



**Digital Switchover –
Management of Transition
Coverage Issues**
Statement

Statement

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Contents

Section		Page
1	Summary	1
2	Introduction	2
3	Comments received on the revised Code	3
Annex		Page
1	List of respondents	9

Section 1

Summary

In September 2005, the Government confirmed that digital switchover will take place between 2008 and 2012, ITV region by ITV region, starting in the Border TV region. Digital switchover (DSO) is the process of changing the UK's television broadcasting to digital. Digital switchover will involve converting the current terrestrial television broadcasting network, as well as communicating to everyone the need to convert or upgrade their TV and recording equipment to receive digital television.

During the transitional period between the start of DSO preparation work (2006) and the end of DSO roll out (2012), the implementation of the DSO plan has the potential to cause some interference to the normal reception of the analogue terrestrial services (BBC1, BBC2, Channel 3, Channel 4/S4C and Channel 5), the existing digital terrestrial television (DTT) services (comprising the six DTT multiplexes as currently broadcast from 80 transmission sites around the UK) and the six DTT multiplex services as they will be broadcast after switchover on a region by region basis.

Ofcom's multiplex licences currently include a condition requiring the broadcasters to comply with the Code of Practice on Changes to Existing Transmission and Reception Arrangements (the Code). In January 2007, Ofcom issued a discussion paper on a replacement Code updated to take into account the scale and likely works associated with DSO.

The discussion paper laid out Ofcom's policy proposal of issuing an updated code of practice providing guidance that the broadcasters should take into account when finalising the planning and implementation of DSO. The discussion paper also invited comments on the draft Code.

Eighteen responses were received from organisations and individuals. Respondents were generally supportive of the updated code of practice although some suggested areas where clarification would be useful. Ofcom has taken these comments into account and has re-drafted the Code accordingly.

A summary of the main comments received and Ofcom's responses are set out below.

Section 2

Introduction

- 2.1 In September 2005, the Government confirmed that digital switchover will take place between 2008 and 2012, ITV region by ITV region, starting in the Border TV region. Digital switchover (DSO) is the process of changing the UK's television broadcasting to digital. Digital switchover will involve converting the current terrestrial television broadcasting network, as well as communicating to everyone about the need to convert or upgrade their TV and recording equipment to receive digital television. Ofcom has inserted conditions into the terrestrial broadcasters' licences to ensure that they implement digital switchover to this timetable.
- 2.2 During the transitional period between the start of DSO preparation work (2006) and the end of DSO roll out (2012), the implementation of the DSO plan has the potential to cause some interference to the normal reception of the analogue terrestrial services (BBC1, BBC2, Channel 3, Channel 4/S4C and Channel 5), the existing digital terrestrial television (DTT) services (comprising the six DTT multiplexes as currently broadcast from 80 transmission sites around the UK) and the six DTT multiplex services as they will be broadcast after switchover on a region by region basis.
- 2.3 Ofcom's multiplex licences currently include a condition requiring the broadcasters to comply with Ofcom's Code of Practice on Changes to Existing Transmission and Reception Arrangements (the Code). This Code was originally drawn up by Ofcom's predecessor, the Independent Television Commission, to provide guidance to broadcasters on how to minimise the impact of the initial launch of DTT in 1998 on analogue viewers. This Code has from time to time been revised by Ofcom.
- 2.4 In January 2007, Ofcom issued a discussion paper on a replacement Code updated to take into account the scale and likely works associated with DSO. This document sets out the conclusions of that discussion paper and includes a final version of the revised Code.
- 2.5 The revised Code is not intended to represent any fundamental change in Ofcom's overall policy, and does not involve adding additional licence conditions to the broadcast licences. However, Ofcom invited comments from stakeholders on the wording and issues raised by the revised Code.
- 2.6 There were eighteen responses to the discussion paper, the details of non-confidential responses are given in Annex A.

Section 3

Comments received on the revised Code

Summary of responses from individuals

- 3.1 There were four responses from private individuals, one of which broadly supported the principle that Ofcom provided guidance to the broadcasters. It further suggested that a seventh multiplex could be useful during the transition process. This multiplex would carry just the five analogue PSB services and would broadcast temporarily in areas where analogue services are to be disrupted during the switchover process.
- 3.2 Of the remaining three responses from private individuals, two used the response form to register their views that Ofcom should allocate spectrum to high definition services, while another made a point about the coverage that will be achieved by commercial multiplexes post switchover. These responses relate to subjects that lie outside the scope of this discussion document. Where possible they have been forwarded for inclusion in more appropriate open Ofcom consultations.

Ofcom response

- 3.3 Although the seventh multiplex proposal is attractive in its apparent simplicity, a number of substantial issues make it unworkable. In particular, changes would need to be made by Parliament to the legislation upon which Ofcom's licensing regime is based. There are also significant technical matters that would need addressing for the five PSB services to be broadcast on a single multiplex (they are currently broadcast on three separate multiplexes each with different regional structures).

Summary of responses from organisations

- 3.4 Fourteen organisations provided comments on the discussion document, one response was partially confidential and two were confidential in their entirety.
- 3.5 The organisations that responded generally welcomed the Code and its aim to ensure that disruption to analogue and digital television services caused by the implementation of the DSO programme is minimised.
- 3.6 Many of the responses sought clarification of some of the draft Code wording. The main points raised fell into categories that are summarised below by subject.

Consumer issues

- 3.7 The Consumer Experts Group (CEG) raised a number of issues relating to the impact of the transitional changes upon viewers. In particular the CEG:
- was concerned about the expense to households that may need to re-orient their antennas more than once;
 - asked whether viewers receiving services on set-top aerials had been considered;
 - suggested that a scheme be put in place to provide viewers that may lose terrestrial coverage at switchover with access to an alternative platform at no cost to themselves.

Ofcom response

- 3.8 It is not anticipated that many viewers will have to re-orient their antennas at all, and certainly not more than once. Also, the broadcasters are under a duty to provide information for viewers in the run-up to and during switchover. This information will include any disruption that may be due to the DSO engineering works themselves so that viewers are well-placed to make informed choices about upgrading their aerial installation should it be necessary, or to adopt alternative platforms either temporarily or permanently.
- 3.9 Television coverage is planned assuming that viewers are using good quality outdoor aerials mounted 10m above the ground. Although set-top aerials work in some locations where signal strengths are good, their performance is generally poorer than outside aerials and they suffer from reflections and signal loss due to the building within which they are used in. Due to the wide variation in building types and indoor receiving arrangements, it is not possible to model conclusively the effect on viewers using indoor aerials.
- 3.10 The overall aim of planning for switchover is to replicate analogue coverage. This objective should be substantially achieved through converting the existing network of transmitters to digital operation. Ofcom has recently consulted on the subject of the licence conditions placed upon the broadcasters and has included a condition that could require the broadcasters to build additional transmitters should it be necessary to do so to satisfy their coverage obligations. For smaller deficiencies, Ofcom is also proposing to put in place a licensing regime that would allow privately-run digital self-help transmitters to be built. This would run in a similar way to the former scheme for licensing analogue self-help transmitters. Further details on both of these proposals are available on the Ofcom website at

http://www.ofcom.org.uk/consult/condocs/dtt_changes/statement/statement.pdf

and

<http://www.ofcom.org.uk/consult/condocs/selfhelp/>

Provision of alternative platforms

- 3.11 Channel 4 expressed concern about the practicality of the option of the broadcasters providing equipment for viewers to receive their television services from another platform should they lose terrestrial reception. Two confidential respondents also commented on this option. One organisation sought clarification on the circumstances in which it may be appropriate to provide access to an alternative platform and on how the costs might be shared amongst the broadcasters and multiplex operators. Another organisation expressed the view that costs should be borne equally by all multiplex operators.

Ofcom response

- 3.12 Ofcom accepts that some clarification is required over the circumstances when the broadcasters may be expected to provide households with equipment to allow them to access television programmes via an alternative platform.

- 3.13 The option of providing access to satellite or cable services to households is one of the toolkit of measures that could be used to restore reception to viewers that lose reception as a result of DSO works, where alternative measures may be disproportionately difficult or expensive to put in place. It is only anticipated to be appropriate in a small number of cases.
- 3.14 Broadcasters would only be expected to provide access to alternative platforms for viewers who would normally be expected to be covered by a transmitter and actually lose reception of one or more of their existing analogue television services from that transmitter for a prolonged period and for whom there is no alternative analogue or digital service available from the same or an alternative transmitter.
- 3.15 Ofcom considers that apportionment of costs associated with the provision of access to alternative platforms is for the broadcasters and multiplex operators to agree and is not proposing to include guidance on this matter in the Code.

Definitions for use in modelling impacts

- 3.16 Two of the confidential respondents suggested that it would be useful if the Code could contain explicit definitions for what constitutes 'lost' and 'degraded' service, and that a number be put on 'very large number of viewers'. They considered that this information is required to enable planners to model DSO interactions and to decide upon appropriate mitigation measures. However, another organisation supported the existing draft Code wording and advised against any narrowing of definitions.
- 3.17 Digital UK suggested that both research and practical experience during the roll-out of the current digital television network has shown that the criteria used for planning purposes generally overestimate the impact of transmission changes on analogue and digital reception on viewers. They therefore suggested that the time period (two weeks) used within the definition of Priority 1, 2 and 3 viewers could be extended to two months.
- 3.18 Data Broadcasting International (DBI) is concerned that its operations and customers would be more seriously affected than the broadcasters or viewers by analogue signal degradations. They state that this is because their data is carried in the Vertical Blanking Interval (VBI) of a television signal (rather like Teletext data) and is more likely to suffer degradation than viewers' sound or pictures. DBI therefore suggested that the definition of analogue degradation should be extended to include the Bit Error Ratio of the VBI data as well as one picture grade. DBI considers that the two week time period within the definitions of Priority 1, 2 and 3 viewers is too long.

Ofcom response

- 3.19 Spectrum planners employ complex computer models to predict coverage and also how many viewers may be affected by transitional interference effects due to the DSO process. Although these models are useful in estimating the coverage of television services, experience has shown that they tend to overestimate the impact of interference on viewers.
- 3.20 Planning models are nevertheless a useful aid that provide an indication of the scale of potential impacts. In view of the difference that can arise between predicted and actual impacts, Ofcom believes that it is important that the Code retains a degree of flexibility and that the draft wording is set at an appropriate level of detail.

- 3.21 Ofcom has considered the time period included in the definition of Category 1, 2 and 3 viewers. Ofcom does not believe that it is appropriate to extend the time period for Priority 1 or 3 viewers (those that are predicted to lose all reception). However, in view of the views expressed above, Ofcom will consider increasing the time threshold above two weeks for Priority 2 viewers (viewers that are predicted to lose at least one, but not all of their services). The actual time period permitted will depend upon the number of services affected and will be considered on a case-by-case basis.

Toolkit of solutions

- 3.22 One of the confidential respondents requested that Ofcom provides within the Code a list of the measures that can be used to mitigate against the effects of transitional impact, and that the measures be ranked in order of desirability. They also emphasised the importance of being able to use frequencies that are due to be released by DSO as ‘parking channels’ to reduce impact on viewers where appropriate. Another confidential respondent suggested that Ofcom would need to place obligations on the broadcasters to accept the practical impacts of mitigation measures and to bear any additional costs associated with the selected technique.

Ofcom response

- 3.23 As the severity, duration and extent of DSO transitional impacts varies tremendously, Ofcom accepts that it will be necessary to employ a range of different mitigation measures. Ofcom supports the toolkit of measures being developed by the broadcasters and multiplex operators. However, Ofcom believes that it is not appropriate to prioritise mitigation measures as it is the broadcasters, multiplex operators and transmission companies that are in the best position to determine the most appropriate mitigation measure to adopt in a specific situation.
- 3.24 Ofcom does not rule out the broadcasters making use of parking channels that fall in the released spectrum,. However, it should be borne in mind that this does have an opportunity cost in that it prevents the spectrum from being released and used immediately for alternative uses. Ofcom would therefore expect the broadcasters to consider the full range of measures available before suggesting use of released spectrum.
- 3.25 Adherence to the Code of Practice on Changes to Existing Transmission and Reception Arrangements is a condition contained in the multiplex licences and the multiplex operators are therefore under an obligation to put its terms into practice.

Provision of Information

- 3.26 DBI requested that notifications of DSO engineering work (including details of disruption and impact) are communicated as far in advance as possible during the planning stage. They also feel that subsequently it is important that transmission companies provide regular status and progress reports on the implementation phase of the works.

Ofcom response

- 3.27 The broadcasters and multiplex operators are under a duty to provide information for viewers on the process of switchover. The Code of Practice on Changes to Existing Transmission and Reception Arrangements also contains a requirement for licensees to provide information to a range of bodies as notified to the licensee by Ofcom.

- 3.28 There are likely to be a large number of planned activities associated with DSO engineering works that will affect reception of both analogue and digital services to varying degrees. Information on these works is likely to be of interest to a range of stakeholders. Ofcom therefore considers that it is reasonable for licensees to put in place a system whereby details of planned works are made available for public and industry use, either through a website or Teletext pages.

Effect of DSO upon radio services

- 3.29 A number of radio organisations (Chrysalis, Digital One, DRG, Emap Radio, Now Digital, UTV Radio) and the radio companies' association, The Radio Centre, responded to the discussion paper. All of these bodies complained that the draft Code wording makes no mention of the effect that DSO works will have upon radio services.
- 3.30 Radio and television services share the same transmitter masts in a large number of instances. The radio organisations are concerned that the DSO works will have significant knock-on effects on radio services in the form of extended periods of reduced power and/or switching breaks when services are switched off completely while mast work is being carried out.
- 3.31 Digital One was particularly concerned about the effect that reduced power working would have on digital radio services which do not exhibit as graceful a degradation as analogue radio services under reduced power conditions.
- 3.32 The radio organisations called for Ofcom to put in place protection for radio services through the Code conditions. In particular they urged that in planning DSO works, the television broadcasters and their transmission companies must give a high priority to ensuring continuity of radio services at normal operating conditions, and that any periods of reduced power working should be minimised and subject to a limit of -3dB (one-half) of normal power.

Ofcom response

- 3.33 The Code of Practice on Changes to Existing Transmission and Reception Arrangements is an existing document referred to in the licences of the television licensees. Satisfying its conditions is a duty that rests with the television licensees who do not have direct control of the transmission companies with which they contract for transmission services or the consequential impact that the DSO works may have upon third-party site operations that also share the same structure such as radio or any other site sharer.
- 3.34 While Ofcom does not feel that it is appropriate to introduce additional conditions on the television licensees to address issues that are largely outside their control, Ofcom does however expect that the television licensees and their transmission companies will take into account the impact that DSO works may have upon radio services and endeavour to minimise that impact.
- 3.35 Ofcom will therefore formalise this expectation by:
- placing the television broadcasters under a duty to give consideration to the impact that DSO engineering works could have on radio services, and to use reasonable endeavours to minimise any consequential effect upon listeners;

- adding key radio companies and associations to the list of bodies with which the television broadcasters and multiplex operators must co-operate.
- 3.36 Ofcom also feels that it is reasonable and proportionate for the requirement for the television broadcasters and multiplex operators to provide information concerning planned works and disruptions (outlined above) to extend to radio services where significant impacts on radio are to be experienced as a result of DSO engineering work.

Annex 1

List of respondents

A1.1 Sixteen non-confidential responses were received

- BBC
- Consumer Experts Group
- Channel 4
- Chrysalis
- Curry, M (individual)
- Data Broadcasting International
- Digital One
- Digital UK
- DRG
- Emap Radio
- Now Digital
- Radio Centre
- Robb, F
- UTV Radio
- 2 individuals with name withheld

A1.2 Two confidential responses were received