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From: Andrew McKernan [mailto:andrew@sociality.com]
Sent: 12 March 2002 22:20
To: jane.humphry@dti.gsi.gov.uk; catherine.smadja@culture.gsi.gov.uk
Cc: Ian Benson
Subject: Response to DTI/DCMS consultation paper DIGITAL TELEVISION: THE PRINCIPLES FOR SPECTRUM PLANNING
Importance: High

Dear Jane, Catherine,

Ian Benson and Andrew McKernan of the digital media consultancy Ian Benson & Partners would like to make the following submission in response to the DTI/DCMS

consultation paper DIGITAL TELEVISION: THE PRINCIPLES FOR SPECTRUM PLANNING

Regards
Andrew McKernan

DCMS/DTI assume that planning will continue for 6 multiplexes (muxs) , as today (Question 1). They suggest that a more radical replanning might reduce or increase this number by one. They express an interest in receiving views on the costs and benefits of this more radical approach.

The scope they have set for this exercise is too narrow.

Hiding behind their 6 mux premise are 3 assumptions which we challenge.

"SUFFICIENCY"

DTI/DCMS assume that the current number of DTT Channels is sufficient for viable

free to air TV.

"WINDFALL"

The sale of relinquished spectrum will create a fiscal windfall.
"UNCERTAINTY"

There will be as yet unidentified alternative applications for the Band IV/V UHF

spectrum within the planning timeframe.

None of these assumptions is proven in our opinion.
1 The spectrum allocated for DTT is insufficient

The Oftel/Mori May 2000 survey showed that the highest ranked reason why analogue customers migrate to digital is greater choice. "The main reason both groups of customers choose digital over analogue TV services (mentioned by just over 1 in 3 digital homes) was they felt digital offered them more, and a wider range, of channels. Free set top box offers encouraged 1 in 4 users to take digital services, and a similar proportion of analogue pay TV subscribers moved to digital for enhanced sound and picture quality."

Those consumers who elect to migrate to digital TV, either free-to-view or pay will continue to opt for the geater choice and value for money that satellite offers. Not only did Sky attract a greater proportion of pay customers than On/ITB digital they were also able to capture On/ITV customers at their time of renewal. In the next 10 years, a channel limited DTT will be further marginalised by DSL and other wired offers which will be able to

offer even greater choice and more attractive bundled tariffs. Ultimately, a channel-limited DTT could be as marginalised as analogue TV is now.

Even if DTT is relegated to a PSB/FTV role, the evidence of increased micro-segmentation in the past ten years suggests that any mediiumthat does not have sufficient channel capacity to support and grow micro-segments will ultimately be sidelined. If the proposition "migrate initially from analogue to

PSB/FTV with the option later to migrate to Pay-TV" is to be credible with consumers then there must be sufficient channel headroom for DTT to compete effectively with DSat. Otherwise, only DSat and xDSL will survive the consumer test.

[The Cave Report (paragraph 11.60) comments on this DTT spectrum plan consultation and concludes "these questions should be examined with a full and proper consideration of the costs and benefits involved. Such an analysis would consider, amongst other matters, the benefits of DTT as a means for delivering public service broadcasting, and pay TV, compared with other platforms, and the costs (in terms of consumer and producer benefits foregone) of using spectrum for DTT rather than for other uses. The review considers that the Government should take into account the conclusions of such an analysis, and a full consideration of all the potential services that could prospectively use the spectrum, before deciding how spectrum should be used following switchover."

Although the main thrust of Cave's argument is that "there is the danger that too much spectrum would be consumed by DTT", we would argue that there is also a risk that too much spectrum could be ceded by DTT to less worthwhile applications.

2 There is no windfall to harvest

The evidence from the 3G Auction fiasco is that the high-value auctions (notably UK and Germany) did not benefit consumers or the mobile industry. Some commentators feel that it may indeed have been one of the significant triggers for the telecoms/dotcom/semiconductor downturn.

[The Cave Report, (foreword p. vi) rejects the "widespread perception that spectrum charging is simply a device to raise money for the Government" and states that "Revenue raising has not been an objective which has governed my recommendations.]

At the start of the auction sequence, the bidders were not sufficiently well organised to manage a successful outcome of price, value, market size and competition. By the end of the auction sequence, the bidders were sufficiently well organised to coordinate their bidding without collusion and lots fell at reserve prices.

The evidence from the migration from analogue to digital in other radio services that digital significantly much less spectrum that analogue. Most analogue spectrum lies idle apart from a few hot-spots. Digital is more efficient, not only because of its inherently higher throughput, but also because it can deploy press-to-talk frequency agile schemes such as trunking. We can expect to see large amounts of VHF and UHF spectrum devaluing as its utilisation decreases.

The peace dividend has not yet worked its way through to completion. The military hold on to vast regions of legacy spectrum at VHF and UHF which they neither need nor in the long term want. The true value of Band IV/V TV spectrum can only be calculated once the effects of releasing parts of the military airband 225-400 have been taken into account.

The prime targets for a consumer led increase in spectrum utilisation with innovative applications is more likely to take place at much higher frequencies than UHF. Above 2GHz, power levels are lower and batteries and antennae are smaller, allowing the development of lifestyle personal devices. If there is to be a spectrum windfall, it is likely to be much higher up the spectrum than where TV is right now.

[The Cave Report (paragraph 130) "recommends that the Government undertake a full cost-benefit analysis of the options for spectrum currently used for analogue TV transmissions. This analysis would take into account estimates of consumer and producer benefits from broadcasting and from alternative uses of the spectrum released by switchover."]

3 We do know that the pre-eminent applications for these Bands are DTT (and its technical evolution)

The lead time for developing new wireless applications remains in excess of 4 years, largely because recent advances in rapid development have been more that offset by increased consumer sophistication and application complexity. If therefore there were to be significant applications which would deploy release UHM spectrum productively around the proposed date for analogue switch-off, we would argue that they would be latent now. They would be apparent either as evolutions from current applications, from surveys of unmet customer needs and they would be being targeted by developments in silicon and application software.

The most likely application to make effective use of relinquished analogue TV spectrum is probably digital TV, perhaps focusing on regional, non-linear and pay-extensions. Before relinquishing any spectrum and setting in stone a downgrading plan, the Government must first examine potential market scenarios for alternative deployment of UHF spectrum. Only by comparing the value of full-scale deployment of all the current spectrum for digital TV to the value alternative scenarios will the correct judgement be possible. There is no element of the action plan focusing on the supposed "value" which will result from "selling off the family spectrum."

[The Cave Report (paragraph 132) states "there is scope to improve the utilisation of broadcasting spectrum at the margin by providing broadcasters greater freedom to carry a wider range of non-broadcasting services. On both analogue and digital transmissions, there is technically room to transmit data (using broadcast technology standards and within the constraints of international co-ordination). The review recommends that the regulatory and financial constraints on such developments be reduced. The current limits on non-broadcast services carried by digital TV and radio multiplexes should be removed, subject to the condition that licensees continue to meet any public service broadcasting obligations. The review also recommends that the Government clarify the BBC's ability, under its Charter, to develop revenue-generating non-broadcast services for transmission on its spectrum, again subject to fulfilment of its primary public service mission."]

Proposal

Our doubts about the consultation premise identify sufficiently high risks for the long term future of DTT within the digital broadcasting mix. We argue therefore that the "6-mux premise" must be tested more comprehensively and would not survive validation. The urgent programme we recommend is contained in the following three steps.

a) Scenario planning

The possible "scenarios" (i.e. those potential play-outs of external factors over which government and industry has no control) should be investigated and documented. The possible "options" (i.e. those possible applications of public and commercial policy over which we have control) should also be investigated. This should include policy options currently under consideration, but should in our opinion also cover the more extreme alternatives e.g. all allocating all current UHF spectrum to digital TV and abandoning DTT. Finally, the interaction between scenarios and options should be analysed to see determine which policy options support, survive and fail in each scenario. Only then will it be possible to examine the potential risks and rewards of the "sufficiency assumption"

b) Spectrum windfall

The value of the spectrum should be estimated now, so that there is a benchmark which digital TV stakeholders can use to determine objectively how to compare the potential value of an expansion of DTT and its technical . The scenario/option study in (a) above will set the environment within which future spectrum value can be estimated, as will the bid/offer behaviour in recent spectrum sale initiatives. The alternative applications in (c) below will serve as a guide to the customer value that can be generated to fund the sale of UHF spectrum. DCMS/DTI state that "we have no way of being sure now what services will have the greatest claim on the spectrum in the future". This is not supportable: there are several groups in the UK that specialise in advising governments of the future value/potential application and recommended bid process. They also state "... but we can be sure that failure to act now to give ourselves room for manoeuvre in the future will constrain our ability to meet those demands". This is beyond question that failure act now will be detrimental. A decision now to release UHF spectrum will destroy DTT irreversibly.

: the government must act now to determine more precisely what reasonable future

values the spectrum might command.
Once a rational valuation of the spectrum is in place then DTT can compare its own valuation both financial and social of full DTT deployment in the current UHF space. Only then can the "spectrum windfall" assumption be safely validated.
c) Alternative applications
Our extensive experience in silicon and software high technology conception and development confirms that the gestation period for significant new applications is between 5-10 years. If there are applications that can generate value from UHF spectrum by evolving from current solutions then they should be visible now to a trained eye. If there are innovative solutions within the 5-10 year timescale then there must be signs of prototype funding, software architecture or silicon design and it should be possible to discover them. If there are no such signs, but there is a belief by technologists, designers or marketers that ther could be applications which might site in this space, then it should be possible to surface and collate such opinion. We propose therefore that a short and carefully targeted survey should take place to calibrate the readiness of the high-tech market to move into this region of spectrum.
Conversely, if there is no such evidence - and the scenario analysis does not throw any life-line, then the "alternative application" assumption is broken for

the foreseeable future.