

Cover sheet for response to an Ofcom consultation

BASIC DETAILS

Consultation title: Planning Options for Digital Switchover

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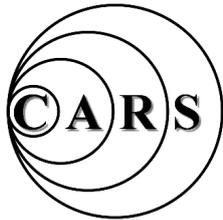
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Name: *Murray Niman G6JYB & John Bowen G8DET* Signed (if hard copy)



Chelmsford Amateur Radio Society

Established 1936

Affiliated to the RSGB Club Callsign: G0MWT
President: Harry Heap G5HF Chairman: Chris Chapman G0IPU
Secretary: Martyn Medcalf G1EFL Treasurer: Brian Thwaites G3CVI

CARS Ref: 20050319

Web Address: www.g0mwt.org.uk

19-March-2005

Response to Ofcom 'Planning Options for Digital Switchover

Introduction

Chelmsford Amateur Radio Society (CARS) is a vibrant club with over 100 active members holding amateur radio licences. Based in and around Chelmsford, Essex, it is nationally recognised as playing a very active role in amateur radio across a wide range activities including social, operational and development/training aspects. The club is affiliated to the national body, the Radio Society of Great Britain (RSGB).

CARS members collectively have a huge range of technical experience and operate from HF to the microwave bands. With roots going back to the 1930s, the club draws much of its membership from professionals in the electronics and radio field.

Chelmsford Club Members, some of whom have worked for or assisted the GEC-Marconi Broadcast, Propagation and Antenna groups including early DAB trials have a keen interest in promoting this medium and improving local reception and quality. In recent years we have also liased with BBC, NTL and Antiference Antenna engineers to better understand the challenges involved to optimise Freeview reception and raise members awareness, as Digital Terrestrial TV has been at relatively weak signal strengths, and partly out-of-band frequencies.

Many of our members are keen to receive robust coverage of Freeview Digital TV and have had to contend with some of the most marginal reception in the country from the main transmitters at Crystal Palace and Sudbury. The latter in particular is possibly one of the weakest main Freeview transmitters in the entire UK due to continental protection issues.

We are also disappointed that the consultation does not include any forward looking provisions for a national Hi-Definition Terrestrial TV service, given that SKY plan to launch their service in 2006. A SPECIFIC NOTE ON HI-DEFINTION AND DVB-H TV IS INCLUDED.

It is on the above basis that we enclose the following responses to the Ofcom consultation on Planning Options for Digital Switchover

Murray Niman G6JYB, MIEE, CARS Committee Member

John Bowen, G8DET, C.Eng. MIEE, Vice Chairman of the Chelmsford Amateur Radio Society

Ofcom Consultation on Planning Options for Digital Switchover
Consultation Questions and Answers

Question 1:

Should all three public service multiplexes be required to achieve the same coverage at switchover throughout the United Kingdom? If so, should the coverage obligations being discussed for the commercial public service broadcasters be adopted by the BBC in its digital switchover planning?

Ideally yes, although this should be discussed in a collaborative manner.

Question 2.

Ofcom seeks views on what level of coverage and capacity the commercial multiplexes could or should adopt at switchover and the effects this decision may have on the switchover process.

We would urge a considerable increase in Commercial Multiplex coverage if possible for the Sudbury transmitter. See our answer to Q13 where the switch to 8K SFN mode may facilitate relays to assist with this.

Question 3.

Is it appropriate to amend the DRLs to clarify licensees' obligations as regards DTT coverage?

See our answer to Q4

Question 4.

If so, is it appropriate for Ofcom to seek to increase clarity for DRL licensees about the digital coverage required by describing obligations in terms of key input parameters (ie sites, transmission mode and power), or the achievement of an explicit coverage output, or other criteria? How should these criteria be worded in the DRLs?

Coverage notably in the South East is subject to atmospheric conditions and occasionally can be highly variable. It may be far clearer to specify matters in terms of transmitters sites, antenna patterns, powers, and modes, provided adequate margins are built into these technical parameters so that there is confidence that a suitable minimum signal field strength is achieved at 'x' km radius with a 'y' percentage probability.

Question 5.

Ofcom seeks detailed responses (with appropriate supporting information) from any broadcasters and channel operators which may be affected by such a reduction in the number of services carried on Digital 3&4 due to the adoption of Option 1. Ofcom would be particularly interested in the impact such a change may have on their operating costs and revenues.

See our Answer to Q6

Question 6.

Ofcom seeks views from respondents more generally about whether the capacity reductions implied by this option outweigh the other benefits. Again, Ofcom would welcome responses supported by detailed background information, including costs, to assist the regulator in assessing the benefits and disadvantages of this option.

Most of the current ~5million Freeview consumers would feel disappointed, and potentially aggrieved, if the available/planned number of ITV/Channel-4 channels were reduced.

Question 8.

Ofcom seeks respondents' views in general on Option 3.

Provided power is raised to mitigate 64QAM robustness issues (relative to 16QAM) this is an interesting option as it frees up some new video channel video capacity.

Question 12.

Taking into account the coverage objectives, capacity considerations, relative power and infrastructure costs, the requirement to begin switchover as soon as is practicable and to complete the DSO process by 2012, the need for appropriate technological neutrality in achieving DSO, and all other relevant facts and circumstances, which DTT planning option should be adopted by the UK and Ofcom for switchover?

Option 2 or 3 looks best. The risks could be mitigated on both options as the South coast is not the first in the timetable, and 8K mode operation would facilitate spectrally efficient relays – See 13 below

Question 13.

It is proposed that the broadcasters should adopt the 8k variant at switchover to enable the adoption of single frequency networks at switchover. Should this be done on a nationwide or regionalised basis and over what timetable?

CARS welcomes a switch to 8K mode to permit more robust coverage and the potential for in-fill SFN relays. In the case of the latter, we expect that more scope would exist for carrying the full suite of multiplexes on the relays, as the need for wider band aerials and frequency clearance issues would be largely nullified.

After switchover, central Essex again will be served by both Sudbury and Crystal Palace hopefully much like analogue coverage is at present. In the Chelmsford area it is common for households to have dual aerials, diplexed together for Anglia and London. Many of our members already may receive Mux-1/B (BBC) from Crystal Palace, mixed with Mux-A (Ch-5 etc) from Sudbury. We would expect that for such regions, many decoders will perform better if they see a uniform signal standard from all transmitters, rather than a mix of 2K and 8K. The 8K mode would also improve robustness of the weaker commercial multiplexes.

Timetable

Already, ITV Digital boxes are very much in the minority and falling out of use due to their slowness and lack of software support. We therefore do not believe that they are much of a factor come the start of switchover. Given that the start of switchover is in 2008, the ITV Digital Box issue could be negligible, particularly if this publicity was included in Public Information Campaigns. We see no reason why an early switch to 8K cannot be made nationwide, as this would improve robustness of the system to ignition/impulse interference and assist take-up in pre-switchover regions.

Question 14.

How should the current coverage deficiencies be managed after digital switchover? Should the current system of self help licensing be continued or should these communities be encouraged to adopt alternative platforms such as digital satellite? Ofcom is keen to hear respondents' views about the relative costs and benefits for each of these approaches.

One option would be for Ofcom to encourage the development of an Open Platform Freesat alternative as pioneered by the BBC, which would maximise consumer choice and help in-fill large areas across the UK.

Has Ofcom also considered the future of analogue RSL TV licenses ?

Supplementary Submission On High Definition TV And DVB-H Handheld/Mobile TV

Some options (such as Option-3) for the post-switchover multiplexes to become 64QAM will barely release any useful capacity for a meaningful HDTV service. In any case coverage robustness is compromised, or additional transmitter power levels are needed which might add uncertainty to switchover.

We are also concerned that some large screen and flat panel display equipment on sale may not be HD-Ready, despite the imminent arrival of the Sky HDTV service. It is important to avoid unnecessary obsolescence and confusion amongst our members and consumers more generally. We ask Ofcom/DCMS/DTI et al to increase the campaign for 'Digital Tick' logo even for Standard Definition Digital kit, and to integrate the more recent HD-Ready initiative into this.

Ofcom should launch an urgent Consultation on Options for Terrestrial Hi-Definition TV (as well as mobile/handheld DVB-H services) so it can better plan for the 'Digital Dividend Spectrum'

We urge a study on whether high power 8K mode 64QAM National SFNs could be used for spectrally efficient HDTV. Such a technical study would lay the foundation for what services could then be broadcast.

We advocate that future HDTV services should be licensed under the Broadcast and not Wireless Telegraphy acts

Undertaking HDTV and DVB-H would permit Ofcom to better fulfil its duty to promote innovation and consumer services.

It is known that the BBC has considered the HDTV issue and requests that Ofcom work with BBC, DTG and others rather than the default light touch laissez-faire approach

One aspect would be to consider whether HDTV planning should come under SwitchCo's remit, or a new working group.

It is important that terrestrial broadcasting does not become a low-definition ghetto relative to satellite.

Whatever happens, there is a pressing case for a clear route map to HDTV and DVB-H which would complement the existing switchover plan.

Appendix: Summary of coverage options

Option	PSB Mode (Mux 1, B and 2)	Transmit power (relative to analogue)	Additional transmitters required?	Predicted Coverage	Impact	Potential Impact on DSO timing risk
1	16 QAM 16 QAM 16 QAM	-10dB (some @ -7dB) -10dB (some @ -7dB) -10dB (some @ -7dB)	No	Exceeds analogue coverage - 98.7 per cent of households	Low cost option, but net loss of around 6 Mbit/s capacity	Low
2	16 QAM 16 QAM 64 QAM	-10dB -10dB -7dB	yes <i>extra transmitters on South Coast</i>	Matches analogue coverage – 98.5 per cent of households	Medium/high cost option, no loss of capacity, may require some mast upgrade + new sites	Medium
3	64 QAM 64 QAM 64 QAM	-7dB -7dB -7dB	yes <i>extra transmitters on South Coast</i>	Coverage falls 0.2 per cent short of analogue – 98.3 per cent of households With high power (-4dB) adopted at selective sites, coverage predicted to match analogue 98.5 per cent of households	High cost option, but net increase of 12 Mbit/sec in capacity, may require some mast upgrade + new sites	Medium to high
4	16 QAM 16 QAM 64 QAM	-10dB -10dB -7dB	no	Coverage falls 0.4 per cent short of analogue – 98.1 per cent of households. Some households may lose terrestrial reception	Medium cost option, no loss of capacity, may require some mast upgrades	Medium
5	16 QAM 16 QAM 64 QAM	-10dB -10dB -10dB	no	Coverage falls 1.5 per cent short of analogue – 97.1 per cent of households. Some households may lose terrestrial reception	Minimum cost option, no loss of capacity	Low