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**What do you want Ofcom to keep confidential?:**

Keep nothing confidential

**If you want part of your response kept confidential, which parts?:**

**Ofcom may publish a response summary:**

Yes

**I confirm that I have read the declaration:**

Yes

**Ofcom should only publish this response after the consultation has ended:**

You may publish my response on receipt

**Additional comments:**

I write as a professional software developer, with a basic technical understanding of copy management software, and as someone who was an early adopter of the standard definition Freeview system.

**Question 1: Do you agree that copy management would broaden the range of HD content available on DTT and help secure its long term viability as a platform? :**

In the short term copy management would probably broaden the range of HD content available as HD content providers would be reassured. In the long term it will harm the Freeview HD system by

- (a) Delaying the introduction of Freeview HD technology, as manufacturers attempt to integrate the late-breaking changes.
- (b) Increasing the cost of Freeview HD technology.
- (c) Increasing the likelihood of software defects within Freeview HD technology.

The overall effect of this will be to reduce the appeal of Freeview HD to consumers.

**Question 2: Do you agree that the BBC's proposed multiplex licence amendment represents the most appropriate means for securing an effective content management system on HD DTT? :**

No - the most effective content management system will be one that does not contain unnecessary complexity, such as 'copy management'.

All 'copy management' systems require the decoding software or hardware to contain the decryption keys. This is a basic, but unavoidable flaw, and skilled persons will always find a way to extract the keys. For example, the 'copy management' systems in DVD (CSS) and Blu-ray (AACS) have both been broken. There is little likelihood that the BBC's EPG system will not be broken - it actually seems far simpler than the (broken) AACS system.

The BBC's system does not actually encrypt the content anyway - just the EPG data. Even if it were to encrypt the actual content, it would still be no good - in the Internet age, only one person needs to break the system and content will be available to anyone with an Internet connection.

Thus, 'copy management' systems do not actually successfully prevent illegitimate uses of content. All they do is burden legitimate users with delayed, costly, more-defective implementations of decoding technology, reducing the appeal of the technology to those users.

**Question 3: Do you agree with the proposed change to Condition 6 in the Multiplex B Licence? :**

No, for the above reasons.

**Question 4: Do you agree that Multiplexes C and D should be granted a similar amendment to their Licences as Multiplex B?. :**

No, for the above reasons.

**Question 5: Do you agree that the BBC's proposed approach for implementing content management would safeguard citizens and consumers legitimate use of HD content, and if not, what additional guarantees would be appropriate? :**

No, because costly and more-defective products hinder fair use.

**Question 6: Do you agree that the BBC's proposed choice of content management technologies will have only a negligible impact on the cost of HD DTT receivers and their interoperability with other HD consumer equipment? . :**

I would expect more than negligible. Even relatively simple software takes time to write and test. Plus the bureaucracy involved in getting approval from the BBC for every box that will use the system has a cost.

Freeview HD hardware and software manufacturers will be best placed to answer this though.

**Question 7: Do stakeholders agree that the BBC's proposed Huffman Code licensing arrangements would have a negligible effect on the market for HD DTT receivers? :**

I think it will be harmful, by causing unnecessary delays, complexity and defects, all of which will harm the image of Freeview HD.

**Question 8: Do the BBC's proposed content management states and their permitted use for different categories of HD content meet the requirements of other HD broadcasters on DTT? . :**

I guess this question means 'will the system meet the requirements of HD content providers?' I suspect we will find that, while they will take as much control as they think they can get, their requirements are actually quite flexible. The music industry initially only sanctioned copy protected MP3s. This approach has now failed, as consumers did not favour it. The music industry is finally learning that unencumbered MP3s are much more profitable.

**Question 9: Are there any issues that you consider Ofcom should take into account in assessing the BBC's proposal, that have not been addressed by this consultation?:**

Unless it is hobbled by total mismanagement, Freeview HD will soon be the predominant HD broadcasting system in the UK. HD content providers will not be able to ignore it. There is little incentive to hobble it with some defective-by-design software tweak in fear that they will.

Freeview HD is broadcasting already - it's astounding that the technical standards are not already finalised. This needs to be resolved as a matter of urgency.