid some of the extremes in the USA where, for example, unbridled trading in the FM band has led to the virtual disappearance of in-car FM reception in many areas.

### **Application of 'Cave' to individual Broadcasting sectors/players**

#### Public Service Broadcasting

10. Broadcasting is an unusual 'economy'. It is an 'information good' (ie, users do not know the value of it until they have already consumed it). It is also one which is characterised by major scale economies (very high fixed cost for high-value content and high fixed transmission cost; but very low or zero marginal cost for each extra home served.)
11. The Social Welfare importance of Public Service Broadcasting has survived the end of spectrum scarcity because of these characteristics and remains relevant.
12. The Government is concerned (see Communications White Paper and Bill) to ensure that the British population continues to have available, high-quality, high investment original content across a wide range of genres. This is a social good which evidence over the past decade of multi-channel shows that the market, unaided, will not provide in sufficient quantity to meet social welfare objectives.

The Government is also committed to ensuring that this social welfare good is available, universally, free at the point of delivery.

13. This social welfare good cannot be delivered on these conditions solely by satellite, cable or DSL. It is noteworthy that, as soon as released by the EC Competition Directorate from its merger obligations, BSkyB has chosen to abandon the free-to-air-only, subsidised set top box. In short, the consumer must pay a fee of £315 to receive that which, hitherto, they have received for free through their receiving equipment. Similarly, cable requires consumers to take a bundle of paid-for services in order also to receive the free-to-air Public Service Broadcasters' channels.
14. Unless, therefore, Ministers wish to abandon the principle of universal, high quality service, free at the point of delivery, there is no alternative to terrestrial free-to-air delivery for public service broadcasting for the foreseeable future.

#### Digital Terrestrial Television

15. The ITC endorses the Cave Report view that the first 12 year contract with the DTT operators must be honoured under the original investment terms. That is, free spectrum for that period. If the switchover objective, to which the Government and 'Cave' attach importance, is to be met, then a full 12 year period of 'free spectrum' needs to be made available, under the current legislative arrangements, for any ITV Digital successor company. As described above, this approach has virtually no opportunity cost, since high value alternative uses are unlikely – for technology and international constraint reasons – to be available during this 12 year period. And without the economic incentive of free spectrum for a clear 'contract' period, switchover will not be achieved.

#### The BBC and Channel 4

16. As noted in paragraph 9(d) above, existing constraints and public policy objectives mean that the ability of the BBC and Channel 4 to respond to economic incentives in their use of spectrum are currently very limited. In radio, the BBC may have slightly greater scope to trade at the margin. The declared aim of Government Policy and the Cave Report is to increase economic efficiency, not to impose a 'spectrum tax' purely for revenue raising purposes (not least since such a tax would actively disincentivise the broadcasters from investment in attractive digital programming, promotion or, most likely, infrastructure investment necessary for a successful digital switchover programme). So trading should be focused where it is compatible with public policy and likely to be effective.

#### Options

17. Against that background, there appear to be three options:

- (i) To acknowledge that the BBC and Channel 4 contribute in kind for their use of spectrum through their investment in digital (and where switchover is the single biggest prize in market efficiency terms). And to regard that investment (as the Cave Report suggests in paragraph 11.43) as meeting their 'spectrum charge' at least for the short to medium term. It seems to us wholly consistent with the Cave Principles, for the 'spectrum charge' to be paid either in cash or in kind.
- (ii) To adopt on the Cave timetable (ie, progressively from 2003 onwards) the mechanism of 'charge plus offsetting grant' which he proposes for the rest of the public sector. This has the merits of a narrow consistency. Its disadvantages are (given the limited scope for efficiency gains/trading at the margins):
  - significant administrative and transaction costs for limited gain in efficiency of spectrum use;
  - uncertainty about workability within Brussels State Aid rules in respect of Channel 4;
  - the need to establish workable mechanisms (as Cave recognises) for maintaining the editorial independence of the broadcasters; and
  - Setting up conflicting incentives. Particularly in radio the BBC would be incentivised to disenfranchise listeners in areas where reception is marginal (and requires high investment in transmission coupled with a spectrum incentive), jeopardising universal coverage. It must be for Ministers to determine how far below 99.4 per cent coverage is acceptable while remaining 'universal'. And for Ministers to decide what currently constitutes public expectations of 'the public service'. (Cave suggests, for example that night-time broadcasting could cease and be replaced by datacasting.) The ITC believes that public expectations are now that PSB broadcasting is a 24/7 activity and notes that for at least some PSBs the night-time hours are used to broadcast commercially low value but socially high value programmes (eg, education programmes and news) which educationalists can video for use the following day.
- (iii) To make clear to the broadcasters that spectrum charging will be introduced at switchover; and, in the meantime, allow them to sublease/trade spectrum at the margins with, as Cave

suggests, a nil or low rate of tax on the proceeds. This will establish benchmark market prices for the spectrum when charging is fully introduced. Such an approach would eliminate administrative/transaction costs and the State Aid uncertainties identified in option (ii) above. It would also provide a solid foundation for the introduction of administrative pricing, based on proper market signals, at switchover when the broadcasters will have greater flexibility than now to respond to market signals to maximise the efficiency of spectrum use, while continuing to deliver universal public service broadcasting.

#### ITV/Channel 5

18. The Cave Report recommends that there be a separation between the charge for an 'exclusive public service licence' and the charge for the spectrum. The ITC agrees.
19. The ITC has currently commissioned an independent project to value the costs and benefits of shareholder-based, commercial PSB. The ITC intends to share the conclusions from this project with Government and hopes and expects that this will meet the core Cave objectives in this area.

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