

# Digital switchover: an audit of viewers' priorities

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## Section 1

# Executive summary

### Switchover is already happening

- 1.1 In recent years, the choice of television services available to UK viewers has expanded dramatically. Interest in digital TV is strong, with more than seven in ten homes already choosing to receive digital services on their main set.
- 1.2 In 1999, the Government announced its intention to stop analogue TV broadcasting and move to all-digital TV transmissions, a policy which has become known as digital switchover. By 2012, the whole of the UK should be receiving television in digital form, whether by satellite, cable, broadband or terrestrial broadcasts, and analogue transmission will come to an end.
- 1.3 The move to digital terrestrial television (DTT) will offer UK viewers greater choice, better quality and more reliable TV reception than analogue terrestrial broadcasting, as switchover enables nearly every household in the UK to access digital television through their aerials. It will also create opportunities for a wide range of new services to use the airwaves currently occupied by analogue transmissions. Possible new uses for this freed radio spectrum include High Definition digital terrestrial television, mobile TV, wireless broadband, local TV and mobile multimedia services.
- 1.4 For most viewers, switchover will pose relatively few challenges. One in four households has already achieved their own switchover, having chosen to equip all their TV sets with digital services.<sup>1</sup> Many more will do the same, well in advance of analogue TV signals actually being turned off in their region.
- 1.5 However, other viewers will need to take further action to ensure they are prepared for switchover. Ensuring that these viewers know what they need to do, when they need to do it and the options available to them will be critical to the success of digital switchover.

### This audit is intended to help clarify the issues for viewers

- 1.6 This report provides an audit of the benefits and costs of digital switchover from the viewer's perspective. Its purpose is to identify aspects of the switchover process that could affect viewers, set out how those issues are being addressed and identify areas where further work is needed by Ofcom, Digital UK, the Government and other stakeholders involved in this important and complex project.
- 1.7 We hope that this report will serve as a useful resource for those working on or affected by switchover. It is not, in itself, intended for a consumer audience. Rather it is aimed at those involved with and responsible for communicating with viewers about switchover, including consumer groups, broadcasters, manufacturers, retailers and the agencies involved in switchover. It is intended to be a contribution to an ongoing debate about how to ensure that the benefits of switchover are secured in a way that does not impose undue cost, difficulty, inconvenience or anxiety to viewers.
- 1.8 In compiling this report we have had substantial and valuable input from a range of organisations, including Digital UK, the Government, the Ofcom Consumer Panel, Ofcom's Advisory Committee on Older and Disabled People, the BBC and BSkyB. We are very grateful for their assistance.

<sup>1</sup> Ofcom, *Digital Progress Report*, March 2006

## Considerations for viewers arising from switchover

1.9 Fig 1 provides a detailed summary of the issues for viewers arising from switchover, and identifies the action underway or planned to address those issues.

**Figure 1. Matrix of issues for viewers arising from digital switchover**

Issue	Impacts on	Opportunities	Responsibility	Work planned
<b>Satellite not available everywhere</b>	Small proportion of homes have no line of sight to the satellite; planning restrictions prevent installation of dishes in a small number of cases	Satellite offers free-to-view option to homes not covered by DTT	DCLG, devolved administrations	Planning regulations for satellite dishes already amended in England & Wales, work in progress for Scotland and Northern Ireland
<b>Cable not available everywhere</b>	49% UK homes cannot receive cable		Cable operators	No current plans to extend coverage
<b>Availability of DTT is limited pre-switchover</b>	27% of homes currently outside DTT core coverage area, although some can still receive some DTT services. Coverage can only be increased at switchover	Switching off analogue allows coverage to be increased to 98.5% of homes	Ofcom, multiplex operators, broadcasters	Ofcom to support Digital UK to provide detailed coverage predictions in advance of DSO
<b>DTT will not be available everywhere post-switchover</b>	98.5% homes covered after switchover. Most of those not covered do not receive a good analogue picture now, but some homes currently watching poor analogue signal may be excluded	For those that can get it, quality of reception should be improved	Ofcom, multiplex operators, broadcasters	Ofcom to support Digital UK to provide coverage predictions to inform viewers and advise on alternatives where DTT not available (e.g. free-to-view satellite)
<b>Some aerials cannot receive current digital frequencies or are poor quality</b>	Up to 30% of households may need to upgrade pre-DSO, c. 10% post-DSO. Average bills could be around £125	Wideband aerials now available, compatible with all analogue and digital TV frequencies	Digital UK, DTI	Digital UK to provide information about appropriate options. DTI launched Registered Digital Installers scheme in March 2006
<b>Use of indoor aerials</b>	30% of homes use at least one indoor aerial (4% on primary sets). 25-50% might need to be replaced by rooftop connection	Rooftop connections provide better picture	Digital UK	Digital UK to provide information about appropriate options
<b>Viewers' understanding of switchover</b>	24% not heard of digital switchover. More than that will be unaware of full implications	Viewers' awareness, understanding and interest are growing	Digital UK, broadcasters	National & regional communications campaign launched in May 2006. Further campaigns planned. Broadcasters must inform viewers of switchover 2 years in advance
<b>Awareness and understanding of choices available</b>	Potentially all households; 30% have no digital service yet. Consumers might make inappropriate choices	Viewers' awareness, understanding and interest are growing	Digital UK, broadcasters, retailers	Digital UK to establish personalised advice and information service (web, helpline, on the ground)
<b>Affordability and understanding of relative costs</b>	Households that have to take additional action to acquire digital television, eg aerial upgrades, and who would not have chosen to convert otherwise	Free-to-view satellite might represent most cost-effective and convenient option	Digital UK, DCMS, BSkyB, broadcasters	Digital UK provide info to support purchasing. BSkyB promoting Freesat. BBC, ITV to launch alternative free-to-view sat. service. Targeted Help Scheme supports eligible households on low income
<b>Engaging local partners</b>	Local authorities, charities, community groups, retailers critical to ensuring viewers' understanding and comfort	Common interest in ensuring viewers have right information	Digital UK	Digital UK developing regional infrastructure to coordinate switchover
<b>Support for vulnerable viewers</b>	Some groups likely to face more difficulties coping with switchover, including older people, people with severe disabilities	Help to be provided to groups in greatest need	DCMS, BBC, Digital UK	Targeted Help Scheme provides safety net for those most likely to face difficulties. Digital UK to consider targeted communications for potentially vulnerable groups
<b>Usability of digital TV equipment</b>	Potentially all, particularly vulnerable groups as above. New remote controls, EPGs and channel scans could create confusion and difficulty of use	New markets for equipment manufacturers	Digital UK, manufacturers, Ofcom, DTI, DCMS	Coordinated action to help manufacturers and retailers develop and market more usable products
<b>Equipment installation</b>	Potentially all, particularly people with visual loss, dexterity impairment or other disability. In Welsh trial 30% did not feel confident installing equipment	Confidence increases after first box installed	DCMS, BBC, Digital UK	DCMS targeted help scheme. Government, Ofcom and Digital UK developing usability action plan
<b>Multiple dwelling units</b>	20% of households use shared aerials. Landlords may need to act on their behalf	New services can be offered in shared dwellings	DCMS, Digital UK, RDI Licensing Body	Communications planned to target private and social landlords
<b>Replacing VCRs with digital recorders</b>	29% of VCRs used to record one channel while watching another	Digital TV recorders offer new, highly attractive functionality	Digital UK, manufacturers	Communications required to raise awareness of VCR issues and promote digital alternatives
<b>Ability and knowledge of retail staff</b>	Viewers looking for advice from retailers could be given inappropriate advice if sales staff not adequately informed	Retailers are vital channel for communicating about switchover and digital TV options	Retailers, Digital UK	Digital UK working with retailers to provide staff training, in-store merchandising and research to help improve customer service
<b>Viewer assent and support for switchover</b>	3% say they will not convert any TV for switchover	Need to communicate benefits of DSO	Government, Digital UK	Research to monitor attitudes to DSO, Digital UK communications to promote benefits

Source: Ofcom

- 1.10 The remainder of this summary contains a more detailed discussion of the major issues for viewers arising from switchover, and sets out what Ofcom and Digital UK are doing to address these. The issues fall into five categories:
- the availability of services;
  - awareness and understanding of switchover and digital TV options;
  - affordability;
  - installation and use of digital equipment;
  - assent to, and support for, digital switchover.

### Availability of digital services

- 1.11 Some form of free-to-view digital television service should be available after switchover to nearly every home in the country. Current options include digital terrestrial TV, i.e. Freeview, and free-to-view satellite. Pay subscription services should also be available to nearly every home seeking additional channels; options include DTT subscription services, digital satellite, digital cable and TV over broadband.
- 1.12 However, not all services are available everywhere. Up to 98% of homes are able to receive free-to-view and pay services via *digital satellite*, although satellite availability can be constrained by local factors such as planning restrictions and the lack of communal distribution systems in blocks of flats. *Digital cable* services are available to 47% of homes, rising to 51% by the end of 2006 when the cable networks will be fully converted to digital transmission. *Digital terrestrial* services are available to around 73% of homes prior to switchover, increasing to around 98.5% of homes after switchover – the same proportion of households currently able to receive analogue TV broadcasts.
- 1.13 As is the case for analogue TV transmission, the issues that determine coverage and reception of digital terrestrial television are complex. Some homes lying within digital terrestrial coverage areas may need to upgrade their rooftop aerials in order to receive the best possible signal. This could affect up to 30% of homes before switchover, although changes in broadcast frequencies and the power of transmissions mean that only 10% of homes should be in this position after switchover. Some of the small number of homes using indoor set-top aerials on their main TV set may need to replace their aerial, or upgrade to a rooftop aerial.
- 1.14 Although switchover will significantly improve the availability of digital terrestrial television signals, some households – around 1.5% of all TV homes, or just under 400,000 households, the same number of homes that currently cannot receive a good analogue signal – will not be able to receive reliable digital signals all of the time. Ofcom's research suggests that many of these households will get a good signal for much of the time, but they could lose reception for several days each year, and some will not receive a signal at all.
- 1.15 For those households that face difficulties receiving digital terrestrial television, but do not want to take up subscription services, free-to-view satellite services (currently available from Sky, and possibly in future from the BBC and ITV), may represent a more attractive and cost-effective way of receiving digital TV.

- 1.16 To help viewers work out which is the best option for them, Digital UK will need to be able to provide independent and reliable advice on a local basis. The organisation will also need to carry out large scale public information campaigns. Ofcom has commissioned further work on the coverage and reception of digital terrestrial television which it will provide to Digital UK to enable it to help households determine what options are available to them. We will continue to support Digital UK in the development of its information and advice services.

**Work planned:**

- **Digital UK will communicate digital TV options available both before and after switchover to consumers, using both mass communications and in a personalised form using a postcode checker that will be available on the Digital UK website ([www.digitaluk.co.uk](http://www.digitaluk.co.uk)) and via the Digital UK call centre (0845 6 50 50 50)**
- **Ofcom will provide more detailed information about coverage and availability of different TV services in locations where terrestrial TV reception is poor, by the end of 2007, to enable Digital UK to develop targeted information and advice services**
- **Digital switchover has to be coordinated at international level; TV transmissions cross national borders and can cause interference to neighbouring countries without detailed international negotiations and agreements. Ofcom will continue to work with European regulators and radio spectrum authorities to finalise the details of international frequency planning, including coordination of lower power transmitters. Detailed work is needed to ensure protection of UK terrestrial television up to and after switchover, so that public service broadcasting channels are able to reach 98.5% of the UK population via the digital terrestrial platform after switchover**
- **Ofcom will undertake further work to seek to identify areas that currently receive analogue TV but may not receive good DTT coverage after switchover. It will do this to help Government and Digital UK consider what support might be needed for any households who will have to switch from a terrestrial TV service to satellite, cable or broadband services in order to continue to be able to watch TV after switchover**

### **Awareness and understanding of switchover**

- 1.17 Most people (63%)<sup>2</sup> are now aware of digital switchover. But the fact that viewers are generally informed about switchover does not mean they have a specific and accurate understanding of the implications of switchover for their household. Digital UK has already launched the first in a series of national and regional communications campaigns to help communicate effectively and persuasively what people need to do and when they need to do it. Digital UK also recognises that there is some considerable distance to go in order to develop a full and accurate understanding of switchover and its implications for consumers.
- 1.18 Many of the messages could be complex: how homes should prepare for switchover might depend on where they live, whether they have already acquired digital services for their main TV set, whether they want to get digital services for other TVs before or at the point of switchover, their proximity to a broadcast transmitter, the quality of their aerial and cabling, the number and nature of channels they want to be able to receive, how they use their video cassette recorders (VCRs) and whether they want access to enhanced services.

<sup>2</sup> Source: Ofcom/Digital UK Switchover Tracker, April-May 2006

- 1.19 Much of the value of moving to digital lies in the opportunity this creates for viewers to have access to a wide range of exciting new TV services. Communications about switchover should take the opportunity to ensure that consumers are aware of these opportunities, including numerous new channels, video-on-demand and pay-per-view, interactive services, high definition TV (HDTV) and technology that makes it easier for people with visual impairment, hearing impairment or other disabilities to access TV services. Although it is not Digital UK's responsibility to market these services on their providers' behalf, their communications will seek to make clear that these opportunities exist for consumers who would derive sufficient value from them to pay more for them.
- 1.20 The most critical requirement is that viewers know the different options available in their local area and understand which of these will suit their particular circumstances. Digital UK will take the leading role in ensuring that consumers have the information they need to make that choice effectively. Some homes will choose the added choice, functionality and value offered by pay services on cable, satellite and broadband, while others will prefer free-to-view options. Some households in the latter group may find that a free-to-view satellite service is the most convenient and cost-effective way of continuing to receive free-to-view TV, particularly if they cannot receive digital terrestrial services in their area or would need to invest in a new aerial to do so.
- 1.21 Digital UK will seek to work closely with regional partners to disseminate information and support about switchover, as well as using national campaigns to ensure the key messages reach the wider UK population at the right time. This will include retailers, who will often be the first source of advice for consumers who may be unsure of the options available to them. It is essential that retail staff are trained and sufficiently knowledgeable to respond to consumer queries. Where appropriate this includes supermarket staff as well as specialist consumer electronics staff.
- 1.22 Some viewers may need more advice and support than others. The Ofcom Consumer Panel, in its report to the Secretary of State for Culture, Media and Sport, identified that "digital switchover presents the biggest challenges for those who are socially isolated – people who will have difficulty in finding out about switchover, in understanding what it means and hence who are unable to take effective steps to deal with it."<sup>3</sup> The Panel concluded that "people without an adequate network of support from friends, family, neighbours or carers will therefore be particularly vulnerable." The digital television trial carried out in Bolton in 2005 found that while many older people and people with disabilities liked digital TV, and that most were able to install the equipment with help from family and friends, a significant minority did not have sufficient help and needed assistance from engineers involved in the trial.<sup>4</sup> It will clearly be essential that people in these circumstances have sufficient support to ensure that they are not involuntarily deprived of access to television after switchover.

**Work planned:**

- **Digital UK will continue to raise awareness and understanding of switchover in a programme of national and regional communications campaigns, supported by the Digital UK website and call centre. Its next campaign will launch in autumn 2006. The Switchover Programme will set targets for raising awareness and understanding and will measure progress against these**
- **Digital UK will seek to develop tools to assist viewers in making decisions about how to prepare themselves for switchover; for example a decision tree guide –**

<sup>3</sup> Ofcom Consumer Panel, *Supporting the Most Vulnerable Consumers through Digital Switchover*, 2004

<sup>4</sup> Department for Culture, Media and Sport, *Report of the Bolton Digital Television Trial*, 2006

**leading people through a series of yes/no questions and answers to narrow down the best option – and a cost calculator to work out what viewers might need to pay, if anything**

- **Digital UK is leading a programme of regional support by appointing Regional Managers to each of the switchover regions. The Regional Managers will be responsible for liaising with local stakeholders, consumer groups and communities to provide advice and guidance in the area. Digital UK will also conduct further regional events after the success of its *Digital Days* in Carlisle in May 2006**
- **Digital UK will continue to support retailers in their use of the Digital Tick logo, including providing merchandising and training support to help ensure that consumers receive reliable switchover advice in-store**
- **Digital UK will develop a strategy for targeted communications and assistance for those groups who may require tailored support (including older people, disabled people, those who are on low incomes or socially isolated, minority ethnic groups, people with limited literacy in English and others)**

## **Affordability**

- 1.23 The costs of digital services and equipment have been falling steadily for a number of years. As such, the costs of switchover are unlikely to represent a significant burden for most households. In 2004-05, on average, UK households spent more than £300 each on TV, video and computer equipment, compared to which the costs of basic DTT set-top boxes (typically £30-50) are already relatively low. Ofcom and Digital UK's research shows that whereas only four in ten over-75s have digital TV, almost seven in ten households on low incomes already have digital TV (67%), indicating that low income is not the most important factor limiting digital TV take-up.<sup>5</sup>
- 1.24 Nonetheless, for some – for example, those that cannot receive digital terrestrial transmissions, or who need a new aerial to do so, or have many TV sets and video recorders which they would wish to use for digital TV – the costs of switchover will be more significant.
- 1.25 The Government has announced plans to establish a Targeted Help Scheme, funded by the TV Licence Fee, to provide a safety net for those most likely to face difficulties coping with switchover: those aged 75 and over and/or with significant disabilities; specifically, people receiving attendance allowance, disability living allowance, or registered blind or partially sighted. This will include equipment for converting one TV set and assistance with installation and use. The support will be free to those eligible households receiving pension credit, income support or the jobseekers' allowance; other households will pay a modest fee.
- 1.26 Digital UK recognises that there will be other low income households outside the scope of the Targeted Help Scheme, and is exploring how its communications could be targeted to provide assistance to these groups. The Ofcom Consumer Panel has recommended that this additional support could usefully be focused on socially isolated consumers who are amongst the groups at greatest risk in the switchover process.

### **Work planned:**

- **Ofcom and Digital UK will continue to monitor average and lowest equipment prices, and rate of take-up of digital TV among low income groups**

<sup>5</sup> Ofcom/Digital UK Switchover Tracker, April-May 2006

- **Digital UK will consider targeted communications to low income groups, and means of providing purchase advice to those groups (for example, via the cost calculator tool)**

## Installation and use of digital equipment

- 1.27 Some viewers, whether eligible for the Targeted Help Scheme, within another potentially vulnerable group, or simply uncomfortable with new technologies, may find it difficult to install and use digital TV equipment. The Targeted Help Scheme will provide practical assistance to those who are eligible; Ofcom also supports Digital UK's intention to explore ways of working with consumer groups and charities to provide assistance to a wider group of consumers. We also support the parallel efforts of Digital UK, DTI and consumer groups to encourage and support the consumer electronics industry in producing and marketing digital equipment that is easier to use.
- 1.28 It is important to remember that digital TV should offer many consumers enhanced services that could significantly enrich their experience of TV. Opportunities for subtitling, audio description, in-vision signing and electronic programme guides are all improved by digital TV. One of the key benefits of switchover should be that many individuals – particularly those with visual loss or hearing impairment – are able to gain greater benefits from TV viewing than would have been the case in the days of analogue broadcasting. However, it will be important to ensure that the quality of these services is maintained; for example not all DTT set-top boxes currently offer reliable access to subtitles. Consumer awareness of the accessibility features of set-top box equipment will therefore be an important issue as switchover approaches.

### **Work planned:**

- **Digital UK, Ofcom and Government are leading a usability action plan, working with manufacturers and consumer groups, to promote easy installation and use of equipment and to encourage broader market availability of equipment with enhanced services for older and disabled people**
- **Digital UK is exploring ways of providing consumers with generic installation and usage advice via its call centre and website**
- **Digital UK is working to ensure that consumers are properly protected through switchover. Digital UK will highlight the importance of using Registered Digital Installers (i.e. appropriately qualified and insured installers who have joined a Government-supported scheme to establish good professional standards in the aerial industry) in its communications, and will liaise closely with the trade bodies for the aerial and satellite installations industry and the Registered Digital Installer-Licensing Body to ensure that consumers are properly protected.**
- **Digital UK will communicate with landlords and social housing partners to ensure any work necessary to ensure multiple dwelling units are equipped to receive digital TV is timely and effective, and will monitor progress in this area.**

## Consumer assent

- 1.29 Experience has shown that, with very few exceptions, viewers like digital TV and prefer it to analogue. However, some viewers will not want to take up digital services and will resent being required to switch. While their reluctance does not undermine the wider social benefits associated with the move to all-digital TV broadcasting, it is

essential that the agencies involved in switchover continue to explain the case for switchover to the public, and that those benefits are clearly demonstrated.

**Work planned:**

- **Ofcom and Digital UK will continue to monitor changes in public attitudes towards switchover, with particular focus on the numbers of households (currently 3% of the UK) who say that they do not intend to get digital TV in advance of switchover. Progress will be reported on a quarterly basis**

**The agencies involved and their responsibilities to viewers**

- 1.30 The success of switchover will depend on coordinated working and a shared sense of purpose between Government, Digital UK and Ofcom at the core of the programme, together with a wide range of other bodies, particularly broadcasters, the manufacturer and retailer supply chain, the transmission and digital network companies and consumer groups.
- 1.31 Digital UK is the independent, not for profit organisation set up by the UK's public service broadcasters and digital terrestrial multiplex operators to coordinate the UK's switchover to digital TV. Its primary objectives are:
- to coordinate the technical roll-out of digital terrestrial television across the UK, ITV region by ITV region, to the timetable set by Government;
  - to communicate with the public about digital switchover to ensure everyone knows what is happening, what they need to do and when; and
  - to liaise with TV equipment manufacturers, retailers, digital platform operators, consumer groups and other relevant stakeholders to ensure understanding of and support for switchover.
- 1.32 The Government is responsible for the policy underlying digital switchover. It is also responsible for explaining to the public why switchover is happening. Government will also ensure that the BBC and S4C are enabled to play their full role in digital switchover through, for example, the BBC Charter and agreement.
- 1.33 Ofcom has a number of statutory duties and powers to address viewer issues relating to digital switchover. Under section 3(1) of the Communications Act 2003, the principal duties of Ofcom, in carrying out its functions, are: to further the interests of citizens in relation to communications matters; and to further the interests of consumers in relevant markets, where appropriate by promoting competition.
- 1.34 In meeting those duties, Ofcom must have regard, in particular, to:
- the interests of consumers in respect of choice, price, quality of service and value for money;
  - the desirability of promoting the purposes of public service television broadcasting in the UK;
  - the vulnerability of children and of others whose circumstances appear to Ofcom to put them in need of special protection; and
  - the needs of persons with disabilities, of the elderly and of those on low incomes.

- 1.35 Ofcom also has a specific duty to secure the availability throughout the UK of a wide range of TV and radio services which, taken as a whole, are of high quality and calculated to appeal to a variety of tastes and interests.
- 1.36 Fig 2 provides a summary of the responsibilities of immediate concern to viewers of the main agencies and organisations involved in delivering switchover. Additionally, Digital UK has put together a more detailed programme structure which sets out the roles and responsibilities of the parties involved.<sup>6</sup>

**Figure 2 Responsibilities for issues relevant to viewers**

Organisation	Responsibilities
<b>Government</b>	<ul style="list-style-type: none"> <li>• Set the timetable for switchover</li> <li>• Explain benefits of switchover for viewers and for the UK as a whole</li> <li>• Establish Targeted Help scheme for those most likely to face difficulties in switching</li> <li>• Determine BBC and S4C's contributions to switchover, which include giving all viewers at least 2 years' notice of switchover and providing platform neutral advice on how to switch</li> <li>• Encourage manufacturers and retailers to develop and market digital TV equipment with improved usability for consumers</li> </ul>
<b>Digital UK</b>	<ul style="list-style-type: none"> <li>• Communicate with consumers about plans for switchover in their region, address concerns and build consumer confidence</li> <li>• Provide information and advice to consumers to help them prepare, including advice about television services available in their area and relative costs</li> <li>• Develop communications to raise awareness of the possible need to adapt or replace TVs and VCRs</li> <li>• Work with local organisations to ensure they are adequately informed about switchover and are able to provide accurate information to their customers</li> <li>• Work with retailers to train staff on switchover</li> <li>• Work with local authorities, consumer groups and others to put in place or ensure access to practical help and assistance for those who will need it</li> <li>• Liaise with equipment manufacturers, retailers, platform operators, consumer groups and other stakeholders to ensure support for switchover</li> <li>• Encourage manufacturers and retailers to develop and market digital TV equipment with improved usability for consumers</li> </ul>
<b>Ofcom</b>	<ul style="list-style-type: none"> <li>• Ensure commercial broadcasters meet licence obligations to support switchover; those obligations include giving all viewers at least 2 years' notice of switchover and providing platform-neutral advice on how to switch</li> <li>• Deliver frequency plan to ensure digital terrestrial television will be available to at least 98.5% of homes</li> <li>• Develop technical planning models to help Digital UK provide better information about coverage of DTT after switchover and the need for viewer aerial upgrades</li> <li>• Encourage others to ensure that digital TV equipment is capable of being used by the widest possible range of viewers, whatever their abilities, and that this equipment is widely available for purchase.</li> <li>• Provide market data and consumer research on digital TV and switchover, in conjunction with Digital UK</li> </ul>

Source: Ofcom

<sup>6</sup> Digital UK, *The Digital Switchover Programme: Programme Structure*, 2006

## Section 2

# The context of switchover

### Digital switchover is already underway

- 2.1 'Digital switchover' is the term used to describe Government policy to switch the UK to digital TV and turn off analogue terrestrial TV broadcast signals. In 1999, the Government announced its intention to achieve full switchover, and stated that switchover would take place when digital television was near-universally available and generally affordable.<sup>7</sup>
- 2.2 Switchover was made the joint responsibility of the Department for Trade and Industry (DTI) and the Department for Culture, Media and Sport (DCMS). The Secretary of State for Culture, Media and Sport confirmed the regional timetable for switchover in September 2005,<sup>8</sup> and an independent, not-for-profit company – Digital UK – has been set up by the UK's public service broadcasters and digital terrestrial multiplex operators to coordinate the switchover process.
- 2.3 The implementation of the digital switchover policy is still in its early stages. But digital technology is already transforming the way we watch television. Since the launch of Sky's digital satellite services in 1998, many of the radical changes in the way we consume TV have been enabled or encouraged by the digitisation of TV signals:
  - the huge expansion of choice, with more than 400 TV channels now available on satellite and more than 30 even with the most basic digital terrestrial box, including new free-to-view channels from the BBC, ITV and Channel 4;
  - the launch of on-demand and near-on-demand services, with cable operators now offering substantial film libraries, catch-up TV, popular archive series and children's programmes, and Sky providing access to hundreds of recent movies through its Box Office service;
  - the emergence of sophisticated digital TV recorders, such as Sky+ and TiVo, offering the ability to pause and rewind live TV, set programmes to be recorded with a single button-press from an electronic programme guide (EPG) and skip adverts in timeshifted viewing;
  - improvement in the quality of TV reception, with less interference or 'ghosting', which has helped grow the market for widescreen plasma and LCD TVs, with screen sizes much larger than traditional cathode ray tube TVs;
  - the introduction of High Definition (HD) TV services on Telewest cable and Sky, which offer more detailed and clearer pictures, more vibrant colour and richer sound quality, and will make most impact on HD-ready plasma and LCD TVs;
  - the development and testing of TV services available to mobile handsets and laptops;
  - extension of the coverage of services that are not currently available throughout the UK on analogue terrestrial, including Five and Channel 4 in Wales;

<sup>7</sup> Speech by Secretary of State for Culture, Media and Sport, Royal Television Society, September 1999

<sup>8</sup> Speech by Secretary of State for Culture, Media and Sport, Royal Television Society, September 2005

- the development of interactive services, which have also helped expand consumer choice – for example by making alternative feeds available at sports events like Wimbledon and the Olympics, and by creating the potential for innovative gaming, betting and shopping services;
- greater accessibility to TV for people with disabilities, especially those with sight or hearing impairment, as a result of improved access to subtitling, audio description, in-vision signing and electronic programme guides.

- 2.4 The benefits of digital TV to viewers are substantial. The fact that over 70% of households had already voluntarily taken up digital services by early 2006<sup>9</sup> shows that viewer interest in digital TV is strong. We expect that by the time switchover begins in each region most homes will have enough digitally-enabled equipment for them not to be significantly affected by it. The number of households that will only switch because they are required to is likely to be relatively small.
- 2.5 Nonetheless, full conversion of the UK from analogue to digital TV broadcasting requires further justification, since the process of switching off analogue TV will inevitably involve some compulsion for the minority of households who otherwise would not take up digital services.
- 2.6 Analysis shows that there are benefits to the UK that mean requiring a small number of households to convert compulsorily is warranted. Switchover will increase viewer choice by extending coverage of digital terrestrial transmissions to most of the 27% of homes that cannot currently receive them. At present, DTT is only available to an estimated 73% of homes. But as analogue signals are switched off, the power of digital transmissions can be increased, and more transmitters can be converted to digital broadcasting using the airwaves previously occupied by analogue TV (see Box 1).

### **Box 1. How switchover will take place**

The process of switchover in each region will take place in several stages:

On-screen messages appear in advance of switchover, informing viewers that switchover is about to start and that in a few weeks' time one analogue channel (for example BBC TWO) will no longer be available

BBC TWO is switched off on the named date, a few weeks before the rest

The BBC TWO analogue service is replaced by an information screen informing viewers that switchover has started and that other analogue services will be switched off shortly

BBC TWO's frequency channel is used to extend the reach of digital terrestrial services to all analogue TV homes, including BBC ONE, BBC TWO, CBBC, BBC THREE and BBC News 24

Shortly after this, messages appear on screen saying that the other analogue services are about to stop

The remaining analogue channels are switched off a few weeks later, and replaced by the remaining digital terrestrial services available in each area, including all the BBC's and ITV's channels, Channel 4 and Five, and a range of other channels

- 2.7 We intend that 98.5% of homes will be able to receive digital terrestrial television after switchover, matching the proportion of homes currently with analogue terrestrial coverage, while digital satellite TV is also available to most households. Consequently, our view is that after switchover every TV home should be able to receive at least one digital TV service, and most households will have a choice of two

<sup>9</sup> Ofcom, *Digital Progress Report*, June 2006

or more. Specifically, switchover will offer greater choice and more channels, including all the BBC's licence fee-funded channels, to over six million households that cannot currently receive digital terrestrial services. It will also have the benefit of enabling almost every home in the UK to receive Five, which currently cannot be received by 7% of the UK population.<sup>10</sup> This cannot be achieved while analogue signals are still being broadcast.

- 2.8 Digital switchover will also enable a large quantity of valuable radio spectrum which is currently used for analogue TV broadcasting to be made available for other uses. Ofcom has launched a major review to assess how that spectrum should be made available to the market.<sup>11</sup> It is too early to predict what the outcome of the review might be, but possible candidate uses of that spectrum include additional or enhanced DTT (in standard or high definition), radio and interactive services, improved coverage for mobile services or new mobile multimedia services and mobile TV. Indeed, the released spectrum could supply the capacity for entirely new communications services that have not yet been designed in any detail. The Government's cost-benefit analysis indicates that switchover is likely to result in quantifiable benefits to the UK of £1.1 – £2.2 billion in net present value terms, with the benefits being larger the sooner switchover takes place.<sup>12</sup>
- 2.9 Finally, there are advantages in coordinating our transition to digital with other European countries, many of which have committed to similar or earlier switchover timetables – indeed of those EU member countries that have published their plans, the UK will be the last to complete switchover fully. By the time Ofcom starts the switchover process in 2008, the Netherlands, Finland and Sweden will already have switched off analogue terrestrial TV transmissions entirely.
- 2.10 A predetermined timetable for switchover enables us to give clarity to our international neighbours about our frequency requirements and to develop plans to manage potential interference from their transmissions. The European Commission has proposed a target date for switchover across the EU of 2012, and it is important that our own plans are consistent with this goal, not least to support the UK's position in international negotiations on spectrum use after switchover.
- 2.11 Given the involuntary nature of switchover, those involved in implementing the switchover policy have an obligation to understand the potential concerns of viewers in the implementation of switchover, and consider now – while we are still in the early stages of implementation – how they could be addressed.
- 2.12 Many of the issues have been previously set out in reports produced by different bodies over the last few years.<sup>13</sup> Some of them remain relevant, including the need identified by the Ofcom Consumer Panel to consider the particular concerns of socially isolated people arising from switchover. However, there have been a number of important developments since some of these reports first appeared:
- information about the different options for receiving digital TV is widely available, and awareness and understanding of digital TV and digital switchover have increased as digital services continue to be promoted;
  - the costs of digital services and equipment have been steadily falling;

<sup>10</sup> Source: Five

<sup>11</sup> The Digital Dividend Review. See [www.ofcom.org.uk/radiocomms/ddr](http://www.ofcom.org.uk/radiocomms/ddr)

<sup>12</sup> DTI/DCMS, *Cost Benefit Analysis (CBA) of Digital Switchover*, February 2005 (Revised)

<sup>13</sup> See, for example, Consumer Expert Group, *Persuasion or Compulsion? Consumers and analogue switch-off*, 2004, Ofcom Consumer Panel, *Supporting the Most Vulnerable Consumers through Digital Switchover*, 2004, and House of Commons Culture, Media and Sport Committee, *Analogue Switch-off: A signal change in television*, 2006

- the Government has announced the timetable for switchover (see Fig 3) and a Targeted Help Scheme, which will provide a 'safety net' to ensure that those most likely to face difficulties in switchover can continue to watch the public broadcasting services after switchover;
- a substantial amount of research on the ease of use of domestic digital TV equipment has been carried out, which has helped to improve understanding of the needs of particularly vulnerable viewers; and
- Digital UK has launched its first nationwide and regional communications campaigns, in May 2006.

2.13 At the time of writing, it is a little over two years until the first region, Border, starts to switch off its analogue TV transmissions. Detailed planning for switchover is under way and it is essential that this planning is informed by an understanding of the issues arising for viewers and the work required to address them.

2.14 In compiling this report, we have had invaluable assistance from a number of organisations including the Government, Digital UK, the Ofcom Consumer Panel, Ofcom's Advisory Committee on Older and Disabled People, the BBC and BSkyB. We particularly benefited from formal advice from the Ofcom Consumer Panel, which is available from Ofcom's website, with a response from Lord Currie on behalf of the Ofcom Board. We are grateful to everybody who helped us with the report.

**Figure 3 The regional switchover plan**



Source: Department for Culture, Media and Sport

## The scale of the switchover project

- 2.15 Despite the substantial market-driven growth of digital TV to date, switchover remains a complex engineering, communications and distribution project, involving a wide range of public and private sector stakeholders. The benefits of switchover are considerable, but with a project of this scale there are inevitably risks.
- 2.16 It is important to be clear about what 'switchover' means for individual viewers and households. On average, each UK home contains 2.5 TV sets and 1.6 video cassette recorders (VCRs).<sup>14</sup> By early 2006, over 70% of UK households were watching digital TV on their main set. One in four homes had converted **all** their TVs to multichannel services.<sup>15</sup> However, that still leaves around 36 million analogue sets in UK homes, of which 21 million are in homes that have at least one multichannel set and 15 million are in homes that currently only receive analogue terrestrial TV. In addition, there are around 40 million VCRs in UK homes, around 11.5 million of which are used to record one channel while watching another.<sup>16</sup>
- 2.17 All sets on which viewers wish to continue to watch live TV will need to be equipped for digital TV by the time of switchover in their region, and if viewers want to watch one channel while recording another, they will need to replace any VCRs they use for this purpose with digital TV recorders (also known as personal video recorders, or PVRs) or recordable DVD players with digital tuners.
- 2.18 It is important to stress that this does not mean that old equipment will need to be thrown out. Existing TVs will not become redundant or obsolete – virtually all can be converted to digital reception simply by connecting a standard digital set-top box, whether for terrestrial, satellite or cable services.
- 2.19 Research suggests that not all households will wish to watch digital TV on all their sets and all their recorders by the time of switchover. Some households will decide not to get digital TV for sets that are only used infrequently, or to get set-top boxes for them at a later date. Some TVs will be used only for purposes other than watching TV, such as playing video games or watching DVDs, and will also not need set-top boxes. Consequently, in April 2006 only around six in ten households expected that they would switch every TV set in their household to digital for switchover.<sup>17</sup>
- 2.20 With respect to recording equipment, approximately two thirds of households use a VCR on their main TV set, and around four in ten of those are currently used to record one channel while watching another, with most of the others either not in use or used only to playback pre-recorded tapes. So only three in ten households will be affected by the reduced functionality of their VCR at switchover, and less than half of them currently intend to adapt or upgrade their VCR.<sup>18</sup>
- 2.21 We suggest that the goal of the switchover programme should not be to encourage conversion before switchover of every TV set and VCR in the country, but:
- to ensure that every household has access to digital television and that viewers are sufficiently well informed that they can decide whether and how to get digital TV for each set on which they want to watch broadcast TV, and each recorder on which they want to record broadcast TV, by the time of switchover in their region.**

<sup>14</sup> Source: Ofcom Residential Tracker Survey, Q4 2005

<sup>15</sup> Ofcom, *Digital Progress Report*, March 2006

<sup>16</sup> Source: Ofcom/Digital UK Switchover Tracker, April 2006

<sup>17</sup> Source: Ofcom/Digital UK Switchover Tracker, April 2006

<sup>18</sup> Source: Ofcom/Digital UK Switchover Tracker, April 2006

## Consumer liaison

- 2.22 Work is ongoing to address many of the issues discussed in this report, with a variety of mechanisms for ensuring that consumer groups are informed about developments. A number of consumer and stakeholder forums have been established that seek to ensure that viewers' interests are adequately interested in the switchover process. The key bodies, and their relevant responsibilities, are detailed in Fig 4.
- 2.23 While it is essential that stakeholders have ample opportunity to review the development of the programme and provide input, the number of consumer forums involved brings with it risks of inefficiency, fragmentation and duplication of effort. At this stage it might be useful to review the structure of the switchover programme's consumer liaison workstream, and the various forums that have developed, to ensure that their input is effectively focused and that individual bodies are clear about their role in achieving common goals. This might also ensure that input is channelled effectively to Digital UK, and in turn that Digital UK has a single efficient mechanism for providing feedback to and engaging with consumer forums.

**Figure 4 Consumer forums and stakeholder liaison groups**

Forum	Responsibilities
Ministerial Group on Digital Switchover	<ul style="list-style-type: none"> <li>• Has oversight of Digital Switchover Programme, receives updates from the team managing the programme and provides opportunity for issues to be raised directly with Government, Digital UK and Ofcom</li> <li>• Co-chaired by relevant DTI and DCMS ministers</li> <li>• Includes Digital UK, Ofcom and representatives of broadcasters, platform operators, consumer bodies, retailers, manufacturers</li> <li>• Meets quarterly</li> </ul>
Consumer Expert Group	<ul style="list-style-type: none"> <li>• Comprised of consumer groups, including bodies representing consumers with special needs</li> <li>• Appointed by Government to advise it and Digital UK on consumer issues relating to digital television and switchover</li> <li>• Seeks to ensure consumer concerns are represented in switchover decision-making and to help communicate switchover to consumers</li> <li>• Meets every 6-8 weeks</li> </ul>
Digital UK Stakeholders Group	<ul style="list-style-type: none"> <li>• Represents all organisations with an interest in success of switchover</li> <li>• Has membership of around 60 organisations</li> <li>• Provides forum within which to update all stakeholders on, and review progress towards, switchover</li> <li>• Meets quarterly</li> </ul>
Digital UK Regional Advisory Councils	<ul style="list-style-type: none"> <li>• Remit to help prepare the region for switchover by coordinating activity across a range of local organisations, particularly those who support older consumers and other potentially vulnerable groups</li> <li>• Includes local authorities, consumer groups, voluntary organisations and retailers. First to be set up in Border ITV region</li> </ul>
Housing Communications Group	<ul style="list-style-type: none"> <li>• Remit to advise the Digital Switchover Programme on issues that may affect the ability of the housing sector to adapt equipment for switchover</li> <li>• Includes major housing organisations, DCMS, DCLG, Digital UK, Housing Corporation, LGAs, tenants groups, DTG and the TV platforms, with representation from the Consumer Expert Group.</li> <li>• Meets quarterly</li> </ul>
Ofcom Consumer Panel	<ul style="list-style-type: none"> <li>• Advises on consumer interests in the markets Ofcom regulates</li> <li>• Independent of Ofcom, with its own budget and independent publications, including a report on switchover published in 2004</li> <li>• Meets monthly</li> </ul>
Ofcom Advisory Council on Older and Disabled People	<ul style="list-style-type: none"> <li>• Advises Ofcom on issues related to older people and people with disabilities, including digital switchover</li> <li>• Meets four times per year</li> </ul>
Ofcom Advisory Councils on the Nations and Regions	<ul style="list-style-type: none"> <li>• Advises Ofcom on issues relating to communications in different parts of the UK, including digital switchover</li> <li>• Meets quarterly</li> </ul>

Source: Ofcom

## Section 3

# Availability of digital services

## Options for receiving digital TV

- 3.1 In recent years the choice of TV services available to UK consumers has expanded dramatically. There are now a number of options for receiving digital TV, offering an increasingly wide range of free-to-view, subscription, on-demand and pay-per-view services. None of them is available to every household in the UK; but there are very few households that will not be able to receive one or more of them. Ofcom's aim is that after switchover nearly every household in the UK should be able to receive digital TV, by one or more means; digital switchover will support this aim by enabling the expansion of coverage of digital terrestrial services.
- 3.2 The main platforms used for delivering digital TV in the UK are:
- digital satellite;
  - digital cable;
  - broadband; and
  - digital terrestrial television.
- 3.3 Knowing what options are available in any particular area is the first step for viewers who have not yet switched to digital. Detailed information about the availability of different options, at postcode level or below, will be made available from Digital UK and Ofcom as switchover approaches.
- 3.4 When they have evaluated the options available to them, whether viewers decide their needs are best served by satellite television, cable, DTT or broadband is a matter for individual households, not Ofcom, Digital UK or Government. In this sense this report is technology-neutral. However, different platforms clearly pose different issues for viewers. In this section, there is more discussion of issues related to availability of DTT services than there is for the other mainstream TV platforms, because DTT is the platform most directly affected by switchover and because Ofcom has substantial statutory responsibilities in relation to extending the coverage of DTT after switchover, which is not the case for the other platforms.

## Digital satellite

- 3.5 The footprints of the Astra 2A and 2D satellites which transmit TV signals cover the whole of the UK, and therefore in theory digital satellite services can be accessed anywhere in the UK via a rooftop dish.
- 3.6 However, like terrestrial television reception, availability of satellite services can be subject to specific local factors. There must be a line of sight from the household's satellite dish to the satellite and this can be blocked by (for example) tower blocks, hills, or dense trees. Mountainous and heavily wooded areas, such as the Highlands of Scotland and the north coast of Devon, are particularly affected. If there is no south-facing aspect in the property, for example in north-facing flats in apartment blocks, there may also be no line of sight to the satellite. Landlords may not allow satellite dishes to be erected on rented property, and there are planning considerations that prevent some homeowners from doing so. Finally, standard

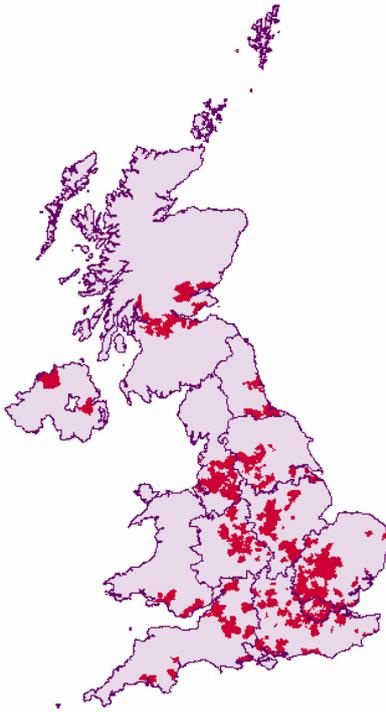
installation is only available for dishes installed up to ten metres off the ground, for safety reasons, and although non-standard installations are available, this may impose additional costs or not be possible in all cases.

- 3.7 It is difficult to measure exactly how many homes are affected by these factors. Research conducted by the Independent Television Commission (ITC) suggested that a minimum of 2% of homes within the satellite's UK coverage area cannot in fact receive satellite services for one of these reasons, suggesting coverage of 98%, but the proportion of homes not served is likely to be larger than this. For example, this study assumed that all flats in an apartment block were covered if there was a line of sight from the roof of the block to the satellite, but this requires the apartment block to have a distribution system from its roof which is not always the case.
- 3.8 At the time of writing in June 2006, prices for BSkyB's subscriber packages ranged from £15 – £42.50 per month, with the first three months currently available for £10 per month.<sup>19</sup> Depending on the number of 'mixes' that are adopted, viewers can receive anywhere between 190 and over 300 TV channels and can receive Sky by Broadband services at no extra cost if they have a suitable broadband connection and PC. Sky+, BSkyB's digital TV recorder product, cost £89 for the set-top box in June 2006, and £10 per month subscription, although subscription is free for subscribers to Sky's premium sports or movie services. Sky's High Definition service cost £299 for the set-top box and an additional £10 per month on top of the standard subscription cost.
- 3.9 Until 2004, all the satellite services marketed in the UK were monthly subscription packages. Although BSkyB did provide free-to-view satellite access, this was not widely promoted. Consequently, satellite TV was often seen as a significantly more expensive proposition than terrestrial television, and there was no actively promoted free-to-view digital TV service available to households outside the digital terrestrial coverage area.
- 3.10 However, within the last two years there have been two developments which have changed the basis on which satellite services are provided in the UK. First, in October 2004, BSkyB launched a new free-to-view service, Freesat from Sky, which costs £150 for a digibox, minidish, installation and viewing card, and there are no recurrent charges. Second, in September 2005, the BBC and ITV announced their intention to establish a new free-to-view satellite service as an alternative to BSkyB's. As of June 2006, a launch date for this service has yet to be confirmed.

## Cable

- 3.11 Digital cable services are available to around 47% of UK homes, and analogue cable to a further 4%, mainly in urban areas (Fig 5). They are principally provided by ntl and Telewest, who completed a merger in early 2006 to form a single company. In addition WightCable provides services in the Isle of Wight, parts of northern England and Scotland.

<sup>19</sup> A summary of services and prices of digital TV providers is available at <http://www.digitaluk.co.uk/en/how/options.html>

**Figure 5 ntl and Telewest digital cable network coverage, January 2006**

Source: Ofcom, network operators

Note: This map does not depict WightCable, which offers cable coverage in Scotland, Borders, the North West and the Isle of Wight

- 3.12 Cable TV is not available on a free-to-view basis, but is bundled with telephone services and (sometimes) broadband Internet access in 'double play' or 'triple play' subscriber packages. At the time of writing in June 2006, prices started at £16 per month for a set-top box offering around 40 digital TV and radio channels and interactive services, rising to around £30 per month for a 'family pack' that provides access to 160 TV and radio services. Customers must take a telephone service with their TV package, which at the time cost an additional £10.50 per month. ntl has also announced plans to develop 'quadruple play' services, including mobile telephony, following its agreement to acquire mobile operator Virgin.
- 3.13 Cable TV was originally based on analogue transmission, but the operators have been gradually switching their networks over to digital for many of the same reasons that digital terrestrial broadcasting is superseding analogue: greater capacity, more interactivity and the potential it offers for new services and functionality. Currently around 18% of cable TV customers receive analogue cable services, but the operators have said that they intend to fully convert their networks to digital by the end of 2006.

## Broadband

- 3.14 The delivery of TV by broadband is a relatively new and growing phenomenon, although broadband TV services have been available in certain parts of the country for several years. Signals are delivered into viewers' homes over telephone lines. Currently most broadband lines are connected to home computers via an internal or external modem; for example, BSkyB launched its Sky by Broadband service in early 2006, to offer subscribers to its premium pay-TV packages access to films and sports content online.

- 3.15 However it is also possible to connect to living room TVs via broadband set-top boxes. For the purposes of this report we generally mean services like these, delivered to TV sets in viewers' living rooms, when we refer to broadband TV.
- 3.16 Broadband TV is currently available in London and Stevenage from HomeChoice. Like cable, broadband TV services are bundled with telephony and Internet access. HomeChoice's service starts at £14.99 per month for access to 35 television channels, including all BBC, ITV and Channel 4 services, as well as broadband internet access. More channels and an on-demand service offering archive programmes and a library of over 1,000 films are available at higher rates, and some of Sky's premium sports and movie services are also available over HomeChoice for an additional £22-29.50 per month. Kingston Communications previously provided a broadband TV service in Hull, but it closed in April 2006, citing an increasingly competitive digital TV market.
- 3.17 A range of other providers including BT, Wanadoo, AOL and others have announced plans to launch broadband TV services in the near future. A variety of payment models are possible; in BT's case, existing broadband internet customers will not have to pay an additional monthly subscription for its TV service (to be known as BT Vision), just a one-off fee for the set-top box.
- 3.18 However, at least some of these services, such as BT's, will not stream live TV channels over broadband, because of the amount of bandwidth required to do so. Instead BT's set-top box will include a broadband receiver and a digital terrestrial tuner. Broadcast content – either Freeview or Top Up TV – will be available through the DTT tuner while on-demand content will be provided by broadband. The two services will be integrated in a single on-screen programme guide, but the implication of this approach is that viewers in areas not covered by DTT (or who suffer from any of the other digital terrestrial reception constraints described below) will **not** be able to receive broadcast channels, including the five main channels.
- 3.19 At the time of writing, not all broadband TV providers have announced their plans in detail. However it seems likely that many if not all will follow BT's lead, and not stream live broadcast channels over broadband. For the time being broadband might not offer a viable way of receiving live TV channels in areas not covered by DTT.<sup>20</sup> This may change as broadband TV services develop further over the next few years.

## Digital terrestrial

- 3.20 For most people, digital switchover means terrestrial services will improve – digital terrestrial offers more choice, a more reliable picture and enhanced functionality (personal video recorders, interactive services) compared to analogue terrestrial television. Digital terrestrial television is currently the cheapest way of acquiring digital TV, assuming that viewers do not need new aerial equipment, and currently the fastest-growing digital platform.

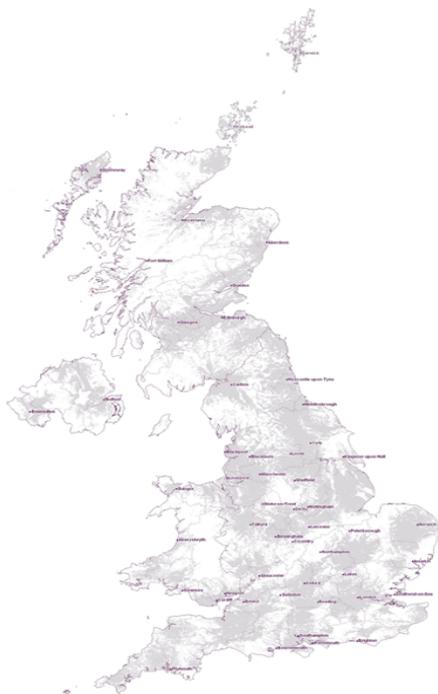
## DTT coverage

- 3.21 Digital terrestrial television uses the same transmitter network as analogue broadcasts. Most homes can receive digital terrestrial services through their existing aerials, either by plugging a set-top box between their aerial and their TV set, or by upgrading their television to an integrated digital television (IDTV) which has a built-in digital tuner.

<sup>20</sup> Note that some recent scheduled programmes will be available through BT's 'catch-up TV' service, which provides on-demand access to selected broadcast output from the previous seven days

- 3.22 However, not all transmitters currently broadcast both analogue and digital signals. In many areas not currently covered by digital signals, there are not enough frequencies available to allow simulcasting of analogue and digital signals. This limits the availability of digital services before switchover. As switchover takes place, the analogue signals will be switched off. This will enable digital TV to be broadcast from more transmitters, and the power of digital transmissions to be increased, so that coverage of the digital public service channels will match coverage of existing analogue services.
- 3.23 As a result the coverage of digital terrestrial television will increase, to make it nearly universally available – one of the main benefits of digital switchover. In the meantime, there are likely to be many viewers who are ready to switch to digital but can't do so unless they choose to adopt satellite, cable or broadband services.
- 3.24 After switchover, the public service broadcasters (PSBs) are required to ensure that their DTT service is substantially the same as their analogue service, including coverage. This will involve ensuring that digital terrestrial transmissions are available to around 98.5% of UK homes. Ofcom is currently working with the transmission companies and broadcasters to develop a transmission plan to deliver this goal.
- 3.25 Prior to switchover, an estimated 73% of homes can receive all six digital terrestrial multiplexes (Fig 6). More than 73% of homes can receive some level of digital terrestrial service, but not necessarily all channels. For this reason, Digital UK's postcode-based DTT availability checker is based on this 73% 'core coverage' figure.<sup>21</sup> Coverage is lower in rural or mountainous areas, such as the Highlands and Islands of Scotland, the Borders region and other upland areas in England and Wales. Coverage is also limited in Northern Ireland, where currently only three transmitters – Divis, Limavady and Brougher Mountains – carry digital broadcasts.

**Figure 6 Coverage of digital terrestrial television services pre-switchover**



Source: Ofcom

<sup>21</sup> The checker is available at [www.digitaluk.co.uk](http://www.digitaluk.co.uk)

- 3.26 In most cases, homes receiving good analogue services now, but which are unable currently to receive digital terrestrial services, should be able to do so once switchover takes place in their region. Detailed coverage predictors will be required by viewers who wish to confirm this. Current coverage predictors are good at providing a general guide to coverage for a particular area, but less accurate at the level of individual houses. Ofcom has initiated research work to identify the best ways to improve these detailed predictions with the overall aim of improving the quality of advice that Digital UK can offer to viewers.
- 3.27 For viewers who cannot currently receive DTT, but will be able to after switchover, there are a number of options, and it is for individual viewers to decide how they want to prepare for switchover:
- they may choose to buy DTT boxes in advance of switchover for each of the sets they want to use to watch digital TV, and wait for the digital terrestrial signal to become available as analogue signals are switched off in their region. The switch-off of analogue services is likely to take place in two steps, starting with just one analogue service being replaced by a digital transmission, so viewers will have a space of time in which to install and check their boxes before the remaining analogue signals are turned off a few weeks later;
  - they may choose to wait until switchover starts to buy DTT equipment. There may be a risk that not enough boxes are available to meet demand if large numbers of viewers switch at the last minute. However, manufacturers and suppliers are closely involved in the switchover programme and should have a good idea of how many boxes are likely to be required in each region as it prepares for switchover;
  - they may take up another platform; or
  - they may use a combination of methods, using different platforms for different household TV sets.
- 3.28 However, there will be a small number of cases in which viewers still do not have access to a good quality digital terrestrial service even after switchover. These households may wish to take alternative action to ensure that they are prepared for switchover.
- 3.29 Firstly, viewers who currently have either no or poor and unreliable access to analogue terrestrial signals, or do not have access to some channels – that is, the 1.5% of homes not covered by core analogue coverage<sup>22</sup> – are unlikely to receive reliable digital terrestrial signals after switchover. These viewers often live in very remote, rural or mountainous areas, and the cost of building new transmitters to deliver analogue television to them has been prohibitive. This will still be the case in a digital environment – in most cases each new transmitter would only serve a handful of households.
- 3.30 Within these homes, there may be some households that are currently watching analogue terrestrial TV, despite not being covered according to the strict criteria of the coverage map. The quality of the TV service in a particular home depends on its distance from the nearest transmitter, obstructions to the signal from hills, trees, and buildings between the home and the transmitter and the amount and level of incoming interference; the ability to receive the service is also dependent on the quality of the domestic aerial and correct orientation of the aerial towards the transmitter, and the sensitivity and quality of receiver equipment. Even if TV

<sup>22</sup> Ofcom, *Analogue Terrestrial Television Coverage*, 2004

coverage and reception is poor in a particular household, it can be possible to receive some kind of analogue signal, albeit fuzzy or subject to interference, or to receive a better signal on some channels than on others.

- 3.31 The factors constraining reception apply both to analogue terrestrial and digital terrestrial transmission. However, in this sense digital broadcasting is more 'all-or-nothing' than analogue: viewers outside the core coverage area, or without adequate receiving equipment, are more likely to get either a relatively good picture, or nothing at all. Homes that currently rely on low quality terrestrial signals like those described may find that they get no consistent signal after switchover. This may not be a frequently occurring problem – incoming interference very often only creates reception problems for a few days each year, at times of high atmospheric pressure – but nonetheless it will be frustrating for the small number of households that are affected, which might be unable to receive any digital terrestrial service for a few days each year. (This issue also applies to analogue coverage, where what is deemed 'good coverage' equates to services being available at least 99% of the time.)
- 3.32 The most cost-effective and convenient option for viewers in areas not covered by good quality analogue transmissions is likely to be to acquire a free-to-view satellite service, if they wish to continue to watch free-to-view television, rather than continuing to rely on a poor quality or no terrestrial signal after switchover. As discussed above, a free-to-view satellite service is already available for a one-off cost from BSkyB, and the BBC and ITV have announced that they are seeking to launch an alternative service.
- 3.33 In extremis, there may be another option after switchover for viewers who are not covered by the DTT coverage map but do not want or are unable to acquire other TV platforms. Some small areas of previously poor analogue terrestrial TV reception are covered by low-power privately operated relay transmitters known as 'self-help relays.' These typically serve less than a hundred homes and fall into 2 groups: (1) those privately operated by an individual or group, often collecting subscriptions from the community to cover costs; and (2) those operated by a commercial concern – for example where a new building has caused local loss of TV cover, the building owner sets up and operates a relay to provide replacement cover for neighbouring residents.
- 3.34 Over 500 self-help relays have been planned and around half of those planned are currently licensed. Others were either never built or have fallen into disuse as residents have opted to receive TV by satellite as a cheaper option. Ofcom and others are currently assessing the effect of switchover on the remaining self-help relay schemes and their users, with a view to providing advice on their options for receiving TV after switchover.
- 3.35 Secondly, there may be some limited new coverage deficiencies that arise as a result of the switchover process itself. Switchover requires some changes in the way that TV broadcasts are transmitted, for example in the frequencies used at a particular transmitter or in the power of transmissions. Some areas may suffer interference from new continental transmitters, depending on how countries like Belgium, France, Ireland and the Netherlands seek to develop their own digital terrestrial services in light of the outcomes of international negotiations on frequency rights at and after the Regional Radio Conference in May-June 2006.<sup>23</sup> The transmission companies will replace or improve the performance of many broadcast antennas in the run-up to

<sup>23</sup> The Regional Radio Conference was the international conference hosted by the International Telecommunication Union that planned the future use of spectrum across Europe, and agreed arrangements to share frequencies where signals cross national boundaries. The Conference ended on 16 June 2006, although bilateral negotiations on specific interference issues will continue

switchover, and this may also create variations in the coverage pattern of a particular transmitter which could in a very small number of cases exclude households that are currently covered by that transmitter.

- 3.36 In most cases, these problems should be limited, and may be solved by redirecting households' aerials at a different transmitter or by installing a new, more discriminating aerial. However, in a small number of cases additional action might be required. Again, other platforms may provide more attractive or more cost-effective alternatives to DTT, particularly if professionally installed new aerials are required.
- 3.37 At switchover, all homes will be able to receive the full range of public service channels, including all the TV channels offered by BBC, ITV, Channel 4, five and Teletext, that are broadcast on the three PSB multiplexes. Most, but not all, will also have access to the additional DTT channels that are broadcast on the three commercial multiplexes.
- 3.38 At present, all these channels are available to the 73% of homes covered by all six digital terrestrial multiplexes. After switchover, the coverage of the three commercial multiplexes will increase, based on commercial decisions made by the commercial broadcasters, and is currently expected to reach around 90% of homes. However that still leaves around 2.2 million homes, out of around 25 million homes, that are unlikely to receive the commercial multiplex channels through rooftop aerials after switchover.
- 3.39 In addition there may be a few homes that are currently able to receive the full Freeview service but who will no longer be able to receive some of the commercial DTT channels after switchover. This is largely because of the impact of predicted international interference, and partly because of changes in power assignments at some transmitters to allow maximum possible extension of coverage of the PSB multiplexes. However most of these are in areas that are expected to be covered by new transmitters to be adopted by the commercial multiplex operators, which should remove the problem in most cases. This issue does not affect the availability of the BBC or ITV channels, nor of Channel 4, five or Teletext.
- 3.40 These will be the main causes of coverage-related constraints on the availability of terrestrial television after switchover. Clearly for those homes and communities affected by coverage deficiencies these problems are very important. The first requirement is for viewers to have comprehensive and reliable information about the digital TV options available to them in their area, and Ofcom's current work is intended to improve the quality of information and advice Digital UK can provide to homes. Ofcom intends to complete this work in the autumn of 2006, with a view to enabling Digital UK to develop a more comprehensive postcode-level database by mid-2007.

#### **Other factors affecting DTT reception**

- 3.41 Some households may have poor terrestrial reception due to problems with their aerials, set-top boxes or other receiving equipment. For instance, some households may need to upgrade their external aerial. Most often, this is because of the poor condition of the aerial or its downlead, which can result in a poor quality or no signal being received. Aerials slowly degrade over time; an aerial with serious degradation may pick up a poor analogue signal but no digital picture at all. Some viewers may also find that low quality cables running between the aerial and the TV, or extension devices with inadequate screening or long cables, may interfere with TV reception. Such systems may have enabled the household to watch sub-standard analogue pictures, but are unlikely to be adequate for reliable DTT reception. In a few cases,

viewers may find that the digital channels are broadcast in their area on frequencies outside the band of channels the aerial was designed for; aerial installers should be able to advise on whether this is the case.

- 3.42 Degraded or out-of-group aerials affect a significant proportion of the population. Prior to switchover, approximately 30% of households are likely to require new rooftop aerials to receive existing DTT transmissions;<sup>24</sup> the Digital UK postcode checker at [www.digitaluk.co.uk](http://www.digitaluk.co.uk) provides guidance on whether homes in a particular postcode are likely to need new aerials because digital channels in that area use different frequencies or transmitters from analogue services.
- 3.43 After switchover, the power of digital transmissions will be increased, and the digital public service channels will generally switch to frequencies currently used by analogue services. As a result Ofcom estimates suggest that **after** switchover a maximum of 10% of households will need new aerials.
- 3.44 Aerial upgrades are expected to cost in the region of £125, on average, and therefore they represent a significant additional cost to some viewers.<sup>25</sup> Because digital switchover will enable more households to receive digital terrestrial television without upgrading their aerial, whether and when viewers should upgrade depends on where they live and when they want to switch:
- if they live in an area in which their current aerial will **not** be able to receive digital terrestrial signals before switchover, but will be adequate after switchover, they may wish to wait until switchover to get set-top boxes for any TVs on which they wish to receive digital terrestrial services;
  - if they live in an area in which their current aerial will not be able to receive DTT transmissions before switchover, and they wish to be able to receive digital services before switchover, they would be best advised either to buy and install a wideband aerial that will work on all frequencies used now or in the future for terrestrial TV broadcasting, or to take up a satellite or cable service. Wideband aerials are widely available but may be slightly more expensive than traditional aerials;
  - if their aerial is inadequate to receive DTT transmissions both before and after switchover, perhaps because of aerial degradation, again a new aerial is the best solution. A fuzzy, snowy or intermittent picture may be an indication that a new aerial is required, particularly if the quality of the picture has deteriorated over time.
- 3.45 If viewers want to be sure they will get a good quality digital picture, the most reliable way is to carry out a signal quality survey. Aerial installers will generally offer a service to measure the signal level at a particular property and check the aerial's condition for around £30-40. The Confederation of Aerial Industries (CAI) or the Independent Digital Standards Commission (IDSC) are able to provide the contact details of installers in most areas.<sup>26</sup>
- 3.46 Where reception problems can be resolved by installing new aerials or reorienting their current aerial, viewers will need to assess the costs of doing so compared to other options. There is clearly a risk that some viewers may spend a significant amount of money on aerial upgrades that they do not need, or would not need if they waited till switchover. Free-to-view satellite might in some cases be a cheaper option than buying and installing a new aerial.

<sup>24</sup> ITC, *Go Digital*, 2003

<sup>25</sup> Scientific Generics, *Cost and Power Implications of Digital Switchover*, 2005

<sup>26</sup> The CAI's contact details are listed in Annex C

- 3.47 Ofcom is currently undertaking further work to develop detailed coverage plans, taking into account the wider availability of DTT transmissions after switchover and related aerial issues. This work will enable Digital UK to provide detailed, reliable information about the options that are likely to be available to viewers in any particular part of the UK, well in advance of switchover. Viewers would therefore be best advised to check with Digital UK at the appropriate time before acquiring and installing a new aerial.
- 3.48 If, when they are fully informed about the options, viewers do prefer to receive digital terrestrial services it should not be difficult to carry out the necessary upgrades. TV aerials are available from most high-street electrical retailers. The Government launched a Registered Digital Installers (RDI) scheme in March 2006, to establish good professional standards in the aerial industry, develop a body of certified trained installers and provide viewers with confidence that installers are qualified, trustworthy and reliable. Members of the scheme will be permitted to use the 'digital tick' certification mark to market their services if they obtain appropriate qualifications, undertake criminal records disclosure and have public liability insurance.<sup>27</sup> The scheme is supported by a partnership between the DTI, industry and further education colleges and will be promoted by Digital UK. Its success will of course depend on its ability to attract a large proportion of installers to apply for certification.
- 3.49 A further issue that affects reception of digital terrestrial services relates to the use of indoor or set-top aerials. TV services, whether analogue or digital, are designed to be received by rooftop or loft aerials, and some indoor aerials will not work effectively with digital signals. Research suggests that currently 30% of homes use an indoor aerial on at least one TV within the home, although only 4% of primary sets rely on set-top aerials.<sup>28</sup> It is predicted that around 50-75% of sets currently using an indoor aerial will continue to be able to use an indoor aerial after switchover, although they may need to be upgraded to a new aerial. The remainder may require connection to a rooftop aerial. The vast majority of indoor aerial users do have access to a rooftop aerial but currently choose not to use it for one or more of their sets.
- 3.50 Recent technological developments may be able to address some of the limitations of existing indoor aerials without the need to install external wiring or aerials. This technology, known as diversity reception, could be built into set-top boxes and integrated digital TVs. Diversity receivers combine the signals of two or more small antenna to increase the overall strength, quality and reliability of the signal sent to the tuner. At the time of writing, a launch date for these receivers had not been confirmed.
- 3.51 Finally, some users may experience problems with their digital terrestrial set-top boxes. All digital equipment suffers from occasional problems including freezing or 'crashing,' and there is some evidence to suggest that digital terrestrial boxes sometimes 'lose' channels or experience variable picture quality. Freeview has commissioned research to provide greater insight into the scale and significance of these issues.
- 3.52 Households in multiple dwelling units, such as blocks of flats and hotels, have particular issues that need to be addressed by owners and landlords – these are covered in more detail in the *Installation and Use* section below.

<sup>27</sup> See [www.digitaluk.co.uk/site/content/documents/mar16\\_press\\_release.pdf](http://www.digitaluk.co.uk/site/content/documents/mar16_press_release.pdf)

<sup>28</sup> Research conducted by Ofcom and DTI in 2004

## Section 4

# Awareness and understanding

## Trends in consumer understanding

- 4.1 In its report to the Secretary of State for Culture, Media and Sport, the Ofcom Consumer Panel identified awareness and understanding of digital television and digital switchover as one of the most intractable challenges for the switchover process, more significant than either affordability or coverage issues.<sup>29</sup> It is undoubtedly the case that public information will be a critical element of switchover planning, if not the most important.
- 4.2 At the time of its report in 2004, the Consumer Expert Group appointed by the Broadcasting Minister felt that the provision of consumer information and support relating to digital TV and switchover had been poor.<sup>30</sup> Since then, the environment has changed in several important ways. The Government confirmed the timetable for switchover in September 2005. Many more homes than expected have already taken up digital services, particularly Freeview, as the prices of set-top boxes have continued to fall. And Digital UK has been created and has developed detailed communications plans, with its first national and regional communications campaigns having launched in May 2006.
- 4.3 There are signs that viewers' awareness is increasing, at least if measured by understanding of the terms involved. By mid-2005, the majority of viewers (91%) had heard of 'digital television.'<sup>31</sup> Awareness of the term 'digital switchover' has increased significantly over the last two years, almost doubling from 29% in 2004 to 52% in 2005.<sup>32</sup> Digital UK's latest research found that by March 2006, 66% of adults had heard of digital switchover, rising to 88% in Border, the first region to switch.<sup>33</sup>

## Raising awareness of switchover

- 4.4 Awareness and understanding of digital switchover are likely to continue to increase as digital services continue to be promoted. Retailers are gearing up for switchover with increased promotion of the 'digital tick' logo indicating that equipment is designed to work before, during and after switchover (Fig 7). By May 2006 2,300 retailers had signed up to the 'digital tick', including ten national retail chains.<sup>34</sup>

**Figure 7. The 'digital tick' logo**



Source: Digital UK

<sup>29</sup> Ofcom Consumer Panel, *Supporting the Most Disadvantaged Consumers through Digital Switchover*, 2004

<sup>30</sup> Consumer Expert Group, *Persuasion or Compulsion? Consumers and analogue switch-off*, 2004

<sup>31</sup> Source: Ofcom Media Literacy survey, June-August 2005

<sup>32</sup> Source: Ofcom Consumer Panel 2005/06 Annual Consumer Survey

<sup>33</sup> Source: Digital UK

<sup>34</sup> Source: Digital UK

- 4.5 Nonetheless there remains a need for dedicated and sustained communication regarding the switchover process itself, providing viewers with information about when switchover will take place, its implications for them, the options available and where they can get more advice, with communications targeted particularly at those groups most likely to feel confused about, or isolated from, the switchover process. People may be aware of the concept of digital switchover; that is clearly very different from understanding what they need to do to ensure they are most effectively prepared for it. Moreover recent research suggested that only a small minority (7%) of adults knew when switchover was taking place in their region.<sup>35</sup>
- 4.6 There are two main strands to the strategy to build public understanding of switchover: Digital UK's marketing activity and the public service broadcasters' communications plans.
- 4.7 Digital UK's communications activity launched in May 2006 with a major UK-wide campaign, encompassing national TV and press advertising, regional press, online search marketing and direct leaflet mailings to 3 million homes in the first regions to switch. The campaign unveiled Digit-AI, a computer-generated robot intended to be the 'face' and voice of digital switchover until 2012. The campaign aims to start the process of telling viewers that switchover is happening, when it will happen in their region, and what they need to do to prepare for it.
- 4.8 The public service broadcasters are required by the terms of their licences, and by its Charter in the case of the BBC, to help promote digital TV in a way which is neutral between platforms. The BBC has been asked by the Government to encourage viewers to take up digital services, while the commercial PSBs' role is to inform viewers of the timetable for switchover, and to explain how the digital equivalents of their analogue services will be available after switchover across all platforms.

### Using TV recorders after switchover

- 4.9 There are around 34 million VCRs in use in the UK.<sup>36</sup> They will still work after switchover for playing back existing recordings or prerecorded tapes, or for recording programmes at the same time as watching them. They can also be used for setting timed recordings of future broadcasts, although only if the TV's set-top box is switched on and tuned to the channel to be recorded.
- 4.10 However, after switchover viewers will not be able to use VCRs to record one programme while they watch another, unless the VCR is fitted with an additional dedicated set-top box – and installing and using this kind of set-up to ensure full VCR functionality in a digital environment is likely to be beyond the technical capabilities of many viewers.
- 4.11 Therefore if viewers wish to continue to be able to record one channel while watching another, they will need to replace their VCRs with digital TV recorders or DVD-recorders with a built-in digital tuner. It is difficult to assess exactly how much of a problem this will be; research suggests that viewers may regularly only use one of their VCRs for recording, with the others either not used at all or only used for playback. Ofcom's consumer research suggests that around 25% of VCRs – 7.5 million recorders – are currently used at least once a month to record one channel while viewers are watching another.<sup>37</sup>
- 4.12 Many VCRs currently in use will be replaced between now and switchover, either by digital TV recorders or by DVD-recorders. However, it seems likely that viewers do

<sup>35</sup> Source: Which?

<sup>36</sup> Ofcom, *Digital Progress Report*, March 2006

<sup>37</sup> *Ibid.*

not fully understand the implications of switchover for recorders; for example, most DVD-recorders will not provide full VCR functionality unless they have integrated tuners, which most boxes currently on the market do not.

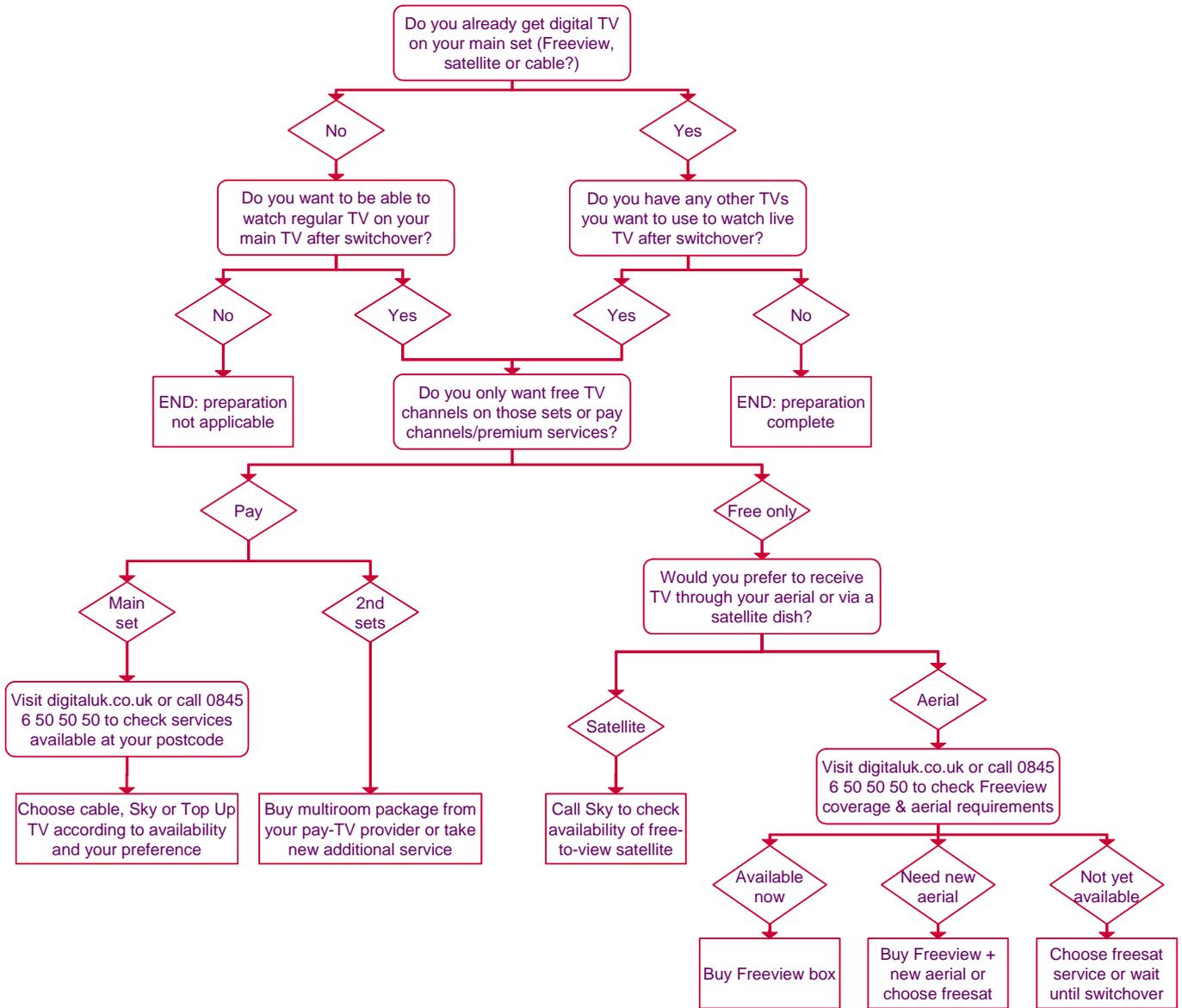
- 4.13 Digital UK and Ofcom will be carrying out further work to assess awareness of issues relating to VCR usage on a regular basis. However, it is clear that this will need to be an important part of consumer communications over the next few years. Freeview has already announced plans to launch a new brand – Freeview Playback – to promote consumer awareness and sales of digital TV recorders for digital terrestrial services.

### **Communicating the options available to viewers**

- 4.14 Awareness of the fact of switchover is not the only factor. If they are to avoid making inappropriate and possibly unnecessarily expensive decisions, viewers need fully to understand the choices open to them. For some viewers, the choices are complex: it might depend on where in the country they live, whether they want to take up digital TV before or at the point of switchover, their proximity to a broadcast transmitter, the quality of their aerial and cabling and the likely cost of installing a new aerial if required, the existence of a line of sight to the satellite, as well as the number and nature of channels they want to be able to receive, and whether they want to watch only free-to-view television or take out a subscription package. The level of functionality required and access to enhanced services such as interactive and broadband services can also help determine the best platform to meet the individual viewer's needs. It is clearly unrealistic to expect even the most knowledgeable viewer to know the answers to all these questions.
- 4.15 There are likely to be two dimensions to ensuring that viewers have the detailed knowledge they need to make appropriate choices. The first is that communications will inevitably need to become more sophisticated as switchover approaches, moving from communicating the fact of switchover to setting out the options viewers should consider, and when they should consider them. Flow charts, such as those shown in Fig 8, might help viewers understand the alternatives and the actions they need to take to ensure they are prepared for switchover at the most appropriate time for them; Digital UK might wish to include simplified versions in its consumer communications.

**Figure 8 Consumer decision-making for digital switchover<sup>38</sup>**

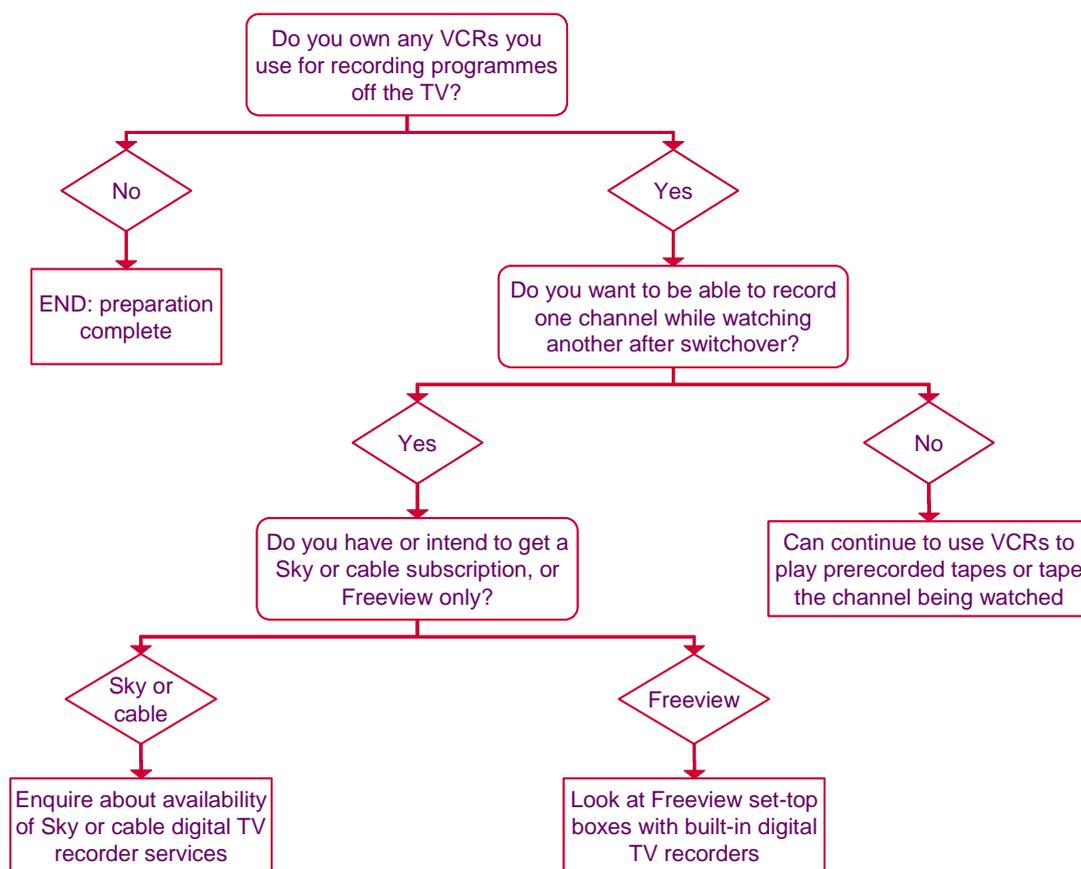
**Deciding how to equip your TVs for digital**



*Note: flowchart excludes ADSL, currently not an option for receiving live TV except in London and Stevenage. Satellite, Freeview and Top Up TV reception may be limited due to specific local circumstances. Consumers should check with service providers before acquiring service.*

<sup>38</sup> Note that this flowchart only addresses issues related to converting TV sets. A similar flowchart could be developed for replacing recording equipment, if appropriate.

**Deciding whether to replace VCRs with digital TV recorders**



Options include:

- Sky+ (available in 40GB, 160GB or HD models)
- Telewest TV Drive
- Ntl launching service later in 2006

Options include:

- Boxes with twin tuners (for recording one channel while watching another)
- Large hard disks (up to 160GB) for recording 80+ hours of TV
- Integrated EPGs
- Ability to set daily or weekly repeat recordings

Source: Ofcom

- 4.16 However, this kind of generic communication cannot hope to address every permutation of circumstances of individual households. The second dimension to communicating the options available to viewers, therefore, is to provide services – over the ‘phone, online and where possible in person – that can provide tailored guidance to individuals in particular situations and with specific questions.
- 4.17 This option is set out in more detail in Section 8 below. Digital UK is leading on developing these services, which are likely to be resource-intensive, and it will need sufficient funding to ensure it can develop consumer advice services of the highest quality. Ofcom will help ensure Digital UK has adequate detailed information about the availability of DTT and other digital TV services in particular areas and to homes with specific local circumstances, that could be used to populate a comprehensive consumer advice database operated by Digital UK.
- 4.18 Retailers also have an important role in communicating with customers about the services available to them, and in providing accurate information about the alternatives. Digital UK is already working closely with retailers to ensure that they are fully engaged in the switchover programme. The key requirement is for shop floor staff to be well trained in the features of different TV services, to understand what

different TVs and set-top boxes offer and to be able to provide basic information to viewers about when switchover will take place, its implications and – perhaps most importantly – where they can get more information. Digital UK is developing leaflets and posters for retailers to display in stores, promoting its information line and providing the key facts about switchover.

- 4.19 Organisations like Citizens' Advice Bureaux, social services departments, GP surgeries, supermarkets and post offices could play an essential part in coordination with Digital UK's regional managers to maximise the impact of switchover communications at local level. The Ofcom Consumer Panel has recommended that Digital UK should develop partnerships with the voluntary sector and local government, which may be particularly important in reaching socially isolated consumers, who are unlikely to have the networks of friends and family around them that others can draw on to ensure that they are adequately prepared for switchover.<sup>39</sup>
- 4.20 Digital UK will be seeking to develop networks of local partners to help them support their customers through the switchover process; it will be important that these groups are adequately resourced to provide the necessary resources to do this job. This could include additional funding for certain groups, either from Digital UK itself or local or central public funding, to enable them to take an active role that does not detract from their ability to continue their day-to-day activities.

<sup>39</sup> Ofcom Consumer Panel, *op. cit.*

## Section 5

# Affordability

### The cost implications of switchover

- 5.1 Research shows that awareness and understanding of switchover are more significant issues to address than affordability. The cost of digital equipment has fallen significantly since BSkyB and OnDigital first launched digital services in 1998. Freeview boxes are now available for as little as £25 – £35, integrated digital TVs can be bought for £99 and DVD-recorders with integrated digital terrestrial tuners are on sale for £140. The costs of equipment – set-top boxes, digital recorders, integrated digital TVs – are expected to continue to decline over the next few years.<sup>40</sup>
- 5.2 Some basic DTT boxes and integrated TVs might lack the attractive and more user-friendly features of more expensive equipment. But they are a solution for consumers who just want basic free-to-view television, and for getting digital TV on secondary sets. The arrival of the £25 box means that many homes that have not already completed their conversion to digital TV will be able to do so for perhaps only £40 – 50, excluding the cost of replacing any video recorders.
- 5.3 This is not a large investment compared to typical spending on TV and computer equipment. On average, UK homes spent over £300 on TV, video and computer kit in 2004-05; even the 10% of homes with lowest incomes spent £78 on this category over the course of the year.<sup>41</sup>
- 5.4 For some homes, though, the costs will be more significant. The one in ten homes whose rooftop aerials will need replacement after switchover will face a cost of around £125, on average, in addition to any new equipment costs; a new feed from a rooftop aerial – for example, to replace an indoor aerial – could cost in the region of £50 on average.<sup>42</sup> Homes that cannot receive an acceptable digital terrestrial signal will most likely need to acquire free-to-view satellite services, which are more expensive to install than Freeview, with a current cost of £150 including professional installation. And viewers with particular accessibility needs – for example, equipment that can provide audio description for people with visual loss – may need to pay more for set-top boxes with this functionality.
- 5.5 The Targeted Help Scheme proposed by the Government (see next section) will provide support to many of those in greatest need of help, including providing financial support to eligible households on low incomes. However, we recognise that there will be some households for whom costs, rather than difficulties with installation and use of digital equipment, will be the greatest challenge. This could be particularly true where households face higher than usual costs or are on very low incomes.
- 5.6 There are over 9 million households with income of less than £13,500 per annum,<sup>43</sup> for whom the costs of switchover could be considered significant. However, recent data on current penetration of digital TV<sup>44</sup> shows that 62% of people in households with income of less than £13,500 per annum have already taken up multichannel services on their main TV set, suggesting that affordability has not been a significant barrier so far for these homes. Even in households on incomes of less than £7,500 per annum, more than half of all individuals (53%) have already taken up digital TV.

<sup>40</sup> Scientific Generics, *Cost and Power Consumption Implications of Digital Switchover*, 2005

<sup>41</sup> National Statistics, *Family Spending*, 2005

<sup>42</sup> *Ibid.*

<sup>43</sup> Source: Family Resources Survey, 2003-04, Office for National Statistics

<sup>44</sup> Source: Ofcom/Digital UK, *Digital Switchover Tracker Survey*, April 2006

As prices of digital equipment continue to fall, it seems likely that more low income households will be able to afford to acquire digital services.

- 5.7 There may be a few households that currently receive analogue signals but will not receive good DTT coverage after switchover. They may be faced with a switch of platform as the only option for continuing to receive television services. For these households, the costs could be at least £150. The Government has indicated that if Ofcom and Digital UK can identify any such households, in light of the outcomes of the bilateral negotiations following the Regional Radio Conference 2006, it will consider with us what support might be needed for those households that will have to switch platform to continue to receive television services.<sup>45</sup>
- 5.8 The actual costs associated with acquiring digital services are not the only affordability issue. There may also be misunderstanding of the costs, or the available options, which could lead some viewers to spend more than they need to or to perceive the costs to be higher than they really are. The Consumer Expert Group found that many viewers associated digital television with pay television, and concluded that "better information would help to address both cost and willingness to pay issues among consumers for whom affordability is not an absolute barrier to adoption."<sup>46</sup> Digital UK's communications activity recognises this and will ensure that information is available not just on what services are available, but also how much viewers should expect to have to pay for them.
- 5.9 Digital UK and Ofcom have commissioned tracking research to monitor consumers' attitudes towards switchover, including perceptions of cost and affordability, over the next few years. As understanding of switchover grows, more households achieve complete conversion to digital, and more information is provided to viewers about the options available to them, we believe that concerns about the cost of digital services will decline further.

<sup>45</sup> Department for Culture, Media and Sport and Department of Trade and Industry, *Government Response to the Culture, Media and Sport Select Committee, Session 2005-2006: Report on Analogue Switch-Off*, 2006

<sup>46</sup> Consumer Expert Group, *op. cit.*

## Section 6

# Installation and use of digital equipment

## Installing digital TV equipment

- 6.1 Once viewers have acquired the equipment or services that suits their circumstances best, some may still face challenges installing and using it.
- 6.2 For cable and satellite services, installation is carried out by professional installers working for the platform operators, and should in most cases be straightforward. Inevitably there is the possibility of customer service failure in a few specific cases, but in general viewers are protected by the professional guarantees of the companies concerned and by their transparent, standardised fees.
- 6.3 For digital terrestrial services, the situation is more complex. Most set-top boxes and digital recorders are designed for viewers to be able to install themselves, and in most cases this is fairly straightforward. However, for some viewers – particularly those with dexterity impairments or visual loss – self-installation will pose more challenges.
- 6.4 In the most recent digital television trial, in Hulton, Bolton, 86% of over-75s said they expected they would need help with installation of a digital set-top box.<sup>47</sup> In a previous trial, in Ferryside and Llansteffan in 2004-05, 30% of respondents felt either not very, or not at all confident that they would be able to install the equipment they had chosen themselves.<sup>48</sup> Over-75s and people with disabilities were most likely to lack confidence, but more than half of all 65-74 year olds and one in five 55-64 year olds also said they did not feel comfortable installing equipment themselves. People aged under 55 generally felt they did not need help with installation.
- 6.5 Despite these initial concerns, trials have found that in practice most older people did not need an engineer to install a set-top box. The installation process was generally easy, and several older people were capable of installing the box on their own. Most of the rest installed their box with the support of friends and family, even when installation help was provided free if needed. In Bolton, 69% of those aged 75 or over were able to 'self-install', most with help from family or friends.<sup>49</sup>
- 6.6 Some, however, do need help – 31% of individuals aged 75 or over in the Bolton trial. The Ofcom Consumer Panel's analysis suggests that these are likely to include, although will not be restricted to, the most socially isolated consumers.
- 6.7 In general, there is a need for comprehensive advice services, not only to provide information about switchover itself but also to provide guidance on and help resolve any ongoing problems viewers face with equipment installation or use. Even once boxes are installed, some viewers may face difficulties from time to time: for example, in carrying out channel scans, or in rebooting frozen boxes. This is particularly critical for DTT viewers; cable and satellite customers have access to established customer support services, but no such equivalent exists for DTT.
- 6.8 After switchover, digital terrestrial broadcasts will in some areas move to frequencies previously used by analogue transmissions. This will mean that most households should be able to pick up digital broadcasts using the same aerial that they used for

<sup>47</sup> Department for Culture, Media and Sport, *Report of the Bolton Digital Television Trial*, 2006

<sup>48</sup> Source: Ipsos MORI, quoted in Scientific Generics, *The Equipment Needs of Consumers Facing Most Difficulty Switching to Digital TV*

<sup>49</sup> DCMS, *Report of the Bolton Digital Television Trial*

analogue services. However, this will mean that their set-top boxes will need to be retuned to the new frequencies used by digital services. Many set-top boxes now in the market automatically retune, and viewers should not have to do anything themselves. However some boxes, particularly older models, do not automatically retune, and viewers will have to carry out a rescan themselves. This is usually very simple to do, and is easily accessed through boxes' on-screen menus. Digital UK's and the broadcasters' communications should inform people as switchover approaches that they may need to do this.

## Supporting socially isolated consumers and vulnerable groups

- 6.9 It is important to be clear that exclusion from the switchover process is not limited to groups of consumers with particular characteristics or circumstances. Switchover will affect most TV-watching households in the UK, to a greater or lesser extent, and many of the issues facing viewers as a result of switchover could potentially affect everybody.
- 6.10 Nonetheless, as the evidence from the switchover trials conducted to date makes clear, there are some particular groups in the population who may be particularly vulnerable in the transition to digital, and who are at risk of exclusion from the process. The Ofcom Consumer Panel concluded that those most at risk were "those who are socially isolated and who need help to overcome practical barriers," and that the concept of social isolation was related to – although not the same as – age, various kinds of disability and low English literacy.<sup>50</sup>

## Targeted help

- 6.11 The main mechanism for providing support to vulnerable viewers will be the Targeted Help Scheme, which will provide a 'safety net' to ensure that those people identified as most likely to face difficulties coping with switchover will be able to watch the public broadcasting services after switchover. Specifically, this will involve providing equipment to convert one TV set, and support with its installation and use.
- 6.12 Eligible households will be those that include:
- one person aged 75 or over; or
  - at least one person in receipt of Disability Living Allowance, Attendance Allowance, or Constant Attendance Allowance under the Industrial Injuries or War Disablement Pension Schemes; or
  - at least one person who is registered as blind or partially sighted.
- 6.13 The Government calculates that this represents a total of 6.5 million households.
- 6.14 The support will be available for free to those who are eligible and who are also in receipt of Pension Credit, Job Seekers Allowance or Income Support. Assistance will be provided to the value of the cheapest available digital platform, although viewers will be able to choose for themselves which platform they wish to take up (making up any difference in costs themselves). Other households who meet the eligibility criteria, but who do not receive these income-related benefits, will pay a modest fee.
- 6.15 It is clearly essential that potential recipients of Targeted Help scheme understand what assistance that is available to them, who is eligible for it and what they need to do to get it. The comprehensive communications campaign led by Digital UK, and the

<sup>50</sup> Consumer Expert Group, *op. cit.*

information provided by broadcasters to their viewers, will be critical in ensuring viewers are given appropriate information and advice, including about the Targeted Help Scheme.

- 6.16 However charities, at national and local level, will also be an important conduit for information to those who are most isolated. The Government has indicated its wish to work with charities to reach out to target groups, and is working with the charities to determine their role in switchover and whether they need extra resources to play it fully.<sup>51</sup>
- 6.17 Not all households that meet the Targeted Help Scheme's eligibility criteria will in practice need help, although preliminary evidence from the Bolton trial suggests that most will. The Bolton trial also found that it can take a long time to locate eligible households for targeted help, particularly if legislation is not in place to enable sharing of data from other agencies (Department of Work and Pensions, TV Licensing, local authorities), and that older people need time and in some cases ongoing support – for at least six weeks – to adapt to using digital TV. For these reasons the Targeted Help Scheme will start to contact eligible households at least six months before switchover starts in each region, to ensure adequate time is available to reach and prepare households who need support before analogue services are switched off.
- 6.18 Although the Targeted Help Scheme targets the groups of greatest need, there may be other consumers that also need some assistance with digital TV. Socially isolated people who have little or no contact with family or friends will overlap with, but are not restricted to the specific groups that will be served by the Targeted Help Scheme.
- 6.19 With a view to informing its communications strategy with vulnerable and socially isolated viewers, Digital UK has identified a number of groups who may have particular needs in switchover, many of which overlap with each other:
- people who have a disability or lack of physical capacity – particularly dexterity impairment or cognitive impairment – but who are not receiving disability benefits, for whatever reason;
  - people with visual impairment but who are not blind;
  - households on very low incomes;
  - people who have limited literacy;
  - people who do not speak English as a first language; and
  - socially isolated people.
- 6.20 There is a large overlap between these groups and the groups covered by the Targeted Help Scheme, as shown in Fig 9, but they are not exactly the same.

<sup>51</sup> DCMS and DTI, *Government Response to the Culture, Media and Sport Select Committee*

**Figure 9 Relationship between groups with particular needs in switchover and those eligible for the Targeted Help Scheme**



Source: Ofcom

- 6.21 Groups with additional needs may be deterred from taking up digital TV services for a number of reasons.<sup>52</sup> They may lack confidence using and installing consumer electronics equipment. They may be excluded from mass communications campaigns, or feel that 'they're not aimed at people like me.' They may not be able to easily use the receiver equipment available in the market, or not know what adapted equipment might be available to better meet their needs. And they may be deterred by the need to get used to new technology: additional remote controls (modern remotes often have many narrowly-spaced buttons that are difficult to distinguish), electronic programme guides (EPGs) and on-screen menu systems. Different individuals are likely to need different levels of support depending on their personal requirements, whether they have friends or family who can help them and their level of comfort with new technologies and equipment.
- 6.22 Digital UK has indicated that it will explore the possibility of providing additional communications support to other groups with particular needs that may not be covered by the Targeted Help Scheme.
- 6.23 Some consumers who need additional help will be able to make use of independent installers. However, use of independent installers – whether for set-top boxes, digital recorders, aerials or aerial cabling – can bring with it risks of its own. There is a possibility that some installers will themselves not have the expertise to set up viewers' equipment appropriately. A few may take advantage of viewers' lack of confidence to charge excessive fees or sell services that viewers do not really need.
- 6.24 This is partly the motivation behind the new Registered Digital Installers scheme, which has been established with the support of Government. The intention is to create a profession of trusted, qualified engineers to carry out aerial upgrades and serve as a reliable source of advice to consumers. The aim of the scheme is to establish good professional standards in the aerial industry and help drive out

<sup>52</sup> This analysis draws on the findings of studies by Scientific Generics, *op. cit.* and i2 media, *Equipment Needs of Consumers Facing Most Difficulty Switching to Digital Television Equipment*, 2006

'cowboy' operators. It is important that consumers are aware they should use registered installers wherever possible.

### Accessibility and usability

- 6.25 The ease of use of digital equipment has a major impact on consumer satisfaction and willingness to take up digital services, and there remain a number of issues to address in this respect. Some viewers find it difficult to understand and use the additional functionality offered by digital TV. Good design of remote controls, set-top boxes, instruction manuals, TV menus and EPGs can help improve the digital TV experience for almost all viewers. The most important immediate requirement, in our view, is for equipment manufacturers to improve the usability of all equipment on the market, which would benefit all viewers.
- 6.26 A substantial amount of research<sup>53</sup> has been carried out into the usability of digital TV equipment, which provides manufacturers with detailed evidence about the requirements of products designed to serve the large market for easy-to-use and adapted receiver equipment.<sup>54</sup> There is little value in replicating or summarising that research here, but in broad terms, there are two possible approaches: development of simple products that offer reduced functionality in some areas, but are easy to use; and development of products with full functionality but tailored to the needs of particular consumer groups.
- 6.27 The Government is working with Ricability to evaluate the usability of consumer equipment, with a view to publicising models that meet usability standards. Ricability has already reported on indoor aerials, and the results for other equipment will be published shortly on its free website.<sup>55</sup>
- 6.28 In addition, one of the advantages of conversion to digital is the opportunity it creates to provide enhanced services to particular groups of viewers, including improving access to programmes for disabled people. Developing accessible products for people with special needs (for example, sight loss, hearing loss or dexterity impairment) will be a critical part of ensuring that they can share equally in the benefits of switchover. The market has so far been slow to react to this growing need, having been more focused on competing on price for more basic mass-market products. The Targeted Help Scheme may help drive further action in this area by encouraging manufacturers to develop more boxes that meet the needs of its eligible groups.
- 6.29 The key requirements that have been identified for accessible digital TV equipment are:
- All digital equipment should include basic features;
  - Accessibility issues associated with electronic programme guides and menus, remote controls and connectivity should be resolved; and
  - The full range of access services should be available via affordable equipment.<sup>56</sup>

<sup>53</sup> Ofcom, *Summary of Research on the Ease of Use of Domestic Digital Television Equipment*, 2006; Consumer Expert Group, *op. cit.*; ITC/Consumers' Association, *Easy TV 2002: Research Report*, 2002; Scientific Generics, *op. cit.*; i2 media, *op. cit.*

<sup>54</sup> Scientific Generics estimates that up to 8.2 million households may have difficulty in the transition to digital television and would benefit from easy-to-use or adapted set-top boxes, although different households might have different specific needs.

<sup>55</sup> [www.ricability-digitaltv.org.uk](http://www.ricability-digitaltv.org.uk)

<sup>56</sup> Consumer Expert Group, *Digital TV Equipment: Vulnerable Consumer Requirements*, 2006

- 6.30 Ofcom will continue to provide assistance to support the development of easy to use and accessible digital equipment, in line with our statutory duties. Ofcom's future work could include: supporting Digital UK in discussions with manufacturers, to encourage availability of usable equipment; continuing to support industry research, working groups and seminars; managing and funding individual ad hoc projects to assist industry-led initiatives, where this support is necessary for those initiatives to succeed.

### Multiple dwelling units and the role of landlords

- 6.31 Around one in five households use shared aerials to receive television services because they are in multiple dwelling units (MDUs) such as blocks of flats, hotels, hospitals, care homes, prisons and so on.<sup>57</sup> Most need their communal aerial to be upgraded in order to receive digital TV, and most will require all households in a particular MDU to switch at the same time. All households within that MDU will therefore need to agree how to get digital TV, and when to do so; or their landlord will need to make the decision on their behalf. In some cases, individual households may **want** to switch to digital TV, but be prevented by their landlord from doing so. The Consumer Expert Group has pointed out that householders in MDUs may have legal rights to digital TV under Section 134 of the Communications Act (2003), which sets out the principle "that no person should unreasonably be denied access to an electronic communications network or to electronic communications services."<sup>58</sup>
- 6.32 Some landlords and tenants may be unaware of the particular issues they face with respect to switchover. There is currently little information available about the level and understanding and expectations regarding switchover amongst landlords. However, there are signs that some large landlords have started to take steps to convert to digital, with several councils having installed digital receiving equipment in their properties.<sup>59</sup>
- 6.33 Communication with landlords has stepped up in recent years, with DCMS publishing leaflets intended to inform them of the benefits of digital conversion and set out the options. Landlords are also one of Digital UK's key target audiences. It intends to carry out further research to assess their current awareness of switchover and conversion plans and has put dedicated staff in place to ensure that landlords understand what they need to do and are prepared for switchover.
- 6.34 There is an important interface between communications with landlords and the Targeted Help Scheme, many of whose recipients may live in social housing blocks or other communal dwellings such as care homes. Further communications with landlords will be developed to ensure that recipients of targeted assistance are not involuntarily excluded as a result of landlords either being unaware of or unwilling to carry out any necessary work on their aerial systems.
- 6.35 There may also be a specific issue around access for disabled people when staying in hotels. Many hotels that switch to digital will use a single central set-top box, which means that subtitles and other access services cannot be switched on or off in individual rooms. An obvious solution would be for hotels to equip certain rooms with their own set-top box to accommodate disabled guests.

<sup>57</sup> DMCS, *Digital TV: Information for Landlords*, August 2004 (Revised)

<sup>58</sup> Consumer Expert Group, *op. cit.*

<sup>59</sup> *Ibid.*

## Section 7

# Assent and support for switchover

## Some viewers are unwilling to switch

- 7.1 So far, progress to switchover has been driven by the free operation of the market. Those households that have been attracted by the digital services on offer – over 70% of all UK TV homes, by early 2006 – have already equipped at least their main set to get digital TV, well in advance of switchover. Most of these homes had adopted digital TV before the timetable for switchover was even confirmed.
- 7.2 This process of voluntary adoption will continue, with a further 1.7 million homes expected to take up digital services in 2006.<sup>60</sup> But research shows that a small proportion of viewers are still firmly opposed to digital switchover, to the extent that they say they would rather go without television than take up digital services.
- 7.3 As switchover approaches and the intensity of communications and media coverage about it grows, it is realistic to expect that some viewers' opposition to the switchover policy will grow in proportion. We can distinguish two groups of viewers:
- 'reluctant' switchers, who do not see the benefits of digital switchover to them personally but recognise its inevitability and, possibly, that switchover is in the interests of the UK as a whole. At present we estimate that this group represents around 6% of all adults,<sup>61</sup> and
  - 'non-adopters,' who say they will not go digital, even if that means going without TV after switchover. Currently this group is estimated to represent around 2% of all UK adults.<sup>62</sup>
- 7.4 Research conducted for the DTI in 2004 suggested that these groups were not a coherent cluster with clearly defined socio-economic or demographic characteristics.<sup>63</sup> Instead, non-adopters had a variety of different reasons for remaining with analogue TV. Reluctance to switch often reflected broader attitudes towards TV, and to multichannel TV in particular. These viewers tended not to value TV as a medium, or felt that more TV channels would have a negative impact on society. Some believed digital TV offered little of value over and above what is already available on the main five channels, while some mentioned practical problems such as cost and difficulty of use.
- 7.5 Reluctant switchers and non-adopters are more likely than others to be opposed to the switchover policy and may resent the costs and inconvenience they believe it will impose on them. There is a risk that opposition from some groups will contribute to a wider reaction against switchover, threatening widespread consumer assent and challenging perceptions of the legitimacy of the switchover process. Ensuring that viewers understand the full benefits of switchover is critical, in terms of both improved TV services and the opportunity created for innovative communications applications.
- 7.6 There is evidence to suggest that both the 'reluctant' switchers and 'non-adopters' have declined in size since the DTI's research was carried out in 2004. Digital take-up has grown much more quickly than expected: in 2004 Ofcom's forecasting model

<sup>60</sup> *Ibid.*

<sup>61</sup> Source: Ofcom Residential Tracker Survey, Q4 2005. This represents the proportion who say they will convert before switchover, but only in the same year that switchover takes place in their region

<sup>62</sup> Source: Ofcom Residential Tracker Survey, Q4 2005

<sup>63</sup> DTI, *Attitudes to digital switchover*, 2004

suggested that digital TV would only reach 78% of households by the end of 2010. Our revised modelling, carried out earlier in 2006, suggests that this goal will now be reached before the end of 2007. This has been largely driven by very rapid take-up of digital terrestrial television, and the falling prices of DTT boxes. We anticipate that as costs continue to fall, and communications about switchover increase, more previously reluctant consumers will become more likely to take up digital services.

- 7.7 Indeed, it is possible that pressure will grow in some areas for switchover to be brought forward. One in four homes cannot currently receive digital terrestrial services; as awareness of switchover grows and the promotion of digital services continues, it may cause increasing frustration amongst viewers in unserved areas that they will not be able to receive DTT for several more years. It will be important to continue to monitor consumer opinion to understand viewers' concerns and to clearly communicate the timetable for switchover, and the reasons for it, from the outset.

## Section 8

# Areas for future work

### There are several areas planned for future work

- 8.1 The previous sections set out the main issues arising from the digital switchover process for viewers, and the activity already underway to address those concerns. Overall, we believe that for most viewers, switchover will pose relatively few challenges. One in four households has already achieved their own 'switchover,' having gone digital on all their sets; many more will do the same, well in advance of analogue TV signals actually being switched off in their region. Some issues, particularly those relating to the affordability and availability of digital services after switchover, should for most viewers not be a cause for concern.
- 8.2 However, several challenges remain, and we recognise the need for continued communications and, where necessary, practical support to ensure that viewers do not face unnecessary expense and difficulty. There are some specific groups in the population that face particular disadvantages in the switchover process, and that will need particular care and attention if they are not to be left behind.
- 8.3 The remainder of this section sets out those areas that we believe will be most critical to the success of the switchover project, and where a substantial amount of work is planned for the next few years. Some of these areas do not lie within Ofcom's remit, and we do not seek to dictate how other bodies should implement their duties and responsibilities. Nonetheless we hope it is useful to identify the areas we believe to be of greatest priority and provide some general indications about what those responsible may want to do over the next year or two to address them.

### Issues arising from the extension of digital terrestrial coverage

- 8.4 Although satellite services are widely available, along with cable and broadband in some parts of the country, terrestrial television is likely to remain the default method of reception for many viewers, particularly on secondary sets. One of the key benefits of switchover is that it will allow nearly every home to receive the public service channels via digital terrestrial broadcasts, up from around 73% of homes at present.
- 8.5 However, DTT will not be available everywhere, and in some areas viewers may need to upgrade their aerials, often at significant cost. Given the importance of terrestrial TV broadcasting in the UK, it is essential that viewers understand the full extent, and limitations, of DTT coverage in their area, and of the possible need for them to upgrade their aerial, particularly if they want to take up DTT before switchover.
- 8.6 We suggest that this will require Digital UK to establish an information centre providing detailed, personalised, reliable advice in response to consumer requests. This could be available online, over the 'phone and, where practical and cost-effective, in person – for example through 'road shows' in regions soon to switch, or through high street offices in major urban centres in each region.
- 8.7 The information centre will rely on high quality data, mainly provided by the BBC, about the availability of digital terrestrial services across the UK, and the alternatives that are available in each area. Ofcom has already commissioned a substantial project to develop techniques that could be used to enhance the postcode coverage database. The output of this project should be a database and set of indicators that

will enable Digital UK to ask any household in the UK a few standard questions about its location and situation and, based on the answers, be able to specify what digital TV options should be available to that household.

### **Raising awareness of free-to-view satellite**

- 8.8 So far Freeview remains the best-known free-to-view digital TV service in the UK. But many viewers cannot receive DTT services before switchover, and some will need to upgrade their aerial to do so. For these viewers, free-to-view satellite services may offer a more convenient and cost-effective option, but it seems likely that many people are unaware of the possibility of acquiring satellite services without paying a monthly subscription.
- 8.9 BSkyB has recently increased its promotion of its free-to-view service, and we hope that this continues. However, the launch of the alternative service proposed by the BBC and ITV would help to raise viewers' awareness and understanding of the possibilities, and address the frustration experienced by many households who would like to take up digital services, cannot receive Freeview, do not want to take out a pay-TV subscription but are unaware of the free-to-view satellite alternative.

### **Promoting the full range of services**

- 8.10 In addition to free-to-view services, it is important that viewers are aware of the full range of opportunities that going digital opens up to them. The Commons Culture, Media and Sport Committee has pointed out that a focus on promoting the cheapest services could result in consumers not being aware of services that might cost more, but would significantly enhance the value of digital TV to them, including interactive functionality, high-definition TV and enhanced services for people with visual loss, hearing impairment or disabilities.<sup>64</sup>
- 8.11 It is chiefly for manufacturers and service providers to promote their products to relevant target markets, not the Government, Digital UK or the broadcasters. Nonetheless the agencies involved in switchover will seek to ensure that viewers are aware of and are able to take up the services that offer most value to them, and this would legitimately include highlighting the particular benefits of some services or applications to particular audiences, especially those who might otherwise be deterred from taking up digital TV.
- 8.12 One specific area where further communications are likely to be required is the need to replace or convert VCRs. If viewers want to continue to be able to record one channel while watching another after switchover, the most convenient solution for them is likely to be to replace their VCR(s) with a digital TV recorder or DVD-recorder with a built-in digital tuner.
- 8.13 So far sales of digital recorders compatible with digital terrestrial services have lagged behind subscriptions to Sky+, the best-known digital TV recorder, provided by BSkyB. Freeview has announced that it will launch a new brand, Freeview Playback, to promote the generic benefits of DTT recorders. As switchover approaches Digital UK will continue to communicate the need to replace VCRs to retain full recording functionality.

<sup>64</sup> House of Commons Culture, Media and Sport Committee, *Analogue Switch-off: A signal change in television*, 2006

## Working with local partners

- 8.14 Local authorities, Citizens' Advice Bureaux, MPs, housing associations, charities and community groups, GPs' surgeries and other local agencies and service providers could play a crucial role in informing and supporting their clients in the switchover process; they might constitute a particularly effective channel of communication with socially isolated consumers, including older people, people with English as a second language or people with disabilities. Digital UK is already developing local networks in the regions to switch first, and may wish to consider establishing a dedicated helpline and website for front-line staff and local professionals working with consumers.
- 8.15 Landlords are a particularly important group because they need to act on behalf of up to one in five households that live in multiple dwelling units and use a communal reception method to receive TV. If landlords are unaware of the need to switch, or of the opportunities available to install digital TV in their properties, there may be increasing numbers of viewers who want to switch to digital TV, but are prevented from doing so. Digital UK has identified landlords as a priority audience and will be developing further communications targeted at them over the next few months.

## Ensuring retail staff are fully trained

- 8.16 For many consumers, the first point of contact with digital TV is likely to be in supermarkets, consumer electronics shops and department stores. The choice available to consumers is already extensive and continues to grow as new products and services launch. While this extension of choice delivers substantial benefits to viewers and can transform their viewing behaviour, it can also create uncertainty and increases the risk of consumers buying equipment that they do not need. Many viewers looking to replace their domestic equipment will be unsure whether they should buy integrated digital TVs, HD-ready sets, plasma or LCD screens, digital TV recorders or DVD recorders, and so on.
- 8.17 Digital UK's consumer communications and information services will therefore need to be complemented by well trained, knowledgeable staff able to explain the options available to consumers at the point of sale – including the ability to explain the relative merits of different TV services as well as the features and functionality of the equipment they stock.
- 8.18 Digital UK is working closely with retailers to ensure they are fully briefed for switchover, including promoting use of the 'digital tick' logo to indicate equipment that will work after switchover. Both national and local support is likely to be required to ensure that retailers and their staff understand the complex messages around digital TV and switchover, possibly with some training provided directly by Digital UK.

## Supporting vulnerable groups

- 8.19 The Targeted Help Scheme will provide support to those viewers who are most likely to face practical issues in coping with switchover, which research and trials have shown to be those aged 75 and over and those with significant disabilities. However, there are likely to be some individuals who do not fall into the most vulnerable categories but nonetheless may be more likely to need additional help, particularly those who are socially isolated and who cannot rely on the help of family and friends.
- 8.20 These groups might also include people with disabilities but not on disability benefits, low income households, people with limited literacy, people who speak English as a second language.

- 8.21 Digital UK is developing plans for additional communications support and advice for these groups with particular needs. We believe it is in the interests of Digital UK's funders to deliver this support, since it will increase the market for and consumers' access to their digital services. The appropriate nature and level of advice will be for Digital UK to determine.
- 8.22 One of the most pressing issues is ensuring the availability of set-top boxes and remote controls that have been designed for maximum ease of use by people with visual loss, dexterity impairment or other conditions that mean they have particular needs. Government and Digital UK are working with manufacturers to achieve this, but Ofcom also has a specific responsibility for ensuring that domestic consumer electronics equipment is easily usable by the widest possible range of people. We will continue to offer our support to Government and Digital UK in their efforts to ensure that the market delivers innovative appropriate products to these groups of consumers.

### **Establishing consumer assent**

- 8.23 Although viewers' interest in digital TV is strong, there are a minority who do not want to take up digital TV services and resent being required to switch. A very small proportion say they are so firmly opposed to switchover that they would rather go without TV than switch, although research suggests that the size of this group is declining over time.
- 8.24 In our view, the widespread interest in digital TV, the frustration of some viewers who would like to receive digital terrestrial television but cannot until analogue signals are switched off, the potential for innovative new services to use the airwaves currently occupied by analogue TV and the economic benefits of switchover to the UK create a compelling case for switchover, even if this requires a small number of households to compulsorily acquire digital services.
- 8.25 Nonetheless we understand the legitimate concerns of those who do not want to switch and believe it would be unfortunate if any individuals who enjoy TV were left without it after switchover. The onus is on those involved in implementing switchover to try to communicate its benefits as well as seeking to ensure that switchover is delivered in a way that minimises the cost, difficulty, inconvenience and anxiety to viewers. We will continue to monitor consumer concerns over the next few years and seek to ensure that those concerns are fully taken into account as switchover takes place.

## Annex A

# Viewers' frequently asked questions

### 1. What is digital switchover?

'Digital switchover' is the term used to describe Government policy to switch the UK to digital TV and turn off the current analogue terrestrial TV broadcast signals. Digital switchover will happen across the UK region by region, between 2008 and 2012.

### 2. Why is it happening?

You may be one of the millions of people already enjoying the extra choice and services offered by digital TV. However, around 1 in 4 UK households cannot get the full range of digital TV services available through an aerial, and 1 in 5 UK households cannot get channel Five through their aerial. The number of UK households that can get these services can only be increased through the process of digital switchover. So switchover will make it fairer for everyone.

Digital switchover will also ensure that today's ageing terrestrial broadcasting network is replaced by the best available technology - digital.

### 3. What are the benefits of digital TV?

Digital technology is transforming the way we watch television. Full switchover has clear benefits for UK consumers and the economy. For most households, the move to digital will bring greater choice, better quality and more reliable TV reception. It will also create an opportunity for a wide range of new services, including high definition TV, mobile TV, wireless broadband, local TV and mobile multimedia services. Interest in digital TV is strong, with more than seven in ten homes already receiving digital services on their main set.

### 4. What do I have to do?

If you don't already have digital TV, you will need to convert your television equipment to digital. There are a number of options for receiving digital TV. None of them is available to every household in the UK; but there are very few households who will not be able to receive one or more of them. The main options are:

- Digital terrestrial – by plugging a set-top box between your aerial and TV set, or by upgrading your existing TV to an integrated digital television (IDTV), which has a built-in tuner ;
- Digital cable – available on subscription only basis ;
- Digital satellite – available on subscription and free-to-view basis ;
- Broadband - digital TV is delivered into your home over a telephone line.

The availability of the different types of digital TV will vary depending on where you live. Check out the available options in your aerial by using the Digital UK postcode checker.

Alternatively you can get advice from an electrical retailer or supplier or look for the digital tick, which indicates sources of information or goods and services designed to help you through the digital switchover process.

## **5. When do I have to do it?**

Digital switchover will happen across the UK ITV region by ITV region, between 2008 and 2012. The Government has confirmed the following timetable for switchover:

- Starting in 2008: Border
- Starting in 2009: West Country, Wales, Granada
- Starting in 2010: West, Grampian, Scottish
- Starting in 2011: Central, Yorkshire, Anglia
- Starting in 2012: Meridian, London, Tyne Tees, Ulster

You'll get plenty of notice before services in your area are affected, and advice on what to do.

## **6. What kind of digital TV is available in my area?**

The availability of the different types of digital TV will vary depending on where you live. Check out the available options in your aerial by using the Digital UK postcode checker ([www.digitaluk.co.uk](http://www.digitaluk.co.uk)).

Alternatively you can get advice from an electrical retailer or supplier or look for the digital tick, which indicates sources of information or goods and services designed to help you through the digital switchover process.

## **7. What will I get with digital?**

Many of the changes in the way we watch TV have been enabled or encouraged by digital TV (all of these benefits aren't available to all viewers):

- Choice - more than 400 TV channels are currently available on satellite and more than 30 even with the most basic DTT box, including new free-to-view channels from the BBC, ITV and Channel 4;
- Launch of on-demand and near-on demand services, for example substantial film libraries, catch-up TV, popular archive series and children's programmes;
- Emergence of sophisticated digital TV recorders, offering the ability to pause and rewind live TV, set programmes to be recorded with a single button-press from an electronic programme guide;
- Improvement in TV reception quality with less interference or 'ghosting';
- Introduction of high definition TV services;
- Extension of the coverage of services that aren't currently available throughout the UK on analogue terrestrial, including Five and Channel 4 in Wales;
- Development of interactive services;
- Greater accessibility to TV for people with disabilities, especially those with sight or hearing impairment, as a result of improved access to subtitling, audio description, in-vision signing and electronic programme guides.

## **8. How much will it cost?**

The costs of digital services and equipment have been steadily falling. Freeview boxes are now available for as little as £25 – 35, and the costs of equipment – set-top boxes, digital recorders, integrated digital TVs – are expected to continue to decline over the next few years. The arrival of the £25 box means that many homes that have not already completed their switch to digital TV will be able to do so for perhaps only £40 – 50, excluding the cost of replacing any VCRs.

For some homes, though, the costs will be more significant. The 1 in 10 homes whose rooftop aerials will need replacement after switchover will face a cost of around £125, on average, in addition to any new equipment costs; a new feed from a rooftop aerial – for example, to replace an indoor aerial – could cost in the region of £50 on average. Homes that cannot receive an acceptable digital terrestrial signal will most likely need to acquire free-to-view satellite services with a current cost of £150 including professional installation. Consumers who need more advanced functionality – for example, equipment that is easier to use for people with visual loss or dexterity impairment – may need to pay more for set-top boxes with this functionality.

## **9. Will I have to throw out my TV?**

Not necessarily. TVs will need to be upgraded to digital if you wish to continue to use them for watching live TV after switchover. However, some sets will not need to be upgraded, either because they will not be used or will be replaced before switchover, or because viewers do not use them to watch live TV – many of them are only used for games consoles or to watch DVDs or videos.

## **10. If I don't do anything, will I lose my TV?**

Yes - if you don't already have digital TV and don't do anything, you won't be able to continue watching television broadcasts once switchover has happened in your area.

## **11. I can't currently get Freeview. Does this mean that I will lose my TV after switchover?**

If you are receiving good analogue services now, but are unable currently to receive digital terrestrial (DTT) services, you should be able to do so once switchover takes place in your region.

If you cannot currently receive DTT, but will be able to after switchover, there are a number of options, and it is for you to decide how you want to prepare for switchover:

- You may choose to buy DTT boxes in advance of switchover for each of the sets you want to switch to digital, and wait for the digital terrestrial signal to become available as analogue signals are switched off in your region.
- You may choose to wait until switchover starts to buy DTT equipment.
- You may take up another platform.
- You may use a combination of methods.

## **12. But why do we have to change the way we get TV?**

Because it's only by switching over the airwaves that digital TV through your aerial can be rolled out to the places that can't currently get it.

And digital TV through an aerial needs to be rolled out more widely to give everyone the widest possible choice of types of digital TV.

### **13. Why should I have to pay because someone else has decided to change TV?**

The Government wants everyone in the UK to benefit from digital TV. Switchover is taking place because it will provide everyone with better, more varied television, irrespective of where they are in the UK, and broader access to a wider range of digital services. Digital switchover is Government policy, so if you have further questions about the policy you can contact the Department for Culture, Media and Sport or the Department of Trade and Industry.

### **14. Will my video recorder still work once I get digital?**

Your VCR will still work after switchover for playing back existing recordings or pre-recorded tapes, or for recording programmes at the same time as watching them. It can also be used for setting timed recordings of future broadcasts, although only if the TV's set-top box is switched on and tuned to the channel to be recorded. If you wish to continue to be able to record one channel while watching another, you will need to replace your VCR with a digital TV recorder or a DVD-recorder with a built-in digital tuner.

### **15. Will I need a new TV aerial?**

Most households won't. If you choose to get digital TV through an aerial, and have reception problems even though you are in a current coverage area (to check this use the postcode checker), the most reliable way is to carry out a signal strength survey. Aerial installers will generally offer a service to measure the signal level at a particular property and check the aerial's condition for around £30-40.

If you use an indoor or set-top aerial, you might find that it will not work effectively with digital signals. It is predicted that around 50-75% of sets currently using an indoor aerial will continue to be able to use an indoor aerial after switchover, although they may need to be upgraded to a new aerial. The remaining approximately 25-50% may require connection to a rooftop aerial.

Check with your local aerial installer – look for an installer who belongs to the Confederation of Aerial Industries (CAI) or the Independent Digital Standards Commission (IDSC) or, from 2006, any installer who carries the digital tick logo. The Government's new Registered Digital Installers scheme aims to create a network of trusted, qualified engineers to carry out aerial upgrades and serve as a reliable source of advice to consumers.

### **16. Can I get any help?**

As well as from Digital UK, advice is available from your electrical retailer, TV rental company or from the companies who supply digital television.

### **17. Can I get anyone to install the new equipment for me?**

For cable and satellite services, installation is carried out by professional installers working for the operators, and should in most cases be straightforward. For digital terrestrial services, most set-top boxes and digital recorders are designed for consumers to be able to install themselves. If you are unable or lack confidence to install your own equipment, you will have to pay for professional installation.

### **18. How will I know if I am getting a legitimate service from traders?**

People should be aware of traders who might seek to cash in on the digital switchover process by offering unauthorised advice, services and goods, faulty equipment or over charging for the provision of services.

Always look for the digital tick logo when buying digital TV products. If you require an aerial upgrade to receive digital TV you should contact the CAI (Confederation of Aerial Industries) or the IDSC (the Independent Digital Standards Commission) who will be able to provide you with details of a qualified installer in your local area.

The Government's new Registered Digital Installers scheme aims to create a network of trusted, qualified engineers to carry out aerial upgrades and serve as a reliable source of advice to consumers.

### **19. I live in a flat and share my aerial with others. What do I need to do?**

If you share your aerial with others then you may have a communal TV system. If so, this may need to be adapted to receive digital television. Your landlord or managing agent should be aware of this and be making plans – ask them for more information. If you are a landlord and would like further advice on what needs to be done to prepare for switchover, a guide is available at

[www.digitaltelevision.gov.uk/pdf\\_documents/publications/digital\\_switchover\\_goodpractice.pdf](http://www.digitaltelevision.gov.uk/pdf_documents/publications/digital_switchover_goodpractice.pdf).

### **20. Will there be a scheme to help older people or others who need particular help?**

The Government has said that it will provide assistance to those most in need of financial and practical support during switchover, specifically households with at least one person aged 75 or over, households with one person with a significant disability (receiving attendance allowance and/or disability living allowance) and households where one person is registered blind or partially sighted. The precise details of this scheme are yet to be confirmed.

### **21. Will switching to digital affect my TV licence?**

Whatever way you receive digital TV, you will still need to buy a TV licence after digital switchover.

### **22. What features does digital TV offer for those with sight and hearing problems?**

Some digital boxes have special access features such as subtitles, signing and audio description for people with hearing or sight problems. For more information please call the RNIB on 0845 766 9999 or the RNID on 0808 808 0123.

Alternative text: The implementation of digital switchover should provide greater accessibility to TV for people with disabilities, especially those with sight or hearing impairment, as a result of improved access to subtitling, audio description, in-vision signing and electronic programme guides.

### **23. Will switchover mean that strangers will be visiting my house?**

Digital UK will not be sending anyone around to your house. When you are buying, renting or installing digital TV equipment, look for retailers, manufacturers and installers that display the digital tick logo.

### **24. Will the licence fee pay for digital switchover?**

The costs assigned to support switchover will represent less than 10% of the total revenue that the licence fee proposes to raise over the next 10 years.

Digital UK welcomes the BBC's support. Switchover is a monumental challenge - and one that a properly funded organisation (Digital UK) can manage for consumers. The proposed funding will help to make its implementation as smooth as possible, and help to ensure that viewers are properly advised and reassured about switchover. With the BBC's support, switchover will ensure that the UK will enjoy a digital future of increased choice and high-quality programming.

**25. Will switching to digital mean that I can get High Definition TV (HDTV)?**

No. HDTV is a new technology that will enable viewers to get better quality and higher definition television pictures. A High Definition Compatible TV is not necessarily a digital TV. If you buy or rent an HDTV, you may not be able to get digital TV through it.

**26. What is a scart lead?**

A scart lead helps you connect your TV to digital TV equipment. You may have a TV that does not have a scart lead connection point. Adapters are available to allow you to connect a scart lead to your TV in these circumstances.

**27. I have received a letter from the Digital Conversion Scheme. Is this part of Digital UK?**

The company trading as 'Digital Conversion Scheme' has no relation to the Government or Digital UK.

**28. What is DAB digital radio?**

Digital Audio Broadcasting (DAB) is a new transmission system bringing the benefits of digital to the world of radio. DAB radio works by utilising technology which converts the music or speech from analogue signal into digital code. This vastly reduces the potential for the broadcast to be corrupted during transmission by weather conditions, and other problems that can degrade the quality of reception.

**29. With digital switchover, will I need to replace my radio?**

No, radio is not affected by digital switchover.

## Annex B

# Ofcom's duties and powers relating to digital switchover

## Ofcom's role

- B.2 Ofcom is the regulator for the UK communications industries, with responsibilities across television, radio, telecommunications and wireless communications services.

## General duties

- B.3 Under the Communications Act 2003, the principal duty of Ofcom, in carrying out their functions is: to further the interests of citizens in relation to communications matters; and to further the interests of consumers in relevant markets, where appropriate by promoting competition.
- B.4 In carrying out its functions, Ofcom must secure, for example, the optimal use of spectrum and the availability throughout the UK of a wide range of TV services which, taken as a whole, are both of high quality and calculated to appeal to a variety of tastes and interests. It is these duties, together with those concerning the content of the Digital Replacement Licences issued in December 2004, which form the main legal foundation for Ofcom's involvement with digital switchover.
- B.5 In performing these duties, Ofcom must have regard, in particular, to: the desirability of promoting the purposes of public service television broadcasting in the UK; the vulnerability of children and of others whose circumstances appear to Ofcom to put them in need of special protection; the needs of people with disabilities, older people and those on low incomes. Ofcom must also have regard to the interests of consumers in respect of choice, price, quality of service and value for money.
- B.6 Where it appears to Ofcom that any of its general duties conflict with each other in a particular case, it must secure that the conflict is resolved in the manner it thinks best in the circumstances.

## European Community obligations

- B.7 To the extent to which Ofcom's involvement with digital switchover concerns the regulation of electronic communications networks or services and spectrum management, the regulator must comply with applicable European Community obligations. These include, for example, the obligations to promote competition, to promote the interests of all EU citizens and not to favour one electronic communications network or service over another.
- B.8 Where it appears to Ofcom that any of its general duties conflict with their Community obligations, priority must be given to its Community obligations.

## Duty to encourage availability of easily usable apparatus

- B.9 Ofcom must take steps and enter into arrangements which appear to it likely to encourage others to secure that domestic electronic communications apparatus, including all digital TV equipment used in the home, is capable of being used with ease by the widest possible range of individuals, and that it is widely available to buy.

- B.10 Ofcom must also review, from time to time, what it has done in order to meet this obligation.

### **Duty to promote media literacy**

- B.11 Ofcom must take such steps, and to enter into such arrangements, as appear to it calculated to bring about better public awareness of various issues related to media literacy for example, the ability to access, understand and create communications in a variety of contexts.

### **Functions for the protection of consumers**

- B.12 Ofcom must conduct research on issues which affect consumers, including the way communications services, such as digital TV, are provided. Ofcom must publish and take account of that research. Ofcom also has a duty to establish and maintain effective arrangements for consultation with consumers about its functions. These arrangements include the establishment and maintenance of the Consumer Panel.

### **Advisory committees for different parts of the UK**

- B.13 There are committees for England, Wales, Scotland and Northern Ireland. The committees advise Ofcom, including other committees established by Ofcom, about the interests and opinions of persons living in the UK in relation to communications matters, including digital switchover.

### **Advisory committee on older and disabled people**

- B.14 The committee advises Ofcom, including other committees established by Ofcom, about the interests of older people and people with disabilities in relation to communications matters, including digital switchover.

### **Duties when carrying out spectrum functions**

- B.15 Ofcom must, when carrying out spectrum functions in relation to digital switchover, have regard in particular to: the extent to which spectrum is available for use; current demand for that spectrum; and future demand for that spectrum.
- B.16 Ofcom must also have regard to the desirability of promoting: the efficient management and use of spectrum; the economic and other benefits that may arise from the use of spectrum; the development of innovative services; and competition in the provision of electronic communications services.

### **Special duty in relation to TV multiplexes**

- B.17 Ofcom must, so far as is practicable, ensure that sufficient DTT capacity is made available to every licensed television public service broadcaster and S4C to broadcast their main service.

### **Conditions in digital replacement licences**

- B.18 Ofcom was under a duty to include a condition in the Digital Replacement Licences issued in December 2004 to Channel 3, Channel 4, Five and Public Teletext requiring that their DTT service be at least substantially the same as that under their analogue licences, including coverage.

## Annex C

# Useful contacts

## Government department, agencies and stakeholders

C.1 Information about how to get digital TV, where digital services are available, when switchover is taking place and the switchover process is available in the first instance from Digital UK. Ofcom can answer questions about interference while the BBC provides information about how to receive its digital services and the Targeted Help Scheme, once it is operational.

Organisation	For information on	Contact
Digital UK	<ul style="list-style-type: none"> <li>• Digital TV availability</li> <li>• What digital switchover involves</li> <li>• When switchover will take place in your region</li> <li>• The Digital Switchover Programme</li> </ul>	<ul style="list-style-type: none"> <li>• Tel: 0845 6 50 50 50</li> <li>• Web: <a href="http://www.digitaluk.co.uk">www.digitaluk.co.uk</a></li> </ul>
Ofcom	<ul style="list-style-type: none"> <li>• Interference problems</li> <li>• Complaints about TV programmes</li> <li>• Research, including research on usability of digital equipment and market data on digital take-up</li> </ul>	<ul style="list-style-type: none"> <li>• Tel: 020 7981 3040</li> <li>• Textphone: 020 7981 3043</li> <li>• Web: <a href="http://www.ofcom.org.uk/contactus">www.ofcom.org.uk/contactus</a></li> </ul>
Government (DCMS and DTI)	<ul style="list-style-type: none"> <li>• Broadcasting policy, including digital television</li> <li>• The benefits of switchover</li> <li>• The Digital Switchover Programme</li> </ul>	<ul style="list-style-type: none"> <li>• Web: <a href="http://www.digitaltelevision.gov.uk">www.digitaltelevision.gov.uk</a></li> <li>• Email: <a href="mailto:digitaltelevision@culture.gsi.gov.uk">digitaltelevision@culture.gsi.gov.uk</a></li> </ul>

## Digital TV service providers

C.2 More information about particular digital TV services is available from the relevant service providers, who also advise consumers on any installation help they may need.

Platform	Services	Providers
Digital terrestrial television	Free-to-view service provided by Freeview with additional subscription services from Top Up TV	<ul style="list-style-type: none"> <li>Freeview: 08708 809980, <a href="http://www.freeview.co.uk">www.freeview.co.uk</a></li> <li>Top Up TV: 08700 543210, <a href="http://www.topuptv.com">www.topuptv.com</a></li> <li>BBC: <a href="http://www.bbc.co.uk/digital">www.bbc.co.uk/digital</a></li> </ul>
Digital satellite	Free-to-view or subscription channels available from Sky	<ul style="list-style-type: none"> <li>Sky: 08702 403481, <a href="http://www.sky.com">www.sky.com</a></li> <li>Freesat from Sky: 08706 061111, <a href="http://www.freesatfromsky.com">www.freesatfromsky.com</a></li> </ul>
Cable	Subscription services provided by ntl, Telewest Broadband and WightCable	<ul style="list-style-type: none"> <li>ntl: 0800 052 4000, <a href="http://www.ntl.com">www.ntl.com</a></li> <li>Telewest Broadband: 0800 953 5353, <a href="http://www.telewest.com">www.telewest.com</a></li> <li>WightCable: 08000 706150, <a href="http://www.wightcable.com">www.wightcable.com</a> or <a href="http://www.wightcablenorth.com">www.wightcablenorth.com</a></li> </ul>
TV over broadband	<p>Subscription services provided by HomeChoice (in London and Stevenage)</p> <p>BT to launch integrated DTT and TV over broadband product later in 2006</p>	<ul style="list-style-type: none"> <li>HomeChoice: 0800 092 4444, <a href="http://www.homechoice.co.uk">www.homechoice.co.uk</a></li> <li>BT: 0800 800 150, <a href="http://www.btvision.bt.com">www.btvision.bt.com</a></li> </ul>

### Other useful contacts

C.3 A number of other organisations can provide information and advice about issues related to digital TV.

Organisation	Service	Contact details
Digital TV Group	Industry association for digital TV in the UK	0870 242 7346, <a href="http://www.dtg.org.uk">www.dtg.org.uk</a>
Confederation of Aerial Industries	Holds details of registered aerial installers who can install new aerials or carry out signal strength surveys	020 8902 8998, <a href="http://www.cai.org.uk">www.cai.org.uk</a>
Independent Digital Standards Commission	Independent trade and standards body for aerial and satellite installations industry. Provides protection for consumers if a member fails to honour guarantee on domestic installation	01291 645 999, <a href="http://www.idsc.uk.com">www.idsc.uk.com</a>

## Annex D

## Glossary and abbreviations

*Terms are defined with respect to the way that they are used in this document, and in some cases would not necessarily have the same meaning in other contexts.*

Aerial band	Aerials are classified into different groups, or bands, each covering part of the TV band of frequencies. Most aerials can only receive services broadcast at frequencies covered by the band they were designed for. Some aerials, known as wideband aerials, cover the whole range of TV frequencies
Analogue	A means of transmitting TV programmes in which the broadcast signal levels are variable and analogous to those captured by the camera and microphone
Audio description	An additional component of a TV service which delivers a verbal description of what is happening on-screen to aid understanding and enjoyment, primarily, although not necessarily exclusively, for viewers with visual impairments. The description is by voice only and typically confined to gaps in the normal programme speech soundtrack
Broadband TV	The transmission of TV and video services over broadband-enabled 'phone lines to TV sets (e.g. HomeChoice). Available where service providers offer services and to homes that can achieve adequate broadband speeds.
Cable TV	The transmission of TV services over underground cable networks. Available wherever the cable network has been built out (currently around 47% of UK homes).
Catch-up TV	A service offered by a broadcaster providing on-demand access to some or all of its recent scheduled programming (typically from the last seven days), via broadband or cable
Commercial broadcasters	Those broadcasters that hold Digital Replacement Licences which include obligations relating to switchover – i.e., ITV1 licensees, GMTV, Channel 4 and Five
Consumer Expert Group	A group of consumer organisations and representatives convened by the Government to advise it on consumer issues relating to digital television and switchover
Content	Any programmes, interactive services and other audio-visual material accessed via TV sets

Coverage predictor	A frequency planning model used to generate probabilistic predictions about whether or not a household in a particular postcode will be able to receive digital terrestrial TV signals
DCMS	Department for Culture, Media and Sport
Digital	A means of transmitting TV programmes which involves the conversion of video and audio signals into binary form (a series of 0s and 1s). Provides sharper, clearer and faster transmission, and is more efficient in terms of spectrum usage than analogue
Digital TV recorder	A set-top box that records programmes to a hard drive, instead of onto video tape or a DVD. Viewers select the programmes they want to record directly from the on-screen EPG. Also known as 'personal video recorder' or PVR
Digital UK	The independent, not for profit organisation set up by the UK's public service broadcasters and digital terrestrial multiplex operators to coordinate the UK's switchover to digital TV
DTI	Department of Trade and Industry
DTT	Digital Terrestrial Television (see 'Terrestrial TV')
EPG	Electronic Programme Guide
Free-to-view	TV services or channels which can be received without subscription, if consumers own equipment capable of receiving them
Freeview	The main free-to-view digital terrestrial television service available in the UK
HDTV	High Definition Television – a new technology offering improved picture quality, clearer colours and enhanced sound. Requires a set capable of receiving high definition signals (also known as an HDTV)
IDTV	Integrated Digital Television – a set which has a digital terrestrial tuner built in
Interactive services	Additional services integrated with digital TV programmes, which allow viewers to interact with, participate in or modify the service, for example by providing additional information, access to alternative videostreams e.g. from different cameras at sporting events, the ability to cast votes, take part in quizzes or enter competitions
Multiple Dwelling single Units	Multiple households living in a single unit and often served by a TV reception point, e.g. flats, hostels, prisons, hotels, residential homes and sheltered housing

Multiplex	A single broadcast channel containing a number of digital television or radio channels. Multiplexing is a more efficient way of broadcasting that takes advantage of the fact that digital signals can be compressed without apparent deterioration to the viewer
Ofcom	The independent regulator and competition authority for the UK communications industries
Ofcom Consumer Panel	Body established under the terms of the 2003 Communications Act advise Ofcom on consumer interests in the markets it regulates. Is independent of Ofcom and operates at arms-length from it
On-demand	The provision of programmes and films when viewers want to watch them, rather than as part of a predefined broadcast schedule. Available on cable and broadband. A similar system, known as near on-demand, is the 'Box Office' service provided by Sky where the same film is shown on multiple channels with different start times, so that viewers can choose the time they want to watch it
Out-of-group	A frequency that lies outside the group of frequencies used by the main terrestrial channels at a particular transmitter, and that therefore may not be capable of being received by standard aerials receiving signals from that transmitter
Pay-TV	TV services or channels that can only be received if consumers pay to receive them. Also known as 'subscription' services
Pay-per-view	An additional one-off payment for particular films, sports events or special programmes on cable or satellite
Platform	A means of receiving TV services, either by terrestrial transmission, cable, satellite or broadband
PSBs	Public service broadcasters. The five main channels, plus BBC THREE, BBC FOUR, BBC News 24, BBC Parliament, CBBC, CBeebies, S4C, S4C2
Regions	The areas covered by the different ITV1 services broadcasting in the UK. Switchover will take place on a region-by-region basis. Viewers can tell which regional service they receive by watching their regional news programme or by checking Teletext page 106
Satellite TV	The transmission of TV services from satellites in orbit around the Earth to dishes erected on viewers' homes. Available wherever there is a line of sight from the dwelling to the satellite, subject to local planning considerations, lease conditions and the safety of installers.
Self-help relays	Privately operated, low power transmitters providing analogue TV broadcasts to small areas not covered by the main transmission network, typically serving less than 100 homes

Set-top box	A box that connects to a TV set that enables reception of digital terrestrial, cable, satellite or broadband TV services
Simulcast	The simultaneous broadcast of the same channel in analogue and digital
Spectrum	The set of frequencies used to transmit TV, radio and other forms of electronic communication
Subscription	See 'Pay-TV'
Targeted Help Scheme	Programme of assistance for those consumers most likely to face difficulties in switchover
Terrestrial TV	The transmission of TV services from land-based transmitters to domestic aerials, in analogue or digital form. Availability in viewers' homes depends partly on their distance from the transmitter, transmitter power, the frequencies used, local topography and the nature and quality of their domestic aerial
Top Up TV	A pay-TV service available on digital terrestrial television, to viewers who have got a compatible set-top box
Tuner	Component that allows a television set to receive digital signals and unscramble them into a signal the set can display. Can be built into the set (see 'integrated digital TV') or come as part of an independent set-top box. Some set-top boxes have twin (or triple) tuners, allowing simultaneous viewing and recording of two (or three) different channels
VCR	Video Cassette Recorder