



Persuasion or Compulsion? Consumers and analogue switch-off

A Report to the Broadcasting Minister
by the Consumer Expert Group

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Executive Summary

- 1 This report presents the conclusions of the Consumer Expert Group, which was appointed by the Broadcasting Minister, Lord McIntosh, to advise Government on consumer issues relating to digital television and analogue switch-off.
- 2 Analogue switch-off cannot take place unless and until consumers are ready. The Government's current policy was stated in 1999, and requires that digital television should be near-universally available, generally affordable and have been taken up by the majority of consumers before the analogue signal can be switched off. These criteria set the high-level objectives for switchover policy, while relying on the market and technology to deliver on these objectives. Although this strategy has succeeded in attracting consumers to digital television, it has been far less successful in dealing with consumer barriers to digital switchover. Put simply, consumers are far from ready for the analogue television signal to be switched off.
- 3 Five years on, Government faces a number of difficulties in marrying the principle of a consumer-led policy with the realities of implementing switchover. Despite more than half of households having adopted digital TV, the majority have only converted their main television set, and most consumers are opposed to analogue switch-off. There is a long list of outstanding consumer barriers which need to be addressed, relating to coverage, affordability, take-up, accessibility, protection for vulnerable groups, consumer support and information. Although these issues are now well-known and well-understood, the Government's existing policy does not ensure that they are addressed as part of the switchover timetable.
- 4 Despite these unresolved concerns, Government is under pressure to announce the switchover timetable in order to drive the digital TV market forward. The Group considers that the main effect of such an announcement would be to compel consumers to convert or replace all their existing analogue equipment – 35 million televisions alone – and it is hard to see how this is compatible with the Government's expectation that consumers will switch voluntarily, or its undertaking not to announce switchover until 70% of consumers have gone digital. This would amount to a radical change in Government policy, from "if the market delivers, we will switch" to "if we switch, the market will deliver". Announcing the switchover timetable provides no guarantee that consumer barriers will be addressed before switchover, and it is unclear what will happen if consumers are not ready when the analogue signal is due to be switched off.
- 5 If Government wishes to announce the timetable for switchover, then we take the view that it can no longer rely solely on the consumer criteria to protect the consumer interest. This report argues that the way forward is for Government to take a more proactive approach to addressing the consumer barriers to analogue switch-off. Before the timetable can be announced, a number of key barriers need to be addressed, including coverage issues and improved consumer information. Other key barriers will need to be removed well before switchover takes place, in particular those relating to vulnerable consumers. Government must ensure that the body charged with implementing switchover has clear plans for dealing with both sets of barriers as part of the switchover timetable.
- 6 As part of this new approach, Government will need to take specific measures to protect vulnerable consumers, in order to ensure that they are protected during analogue switch-off,

and that the potential benefits of digital TV are delivered and accessible to all. Priorities include establishing measures to assist low income households with the entire cost of converting one television set to digital TV. The Government should also work with organisations representing these groups, including the Expert Group, in advising and supporting vulnerable groups of consumers.

- 7 The Expert Group was also asked to advise Government on revisions to the consumer criteria. In their current form, they are not specific enough to be measurable, not targeted enough to effectively protect the most vulnerable groups of consumers, and not practical enough to be technically feasible. The Expert Group recommends that the criteria should be revised and restated urgently, and our recommendations are intended to ensure that the revised criteria protect vulnerable consumers more effectively and can actually be met at the point of switchover.
- 8 This report challenges Government to deliver on its promise of a consumer-led process in the way it implements analogue switch-off. Government must persuade, rather than compel, consumers towards analogue switch-off. This means taking the outstanding consumer issues seriously – abandoning the language of the “refusenik” to describe consumers who are not yet ready – and ensuring that the outstanding consumer concerns are dealt with as part of the Government’s timetable and policy for digital switchover.

Summary of recommendations

- 9 The Expert Group has made a number of detailed recommendations to Government, intended to tackle the remaining consumer barriers to analogue switch-off, which are summarised below.

Coverage

- 10 The coverage test should be revised as follows.
- Before switchover is announced, firm and specific plans should be in place to ensure that every viewer who currently has analogue television is able to receive public service digital television signals at the point of switchover.
 - In practice, this means that digital terrestrial television should be available to at least 99.5% of the population in each region at the point of switchover.
 - Plans should include details of how consumers who cannot receive digital terrestrial signals will gain access to free-to-view public service broadcasting.
- 11 Before switchover can be announced:
- Government, broadcasters and the transmission companies should publish detailed information about digital terrestrial coverage which will be achieved at switchover.
 - Consumers should be informed of the platform options which will be available in each area, areas in which portable aerial reception will be available, and where aerial upgrades are likely to be necessary.
 - Government should ensure that consumers are fully informed of the timings for switchover and the transition process in each area.

- Commercial broadcasters should be encouraged to announce their plans for improving digital terrestrial coverage to help consumers select the appropriate platform.
- Information and support should be available to consumers to deal with domestic reception issues.

12 Before switchover takes place:

- Government should seek to achieve universal digital terrestrial coverage in order to ensure that the majority of consumers have a choice of free-to-view platforms.
- Consumers must have access to an affordable free-to-view satellite option and have confidence that this will remain free for the foreseeable future.
- A common national standard of 16 QAM should be required for digital terrestrial services from public service broadcasters in order to maximise coverage and safeguard picture quality.
- Information and support should be available to consumers during the transition process, including assistance with domestic installations, retuning and aerial issues.
- Government should publish a guide for householders living in multiple dwelling units on the steps to take in order to convert their digital aerial systems for digital reception.

Affordability

13 The affordability test should be revised as follows:

- The whole household cost of converting to digital television, including reception equipment and installation where necessary, should be affordable to households on low and fixed incomes.
- 95% of those on low and fixed incomes should have adopted digital television before switchover takes place.
- The Government should work with specialist consumer representatives to identify and target low income and special needs groups for the purposes of the test and assistance scheme.

14 Before switchover is announced:

- Improved information about the likely cost of switchover, including the cost of converting additional TV sets and recording equipment, should be provided to consumers.
- Specific measures should be put in place to assist low income and special needs groups to switch to digital television. These plans should include clear criteria identifying those who will be eligible for assistance under the scheme, and should provide them with assistance for the full costs of converting one set, including the cost of aerial replacement, installation and VCR conversion. Such assistance should be available immediately.

15 Before switchover takes place:

- Manufacturers should be encouraged to develop low-cost conversion options, in particular for second sets and VCRs.
- Government should ensure that the full range of access services and features are available via affordable digital equipment.

Take-up

- 16 The take-up test should be confirmed in the following form:
- Before switchover is announced, 70% of households should have adopted digital television for their main television set.
 - Before switchover takes place, 95% of consumers should have adopted digital television for their main television set.
- 17 Before switchover is announced:
- Government and other stakeholders should change the language used to describe non-adopters and abandon the term “refuseniks”.
 - Measures should be taken to improve the quality of information available to consumers about digital television and the Government’s switchover policy.
- 18 Before switchover takes place:
- Data on the take-up of digital TV should be published, broken-down regionally and demographically, in order to promote transparency and assess the effectiveness of other policy measures.
 - Measures should be taken to promote take-up in areas which will not be covered by digital terrestrial signals prior to switchover, including the development of a free-to-view satellite platform.

Consumer information and support

- 19 Before switchover is announced:
- Government should launch a public information campaign to improve both consumer knowledge and awareness about switchover policy, and the quality of advice available to consumers during the purchase and installation of digital TV equipment.
 - Any kitemark or logo scheme should be backed by rigorous standards of performance for the product or service they relate to, and its usage should be strictly monitored.
 - All information and support should address the needs of consumers with disabilities, older people and communities for whom English is not their first language.
- 20 Before switchover takes place:
- During the transition period, Government should make sure that a service is in place to assist consumers with retuning, reconnection and installation issues.
 - Improved advice and support should be provided to leaseholders, landlords and tenants to deal with the specific issues relating to the provision of communal aerials which need to be dealt with in multiple dwelling units.

Accessibility

- 21 Before switchover is announced:
- Specific plans should be in place to address the needs of disabled people before switchover actually takes place.

- Any public information campaign or logo scheme should be fully accessible to all consumers, and consumers should be able to access specific advice and information about accessibility issues associated with digital TV.

22 Before switchover takes place:

- There must be a choice of fully accessible digital television receivers, for all platforms and all digital equipment should include basic access features.
- Outstanding accessibility issues associated with electronic programme guides and menus, remote controls, and connectivity must be resolved.
- Government should ensure that the full range of access services is available via affordable digital equipment.

The costs and benefits of switchover

23 The Group recommends the following:

- Government should develop a consumer cost-benefit analysis (CBA) to gain a greater understanding of the impact of the timing of switchover on the costs to consumers, the consumer criteria, and the potential impact of various policy options.
- The existing CBA should also be revised, addressing the concerns of this Group and making the process and assumptions behind the CBA more transparent.

Consumer consultation

24 Before switchover is announced:

- Government should carry out a formal public consultation exercise on a regional and sub-regional basis about the policy, timetable and process for analogue switchover.
- This should not take place until after the launch of a public information campaign in order to ensure that individual consumers are properly informed and are able to participate effectively.

25 Before switchover takes place:

- Government should carry out a series of deliberative consultations, such as citizens' juries, on a regional basis and with vulnerable groups, in order to identify and address outstanding consumer concerns during the implementation of analogue switch-off.
- Government should ensure that all consumers have the opportunity to participate effectively in the public consultation. To encourage individuals to participate, written documents should be produced with brief summaries and in a range of formats and languages (including Braille, sign language and audio on request), and any alternative consultation processes should be fully accessible.
- Government should work with organisations which work with and represent consumers – including older and disabled people, rural and isolated communities, low income groups, regional, local and tenants' organisations – in informing and consulting the public about analogue switch-off.

Chapter 1: Introduction

The Expert Group

26 The Consumer Expert Group was appointed by the Broadcasting Minister, Lord McIntosh, to advise Government on consumer issues relating to digital switchover.¹ Announcing the appointment of the Group at the Westminster Media Forum on 17th June 2003, he said:

“We have made it clear from the start that the interests, needs and concerns of consumers are at the heart of our plans to switch to digital television. We have set criteria relating to affordability and accessibility and welfare of consumers ... We cannot simply shift from a criteria-based approach to the announcement of a firm date, without knowing whether the interests of consumers are fully safeguarded.

“The Group will ensure that the public’s concerns are a continuing, integral part of the decision-making process. I look forward to listening to their views on the issues that matter to viewers on the switch to digital television.”²

27 The Group welcomes the opportunity to advise Government at this key stage on the path towards digital switchover, and strongly supports the Government’s intention to protect and prioritise consumer interests during this process. There are a number of significant challenges which Government will face in delivering on these good intentions, and this report makes recommendations about how this might be achieved.

Scope and structure of this report

28 The Expert Group’s terms of reference are as follows:

- To help the Government clarify and develop the criteria set for switchover in September 1999 by the Secretary of State for Culture, Media and Sport.
- To undertake research and take expert advice on issues of particular relevance to consumers.
- To work with Government to determine what research needs to be done.
- To advise Government on consumer issues such as communications with consumers, equipment and installation issues and regional issues.
- To advise Government on the process of consultation and who should be consulted.
- To prepare a section on consumer issues, including framing questions, for inclusion in a Government public consultation paper to be published in Spring 2004.
- To respond to the public consultation.
- To advise Government on post-consultation interpretation of criteria.

This report addresses the first five elements of the Group’s remit prior to the Government’s proposed consultation with the public and industry stakeholders.

¹ A list of members of the group is included as Appendix A.

² DCMS press notice 17th June 2003.

- 29 We understand that the proposed public consultation paper, scheduled for Spring 2004, has now been postponed. Although this report will be in the public domain, it is not intended to be part of the consultation itself, since the conclusions and recommendations it contains will be primarily the subject of Ministerial decisions and actions, rather than those of other stakeholders in digital switchover. In addition to this report, the Group has provided advice to Government during the course of its deliberations, most recently on the draft switchover strategy, the proposals relating to the digital logo/kitemark and the forthcoming consumer information campaign.
- 30 The Group was also asked to undertake research on consumer issues. There is a considerable body of existing evidence, including recent reports by Ofcom, the BBC and DTI/Generics, upon which we have drawn extensively in reaching our conclusions. Rather than duplicating this work, and in light of the limited time available to the Group, our own research concentrated on identifying and addressing research gaps. Research was commissioned from GfK and JMaps, focusing largely on coverage and adoption issues affecting rural consumers, and is included as Appendix B. The Group has also made recommendations about further research. A summary of recent research is provided as Appendix C.
- 31 The structure of the report is as follows:
- This Chapter provides an introduction to the report.
 - Chapters 2, 3 and 4 address the issues relating to the Government's criteria for analogue switch-off: coverage, affordability and take-up.
 - Chapters 5 and 6 deal with consumer issues which are not adequately captured by the criteria as they stand: information and accessibility.
 - Chapter 7 concerns the issue of a consumer cost-benefit analysis.
 - Chapter 8 addresses the Government's request for advice on matters relating to a public consultation.

The context of switchover policy

- 32 Until recently, there has been something of an air of unreality in the debate surrounding digital switchover. The Government's intention to switch off the analogue television signal has been clear, but the details of the timing of any switch, the public policy objectives of doing so, when it will be announced, and the switchover process itself have remained unclear. Much progress has been made in the context of the Digital Action Plan and a number of difficult but essential political decisions are needed in order to make digital switchover a reality. Recent reports by the BBC and Ofcom, among others, have argued that this is a critical juncture in switchover policy.
- 33 It is essential to consider the context of the Government's existing policy for digital switchover which was part of a wider debate in Europe about the potential benefits of digital switchover in the 1990s, and a Government desire for the UK to seize the initiative in relation to converging communications markets. A number of broad public policy objectives were outlined: improved social inclusion through technological means; the promotion of greater competition in communications markets; greater choice for consumers in broadcast and other communications goods and services; and in promoting efficient use of spectrum and realising

its value for the Exchequer through spectrum trading. Because digital switchover was expected to contribute significantly to these objectives, Government announced its intention to switch off analogue television as soon as possible.

34 Nevertheless, it was recognised that there were a number of political risks relating to digital switchover, not least the difficulty of getting the population to switch to digital television before switchover can be effected. Here there were essentially two choices: to set a date for switchover, implying significant compulsion and/or public assistance for consumers to switch; or to rely on the market to deliver sufficient levels of take-up. At that time, digital switchover had not been attempted elsewhere, there were a huge number of unknowns in the process, and there was the risk of a political backlash if digital switchover was announced before it was clearer how it would actually take place. Accordingly the Government chose to adopt a market-led approach based on consumer-focused criteria.

35 Chris Smith, the previous Secretary of State for Culture, Media and Sport, set out three criteria – relating to affordability, accessibility and take-up – which have to be met before the analogue television signal is switched off:

*“Before the switch-over to digital is completed I want to make sure that 99.4 per cent of the population are covered by digital transmissions, and that 95 per cent of consumers have access to digital equipment ... Switching to digital equipment – including videos as well as televisions – must be affordable for the vast majority of people, and including those on low and fixed incomes and older people ...”*³

36 This speech contained the two key elements of existing switchover policy. Firstly, it established the principle that the switchover timetable will be based upon consumer demand for (and market delivery of) digital television technology and services. Secondly, it recognised that there is a need to protect vulnerable consumers and those who have not yet switched to digital television. Linking these two elements, the criteria serve two key functions: to assess consumer demand so that the switchover timetable can be announced; and to protect consumers prior to and during the transition to digital. As such, the consumer criteria are absolutely central to the Government’s switchover policy.

37 The Government anticipated that these criteria would be met between 2006 and 2010, but Chris Smith made it clear that the timetable for analogue switchover would be determined by the date by which the digital television industry (including broadcasters, retailers and manufacturers) could meet the criteria, and that by which viewers switched to digital television. The policy also made it clear that there is no necessary conflict between setting a date for analogue switchover and ensuring that the criteria are met, but where there is a conflict, the criteria take precedence. As Chris Smith subsequently clarified:

*“I emphasise that the tests, not the target dates, are paramount.”*⁴

38 Nevertheless, since the tests were established, a number of things have changed. Firstly, the tests were predicated on the assumption of a “big bang” approach to switchover in which it would take place nationally on a single date, but it is now clear that this is not technically possible. Secondly, it was assumed that the commercial digital television offerings would attract the majority of consumers to switch to digital, but many consumers are not interested

³ Speech to Royal Television Society, Cambridge, 19th September 1999.

⁴ Hansard 29th October 1999 Column 1209.

in pay services. Thirdly, the tests assumed that it would be possible for most consumers to adopt digital television prior to switchover taking place, but as Ofcom and the BBC have noted, the constraints of digital terrestrial coverage mean that many people will not be able to receive free-to-air services until switchover actually begins.

- 39 It is therefore argued, not least by Ofcom and the BBC, that Government needs to announce the timetable for digital switchover. The key question has become: when will analogue switch-off actually take place? The timing issue carries a number of political risks. An early announcement of digital switchover is likely to have the effect of compelling a significant proportion of consumers into switching to digital TV, reinforcing consumers' negative perceptions of digital television and the switchover policy in general. On the other hand, significantly delaying switchover is likely to increase uncertainty and costs for the digital TV industry.
- 40 Announcing switchover at this stage would imply abandoning the principle that the policy and timetable for switchover should be driven by the market and consumer demand for digital equipment and services. It would also require the Government to abandon the undertaking, given by Chris Smith, that the Government would not make any announcement about the arrangements for analogue switch-off until 70% of viewers had switched to digital. It would also imply some element of compulsion in order to achieve switchover, which does not fit well with the Government's expectation that consumers will switch to digital voluntarily, using their own money. This would amount to a radical change in Government policy, from "if the market delivers, we will switch" to "if we switch, the market will deliver".
- 41 The Expert Group recognises there is not a simple choice between these two approaches. Research has demonstrated that, on its own, the market will not deliver the conditions for switchover for some time – if ever – and a switchover announcement is likely to play a key role in driving the market. This means that there will inevitably be some element of compulsion in any decision about digital switchover, although the proportion of consumers affected depends greatly on the timing of any announcement, the date of switchover itself, and the extent to which a wide range of consumer concerns and needs are addressed before these take place.
- 42 Reports by the BBC and Ofcom have recently demonstrated there is now a significant consensus about the consumer barriers to switchover and a good evidence base relating to the detail of these issues. For example, it is widely recognised that many people simply don't want digital television; consumers lack information about digital TV and switchover policy in general; and there is no conversion option for analogue VCRs. Moreover, consumers themselves have a range of unanswered questions about digital switchover and policy.
- 43 Although these problems are widely recognised and understood, many of these issues remain unresolved, and some seem unlikely to be resolved within the anticipated timescale for switchover unless Government ensures that solutions are found. There are essentially two sets of issues at stake: those issues which will need to be resolved before analogue switchover can be announced; and those which have to be dealt with before it can take place.
- 44 Government must address the former category of issues if a switchover announcement is to be credible. Consumers will need to know when switchover is taking place in their area; the platform choices which are or will be available to them; their conversion options; whether they are eligible for financial assistance; how to get further information and support if they need it;

and a huge range of other matters. These issues can generally be resolved through the provision of information and support if needed, but a number of key decisions (e.g. on digital terrestrial coverage) will need to be taken before such information about switchover can be provided.

- 45 Issues which will need to be resolved before switchover can actually take place include ensuring that all households are able to access digital television; that the majority of consumers have switched; improvements to the usability and accessibility of equipment and services; and that vulnerable groups are protected during the transition. Not all of these issues are addressed by the consumer tests as they stand, so the tests need to be revised and enhanced in order to ensure that these issues are dealt with before switchover.
- 46 It is against this background that the Expert Group makes its recommendations. There is a remarkable degree of consensus about the issues which need to be resolved, but far less agreement on how this can be achieved, the extent of Government intervention which is needed, and the impact of these factors on the timetable for switchover. It is entirely consistent with existing Government policy that the timetable for switchover should depend on the speed with which these issues can be resolved, by the market where possible, and through Government taking action and providing incentives where necessary. The Expert Group urges Government to consider the Group's recommendations on how this might be achieved.

Revising the criteria for analogue switch-off

- 47 Not surprisingly, since they were intended to apply at point of switchover, none of the Government's tests for analogue switchover has yet been met. The evidence and reasons for this are detailed in subsequent sections, but it is clear that neither the specific targets contained in the tests, nor the broad objectives which they were intended to fulfil, have yet been achieved. In addition, when the criteria were announced it was not clear that switchover would have to be carried out on a region by region basis. As a result, as both Ofcom and the BBC have argued, it seems unlikely that the tests will be met unless there is an early announcement of the date when switchover will commence and this will need to be made soon if the Government is to meet its timetable.
- 48 The Government has been under pressure for some time to abandon the consumer criteria in favour of simply announcing a timetable for switchover. The tests are undoubtedly seen by some stakeholders as merely an awkward and artificial barrier to a switchover announcement. Others have argued that, since a number of tests are unlikely to be met in their current form unless switchover is announced, the only way for the digital TV industry to meet the switchover tests is to allow an announcement of the switchover timetable. The Expert Group cannot support any suggestion that the Government should abandon the existing criteria-based approach, particularly since the group has been asked to advise on revisions to the tests.
- 49 The Group welcomes recent assurances that the Government remains committed to the consumer criteria despite pressure to abandon the tests. Nor does the Group agree that setting a date for switchover necessarily implies abandoning the consumer tests. Nevertheless the Group recognises that the tests may need to be revised but that revision should not result in making them easier to meet. The Group's revised tests outline preconditions to ensure that consumer needs and concerns are addressed before an announcement is made.

- 50 In revising the criteria, the Group has given in-depth consideration to consumer needs and concerns. Are the criteria effective in protecting all consumers, including various vulnerable groups? Do they help to identify priorities for public policy measures? Do they address the actual and potential forms of consumer detriment relating to switchover?
- 51 The current criteria pose a number of practical policy problems. First, they are unlikely to be fulfilled in their current form prior to analogue switch-off, and in the case of terrestrial coverage they are technically impossible to meet. Secondly, they are defined too broadly as national totals. This means they do not guarantee protection to vulnerable groups such as blind or deaf consumers, those who live in rural/isolated communities or in multiple dwelling units. Thirdly, as they can be hard to measure, it would be difficult to determine precisely whether they had been met.
- 52 The Expert Group considers that the objective of revising the tests should be to ensure that the policy framework is linked to the path which individual consumers will plot to switchover, and addresses the barriers they may encounter along the way. It is important to recognise that the revised tests and other policy measures are not abstract instruments of public policy, rather they relate directly to the concerns and barriers which ordinary consumers face. As such, they are not intended to prevent switchover, but set a number of important preconditions for it.
- 53 In revising the tests, there are a number of requirements which should be met:
- It should be possible to determine whether the revised criteria have been met, in a way that is clear and transparent. This requires the tests to be measurable and that progress can be measured in practice; and that research should be published to ensure transparency when it is decided that the test has been met.
 - It is important that the criteria proposed are realistically achievable, otherwise there is a danger that they will simply be abandoned or ignored. Government has made it clear that it is the responsibility of industry to meet the criteria, but there is a key role for Government in facilitating and incentivising this, and in ensuring that the tests are met in practice.
 - Revisions to the criteria should distinguish between measures which are necessary to protect particular vulnerable groups of consumers, and those which are more general in their intent. Not all of these issues are appropriate for inclusion in the revised criteria, and some are more appropriately addressed through other means.
 - The tests need to remain consumer focused. By considering how individuals will plot their own course towards switchover, and the barriers which remain, revisions to the tests should ensure that the tests address actual and potential consumer needs, concerns and forms of detriment.
 - In revising the tests, various policy and technical constraints have to be recognised, such as the impossibility of achieving universal DTT coverage prior to switchover.
- 54 The Expert Group, having applied these principles in revising the tests, recommends that the Government should adopt the revised consumer criteria as detailed in the following chapters. Most importantly, these tests should ensure that issues of importance to consumers are addressed prior to switchover. This should include efforts to raise awareness of the important role which consumer criteria play in switchover policy.

Chapter 2: Coverage

Introduction

- 55 It is obvious that consumers must have access to digital television before analogue signals can be switched off. Although the issues involved in achieving this objective are complex in technical and policy terms, consumers need to know how and when digital television will be available before switchover can be announced, and will need adequate support and information during the transition process.
- 56 The coverage test, as stated by Chris Smith in 1999, requires that everyone who can currently get the main public service broadcasting channels in analogue form must be able to receive them in digital format prior to switchover. In its original form it was unclear whether the test was intended to refer solely to digital terrestrial coverage, or included satellite and cable coverage, raising the possibility that the test had already been met because satellite coverage is almost universal. However, in the absence of an affordable digital satellite option, and in order to maximise platform choice for consumers, the Viewers' Panel⁵ recommended that the test should relate only to digital terrestrial, and that the public policy objective should be to maximise digital terrestrial coverage.
- 57 In practice, the test means that 99.5% of the population must be able to receive a digital signal before switchover can take place.⁶ At present the public service multiplexes are available to around 73% of UK households through digital terrestrial. Known as "core coverage", this has been achieved through digital roll-out at 80 transmitter sites and subsequent power increases. It should be noted that this is a national average, and that coverage between and within the UK nations and regions varies greatly. For instance, research undertaken for the Group suggests that 37% of rural households have no digital terrestrial coverage at present, compared to only 17% in urban areas (see Appendix B). It is therefore clear that the coverage test has not yet been met.
- 58 In order to improve digital terrestrial coverage, it will be necessary to extend the DTT network of stations beyond the 80 existing sites, possibly to the current 1150 analogue transmitters. Much will depend on the investment case for the broadcasters. This is currently the subject of negotiations between the broadcasters, Ofcom and the Government. It seems likely that the public service broadcasters intend to maximise DTT coverage after switchover, but it may not be possible to match analogue reception without a change of mode.⁷ This is because of the differences between the technical characteristics of the new digital signals and because of the planning assumptions that are built into the current figures for digital terrestrial coverage.
- 59 It is widely recognised that the broadcasting industry cannot meet the coverage test for switchover in its current form. While simulcasting with analogue continues, further

⁵ Set up to advise Government on consumer issues relating to digital switchover. Its report *Digital Decisions* was published in December 2001.

⁶ 99.5% consists of 97.9% with good quality analogue reception and 1.6% in areas of marginal coverage. DTI/DCMS *Draft plan for digital switchover 2004* p7.

⁷ 96% at 16 QAM or 93.4% at 64 QAM. *Ibid.*

transmitter roll-out and power increases could increase core coverage to a maximum of 80-85%. However, because there are not enough available frequencies to allow simulcasting of analogue and digital signals at high power, around 15-20% of households will not be within terrestrial coverage until broadcasters are free to reallocate the current high-power analogue services to digital services. Thus broadcasters will not be able to meet the coverage test until the point at which the analogue signal is switched off.

Revising the coverage test

- 60 The principle that no analogue viewer should lose access to television is a sound and uncontested one and, for a number of reasons, the current consumer test is ineffective as a consumer protection measure. Firstly, as explained above, it has not been – and cannot be – met before switchover takes place. Secondly, because it is based on a national average it does not really address the concerns of those consumers who are most at risk (i.e. the 28% who are currently outside core coverage and/or in areas with particular reception problems). Thirdly, the test only deals with a narrow range of issues within a much longer list of consumer concerns about coverage.
- 61 Although the “no loss of signal” principle is not in question, and in light of the weaknesses of the current test, the coverage test remains a necessary part of the policy framework which cannot be simply abandoned. It provides clarity for consumers and industry, making it clear that maximising digital terrestrial coverage is a key objective. It is also a mechanism for ensuring that a range of coverage-related consumer issues are addressed before switchover. For these reasons, the test needs to be modified and restated in ways which make it more useful within the policy framework to ensure that all consumers are protected in practice.
- 62 Firstly, the test needs to be revised to make it clear that high levels of digital coverage will not be possible before the analogue signal is actually switched off. The Group recommends that, before switchover is announced, firm plans should be in place to ensure that every viewer who currently has analogue television can receive the public service broadcasting channels. This is necessary to ensure that the test can be met at the point of switchover.
- 63 Secondly, the criteria should be revised to clarify the level of coverage that will be achieved at the point of switchover. Recent research by Ofcom indicated that core analogue terrestrial coverage is 98.5%, although coverage of all the individual services exceeds 99%.⁸ We are concerned that the target should not be revised downwards to reflect this because it would not guarantee that people in marginal areas could continue to view channels that are currently available to them via analogue terrestrial television. As a bare minimum, we recommend that the coverage target should remain at 99.5% for digital television.
- 64 Thirdly, we recommend that the Government should consider raising the target in order to achieve universal coverage at switchover. Although there will be some areas where digital terrestrial coverage is simply not possible due to physical obstructions or interference (e.g. parts of the south coast of England due to a conflict with French services), we understand that further coverage improvements are possible. As members of the Government have argued, the

⁸ Ofcom *Analogue terrestrial television coverage analysis* 2004.

objective of switchover should be to improve on what already exists, and universal coverage would provide a further clear public benefit which digital switchover could deliver.⁹ This should also inform the Government's negotiating position on coverage conditions to the broadcasters' digital licences.

- 65 Fourthly, the Government should clarify the means through which the test will be judged to have been met. If this includes satellite coverage, the coverage test is meaningless since this would imply that it has already been met, and would provide no basis for further improvements in digital terrestrial coverage. As the Viewers' Panel argued previously, we recommend the test should refer only to digital terrestrial coverage. It may also be useful to clarify that the test refers only to the public service digital terrestrial multiplexes, although steps should be taken to improve the coverage of the commercial services.
- 66 Finally, the test should reflect the phased regional process through which switchover is likely to take place. Planning should ensure that the test is met in each individual region at point of switchover. The Group recommends that, as far as is technically feasible, the same 99.5% target for digital terrestrial coverage should be applied in every region. We also recommend that coverage data should be published on a regional basis prior to switchover.
- 67 A proposed wording for the revised coverage test is included in the summary of recommendations below.

Other coverage issues

- 68 There are many consumer issues and concerns relating to coverage which are not captured by the consumer criteria, but which will also need to be addressed before finalising the timetable for switchover.

Free-to-view satellite

- 69 The role of satellite in achieving universal digital coverage has been widely discussed, and the Group agrees with the BBC and Ofcom that a free-to-view satellite platform would be of considerable benefit to consumers. Prior to switchover where digital terrestrial is already available, and in most areas after switchover, it would provide a choice of free-to-view digital platforms. The different range of channels and interactive services available via satellite might also encourage faster take-up of digital services. By providing free digital satellite services in areas where digital terrestrial signals will not be available until after analogue switchover, it would also improve digital take-up and avoid the need for switchover to take place in order to provide all consumers with the option to go digital.
- 70 Even if near-universal coverage is achieved for digital terrestrial television, inevitably there will also be a role for satellite in reaching areas where this cannot be achieved. There are broadly two scenarios here. In the first, digital terrestrial coverage is maximised to meet the current coverage test, and satellite is only used to deal with a very small minority of households who cannot get a signal. In the second, lower targets would be set for digital

⁹ Minister of State for Scotland (Mr Brian Wilson) Hansard 18th April 2000 Column 812.

terrestrial, and the coverage test is met through a combination of platforms. In either scenario, the public service broadcasters should be obliged to ensure that consumers are able to access their services free at the point of delivery, which would require the development of an affordable “FreeSat” option. It seems likely that, in practice, both scenarios will apply to some extent: digital terrestrial coverage will be maximised for public service broadcasters, while other broadcasters will rely on a combination of platforms.

- 71 In addition to providing free-to-view access to digital public service broadcasting, it is important that a “FreeSat” option meets the requirements of the affordability test. This means that the price should be comparable to that of the equivalent digital terrestrial services, and that its availability and affordability should be sustainable in the long-term. If this cannot be guaranteed, then digital satellite cannot be considered to be a substitute for free-to-view digital terrestrial services in terms of the consumer criteria. We are also concerned that a “FreeSat” platform should not enable control of “gateways” such as the electronic programme guide or encryption systems by commercial interests.¹⁰
- 72 We welcome the BBC and Ofcom’s conclusions about the desirability of a free-to-view satellite service, and the regulator’s readiness to ‘consider whether [they] need to impose regulations to make free-to-view satellite a more realistic option before switchover’.¹¹ Compulsion could be greatly reduced by offering viewers the opportunity of switching to digital by taking advantage of a genuinely free-to-air satellite transmission. Although such a service could in theory remove the need for switchover to take place in order to ensure that all consumers are able to receive digital TV, this ignores the costs of maintaining the analogue network indefinitely.

Household reception

- 73 As well as the supply-side aspects of coverage (i.e. transmitter conversion, power and mode), there is also a need to address the “household end” of the coverage issue (i.e. aerials, installations, retuning etc.). These factors are important in determining whether consumers can get a signal, since many household installations do not match the assumptions used for coverage planning. It is estimated that 1 in 3 households will need to change their aerial due to either being out of aerial band or the poor quality of existing aerials.¹² Poor aerials or down-leads can affect reception even in areas of good signal coverage.
- 74 Around 21% of TV sets are connected to portable set-top aerials.¹³ As the BBC has pointed out, millions of consumers use portable aerials for 2nd and 3rd sets, and many residents of multiple dwelling units have no alternative means of reception.¹⁴ Although we recognise the difficulty of matching analogue reception using portable aerials for digital terrestrial, if this is not provided it will result in considerable expense and difficulty for consumers. The Group considers that measures should be taken to ensure that portable reception is maintained for digital television along the lines proposed by the BBC. To avoid unnecessary expense and

¹⁰ The BSkyB free-to-view offering, announced as this report was being finalised, does not appear to address the group’s concerns about long-term affordability and platform control. We understand that the BBC is pursuing alternative solutions.

¹¹ Ofcom *Driving digital switchover* 2004 para. 13.

¹² TEG research on household aerial installations.

¹³ ITC research conducted for TEG, March 2003.

¹⁴ BBC *Progress towards digital switchover* p47.

ensure that, where necessary alternative reception equipment can be installed, consumers should also be informed whether portable reception will be possible after switchover.

- 75 In areas which are not currently covered by digital terrestrial signals, a significant proportion of consumers may require an aerial check or upgrade prior to switchover in order to receive digital signals after switchover takes place. In areas which are covered, it is unfortunate that some consumers are currently replacing aerials in order to receive DTT at low power, although these new aerials might not be necessary if they waited until power is boosted at switchover. Similarly an upgrade to a wideband aerial may be required at present but perhaps due to frequency re-allocation when analogue services cease, the upgrade might not have been necessary at least for public service channels. Although the Government's intention is to minimise this problem in the spectrum allocation plan, it is not clear that it will be entirely avoided. We urge the Government to address this issue urgently.

Availability of commercial services

- 76 Although the coverage test was only intended to relate to public service broadcasters, improved access to the commercial multiplexes is a key potential benefit of digital switchover. Current coverage for the commercial multiplexes is around 56% of households, and further transmitter roll-out will depend on the investment case for the broadcasters. If the commercial multiplexes are not more widely available, this will impact on the incentive for consumers to convert, reduce the benefits of switchover itself, and further complicate the task of communicating to consumers. Since the availability of commercial services will impact on consumers' choices of platform (terrestrial, satellite or cable), uncertainty about what services will be available may lead to delays in take-up. We recommend that the Government should require commercial broadcasters to clarify their intentions relating to the availability of their services via digital terrestrial before switchover is announced.

Signal conformation

- 77 One of the putative benefits for viewers of switching from analogue to digital reception is the opportunity for improved quality in both picture and sound. It is therefore important to be sure that these benefits are actually delivered to viewers. In part, these are guaranteed by the Code on Technical Standards which Ofcom has inherited from the Independent Television Commission. In the main these apply to the services of ITV, Channel 4 and 5 while other services are expected to achieve "high standards of technical quality".¹⁵ The Group considers that all digital terrestrial channels should at least be equal to those currently receiving analogue signals through a good aerial and receiver installation. The Code also needs to be reviewed and refined in a further important area if digital viewers are to be assured about their picture quality.
- 78 The current specification allows commercial multiplex operators to use a form of modulation which is less robust than that currently deployed by the BBC. Whereas all broadcasters originally transmitted their signals at 64 QAM, potentially allowing the insertion of more

¹⁵ ITC *Specifications of digital terrestrial transmissions* and Ofcom *Technical quality standards: programme production standards* (currently under review by Ofcom).

channels in the multiplex, the BBC now transmits its signals using the more robust standard of 16 QAM, which allows fewer channels. For each multiplex operator, there has to be a trade-off between the number of channels placed within a multiplex and the robustness of the signal.

- 79 The key issue for viewers is that the signal strength of all broadcast channels should be identical. If viewers discover that when they switch from analogue to digital there are marked differences between the quality of reception that they can enjoy from a 16 QAM digital signal, compared with a 64 QAM signal, it will severely prejudice the Government's switchover policy. This difference will also affect the area that can be covered by terrestrial transmissions after switchover, and the extent of mobile reception. According to the DTI/DCMS Draft Plan for Digital Switchover, whereas 96% of the country will be covered by 16 QAM transmissions, the coverage falls to only 93.4% with 64 QAM transmissions.
- 80 It is essential for viewers to be assured that all the nation's public service channels will be universally available via digital terrestrial after switchover. Currently it appears that the only way this can be assured is for the Government and Ofcom to insist that public service broadcasters transmit their signals to viewers in 16 QAM. We recommend that this be a condition for the forthcoming renewal of digital terrestrial licences. This would also maximise the extent of portable aerial reception, minimise the need for aerial replacements, and simplify the task of communicating with consumers on coverage issues.

Consumer information and support on coverage issues

- 81 Many people are frustrated by the fact that, in some areas, they cannot receive BBC digital services although they pay for them through the licence fee. Improvements in coverage would undoubtedly be popular, and would strengthen the Government's case for switchover. Consumers may also need practical support in order to deal with switchover, including assistance with aerial replacement, retuning and installation. During the transition, Government should make full use of the broadcasting system in communicating with consumers, including via on-screen captions and accessible means of communication for disabled people such as verbal information.
- 82 The Group recommends that the provision of consumer information and support relating to coverage should be tied into the switchover timetable. Before switchover is announced, consumers will need information about a range of coverage issues, including when switchover will take place in their area, what platforms will be available to them, whether they will need a new aerial, and how the transition will be managed in areas without existing digital terrestrial coverage. During the transition process, and before switchover takes place, support and information will need to be provided via local sources to assist consumers with retuning and installation. Some of these issues are addressed in more depth in Chapter 5.

Shared distribution systems

- 83 Around one in five households rely on shared aerials to receive television services because they live in multiple dwelling units (MDUs). For most, it will be necessary for their communal aerials to be upgraded in order to receive current and future digital TV services. Moreover, it is unlikely that existing communal systems will allow some households to continue to receive

analogue broadcasts, while others switch to digital. It will therefore be necessary for households living within that MDU to agree collectively not only how to upgrade their communal aerial system, but also when to switch. This may not be easy to achieve, and it may be necessary for the freeholder or landlord of an MDU to impose the switch to digital on leaseholders or tenants. Equally, there is a risk that these difficulties may delay switchover in these households.

- 84 By 2001, a number of local councils in the UK had installed digital receiving equipment in their properties. Some councils, such as Enfield and Newham, allowed their tenants to choose whether to switch or not, as they installed Integrated Reception Systems which were designed to distribute all analogue and digital broadcast services, regardless of whether they were received via the terrestrial or satellite platforms. Other local councils, such as Glasgow and Salford, adopted a more coercive approach to switchover by undertaking a significant number of digital terrestrial conversions to their properties, but still included DAB and FM radio.
- 85 Little information about the changes in the communal aerial systems installed in private sector MDUs is available. In many rented MDUs, the landlord may simply be unaware of the issues raised by analogue switch-off, or unwilling to co-operate with the collective wishes of the respective occupiers. Even if all the householders living in an MDU are able to agree among themselves the means by which they wish to receive digital television signals, in many cases they may find that they cannot exercise that choice because of restrictions in their lease or tenancy agreement. Parliament has already established a statutory arrangement by which householders in MDUs might partially address these problems, but it has received little publicity from Ofcom or the Government.¹⁶
- 86 In discussions with DCMS officials, the Group proposed that the Government and/or Ofcom should publish a step-by-step guide for householders living in MDUs who wish to switch to digital. This should spell out the rights granted to householders living in MDUs under Section 134 of the 2003 Communications Act, the procedure that Ofcom will adopt to exclude any provisions in leases or tenancy agreements that prevent an occupier from switching from analogue to digital television, and the procedures that Ofcom will put in place to resolve any dispute between a household and the lessor or landlord. This should also include information on upgrading a communal aerial system to receive digital broadcasts, and how to purchase (or lease) and install the appropriate receiving equipment.
- 87 Other categories of MDUs which need to be considered are hospitals, care homes, sheltered housing, and prisons.

Summary of recommendations

- 88 The coverage test should be revised as follows:
- Before switchover is announced, firm and specific plans should be in place to ensure that every viewer who currently has analogue television is able to receive public service digital television signals at the point of switchover.

¹⁶Section 134 of the Communications Act 2003 establishes the principle that no person should unreasonably be denied access to an electronic communications network or service, and enables amendments to prohibitions or restrictions which may apply to the installation of digital equipment.

- In practice, this means that digital terrestrial television should be available to at least 99.5% of the population in each region at the point of switchover.
- Plans should include details of how consumers who cannot receive digital terrestrial signals will gain access to free-to-view public service broadcasting.

89 Before switchover can be announced:

- Government, broadcasters and the transmission companies should publish detailed information about digital terrestrial coverage which will be achieved at switchover.
- Consumers should be informed of the platform options which will be available in each area, areas in which portable aerial reception will be available, and where aerial upgrades are likely to be necessary.
- Government should ensure that consumers are fully informed of the timings for switchover and the transition process in each area.
- Commercial broadcasters should be encouraged to announce their plans for improving digital terrestrial coverage to help consumers select the appropriate platform.
- Information and support should be available to consumers to deal with domestic reception issues.

90 Before switchover takes place:

- Government should seek to achieve universal digital terrestrial coverage in order to ensure that the majority of consumers have a choice of free-to-view platforms.
- Consumers must have access to an affordable free-to-view satellite option and have confidence that this will remain free for the foreseeable future.
- A common national standard of 16 QAM should be required for digital terrestrial services from public service broadcasters in order to maximise coverage and safeguard picture quality.
- Information and support should be available to consumers during the transition process, including assistance with domestic installations, retuning and aerial issues.
- Government should publish a guide for householders living in multiple dwelling units on the steps to take in order to convert their digital aerial systems for digital reception.

Chapter 3: Affordability

Introduction

- 91 The cost of digital equipment has fallen significantly since the launch of digital television, particularly with the advent of free-to-view digital services. Yet while some households have been able to switch to digital television for as little as £50, for others the costs of replacing an aerial and down-leads, converting additional TV sets and VCRs, and getting appropriate assistance with installation will be much higher. This means that, although it is tempting to suggest that consumer concerns about affordability are based on misapprehensions about the actual cost, affordability remains a legitimate concern which needs to be addressed by the Government's switchover policy.
- 92 There are broadly two sets of consumer barriers to digital adoption – ability and willingness to pay – both of which are affected by consumers' perceptions and awareness of costs. Ability to pay is a significant barrier to the adoption of digital TV among low income groups, and the recent BBC, Ofcom and Scientific Generics reports have provided useful evidence on this issue, together with the extent to which it constitutes a barrier to switchover. Although take-up appears to be fairly even across social grades, and a proportion of low income households have already adopted pay-TV, there are significant variations between low income groups.¹⁷ For instance, families with children have adopted digital television much more readily than older people.
- 93 The Expert Group welcomes Ofcom's analysis of the transitional burden of switchover, which suggests that the cost of switchover will fall more heavily on low income groups and the regulator's conclusions about the need for financial assistance for some groups. It is significant that, in the case of both Berlin and Sky's switch to digital, significant financial assistance was provided to assist consumers with the transition. We agree with Ofcom that financial assistance measures should be developed, and that they should be clearly targeted and launched as soon as possible to avoid the risk that non-eligible households would delay digital purchases.¹⁸
- 94 The cost of digital TV is not just an issue which affects low income consumers. Willingness to pay is equally important in terms of its impact on voluntary adoption. Ofcom has recently pointed out that the sums involved represent a comparatively small proportion of most households' disposable income. However consumers' perception of the value of digital TV as weighed against the costs of conversion vary greatly, particularly where additional equipment is concerned. Although Ofcom plays down the impact of cost on the conversion of second TV sets and VCRs, we support the BBC's conclusion that cost may act as a barrier to full household conversion to digital television. Despite falling box prices and the rise of free services, there remains a significant number of consumers for whom even relatively low costs will be a deterrent to going digital.

¹⁷ 46% in social groups DE have adopted digital TV. (GfK *Multichannel ownership overview* Q4 2003).

¹⁸ Ofcom *Driving digital switchover* 7.53.

95 The Group considers that, on their own, the market and technology are unlikely to address the full range of affordability issues faced by consumers. Although ability to pay should be the primary focus of public policy measures, issues of willingness to pay and consumer awareness of costs also need to be addressed in the context of a switchover policy which relies on consumers spending their own money to switch to digital television. This section considers how this might be done through revising the affordability criteria and other measures.

Revising the affordability test

- 96 The affordability test established by the previous Secretary of State required that, before digital switchover “switching to digital equipment – including videos as well as televisions – must be affordable for the vast majority of people, and including those on low and fixed incomes and older people”. Rather than specifying a monetary definition of affordability, the test would be judged to have been met if 95% of consumers adopted digital television. Although this definition is problematic, two principles are clear: that affordability should be defined in terms of actual consumer behaviour; and that it must be assessed with regard to additional equipment as well as the main household TV set.
- 97 If the test is defined simply in terms of the cost of digital equipment, the availability of set-top-boxes for £50 might suggest that the test has been met. However, this approach is flawed. Firstly, it ignores the common additional costs of converting a TV, such as aerial upgrades. Secondly, the original test included VCRs, but digital recording equipment remains expensive, there are few conversion solutions currently on the market, and “re-plugging” does not work with many of the cheaper boxes. Thirdly, work on the “whole household” cost of conversion demonstrates that, even if conversion of the first set appears to be affordable, many households will face significantly higher conversion costs.¹⁹ Finally, cost is still seen by many consumers as a major barrier to adoption, whether due to ability or willingness to pay, as well as misapprehensions about the actual cost.
- 98 If the test is defined in its original terms in relation to take-up it is again clear that it has not been met. Take-up of digital television is currently around 50% of households for the first TV set, and 27% for VCRs far below the original criterion of 95%. Among the low income groups that the test was intended to protect, take-up is even lower.²⁰ Although take-up continues to rise, Ofcom’s projections suggest that affordability (both absolute and in terms of willingness to pay) will remain a significant barrier to the adoption of digital television, and that low income groups are likely to be among the last to switch. Even if the 95% test were met, research demonstrates that half of the remaining 5% would not have adopted due to cost issues, and the majority of this group would be on low incomes.²¹
- 99 Although measures to address the cost issue are undoubtedly still required, the current affordability test is not effective in protecting consumers. A broad population-based test linked to take-up is no longer appropriate since many conversions are relatively inexpensive and it is difficult to argue that digital television is widely unaffordable when around half of UK homes have it. Equally, the current population-based test fails to address the concerns of those groups

¹⁹ DTI/DCMS *Draft digital switchover strategy*.

²⁰ 35% of those on state benefits, 39% of those on incomes below £10,000 p.a. (GfK *Multichannel ownership overview Q4 2003*).

²¹ Scientific Generics *Attitudes to digital switchover 2004* p16.

for whom cost is a significant barrier, particularly those with low incomes and/or high costs of conversion. For these reasons, the current test needs to be revised.

- 100 In revising the test, we can identify two distinct sets of issues which the existing affordability test captures (and conflates) to some extent. First, the test was intended to protect consumers on low or fixed incomes, for whom the cost of digital television is likely to be an absolute barrier to adoption. Second, it identifies issues which will also affect consumers for whom cost is not an absolute barrier, but is nevertheless a significant issue (including willingness to pay, the cost of converting additional equipment etc). We propose to address these issues separately, and to distinguish between the affordability test itself and other general measures relating to the cost of digital television.
- 101 The Expert Group recommends that the test should be revised to focus more clearly on those consumers for whom affordability is likely to be an absolute barrier to adoption. This can be done by maintaining the requirement that before digital switchover, digital television equipment should be affordable to consumers on low and fixed incomes. The affordability requirement relating to the conversion of additional equipment such as VCRs should be maintained, and extended to refer to the costs of converting reception equipment such as aerials and down-leads, and of assistance with installation where necessary. This provides incentives to ensure that the “whole household” cost of conversion for low income households is addressed before switchover.
- 102 In order to focus on these households, the 95% criterion should be maintained, but as a proportion of households on low and fixed incomes, rather than of the population as a whole. We recommend that Government works with the Group and other consumer representatives – particularly those with expertise on low incomes and special needs – to identify the relevant population and find ways to assess take-up. As a starting point, this population is likely to correspond to any group which is eligible for financial assistance with the cost of digital conversion, although it may be desirable to use a wider definition of low income groups. In this way, the 95% target can be adapted to provide a “safety net” to ensure that vulnerable groups have switched to digital television before analogue switchover. This would also provide a clear target and measure of the success of public policy measures to deal with affordability issues for these households.

Other affordability issues

- 103 As indicated above, there are a number of affordability issues which are not addressed by the consumer criteria, which will need to be tackled by other means.

Financial assistance

- 104 The Group welcomes Ofcom’s analysis of the transitional burden of analogue switchover, and its conclusion that this falls most heavily on low income households. Accordingly, we support Ofcom’s suggestion that financial assistance should be made available to certain low income groups. Although Government has been understandably reluctant to consider measures of this nature, we welcome the fact that this is now being actively considered. Further work will need to be done by Government to identify and correctly target the relevant households, which

should involve the Expert Group, other consumer representatives such as the Ofcom Consumer Panel, and those with specific expertise on budgetting among low income households.

- 105 The cost of whole-home conversion needs to be considered in designing these measures. This will vary greatly, from the cost of a single box to that of converting or replacing multiple sets, recording equipment, distribution systems, cabling and aerials, and installation services, where necessary. We recommend that assistance should apply to the cost of converting one television set, an associated VCR and any other reception equipment, as well as assistance with installation where necessary. In the case of social housing and multiple dwelling units occupied by low income households, assistance should also be available to landlords.
- 106 The Expert Group agrees that any financial assistance scheme should be clearly targeted towards low income groups and announced as soon as possible in order to avoid the risk that non-eligible households will delay switching in the hope that Government will pay for them to get digital TV. Furthermore, we recommend that details of the scheme should be published when – or before – the switchover timetable is announced. Ensuring that the outstanding concerns of households on low and fixed incomes are addressed would promote consumer confidence in the Government’s plans and timetable for switchover.

The cost of household conversion

- 107 Some of these costs will be optional for consumers, but many will not. While some of these costs are front-loaded, in that existing adopters will already have paid them (such as aerial upgrades where necessary), consumers are likely to delay conversions of second sets and VCRs until shortly before switchover.

Information about costs

- 108 Although it is wrong to suggest that consumer concerns about cost are due to misinformation, research suggests that there is still confusion about the cost of digital television among consumers, and a perception that digital means pay – or subscription – television. Even among those who are aware of the true cost of switching, there are legitimate concerns about the cost of converting additional sets, VCRs and domestic reception equipment. 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.
- 109 It is often argued that the advent of cheaper DTT set-top-boxes, and the likelihood that prices will fall further before switchover, effectively “solves” the affordability problem. Even putting aside the economic viability of, say, a £10 box, there are significant doubts about the functionality that could be included at that price. Such boxes would be unlikely to include the full range of access features, interactivity, or automatic downloading and rescanning. This raises questions about the desirability of such a box to consumers, its ability to contribute to the Government’s digital public policy objectives, and its adequacy for purposes other than converting second TV sets.
- 110 There is also a risk that this will create unrealistic expectations about the cost of conversion among consumers, and the features that are available at different prices. For these reasons the

Group considers that consumers need better information about costs, and about the features and functionality which digital equipment provides. Information about digital television should also distinguish between the features which are common (e.g. more channels) and those which are limited to more expensive equipment (e.g. full interactivity). This issue is addressed in more detail in chapter 7.

The cost of access services

111 We are concerned that, for the foreseeable future, receivers containing access features for blind and partially sighted people will be in the higher price band. Consumers with particular needs, such as viewers with visual or hearing impairments, should not face additional costs in accessing services such as subtitling and audio description. To this end, Government and Ofcom should take steps to promote the provision of access services – and particularly the need for viewers to be able to select subtitle size – to be in the basic specification of digital equipment sold in the UK. More detail on this issue is provided in Section 5 below.

Summary of recommendations

112 The affordability test should be revised as follows:

- The whole household cost of converting to digital television, including reception equipment and installation where necessary, should be affordable to households on low and fixed incomes.
- 95% of those on low and fixed incomes should have adopted digital television before switchover takes place.
- The Government should work with specialist consumer representatives to identify and target low income and special needs groups for the purposes of the test and assistance scheme.

113 Before switchover is announced:

- Improved information about the likely cost of switchover, including the cost of converting additional TV sets and recording equipment, should be provided to consumers.
- Specific measures should be put in place to assist low income and special needs groups to switch to digital television. These plans should include clear criteria identifying those who will be eligible for assistance under the scheme, and should provide them with assistance for the full costs of converting one set, including the cost of aerial replacement, installation and VCR conversion. Such assistance should be available immediately.

114 Before switchover takes place:

- Manufacturers should be encouraged to develop low-cost conversion options, in particular for second sets and VCRs.
- Government should ensure that the full range of access services and features are available via affordable digital equipment.

Chapter 4: Take-up

Introduction

- 115 The principle that the majority of consumers should have adopted digital television before analogue switchover takes place is central to the Government's switchover policy. Not only is it politically expedient to avoid depriving people of television signals, but the legitimacy of the Government's switchover policy itself depends on the majority of consumers embracing the benefits of digital television. If a significant minority of consumers do not adopt digital television, digital switchover will not be able to take place unless Government is willing to either force or pay for them to get digital television.
- 116 Although a significant proportion of consumers have already been persuaded to switch by the commercial digital platforms, and many more households have been attracted by the free-to-view services, there is a significant minority of consumers who are unlikely to switch voluntarily. Although this Group tend to be labelled as "refuseniks", research demonstrates that there are many reasons why they do not wish to switch, for example satisfaction with the existing analogue services, as well as the other barriers discussed in this report.
- 117 In addition, there is a significant group of consumers who are willing to switch to digital, but see no urgency in doing so until an announcement is made.²² It is therefore argued that take-up can no longer be left to the market, and that the only way to persuade non-adopters is to announce the switchover timetable. Although a switchover announcement would undoubtedly encourage digital take-up, this would amount to compulsion, which does not fit well with the Government's stated policy of voluntary adoption. It is also difficult to see how Government can announce a switchover date in the near future without abandoning its undertaking that a date would not be set until take-up reaches 70% of homes.
- 118 The Group considers that the take-up test needs to remain central to the Government's policy of a market-led switchover timetable. As Chris Smith originally stated it:
- "Before the switch over to digital is completed I want to make sure ... that 95 per cent of consumers have access to digital equipment."*²³
- 119 It is argued that this was never intended to be a test in itself, but rather a measure of affordability, albeit a flawed one (see above). Nevertheless, the take-up test captures the key principle that the digital switchover timetable should be driven by the rate of consumer adoption of digital equipment and services. For this reason, the Viewers' Panel recommended that the take-up criterion should be regarded as a test in its own right, and the Expert Group supports this recommendation.
- 120 Even if there was never supposed to be a "take-up test" as such, the Secretary of State gave undertakings that a date for analogue switch-off would not be set by Government unless and until a sufficient proportion of households had switched to digital television.

²² Scientific Generics, *ibid.*

²³ Chris Smith, Speech to Royal Television Society, Cambridge, 19th September 1999.

“The degree of take-up of digital equipment in households (either through a set top box or a digital TV set) will of course be a key measure of progress to set alongside the affordability test. When 70% of consumers have access to digital equipment we will know that a significant milestone has been passed, and can clarify the timetable further.”²⁴

- 121 This undertaking was intended to minimise the effects of announcing a switchover date on consumers. Firstly, it would limit the number of households which would be compelled to switch to digital television as the result of an announcement. Secondly, it would ensure broad awareness of the benefits of digital TV before announcing switchover. Thirdly, it provided a “common sense” indication of the likely limits of voluntary adoption which has since been confirmed.²⁵ Finally, to limit the adverse political consequences, it was undoubtedly the Government’s policy for analogue switch-off to reassure consumers that it would not take place until the majority of consumers were ready.
- 122 To date, despite the fast take-up of digital television in comparison to other types of consumer electronics equipment, only just over half of households have switched.²⁶ Although widely welcomed as an important milestone, this figure primarily relates to first television sets, so it would be misleading to suggest that the country is half-way to switchover. Recent research found that only 14% of multichannel homes have converted their second TV sets, and the majority of additional sets and VCRs remain unconverted. This means that, for recording and viewing on equipment other than their main television set, the majority of so-called digital homes are still dependent on analogue broadcasts. It is clear that there is a long way to go before either the 70% (pre-announcement) or the 95% (pre-switchover) take-up criteria will be met.
- 123 Although projections vary, it also seems unlikely that the take-up criteria will be met within the Government’s original 2006-2010 timeframe. Ofcom anticipates that only 78% of households will have adopted digital television by the end of 2010. The BBC suggests that take-up will not reach 95% until 2013 if left entirely to the market. Similar findings have emerged from the DTI/Generics study. All of these projections assume that, short of announcing switchover, no further action is taken to attract consumers to switch voluntarily to digital television, and indeed all three reports suggest that a switchover announcement is required to reach the take-up targets. Research suggests that a significant proportion of consumers will not switch to digital unless switchover is announced, and that up to 5% of households will never convert.²⁷

Revising the take-up test

- 124 Although it is unavoidable that any Government announcement about digital switchover will involve some degree of compulsion, the take-up tests (i.e. 70% before announcement, 95% before switchover) were intended to delay and limit the extent of any such compulsion:

²⁴ Chris Smith *ibid.*

²⁵ Recent studies by Ofcom, Generics and the BBC have confirmed CA’s 2001 finding that around three-quarters of consumers will adopt digital TV voluntarily.

²⁶ 54% of homes (GfK *ibid.*).

²⁷ Scientific Generics *ibid.*

“It is important that we ensure that people who at the moment receive analogue and who wish to carry on doing so for some considerable time will be able to do so, and that no one will be forced unnecessarily to purchase a digital set.”²⁸

- 125 The take-up criteria also secure the principle that the timetable for switchover should be set by consumer demand for, and market delivery of, digital television services and equipment. For these reasons, we take the view that both the 95% (before switchover) and 70% (before announcement) levels remain appropriate, and should be retained in full. The question is therefore not one of how the tests should be revised, but rather of how they can be met, given the current limits of coverage and the likely extent of voluntary adoption. Although it is not the responsibility of the Expert Group to determine how the tests will be met, in recommending their retention it is necessary to demonstrate how they might be fulfilled.
- 126 The existing 95% take-up test should be retained as the objective for policy measures prior to switchover, and should apply to the first set and VCR in each household. It should also be applied regionally as a “backstop” check, which must be met prior to switchover actually beginning. This approach has been adopted by the FCC in the US and has fundamental implications for both public policy and/or the switchover timetable: if the target has not been met then either switchover needs to be delayed or assistance to consumers will need to be provided. This problem will be particularly acute in those areas which are unable to receive digital signals prior to switchover taking place.
- 127 Ofcom anticipates that take-up will reach 70% in mid 2006 without any further action to drive consumer adoption of digital television. Other research demonstrates the extent of consumer confusion about digital television, and the benefits of better information in driving adoption.²⁹ The forthcoming consumer information campaign is likely to hasten the pace of voluntary adoption, such that the 70% test could be met sooner than 2006, allowing the switchover timetable to be announced. Better consumer information would thereby allow Government to maintain the policy of a consumer-led switchover timetable.
- 128 The Expert Group does not agree that an announcement and the 70% test are incompatible. Indeed, the test provides an incentive for all stakeholders to improve the quality of consumer information and advice before switchover, and usefully supports the argument that the launch of a consumer information campaign should not be linked to a switchover announcement. Moreover, announcing switchover before the 70% criterion is met is likely to stall the rate of voluntary adoption which is currently high, sustainable, and likely to reach 70% even without further intervention.

Other take-up issues

- 129 The Group has also considered a number of other issues relating to the adoption of digital television.

²⁸ Chris Smith, Hansard 16th March 1998 Column 980.

²⁹ Scientific Generics, *ibid.*

Information

- 130 Improved information at all stages would promote consumer confidence and improve take-up of digital TV. This issue is dealt with in more detail in the next chapter.

Out-of-coverage areas

- 131 In addition to improving coverage prior to switchover (see above) a genuinely free-to-air digital satellite service would provide greater platform choice to those viewers living in areas already covered by DTT, and would also allow viewers (approximately 25%) living in areas not yet covered by terrestrial transmissions the opportunity to receive free-to-air broadcasts. This is likely to have a beneficial impact on take-up in all areas, while in areas which are currently not served by digital terrestrial services it would increase consumer awareness of the benefits of digital TV and reduce the “conversion gap” at the point of switchover.

Monitoring

- 132 It is important that take-up continues to be monitored among vulnerable groups such as those living in isolated rural areas and low income households, older people and viewers with hearing or sight impairments on a regional basis, as well as nationally. The comparisons undertaken between rural and urban consumers (see Appendix B) have demonstrated the value of this approach in determining whether further intervention is necessary. Publication of such data would enable greater transparency and predictability both before and after any switchover announcement. It would also promote public awareness and understanding of the likely switchover timetable, and enable any assistance measures to be targeted if it was found that take-up remained low among particular groups.

Non-adopters

- 133 Government has an important role to play in encouraging other stakeholders to change the language used to describe non-adopters. “Refuseniks” is a particularly unhelpful term, and one which demonstrates a lack of understanding of the multiple and legitimate reasons why consumers have chosen not to switch. This group of consumers will need to be persuaded and helped, not stigmatised and bullied. It is also essential for both the Government and the broadcasting industry to realise that they fall into a number of separate categories, who require different types of advice and support. This issue is dealt with in more detail in the next chapter.

Summary of recommendations

- 134 The take-up test should be confirmed in the following form:
- Before switchover is announced, 70% of households should have adopted digital television for their main television set.
 - Before switchover takes place, 95% of consumers should have adopted digital television for their main television set.

135 Before switchover is announced:

- Government and other stakeholders should change the language used to describe non-adopters and abandon the term “refuseniks”.
- Measures should be taken to improve the quality of information available to consumers about digital television and the Government’s switchover policy.

136 Before switchover takes place:

- Data on the take-up of digital TV should be published, broken-down regionally and demographically, in order to promote transparency and assess the effectiveness of other policy measures.
- Measures should be taken to promote take-up in areas which will not be covered by digital terrestrial signals prior to switchover, including the development of a free-to-view satellite platform.

Chapter 5: Consumer information and support

Introduction

- 137 Consumers need adequate information about digital TV and switchover policy, whether their question is “what is it?”, “do I want it?” or “which one should I get?” It is disappointing that the provision of consumer information and support relating to digital TV and switchover remains poor. Although there has been much discussion of the issues relating to consumer information and support in the context of the Action Plan, this has only recently begun to bear fruit. On the negative side, this means that many consumers remain confused and worried, while on the positive side, better information and support could facilitate and help drive the consumer-led switchover process. In addition to general advice about digital television and switchover, many groups will need specific help to tackle domestic installation issues.
- 138 It is not appropriate to set a switchover test relating to consumer information and support, but Government should ensure that a consumer information campaign is launched as soon as possible, and that detailed plans for information provision prior to switchover are in place before switchover is announced. Consumers will not have confidence in a switchover announcement unless information is available about the entire switchover process. This will include answers on issues which remain unresolved at present, such as the conversion of VCRs and set-top aerials. This implies that there can be no announcement until these outstanding issues are resolved.

Consumer requirements

- 139 This section of the report is intended to set out only the basic principles for consumer information provision and support, as the Expert Group has separately advised Government on a number of detailed issues relating to the planned consumer information campaign. The Group warmly welcomes the plans for this information campaign, but it is important that it addresses a number of basic consumer requirements and concerns if it is to be both credible and useful to consumers. These are set out below.

Accessibility

- 140 All information and support should address the needs of consumers with disabilities, older people and communities for whom English is not their first language. It should also address accessibility issues, both by being accessible itself to consumers with disabilities, and through providing information about the accessibility of digital TV products and services (e.g. subtitling and audio description) at an appropriate geographical level. Training should ensure that retail and installation staff are aware of access issues, able to communicate with disabled consumers, and can demonstrate relevant features. Other support mechanisms (e.g. helplines, installation) should also be accessible to consumers with disabilities.

Product labelling

- 141 Although potentially useful to consumers, any logo or kitemark scheme will need to inspire consumer confidence. To this end, its use in all contexts (retail, packaging, etc) will need to be backed by rigorous standards and enforcement to ensure that it remains meaningful, useful and credible. Similar standards should apply in all contexts, including packaging, aerial installation, advertising and retailing. The logo should ensure that information about accessible products is available even where other assistance is not available, e.g. supermarkets. The logo has an important part to play in enabling consumers to derive maximum benefit when they switch to digital services. This will include taking advice from retailers or aerial installers, the upgrading of their aerial, and decisions as to what equipment to purchase.
- 142 Any implementation body, such as the proposed “SwitchCo”, will also need to inspire consumer confidence, and to be seen as neutral and “public service” in character. As such it should not be responsible for deciding or announcing a switchover date, and it might be wise not to name it “Co”, given the implication of commercial rather than consumer interests. Although it might usefully work with local, voluntary and consumer groups (e.g. Citizens Advice, Age Concern, Which?, the WI, RNIB, RNID and Sense), strategies should recognise the resources constraints of these organisations.

Installation

- 143 Some groups of consumers will need assistance to install, tune-in and learn to use digital equipment. The Generics study estimated that 15% of households would not be able to cope with installation on their own which rose to 50% for those over the age of 75. Although much could be done through the market through improved product usability and installation services, these will only provide a partial solution. There is also a risk that such provision would go beyond the needs of the majority of consumers, further increasing the cost of switchover to consumers. It is also important that vulnerable groups, including older people, are protected from rogue traders coming into their homes. For these reasons, we recommend that the Government should consider how to develop a secure service along the lines that Channel 5 provided for retuning VCRs to assist consumers at the point of switchover.

Timing

- 144 The launch of a consumer information campaign and the announcement of switchover should be seen as separate tasks, and the former should begin as soon as possible. Linking the two has already delayed the provision of information to consumers, and there is a danger that it could stall voluntary adoption and result in an information campaign being discredited by appearing to “bully” consumers towards switchover.

Multiple dwelling units

- 145 There is a need to improve the provision of information to both landlords and tenants of multiple dwelling units. The Expert Group has proposed that a separate information strategy is prepared for these groups, as previous information provided by DCMS was aimed at landlords and is now out-of-date (see Chapter 3).

Summary of recommendations

146 Before switchover is announced:

- Government should launch a public information campaign to improve both consumer knowledge and awareness about switchover policy, and the quality of advice available to consumers during the purchase and installation of digital TV equipment.
- Any kitemark or logo scheme should be backed by rigorous standards of performance for the product or service they relate to, and its usage should be strictly monitored.
- All information and support should address the needs of consumers with disabilities, older people and communities for whom English is not their first language.

147 Before switchover takes place:

- During the transition period, Government should make sure that a service is in place to assist consumers with retuning, reconnection and installation issues.
- Improved advice and support should be provided to leaseholders, landlords and tenants to deal with the specific issues relating to the provision of communal aerials which need to be dealt with in multiple dwelling units.

Chapter 6: Accessibility

Introduction

- 148 The accessibility of digital television equipment is a significant concern and barrier to take-up for many consumers, particularly people with disabilities and older viewers, but is not confined to these groups. There is a range of access issues, from those specifically relating to people with disabilities to those which are more general such as usability, in relation to which digital TV generally performs poorly in comparison to analogue television. These issues form a barrier to switchover for a significant proportion of consumers.³⁰
- 149 Since concerns about these issues were first raised (including by the Viewers' Panel, organisations representing disabled and older viewers, and consumer groups) the evidence base has expanded considerably. The Group has particularly welcomed the research commissioned by the DTI, highlighting the usability and accessibility barriers which affect consumers, and promoting a "design for all" approach to addressing these problems. The need for more 'consumer focused technology' has been recognised as an issue which needs to be addressed as soon as possible.³¹
- 150 Although these issues have been the subject of much research and various tasks within the Action Plan, the Expert Group is concerned that few solutions have yet emerged. Accessibility issues are not yet fully incorporated in the policy framework, nor is there any guarantee that these issues will be properly addressed prior to switchover. There is also much that could be done to tie access issues into other actions before switchover, such as the proposed logo and information scheme (see Chapter 5), and measures related to affordability (see Chapter 3). It is vital that solutions to these issues are implemented prior to switchover in order to ensure that all sectors of the population are able to benefit.

Accessibility requirements

- 151 It is not appropriate to set an access criterion as such, but before switchover is announced, specific plans should be in place to address and resolve the issues below before switchover actually takes place. This would promote consumer confidence, particularly for those who are excluded by existing technologies, and provide a clear objective and timescale for both manufacturers and public policy measures in order to ensure that these issues are dealt with in a timely manner.

Access features and services

- 152 Where hearing impaired people are concerned, low subtitling requirements (80% in 2014) are unhelpful in encouraging them to switch to digital services. Similarly for visually impaired people, access to audio description equipment and services is potentially a key driver of digital television uptake, and a key benefit of digital TV over analogue services.

³⁰ Scientific Generics, *ibid.*

³¹ Michael Starks presentation to Digital Action Plan stakeholders, 7th May 2004.

- 153 There must be a choice of fully accessible digital television receivers, for all platforms, and all digital equipment should include basic access features. This would guarantee that digital TV is accessible to consumers with disabilities; ensure that such features do not add to the cost of digital TV, and that accessible equipment is available at all price levels. It would also add to the longevity and usefulness of equipment for all consumers; and would contribute significantly to the public policy objectives and benefits of digital switchover. This could be achieved by adopting universal design principles into the criteria for the logo scheme.

Cost

- 154 Viewers with special needs, such as older people or those with physical or sensory impairments, should not incur additional costs in accessing digital equipment or services. This includes a number of issues, including add-on equipment (e.g. to deliver speech output; Braille equipment/embosser); additional installation costs; helplines that are not free; access features that are only in the most expensive receivers. This should be addressed in the context of the financial assistance programme, for instance through a scheme that covers people whose access needs are not met by standard services and equipment; registered blind and partially sighted people; and recipients of other “special” benefits.

Research

- 155 Further research is required in a number of areas relating to accessibility, including the possibility of talking Teletext and the output of digital subtitles in Braille. Government should ensure that such research is undertaken. These features must be available prior to analogue switchover, otherwise deaf/blind people will not be able to access key news and information services.

Electronic Programme Guides and other on-screen menus

- 156 Currently, EPGs are not easily accessible to many people, including blind and partially-sighted people, those with cognitive difficulties and people with impaired dexterity. The following issues need to be addressed: font size; colour contrast; ability to manipulate the way in which text is displayed; speech output/recognition; the ability to print in Braille; flags to indicate audio described, signed, and subtitled programmes. EPGs should be able to comply with any future assistive technology developments. It is important that work continues to address these issues in order to ensure that solutions have been implemented prior to analogue switchover. This is essential to ensure that all sectors of the population benefit from the switch to digital television.
- 157 Menus should conform to the general principles as set out above for EPGs. They should also be intuitive and have an ability to return to the “top” page by using a common term such as “back” or “return”. The ability to access subtitles and audio description should not be buried within menus but should be accessible from a dedicated button on the remote control.

Information and support

- 158 All information and support should address the needs of consumers with disabilities. It should also address accessibility issues, both by being accessible to consumers with disabilities, and through providing information about the accessibility of digital TV products and services

(e.g. subtitling and audio description). Training should ensure that retail and installation staff are aware of access issues, able to communicate with disabled consumers, and can demonstrate relevant features. Where possible, shops should have a range of equipment that can be tested by consumers, particularly to try out remote controls and access features. Other support mechanisms (e.g. logo, helplines and installation) should also be accessible to consumers with disabilities.³² In the course of its 'life' a set top box may be required to operate at a number of different locations, therefore "installation wizards" should remain permanently accessible.

Connectivity

159 The difficulty of connecting digital equipment to existing television sets and VCRs is a barrier to adoption for many consumers, and an acute problem for consumers with specific accessibility needs such as disabled consumers. Measures to address these problems should include: installation guides with all equipment, providing instructions for common combinations of equipment; clear labelling on equipment, including the number and description of SCART sockets, whether cables are provided and provision of dedicated information and support services (see Chapter 5 on consumer information and support).

Remote controls

160 The number and complexity of remote controls which consumers have to deal with in using digital equipment is a barrier to consumers in accessing the benefits of digital television, and is a significant concern to many, such as older people with limited dexterity. Again, some steps have been taken to improve the situation, such as the ITC design checklist for remote controls. Further steps should be taken to ensure that these measures are widely adopted, including the incorporation of this checklist in the criteria for the digital logo scheme.

Summary of recommendations

161 Before switchover is announced:

- Specific plans should be in place to address the needs of disabled people before switchover actually takes place.
- Any public information campaign or logo scheme should be fully accessible to all consumers, and consumers should be able to access specific advice and information about accessibility issues associated with digital TV.

162 Before switchover takes place:

- There must be a choice of fully accessible digital television receivers, for all platforms and all digital equipment should include basic access features.
- Outstanding accessibility issues associated with electronic programme guides and menus, remote controls, and connectivity must be resolved.
- Government should ensure that the full range of access services is available via affordable digital equipment.

³² For instance, BSkyB has a dedicated team dealing with access issues.

Chapter 7: The costs and benefits of switchover

Introduction

- 163 Research indicates that digital switchover is an ‘unpopular policy which consumers see as coercive ... Government’s rationale and motives for switchover are not understood and are not trusted’.³³ This research included people who have adopted digital TV and were already aware of the implications and practicalities of switchover – 50% of people disagreed with the policy. Such views cannot simply be explained away in terms of a lack of consumer knowledge and there is clearly something of a mismatch between Government’s attitude to switchover and that of the public, together with a failure to appreciate the reasons behind consumers’ concerns.
- 164 At the heart of the issue lies the Government’s cost-benefit analysis (CBA). The CBA is a core element of the Digital Action Plan, and central to any future decision about the timing of switchover. It models the costs and benefits of switchover for a range of possible dates allowing the testing of various scenarios, such as the impact of different levels of digital transmitter roll-out. On the basis of the CBA, it is calculated that the net benefit of digital switchover is in the region of £2 billion. This led to the current Secretary of State for Culture, Media and Sport announcing that digital switchover is now a matter of “not if, but when”.³⁴
- 165 Although the CBA suggests that there is a considerable net benefit to consumers from digital switchover, the Group has raised a number of serious concerns about this conclusion. It appears to conflate public/citizen and private/consumer benefits, as well as ignoring the role of the market in valuing consumer benefits. The existing CBA also appears to downplay consumer costs, because they are largely transfers within the economy, and also makes some questionable assumptions about the consumer benefits of switchover for existing non-adopters. Although consumer CBAs are standard procedure when considering the impact of public policy proposals on consumers, such an exercise has not been undertaken for digital switchover. This section critiques the existing CBA and proposes that a consumer CBA be developed.

Costs

- 166 It is important to note that the CBA is a net benefit analysis, and as such it excludes a number of key aspects of the cost of switchover to consumers. Firstly, it excludes costs which are identical in both digital and analogue scenarios (such as the normal replacement cycle of household television sets). It also excludes transfers of value within the economy, including those from consumers to industry (e.g. when consumers buy digital equipment). The costs borne by consumers who have already switched to digital prior to switchover are also not included in the calculations.
- 167 Consequently, the only consumer costs which are considered are the penalty costs of forced conversion, which will only be applicable to a minority of consumers. This is traded-off against

³³ Scientific Generics *ibid.*

³⁴ Tessa Jowell Speech to RTS biennial convention, 18th September 2003.

a value placed on the assumed benefits of switchover to consumers, which the model assumes are applicable to the majority of consumers. This raises a number of questions about the methodology used for the CBA, the assumptions it incorporates, and the validity of the outcomes, which are explored below.

- 168 The CBA estimates the net penalty costs of forced conversion at £25. This assumes conversion costs of £50 but an average benefit (assuming values are evenly distributed across the range 0-100%) of half that cost. These assumptions can be questioned.
- 169 Firstly, although the cost of boxes may well fall well below £50 before switchover, such boxes may be extremely basic which reduces the benefit (particularly if they do not include features such as automatic downloads and re-scans). Many households will require more than one box, and may also require an aerial upgrade, which multiplies the cost of conversion (but not the benefit). Thirdly, the average benefit to consumers for forced conversions is likely to be considerably lower than 50%, since the perceived benefits of digital television are not normally distributed across households, and unconverted households are likely to be those who least value digital television.
- 170 There are also the questions of how many consumers these penalty costs will apply to (i.e. how many forced conversions are necessary) and who will bear these costs. The number of forced conversions will impact heavily on the penalty costs. Estimates of the proportion of consumers who will refuse or be unable to go digital prior to switchover range between 10-20%.³⁵ The number of forced conversions will be significantly higher in areas where DTT coverage does not exist prior to switchover and in some cases may include entire communities.
- 171 The model does not allocate the costs of the forced conversions, for the pragmatic reasons that it is not necessary for the purposes of the calculation (although the total cost will vary according to economies of scale unless the boxes are bought individually) and the potential deterrent effect on voluntary switching (fewer people would buy a box if Government announced that it would give them away before switchover). Nevertheless, the issue of “who pays” is significant in terms of the overall costs and benefits to consumers.
- 172 For these reasons, it is likely that the CBA greatly underestimates the penalty costs of switchover for consumers, by underestimating the costs and overestimating the benefits. Although the CBA may address some of these issues (for instance the proportion of homes requiring an aerial upgrade is factored into the calculation), it is unclear whether and how this has been done. It would be useful to know what penalty cost assumptions were used in arriving at the £2 billion net benefit figure, and the sensitivity of the model to variations in penalty costs.

Benefits

- 173 Central to the CBA is the calculation of the benefit of digital switchover to consumers. Not only is the net benefit calculation extremely sensitive to variations in the estimated value of released spectrum, but the method of arriving at these estimates is controversial.

³⁵ Guardian 17th December 2003 p3.

- 174 Estimates of the value of released spectrum are based on research done by the Radio Communications Agency on the value which consumers place on various spectrum uses. This research was undertaken in 2001, prior to the failure of ITV digital and the launch of Freeview, and not specifically for the purposes of the CBA. Rather than asking consumers directly about the value of spectrum (an abstract and arguably pointless exercise), the CBA calculates it on the basis of how consumers value existing spectrum uses, such as TV and radio. There are a number of concerns about this approach.
- 175 Firstly, the value which consumers place on existing spectrum uses may not equal its reuse value. Under conditions of spectrum scarcity it is used for high-value purposes such as broadcasting, but it may be reused for applications which consumers do not value so highly. Secondly, the value of spectrum depends on the conditions for its reuse, and cleared analogue TV spectrum may only be available for broadcasting, or may be allocated to other services from which consumers do not directly benefit. Thirdly, if the spectrum is reused for broadcasting, it is important to note that a large number of consumers do not value additional services as highly as they value existing ones (i.e. they don't want extra channels). Even for consumers who want additional services, the value of spectrum reuse tends towards a limit rather than increasing incrementally, so the "additional value" from reuse is also limited.
- 176 It is also unclear whether the benefit calculation is for the population as a whole, or whether the calculation only relates to those who are forced to switch, or whether the two are included and weighted. Calculating the benefit for the population as a whole would be inconsistent with the penalty cost (which is estimated for forced conversions only) and would include a large number of people who have already switched and thus have little to gain from switchover itself, except from the reuse of spectrum for other purposes.
- 177 For these reasons, it is likely that this approach to the calculation overestimates the benefits to consumers, and conflates the benefits of going digital (as perceived by consumers who have already switched) with the benefits of the switchover policy itself.

Conclusions

- 178 Although the CBA is a welcome exercise, the approach used appears to overestimate the benefits and underestimate the costs of digital switchover to consumers. Whilst it is politically advantageous to estimate the value of released spectrum using consumer attitudes rather than market or other valuations, the methodology appears to be flawed and it ignores many consumer costs (because they are not net transfers). Effectively it defines how consumers "ought" to value switchover as citizens, rather than its actual value to consumers, and in particular those who are unconvinced by the benefits.
- 179 For these reasons, when the CBA was being developed, a number of groups representing consumers argued that there should be more explicit reference to the actual costs of switchover for consumers. While the net benefit approach remains a useful one, a parallel consumer cost-benefit analysis should be developed. This is common practice in regulatory decision-making. A consumer CBA would allow Government to address the following issues: the distribution of costs and benefits of switchover (who wins and loses); the overall costs of switchover for consumers; the impact of targeted interventions (i.e. vouchers etc); and the effect of switchover timing on the costs and benefits to consumers.

- 180 A consumer CBA should also allow a focus on specific consumer groups and regions as well as the national picture. It would provide an overarching framework for the existing tests, allow modelling of the impact of various public policy interventions, and enable consideration of how the costs to consumers vary according to the proposed switchover dates. For instance, net consumer costs would be low if idTVs became commonplace soon and had largely replaced analogue TVs by a 2012 switchover date.
- 181 The existing CBA should also be revised, addressing the concerns raised above and making the process and assumptions more transparent. In particular, the allocation of specific costs and benefits should be made clearer. This should include the recognition that late adopters of digital television are likely to value additional services less than early adopters, and that the reallocated spectrum is unlikely to be reused for additional TV services.

Summary of recommendations

- 182 The Group recommends the following:
- Government should develop a consumer cost-benefit analysis (CBA) to gain a greater understanding of the impact of the timing of switchover on the costs to consumers, the consumer criteria, and the potential impact of various policy options.
 - The existing CBA should also be revised, addressing the concerns of this Group and making the process and assumptions behind the CBA more transparent.

Chapter 8: Consumer consultation

Introduction

- 183 The Expert Group has been asked to advise Government on matters relating to a public consultation on digital switchover. Although we welcome the Government's intention to consult consumers, Government needs to be clearer about why it wishes to launch a public consultation and the matters on which it intends to consult consumers. Until these questions have been addressed by Government, it is not possible for us to prepare parts of the consultation paper, as originally proposed.
- 184 Our advice therefore focuses on a number of general principles rather than the detail of the consultation. Firstly, consumers need to be consulted at key stages, both before switchover is announced, and again before switchover takes place. Secondly, consumers have to be adequately informed if they are to participate in any consultation effectively. Thirdly, appropriate methods of consultation need to be used, recognising the diversity of consumer needs, concerns and views about digital switchover, and the need to consult some groups of consumers separately according to circumstances. Finally, in seeking consumer views, it is important to distinguish between, and recognise the complementary roles of, formal consultation processes, direct consultation with consumers, consumer research and consultation with consumer representatives. These issues are explored in more detail below.

Consulting consumers

- 185 As this report demonstrates, there is already a large body of research evidence about consumer needs and concerns relating to analogue switch-off. The consumer criteria and the cost-benefit analysis also provide some form of a link between consumers and the timetable for switchover. Nevertheless, although these are important ways of considering the consumer interest, they are not a substitute for proper consultation. It is important that consumers and their representatives are fully consulted about the policy, process and timetable for digital switchover. This should take place at two key stages: before switchover is announced, and during the implementation process before switchover takes place.
- 186 Ofcom and the BBC, among others, have argued that it is time to move from planning to the implementation of digital switchover, and the Government has recently invited various stakeholders to work together to establish an appropriate timetable. All stakeholders, including individual consumers, should have the opportunity to input their views through a public consultation on the timetable for switchover. In particular, if the Government considers that it may be necessary to withdraw from the undertaking that the timetable for switchover will not be set until 70% take-up is reached, this should be clearly stated and consulted upon. As argued below, given the current extent of consumer confusion about digital switchover, such a consultation cannot happen before an effective public information campaign is in place.
- 187 Once the timetable for switchover has been set, a further series of consultation exercises should take place to ensure that consumer concerns are identified and addressed during the

implementation of analogue switchover. The consultation process should take into account different circumstances, such as variations in coverage, the platforms available in each region, income levels, housing types (i.e. proportion of tenants and those in multiple dwelling units), the rural/urban mix, and the issues faced by older and disabled people. To this end, a series of deliberative consultations should be undertaken on a regional basis and with specific vulnerable groups along the lines proposed below. These would focus on identifying and finding solutions to consumer concerns, and would help to ensure that best practice is shared between regions during the transition process.

- 188 Consumers cannot participate effectively in any public consultation process unless they are properly informed about the issues on which they are being consulted. This is a significant challenge, given the complexity of the issues at stake, and the existence of significant technical and policy constraints. This requires that the consultation is backed by clear information, which presents the issues in an unbiased way, according to the principles set out in Chapter 5. Given the importance of consumers being properly informed, in the context of existing consumer confusion about digital switchover – demonstrated most recently by the DTI/Generics research – direct consultation with consumers is likely to be a discredited and unhelpful exercise at present. There are broadly two options available to Government in order to ensure that consumers are sufficiently well-informed to participate effectively in the public consultation process.
- 189 The first option would be to launch a straightforward public information campaign to inform consumers along the lines of a traditional written or questionnaire-based consultation and then consult on a series of policy options. Given the complexity of the information and options which need to be considered, it is unlikely that this approach would work unless accompanied by detailed information. This would provide incentives for Government and other stakeholders to provide detailed explanations of the switchover policy and process to consumers, and would give all consumers the opportunity to comment. However, such processes typically suffer from low participation rates, and can exclude those who have difficulties in participating effectively in formal consultation exercises.
- 190 Alternatively, Government could employ other consultation processes, such as citizens' juries. Because such methods are deliberative in nature, providing the opportunity for people to work through and ask questions about the issues on which they are being consulted, they are well-suited to the evaluation of complex information and options. This approach would also have the merit of allowing Government to directly consult specific groups, such as older and disabled people, and to consult regionally and sub-regionally. It would also allow the consultation to be run differently according to circumstances, for instance depending on whether there is existing digital terrestrial coverage or not. Because of the limited numbers who can participate in such processes, it would be important to support this approach with quantitative research, to ensure that the results of the consultation are representative of wider opinion.
- 191 The complementary roles of direct consultation with consumers and with representative groups needs to be recognised. It is important not to draw a false distinction between the two, since the views of the organisations represented on the Expert Group are largely based on research and direct contact with consumers and viewers. There may be significant barriers to individuals participating effectively in any public consultation, particularly for groups such as

older and disabled viewers. As well as representing their views, representative organisations have strong links to such user groups, which can help facilitate direct consultation. Government should work closely with consumer and user representatives, at both a national and local level, in devising and carrying out any public consultation exercise.

Summary of recommendations

192 Before switchover is announced:

- Government should carry out a formal public consultation exercise on a regional and sub-regional basis about the policy, timetable and process for analogue switchover.
- This should not take place until after the launch of a public information campaign in order to ensure that individual consumers are properly informed and are able to participate effectively.

193 Before switchover takes place:

- Government should carry out a series of deliberative consultations, such as citizens' juries, on a regional basis and with vulnerable groups, in order to identify and address outstanding consumer concerns during the implementation of analogue switch-off.
- Government should ensure that all consumers have the opportunity to participate effectively in the public consultation. To encourage individuals to participate, written documents should be produced with brief summaries and in a range of formats and languages (including Braille, sign language and audio on request), and any alternative consultation processes should be fully accessible.
- Government should work with organisations which work with and represent consumers – including older and disabled people, rural and isolated communities, low income groups, regional, local and tenants' organisations – in informing and consulting the public about analogue switch-off.

Glossary

Access services	Audio description, sign language, subtitles
Aerial Band	Aerials are classified into five groups, four of which are subgroups each covering part of the TV band of frequencies, i.e. A, B, C/D, E and K while group W is wideband
Analogue	A means of broadcast transmission whose signal levels are varied and analogous to those captured by the camera and microphone
Audio description [AD]	An ancillary component associated with a TV service which delivers a verbal description of the visual scene to aid the understanding and enjoyment, not necessarily exclusively, for viewers with visual impairments. The description is by voice only and typically confined to gaps in the normal programme narrative
CA	Consumers' Association
CENELEC	European Committee for Electro-technical Standardisation
Commercial broadcasters	In the context of this document, those broadcasters who provide services either free-to-view or via subscription and which do not form part of Public Service Broadcasts [PSBs]
DAB	Digital Audio Broadcasting
DC	Design Council
DCMS	Department for Culture, Media and Sport
Dexterity	The ability to handle equipment such as remote control buttons.
Digital	Conversion of video and audio signals into binary [a series of 0's and 1's]. Provides sharper, clearer and faster transmission in less spectrum space than analogue
Digital Action Plan	A Government project intended to enable switchover to take place
Digital equipment	Any equipment which enables viewers to receive digital services
Down-leads	Coaxial cables which carry signals from external equipment e.g. aerials
Downloading/Re-scanning	Automatic updating of equipment by service providers/manufacturers
DTI	Department of Trade and Industry
DTT	Digital Terrestrial Television
DTV	Digital TV

EPG	Electronic Programme Guide
FCC	Federal Communications Commission (regulates communications in the USA)
Free-to-air services	TV channels which can be received without subscription
Generics Group (Scientific)	An integrated technology consulting, development and investment organisation
GfK	A German market research institute with a UK office
idTV	Integrated Digital TV (set)
Installation wizard	Automatically sets up and programmes new equipment
Integrated Reception Systems (IRS)	An installation system which provides digital and analogue services to individual homes within Multiple Dwelling Units
Interactivity	A digital service which – in its most basic form – enables viewers to select additional information of their choice from a special menu, rather like an advanced form of Teletext
ISBA	Incorporated Society of British Advertisers
ITC	Independent Television Commission – one of the five regulatory bodies incorporated into Ofcom at the beginning of 2004
Modulation	A system whereby transmission of electrical signals can be impressed on a carrier frequency for communications
Multiple Dwelling Units	For e.g. flats, hostels, hospitals, prisons, residential homes, sheltered housing
Multiplex	A number of digital television or radio channels multiplexed onto a single broadcast channel. Four or more may be broadcast in the space of an analogue channel (but viewed independently)
Ofcom	The Office of Communications which regulates television and telecommunications
Pay-TV	Whereby the viewer pays for the reception of a service either by a monthly subscription or paying to view a single programme
Platform	A means of receiving services either by terrestrial TV, cable or satellite
PSB	Public Service Broadcaster – channels 1 through to 5, plus BBC3, BBC4, BBC News24, BBC Parliament, S4C, S4C2, CBBC and CBeebies
QAM	Quadrature Amplitude Modulation. A sophisticated modulation technique using variations in signal amplitude that allows data encoded symbols to be represented in different ways

RNID	Royal National Institute for Deaf People
SCART connections	A 21-way industry standard cable, socket and plug enabling a variety of audio-visual equipment to be connected together
Simulcast	Simultaneous broadcast of analogue and digital channels
Spectrum	The frequency range within which services are transmitted
Stakeholders	Everyone with an interest in the subject – e.g. manufacturers, service providers, retailers, consumers
STB	Set Top Box
Talking Teletext	Conveys audio information from Teletext pages verbally for visually impaired people
TEG	Technical Equipment Group – part of the Digital Action Plan
Terrestrial	Broadcasts achieved by land based transmitters and received by aerials. The extent of their coverage is determined in part by transmitter power, the frequency used, and the local topography
VCR	Video Cassette Recorder

Appendix A: Membership of the Expert Group

The following were appointed as members of the Expert Group:

Michelle Childs	Chair (until Mar 04)	Consumers' Association
Denise Evans		Royal National Institute of the Blind
Carole Garfield		Action with Communities in Rural England
Katie Hanson		Sense
Alison Hopkins		National Consumer Council
Gretel Jones		Age Concern
Mark Morris		RNID
Ruth Myers		Former Secretary, Deaf Broadcasting Council
Vincent Porter		Voice of the Listener and Viewer
Roy Staines		Sense
Gerry Stallard		RNID
Allan Williams	Chair (from Mar 04)	Consumers' Association

The Group is grateful to the following experts for providing information and advice:

Greg Bensberg	Ofcom / Spectrum Planning Group
Brian Haesler and Alan Watson	NTL
Caroline Jacobs	Research Institute for Consumer Affairs
Jeremy Klein	Generics Group
Phil Lewis	GfK
Henry Price	Technical and Equipment Group
Michael Starks	Digital Action Plan

The Group also wishes to thank officials from DTI and DCMS, the DCMS secretariat, and Sarah Howe, for their assistance during the preparation of this report.

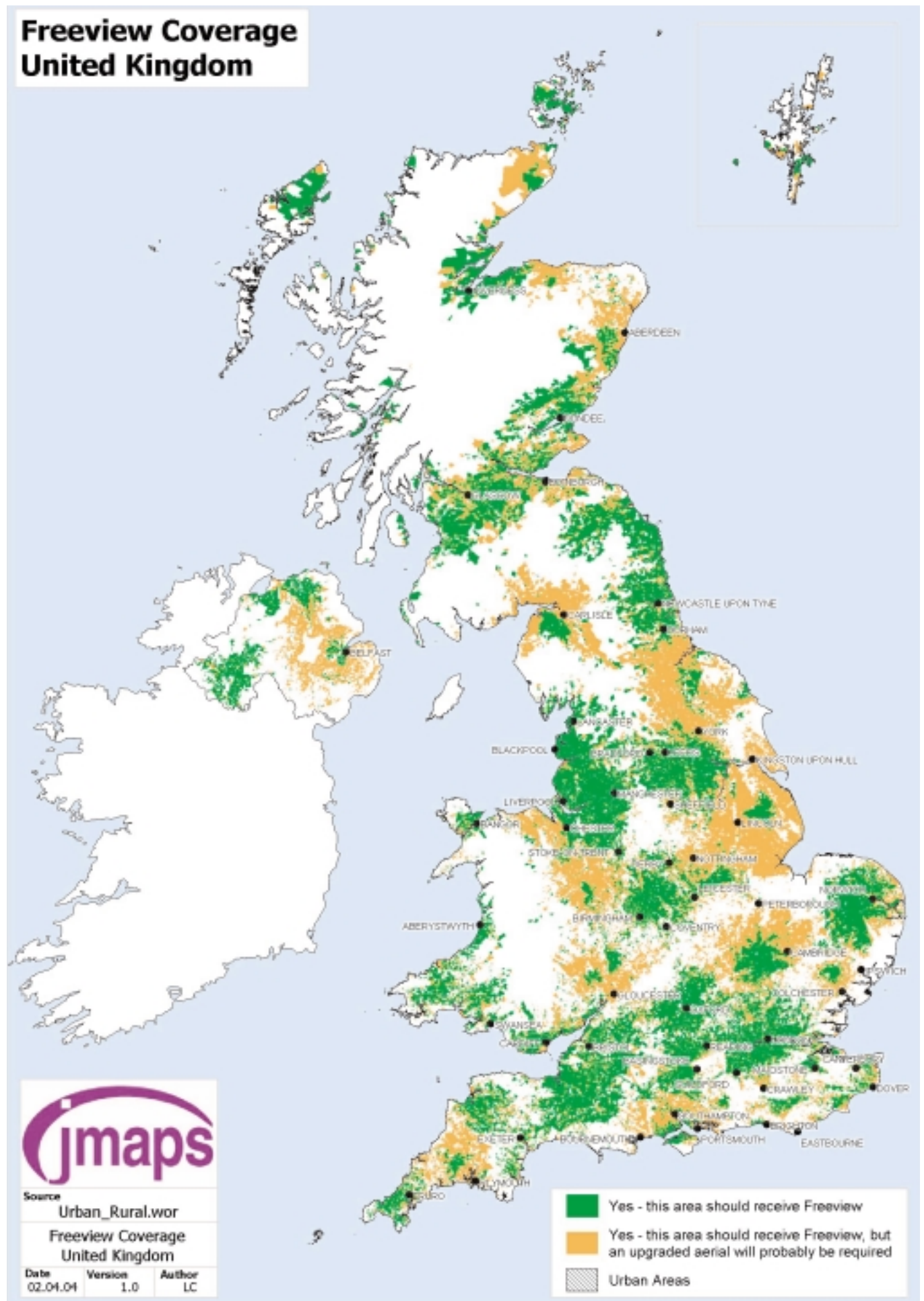
Appendix B: Issues affecting rural consumers

Introduction

- 193 It has been recognised that many groups of consumers face multiple barriers in their path to digital switchover, including low income consumers, older and disabled viewers, and those living in rural areas. The needs and concerns of most of these groups have been largely identified by existing research, but there is something of an evidence gap in relation to rural consumers, particularly communities in remote areas. Although the existing coverage and affordability criteria provide some protection to these groups, the Expert Group was keen to investigate the issues facing rural communities in more detail.
- 194 Rural consumers potentially face a number of barriers to switching to digital television: average rural incomes are typically lower; coverage is more likely to be poor for analogue television, and non-existent for digital terrestrial television; topographical factors also affect reception in mountainous regions; and platform choice is likely to be more restricted. Isolated rural communities are among those who are likely to find analogue switchover most difficult, for instance because they are more likely to live in areas where there will be no digital terrestrial reception until switchover takes place, and where access to information, advice and support is also likely to be more limited. Of course, these issues are not confined to rural communities, and indeed some (such as those in south east England) will be in a similar situation to those in urban areas.
- 195 Nevertheless, it is important to identify those most at risk in order to ensure that the policy framework addresses their needs and concerns. Recognising the danger that national totals can hide significant inequalities, the Viewers' Panel previously recommended that the coverage and take-up targets should be assessed separately for vulnerable groups. Accordingly, the Expert Group asked DCMS to commission research into the issues facing rural and isolated communities, focusing on the existing coverage and take-up tests. This was undertaken by GfK and JMaps through further analysis of data which is collected on a quarterly basis. Unfortunately, data was not available for Northern Ireland.

Coverage

- 196 Coverage in rural areas is significantly lower than in urban areas. 37% of rural households have no DTT coverage at present, compared to only 17% in urban areas. Currently only 32% of rural households are likely to receive digital television without requiring an aerial upgrade, compared to 57% of homes in urban areas. Rural consumers are also more likely to require an aerial upgrade in order to get existing DTT services (31% rural compared to 25% urban) with the associated costs that this brings.
- 197 As the coverage map below illustrates, the differences in coverage between urban and rural areas are even more marked away from large metropolitan centres and south east England (although this does not take account of differences in population density). This means that consumers in such areas are even less likely to have access to digital signals than the national averages above suggest, demonstrating the importance of measuring coverage on a regional and sub-regional basis.



Take-up

- 198 Take-up of digital television appears, at first glance, to be similar to that in urban areas, at around 53% of households. Inevitably, a larger proportion of rural households are BSkyB subscribers than in urban areas (38% rural compared to 27% urban) and very few have cable due to the lack of infrastructure (3% rural compared to 17% urban). DTT take-up is similar between urban and rural areas, at around 13% of rural homes, although this is likely to hide the effect of differences in coverage between rural areas, suggesting that take-up may in fact be higher than in urban areas, possibly due to previous poor analogue coverage in rural areas where DTT is available.
- 199 Differences in take-up between urban and rural areas are more marked when the data is analysed on a regional basis, grouped by ISBA region. For instance, in Scotland, rural digital take-up (57% of homes) significantly exceeds that in urban areas (50% of homes), and a far greater proportion of homes use the satellite platform. The extent of terrestrial digital and even analogue coverage is likely to be a significant factor in this finding.

Conclusions

- 200 Although this research has largely confirmed the Expert Group's expectations about the differences in coverage and take-up between rural and urban areas, it is useful to be able to quantify these differences. The research suggests that, although some specific measures may be appropriate (e.g. in areas of poor analogue and marginal DTT coverage), the majority of issues affecting rural consumers will be addressed through policy measures which are not specifically targeted particularly at rural groups (such as better information available locally and improved coverage). Recommendations relating to the needs of rural consumers are therefore included in the main body of the report.
- 201 This exercise also demonstrates the usefulness of applying all three consumer criteria at higher resolution, focusing on specific groups who may face higher or multiple barriers to adopting digital television. National averages can disguise significant inequalities between and within groups, which need to be addressed by the policy framework. Often it is those who are effectively "invisible" within national averages who will be in greatest need of protection during the transition to digital switchover, such as those in isolated rural communities. Further research is needed to ensure the effective targeting of policy measures to assist vulnerable consumers, as well as ongoing monitoring to assess the effectiveness of these measures. Recommendations on addressing the needs of vulnerable groups are included in the main report.

Appendix C: Research on consumer issues

Summary

202 The body of evidence on consumer concerns and needs relating to digital television has grown substantially over the last few years. There is now something of a consensus about the issues which need to be addressed, if not about how and by when this might be done. The summary of research below was prepared for the Expert Group in July 2003, and represents a snapshot rather than a systematic literature review. Since this list was prepared a number of key research reports have been issued, including significant reports by Generics/DTI, Ofcom and the BBC. Quarterly updates on take-up are also prepared for Government. The Expert Group has recommended that such data should be published regularly to provide a measure of progress towards switchover, and to ensure transparency when it is determined that the consumer criteria have been met.

Management Report On Digital TV Uptake: Prepared for the Department Of Trade & Industry (Monthly Retail Audit For May 2003 & Consumer Panel Data for March 2003) – Phil Lewis & Samantha Powers, GfK, (June 2003)

- Analysis of GfK Lek-Trak retail audit and ConsumerSCOPE consumer panel data:
 - a) UK is biggest European market for Home Entertainment equipment
 - b) Strong DVD led growth in leading edge markets, and underlying importance of widescreen sets – particularly in Dig. TV homes.
 - c) Freeview growth is still strong, 8 months after launch – more brands entering and giving strong marketing support.
 - d) Freeview sales impact directly on Sky Digital – now facing strong loss of market share.
 - e) Freeview has achieved relatively wide distribution – has penetrated the Independent sector.
 - f) Key reason for Freeview take off is *“WANTED MORE CHANNELS BUT DID NOT WANT TO PAY SUBSCRIPTION”*
 - g) Older profile for Freeview – including older AB/C1 homes – (sample of 193 respondents in QR4 ‘02.)
 - h) 41 million TVs left to switch to Digital reception.
 - i) About a quarter of multi-channel homes have additional sets linked to the same or another platform.

Standardisation Requirements for Access to Digital TV and Interactive Services by Disabled People: Final Report to CENELEC on TV for All

– *Gerry Stallard, (December 2003).*

- Investigates the question of digital TV usability, with respect particularly to older people and those with disabilities. The analysis covers various issues concerning assistive services and the relevant technology, before concluding with recommendations for the future: –
 - a) Main forms of assistive services on analogue and digital platforms,
 - b) Transmission and Decoding of Assistive Services,
 - c) Receiver Terminals, Peripherals and Interactive Equipment,
 - d) Electronic Programme Guides (EPGs) and Navigational Menus,
 - e) Production of Assistive Services,
 - f) On-Screen Displays,
 - g) Interoperability,
 - h) Recording Equipment,
 - i) Retention of Recordings,
 - j) Promotion of Assistive Services.

BBC Digital Changing the Face of TV – BBC, (June 2003).

- Describes the digital TV market before the advent of Freeview.
- Provides statistics relating to Freeview's a) uptake and current market position, b) profile of consumers, c) attractiveness to those consumers, d) viewing ratings, e) customer satisfaction.
- Outlines the BBC's future strategy for Freeview.

Initial Report on the INtouch Kirklees Digital Television Project

– *Colin Smith, University of Huddersfield & William Webster, University of Stirling, (April 2003).*

- An initial evaluation of the INtouch Kirklees digital TV project: a pilot project led by Kirklees Metropolitan Council and partners to work closely with the residents of a small number of disadvantaged communities in the provision of locally focussed electronic public services, delivered via digital TV.

'Set Top-Boxes on Test' – All Change, (May 2003).

- Review of six Freeview STBs on the market, rating them by price, features and usability.

Human Aspect of Digital TV: Progress Report – DCMS, (24th June 2003).

- Summary of usability difficulties faced by older users.
- Discussions of what recommendations should be made on the basis of the usability audit's findings: specific example taken of accessing subtitles.
- Findings of focus groups researching the attitudes of the reluctant adopters strand; must not confuse non-adoption with resistance.

Human Aspect of Digital TV: Progress Report – DCMS, (20th May 2003).

- Revision of Ipsos Quest survey.
- Summary of preliminary findings of usability audit for special needs strand. Continuing research into the needs of older users.

Human Aspect of Digital TV: Progress Report – DCMS, (24th April 2003).

- Outlines progress in meetings with various stakeholders.
- Work on a 'usability audit' for the special needs strand of consumers is initiated.
- Hypothesis for focus groups to investigate the mindset of reluctant adopters.
- Sets out work programmes for two reports into 'usability vs. adoption':
 - a) 'Inclusivity Issues and Guidelines For Digital TV',
 - b) 'Human aspects of DTV adoption'.

Human Aspect of Digital TV: Progress Report – DCMS, (27th March 2003).

- Report on activities; establishing need for project to build on rather than replicate the research of the Easy TV and Go Digital projects.

A Report on Progress Towards Switchover (Final) – ITC/BBC, (April 2003).

- Report outlines the progress to date of the three criteria (availability, accessibility, affordability,) and examines the implications for switchover.
- Progress to date: –
 - a) Since the launch of digital TV services in 1998, a good start has been made towards meeting the Government's criteria.
 - b) Competition has seen the introduction of a wide range of packages; nearly all viewers have access via at least one delivery platform. A growing range of low-cost STBs is now on the market.
 - c) Take-up stands at c. 40% of households.

- d) Temporary uncertainty regarding DTT arose in 2002 due to the demise of ITV digital, but has now been resolved with the launch of Freeview.
- e) The BBC has recently announced its intention to broadcast in the clear on digital satellite, instead of using BSkyB's encryption services.
- Implications for switchover: –
 - a) These changes mean it is a difficult time to make firm projections for the development of digital TV.
 - b) There is much optimism in the marketplace about the future of Freeview. Early performance data are encouraging, and as more sales data becomes available this will enable firmer projections.
 - c) This document suggests a take-up range to 2007 (paras. 146-9) which suggests that the Government's criteria are unlikely to be met to enable nationwide switchover in the early part of the 2006-10 'target window'.
 - d) However, the projections are based on a market model only and make no assumptions about policy intervention. They do not include the potential positive impact of actions the Government might take, e.g. announcement of a firm switchover date, coordinated public information campaign, etc.

Digital Television in the UK: Statistics Options (Paper for Project Team Meeting 27/03/03 – David Fuhr, (March 2003).

- This paper scopes out options for statistical sources on Digital TV take-up, equipment sales, and equipment deployment. Outlines existing (ITC, Intellect) and future (GfK, ONS) sources of data.

Go Digital: Key Findings – Members of the Go Digital Project, (14th April 2003).

- Go Digital was a landmark collaborative research project to study the effects of complete conversions of around 300 households to digital TV reception. It examined:
 - a) Expectations and reactions to the conversion to digital,
 - b) Social and marketing barriers to uptake of digital TV,
 - c) Commercial and technical issues associated with transition to digital.
- Even the digitally disinterested were largely won over by the experience and were shown not to be a single, homogenous group.
- The most attractive features of digital TV were:
 - a) Increased channel choice,
 - b) Enhanced picture and sound quality, with improved reception of Channel 5,
 - c) Increased convenience of access to content, (including PVRs, conveniently timed repeats, 24-hour news channels, EPGs, access to channels on any TV set).

- Interactive services were of interest to many participants, but were generally not perceived as a factor in persuading them to acquire digital TV, with the exception of EPGs.
- Self-installation of DTT proved straightforward for most households.

Developments in the UK Television Market – ITC, (March 2003).

- Section 2 (digital TV) gives statistics on the following:
 - a) Range of available digital basic pay-TV packages (satellite & cable),
 - b) Multichannel TV take-up by platform,
 - c) How people are watching free-to-air digital TV,
 - d) Take-up of digital TV compared with other home technologies,
 - e) Forecast take-up of digital TV,
 - f) Growth in broadband internet subscribers 2001-2002.

Multichannel TV: Q1 2003 – GfK, (January-March 2003).

- GfK statistics on 'Acquisitions for Great Britain to 31st March 2003: Satellite & Digital TV':
 - a) Quarterly disposals,
 - b) Outlet shares,
 - c) Previous status of acquirer,
 - d) Social class within platform,
 - e) Lifestage within platform,
 - f) Household income within platform,
 - g) Length of tenure within platform,
 - h) Type of tenure within platform,
 - i) ISBA regions within platforms,
 - j) Overlap TV regions within platform,
 - k) Reasons for choosing Sky Digital,
 - l) Reasons for choosing DTT,
 - m) Reasons for choosing Digital Cable,
 - n) Linked purchase of new TV set.

NOP Research – NOP World, (16th – 21st January 2003).

- Statistics showing the results of a survey into how many people utilise the television subtitling function, how often they use it, or why they do not.

Easy TV 2002: Research Report – ITC, CA, DC (*Design Council*), (*January 2003*).

- The ITC, CA and DC run Easy TV initiative aims to promote the need for easier to use domestic digital TV receiver equipment. The results of a major survey commissioned by ITC are analysed in this report.
- It showed that relative to analogue TV, digital TV is perceived to be difficult to use by the general public, which could present a significant barrier to digital take-up.
- The results presented in this report offer a good starting point in identifying best practice in the design and development of easy to use domestic digital TV equipment and services.

The Easy TV Initiative: Background, Research to Date and Future Plans (Presentation delivered to the Digital Action Plan Technology and Equipment Group) – *Dr Jonathan Freeman, Project Manager, ITC & Dr David Harrison, Deputy Director, Technology Group, ITC, (20th June 2002)*

- Outlines the background necessitating the Easy TV initiative: a) increasing equipment functionality, b) ageing population, c) design focus upon extra functions rather than ease of use.
- Summarises the objectives and research activities of the project, including statistics on the perceived ease of use of various household appliances, relative to digital television.

Multichannel Quarterly: Q1 2003 – ITC, (*January-March 2003*).

- (Reports every three months on the take-up of both analogue and digital multichannel TV in the UK.)
- 1 in 5 digital households now free-to-air, accounting for 60% of the growth in the UK digital TV market. By 31st March 2003 multichannel and digital TV penetration were estimated to have reached 48.6% and 43.9% of UK households respectively.
- DTT showed substantial growth with total DTT households reaching 1.6m.
- Sky added more than 143,000 paying subscribers, leading pay TV market with 6.4m UK households.
- Cable lost 37,458 subscribers resulting in a total of 3.3m UK households. However, digital cable households increased by 56,397 bringing the total no. to just over 2.1m.

Multichannel Quarterly: Q4 2002 – ITC, (*October-December 2002*).

- As of 31st December 2002 multichannel and digital TV penetration were estimated to have reached 46.8% and 41.4% of UK households respectively.
- Sky added more than 227,000 paying subscribers, leading the pay TV market with 6.3m UK households.

- DTT outperformed all other platforms in terms of growth, adding c. 300,000 households in Q4 2002. ITC estimates there are 1.3 Freeview homes in the UK.

Digital TV in Wales – *Welsh Consumer Council, (2002).*

- Chapter 1 looks at what digital TV has to offer Welsh consumers and outlines the costs involved.
- Chapter 2 examines survey data commissioned by the Welsh Consumer Council to show who accesses digital TV in Wales and how and why it is accessed.
- Chapter 3 discusses the future for digital TV and considers Government plans for analogue switch-off, consumer attitudes to digital take-up, and the potential of digital TV as a means of widening internet access.
- Chapter 4 sets out the conclusions and policy recommendations of the report.

Digital Television Project, First Technology and Equipment Group Report – *Henry Price, Chairman, DTP-TEG, (4th July 2002).*

- Summarises the work of the Technology and Equipment Group (TEG) since the start of the project in January 2002.
- It identifies a number of key technical issues that need to be addressed if UK conversion is to take place within the suggested timescale:
 - a) Set-top reception,
 - b) Aerial Installations,
 - c) Digital Converters,
 - d) Digital Recorders,
 - e) Interoperability.
- The report then outlines TEG's recommendations for a number of new work tasks for TEG and other DTP groups, including some outside the Action Plan.
- N.B. Many of the problems raised in this report have been addressed, or have begun to be tackled, since its publication.

Digital Television 2002, Final Report: Research Study Conducted for Department for Culture, Media and Sport – *MORI, (May 2002).*

- Investigates current and future take-up of digital television – uptake increased rapidly during 2002; projection that 65% of Britons will be digital viewers by 2007.
- Examines attitudes towards digital TV – growing familiarity, leading to awareness of both its benefits and its limitations (particularly the 'hidden' costs of subscription); greater awareness of analogue switch-off.

- Looks at the impact of digital TV on a) deaf and hard of hearing viewers, b) blind and partially sighted viewers. Concludes that the most important factor that will drive uptake in these groups is the availability of subtitling and audio-description on digital channels.

RNID Survey Results – RNID, (2002).

- Results of questionnaire mailed to RNID members. Findings divided into various areas:
 - a) Use of subtitles,
 - b) Viewing habits,
 - c) Multi-channel television,
 - d) Quality of subtitling on non-terrestrial channels.

NCC Digital report 2001 – National Consumer Council, (2001).

- Critique of the Government's Digital Action Plan, as published in 2001, from the point of view of the consumer.
- 'Free to Air and DTT': calls for clearer definition of the switchover tests; weighs up the growth potential of pay-TV and DTT; discusses the competition implications for consumers with no viable DTT alternative, in the absence of a competitive pay-TV market.
- 'Complexity and informed choice': calls for a long-term public information strategy, the prioritisation of retail staff training, and provision by Ofcom for the education of consumers in the digital environment.
- 'PSB and content pull': calls for a less piecemeal approach to development of digital PSB.

Digital Decisions: Viewer Choice and Digital Television – A report by the Viewers' Panel to the Secretary of State for Culture, Media and Sport, (December 2001).

- In the report's executive summary, the Viewers' Panel identifies, in the following categories, a number of key challenges facing Government before switchover can take place: –
 - a) Protecting and informing consumers,
 - b) Clarifying and improving the digital offer,
 - c) Removing barriers to adoption.
- The Panel goes on to welcome the Government's commitment to the three key tests, but calls for greater clarity in the definitions of availability and affordability to ensure transparency before switchover. It urges that viewers' and consumers' interests need to be central to Government policy.

- The report goes on to address the following issues, before summarising its recommendations: –
 - a) Viewers' attitudes to digital television,
 - b) Key factors for viewers considering digital television,
 - c) Key barriers for viewers ready to switch.

Turn on, Tune in, Switched off: Consumer Attitudes to Digital TV

– *Consumers' Association, (March 2001).*

- Results of CA survey, outlining the key factors, key drivers, and key constraints that determine consumer uptake of digital television.
- Identifies four key groups of consumers and examines the policy implications of those who *can't* or *won't* go digital.
- Highlights the issues requiring resolution before universal access can be reached: a) technology and coverage, b) spectrum-planning, c) public information campaign.
- Recommends that the Government place more emphasis upon delivering actual benefits for consumers.

The Expert Group is grateful to Sarah Howe for preparing this summary.



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PP 740 October 2004