Ferryside and Llansteffan
Digital Switchover Technical Trial:
Research on Vulnerable Households

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Prepared for

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Background

This executive report provides an overview of the research undertaken by Ipsos RSL on behalf of the Department of Culture, Media & Sport amongst the communities taking part in the digital switchover technical Trial in Ferryside and Llansteffan. This research consisted of phases including quantitative research techniques via postal questionnaires and in-home in-depth qualitative interviews with members from the trial area.

The overall objective of this research was to evaluate the human effects of a switchover to digital television, specifically with regards to how this would impact upon the elderly and/or disabled members of society.

When digital switchover occurs, the appropriate level of support should be provided to those who need it the most. To determine appropriate levels of support, this research set about observing behavioural patterns and analysing people's attitudes towards the switchover – especially regarding those within specifically defined 'vulnerable' groups.

In order to fully understand reactions to an enforced switchover to digital, a multi-phased programme of research was undertaken as follows:

- (Quantitative) Self-completion questionnaire to c.91% of all 475 Trial households (to benchmark attitudes prior to switchover)
- (Qualitative) In-depth interviews within 8 Trial households (to provide case studies of attitudes towards switchover amongst 'vulnerable' group, prior to switchover)
- (Quantitative) Self-completion questionnaire to c.91% of all 475 Trial households (to understand evolution of attitudes post switchover)
- (Qualitative) In-depth interviews with 9 Trial households (to revisit case studies and understand attitudinal shifts amongst 'vulnerable' group post switchover)

Whereas the purpose of the quantitative phases was to benchmark and measure changes in attitudes on a larger scale before and after digital installation, the intention of the qualitative phases was to provide detailed analysis on a more personal level.
The separate phases of research can be treated separately if desired, as they were looking at the same overall objective but from different perspectives, yet the main objective of this research trial remained consistent for all phases of research and each phase served to compliment the other.

1 Introduction

The following sections of this report contains the results of two postal surveys conducted by Ipsos-RSL on behalf of the Department of Culture, Media and Sport, in which the respondents were residents of Ferryside and Llansteffan, villages in West Wales where the digital switchover technical Trial was taking place. Advice was given to Trial households as to what equipment they would need to convert to digital TV. Some homes required particular set top boxes for connectivity or signal strength. Others needed advice on installing to very old TVs (no user manual) or complex existing equipment installations.

Trial households could either:

choose from a selection of 5 set top boxes, and 2 PVRs which were type-tested as 'fit for purpose' (e.g. MHEG, no proprietary software) and which were fully subsidised,

- A full subsidy for the Netgem set top box (the only set top box on the market with audio-description) was available to individuals who were vision-impaired.

- Twin tuner PVRs were used to convert TV/VCR 'clusters', allowing the user to record one programme while watching another.

or:

purchase any digital equipment of their choice from any retailer and claim a subsidy from the Trial to the equivalent cost of providing the Trial equipment described above,

or:

obtain digital satellite services and qualify for the equivalent (one-off) subsidy.

On 29 November 2004 digital transmissions from the Ferryside transmitter were switched on, and on March 30th 2005 the analogue transmissions were switched off.

The first survey was conducted in December 2004/January 2005, soon after digital installation had been completed, and the second stage was conducted in the latter half of April 2005, only two weeks after the analogue signal had been switched off.

The surveys were designed to provide a quantitative analysis of the trial audience's reaction to the switchover to digital television. Of particular interest was the level of support needed by vulnerable groups in their installation and subsequent use of DTV equipment. For the purposes of the analysis of these surveys, "vulnerable" has been defined as aged 75 or over and/or with a disability.

Specifically, the research had the following key objectives:

- To quantify the level of expected and actual difficulty with installation and re-scanning of equipment
- To identify the amount of information and assistance required for installation and re-scanning
- To gauge attitudes towards digital switchover
- To monitor problems experienced when operating new equipment
- To measure usage of and attitude to the various features of digital television at two stages in the trial
- To elicit opinions of picture and sound quality both pre and post analogue switchoff
- To compare results among the overall trial group to those of vulnerable individuals.

2 Methodology

Method Self-completion postal questionnaires

Survey Universe Households in Llansteffan and Ferryside that were taking part in the digital switchover technical trial.

The respondent to whom the questionnaire was addressed in each case was the household member with whom the majority of the correspondence had taken place in earlier parts of the trial, typically the head of the household or the partner of the head of the household. This is not therefore a survey which represents equally all individuals resident in the trial households. (See the respondent profile).

Fieldwork Period	Wave 1 Fieldwork - 16th December 2004 - 21st January 2005 Wave 2 Fieldwork – 16th April 2005 – 27th April 2005
Response Rates	Wave 1 – 423 questionnaires sent and 218 returned (of which 214 had already had digital equipment installed), representing a response rate of 51.5% Wave 2 – 473 questionnaires sent and 195 returned, representing a response rate of 41%.
Analysis & Weighting	Data processing of postal questionnaires by Ipsos-RSL Ltd. No weighting was undertaken on this survey

3 Respondent Profile

Since no weighting of the survey data was undertaken at either wave, it is important to bear in mind that the surveys are only representative of those households who returned questionnaires, and that where the data for both waves are compared, it may be that small differences in the profile of the two waves account for some of the differences between the data for Wave 1 and that for Wave 2. In particular, Wave 1 is more skewed towards male respondents and towards the vulnerable** group. It should also be considered that this is not a survey that equally represents all individuals in the trial households, but that the respondent in most cases is either the head of household or the partner of the head of household.

	Wave 1	Wave 2
	N=218	N=195
Male	65%	58%
Female	33%	40%
NA	2%	2%
18-34	5%	6%
35-54	28%	26%
55-64	29%	27%
65-69	6%	10%
70-74	9%	10%
75+	21%	19%
Deaf/hard of hearing	18%	16%
Partially sighted/blind	2%	4%

Physically disabled	5%	4%
Other disabled	2%	0%
Any disability	23%	21%
Vulnerable**	33%	29%
One person household	33%	34%
2+ person household	67%	66%

*** "Vulnerable" has been defined throughout as aged 75+ and/or with a disability*

4 Main Quantitative Findings

- 63% of households managed the initial installation without help from outside the household, and just 19% required the help of the trial team. 14% had help from a friend or family member outside of the household and 4% either had other help or they were not sure.

- 71% felt that they would be able to tackle the task on a future occasion perhaps due to their recent positive experiences from the trial.

- 66% of households re-scanned the equipment by themselves, whilst 27% needed to call in the trial team. 7% had a friend or family member from outside the household re-scan the equipment and 4% were unsure. (PLEASE NOTE: This was a 'multi-punch' question therefore the same respondent could have given more than one answer. The results will add up to more than 100%)

- 35% of those aged 65+ required trial team assistance for installation, 40% of the disabled and 37% of the vulnerable.

- 43% of the vulnerable group did not even consider tackling installation themselves.

- 52% of the vulnerable called in the trial team to re-scan their equipment.

- The confidence of the vulnerable to undertake the technical tasks themselves increased slightly throughout the trial.

- 90% of those who completed installation themselves considered it to be easy but those who did not were only half as likely to perceive it as such.

- Half of respondents would have been willing to pay for digital conversion at Wave 1 (an average of £30 amongst those willing to pay), with respondents aged 55+ more willing than others.

- Usage of the red button, the Electronic Programme Guide (EPG) and the remote control increased during the trial, as did perceived ease of use. The EPG and the remote control in particular became more indispensable as the trial went on.

- Amongst the vulnerable, the EPG really increased in popularity as the trial progressed, reaching almost the same level of usage as amongst the total sample.

- The picture quality of the digital services was judged as better than the analogue services had been by 82% and as much better by 64% of the total sample.

- Once analogue had been switched off, 71% felt that picture quality was better again, and 47% much better.

- Sound quality was judged to have improved at both stages but to a lesser extent.

- 62% of respondents were of the view that their television reception was at its best after analogue switchoff.

- Picture quality increased in importance as a perceived benefit of digital TV after analogue switchoff but the new channels available were rated as the most important benefit both before and after switchoff.

- Vulnerable respondents actually promoted picture quality to the top benefit (above new channels) after analogue had been switched off.

5 Detailed Reporting by Question

5.1 Confidence in ability to install equipment and re-scan after analogue switchoff

There are three areas of questioning where we have an opportunity to assess how the confidence of the individual respondent and the household developed during the trial.

5.1.1 Level of Confidence in household's/respondent's ability to install the equipment (Wave 1 Tables 2/3 – Q1b/2)

Of the 218 respondents to the Wave 1 questionnaire, 4 households had not yet had their digital equipment installed, leaving a base of 214 households where the equipment was in place.

Amongst the total sample, confidence in the ability of at least one household member to install the equipment was high at 63%, with over 1 in 5 feeling very confident that the household was up to the task. Male respondents expressed greater confidence than women (69% very or fairly confident vs. 48% of women). There were stark differences by age, with 31% of those aged 18-54 feeling very confident, 22% of those aged 55-64, 13% of those aged 65-74 and 9% of the group aged 75 or over. In line with this decline with age in the highest level of confidence, those expressing the lowest level of confidence rises from 4% amongst the 18-54's, to 13% of 55-64's, to 34% of 65-74's, and up to 51% of those aged 75+.

Respondents over the age of 75 also constitute the majority of the "vulnerable" group, with just 25 respondents out of the 71 vulnerable who are disabled in some way but not aged 75+. It is not surprising, therefore, that 47% of the vulnerable group should feel "not at all confident" about there being someone in their household who would be able to install the box (vs. 9% of those not classed as vulnerable). Amongst those with a disability, the equivalent figure was slightly higher at 52% (compared with just 12% for those with no disability). It should be noted that a slightly higher proportion of the disabled were the only

member of their household (42%) than was the case for the remainder, which may help to explain their lesser confidence. Those in a single person household were as likely as others to be "very confident", but less confident overall. In terms of personal confidence in their own ability to install the equipment, a quarter were very confident that they could do the job themselves, and just over two thirds confident to any degree; again the highest level of confidence came predominantly from the men, the younger people and the able-bodied.

5.1.2 Predicted Confidence in installing on a new television set (Wave 1 Table 11 – Q10)

With the experience of installation behind them, respondents were asked how confident they felt that they would be able to install any digital equipment on any new sets in the future without outside help. Amongst all respondents, the level of confidence in being able to install a set-top box without outside help had risen from 63% (when asked how they felt about their household's ability to install the box the first time around) to 71% when asked about the installation on any future sets, with more than double the number now claiming to be "very confident" (43% from 21% previously).

Of those who completed the initial installation themselves, 68% pronounced themselves "very confident" of being able to do the job again in the future, and a further 28% "fairly confident" of being able to do so, leaving just 4% as not confident. Amongst those who did not do the installation themselves, only 42% felt confident. However, 30% of those who had called in the trial team felt confident that they would be able to tackle the installation themselves next time. Those who were most likely to lack the confidence for next time around were women and the vulnerable groups.

5.1.3 Level of Confidence in household's/respondent's ability to re-scan the equipment (Wave 2 Tables 1/2 – Q1/2)

Although not a directly comparable task, it is interesting to note that the level of confidence that respondents felt in tackling the re-scanning without outside help, was very similar to that noted above relating to the predicted confidence for future installation of set-top boxes, and therefore higher than their initial confidence about tacking the first installation stage. Whilst 40% felt very confident that at least one person in their household would be able to complete the re-scan, 72% were confident to any degree. As before, confidence diminished with age, with 46% of those aged 75+ claiming to be not at all confident that at least one person in their household would be up to the job. Of those who were very confident, 83% went on to complete the job personally and only 5% needed to involve the trial team, with other respondents also mentioning that they got help from another member of their household and/or friends or family from outside of their household (respondents could choose more than one answer at the question 'Who actually re-scanned digital equipment in your household?', therefore the results do not add up to 100%). Of those who were fairly confident, 65% actually did the re-scanning themselves and 24% called in the trial team. Of the 41 respondents who were not confident to any degree, 15% turned out to be capable of doing the job themselves but two thirds needed the help of the trial team (caution small sample). Vulnerable respondents, and those aged 75+ in particular, were the least likely to feel confident that their household would be able to re-scan the equipment (8% very confident, 32% confident to any degree and 46% not at all confident). The level of "not at all confident" amongst vulnerable groups does actually reduce slightly at each of three stages outlined above, from 47% "not at all confident" at the earliest stage, to 41% predicted not at all confident for future installations to 36% not at all confident about the re-scan.

5.2 Did the household actually manage without outside help?

5.2.1 Who actually installed the set-top box? (Wave 1 Table 4 – Q3)

Over half of respondents (53%) actually went on to install the set-top box themselves, with 69% of male respondents and 22% of females doing so. Almost three quarters of respondents aged 18-54 tackled the installation themselves, dropping to 59% of those aged 55-64, 41% of those aged 65-74 and 22% of those aged 75+. More importantly, perhaps, in terms of the household's ability to cope without assistance, 63% of the households managed the installation without resorting to any help from outside the household, an exact match with the proportion who felt confident to some degree that their household could handle the task. Inevitably, there were some amongst the confident (15%) who did not in the end manage to keep the job within their own household, but equally there were some from amongst the less confident (28%) who did manage to complete the installation without help from outside the household. Just over three quarters of the total managed either by themselves or with help from the wider circle of friends and family, whilst just 19% required the services of the trial team.

Male respondents were more likely to install the box than women, only 39% of female respondents claimed that the task was tackled within their own household, compared with 75% of men, because a much higher proportion of female respondents were in single person households than the men (46% of women vs. 26% of men). This highlights the fact again that the household respondent for most of the liaison during the trial was male and that women were more likely to be the respondent only when either there was no man in the household or where the male household member was not the most suitable person to liaise with the trial team.

Those requiring the assistance of the trial team were more likely to be respondents aged 65+, 35% of whom used the services of the trial team for the installation. Four out of ten of those with a disability required trial team assistance, compared with just 12% of others, rising to 37% of those classified as vulnerable. Those in single person households had broadly the same likelihood as others to involve the trial team, but were more likely than others to enlist the help of the wider circle of family and friends.

5.2.2 Who actually re-scanned the equipment (Wave 2 Table 3 – Q3)

Whilst 59% of respondents re-scanned the equipment themselves, in a small number of cases this was with the help of another household member and in three cases with help from the trial team. In 7% of cases a friend of family member from outside the household was required and in 27% of cases the trial team, meaning that only 34% of households were not able to cope by themselves, a very similar proportion seen in the case of the original installation. Vulnerable respondents re-scanned the equipment themselves and called in the trial team in 30% and 52% of cases respectively.

5.3 How useful were the written instructions?

5.3.1 Steps taken before installation (Wave 1 Table 5 – Q4)

From the total sample, 72% read the help sheets, provided by the Trial Team themselves prior to installation, with 30% asking for advice or help from family and friends and 17% from further afield, whilst 7% claimed to need none of these forms of instruction.

Male respondents were the most likely to read the help sheets and the least likely to ask others for advice, with those up to the age of 64 having very similar likelihood to read the instructions, a likelihood which dropped from the age of 65+.

The disabled groups were less likely to read the instructions than others (58% vs. 76%), but more likely to seek other forms of help, with a very similar pattern for the vulnerable.

Of those who actually installed the box themselves, 88% had read the instructions first, compared with only 54% of those who did not do the job themselves. Of those who called in the trial team, 63% had first read the instructions.

5.3.2 Steps taken before respondent re-scanned equipment (Wave 2 Table 4 – Q4)

We can only compare the behaviour of those who actually did the job themselves, as at Wave 2 only those who had re-scanned the equipment themselves were asked what they had done beforehand. The majority of those who had re-scanned the equipment themselves had read the written instructions (83%) but only 26% had read the manufacturer's written instructions and 23% had attended the trial team clinic.

5.4 What proportion of those who did not do the job themselves even considered doing so?

5.4.1 Did non-installers consider trying to install the box themselves? (Wave 1 Table 6 – Q5)

Of those who did not tackle the job themselves, 40% never even considered doing so, 21% considered it but lacked the confidence, whilst 18% actually started the job but gave up. From the group who called in the trial team, 28% had started the job but had given up.

Women were the least likely even to consider doing the installation themselves, the appetite for doing so also diminishing with age, with 53% of those aged 75+ not even considering the task as within their capabilities. Similarly, 46% of the disabled and 43% of the vulnerable did not even consider tacking the job themselves.

5.4.2 Did non-scanners consider trying to re-scan the equipment themselves? (Wave 2 Table 6 – Q6)

Of those who did not re-scan the equipment themselves, 36% did not even consider trying to do so, rising to 57% of those aged 75+ (caution small sample). These levels are very similar to those seen in the case of the original installation.

5.5 Level of help needed

5.5.1 Level of help needed in installing box (Wave 1 Table 7 – Q6)

As noted above, 53% of respondents installed the box themselves and, of these, almost two thirds claimed that they needed no help at all in doing so, all but one of the remainder claiming that "some" rather than "quite a lot" of help was required. Of the total respondents, 37% classified themselves as needing no help, 29% some and 32% quite a lot.

5.5.2 Level of help needed in re-scanning equipment (Wave 2 Table 5 – Q5)

Again it is important to note here that this data is not directly comparable with the equivalent question from Wave 1 as only those who actually re-scanned the equipment themselves were asked at Wave 2 how much help they needed in doing so.

Of those who re-scanned the equipment themselves, 79% claimed to need no help at all, more than the two thirds of self-installers who claimed this at Wave 1. Of this same group, 17% claimed that some help was needed (3 of whom had called in the trial team) and only 2% needed quite a lot of help. Clearly these definitions were open to interpretation. Of the small base of 17 vulnerable people who re-scanned the equipment themselves, 14 did so with no help at all.

5.6 Perceived ease of completing the job

5.6.1 Perceived ease of installation (Wave 1 Table 8 – Q7)

Whilst overall 72% of respondents perceived the installation to be "easy" (23% very easy and 49% fairly easy), this rises to 90% of those who did the job themselves, with 35% describing it as "very easy", none describing it as "very difficult" and just 7% as "fairly difficult". Those respondents whose installation was done by another household member appear to have perceived the task in a similar way (caution small sample), but those who called in help from outside the household were around half as likely to perceive the installation as being easy. This may reflect the inconvenience of having to call in outside help rather than the installation process itself.

5.6.2 Perceived ease of re-scan (Wave 2 Table 7 – Q7)

Whilst around half of total respondents perceived the re-scan as being "very easy", this varied from two thirds whose re-scan had been done without help from outside the household to a quarter of those who had called in the trial team! Only 19% of those aged 75+ perceived the re-scan as being very easy. It would appear, as was the case with the original installation, that those who had to call in outside help automatically perceived the re-scan as more of a nuisance, and that this was reflected in their judgement of its difficulty.

5.7 Duration of the task

5.7.1 Duration of Installation (Wave 1 Table 9 – Q8)

The question referred to the duration of the task for all equipment in the household. On average, the installation took around 48 minutes (where values chosen for calculation of the mean were midpoints in the ranges shown on the questionnaire). This varied only slightly from 44 minutes for those who did the job themselves to 52 minutes for others (and 60 minutes where the trial team had done the installation, this longer period may be due to the time taken to explain the functions to the householder)

Where there was only one household member, the time taken was significantly less (38 minutes vs. 53 minutes for larger households). We assume that this correlates with the generally larger number of TV sets in larger households, or it may be linked to the larger number of distractions in larger households.

5.7.2 Duration of re-scan for main set only (Wave 2 Tables 8/9 – Q8/9)

As was found in the case of the installation, the overall figure of 84% who said that re-scanning took less than 30 minutes varied between those who did the job themselves and those who did not (93% vs. 67% of those who called in the trial team).

On average 2.5 pieces of equipment needed re-scanning per household, with fewer items in older households and where there was just one household member. This may explain why there was no obvious correlation between number of sets and likelihood to call in external help.

5.8 Most complicated aspect of Installation (Wave 1 Table 10 – Q9)

Over a quarter of self-installers felt that there was no complicated aspect to the installation (27% vs. 8% of others). In line with patterns observed earlier, male respondents were more than twice as likely as females to claim no complications (23% vs. 10%), with younger people in the same vein. Apart from this group, respondents were divided broadly equally across the other options suggested; understanding the instructions (13%), identifying the correct cables and sockets (18%), tuning the box into the television (21%) and operating the remote control (15%). The remote control was a particular issue for the very old and the disabled who comprised the vulnerable group.

5.8.1 Reaction to re-scanning instructions from trial team (Wave 2 Tables 10/11 – Q10/11)

Understanding the re-scan help sheets was perceived as a complication by 34% of respondents, rising to almost two thirds of those aged 75+. However, when asked specifically to rate them on their ease of use, only 18% rated them as difficult to follow (rising to 60% of 75+'s), with nearly three quarters of the total sample finding them unproblematic.

5.9 Amount would have been prepared to pay for digital conversion (Wave 1 Table 12 – Q11)

Wave 1 respondents were asked how much they would have been prepared to pay for help with digital installation (not including the costs of the equipment). Respondents were equally divided between those who would have been prepared to pay vs. not pay for digital conversion, with an average of £15 on a base of all respondents or £30 amongst those willing to pay. Unsurprisingly perhaps, those who had managed their installation themselves were less likely to be willing to pay (50% would pay nothing) than those who had needed the trial team (38% would pay nothing).

5.10 Usage of and attitudes to digital features (Wave 1 Tables 13- 24 – Q12/13)

Questions about usage of and attitudes to digital features were asked at both Waves of the research in order to understand how this would change over time and in relation to the actual analogue switchoff.

The least used feature of the digital package early on in the trial was **the red button** for interactivity, used by just 58% of respondents at the point of the first survey. Usage was significantly higher amongst men (65%) than by women (43%), and amongst 18-54's (68%) more so than older people (63% of those aged 55-64 and just 45% of those aged 65+). Respondents in the vulnerable group were also less likely than others to be taking advantage of this feature (49% vs. 63%).

However, amongst its total users use of the red button was perceived almost universally as easy to a greater or lesser extent, those pronouncing it difficult falling almost entirely within the vulnerable group.

In terms of attitude, the red button was regarded as a “nice to have” but not an essential feature, adding to the enjoyment of TV for 17% but indispensable already for only 4%. It also had the lowest level of understanding of all the listed features, 17% of respondents claiming an incomplete comprehension of the use of the red button (rising to 44% of those aged 75+).

The digital remote control was used by 88% of respondents, with 46% pronouncing its use very easy and 31% fairly easy, but with the usual patterns relating to gender, age and vulnerability. Whilst 80% of vulnerable respondents did make use of the remote control, only 57% found its use easy. It was considered indispensable by almost half of the vulnerable group, compared with 64% of others.

Experience of the electronic programme guide (EPG) was experienced and rated in very similar ways to the remote control, with 79% usage compared with 88% for the remote, and with 73% rating it as easy to use, perhaps surprising in view of the much lesser familiarity of the concept for those who have not previously been exposed to digital TV in their own home. Vulnerable respondents were significantly less likely to see the EPG as easy to use than others (49% vs. 85%).

Overall, however, the EPG was already a highly prized tool at this stage considering the relative unfamiliarity of the concept, with 30% saying that they used it every day and would not be without it. Men embraced it more than women, who were also less likely to understand it fully. It had clearly not been such a success with the over 75’s, only 7% of whom saw it as indispensable and 27% of whom did not fully understand it.

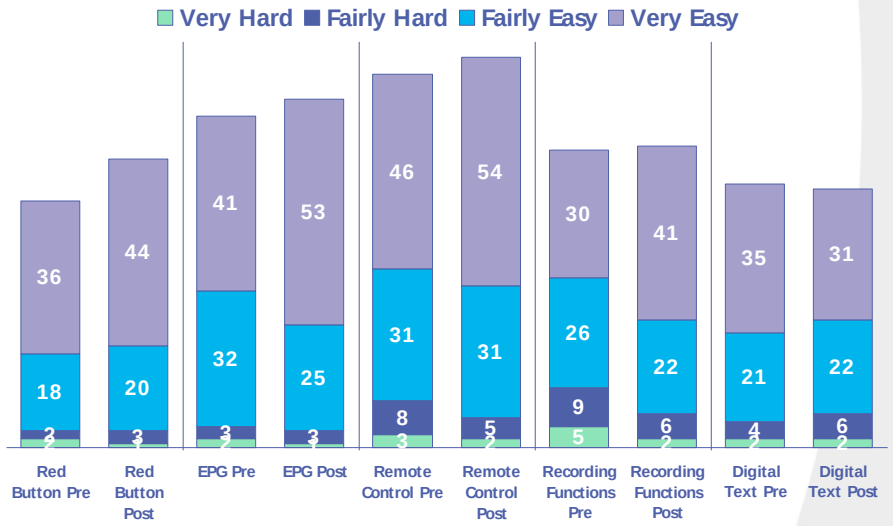
Recording functions were used by 70% of respondents before switchoff, and by just 59% of the vulnerable group, compared with 75% of others, with a significant decline in usage from the age of 65, as well as a significant second drop from the age of 75. These functions were declared “easy to use” by 56%, with the familiar pattern of the greater the age, the greater the difficulty. Whilst for all the younger age groups, more than half of the actual users found the recording functions easy to use, this was not the case for the users aged 75 and over, half of whom found their usage difficult. Again, appreciation and understanding of the recording functions diminished with age.

Digital text was used by 63%, with the sharpest decline in usage occurring between the 55-64 and 65+ age bands (70% and 45% respectively). The vast majority of users found digital text easy to use, even in the vulnerable group, although it should be noted that only half of this group had actually used this feature. Digital text was clearly seen as advantageous but was not frequently used, with a third of those aged 75+ claiming not to understand it fully.

5.11 Changes in usage and attitudes to digital features pre and post analogue switchoff (Wave 1 Tables 13-24 – Q12/13 and Wave 2 Tables 17-28 – Q15/16)

In order to show the changes as clearly as possible, the data from both waves has been presented in the following charts, the first two showing data for all respondents and the second two for all vulnerable respondents.

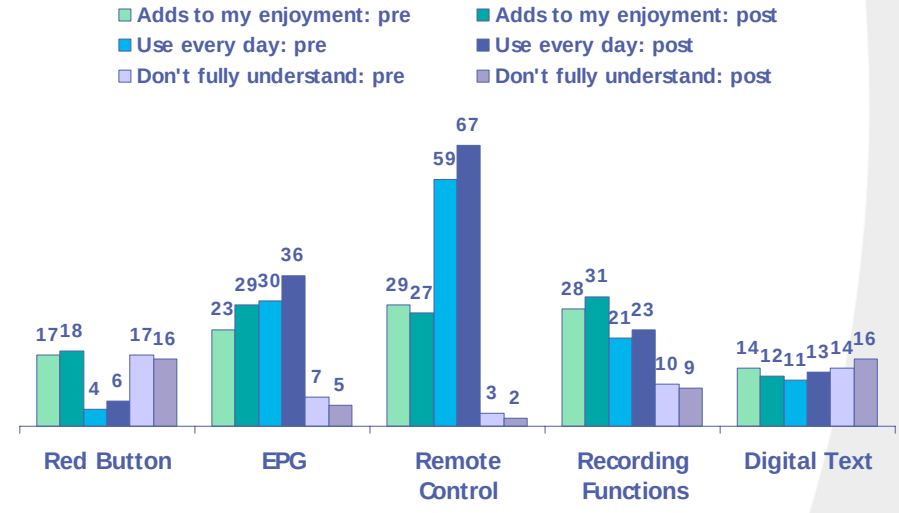
Ease of use of digital features – pre vs post switchoff – All respondents



Base: Pre wave (214), Post (195)

Greater familiarity with the digital features over time had a beneficial effect in terms of levels of usage and perceived ease of use for the EPG, the red button and the remote control, as shown by the above chart. However, the effect on usage and perceptions of the recording functions was less significant, with just a slight positive shift in ease of usage, and there appeared to be no positive shift for digital text, as shown below.

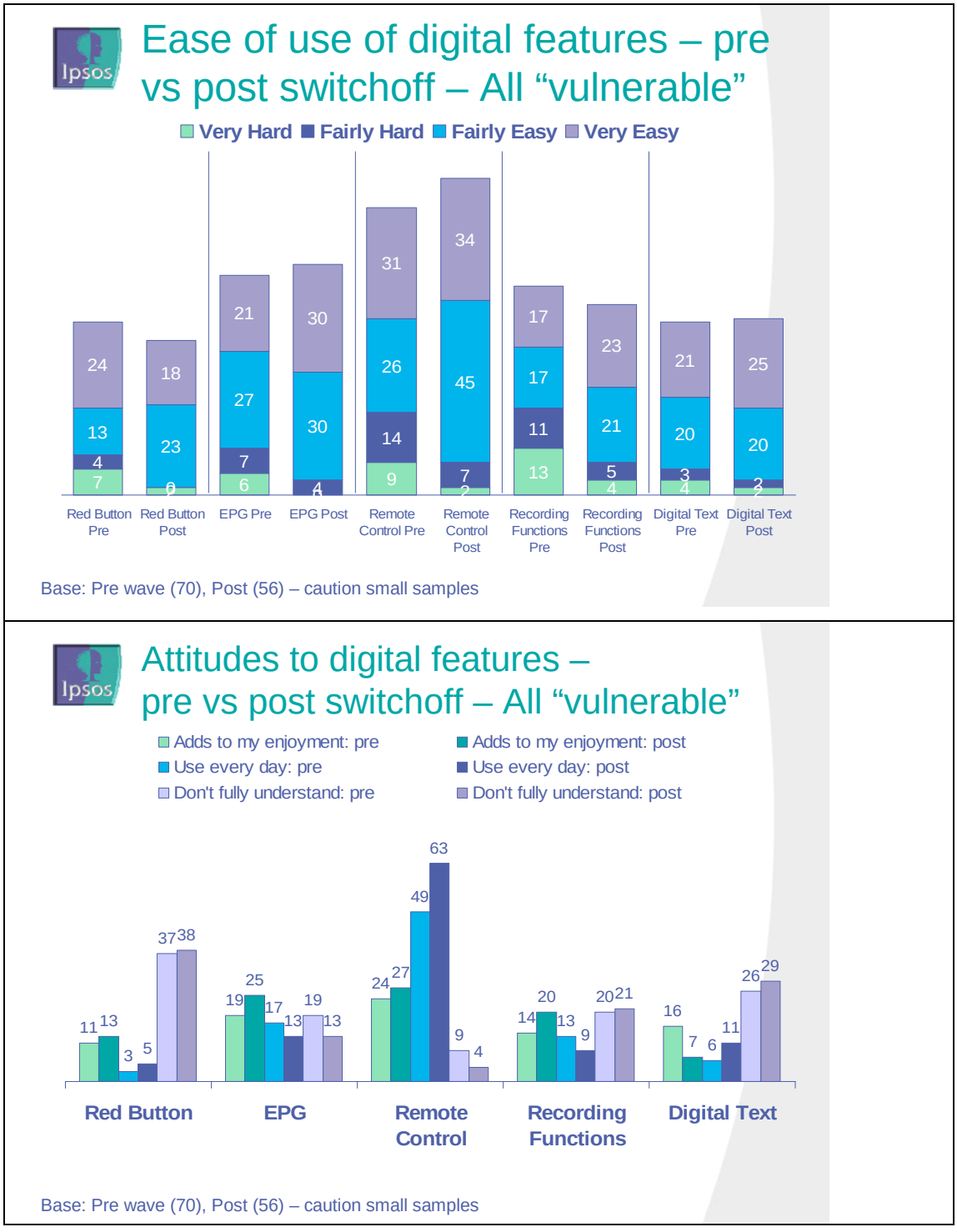
Attitudes to digital features – pre vs post switchoff – All respondents



Base: Pre wave (214), Post (195)

Amongst the vulnerable, some of the shifts between waves follow different patterns from the total sample, with only the remote control enjoying greater usage over time, but with

increases in every case except the red button in the overall proportion finding the function easy to use. In terms of attitude, the vulnerable group appeared to have increased enjoyment and understanding of the EPG, but were not converted to the extent of finding it indispensable. In the case of the remote control, understanding also increased, but the most dramatic change was the increase in the proportion using it every day, where the level of usage amongst the vulnerable group reached almost that of other respondents.



To put some of the reactions to the remote control in context, respondents were asked in Wave 2 how many separate remote controls they were using to view and record on their main set since analogue switchoff (Wave 2 Table 29 – Q17). Most respondents (61%) were

using two remote controls with their main set at this point, with younger people using more on average than the elderly. Only 15% were using just one remote control and 21% were using 3 or more. We do not know how many remote controls were being used prior to the switching on of digital services or during simulcasting of the digital and analogue signals so it is difficult to judge the extent to which respondents were actually changing their habits in this respect.

5.12 Perception of Picture and Sound quality on digital TV compared with analogue (Wave 1 Tables 25-27 – Q14)

During simul-cast period picture quality was judged better than before by 82% of the total sample, and as much better by 64%, whilst 10% judged it to have stayed the same and a negligible number felt that the quality had deteriorated.

Sound quality was judged to have improved to a lesser extent, with 57% finding it better and 40% much better, but 7% worse.

5.13 Perception of Picture and Sound quality on digital TV after analogue switchoff (Wave 2 Tables 13-15 – Q13)

Almost half of respondents noticed a further significant improvement in picture quality once the analogue had been switched off, with 71% saying that picture quality was better than the digital signal before switchoff and 47% much better. There was a lesser consensus that sound quality had improved, with 58% judging the sound quality any better than before.

5.14 When would you say the overall quality of your television reception had been the best? (Wave 2 Table 12 – Q12)

When asked to compare the reception in the three situations: pre digital TV, during simulcasting of both analogue and digital and post analogue switchoff, 62% were of the opinion that the post analogue switchoff signal was the best. Male respondents were more likely to have reached this view than female respondents. Of all respondents, 18% felt that reception was best while both digital and analogue were available and just 3% clung to the view that it was better before they had digital at all.

5.15 Three most valued benefits of digital television (Wave 1 Tables 28 – Q15 and Wave 2 Table 30 – Q18)

This question was asked in both waves of the research, so we can look first at the way benefits were rated during the first wave and then at how things may have changed a few months further into the trial.

The most highly valued benefit of digital TV in the early stages of the trial was considered to be the new channels available, cited in their top 3 by 73% of respondents. These were universally appreciated, with few differences by demographic, apart from a higher level of appreciation from female respondents than from men (84% vs. 69% respectively).

Picture quality, on the other hand, which ranked in second place overall, with mentions from two thirds of respondents, was actually ranked in first place by men (71% of men vs. 57% of women). Apart from these rather marked gender difference in the top two mentions, other features were endorsed to a similar degree by both men and women. Recording functions

were rated as third most important overall (41%) but with an appeal that diminished with age and disability.

The EPG was mentioned by just 27% but had a similar demographic profile to the recording functions.

Sound quality was valued by 23% and had an appeal that increased with age (and amongst the deaf/hard of hearing).

Just 18% selected the remote as one of their top 3 benefits, its appeal increasing with age and disability, and only 7% and 6% respectively endorsed digital text and the red button.

Later in the trial, and after the analogue signal had been switched off, respondents were asked again to name the top 3 benefits of digital TV, and the answers given had changed very little since a few months before.

Whilst picture quality had increased only slightly from 66% to 69%, sound quality had enjoyed a more significant increase from 23% to 29%, an increase which came particularly from amongst the men (23% to 31%).

The rank order for vulnerable respondents had changed from pre to post analogue switchoff, with picture quality promoted to top position (79%) over the new channels available (66%) at Wave 2. Sound quality had also risen in importance from 30% at Wave 1 to 39% at Wave 2.

5.16 Did you need to have any work done on your aerials or cables? (Wave 2 Table 16 – Q14)

In total, 38% of respondents had needed work done on their aerials or cables, 23% needing it in order to obtain a signal from Ferryside and 22% to get digital television to work properly.

6 Conclusions

In conclusion, it would appear that the quantitative data bear out many of the key findings from the qualitative report and reflect a positive attitude to participation in the trial and to the benefits of digital television. The majority of triallists had noticed the improved reception and were enjoying the other features of digital TV. Vulnerable respondents increased in confidence with the new technology as the trial progressed.

7 Main Qualitative Findings

- The next section of this report outlines the findings from two phases of in-home qualitative interviews with elderly and vulnerable people in Llansteffan and Ferryside. The first phase was conducted with eight households in late December 2004, shortly after they had been equipped with digital set-top boxes. The second phase of interviews with nine households took place in April 2005, about three weeks after the analogue switch-off had taken place.
- The aim of the research was to find out how well the elderly and vulnerable people coped with the move to digital and to identify any particular problems they had experienced over time.
- The elderly people interviewed were very positive about the trial and were pleased that their villages had been chosen for this project.
- Their experience and capability with new technology was very varied. Some elderly respondents had technical backgrounds and/or were fairly up to date

with technology, using mobile phones, computers and the internet with ease. Others were inexperienced, worried and confused by the new equipment they had been given.

- Just one respondent had chosen to self-install, but he was younger than most in the sample and also had a technical background. He found it straightforward to set-up but had some problems tuning the set-top box itself.
- All the other respondents were happy with the service provided by the fitters who had installed their systems.
- Respondents were also happy with the telephone help desk service, but the basic technical knowledge required to put telephone instructions into practice was too much for some of the elderly householders.
- Before the analogue switch-off, most respondents were already using the digital channels and were able to carry out the basic operations required, such as switching on and changing channels, but a few were still using analogue or were having a lot of problems accessing the digital channels.
- During the first phase of interviews, respondents were still mostly watching television as they always did and were still using a published listing rather than an electronic programme guide (EPG).
- Very few respondents had used or even explored the use of other digital and interactive services, including the EPG.
- This is partly because they did not really understand about the extra services available on digital and partly because they are very worried about pressing the ‘wrong button’ and not being able to get back to their normal channels.
- One reason for this lack of use of digital services is that elderly people are often slower at learning new things. Another is that many of this generation have no or low familiarity with the conventions of modern electronic equipment, whether TV, mobile phone or computer. They do not understand about menu driven systems, about toggles or about the fact that there may be more than one way to achieve the same result. This makes the operation of the remote control much less ‘intuitive’ than it is to a younger more technically savvy person.
- Most of the householders we visited seemed to find it easier in the first instance to be shown how to operate the system, rather than having to rely on a written instruction manual. And they also needed some hands-on experience to reinforce the lesson and to give them confidence. They then had often written down these basic instructions or asked for them to be written down.
- At our second phase of interviews, in general, all the residents interviewed were very satisfied with the Trial and were fairly competent at operating their set-top boxes.
- They felt that the transition from analogue to digital had been very carefully planned and executed and that the support team, through its communications and direct help, had made the process as easy as it could have been.
- Most respondents were still only using the digital provision in a fairly limited way, to watch the programmes they watched previously with analogue channels.
- But with growing confidence, most had tried out new channels and a few were now making regular use of interactive services, including the EPG, schedules and alternative and additional programming available through the ‘red button’.

- Respondents with Personal Video Recorders (PVRs) were generally more confident in their use of these services than respondents who only had a digital set-top box.

- The remote control handsets are not very ergonomically designed and in particular the wording over or on the buttons is often too small for many elderly people to read. As a result, most of the respondents stuck to using just the one or two buttons they knew how to operate.
- Better designed handsets would make it easier for elderly people to learn how to access and use digital services, in particular they would be reassured by the presence of a 'Home' button to return users to the opening screen from anywhere in the system.
- We recommend education about digital services for consumers to increase understanding of services and how to access them. For newly installed households with vulnerable people we also recommend an initial personal step by step training session to teach the basic operations with a follow-up phone call. They might also benefit from a later visit so that they can learn how to use other digital 'extras', such as the EPG, favourites, teletext, games and interactive services.
- We also recommend greater use of large type in instruction manuals and on handsets for visually impaired users.

8.1 The Sample (First Phase)

The first phase of the qualitative research comprised depth interviews with eight households, five in Llansteffan and three in Ferryside on the 21st and 22nd December 2004. The table below shows the profile of the respondents interviewed.

	Age	**Disabilities**
Couple	60s	None
Couple	80s	Invalid wife
Couple	70s	Husband has sight deficiency
Couple	Husband 70s, Wife 50s	Wife is bed bound
Widow	80s	Limited mobility, deaf
Widow	70s	None
Widow	70s	Poor sight
Widow	70s	None

The respondents were chosen from a list of householders who had been contacted by the DCMS and had agreed to take part in the qualitative research. They probably represent a cross-section of the elderly population of these two villages, both of which are popular places for holiday cottages and for retirement. All but one of the respondents were English people who had moved to West Wales to retire, but two had already been working in Wales and had stayed on in retirement and

several had lived there for 10 to 20 years. The one truly 'local' resident, was Welsh-speaking and the interview was conducted in Welsh.

8.2 The Sample (Second Phase)

The second phase of the qualitative research comprised depth interviews with nine households, four in Llansteffan and five in Ferryside on the 20th and 21st April 2005. The table below shows the profile of the respondents interviewed.

	Age	**Disabilities**
Couple	80s	Invalid wife
Couple	Husband 70s, Wife 50s	Wife is bed bound
Couple	60s	None
Couple	60s	None
Couple	60s	Wife is bed bound
Single Man	90s	None
Widow	70s	Poor sight
Widow	70s	None
Widow	70s	None

Three of the respondents were Welsh, the others were English, but had all been living in Wales for some time. All of the interviews were conducted in English.

We interviewed five households that we had interviewed in December and four households we had not previously interviewed.

9 The Trial

All of the respondents, without exception were very positive about the trial and were pleased that their villages had been chosen for this project. They enjoyed the attention they received, the coverage in the local and national press and the constant stream of visitors.

From a practical point of view, as the analogue signal in both Llansteffan and Ferryside was poor, prior to switch over everyone was looking forward to better reception on the television channels that they were accustomed to watching. And for the most part they were not disappointed.

The switchover was very straightforward and the residents were able to watch the TV news coverage of their villages with pride and excellent reception.

As well as the improved reception, to varying degrees, respondents were also curious to try out the extra digital channels, which most had not been able to receive before. One household interviewed had Sky, while another had previously had Sky, but for all of the others, extra channels and digital transmission were new experiences.

10 Technology

Just because they are elderly does not mean that people are not interested in and capable of handling new technology. The youngest man in the sample had a fairly technical background and had chosen to install the set-top box himself. One gentleman had a computer and was a regular internet and email user and was looking forward to getting to grips with the digital boxes. Others had got the hang of their equipment fairly easily, but more typically, respondents fell into two categories, those that still had not understood how to operate the set-up and those who could do the basics on their sets (switch on, change channels) but had gone no further.

In December, a number of the respondents were still having significant problems operating their set-top boxes. They were very apprehensive of the whole process. Even the basic operations, such as switching on or selecting channels, caused anxiety and anything more sophisticated, such as the use of the EPG or interactive services were out of the question. Some of the respondents we interviewed at Christmas had been visited by a succession of technical staff and at the time of our visit, were still not able to carry out the basic operations consistently. A number of these residents were 'scared' of the technology and were not at all sure that they would ever be able to fully master the simple tasks of switching on the television and choosing the programmes they wanted to watch, let alone select programmes for future watching, or access interactive services.

At our second visit, it was apparent that all of the residents had made progress and only one of the respondents we interviewed was still having some problems with the basic operation of the set. All the others had moved up the learning curve to some extent and were confident about the basics and they nearly all expressed their achievements in the same words:

"I have finally more or less got the hang of it!"

Female, Ferryside

This didn't mean that they had mastered the use of the set-top box, so much as having:

"Got the hang of it as far as is necessary."

Male, Llansteffan

Everyone was able to watch the programmes they wanted to watch. These were mostly the same programmes they had watched on analogue channels, but they now watched them as easily on the digital channels as they had done on the analogue. There was very little anxiety associated with the process any more.

Three interrelated changes had occurred to bring this about – the first was that they had all had a lot more practice and experience at using the equipment, the second was that they had learnt how to get themselves out of difficulties and perhaps most importantly of all they had all grown much more confident about using the equipment, as one respondent put it:

"Confidence is the big thing."

Female, Ferryside

And the confidence they had achieved was not just the confidence gained from getting things right, though this was important, but it was also the confidence that it didn't really matter if they got things wrong. Initially, most of the residents had treated the set-top box and the remote control with a certain amount of trepidation and a number made more or less the same remark:

"I was terrified of breaking the whole thing if I pushed the wrong button."

Female, Ferryside

With time they had learned that the equipment was more robust than they gave it credit for and they had also learned that if all else failed they could switch off and start again:

"If you make a wrong step, you simply go back to the beginning."

Female, Llansteffan

"The big thing if I get in a mess is I switch off and start over again."

Male, Ferryside

But also with time, they had been learning how to do the basics and then slowly adding to their skill set, as one respondent put it:

"You keep learning little lessons."

Male, Llansteffan

11 Installation

11.1 Self-Installation

The one person who had installed his own equipment had found it very easy to set up and said that he had connected it himself in about five minutes, but he was a fairly practical DIY enthusiast with experience of installing electrical equipment. However even he did have a problem tuning the set-top box because the instruction manual omitted to explain that you needed to press OK at the end of a particular sequence.

11.2 Aerials

A number of households had needed new aerials, on the advice of the fitters, which is a significant additional (and unexpected) cost to bear. They were generally accepting of this, but it is something which needs to be made very clear right at the start.

11.3 Set-top Boxes

While we understand that was important to trial different set-top boxes were allocated, this obviously made it harder for neighbours and friends to advise one another, because they often had a different set-top box. It might have been better to have allocated one type of box in Llansteffan and another in Ferryside.

11.4 Personal Video Recorders (PVRs)

In a small friendly village everyone talks to their neighbours and friends and compares notes. Some of the households visited had been given PVRs, others had not. While no-one was complaining about this, there was insufficient understanding of the reason for the choice and a number of householders expressed the desire for a PVR, if they were available.

11.5 Fitters

All the respondents were pleased with the fitters that had come round to install the set-top boxes. All of them demonstrated how to use the set-top box, but in a few cases, the demonstration was over very quickly. It can be difficult for a fitter installing and demonstrating a large number of set-top boxes every day to appreciate how it feels to use the equipment for the first time. We think they should

make sure that the householders can run through a normal sequence – switching on, switching channels, switching off.

11.6 Help-Desk

About half of the respondents in the first phase of our research had contacted the help desk and found it helpful, but the technical language they employ can be intimidating, even if it is necessary to use it to clarify the equipment in the household or the possible solution to the problem. We phoned up the help desk for advice on unfreezing a set-top box for a respondent and we were asked, for example, whether the set had a Scart connection, that particular vulnerable householder in question would never have been able to answer that kind of question.

11.7 Re-tuning

As part of the analogue switch-off, all households had to re-tune their digital set-top boxes. The overall impression from the digital team was that the switch-off had been very smooth and this was borne out by the comments from all the residents interviewed, as one of them said:

"I haven't heard of anyone with problems."

Female, Ferryside

Those people that felt able to tune their own set-top boxes had followed the written instructions for their specific model without much difficulty:

"I just followed the instructions and it worked."

Female, Ferryside

Partly this was due to the fact that the instructions had been written in a very accessible style:

"The good thing was that the instructions were written in plain English."

Male, Llansteffan

Those residents that felt unable to re-tune the set-top box themselves had asked for and received help:

"They came to re-tune it for me and they have been absolutely marvellous – they couldn't be bettered."

Female, Ferryside

11.8 Helpful Team

There was spontaneous praise for the team that worked on the digital pilot:

"They were absolutely wonderful."

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Female, Llansteffan

"I had all the help I needed."

Male, Ferryside

"An excellent team at Ben Evans."

Female, Ferryside

In the case of some of the elderly residents, they had asked for and received help on a number of occasions:

"I've had a constant stream of young men coming in to help me!"

Female, Ferryside

There was also praise for the way that the digital team kept in close touch with the residents of Ferryside and Llansteffan:

"The communication all the way through was brilliant."

Male, Llansteffan

12 Community Impact

One unexpected result of the pilot was that it had improved the "community spirit" of the two villages. Villagers are used to helping each other, but the frequency and extent of this had undoubtedly gone up through knowledgeable neighbours helping others to get their set-top boxes up and running:

"If we get into trouble, we ring Steve, our neighbour three houses down. He is computer literate and tells us what to do."

Male, Llansteffan

You can usually get a neighbour to show you."

Female, Ferryside

But the effect had been wider than this, if only because it had given everyone a topic of conversation and a common challenge. Without overstating the case, it seemed as if neighbours were now more likely to talk to each other and to share their experiences and their tips on how to overcome problems, so that in the words of one:

"It has helped the community."

Female, Ferryside

13 Approaches to Watching Television

In December, most respondents were still primarily watching television as they always did, or said they were. They were all using a published listing (Radio Times or newspaper) to help them select their programmes and no-one was spontaneously using the EPG (some were not really aware of it).

They were looking for and watching the extra channels that they could now access, but were not watching television any more. The more adventurous had looked at shopping channels, for example, but no-one had even contemplated buying online. There was passing reference to the switch to the Welsh version of BBC2, but this was seen as being a temporary problem arising from the trial, which would be sorted out in due course.

By April, this had changed. While most of the respondents interviewed continued to watch very much the same programmes as before, they were more likely to be watching them on other channels than before, for example watching repeats or other examples of a favourite genre (mystery thrillers seemed very popular). Everyone had also explored the other channels' programming to some extent:

"I am straying onto the other ones a bit."

Male, Llansteffan

"I have a skip through the other channels."

Female, Ferryside

But this choice of programmes usually did not involve use of the EPG or the online schedules. Older people in particular still liked to choose their viewing from the printed page, even if they were now looking at new channels:

"Yes, I am looking at different channels. I take the Radio Times out and look at what's on…"

Female, Ferryside

Two of the younger and more technical of the sample did use the EPG to inform and guide their viewing and use of the PVR, but they drew attention to a problem with the guide schedule:

"It takes a long time to provide programme details for a few days ahead."

Male, Ferryside

"*My biggest gripe is it is very slow to load the TV schedules"*

Male, Llansteffan

One of the two respondents had previously had Sky so he was able to compare the Freeview service with the Sky digital schedules and his memory of Sky was that with Sky it was *"almost instant".*

As to buying on the shopping channels, this has now become a regular activity for a few of the more technically confident households.

14 Approaches to Digital Television

a. Trial & Error

Although they were positive about the trial when we visited in December, there was a lot for these households to learn and most were very hesitant about experimenting, worried that they might push a button and be unable to get back to the familiar channels they wanted to watch. Things happened which seemed to be impossible to change, for example a few householders had subtitles as the default setting – this can be easily changed, but you have to know that this is the case and then how to do it! Another more adventurous householder had used her PVR, and was very impressed with it, but could not work out how to set it up to record in advance. In a way, the fitters had obviously added to some of the worries about experimenting by telling some of the elderly householders never to 'press the Red button'. No-one seemed to know for example that they could select 'favourite channels' which might make watching easier, instead they had mostly written down the key channel codes.

There were two or three interrelated problems at play here. Firstly, there was the fact that the triallists did not know the full capability of the digital system they had been given. While they knew that they would have all the channels they were used to plus some new ones, they did not necessarily know about all the interactive elements on offer. There is no reason why they should have known about the EPG or about the "i" button or that they had digital teletext and interactive games available on their television sets. These are all things that they needed to be shown and that they needed help to explore. In our experience of researching the introduction of digital services with all kinds of households, it takes time for people to learn about and to use the various digital services. Children are usually the quickest to learn and to adapt to the new equipment and elderly people are usually the slowest. One simple reason for this is that elderly people are more forgetful and need more practice and more reinforcement to learn how to use the new equipment. Another reason is that they are generally more hesitant about using the EPG for fear of 'breaking something' or of not being able to get back to the familiar channels that they normally watch.

b. Benefits of Digital Television

Transmission powers were increased as a result of analogue switch-off in March, which should have provided better TV reception after analogue switch-off than before. As the analogue signal had been poor for many of the households, the move to digital produced a better picture, which mosts residents noticed and appreciated:

"Noticeably better picture – it is very crisp."
Female, Ferryside

But a few respondents felt that the change had not made very much impact, especially where they had previously had a fairly good analogue picture:

"I would say there is not much difference in the picture quality."
Female, Ferryside

As we have indicated, at our second visit in April, residents were now much more confident about using their digital equipment, but were still mostly using limited approaches to their use. For example, many were still moving channels by putting in channel numbers, rather than by using arrows on the handset. Many were not using the EPG or the schedules and very few seemed aware of the information or i button on their handset. A few had tried interactive teletext, but no-one was really using it. One respondent thought it was too cumbersome to use:

"Not as good as conventional teletext because you have to go through a lot of menus."

Male, Ferryside

While a respondent with poor eyesight rejected it on the grounds of poor readability:

"It is harder to read on the screen than it is to read the printed word because of the choice of background colours."

Female, Ferryside

Use of the interactive services was varied. While most respondents were not using it, more had certainly given it a go, even if they subsequently rejected it:

"I have tried interactive, but can't see a lot of point to it."

Male, Ferryside

But two of the households visited were using interactive to keep track of the progress of the World Snooker Championships that were on the television at the time of the interviews:

"I have been using it to get into the snooker and you can pick which match to watch."

Male, Llansteffan

"I've been watching the snooker with the interactive – my son showed me how to do it."

Male, Llansteffan

Interestingly the latter respondent who was well into his 80's had been shown how to access the snooker by his son who knew about the interactive service, but he was now very confident with how to do it for himself.

15 Personal Video Recorder

There is no doubt that the PVR was very well received and was generally seen as being very easy to operate:

"One thing I do like is you can just press that once and it will record just that programme."

Male, Llansteffan

And it was noticeable that respondents with a PVR were more at home with the EPG and the TV schedule than other respondents because they needed to use these to select what programmes to record.

One householder interviewed was having problems with his PVR failing to record programmes fully, but he was the only person to mention this problem and an engineer who called during the interview felt that the problem was mostly likely caused by the position of the household aerial, rather than by the PVR itself.

As the PVR has only a limited memory, at least one respondent was concerned about finding a way to make a copy of programmes he recorded but to date he had tried and failed:

"I have not got the hang of how to transfer a programme from the PVR to a VCR"

Male, Ferryside

c. Usability

Much consumer electronic equipment is poorly designed and is difficult to use – the video recorder being perhaps the best example of this. But whereas younger users learn to use the equipment despite the poor design, the elderly are more likely to be defeated by them. In particular, they often have problems handling small controls and in reading small type. In the case of EPG remote controls, they are expected to do both and this does compound the problem of learning to get the most out of their digital television. In fact, in the case of one elderly lady we visited, it had actually prevented her getting started at all. In the first phase, she was still watching analogue television in her living room, while the set-top box in her bedroom had frozen, requiring a call to the help desk for advice on how to re-set it. She had poor vision and found it difficult to read the wording on the various keys of the remote, such as 'list' 'guide' 'menu' 'i' 'OK' 'text' 'opt' 'back' 'exit'. And of course, there is the additional problem of understanding what each of them does and what the difference is between them – for example the difference between 'list' 'guide' and 'menu'. And that assumes that you have located the various buttons on the remote control in the first place. Mostly, people only register a few of the buttons on their handset and then mentally seem to block out the others.

16 Problem Areas

d. Multiple hand sets

Without an iDTV, everyone has to use at least two remote controls to operate their system – one to switch on the television set and the other to operate the electronic programme guide (EPG) and to select interactive services. Volume control is sometimes controllable by both.

A number of householders are in the habit of switching off their television set at the wall, which then requires setting the set with the TV remote to the appropriate channel through which the digital operates. This caused some confusion and problems with actually operating the digital services.

e. Demonstrations

A few respondents (invariably male) preferred to work out how to operate the system themselves, but among the elderly these are likely to be a very small minority. Most of the householders we visited seemed to find it easier in the first instance to be shown how to operate the system. This really needed to involve some hands-on experience on their own part. They then often had written down or asked them for these basic instructions to be written down. There are two particular reasons why demonstrations are so important for both the basic operations and for the more sophisticated ones. The first is that most elderly people have a very limited experience of technological norms. This means that they don't understand about menus, 'toggles' or the fact that there may be more than one way of achieving the same result, such as changing channel. Secondly, they mostly do not know the extra dimensions that digital brings to their living room. We interviewed householders for example who did not know that they could listen to digital radio

through their television sets. We also had to show them most of the digital information that they could access, including programme guides, programme information, calendars, teletext, help facilities, interactive games and of course the famous 'red button' and the interactive services.

f. Instruction booklets

The key 'leave behind' has been the set-top box instruction booklet, although we know other literature and guides were provided. While the booklets were very informative, a number of the householders had problems with them for two key reasons. The first is that the booklets were comprehensive, which made them very daunting. They covered the critical basics and then the much more sophisticated options. The second problem for many elderly people was that the booklets were in a small typeface, which was difficult to read.

g. Handsets

The handsets that are standard issue with the set-top boxes issued in Llansteffan and Ferryside are not very easy to use. There are a bewildering number of buttons on them and the lettering is very small. This makes using the handset very difficult for elderly people, especially if they have poor eye-sight. At the very least, it would be helpful for manufacturers to provide a large-scale diagram of the handset, but the ideal would be more ergonomically designed handsets and in particular a large type handset (cf large type telephones) for the elderly and the visually impaired. It would also be particularly helpful to have a 'home' button that would bring the user back to the opening screen. An elderly user with a recently installed set-top box in another research exercise switched on her television after her grandchild had been visiting and found that it was set to interactive games and she could not find out how to 're-set' the television to its normal mode. It required a phone call and a patient step by step explanation from her seven year old grandson to get her back to the television channel she wanted to watch.

By the second phase, people had grown more confident in their use of the digital channels but the poor layout and design of the handsets meant that they were still very much confined to using the few controls they knew how to use. Over time, if anything, they had grown less aware of the other buttons or controls on the handset. They seemed surprised when we showed them some of the buttons on their handsets, registering them as though for the first time. To be fair, this is probably no different to their approach to their television remote control or their VCR. Having learnt the basics, most people mentally ignore the buttons or controls that they don't use. They are open to learning new ways of doing things or new buttons to press, but they need to be showed how to do it. After the first few days or weeks, they are no longer in exploratory mode.

h. Lack of Standardisation

It may be too much to ask for, but part of the problem for the elderly respondents was the lack of standardisation in terms of terminology and in terms of the equipment provided. To give one example, one elderly lady had two television sets, but they used different channels for the digital:

"I have to use '5' to get digital with the television in my living room and '2' to get the digital channel in my bedroom."

Female, Ferryside

And for anyone with different set-top boxes, there was the confusion of different names for different buttons, for example 'information' on one handset is simply 'i' on another and so on.

i. Switch On/Standby/Switch Off

At our first visit, we identified a problem with householders switching off everything at the plug, including the set-top box. This meant that when they switched on the television in the morning, there was a long wait while the set-top booted up. While most of the householders managed to reverse the habit of a lifetime, there was still some problem associated with the time it took for the set-top box to boot up from standby. People who are used to their television set coming on immediately start to worry if the digital service doesn't start instantly and may then press the standby button a second time which then switches the set-top box back into standby. (This is part of the problem mentioned above of many older people having little experience of 'toggles' on electrical devices.)

j. Intermittent Freezing of Images

Almost the only complaint that people had about the digital service was that the image sometimes froze for a few seconds on quite a regular basis:

"It freezes for short bursts, For 2-3 seconds."

Male, Ferryside

This was usually short-lived and the picture returned to normal, but sometimes it required more drastic action:

"Twice last night I had to unfreeze it by switching on and off."

Female, Ferryside

We are not clear whether this is something to do with the signal strength in the trial area or whether it is a more widely recognized problem with free to air digital delivery.

17 Recommendations

At this point, we would recommend the following:

k. Personal Training Session

- Step by step session by the installer, but could be someone else who did this
- this must involve hands-on practice by the householder at the basics (switch on, switch channels, switch off)
- must follow a checklist with regard to key features (e.g. subtitles, volume, mute, radio, teletext)
- 'leave behind' – a personalised Getting Starting guide – which they can use as a reminder
- Follow-up phone call a day or so later

  To check that everything is OK

  Offer of follow-up visit
- Later follow-up visit once the basics are mastered to introduce 'extras'

  Could be a few weeks to a month later

l. Visual Aids

- Large type illustrated guide to remote control handset

- Ideally large remote control handset (cf large type telephones)

m. Education

- Need for education and awareness among manufacturers of needs of the elderly and other vulnerable groups
- There is also a need for education for consumers – some of this is likely to come from the manufacturers, but it could also come from other sources, such as local authorities or community organisations or from television listing guides.

n. Handset Design

- The design of the handset is critical for all users, but particularly for the elderly. Buttons need to be larger and more spaced out and need to have large labels on them to be easily identified.
- A 'Home' button to get out of sub-menus and to return users to the opening screen would give the elderly more confidence to investigate functions by pressing buttons without the fear of being unable to get back to 'normal' television channels.