UK Consumer Responses to iDTV Report

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This report is also available online at www.idtvconsumers.com
Other online papers include www.marketingandtheinternet.com and www.predictionsmedia.com.

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UK CONSUMER RESPONSES TO iDTV

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EXECUTIVE SUMMARY

The UK is the most advanced country in the world in consumer adoption and usage of interactive digital television (iDTV). The future success of iDTV and its role in society depends on how well consumers respond to what it offers. This report attempts to draw together the fragmented evidence on the consumer response to date in the UK, together with some published forecasts. The initial basis for the report was a September 2001 conference organised by the Future Media Research Programme at London Business School.

The report covers five areas of consumer response:

- Adoption to-date of digital TV (DTV) and iDTV (Section 2)
- Attitudes and projected future adoption (Section 3)
- Response to interactive TV programming (Section 4)
- Response to interactive TV advertising (Section 5)
- Response to other interactive TV services (Section 6).

The final section summarises the results and some implications.

DTV has taken off fast in the UK, driven by competition between satellite, cable and terrestrial TV platforms. DTV penetration in December 2001 was 33% of homes with a television. BSkyB, the satellite operator, switched off its analogue signal in September 2001, having converted almost all its viewers to digital. It had driven DTV penetration by heavy investment in programming, marketing, and “free” set top boxes (STBs). It still has over 60% of DTV homes, but has been steadily losing share to digital cable. The future of digital terrestrial TV (DTT) is uncertain at the time of writing.

More than 50% of DTV homes have iDTV, here defined as DTV with a “return path” from the home to the broadcaster and this proportion continues to grow. The evidence is that iDTV is mainly seen as enhanced television rather than a low-cost way of accessing the Internet or other interactive services. iDTV penetration (19% among all UK adults in January 2002) was twice as high among those with Internet access via a home PC as among those without (27% vs. 13%).
Nevertheless, for a significant minority (8% of adults) iDTV is the only online access device in the home. However, if we also include those with access at work/college and/or with WAP, the total proportion of UK adults with online access rises from 43% (with online PCs at home) to about 58% (with at least one kind of access, and in many cases two or three). This, however still leaves 42% “digital have-nots”, many aged 65+.

Demographically, iDTV adopters are fairly representative of the general population, but with a skew towards families with children, young adults, and men. Unlike online home PCs, iDTV does not have a strong ABC1 bias.

The finding that consumers see iDTV as enhanced television rather than primarily an interactive medium is strongly reflected in their stated reasons for adoption. These are dominated by TV-related reasons, especially the desire for more/better channels and programmes as well as improved pictures and sound. Interactive services such as web access, email, and home shopping are seen as additional benefits, not core reasons for adoption.

Opinions differ as to future adoption of DTV and iDTV. Most analysts project continuing adoption slowing down as digital pay-TV approaches saturation and then accelerating again as cheap digital television sets appears from 2005/2006, leading to faster adoption of free-to-air digital TV. However, the Government’s target of analogue switch-off by 2010 looks ambitious.

Viewers regard some interactive programming (e.g. game shows) as a welcome addition to the viewing experience, although not all programmes or genres are suitable for concurrent interactivity. Others, especially documentaries, cooking/gardening/ DIY shows etc, are well-suited to using the Web to provide further information for browsing or downloading after transmission. Finally, some entertainment programmes, such as Big Brother and Banzai, have successfully generated direct audience involvement (and extra media coverage) using interactivity.
Interactive TV advertising, in principle, has high potential for targeting and for convenient direct response ads. It has been shown to boost audience involvement and response, although it has been held back by a lack of standards, high perceived costs, the low penetration and usage of iDTV compared with regular television, and perhaps by viewers’ and advertisers’ lack of experience. iDTV advertising response rates vary greatly but are typically higher during daytime. However, many consumers see advertising as intrusive and iDTV advertisers have usually needed to give an incentive of some kind to persuade viewers to interact. Other concerns include legal (privacy) issues and the increasing possibility for viewers with personal video recorders (PVRs) and similar technologies to skip commercial breaks.

Consumers’ use of other interactive services via their iDTVs is characterised by short visits, mostly as an alternative to uninteresting TV programmes. Many people in homes with iDTV have never even tried any of the interactive services, while others have been discouraged by poor reliability, slow access, and weak content. The main successes to-date have been iDTV games and gambling, although operators have found it hard to make these profitable.

Overall, UK consumers’ initial responses to iDTV suggest that its main value is as an entertainment medium, primarily providing better television (range, picture, sound, plus some interactive enhancement) as well as games and gambling. It has mainly been adopted by homes which are already online and see it as complementary to the PC which is preferred for more functional “lean-forward” tasks such as searching for information or shopping. However, iDTV is seen as possibly appropriate for browsing or buying some leisure products and services, such as holidays, games, and music.

Our overall conclusion is that iDTV is television with interactivity, not the Internet with moving pictures.
1. INTRODUCTION

This report aims to integrate the evidence on UK consumers’ response to-date to interactive digital television (iDTv). It covers five areas of consumer response:

- adoption to-date of digital television (DTV) and iDTv (Section 2)
- attitudes and projected future adoption (Section 3)
- response to interactive programming on iDTv (Section 4)
- response to interactive advertising on iDTv (Section 5)
- response to other interactive services on iDTv (Section 6)

The final section summarises the results and some implications.

We define DTV as any television platform (whether satellite, cable, or terrestrial) for which content is transmitted in digital form. We define iDTv as DTV which is interactive in the sense of having a “return path” to allow two-way communication between the consumer and the broadcaster (e.g., instruction to change the viewing angle of a camera), advertiser (e.g., shopping order), or service supplier (e.g., request a movie). It is important to underline that, in practice, interactivity is a matter of degree. There are many functions regarded as interactive that do not necessarily require a return path, e.g. playing free games, using news services, switching between tennis courts at a Wimbledon Tennis Championship broadcast, “surfing” through a limited walled garden Internet, near-video-on-demand, or even just using teletext (Parker 2001).

Much of the material reported here is based on presentations by invited speakers at a September 2001 Future Media Research Programme conference at London Business School. We are grateful to the presenters for allowing us to reproduce this material1 as well as to other experts who gave comments on an earlier draft of the report2.

1 Andrew Curry (The Henley Centre), Dave Chilvers (Continental Research), Tim Davies and Lucy Shepherd (CIA MediaLab), Julian Dobinson (BSkyB), Andrew Kearney and Catherine Blizzard (Carlton Television), Jon James (Flextech), Duane Varan (Interactive TV Research Institute, Murdoch University, Perth, Australia), David Muir (futureOgilvy), Alex Owens (BBC), Chris Goodall (Enders Analysis) and Andrew Wallace (Pace Micro).

2 Robin Foster (ITC), Anthony Robb-John (Two Way TV), Shuvo Saha (Proctor & Gamble), Joy Taylor (Interactive Forum).
The deployment of iDTV is more advanced in the UK than in any other country, despite the current uncertainty about the future of digital terrestrial TV. Even here, iDTV is still at an early stage and the research published to-date is limited and fragmented. But the future success and impact of digital television depends crucially on consumer response. This report is a first step in pulling together the evidence about that response, as an input to strategic decisions by interested parties in the UK and elsewhere.
2. CONSUMER ADOPTION TO DATE

2.1 Adoption of DTV and iDTV

DTV was launched in September 1998 and its adoption has been fast. Three-and-a-half years after the first DTV service was available it has reached one in every three UK households, although the rate of adoption has slowed (Figure 2.1).

![Figure 2.1: % of UK Households with DTV](image)

Source: Continental Research, 2002a

The main driver of the rapid growth was the offer by BSkyB and ONDigital (later ITV Digital) of “free”, i.e. subsidised, set-top boxes. Another key driver was BSkyB’s conversion of analogue satellite households to digital. This ended in September 2001, when BSkyB switched off its analogue signal.

Increasingly, growth has been driven by two other factors:

- Upgrading of analogue cable households to digital (by NTL and Telewest)
- Aggressive marketing to attract new subscribers by all three platforms (satellite, cable and terrestrial).
However, these further factors have limited growth:
- The slowdown in general economic conditions
- High churn, especially for ONdigital/ITV Digital
- Recent uncertainty about the future of ITV Digital and the digital terrestrial platform.

These various factors have contributed to a change in the relative weight of each digital platform as illustrated below (Table 2.1)

<table>
<thead>
<tr>
<th>% of UK households</th>
<th>06.00</th>
<th>09.00</th>
<th>12.00</th>
<th>03.01</th>
<th>06.01</th>
<th>09.01</th>
<th>12.01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital satellite TV</td>
<td>13</td>
<td>16</td>
<td>18</td>
<td>20</td>
<td>21</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>Digital terrestrial TV</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Digital cable TV</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>22</td>
<td>25</td>
<td>29</td>
<td>31</td>
<td>33</td>
<td>33</td>
</tr>
</tbody>
</table>

Source: Authors’ estimates based on Continental Research data (Figures may not sum due to rounding)

As of December 2001, digital satellite TV still accounted for over 60% of DTV households. Yet, it is losing share to digital cable TV, as is digital terrestrial TV.

Not all DTV households have iDTV. In January 2002, two years after the launch of the UK’s first iDTV system (Open…., now branded Sky Active), 16.4m out of the UK’s 47.1m adults aged 15+ lived in homes with DTV, a penetration of 35%. Of these, 9.1m (55%) had iDTV, defined as DTV online access with a return path (Continental Research 2002a).

### 2.2 Complementarity of iDTV and Online Home PCs

Some analysts believe that the reason for iDTV’s success in the UK is that it “represents an alternative to household Internet access, which is not as readily available or as inexpensive (...) as it is in the United States” (Chain Store Age, 2001). Additionally, the 25-year experience with
teletext may have contributed to people feeling comfortable with TV as a medium for getting information compared with the US (Groticelli and Kerschbaumer, 2001). However, iDTV and PCs have very different natures (lean back versus lean forward) and are used to fulfill different needs (entertainment versus task orientation). Therefore, they should thus be regarded as largely complementary to each other (Henley Centre, 2001).

The complementarity of iDTV and online PCs is reflected on the overlap in their adoption. According to Continental Research (2002a), 20.2 million UK adults (43%) had online access via a home PC in January 2002. Based on Continental’s figures, we estimate that 5.5 million of these also had iDTV, a penetration of 27%. In contrast, only about 3.5 million of the 26.9 million adults in homes without online PCs had iDTV, a penetration of only 13%:

\[
\frac{5.5\text{m}}{20.2\text{m}} = 27\% \\
\frac{3.6\text{m}}{26.9\text{m}} = 13\%
\]

The population breakdowns are shown in Table 2.2.

**Table 2.2: UK adults with access to iDTV and/or online home PCs (January 2002)**

<table>
<thead>
<tr>
<th></th>
<th>UK adults 15+ (millions)</th>
<th>% of UK adults 15+</th>
</tr>
</thead>
<tbody>
<tr>
<td>All UK adults 15+</td>
<td>47.1</td>
<td>100</td>
</tr>
<tr>
<td>Those in homes with:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iDTV and PC</td>
<td>5.5</td>
<td>12</td>
</tr>
<tr>
<td>iDTV and no PC</td>
<td>3.6</td>
<td>8</td>
</tr>
<tr>
<td>PC and no iDTV</td>
<td>14.8</td>
<td>31</td>
</tr>
<tr>
<td>Total iDTV and/or PC</td>
<td>23.9</td>
<td>51</td>
</tr>
<tr>
<td>Total iDTV</td>
<td>9.1</td>
<td>19</td>
</tr>
<tr>
<td>Total PC</td>
<td>20.2</td>
<td>43</td>
</tr>
</tbody>
</table>

\(^3\text{As with other new media, the penetration for individuals – ie the percent living in homes with the technology – is somewhat higher than the homes penetration. This is because the homes which adopt tend to have an above-average number of household numbers, mainly because adoption is low among those aged 65+, see Section 2.4 below.}\)
Source: Authors’ estimates based on Continental Research (2002a). (Figures may not sum due to rounding)
Thus, iDTV penetration was about twice as high among adults with online PC access at home as among those without (27% vs. 13%). But the idea of iDTV as a way of broadening online access is not entirely a myth. As shown in Table 2.2, the 8% of adults with iDTV but no online PC at home brought the total population with online access at home to 51% (versus only 43% with online PCs at home).

On this basis, iDTV is emerging as primarily a complementary medium for people who already have web access at home: given the choice, almost no-one with access to both would do their grocery shopping via the TV rather than the PC. However, there is a significant minority (8% of adults in January 2002) for whom iDTV is the only online access device in the home.

### 2.3 Total Online Access Including at Work and Via WAP

Continental Research (2002a) also reports ownership of WAP phones. They estimate that 4.6m UK adults 15+ (10%) had WAP phones in January 2002. Most of these were in homes with an online PC and/or iDTV, but 1.0 million (2% of all adults) were not, bringing the number with online access via at least one of these three media to 24.9 million – 53% of all adults.

This excludes those with online access at work (including school or college) but not at home or through WAP. Continental Research (2002b) estimates that, at the end of 2001, 34% of adults had Internet access at work. Most of these (27% of all adults) also had Internet access at home, but a significant minority (the other 7%) did not, bringing the total proportion with any Internet access via a PC to 50%:

<table>
<thead>
<tr>
<th>Internet access via a home PC</th>
<th>43%</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Internet access at work but not via a home PC</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50%</strong></td>
</tr>
</tbody>
</table>

Of the 7% with online access at work but not via a home PC, we do not know how many had iDTV and/or WAP. Our estimate would be 20%-40% of the 7%, i.e. about 2% of all adults.
On this basis, Internet access at work adds a net 5% to our earlier estimate that 53% of adults had online access at home (via a PC and/or a TV) and/or via WAP. If this estimate is correct, 58% of all UK adults had some kind of online access by January 2002:

<table>
<thead>
<tr>
<th>Access via online home PC</th>
<th>43%</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Access via iDTV/WAP/PC at work (but not home PC)</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>58%</strong></td>
</tr>
</tbody>
</table>

Thus over 40% of UK consumers (doubtless accounting for well over half of total consumer expenditure) already had Internet access at home. Including those with iDTV or WAP brings the proportion to more than 50%. If we also include these with access at work, almost 60% had some kind of online access.

Despite the collapse of the various digital and related bubbles (including, to some extent, iDTV and WAP), we expect the proportion with online access to continue growing slowly but steadily. The main challenge for content and service providers is not that consumers have failed to adopt digital technologies (although this is true of some technologies) but rather that it has proved far harder than most suppliers expected to convert adoption into revenue. For most operators, the biggest issue today is average revenue per user (ARPU).

In addition, there should be concern at the “digital divide”. Our analysis suggests that iDTV can play a role in bringing people without PCs online, but only to a limited extent. We are moving into a world in which most consumers have online access, many via multiple digital channels, while a large minority has none (Barwise 2001a):

Since January 2002, the number of iDTV households has probably increased both in absolute terms and as a proportion of DTV households. Strategy Analytics has estimated that by December 2002 40% of UK households will have iDTV-capable TV sets, representing a 43% increase since February 2002 (Higgins, 2001).
2.4 Characteristics of DTV and iDTV adopters

iDTV adoption correlates with the presence of children and the ages of adult household members. For instance, a BMRB survey for the BSC and ITC in August/September 2001 found the following adult DTV penetrations by age (Towler 2002).

<table>
<thead>
<tr>
<th>Age Group</th>
<th>DTV Penetration</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-24</td>
<td>47%</td>
</tr>
<tr>
<td>25-44</td>
<td>53%</td>
</tr>
<tr>
<td>45-64</td>
<td>34%</td>
</tr>
<tr>
<td>65+</td>
<td>18%</td>
</tr>
<tr>
<td>All UK adults</td>
<td>40%</td>
</tr>
</tbody>
</table>

Table 2.3 Demographic profiles of adults in DTV, iDTV and online PC households %

<table>
<thead>
<tr>
<th>January 2001</th>
<th>UK population</th>
<th>DTV</th>
<th>iDTV</th>
<th>Home PC access</th>
</tr>
</thead>
<tbody>
<tr>
<td>With children 0-14</td>
<td>64</td>
<td>57</td>
<td>51</td>
<td>61</td>
</tr>
<tr>
<td>Without children</td>
<td>36</td>
<td>43</td>
<td>49</td>
<td>39</td>
</tr>
<tr>
<td>15-24</td>
<td>15</td>
<td>20</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>25-34</td>
<td>20</td>
<td>22</td>
<td>29</td>
<td>21</td>
</tr>
<tr>
<td>35-44</td>
<td>17</td>
<td>22</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>45-54</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>55-64</td>
<td>13</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>65+</td>
<td>19</td>
<td>10</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Male</td>
<td>49</td>
<td>52</td>
<td>57</td>
<td>55</td>
</tr>
<tr>
<td>Female</td>
<td>51</td>
<td>48</td>
<td>43</td>
<td>45</td>
</tr>
<tr>
<td>AB</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>39</td>
</tr>
<tr>
<td>C1</td>
<td>28</td>
<td>28</td>
<td>27</td>
<td>34</td>
</tr>
<tr>
<td>C2</td>
<td>22</td>
<td>26</td>
<td>29</td>
<td>17</td>
</tr>
<tr>
<td>DE</td>
<td>28</td>
<td>23</td>
<td>20</td>
<td>13</td>
</tr>
</tbody>
</table>

Source: Continental Research, 2001a

Table 2.3 shows the demographic profile for adults in DTV and iDTV households in a January 2001 study by Continental Research. The main deviation from the general population – and the
online PC population – is that DTV and (especially) iDTV penetration is skewed towards households with children. iDTV is also skewed towards the age range 25-34 and towards men. DTV, iDTV and online PCs all show a large shortfall among older consumers. DTV and iDTV do not show the strong ABC1 skew which still characterises online PC access.

Table 2.4 shows the latest demographic figures for DTV alongside the January 2001 figures in Table 2.3. These show little change over the year.

Table 2.4 Changes in the demographic profile of adults in DTV households

<table>
<thead>
<tr>
<th>% of population</th>
<th>Jan 2001</th>
<th>Jan 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>With children 0-14</td>
<td>43</td>
<td>44</td>
</tr>
<tr>
<td>Without children</td>
<td>57</td>
<td>56</td>
</tr>
<tr>
<td>15-24</td>
<td>20</td>
<td>16</td>
</tr>
<tr>
<td>25-34</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td>35-44</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td>45-54</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>55-64</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>65+</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Male</td>
<td>52</td>
<td>51</td>
</tr>
<tr>
<td>Female</td>
<td>48</td>
<td>49</td>
</tr>
<tr>
<td>AB</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>C1</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>C2</td>
<td>26</td>
<td>22</td>
</tr>
<tr>
<td>DE</td>
<td>23</td>
<td>26</td>
</tr>
</tbody>
</table>

Source: Continental Research, 2001a and 2002a
3. CONSUMER ATTITUDES AND PROJECTED FUTURE ADOPTION

3.1 Consumer attitudes to DTV and iDTV

In line with our conclusion in Section 2.2 that iDTV is largely complementary to home PCs, there is wide agreement in the industry that the main motivation for adopting DTV has been to get more/better television, rather than interactive services. Consumers often have only a vague idea about what kinds of interactive services and programming are offered before becoming DTV users. Therefore interactivity has not been a major motivator for adopting DTV. Many early adopters have been disappointed with the reality of interactivity, except for some TV-related services such as Sky Sports Extra, Big Brother and Banzai.

According to CIA MediaLab (2001), early DTV adoption was mostly motivated by a desire to reclaim lost events from terrestrial television (e.g. soccer) plus pester power, similarly to what had happened with analogue pay-TV adoption. Current adoption is driven by the promise of more channels, better picture/sound quality, and better/extra programme coverage. The only significant non-TV benefit is interactive games, mentioned by 11% of adopters. Online shopping, email and the Internet are barely mentioned (Table 3.1).

<table>
<thead>
<tr>
<th>Main Reasons for Purchasing DTV</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>More TV channels</td>
<td>72</td>
</tr>
<tr>
<td>Better picture quality</td>
<td>31</td>
</tr>
<tr>
<td>Better coverage (e.g. Sky Sports Extra)</td>
<td>30</td>
</tr>
<tr>
<td>Better sound quality</td>
<td>18</td>
</tr>
<tr>
<td>Better programmes</td>
<td>14</td>
</tr>
<tr>
<td>Access to PPV events</td>
<td>14</td>
</tr>
<tr>
<td>Games</td>
<td>11</td>
</tr>
<tr>
<td>Online shopping</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: CIA MediaLab, 2001
Still only 60% of the households with digital TV had access to interactive services like shopping and banking (Table 3.2).

Table 3.2: Which DTV services do consumers have? (Base UK homes with digital TV)

<table>
<thead>
<tr>
<th>Service</th>
<th>% of answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra channel packages</td>
<td>77</td>
</tr>
<tr>
<td>Interactive services e.g., shopping, banking</td>
<td>60</td>
</tr>
<tr>
<td>Internet / e-mail</td>
<td>34</td>
</tr>
<tr>
<td>None of these-only free channels</td>
<td>15</td>
</tr>
</tbody>
</table>

Source: Hoak Breedlove Wesneski, 2000

Continental Research (2001b) reports that 89% of digital adopters give either more channels (55%) or better picture quality (34%) as the single most important benefit of DTV (although not everyone would agree that DTV picture quality is typically better than analogue). More channels are seen as especially important by younger consumers.

There is less agreement among adopters about how DTV could be improved. 45% mention more programme variety and 36% a more efficient EPG (electronic programme guide). But significant numbers also mention faster interactive service (31%), full Internet access (25%), and faster/easier email (15%) (Table 3.3).

Interactive service is seen to add value and is a welcome addition to the TV environment but not a ‘must have’ service or a huge innovation (Carlton Television, 2001). For viewers, iDTV lies conceptually between teletext and the Internet, although the perception varies by viewer type. Factors that affect the perception of iDTV include familiarity with teletext, DTV (especially EPGs), and the Internet (Carlton Television, 2001).
Table 3.3: Priorities for improving DTV

<table>
<thead>
<tr>
<th>Priority</th>
<th>% of adopters</th>
</tr>
</thead>
<tbody>
<tr>
<td>More programme variety</td>
<td>45</td>
</tr>
<tr>
<td>More efficient EPG</td>
<td>36</td>
</tr>
<tr>
<td>Faster interactive services</td>
<td>31</td>
</tr>
<tr>
<td>Full internet access</td>
<td>25</td>
</tr>
<tr>
<td>Better picture quality</td>
<td>20</td>
</tr>
<tr>
<td>Faster and easier e-mail</td>
<td>15</td>
</tr>
<tr>
<td>More interactive TV</td>
<td>15</td>
</tr>
<tr>
<td>More PPV films</td>
<td>15</td>
</tr>
<tr>
<td>Improved sports programmes</td>
<td>12</td>
</tr>
<tr>
<td>Better sound quality</td>
<td>10</td>
</tr>
<tr>
<td>Improved movie quality</td>
<td>9</td>
</tr>
<tr>
<td>Better back-up service</td>
<td>9</td>
</tr>
<tr>
<td>None of these</td>
<td>6</td>
</tr>
</tbody>
</table>

Source: Continental Research, 2001b

The staged rollout of services and a perceived lack of coaching/education have led to less than satisfactory first impressions for many viewers. An example of this lack of coaching comes from an NTL customer: “We got this (direct mailing) through the post the other day and (...) [it] is the first thing I’ve seen that explains everything you can do” (Netpoll, 2001).

Many new users are keen to explore what iDTV has to offer and are willing to experiment with the services, but the initial enthusiasm quickly dissipates due to common complaints about unreliability, lack of speed, and lack of depth.

This, in combination with inflated initial expectations of what the interactivity would mean for the TV experience, may make it hard to regain the interest from disillusioned or disappointed viewers (CIA MediaLab, 2001). In a survey carried out by produxion.com and Mantra, only 6% of those who had tried interactive betting said they would repeat the experience (Cane, 2001a).

One area of controversy is about the propensity to switch services. Some sources claim that customers are reluctant to switch and, therefore, “the first companies to get inside the home will win” (HSBC, 2000). Switching costs could come from subscription fees, acquisition of STB and other equipment (e.g., keypads), learning the software and others. Other sources (e.g., the Henley
argue that the propensity to switch is high for many consumers. When the equipment gets old or starts playing up, the consumer is likely to consider a switch.

**Consumer Segments**

There have been several attempts at segmenting iDTV viewers and identifying the early adopters as well as the most promising followers. Netpoll (2001) believes that “teenagers with an interest in all things cool” are the most knowledgeable users of interactive services. Another important segment is that composed of eager sport viewers. However, the “over 50s” segment and that composed by housewives, either childless or with young children, may account for an important share of future interactive users because they “see it as less intimidating than the PC with less chance of making errors” (Cane, 2001b).

Another study by Continental Research (2001b) has identified that a segment composed predominantly of high-income men with no children has been at the digital forefront (“Boys with toys”). Next in terms of iDTV adoption, there is a group predominantly composed of men, of mixed income levels, who use many of the services available such as player-cam or fan match commentary, but not online banking or betting (“Match of the Day man”). (Table 3.4)

<table>
<thead>
<tr>
<th>Name of segment</th>
<th>Composition</th>
<th>iDTV usage</th>
<th>% of DTV households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys with toys</td>
<td>Predominantly male</td>
<td>PPV sport and PPV movies, player-cam, games and all online services</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>High income</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Match of the Day man</td>
<td>Predominantly male</td>
<td>Sky Sports, player-cam, fan commentary and online services; not banking or betting</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Mixed income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ikea generation</td>
<td>Young families</td>
<td>TV as entertainment centre: radio and games; not PPV</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Good income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Royle Family</td>
<td>Both male and female</td>
<td>TV as focal point: PPV movies, online shopping, quizzes, competitions and radio</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Lower income</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Have children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richard Madeley fan club</td>
<td>Females with children</td>
<td>PPV movies and radio; no interactive services</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Lower incomes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The other half</td>
<td>Predominantly female</td>
<td>Does not use interactive services</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>Mixed social background and income</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Continental Research, 2001b
3.2 Projected future adoption

After rapid initial growth, DTV’s household penetration has slowed. Nevertheless, analysts are generally optimistic and estimate that DTV’s household penetration will reach as high as 93.4% by 2010 (Figure 3.1). Others argue that the digital resisters are broadly the same as the multi-channel resisters and will therefore prove hard to convert (Henley Centre).

**Figure 3.1: DTV household penetration in the UK**

![Graph showing DTV household penetration in the UK]

Source: Jerel Whittingham, Durlacher, November 2000

Many sources are optimistic with Equifax forecasting 60% household penetration by the end of 2003 (Chain Store Age, 2001) and the UK government forecasting a rise to 47% by 2003 and 76% by 2008 (Bardsley, 2000).

Regarding iDTV usage, Jupiter forecasts that 25.5% of all individuals will use interactive services by 2003, and 38.6% by 2006 (Behe, 2001).

This trend is influenced by a number of factors.

First, there is a shift of focus among the main digital network operators. BSkyB has now completed the conversion of analogue subscribers into digital. Its focus has now shifted from acquiring new subscribers to improving customer retention, revenue per subscriber (ARPU) and profitability. The Set Top Box (STB) subsidisation programme is ending. NTL and Telewest are under strong shareholder pressure to improve profitability rather than penetration. Their focus is
on upgrading analogue subscribers to digital and increasing ARPU. At the time of writing, ITV Digital is under administration and its shareholders (Carlton and Granada) are under strong financial pressure to limit further investment in DTV.

Second, according to some analysts, the potential "third wave adopters" might be looking for a cheap and friendly substitute to the PC. They will be mainly using interactive services such as e-mail, shopping, banking, gambling and travel services, according to the Yankee Group. These users “will be largely lured (...) by set top box subsidisation”, and the providers will have to use revenues from PPV or t-commerce to offset their high acquisition costs (Electronic Advertising & Marketplace Report, 2001). Forrester Research predicts that by 2005 only 15% of the operators’ revenues from iDTV will come from subscriptions. According to Forrester, 49% will come from t-commerce and the rest (36%) from marketing fees and advertising (Hoak Breedlove Wesneski 2000) (Table 3.5). We think these estimates of advertising and t-commerce revenue are highly optimistic.

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2003e</th>
<th>2005e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising</td>
<td>20</td>
<td>30</td>
<td>36</td>
</tr>
<tr>
<td>t-commerce</td>
<td>28</td>
<td>38</td>
<td>49</td>
</tr>
<tr>
<td>Subscription fees</td>
<td>52</td>
<td>32</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Source: Forrester quote by Behe, 2001 and Hoak Breedlove Wesneski, 2000

Third, further penetration of DTV will increasingly depend on later adopters, who do not want pay-TV. They may be willing to buy a STB or an integrated DTV set in order to view free-to-air digital channels which are now being launched (Hargreaves, 2001). However, it is unclear how attractive these channels will be to these viewers (Barwise, 2001b).

The Henley Centre’s projections for future penetration of DTV assume a slowdown over the next five years as digital pay-TV matures, followed by a second period of fast growth as the cost of integrated DTV sets falls and as free-to-air DTV channels get into their stride (Figure 3.2). Nevertheless, even this renewed growth is not projected to achieve the penetration required for analogue switch-off by the government’s target date of 2010 (Cane, 2001c). As Henley Centre’s
Andrew Curry put it, “Digital resisters will be very slow to convert” and most households with DTV in 2010 will also have one or more analogue sets still in use. Psychologist Armond Aserinsky argues that there is a large portion of DTV population who will not embrace iDTV, because they “will become very anxious with the innumerable choices and hanker for a time when there were only three channels” (Spoonauer, 2001).

Fourth, technological developments such as video-on-demand and personal video recorders, which allow viewers to watch their favourite programmes at whatever time is most convenient for them, are expected by some analysts to be a huge force driving iDTV’s future adoption (Spoonauer, 2001). According to the Gartner Group, a key factor influencing mass-adoption of iDTV will be the bundling of iDTV into existing hardware or services, similarly to what happened with the modem (which now comes embedded in most computers). It is a matter of viewers not even realising they are using the technology (Spoonauer, 2001).

Finally, the Government can play a key role in influencing the trend. Last summer it stated its interest in pushing for iDTV: “the Government has launched initiatives to encourage people to buy digital television sets... It has also introduced a labelling scheme to ensure customers know
which equipment will be out of date when switch off eventually occurs” (Peachey, 2001). Since then, however, the actions of the Government have been relatively low key.

Yankee Group forecasts that by 2005, nearly as many individuals will be connected to the Internet via iDTV as via a PC, with iDTV becoming “the poor man’s Internet connection” (Electronic Advertising & Marketplace Report, 2001). Similarly, the Henley Centre (2001b) has projected that iDTV will be the interactive platform with the widest reach by 2005 (Figure 3.3). Many households will have access to both platforms. For these users, as discussed in Section 2.2, the platforms will be seen as complementary with the PC as the dominant channel for e-commerce (Barwise, 2001b).

![Figure 3.3: Penetration of different interactive platforms among UK individuals](image)

Source: Authors’ estimates based on Henley Centre data
4. RESPONSE TO INTERACTIVE TV PROGRAMMING

4.1 Programme types with interactive potential

iDTv can support two types of change in the viewing of TV programming:
(a) changes in which programmes are watched, when and potentially how they are paid for
(b) changes in the programmes themselves, and therefore also in how they are watched.

Under (a), we would include video-on-demand (VoD) and pay-per-view (PPV), plus personal video recorders (PVRs) and related digital time-shift technologies, some of which may also affect how programmes are watched – part of (b). However, PVR penetration is still minimal (near 0% in 2000, less than 2% by the end of 2001 - Whittingham, 2000). We here focus on (b), which involves interactivity in the programme itself.

Earlier commentators such as George Gilder (1994) and Nicholas Negroponte (1995) expected digital technology to revolutionise TV programming and viewing for all genres. They and other enthusiasts suggested that viewers would watch most programmes other than news and most sport time-shifted rather than live. Viewers would also make extensive use of interactive features such as the ability to stop, freeze, replay, “drill down” for more information, purchase products placed by advertisers, place real-time bets on sport events, change camera angles, and choose alternative storylines, and would use many other features yet to be devised. (Barwise, 2002).

More recently, in March 2001, the BBC’s director of new media, Ashley Highfield, announced that the BBC was moving towards a policy of commissioning only programmes with additional interactive propositions (Higgins, 2001).

The current climate, though, is justifiably cautious about these claims. In practice, the usage of interactive features seems to vary widely with the type of programme being watched. The main genres with immediate significant interactive potential appear to be game shows and sport, discussed below. Programmes that have a break in the action such as news, sports events and awards shows “have worked very well”, according to Eric Handler of the Walt Disney Group, but...
the same is not true for programmes that have to be followed closely such as sitcoms or dramas (Spoonauer, 2001).

According to Alex Owens, a senior research specialist at the BBC, the interactive programmes that work best are those that understand and anticipate viewers’ needs and/or add to the viewing experience without distracting the viewer from it (BBC, 2001). Owens also argues that interactive services can be applied to any type of programme as long as it is relevant to the content of the specific programme. As Kris Jones of PACT puts it “Interactivity only works successfully when it is integral to the overall idea, and not just an add-on” (Higgins, 2001).

4.2 Response to interactive game shows and sport

The main drivers for the usage of interactive features while watching TV (i.e., concurrent enhancement) are (BBC, 2001):

- Wish for increased involvement in the programme – e.g., voting and quizzes
- Need for information and updates – e.g., sports scores and highlights
- Need to improve enjoyment of the linear programme – e.g., subtitles and lyrics
- Wish to build emotional relationship – e.g., background information on programme, character or presenters (often accessed immediately after viewing the programme).
- Perception of choice
- Boredom or lulls in activity – e.g., rain breaks during a live sports event, magazine programming

<table>
<thead>
<tr>
<th>Example of awareness and usage of interactive features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Champions League</td>
</tr>
<tr>
<td>78% were aware of interactive service</td>
</tr>
<tr>
<td>60% of these used interactive service</td>
</tr>
<tr>
<td>71% of these thought that it added value</td>
</tr>
<tr>
<td>Source: Carlton Television, 2001</td>
</tr>
</tbody>
</table>

Examples of recent popular enhanced programmes are the reality show “Big Brother” (Image 4.1), the Wimbledon Tennis Championship (Image 4.2), Golf tournaments and Formula 1 motor racing.

Furthermore, Sky has declared that, when the Sky’s Sports Active interactive application is available on a match, more than 40% of viewers access it at least once during the match (Teather, 2001).
More recently, MTV hosted its first interactive TV programme with the European Music Awards. Michiel Bakker, MTV’s UK Managing Director, strongly believes that the interactive features played a significant part in the 12% increase in viewing figures. He points out that viewers who have voted had a vested interest in the event and were more likely to watch the show live (Adegoke, 2001). With a similar objective, the Discovery Channel has just launched Discovery Mastermind, a quiz game where viewers recording the highest scores are invited to participate in a viewers’ final at the end of the series.

Viewers are divided when it comes to perception of choice in the iDTV environment. For some, the perception of choice is a key driver for trial, whereas for others it is viewed as something that the broadcaster, not the viewer, should be doing. An example of the latter view comes from a frustrated Sky Digital viewer: “One of the huge, huge, huge problems I have with the whole [interactive] thing is the idea that we want to be editors. The idea that we all want to have
control, well I don’t. I don’t want to sit there fiddling around at 10 o’clock in the evening, constructing it with the variety of endless options that may be there. Apart from the initial flurry, I’ve only used the interactive television once” (BBC, 2001).

Additionally, it is crucial to achieve a balance in the intensity of the experience: “too difficult, and the user becomes anxious; too simple, and boredom sets in” (Curry, 2000).
5. RESPONSE TO INTERACTIVE TV ADVERTISING

5.1 The potential of interactive TV advertising

Interactive television has the potential to revolutionise TV advertising (Image 5.1) because:

- Interactivity makes audience input possible in the forms of information exchange and transactions are much more efficiently executed than via other response mechanisms
- Internet-like data collection and storage capabilities mean that an advertiser can gather valuable information unobtrusively whenever a viewer clicks through an interactive service on the TV screen, which will help build a profile of the household
- Video messages can be sent directly to households (who are identified by type of household or by ID) allowing for targeted advertising

![Image 5.1 Projected example of interactive advertising](image)

Source: Henley Centre, 2001

The data gathered through iDTV could be fed into a company’s CRM systems providing better information on its customers (Talacko, 2001) and making customising and targeting a more attainable goal. Additionally, when compared to other forms of advertising, interactive advertising is claimed to (O’Brien, 2001):

- Offer consumer information at a lower cost—using iDTV for market research is argued to be cheaper than a focus group or phone survey
- Provide rich information – it helps advertisers identify which networks, offers and messages produce the highest rates of interaction
• Be flexible – iDTV suits different marketing styles and objectives (e.g., low-cost leads for financial services or coupons and trial samples for FMCG)

### Example of impact of iDTV advertising

**Domino’s Pizza**

Domino’s claims that it sells 3% of its pizzas in the UK via iDTV.

*Source: Yahoo!Internet Life, 2001*

Of the interactive sales, 75% are via iDTV and 25% via the web. The ticket value is 35% greater than over the telephone. 21% of the customers are entirely new to Domino’s. The interactive ad led to a 27% increase in sales.

*Source: BSkyB, 2001*

iDTV allows the viewer to request more information about an advertised product or even to buy it, with minimal effort. With addressability, it potentially allows much more accurate targeting such as showing a dog food commercial only to viewers whose store loyalty cards show they buy dog food (Barwise, 2001b). The possibility to connect purchase patterns with TV viewing habits, though, raises questions about privacy (Business Week Online, 2000; Privacy Watch, 2001). It is technically possible to know who is the viewer, where he/she is and which transactions he/she is already performing. Yet, there are regulations, such as the Data Protection Act, that protect the consumer from being harassed and, therefore, limit the scope of interactive advertising. The only satisfactory solution to this limitation is permission marketing where viewers must “opt in” to receive further information. (Godin, 1999; Cassidy, 2002).

US advertisers are enthusiastic about the long-term potential of interactive TV advertising, but they are not yet investing significantly. Those interviewed by Forrester (O’Brien, 2001) rate their interest in interactive TV advertising as 4 (minimum = 1; maximum = 5), but were only spending an average of 0.5% of their TV budget on iDTV. By 2003, though, the average investment was expected to have increased fourfold to about 2% (Table 5.1). This estimate may be optimistic, since US iDTV penetration is expected to be only 17% in 2003. The question is whether US advertisers will consider interactive advertising worth investing in before a much bigger part of the population has access.
Today’s low level of investment reflects both iDTV’s small and fragmented consumer base and the relatively primitive stage of the technology, including the lack of standards (see box). In addition, the current economic recession has lead to budgets being tightened.

The total DTV audience in the UK is now substantial, and many of these viewers are “interacting” (without necessarily using a return path). However, there is still no agreed way to accurately measure the viewer’s level of interaction with an interactive advertisement. It is therefore difficult to know how to value the opportunity of interactive advertising, which means that there are still sharp disagreements about how to price the media space.

Decreasing costs may contribute to the further uptake of interactive advertising (the fixed costs are likely to change, but not the cost of bandwidth - Flextech, 2001). And, finally, education will have a role as well, both for advertisers, who will produce more appealing and effective advertisements, and for viewers, who will interact more.

The advertising inventory consists currently mainly of DAL’s (dedicated advertiser location), banners, interactive airtime, microsites and sponsorships (BSkyB, 2001). Regarding the types of interface, there are (Flextech, 2001):

<table>
<thead>
<tr>
<th>Table 5.1 % of TV budget spent of iDTV</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1%</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>2001</td>
</tr>
<tr>
<td>2003e</td>
</tr>
</tbody>
</table>

Source: Daniel O’Brien, Forrester, 2001

---

**Emerging standards**

**Europe:** The EU passed legislation earlier this year that makes Multimedia Home Platform (MHP) mandatory for next-generation set-top boxes. The problem is that MHP works only on more expensive set-top boxes with more memory and processing power than current models offer.

**Japan:** The Japanese government has established a second-generation Integrated Services Digital Broadcasting standard and pushed broadcasters and consumer electronics companies to agree on technical protocols.

**USA:** The US adopted the Eight-level Vestigial-sideband Modulation standard, which is a high-definition scheme, but very costly and difficult to implement. The standards bodies are now favouring MHP, the European standard.

*Sources: Fischetti, 2001 & Hayes, 2001*
- The simple one-page model (much like a poster), suitable for simple offers from established brands
- The basic data entry/Q&A site, consisting of 2-3 pages. This is more suitable for qualified lead generation
- The customised/full service site, which is extensive and aimed at complex lead generation and/or brand-building.

In the future we are likely to see targeted advertising, as well as more possibilities for the viewer to interact with an ad. Software has been developed that allows marketers to target ads at the individual household level and to customise an ad’s audio, video and graphics, and at the same time allows the viewer to choose a spot that interests her or to request additional information about for example products, promotions and sweepstakes. Elkin (2002) claims that: “once the viewers’ preferences are fed into the set-top box, cable operators receive reports that are then sent on to advertisers to shape their marketing efforts”, but “viewers must specifically opt in for any personal information to leave the household”. He adds that, although many media executives have shown great interest in trying targeted advertising, they worry about how long it will take before the technology will have a substantial rollout [in the USA].

With the advent of personal video recorders (PVRs) and Video on Demand (VoD), which give viewers the possibility to skip commercials, “advertising will slowly disappear from the slots inserted into programmes (...). Advertisers will choose instead to deliver their messages through interactive programmes”, according to KPMG Consulting (Ward, 2001). Currently, advertisers are focusing on enhanced commercials (because they leverage existing media) and EPG visibility (to create awareness) (O’Brien, 2001). Additionally, some are starting to explore impulse buying and stimulate it within the context of TV programming (see box).

### Example of impulse buying on iDTV

**Rock Concert**

When KBHK, a San Francisco broadcaster, screened a rock concert by Melissa Etheridge recently, 22% of the audience ordered a CD through the TV during the show.

*Source: Ward, 2001*
5.2 Attitudes

Existing iDTV users feel bombarded by numerous messages, visual and audio stimulation, and the need to co-ordinate the remote control (CIA MediaLab, 2001). It is, therefore, important that advertisers are aware of this sensory overload as they develop interactive content. According to CIA MediaLab (2001), there is some demand for advertising interactivity, but viewers prefer to access it in dedicated shopping areas in order to limit the impact on viewing programmes. Those viewers with home Internet access seem more inclined to take action in response to interactive advertising, suggesting that there is a relationship between familiarity with the Internet and iDTV usage, as discussed in Section 3.1.

Regarding the preferred route for responding to adverts, the key issue is convenience, so TV remote access is preferable among young people to visiting a website. CIA MediaLab (2001) found that a majority of 15-24s and 25-34s think that using a website to respond to an advert is very/relatively useful (62% and 56%, respectively), but even more feel that the remote control is useful (76% and 65%, respectively). For all adults, Teletext pages (14%) rate below telephone (20%) and website (19%) routes, despite the high Teletext penetration (now 78% of adults, Towler, 2002). This will, nevertheless, impact on future digital text and enhanced TV services.

Many analysts believe that the advent of PVRs and VoD will further increase viewers’ power. One study estimates that at present up to 88% (others show figures ranging from 50%-90%) of PVR users are skipping ads (Interactive Television Research Institute, 2001). These analysts highlight the need to find ways to counteract this trend.

Other analysts, though, minimise this fact and say that the early adopters of this technology are those viewers that are really annoyed by ads and are willing to pay to avoid them (Pace, 2001) and, therefore, they are not representative of the wider market. Others have argued that ad skipping will neither be significant nor stimulated by this technology because the hardware and service are expensive, thus limiting PVR penetration.

At this stage, the jury is out on the impact of PVRs and VoD on the viewing of commercials. There is much speculation but virtually no published research. Our own view is that VoD will
have limited impact because it will only ever account for a small proportion of viewing (and live pay-per-view even less). In contrast, we believe PVRs will, once aggressively marketed, be adopted on a large scale and lead to a substantial proportion of viewing being time-shifted, (mostly by only a few minutes or hours) and that this will lead to viewers skipping ads perceived as irrelevant or boring (Barwise, 2002). We hope some data will emerge into the public domain over the next year or so to clarify this important issue.

5.3 Response rates

Interactive TV advertising has yet to take form fully but, at this early stage, some of the results look promising. For example, Sky had run only 34 interactive campaigns by September 2001 but claimed that these campaigns had generated 1.2 million responses (BSkyB, 2001).

<table>
<thead>
<tr>
<th>Example of response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Virgin Mobile</strong></td>
</tr>
<tr>
<td>An interactive campaign ran for 4 weeks in May 2001 on Sky and Flextech’s Bravo channel. It consisted of an interactive ad and a banner under the slogan: “What makes you see red?” In the ad, the viewer could vote about what made them “see red” and request a brochure. The viewers were asked about their age.</td>
</tr>
<tr>
<td>31,712 viewers took part in the vote and 94% requested a brochure. 63% of the visitors were in the core target group (age 16-34).</td>
</tr>
</tbody>
</table>

Source: BSKyB, 2001

There is a wide variation in response rates. Even within a single campaign, response rates have ranged between 0.02% and 9.7% (Flextech, 2001). The average rate so far (0.6%-0.7%) is claimed to be 10-20 times the analogue average (Flextech, 2001). Younger viewers and more web-literate viewers are more likely to be responsive to interactive advertising (BSkyB, 2001; CIA MediaLab, 2001).

![Figure 5.3 Action taken in response to ad viewing](image-url)
Customised icons increase response rates from 0.4% to 1.6% (BSkyB, 2001). However, banner ads have had very mixed response (CIA MediaLab, 2001), with some viewers claiming they disliked clicking through and abandoning the original site. Nevertheless, because of their large graphics, banners seem ‘easier’ to click on.

According to a survey on ad/sponsorship awareness (Carlton Television, 2001), 39% of respondents remembered seeing an Internet banner in the last 4-week period and a higher number, 65%, were aware of banners on interactive pages. Additionally, 28% were aware of broadcast sponsorship and 40% were aware of interactive service sponsors.

Some research suggests that there is a difference between dayparts. Analysis of some interactive advertising campaigns indicated that response rates can average 15.6% during daytime and drop down to 0.43% during peak time viewing (FutureOgilvy, 2001). Some analysts question this finding, however. They say it is too early to draw patterns due to the limited number of campaigns up until now and the fact that these may be early adopters drawn by the novelty factor and, therefore, they may not be representative of future behaviour.

Other big questions are: How much of this response rate (among early adopters) is due to the novelty factor? What if people skip ads and nobody interacts? And if there is no advertising on interactive television, what and who will pay for the content?

When choosing among different programmes, advertisers and agencies will not only judge the programmes from the number of viewers, but also from the number of interactive responses generated (e.g., how many viewers are choosing to interact with the programme or even to buy something). This suggests that some combinations of programmes/products being advertised will be much more effective than others. For example, travel programmes could link well with the possibility of booking a trip, music concerts with CD or merchandising sales, and movies and sports events with pizza delivery.
5.4 Effectiveness

In its report “Cultivate Consumers with iTV Ads”, Forrester forecast that “over the next three years, commercials will grow increasingly ineffective. By 2004, 31% of all TV viewing will be on-demand (...) and ads in such programs will be easy to skip” (O’Brien, 2001). However this projection (exaggerated, in our view) depends on the rate of VoD network buildout, adoption, and usage. Additionally, there is a limit to the number of interactive ads per commercial break. Some analysts suggest a limit of one interactive ad per commercial break (Solomons, 2001). To counteract this trend, advertisers need to rethink TV interactive advertising in terms of:

- The characteristics of the commercial
- The way it is delivered to the viewer

Regarding the commercial’s characteristics, interactive ads need to be simple, entertaining, and relevant as well as providing a reward for the viewer (FutureOgilvy, 2001). Because TV is mostly seen as an entertainment medium rather than a utilitarian one, interactive ads also need to be emotionally appealing (CIA MediaLab, 2001). Interactive features and personalisation improve perception (Carlton Television, 2001). iDTV will be used for some low-ticket transactions and for generating leads for high-ticket items (however, the leads may be of low quality if it is too easy for consumers to request further information) (Barwise, 2001b). It can be seen as phoneless direct response television (DRTV).

In order to encourage trial, the advertiser has to give the viewer a reason to enter the interactive service. Thus the interactive ad has to provide continuity from the original ad and add value up front (Carlton Television, 2001). To lure viewers to watch interactive advertising, some advertisers are using incentives such as competitions, games, coupons, and special offers.
Regarding the way the ads are delivered, advertisers need to experiment with new formats. One option is to place banners, logos, etc on EPGs. With the continuous rise in the number of channels available to viewers, EPGs become crucial to help navigation. Established brands with well-known logos and simple taglines may benefit from these simple “drive-by” impressions (O’Brien, 2001).

Another option is enhanced programme sponsorship, making marketing messages harder to avoid. Currently, branded content is prohibited in the UK by ITC regulations but some analysts expect the ITC to relax its rules regarding sponsorship (Schreiber, 2001). Yet another option is “pop-up” features such as video information, demos, contests and branded games (O’Brien, 2001) although these may alienate viewers if too intrusive.

Interactive advertising is applicable for a wide range of products and strategies, but “for some more than others” (Carlton Television, 2001) (Table 5.4).

On the subject of customised advertising, Murdoch University (Interactive Television Research Institute, 2001) conducted an experiment on persuasion through interactive television. In this experiment 70 subjects were exposed to creative simulated interactive programming and advertising. Two products were chosen, one low-involvement (a well-known brand of cookies) and one high-involvement (a PC brand). There seems to be clear evidence that interactivity shapes the way people process messages both in terms of the type of thinking and the number of
cognitive elements. Thus, interactive advertising seems to stimulate the cognitive process, which shifts from “peripheral” to “central” processing (Petty et al, 1983). This means that instead of thinking about peripheral aspects of the ad such as what the people in the ads are wearing, viewers tend to think about the ad itself and relate it to their own life. The shift in the cognitive process more than doubled in the experiment. Regarding the impact of interactivity on attitudes, there was a positive relationship between the interactivity and the attitude to the ad in the case of the low-involvement product, but not in the case of the high-involvement product. Purchase intention went up for the low-involvement product, but down for the high-involvement product.

Table 5.4 Example of iTV advertising opportunities

<table>
<thead>
<tr>
<th>Product</th>
<th>Pop-up</th>
<th>EPG</th>
<th>Program Enhanc.</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beer</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>New branding billboards in sports and guides</td>
</tr>
<tr>
<td>Cars</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>Winner: Car shoppers want info, makers want local leads</td>
</tr>
<tr>
<td>Cell phones</td>
<td>+</td>
<td>+</td>
<td>+/-</td>
<td>Tune calling-plan offers to coverage area, competition</td>
</tr>
<tr>
<td>Clothing</td>
<td>+/-</td>
<td>+/-</td>
<td>+</td>
<td>Runway footage, live catalogues, co-op with small stores</td>
</tr>
<tr>
<td>Computers</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>Reviews, specs for techs, build-your-own bundles</td>
</tr>
<tr>
<td>Consulting</td>
<td>+/-</td>
<td>-</td>
<td>+/-</td>
<td>B2B demo videos delivered off VoD servers</td>
</tr>
<tr>
<td>Credit cards</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>Test and measure hundreds of offer variants</td>
</tr>
<tr>
<td>Fast food</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>Links from tie-in movie promotions</td>
</tr>
<tr>
<td>Insurance</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>Targeting will get stage-of-life ads to right audiences</td>
</tr>
<tr>
<td>Movies</td>
<td>+/-</td>
<td>+</td>
<td>+/-</td>
<td>Link from EPGs to theatre trailers and interviews</td>
</tr>
<tr>
<td>Packaged goods</td>
<td>+/-</td>
<td>+</td>
<td>-</td>
<td>Pricey for coupons and sales, but not for research</td>
</tr>
<tr>
<td>Prescription drugs</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>Good for leads and depth but sticky disclosure issues</td>
</tr>
<tr>
<td>Vacations</td>
<td>+</td>
<td>+/-</td>
<td>+</td>
<td>Resorts, cruises will send you-are-there tours on demand</td>
</tr>
</tbody>
</table>

Source: O’Brien, Forrester, 2001

Another experiment explored advertising style. 339 subjects were exposed to both informational and transformational executions of interactive advertising. The results indicated that, even though people chose the advertising style that they had a propensity to attend towards, choice of style did not matter on any variable. What did matter was the match between the advertising
style (transformational or informational) and the subject’s style (transformational or informational).

Therefore, the role of expectation is critical in interactive design (Interactive Television Research Institute, 2001). It is important to acknowledge the expectations that consumers have for the brand and product category before executing the interactive commercial. Otherwise the advertiser might risk damaging the brand.
6. RESPONSE TO OTHER INTERACTIVE SERVICES

Usage of interactive services in iDTV households is characterised by short visits, mostly as an alternative to uninteresting TV programmes and occasionally as an extension of interesting ones. Half of all iDTV users say they use interactive services when they cannot find a good programme to watch, a quarter use it mainly during ad breaks, and the remaining quarter turn on the TV specifically to use interactive services (Henley Centre, 2001). When using interactive services, about 50% usually use it for periods of up to 10 minutes (Henley Centre, 2001) (Table 6.1).

<table>
<thead>
<tr>
<th>Minutes</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 10</td>
<td>48</td>
</tr>
<tr>
<td>11-20</td>
<td>18</td>
</tr>
<tr>
<td>21-30</td>
<td>22</td>
</tr>
<tr>
<td>31-60</td>
<td>7</td>
</tr>
<tr>
<td>60+</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: BMRB Digital Viewer, Henley Centre Analysis, 2001a

As of March 2001, 50% of the individuals in digital households had not used interactive services (Continental Research, 2001b). Key events last summer such as Big Brother and the Wimbledon Tennis Championship have started to change this. Recent figures from BMRB suggest that 76% of cable and satellite users and 50% of DTT users have tried interactive services and programming.

Those households with both PC-based Internet access and iDTV still preferred to access the web via their PC for most online services (Continental Research, 2001b). Regarding the interactive programmes that viewers prefer, game shows are top of the list (31%) followed by reality shows (20%) (produxion.com and Mantra, cited in Cane, 2001a).
6.1 Games and gambling

Interactive games are expected to become an important revenue stream for network operators, based on the addiction factor, but opinions are divided regarding the role of gambling (or betting) as a revenue generator. It is worth noting that this type of game is to be distinguished from the studio game shows, which can be watched passively (or where the viewer can compete by using iTDV) as already discussed in Section 3. Over time, the distinction may blur and thus become an example of true convergence.

Game playing is currently the most popular single application of iTDV and shows signs of significant usage (Henley Centre, 2001). Two Way TV has 1.5 million games played per month, and 30% of all the households have played at least one game (Two Way TV, 2002). On average the regular PPP (play per pay) player spends over £7.50 per month (Two Way TV, 2002). BSkyB’s Playjam games channel consistently ranks in the top 10 most popular channels among the 16-34 age group and registers an average of 83m gameplays per week (Murphy, 2001).

Playjam’s users spend an average of 7 minutes on each game session and 31 minutes per week on the channel (Murphy, 2001).

“Gaming is something of a cash cow” (Schreiber, 2001). The main revenue streams are pay-per-play, subscription fees, registration of scores (via premium rate telephony), branded games / sponsorship and advertising. So far, though, most advertisers have been cautious about sponsorship and advertising in the gaming environment (Henley Centre, 2001).

The fact that playing games on iTDV is so popular may not be too surprising if we consider that using the TV set as a medium for games is an already established habit through the use of game consoles (Sega, Nintendo and Playstation). The move from using a game console to playing an online TV game might not be too big. However some sources argue that many users are disappointed by the iTDV gaming experience considering that the games compare poorly with their arcade equivalents created for PCs or consoles (Cane, 2001a). However others say that it is
important to bear in mind that user sessions for digital TV games are much shorter than for PC games and often take place as a break in the day or (like other interactive applications) instead of watching television (waiting for programme, finished programme, nothing good on, etc.). These sources argue that usage is modal and that expectations are usually appropriately aligned with the experience of each channel (Henley Centre, 2002).

Regarding the role of gambling as a revenue generator, opinions are divided. On the one hand there are those that expect iDTV to provide a way of getting to a new gambling clientele and uncap revenue. On the other hand there are those who consider that the TV betting process is far more difficult than the telephone one, thus hindering impulse betting and seriously limiting the revenue potential.

KPMG Consulting considers that betting (together with TV-poll voting and merchandise sales around big live events) will drive the future of transactional revenue from TV programming, even though there will be “no overnight revolution” (Ward, 2001). BSkyB is equally optimistic and has announced that it expects to generate £700m from online betting by 2005, mostly from iDTV (Dresdner Kleinwort Wasserstein Research, 2001). An example of the success of this type of application comes from France, where Canal Satellite’s horse racing TV betting service has been a huge success (Schreiber, 2001).

<table>
<thead>
<tr>
<th>Example of spread betting</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIG</td>
</tr>
<tr>
<td>Global Interactive Gaming is developing a proposition where viewers, using money from a prepaid account, could choose to take bets on, for instance, which soccer team would score the next goal or whether there would be a throw-in in the next 10 seconds</td>
</tr>
</tbody>
</table>

Source: Murphy, 2001

One of the most promising forms of gambling is “spread betting”, i.e. the possibility of placing bets during the occurrence of the event. This form of betting encourages viewers to stick with the channel they are watching and thus discourages zapping or surfing.

The main streams of revenue are subscription fees and registration of scores (via premium rate telephony).

The main limitations for TV betting are:

- Legislation - service providers need to obtain a licence which is geographically limited
• Regulatory - minors cannot place bets and the current systems do not guarantee an effective safeguard
• Taxation - these activities are heavily taxed which seriously limits the revenue potential
• Consumer behaviour – Betting is not a socially acceptable pastime and some consumer groups consider the offering intrusive and addictive.

According to the less optimistic analysts, iDTV is unlikely to gain a large share of the existing betting market. According to EndersAnalysis’ (2001) estimates, TV gambling revenue potential will be in the range of £100-200m by 2005, with the largest share of revenues coming from football-related betting. The average TV bet does not exceed £5, which is ten times smaller than the average telephone bet. Chris Goodall (EndersAnalysis, 2001) thinks it unlikely that iDTV gambling revenue is going to be profitable. According to Goodall, one reason why betting is not going to be successful lies in human behaviour: betting is not among the socially acceptable pastimes. An occasional bet on a horse might be acceptable, but many are the articles about the dangers of compulsive gambling. Moreover, “most gamblers like to lose in private” (EndersAnalysis, 2001).

6.2 Email, the Web, and t-commerce

Research suggests that very few people prefer to access the Internet from their television sets (Figure 6.1).

Figure 6.1 Preferred access method for online activities

![Figure 6.1 Preferred access method for online activities](image)

Source: Continental Research, 2001c
The PC has of course a first mover advantage over iDTV and once people have established a preferred mode of access, their attitudes and behaviour can be hard to change. Another reason for this reluctance to access Internet, e-mail, online shopping and online banking from the TV environment can be found in the perception of the medium. TV as a medium has traditionally been associated with entertainment and information, not with communication and transactions (Henley Centre, 2001), i.e., TV is seen as a “lean back” medium, in contrast to the PC, which is considered a “lean forward” medium. Yet another reason for the limited success of TV as a web access platform might be that television viewing is sometimes a secondary activity (e.g., viewing while preparing or having a meal) as well often as a social activity (e.g., family viewing), whereas the PC is usually used with a specific aim in mind by one person.

The interactive services that seem to work best on TV are those that do not directly compete with the functions usually performed over the PC (Figure 6.2).

![Figure 6.2 Interactive Services work best when they don’t compete with the PC](image)

Source: BMRB Digital Viewer, Henley Centre, 2001 (Base: all users of Open who were also online at home)

Yet, it may be too soon to write off iDTV as a commerce platform. Even though only 8% of Sky Digital’s subscribers have used the interactive components to purchase items, some retailers are still optimistic (Chain Store Age, 2001). The British grocer Sainsbury, for instance, expects t-commerce to represent 5% of its total yearly sales by 2005, even though it currently represents less than 1% (Chain Store Age, 2001).
The medium has its own characteristics, though, and retailers cannot just transport their website to the TV set (Chain Store Age, 2001). Woolworths, for instance, carries only 300 SKUs in its iDTV service, whereas the average Woolworths store carries up to 25,000 SKUs. Howard Unna, Woolworths’ e-commerce director, justifies this by saying that “Customers shopping with us on iDTV tend to know what they want before they even get there, whereas in the store, customers walk up and down the aisles and browse” (Chain Store Age, 2001). The t-commerce offering is probably going to be most successful for products that fit the consumers’ perception of the TV medium as a source of entertainment. Among these, toys and games, home and electrical products, and CDs, videos and DVDs have the potential to be successful (Henley Centre, 2001). Viewers express a willingness to buy certain products such as holidays (48%), cinema/concert tickets (45%) and books (45%) (Pace, 2001). Security does not seem to be a significant barrier as only 2% are concerned with security matters in the iDTV environment (Interactive Television Research Institute, 2001).

The challenge is to manage viewers’ expectations and adapt the iDTV offer to the medium.
7. SUMMARY AND IMPLICATIONS

7.1 Summary

Digital TV penetration has taken off fast in the UK. All Sky households and 50% of cable households have already converted to digital. iDTV penetration is over 40% of DTV households and growing. Younger households and families account for the majority of the UK iDTV adopters. Prime motivators for getting digital TV have been the possibility of getting a larger and better choice of channels, and getting better picture and sound quality. Interactivity is seen to add value to the TV experience but not as a huge innovation, lying conceptually between teletext and the Internet. Interactive features in some programming are successful. Viewers use the possibility to for example cast votes and gain additional information e.g. Big Brother, Wimbledon and Banzai. Interactive services as game playing, betting etc. are mostly used as an alternative to uninteresting TV programmes, and for short visits. The main factors influencing future adoption are STB cost, free-to-air channels and technological developments that allow for more customised TV viewing, mainly convenient time-shifting via PVRs and smart STBs.

The main driving forces for the usage of concurrent programme enhancement are increased involvement/enjoyment, in the programme, information and updates, building of emotional relationships, perception of choice and boredom.

When compared with other forms of advertising, interactive advertising is potentially powerful, but raises some questions about privacy (to which permission marketing is the only long-term solution). Interactive advertising campaigns enjoy, on average, greater response rates than traditional ones. Nevertheless, ways have to be found to counteract the possibilities brought by the PVR, which allows viewers to skip commercial breaks and fast-forward through TV broadcasting. Responsiveness to interactive TV advertisements is higher among younger viewers, web savvy viewers, and during daytime. Interactive ads need to be simple and emotional, entertaining, relevant and providing some reward for the viewer. Interactive advertising seems to stimulate the cognitive process and, naturally, advertising strategies vary by product category.
TV is associated with entertainment and information and not with communication or transactions (Image 7.1). Hence, it is not surprising that gaming is popular among viewers, but not e-mail, web browsing or t-commerce. Television viewing is often a secondary and/or social activity. At present, interactive services seem to a large extent to be complementary to online PC and the interactive services that will work best on TV are probably those that do not directly compete with functions usually performed on the PC. It might be hard to persuade viewers to start interacting and transacting heavily within the iDTV environment.

**Image 7.1 TV is associated with entertainment and information.**

![Image 7.1](Image 7.1)

Source: Henley Centre, 2001

### 7.2 Implications

The fact that most viewers regard iDTV as “enhanced television” rather than a completely new medium, raises the question whether they are willing to pay for interactive programming.

Similarly, we would recommend caution in forecasting future revenues from interactive advertising campaigns. The initial response rates for interactive advertising have been fairly
encouraging, yet much of this success may be due to the novelty factor rather than a change in TV viewing habits and, therefore, may not be illustrative of future success. Because TV is associated with entertainment and information rather than communication or transactions (Image 7.1 above), we believe advertisers should use “soft sell” instead of “hard sell” and should offer something of value to the viewer, in order to encourage him/her to interact (Image 7.2).

![Image 7.2 Example of Interface for Interactive Services](Image)

Source: CIA MediaLab, 2001

Additionally, interactivity cannot be forced upon viewers. Content producers should try to find different social uses of interactivity, in order to benefit from the fact that television viewing is often a secondary as well as a social activity. Moreover, interactive services should be user-friendly, and not compete directly with services offered via the PC.

The t-commerce offering will be most successful for products that are well aligned with consumers’ perceptions of the TV medium. Therefore, we believe that those products and services focused on the entertainment and leisure have higher revenue potential than other categories.

There are signs that women are lagging behind children and men in the usage of interactive features (CIA MediaLab, 2001). We believe that youngsters could be instrumental in unlocking a
potential latent interest in iDTV. Household ‘techies’ are the first to gravitate towards iDTV and these ‘techies’ are predominantly children (CIA MediaLab, 2001). It is also important to recognise that some groups of consumers are easier to reach than others, and that some viewers may never embrace the iDTV medium and its services.

Viewers have expressed high levels of potential interest in t-commerce, but there is a degree of disappointment with the current offering. As the early days of the Internet showed us, first movers can have a competitive advantage because of the economies of learning, brand awareness and the locking of important partners. However, that advantage is short-lived if the proposition being offered falls short of viewers’ expectations. Disappointed consumers are unlikely to try the service again and, therefore, it is critical to manage viewers’ expectations. Moreover, providers need to complement their online offer to the High Street offer.

Finally, it is important to avoid the temptation of merely transferring web content into this platform. First, because the profile of iDTV viewers and the usage patterns that are emerging are significantly different than those of PC users. And second because the medium has its own characteristics and limitations (it is not suitable for small print, for instance).
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