Digitisation 2007

Digitisation of the German television market

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Digitisation of the German television market: facts and figures

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Digitisation of the German television market: facts and figures
Objective of the GSDZ survey

With the present data on the digitisation of television reception in Germany the Commission on Digital Access presents the third survey conducted on behalf of the German regulatory authorities.

The survey covers the percentages of cable, satellite and terrestrial transmission respectively regarding transmission infrastructures as well as the rates of switchover to digital reception. And as in the previous surveys, the 2007 data also show reception for up to three sets per household.

But unlike in the surveys for 2005 and 2006 respectively, the data are given on the basis of all private households in Germany for the first time, i.e. they also include all households of non-German viewers in Germany in weighted and projected form. The basis for the analysis thus increases from 33.904 million to 36.981 million television households. The data therefore allow for a better comparison with the figures collected under the German Satellite Monitor carried out by SES Astra. In the future, the data gathered by the Commission on Digital Access and under the German Satellite Monitor respectively will be published alternately every six months. And although the absolute figures for 2007 may now no longer compare fully with the figures established for 2005 and 2006, it is still possible to compare the percentage values.

The survey documents the course of the switchover process and provides a basis for analysing the progress of switchover in Germany and for the decisions required from politics and the industry.

The state of digitisation in Germany

The share of television households in Germany in which at least one digital television receiver is available rose to around 40 per cent by the middle of 2007 (see Fig. 1), an increase by around eight percentage points, or four million television households, compared to last year. Regarding last year’s rate of increase of just under six per cent, digitisation appears to get going.

Some 14.8 million television homes own at least one digital receiver, mostly so-called set-top boxes converting the digital television signal. Television sets especially of the upper price range are increasingly fitted with integrated digital tuners (so-called integrated TV sets, iDTV).

Around one fifth of digital households resorts to analogue reception alongside digital reception. Increase in this sector is clearly down on the previous year compared to households equipped with digital reception equipment only.
The transmission infrastructure

Cable retained its lead among the transmission platforms capturing some 54 per cent of the market, and could even enlarge its share compared to 2006. Satellite reception comes second with an almost unchanged rate of around 43 per cent. A remarkable increase can be noted for terrestrial reception which rose by some two percentage points to around 12 per cent. In absolute figures, 19.9 million television households receive television via cable, 15.7 million watch satellite television, and 4.2 million resort to terrestrial reception (see Fig. 2). These figures can contain some overlaps as they comprise not just the main mode of reception but all transmission modes available in a household.

The cable household total includes around 900,000 households with television reception via so-called satellite master antenna systems (SMATV-CH) which convert the satellite signal for reception with a standard television set; unlike with satellite reception, a separate satellite receiver is not needed. For this reason, these households are included in the figures for cable households. By contrast, SES
ASTRA qualifies reception mode as the key criterion and therefore includes SMATV households in the figures relating to satellite reception.

The digital transmission platforms show increases overall. With 2 percentage points, the rise is clearly lower for cable while terrestrial and satellite reception rose by some 5 percentage points each compared to the previous year.

**Digitalisation of the individual transmission platforms**

**Cable** being the most important transmission platform for television reception in Germany still accounts for a slight upwards trend of homes connected. This increase can be attributed almost exclusively to digital cable connections, reflecting the efforts of the three major cable providers to convince new customers to go for digital cable (DVB-C) from the start.

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**Fig. 2** Access totals via cable, satellite and terrestrial reception

<table>
<thead>
<tr>
<th>Year</th>
<th>Cable</th>
<th>Satellite</th>
<th>Terrestrial</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>46.7%</td>
<td>44.6%</td>
<td>9.7%</td>
</tr>
<tr>
<td>2006</td>
<td>51.7%</td>
<td>45.0%</td>
<td>5.3%</td>
</tr>
<tr>
<td>2007</td>
<td>53.7%</td>
<td>42.5%</td>
<td>9.9%</td>
</tr>
</tbody>
</table>

Basis: 36.981 million TV households in Germany
Source: GSDZ June 2007

- **Digital**: green
- **Analogue**: orange
According to the GSDZ survey, some 3.2 million households or around 16 per cent of all German cable households are connected to digital cable; the figure is therefore congruent with the data published by the association of German cable operators. As regards digitisation, cable lags far behind the other two modes of transmission (see Fig. 3). Put another way, some 16 million cable households still have to switch to digital reception before switchover is completed.

In this context, the situation concerning second and third television sets in homes is particularly interesting (see Fig. 5). Around one third of the 37 million television households owns a second set; it is usually located in the bedroom or the children’s room. This ratio is largely the same for all three modes of transmission except for digital cable: Here, only every eighth household also uses DVB-C for television reception on the second set.

This situation highlights a structural deficit of digital cable: For reception via DVB-C, each television set requires a separate set-top box. It is no longer

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**Fig. 3** State of digitisation by transmission platforms

<table>
<thead>
<tr>
<th>Year</th>
<th>Cable</th>
<th>Satellite</th>
<th>Terrestrial</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>9.7%</td>
<td>38.8%</td>
<td>45.6%</td>
</tr>
<tr>
<td>2006</td>
<td>15.2%</td>
<td>47.2%</td>
<td>57.1%</td>
</tr>
<tr>
<td>2007</td>
<td>16.2%</td>
<td>57.3%</td>
<td>86.0%</td>
</tr>
</tbody>
</table>

Basis: 36.981 million TV households in Germany
Source: GSDZ June 2007
possible to connect any number of television sets to the cable point. As a consequence, cable loses an advantage it had so far enjoyed over satellite, which had always necessitated separate receivers for watching or recording different broadcasts.

The marketing strategies adopted most recently by some network operators aggravate these problems as they decrypt digital services for one specific box only. Customers of these networks owning several boxes can thus not automatically use their smart card for all set-top boxes.

For viewers, both aspects at first sight indicate restrictions in use which appear to keep many cable customers from switching to DVB-C.

By the same token, the example shows that the considerable number of second and third sets must be included in the switchover process. For these, too, viewers need a convincing perspective at least in the medium-term to convince them to change to digital reception.

As there is still a comparatively large number of analogue households, efforts for conversion of the cable networks must be intensified. The regulatory authorities therefore recommend that the con-

![Modes of reception in digital households](image)

**Fig. 4** Modes of reception in digital households

<table>
<thead>
<tr>
<th>Year</th>
<th>Cable</th>
<th>Satellite</th>
<th>Terrestrial</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>19.4%</td>
<td>65.0%</td>
<td>17.2%</td>
</tr>
<tr>
<td>2006</td>
<td>23.0%</td>
<td>61.8%</td>
<td>16.7%</td>
</tr>
<tr>
<td>2007</td>
<td>21.8%</td>
<td>61.1%</td>
<td>24.7%</td>
</tr>
</tbody>
</table>

Basis: 36.981 million TV households in Germany
Source: GSDZ June 2007
siderations for pilot projects analysing complete switchover should be resumed; they would also permit a more detailed investigation of the aspects outlined above.

Apart from that, progress of digitisation in the cable networks will yield positive effects not only for digital television transmission, but also for the position of broadband provision in Germany overall which is today effected almost exclusively via DSL.

In 2007, digital satellite transmission for the first time topped analogue satellite transmission: 57 per cent, i.e. more than half of all satellite households resorted to digital television reception (DVB-S, see Fig. 3). In comparison to 2006, DVB-S reception increased by five percentage points. At the same time, the total number of satellite households remained almost unchanged. Unlike with cable, digitisation has not resulted in an increase; rather, satellite households appear to have merely replaced the set-top box. Most satellite dishes are fitted with digital-ready LNB converters.

The discussions on the plans for basic encryption of the digital satellite signal which were stopped by the Federal Cartel Office might have kept consumers from switching to satellite reception.

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**Fig. 5** Reception via the three sets used most frequently

<table>
<thead>
<tr>
<th></th>
<th>Main TV set</th>
<th>Second TV set</th>
<th>Third TV set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable</td>
<td>45.1%</td>
<td>17.2%</td>
<td>19.0%</td>
</tr>
<tr>
<td>Satellite</td>
<td>8.1%</td>
<td>10.0%</td>
<td>18.2%</td>
</tr>
<tr>
<td>Terrestrial</td>
<td>4.0%</td>
<td>1.6%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Digital</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analogue</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Basis: 36.981 million TV households in Germany
Source: GSDZ June 2007

Main TV set: 36.981 million homes
Second TV set: 11.621 million homes
Third TV set: 2.885 million homes
DVB-S still provides the greatest contribution to digitisation with just over 9 million households (see Fig. 4). According to present estimates, a major share (around 40 per cent) of set-top boxes used are so-called „zapping“ boxes, i.e. sets not permitting reception of encrypted signals.

However, sets that can receive encrypted services and are addressable are a prerequisite for new business models allowing established service providers to stabilise their basis and for permitting new providers to access the market. Such models will be all the more difficult to establish for satellite television, the more free-to-air boxes are the market.

The most positive development notable in the present survey relates to digital terrestrial reception (DTT). Some 3.6 million households now resort to DTT reception, almost twice the number of 2006. In around 3 million homes, DTT is the reception mode for the main television set in the household (see Fig. 5).

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Fig. 6 DTT reception in the DTT core areas

<table>
<thead>
<tr>
<th>Region</th>
<th>DTT Recept. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baden-Wuerttemberg</td>
<td>3.3%</td>
</tr>
<tr>
<td>Bavaria</td>
<td>9.3%</td>
</tr>
<tr>
<td>Berlin, Brandenburg</td>
<td>13.6%</td>
</tr>
<tr>
<td>Hamburg, Schleswig-Holstein</td>
<td>16.5%</td>
</tr>
<tr>
<td>Hesse</td>
<td>11.0%</td>
</tr>
<tr>
<td>Mecklenburg-Western Pomerania</td>
<td>12.4%</td>
</tr>
<tr>
<td>Bremen Lower Saxony, Northrhine-Westphalia</td>
<td>2.2%</td>
</tr>
<tr>
<td>Rhineland-Palatinate, Saarland</td>
<td>1.1%</td>
</tr>
<tr>
<td>Saxony</td>
<td>1.0%</td>
</tr>
<tr>
<td>Saxony-Anhalt, Thuringia</td>
<td>2.8%</td>
</tr>
</tbody>
</table>

Basis: 36.981 million TV households in Germany
Source: GSDZ June 2007
The range of services available varies from region to region.
Status per 23 July 2007
Source: www.ueberallfernsehen.de

commercial and public-sector channels
only public-sector channels
Another positive aspect is the fact that digitisation of terrestrial transmission has now risen to just under 90 per cent (see Fig. 3). The ARD network is therefore planning to complete switch-off of its analogue transmitters which has already started, by the end of 2008. In its strategy for the digital media world which was presented recently, the network also outlined plans for the extension of DTT by 2008 allowing reception via roof antenna for 90 per cent of the population.

A comparison of the various transmission platforms shows that DTT has taken the lead over digital cable. The fact that the strong increase of DTT does not result in comparable losses for the other transmission routes (see Fig. 4) proves that, relatively speaking, the relevance of terrestrial reception in Germany is still limited.

The analysis by regions again confirms that DTT reception is still below average in those areas where switchover to digital transmission was taken on last (see Fig. 6). Furthermore, the range of services at present distributed in these areas is almost entirely limited to public-service channels (see Fig. 7). Switchover or the investment in a DTT receiver, however, is an attractive option for viewers only if at least a basic range of commercial services is also available via DTT.

Another observation concerns the fact that DTT is more prominent in city areas than in rural regions. This may be attributable to the fact that opportunities in cities to mount satellite dishes are often restricted, and that DTT build-up is still patchy.

Since the 2006 survey, a number of services provided via DSL have been launched. T-online and Hansenet offer television packages distributed via DSL, and Arcor has also started a similar pilot project. However, this fourth mode of transmission is only at the start of its development. The current survey established that some 0.3 per cent of television households use DSL TV.

Progress will depend on whether the various providers can present a compatible range of services, i.e. whether they can offer all programme categories that attract viewers. Further development will also be determined by the outcome of the debate on the extension and shared use of the DSL networks by other service providers.

DTL-TV as defined for this survey uses the standard television set for reception. In contrast, PC TV is defined as television reception over the personal computer or, to be more precise, via a TV card with the television signal being provided via any of the transmission platforms described above. According to the GSDZ survey, some 1.6 million television households already watch TV over a PC; especially for younger viewers, the computer holds a strong and growing relevance for their media consumption.

Pay-TV

According to the business figures available, the number of pay-TV subscribers in the first quarter of 2007 totalled 5.2 million (see Fig. 8). This represents another slight increase over the rate at the end of 2006. But it has to be noted that this figure represents the number of packages sold and not the number of households using pay-TV. It can be assumed that some households use different packages offered by different providers. The fact that the number of Premiere subscribers has remained largely unchanged with the increase primarily concentrated with arena and KDG may serve as proof of this assumption.

The range of premium services offered as pay-TV certainly provided a major contribution to digitisation. But the share of pay-TV users in digital households has decreased continually from 28 to 22 per cent since the first DSDZ survey was carried out. It will be interesting to see what effect on further developments the agreement will have which was recently reached between arena and
Premiere on the transmission rights for the First Football Division and which has now also been approved by the Federal Cartel Office. In addition, the new Premiere Star service has been launched in the market, and, not least, HD TV will also have some role to play: for digitisation overall as HD services are available only via HD TV, and particularly for pay-TV since a large percentage of these cost-intensive services can only be refinanced via pay-TV.
Methodology

The survey was conducted with computer-assisted telephone interviews (CATI) on the basis of the telephone random sampling system of the representation of private market and social research agencies in Germany (Arbeitsgemeinschaft der deutschen Marktforschungsinstitute, ADM). The interviews were held during the period 30 May to 26 June 2007. The survey was carried out by TNS Infratest MediaResearch on the basis of a questionnaire based on the questionnaire of the 2006 GSDZ survey; it also incorporated some elements and text included in the German Satellite Monitor conducted by SES ASTRA. By aligning the survey instruments, a better comparison of the two studies is to be reached.

The overall population basis for the survey was represented by all German-language private households in Germany. By contrast to the 2006 survey, the projection was based not only on the German households but also on households of non-Germans living in Germany. Accordingly, the overall basis of households has increased from 35.57 million (2006 figure) to 39.18 million in 2007. Of these, some 94.4 per cent, or 36.98 million households, own a television set. They form the basis for the presentation of the results. The survey is based on a net number of 6,000 interviews which were in each case conducted with the person in the home stating that he or she knew best about television consumption in the respective household.

The random sampling involving 6,000 interviews was devised disproportionately in order to warrant a sufficient basis of interviews for each of the German states. This disproportionate approach for the random sampling was subsequently levelled out during the weighting of the data.

Definition of cable and satellite reception
Television sets connected to a satellite master antenna system (SMATV) not requiring a separate receiver are counted as cable reception. In these households, the high-frequency satellite signals are converted for transmission in the low-frequency cable network of the SMATV system. The range of services available is pre-defined as is the case for customers serviced by level three operators. Satellite reception therefore only comprises television sets featuring an integrated satellite receiver. The rationale behind this definition is that the survey was devised to analyse reception from the viewpoint of the television households. By comparison, the SES ASTRA survey includes these households in the figure for satellite reception.

Establishing transmission platforms and transmission technologies
For each of the television sets in a household, every transmission technology available was analysed. Homes receiving television both via DTT and via satellite using the same set were included in both transmission categories for the analysis of transmission platforms available. This results in a sum total exceeding 100 per cent in Fig. 2; this does not, however, include reception via the 1.6 million PCs.

In the survey of the transmission technology (analog or digital), cable reception represents an exception: TV households with cable reception using a television set which is connected to a digital cable receiver tend to use this receiver for pay-TV reception only. The services available free of charge are usually watched in analogue transmission mode. As this form of both analogue and digital reception does not exist for satellite and/or terrestrial transmission, all cable TV sets with a digital receiver are counted as digital receivers for the benefit of uniform presentation.
Commission on Digital Access

Remit
The Commission on Digital Access (GSDZ) collates and coordinates the experience and expertise of the German regulatory authorities regarding digital access on a national level, acting as a contact for the industry and politics. The GSDZ sees its key role in moderating and steering digital development.

The GSDZ deals with concrete issues concerning open access to technical platforms for digital reception, cooperating with the Federal Network Agency in agreed procedures. In addition, the GSDZ sees to navigators offering non-discriminatory systems by developing guidelines together with the industry. It paves the way for the decisions on issues relating to Section 53 of the Interstate Broadcasting Treaty which are taken by the competent regulatory authority, and develops recommendations.

Ensuring uniform open standards via guidance, cartel proceedings and voluntary agreements are key responsibilities of the GSDZ. Over the next few years, it will continue to shape and guide analogue-digital switchover in Germany.

Apart from consultation and regulation, legislative processes regarding digital broadcasting are a major sector looked after by the GSDZ. In this process, it develops positions regarding the amendment of the Interstate Broadcasting Treaty as well as European and national telecommunications legislation.

Legal basis
The work of the Commission on Digital Access (GSDZ) of the Directors’ Conference of the German regulatory authorities (DLM) is based on Section 53 of the Interstate Broadcasting Treaty and the joint statute on the freedom of access to digital services of the regulatory authorities of 13 December 2005 which entered into force on 1 August 2006.

Under this statute, the regulatory authorities form a joint unit consisting of the Commission and an associated office. The decisions of the GSDZ are executed by the Commission which analyses and coordinates all issues relating to digital access on a national level. The office is located in Berlin.

The GSDZ was set up on 5 December 2000 and met for the first time in Munich on 19 December 2000.
Digitisation 2007

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Facts and Figures

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