

The digitisation of the German broadcasting market continues its progress. The data published by the German media authorities in the 2012 report on digitisation document the facts and figures for the eighth time in succession. Last year, an above-average number of television households quit analogue broadcasting and turned to digital TV reception. The rate of digitisation has now reached 77.8 per cent, around 10 percentage points more than in 2011. The main reason for this disproportionate increase is the switch-off of analogue satellite transmission.

As in earlier years, the report on digitisation combines the facts with comments on current issues facing the world of broadcasting. The focus is thus directed less towards the opportunities and potentials to be found in the online world than the risks and challenges of the digital age which are becoming evident. The contributions analyse the new gatekeepers for searches in the world-wide web as well as the use of online video material. In addition, the hottest issue in the current debate in media politics, namely the reform of copyright, is covered.



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Digitisation

About Power and Control in the Digital Age

Imprint

Digitisation 2012

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Preface



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Dr. Hans Hege

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Last year's cheers followed by this year's gloom? Avid readers of the report on digitisation will note the discrepancy between the 2011 title „Open, neutral, hybrid – the new media (dis)order“ and the 2012 motto „Of power and control in the digital age“. What was rated an opportunity in 2011 is being followed this year by an emphasis of the risks brought about by digitisation. Could it be that the media authorities are not really sure of their position and objectives?

Definitely not: We have simply aligned the focus thrown on one and the same phenomenon as would appear appropriate in the light of last year's debate among media politicians.

There is no doubt that digitisation affects everyone and everything in our society. With their online features smart devices of all shapes and sizes deliver the variety the internet has to offer to almost everyone at any time. This broad range of contents and services presents a genuine chance for more democracy. However, it is becoming increasingly evident at the same time that this decentralised variety is being bundled by major aggregators who thereby gain a key position in the process of the formation of opinion.

Search engines offer a perfect tool which consumers use for the complex activity of searching and finding content, making life that much easier as they would be lost in the world-wide web without some form of navigation. And yet, search engines establish new facts and through their ran-

kings act as gatekeepers: They create realities, and this also more and more in the world of television and other video content.

In his article, Hans Hege outlines this area of conflict and raises the question whether search engines are not actually a service for which there should be some public responsibility as well. Bert-ram Gugel and Eva Flecken look at the online video market, revealing structures that beg for the conclusion that this market is also characterised by concentration and positions of dominance.

Power and control also mark the bitter fight regarding copyright. Rarely has there been such a fierce controversy among media politicians as is the case on this question at present. Christian Stöcker describes the opposing positions adopted by the creative industry, exploiters of rights and consumers, who put the existing rights into question.

For the eighth time in succession, the media authorities have researched the developments in the process of digitisation of broadcasting which are presented in the facts and figures section. Alongside the annual data on the status of digitisation, current trends and topics including HD-TV and connected TV are covered.

This year's report actually deals less with „feel good“ topics but focuses on the risks and related challenges of the digital age. We hope that this will again provide interesting and entertaining reading.

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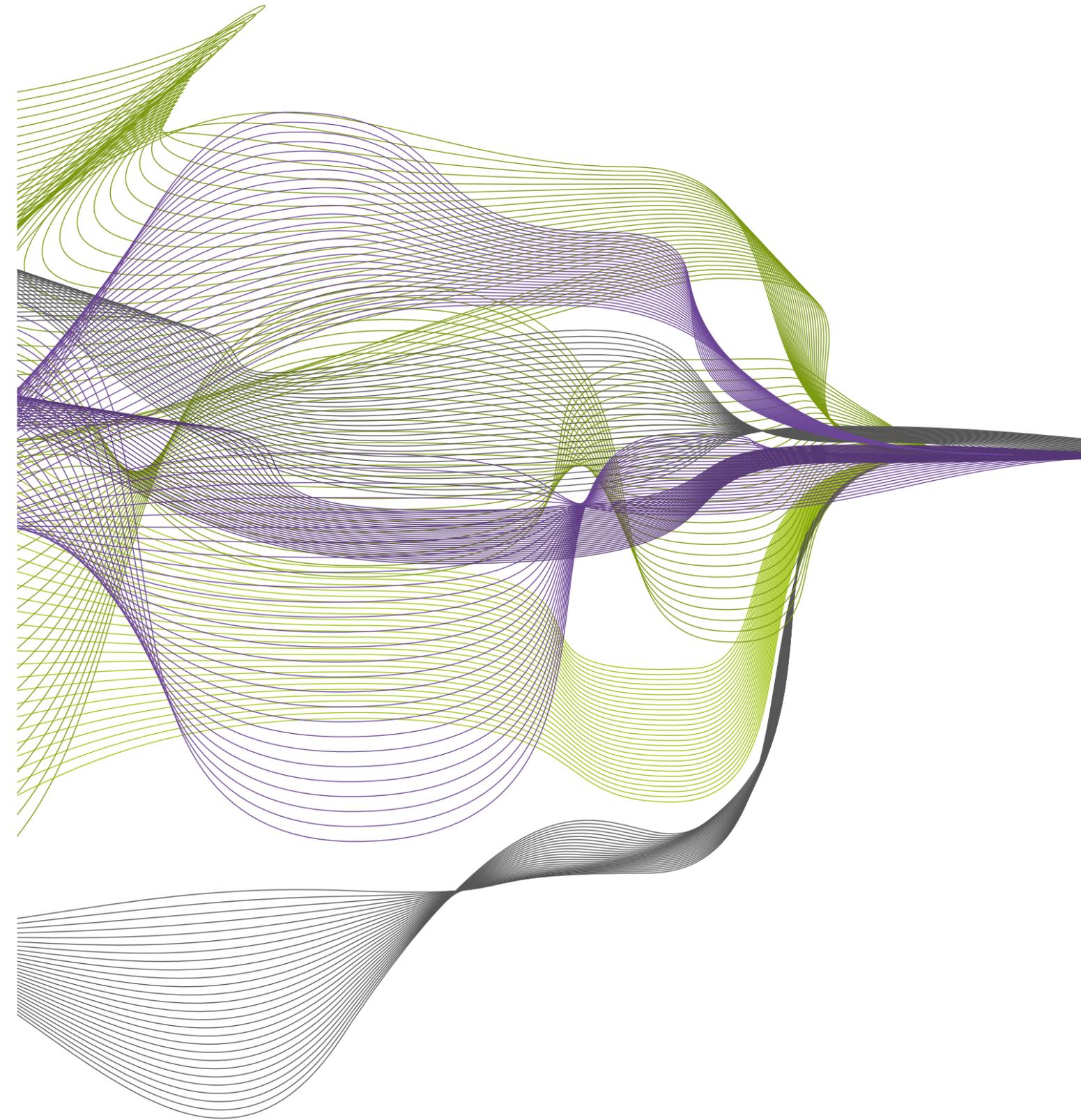
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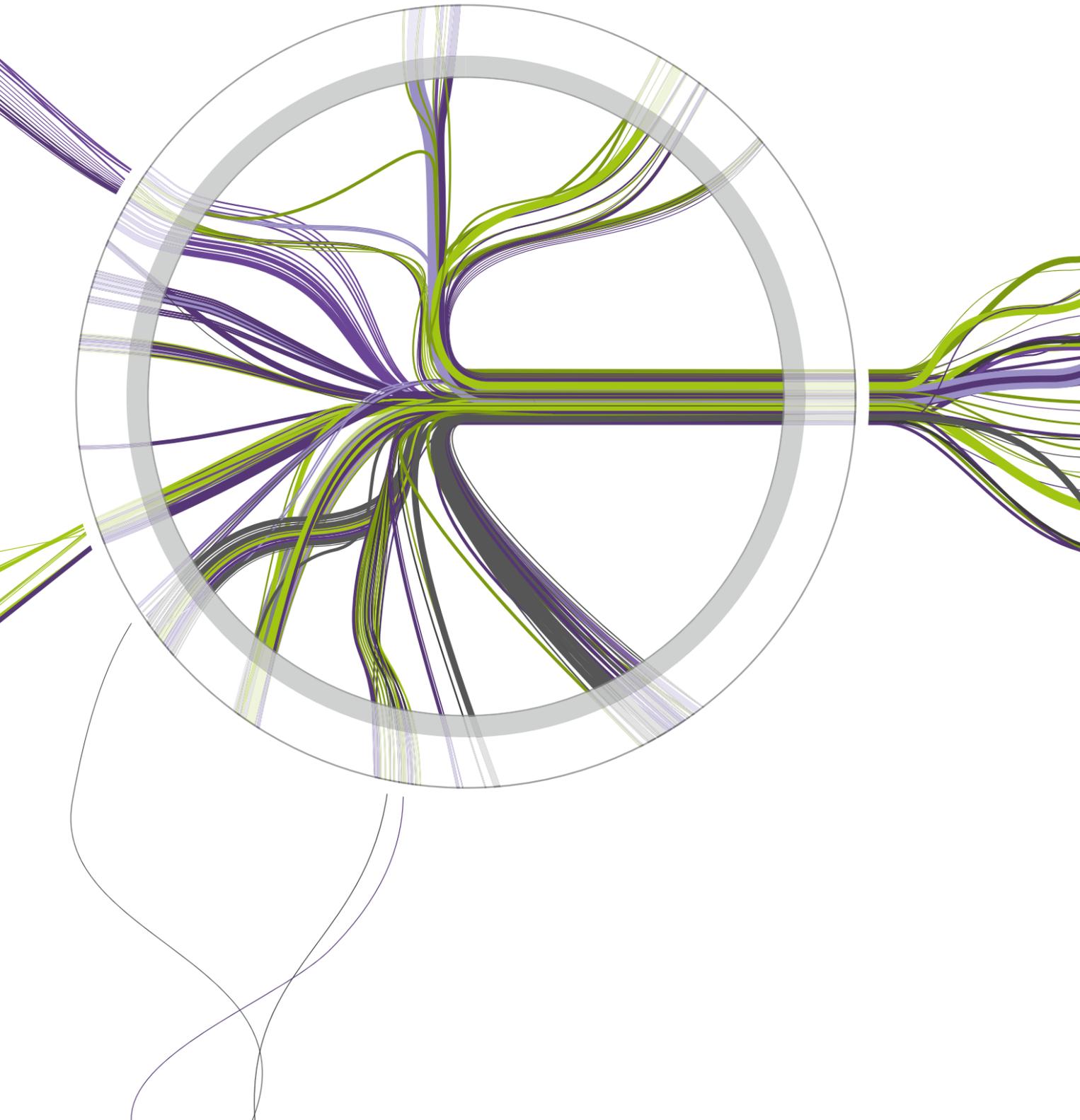
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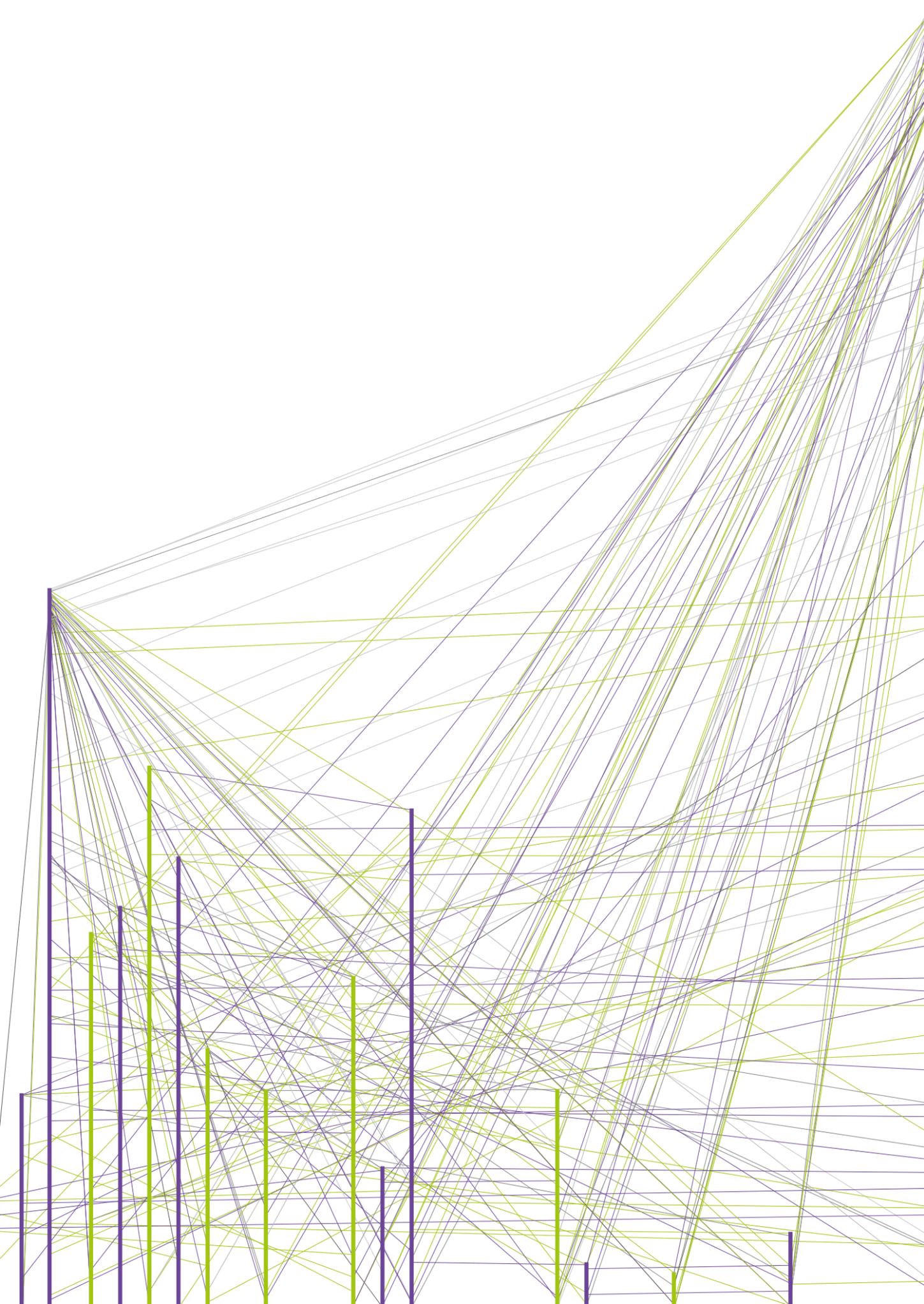
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About Power and Control in the Digital Age





Is a publicly-funded search engine a constitutional requirement?

Thoughts on opportunities and constraints of media politics and media regulation

Dr. Hans Hege

The Federal Constitutional Court calls for timely measures preventing any potential concentration of the power of opinion; developments which have already taken root and are progressing in the wrong direction are almost impossible to reverse since the influence which a dominating position brings with it could also be deployed for political purposes.

The process of digitisation is mitigating the impact of some concentration tendencies: The influence exerted by the large television groups and the traditional print media is waning especially among younger audiences. Media consumption is shifting away more and more from the scenario which formed the backdrop for of the groundbreaking rulings the Federal Constitutional Court in relation to public-sector broadcasting and the introduction of the dual broadcasting order in 1961 and 1973 respectively.

Navigation is key

Today the key question arising is where to find content or where content can be found in an ever-expanding range of digital services. A large

number of online offers provided by publishing houses and print media can already be located using a search engine. In this field, Google holds a dominant position while Google subsidiary YouTube is number one for searching user-generated content, and is now also gaining growing relevance for the professional media.

With content being available at any time and in any place, the traditional orientation towards channels and programme schedules is in decline. The navigation of TV sets offering both TV and internet reception is still working in differing ways. In the television world, viewers use the keys of the remote control and simply enter the channel numbers for the most important services while for on-demand consumption in channel libraries and especially for other media content, navigation via apps is getting ever more wide-spread. Tablet PCs and smart phones can also be used to navigate on the large screen, and might well replace the traditional remote control.

Integrated navigation tools for accessing all content – irrespective of whether it is provided as linear content or on-demand content – are still in

their infancy. The same applies regarding intelligent orientation tools which use the data generated during internet use to scale down the complexity of the digital world to those functions that are attractive for a specific user, thereby allowing for easy choice. Recommendations made via social networks can help with navigation.

An objective pursued by the major players of the internet world, Apple, Google, Facebook and Amazon as well as the platforms provided by the various infrastructure operators, the globally acting manufacturers of receivers and the powerful media conglomerates alike is gaining control of the various screens and turning them into useful tools serving their respective business models. In this respect the user surface presents the most important tool; it is influenced by hardware, operating systems and software.

Media politics and regulation must therefore continue to ensure that citizens and consumers retain control of the screen, and to safeguard open access for content providers, in particular for minority positions, to secure the basis of the free formation of public opinion, and thus, of democracy.

To attain this goal it is not enough to rely on the competition among the large commercial companies for securing choice and access, even if none of them in the foreseeable future is likely to get close to the dominant position which Google holds in the sector of search engines. The new power of the search engines is based on the fact that they collect every type of media content and in addition can also influence access to all other functions used in the internet, and thus influence communications.

Deficits of commercial navigation

Commercially-structured navigation has some deficits which could, in the medium term, have greater consequences than the ones which the Federal Constitutional Court outlined in respect of the commercial television media, which in his view justify the continued existence and development of public-sector broadcasting.

For the development of navigation tools, advertising is of even greater importance as regards funding than for commercial broadcasting which can at least resort to the alternative of paid content. Companies depending on advertising revenue for refinancing their operations will gear their strategy towards maximising revenue, and may not pay the same attention to content which offers a less profitable environment for advertising. In the internet, individual user data can be collected; as a result, preferences for content with a maximum-possible audience reach are no longer in the sole focus as has been the case in traditional broadcasting. However, the objective of finding as many consumers as possible and of achieving monetisable results remains unchanged. References including a connection to a product or service, will be more lucrative from the start than those for a more detailed journalistic analysis or similar.

Commercial search engines depend on collecting data; with their business models, they will collect more data than needed for improving the search function as they must be interested in utilising the data in other contexts as well.

Another risk presented by commercial approaches is vertical integration, i.e. the combination of a search engine with other business sectors – a combination which would appear to be obvious from an economic viewpoint. Offering your own content and services or benefiting from specific economic advantages they offer, you would be

interested in such offers being found more easily, just as an infrastructure operator could be inclined to prefer his own content.

Irrespective of the fact that search engines are built on algorithms and thus seemingly operate in a neutral fashion, they exert some influence on the formation of public opinion: With their approach, they reinforce existing opinions and provide little incentive to look at less well-known positions. The objective of a plurality of content which constitutional jurisprudence aims for is put at risk by the fact that the focus on content which already holds a considerable share in public opinion is further intensified.

The process of concentration that can be noted concerning text-based searches already is fortified as a result of the conditions of the commercial framework. The mass appeal of the search engines today already surpasses that of the traditional media. As far as topicality is concerned, a search engine easily beats them. It deploys the suggestive power of moving images, even if control of professional video content may not yet be as advanced as is the case for the text-based search. This means that search engines now meet all three criteria which have characterised broadcasting in its specific role to date.

Public interest in plurality

The deficits of commercial broadcasting which were identified by the Federal Constitutional Court were taken to justify public-sector broadcasting and its public funding model, thus ensuring that the variety of opinions which exist can be lent a voice as widely and fully as possible. Applying the same yardsticks to search engines, it would seem appropriate to develop a search engine which is funded by the general public, thereby exempting it from the dependence on advertising revenue.

This does not mean that commercial activities should be replaced. The success of the German dual broadcasting system – especially when comparing it to commercially dominated models such as that existing in the USA – is based on the fact that public-service quality presents a challenge for the commercial providers in the same way in which public-service broadcasting benefits from innovation brought about by the commercial sector.

Were there a search engine which is independent from advertising revenue and geared only towards the quality of its content and which could also provide incentives and orientation over and above searches, rather than merely dealing with majority views that are in the public domain already, commercial operations would have to pay more attention to consumers and their interests.

Offering orientation could contribute more to the formation of public opinion and the cohesion of society than a great deal of the content currently produced by public-sector broadcasting at considerable expense.

It would not be necessary for a public search engine to become market leader in order to perform the function of safeguarding plurality. It could gain influence via quality especially among citizens particularly interested in participation. After all, the influence of the traditional media is not rated exclusively by their sales figures and duration of consumption either.

Too late already?

Companies such as Google and Facebook started out as small business set-ups, but today they have at their disposal server farms all over the world and funds for development and acquisition that are hard to envisage for a national approach. In contrast to the text-based search, they have not yet gained control of professional video content

but are aiming at also dominating this field in the future. Television content will continue to be strongly characterized by language areas, and even in combination with other professional video content it will be easier to oversee than the rest of the internet, not least because there are financial limits for the production of new content. It is therefore not yet too late to take an alternative into consideration and deliberate how it could be organised.

Why is there no public-service search engine under development?

The current debate in media politics is focused on the apps of the public-service broadcasters and their overlap with the offers of the publishing industry. When applying for their funding, the public-sector broadcasters present many projects; a search engine, however, is not among them.

This is mainly due to two reasons. Competing for the attention of consumers, you cannot at the same time service the interest they have in a survey of offers overall in a trustworthy fashion. The public-service broadcasters want to keep viewers in their world just as much as the commercial competition. A publicly-funded search engine, however, would have to be independent to fulfill its functions.

But there is another reason: Public-service broadcasting in its existing structure offers little prospect for the development of a product that could compete against Google.

It is no coincidence that new products in the world of the internet have not been developed by established companies, and even less by joint ventures of traditional enterprises, but they have been advanced by new ventures operating along new forms of organisation and seeking to re-invent themselves time and again.

The organisation of public-sector broadcasting dates back more than 60 years and has remained unchanged in its core structures ever since. A system which was established as a safeguard against the former state influence does not guarantee success concerning the new forms of communication in the age of the internet by its nature alone. The funding system includes elements of a planned economy, the main concern is the preservation of what has been developed in the last decades. Some components have been advanced but there is little incentive for innovation and change.

On the other hand, the public-service broadcasting system is firmly established, supported by the jurisdiction of the Federal Constitutional Court, promoted by politics which still gets more air time with ARD and ZDF than on commercial television, and can exert greater influence. That, too, will not exactly speed up its adjusting to the demands of the age of the internet.

Search engines present a particularly obvious example of a dilemma that is noticeable elsewhere, too, and is deepening: public-service content reaches only part of the population - usually the older viewers -, thus raising doubts concerning the requirement according to which public-service broadcasting should serve all sections of the population and contribute to the formation of opinions overall.

What applies to search engines also applies to other content which could usefully be promoted employing public funds in the age of the internet as the market does not provide for it; public-service broadcasting in its traditional form, however, would not be in a position to supply it.

The household fee as food for thought

On the basis of the survey commissioned by ARD and ZDF with Professor Kirchhof¹ the current funding system is being changed to the household fee. The survey did not deal with the question of reforming the remit and the organization of the public-service broadcasters.

It would have been possible to earmark at least some of the income for innovations to be found outside the established system. And this is still possible. The household fee will probably generate more revenue than needed as income for the traditional public-service broadcasting system.

Rather than continuing to support established institutions via the public-service broadcasters, it would have been possible to fund a think tank which could have looked into the basics for organising a publicly funded search engine, or could have taken up issues such as securing quality journalism in regional and local media.

Instead, Google of all institutions supported the foundation of an institute dealing with the issue of internet and society. The German universities were not able to take up this task independently, nor could the media authorities act easily. Is it really feasible to expect an institute financed by Google to deal with the question of funding competition to Google?

The states have shown considerable creativity regarding the use of part of the revenue which is on principle specified for use by the media authorities. Each state develops its own concept, funding established film promotion schemes or orchestras in financial need. Media lottery funds rather than investment into the future.

Anyone who wants to make use of the opportunity to yield more influence in the future than merely regarding local and regional media, any-

one who wants to take on the Federal Constitutional Court's requirement to design the media landscape in the light of today's communications structures, including the offer of an alternative to Google, would have to look beyond the borders of his own state.

Unless this happens, the basics of our communications system will almost exclusively be determined by the cartel authorities as is the case with search engines. It is not, however, the German authorities that are in charge, but those in Brussels - at best. Media, however, will continue to be more than just an economic good like any other.

Regulating commercial search engines

As little as is the case in traditional broadcasting, will the existence of a publicly-funded system imply that the commercial side would be free to act as it chooses. The function of the search engines raises the question which rules are necessary to safeguard the free formation of opinion and other public interests.

The media legislation in place today is geared to providers and infrastructure operators including the platforms they operate. The function of a search engine is not separately covered, even if it also serves the purpose of orientation on content including broadcasting content.

In German media law, provisions concerning the transparency of search engines and a procedure for its verification have not yet been drafted. The complexity of the search processes presents a particular challenge regarding the know-how and independence of control.

Doing away with regulation altogether to provide for a level playing field cannot be the right

¹ Professor Paul Kirchhof is a former justice of the Federal Constitutional Court.

response. An operator who is vertically integrated with content or service providers which can be found via a search engine, or the risk of economic agreements under which lucrative positions are provided in line with financial trade-offs specifically call for supervision. It must at least be possible to react to complaints and to control whether such a discrimination exists.

The option of limiting vertical integration as practised in the past will probably not be applicable, presumably for practical reasons: It would comprise a limitation of the market share of a search engine in line with the limits for platforms for video marketing as they exist in the US market. In theory it could prevent a platform from becoming so powerful that it can bar access to the market for the formation of opinion. Google has become so powerful through internal growth that this instrument has long since lost its effect.

This leaves only the – more theoretical – option which was courageously adopted by the USA in some instances in the past: destroying powerful companies, prohibiting them from simultaneously dominating related markets. Or the hope for “creative destruction” and the subsequent limitation of positions of power resulting from the digital development.

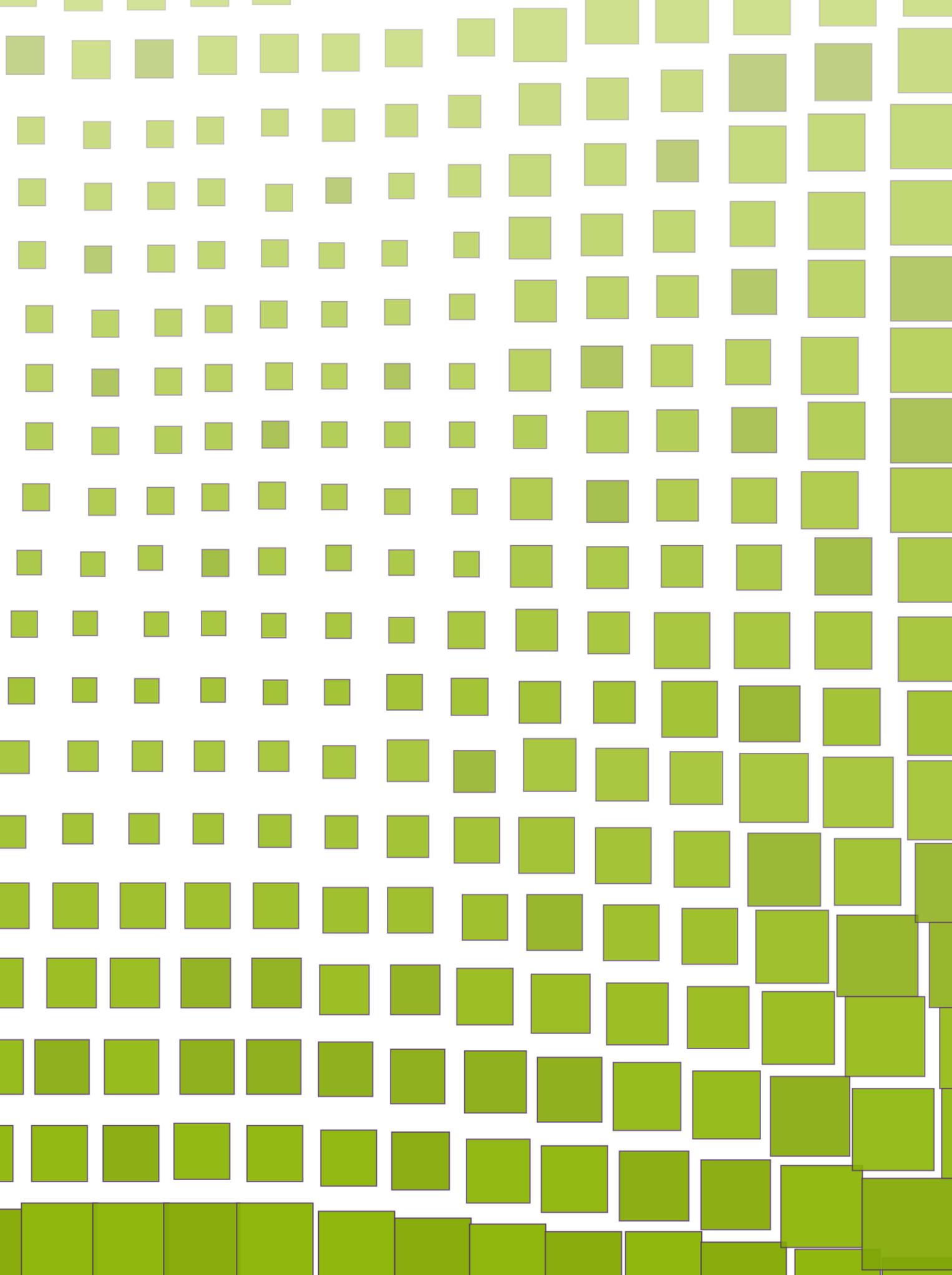
Traditional German legislation for media concentration does not offer any useful tools. It would only come to be applied if a search engine which dominates the market were to merge with one of the major media groups. Such a national acquisition, however, does not make much sense in the business strategies of the major search engine operators. What is at stake is not dominance in the media which results from the combination of market positions in the established media markets, but a key position concerning a core function of the media market for which the control tools

for media concentration are unsuitable. Vice versa, it must be possible to contain potential abuse even if the maximum share permitted with a view to a dominant position regarding the formation of opinion has not yet been reached.

As in other cases of abuse, the question arises whether controlling abuse merely with the tools of cartel law is sufficient or whether it should be complemented by instruments embedded in media legislation. Looking at the requirements established by the Federal Constitutional Court, this should be welcomed. However, it has not been possible until now to develop an approach in media legislation which could serve as a powerful alternative. The position of Google regarding the text-based search is being investigated at the European level. German participation should be aimed for – at least with individual competence. This requires forms of cooperation in media control that reach further and are not limited to the national framework.

Strengthening citizens' rights and media literacy

In the face of companies acting on a global level, the necessary consequence should be to strengthen the consumer and his options for participation, thereby compensating for the difficulties and limits of regulation. This can take many forms, starting from the promotion of media literacy to support for independent organisations devoted to safeguarding citizens' rights in the digital society.



Digitisation of the German television market: facts and figures

Current state of digitisation in German TV households

June 2012

Dr. Eva Flecken, Andreas Hamann

„Same same, but different“ – this is what tourists hear when they are offered fake brand products in street markets in South-East Asia. The slogan fits perfectly for describing the latest facts and figures concerning the state of digitisation of the German television market: „Same same“ as the main trends in the broadcasting market continue, „but different“ as the switch-off of analogue satellite transmission has effected a shift of key parameters.

Methodology

Prior to the presentation of the latest data, the methodology of the annual survey which market research institute TNS Infratest conducts on behalf of the media authorities should be explained. The media authorities have commissioned research into the development of digital broadcasting in Germany for the last eight years. In order to provide valid data also on a state-by-state level, TNS Infratest conducts interviews with 8.000 German TV households, researching the receiver situation and the mode of television reception. The computer-based telephone interviews were held in the period 16 May - 30 June 2012. For also

establishing technology trends in TV reception, the study focused on collecting data on the types of receiver available in TV households. In the survey, the media authorities researched all types of receivers; this also takes into account television homes using several modes of reception. In contrast to the analysis of market shares which SES ASTRA has adopted for its study which is also carried out by TNS Infratest at the end of each year, the data established in the study commissioned by the media authorities can result in values exceeding 100 per cent. As the market share analysis also sets priorities by mode of reception, a direct comparison of the data produced by the two studies is not possible.

In addition, the media authorities count as cable households the so-called SMATV-CH homes, i.e. households serviced via a satellite master antenna system converting the satellite signal to cable frequencies. The diversions resulting from this different allocation are negligible, however; for the current year, they are less than one per cent.

Boost for digitisation

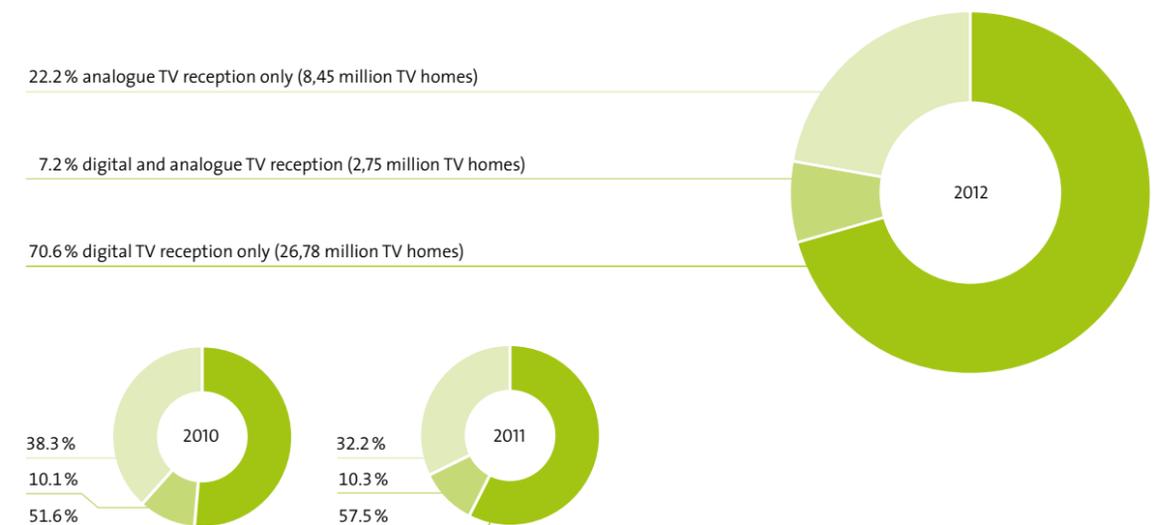
Digitisation has taken a major leap forwards during the last year. While analogue reception last year was the sole mode of TV consumption for 32.2 per cent of the German television homes, in 2012 the rate dropped to 22.2 per cent. Today, some 29.5 million TV households have access to digital television; this is equivalent to a rate of digitisation of 77.8 per cent. Last year, the rate was 67.8 per cent (Fig.1)

The 10 per cent shift compared to the rate of digitisation in 2011 is largely attributable to the switch-off of analogue satellite transmission on 30 April 2012. Last year, 86.4 per cent of satellite households received digital TV signals while some 2.3 million homes watched only analogue TV via satellite. Taking the total of 37.7 million televisi-

on households in 2011 as the basis, this rate corresponds to around 6 percentage points. At the time, the number of TV sets to be replaced during the remaining eleven months prior to switch-off was put at around 7.000 sets per day. The figure caused some concern as to whether the switch-over would actually work without major complications, but it can now be stated that the operation was well worth the efforts invested by all parties involved. According to the project office „klardigital“ which dealt with accompanying communication measures, the switch-off could be effected without any major difficulties. As in the case of the switch-off of analogue terrestrial transmission, the early information of the wholesale and retail trades, the crafts sector and the citizens led to everyone affected being informed and thus able to adjust to the switch-off of analogue satellite

Fig.1

State of digitisation of TV households



Source: TNS Infratest; Basis 2012: 37.977 million TV households in Germany (Basis 2010: 37.464 million and 2011: 37.668 million)

in good time. The communication measures conducted by the channels themselves, be it via video text, scrolls or information broadcasts helped to cut down the number of homes which were caught out unexpectedly by switch-off on 30 April 2012 to a very small number.

This leaves cable as the last infrastructure still operating in simulcast transmission. After the successful switchover of satellite, it stands to reason that cable also takes analogue switch-off into consideration. The following analysis will therefore focus more extensively on the situation in the cable networks.

Nearly half the cable households are digital

Cable could uphold the trend established in recent years and has continued digitisation. Today, around 8.8 million cable households (also) watch digital television; this in an increase of just under 6 percentage points over the previous year. The rate of digitisation at 48.2 per cent proves that digital cable reception also presents a convincing option for many end-customers (Fig. 2)

The question now is whether this is already the critical mass needed as a basis for a switchover scenario. Regarding satellite switchover, the media authorities took up discussions with the

broadcasters concerning the possible end of analogue satellite transmission as early as 2009; the rate of digitisation at the time was 74.1 per cent. When the „klardigital“ project office was set up in 2010, some 79.1 per cent of satellite households had switched to digital reception. The switchover of terrestrial transmission, on the other hand, which started in 2003, was carried out as a clear-cut process without a phase of initial growth of DTT reception. The most suitable scenario and timing for cable therefore remain to be seen.

The debate concerning cable switchover, however, should focus not only on the comparatively low level of digitisation, but should also take into consideration which viewers would be affected by a switchover. An analysis of the socio-demographic characteristics of analogue cable reception shows that the cable users affected can be classed largely in the low-income group of society. Around one third of analogue cable households have a monthly net household income of just EUR 750 – EUR 1.500 at their disposal; a further third ranks between EUR 1.500 and EUR 2.250 while only 14.6 per cent of analogue cable homes can spend more than EUR 3.000 per month. By contrast, 26.6 per cent of satellite households have an income in excess of EUR 3000 per month while the rate for digital cable homes is 24 per cent.

The financial effects of an analogue-digital cable switch-over therefore appear to be disproportionate concerning analogue cable customers; this should be taken into consideration when assessing whether a switch-off scenario would meet with acceptance.

Lastly, the number of second sets in a household also presents a factor for consideration when discussing switchover. In the 18 million cable households, around 26 million TV sets are available which are connected to a cable network for TV

reception. Some 5.6 million of the 18 million cable households own at least one further TV set which is also connected to cable. As regards the second set, the share of digital receivers is lower at 29.8 per cent than that established for the first set (47.5 per cent). All in all, around 15 million TV sets in German television homes are connected to analogue cable while the number of digital cable receivers is around 11 million.

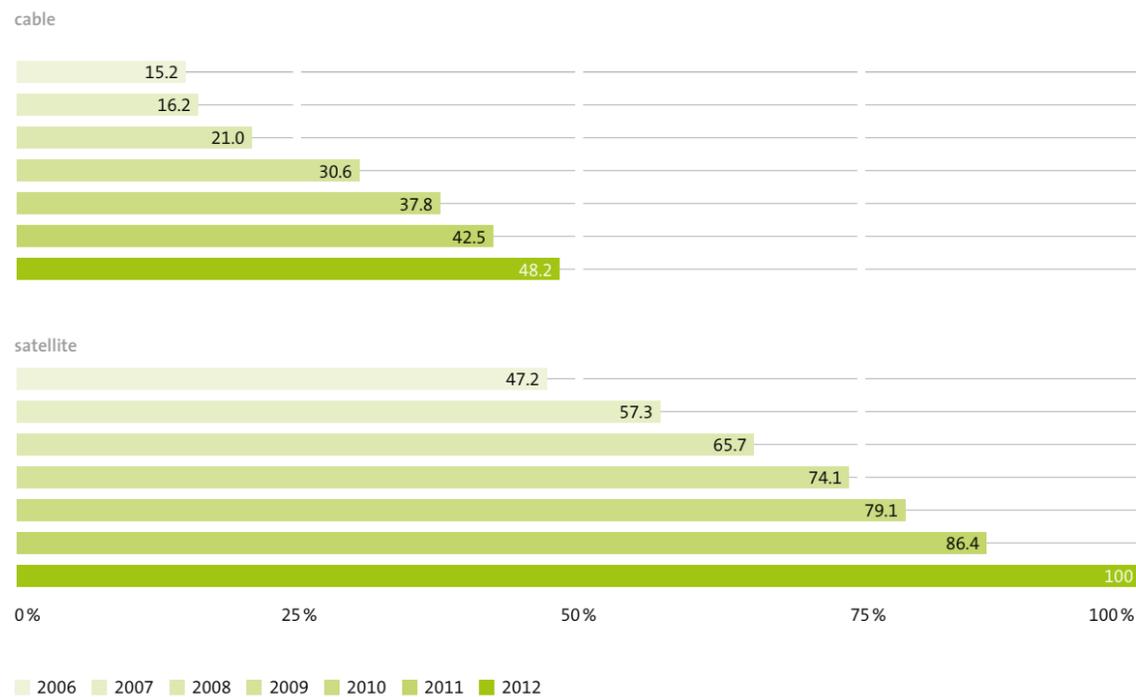
Basic encryption in the digital cable networks

In the opinion of the media authorities, digitisation of the cable networks could be promoted by doing away with basic encryption all over Germany. At a digitisation rate of 48.2 per cent, some 8.8 million households have a digital cable connection. However, one should note that – depending on the network operator – some viewers might receive only public-service television in digital quality while the commercial channels are transmitted in analogue transmission mode since only the digital services provided by ARD and ZDF are not encrypted. In many cable networks a smart card provided by the respective network operator is needed for receiving digital commercial channels. When such a smart card is plugged into the TV set or receiver, the encrypted commercial channels are also available in digital quality. With the exception of KabelBW, all network operators operate this form of basic encryption. When the Federal Cartel Office approved the merger of KabelBW and Unitymedia, it required Unitymedia to give up basic encryption of the commercial SD channels as of the year 2013.

In the current survey, the media authorities also studied the use of such smart cards. According to their findings, 3.7 million cable TV households had a smart card activated and can now watch commercial TV in digital quality. This means that a mere 42 per cent of the 8.8 million homes using

Fig. 2

Digitisation by transmission platforms



Source: TNS Infratest; Basis: 17.529 / 17.571 / 19.859 / 19.558 / 19.765 / 19.273 / 18.928 / 18.201 million cable-TV homes // 14.616 / 14.242 / 15.734 / 15.657 / 15.733 / 16.048 / 16.843 / 17,320 million satellite TV homes in Germany

digital cable also watch digital commercial TV. Or put another way: More than half of the digital cable households resort to a mix of digital public-service television and analogue commercial TV for their TV consumption. This cannot be in the interests of the commercial broadcasters. The data also appear to imply that the idea that basic encryption could provide additional funding for commercial channels might not have worked out after all. At least for the smaller channels, the model appears to be working less and less well. And lastly, it would also serve the interests of consumers to give up basic encryption as they could then watch all digital SD channels with the standard DVB-C tuners available today without any additional receiver or cost.

Shares of transmission infrastructures largely stable

The trend observed concerning the development of audience reach by mode of transmission continues along the path of the last five years:

Cable is still losing audiences while satellite, terrestrial TV and DSL-TV are gaining ground. However, the market share of 47.9 per cent still puts cable at the top of the league. But the gap to satellite, still number 2, is narrowing; satellite increased its share to 45.6 per cent for the current year.

Television via DSL is also becoming more popular. Some 1.6 million German households now use DSL-TV, an increase of 1.3 percentage points. Gauged by the market share of 4.3 per cent overall this is a remarkable rate of growth. Even digital satellite which has a considerable audience reach could only score an expansion of 0.9 percentage points (Fig. 3).

Terrestrial reception had been stable at round 11 per cent over the last years; it has achieved an increase to 12.5 per cent for this year. In Germany, just

under 5 million households can now use DTT. It is particularly popular in urban areas: In Berlin, 22.7 per cent of the television households watch DTT; the rate in Bremen is even higher at 25.7 per cent. A considerable number of DTT homes (3.7 million) have opted for DTT reception for their first or only TV set. The data show that DTT has established itself as a free-to-air and free-from-pay transmission platform for TV. It is also remarkable that DTT is clearly used not just for the second set.

Irrespective of all the changes among the various modes of transmission, it is, however, evident that the shares of the transmission platforms have remained almost entirely unchanged over the last years. Not even the switch-off of analogue satellite transmission could yield any major effect as it resulted neither in noticeable increases nor in dramatic losses for satellite reception prior to switch-off. The extensive communication campaigns presented another major stabilising factor in the context of analogue satellite switch-off.

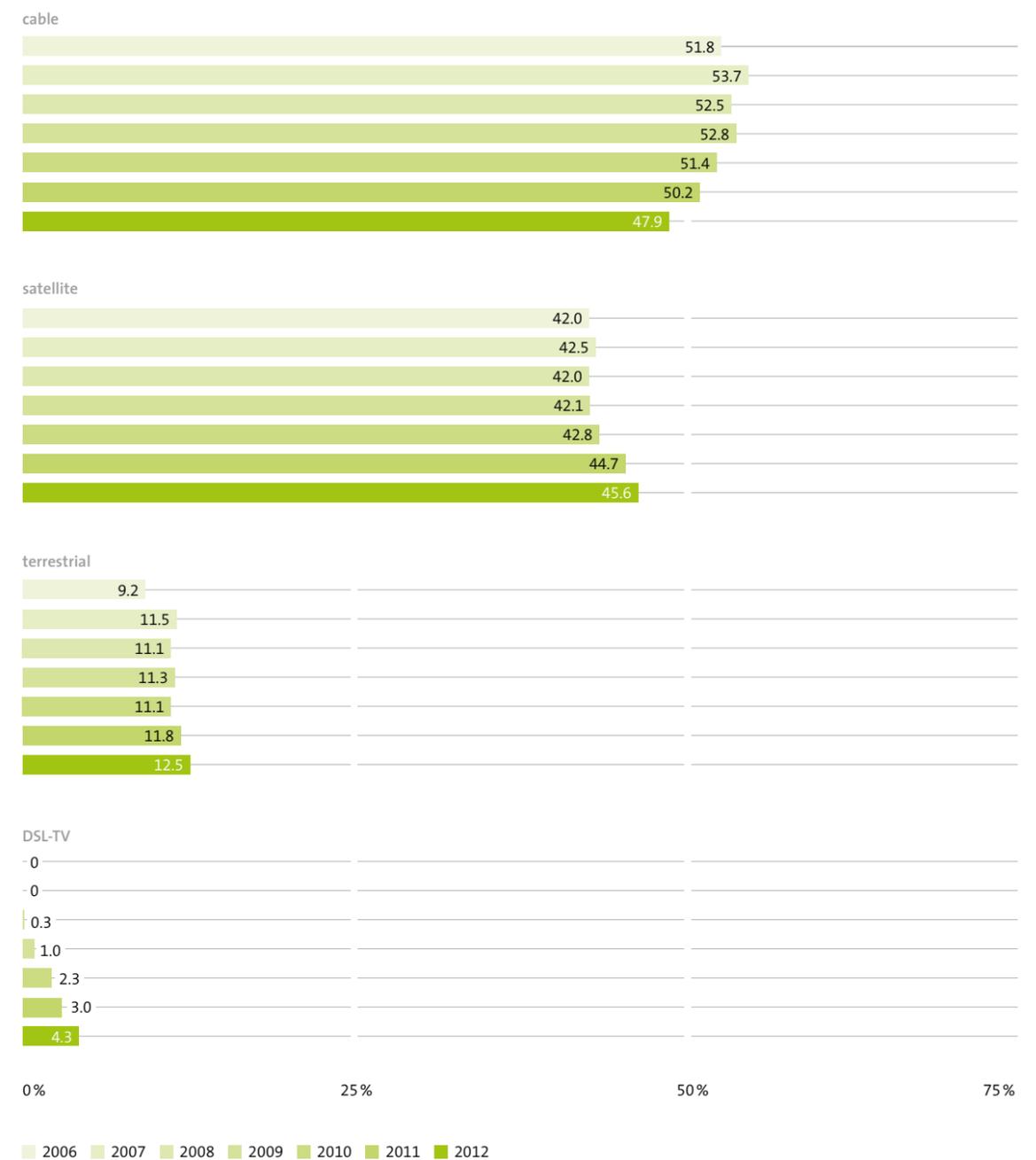
SmartTV

The issue currently in the focus of every debate on media development in Germany is connected TV. The new flat screen sets can now be connected to the internet, opening up a passage from the classical television world to the world of the internet. The portals provided by the manufacturers offer online content and online services. Most new sets also feature an internet browser which permits access to every website in the world – at least theoretically.

This has sparked off a series of debates, for instance on the different levels of regulation that are now united on one screen or on issues of access to the new portals. This study deals only with the data established on connected TV during this year's survey.

Fig. 3

Shares of the transmission platforms



Source: TNS Infratest; Basis: 33.904 / 33.904 / 36.981 / 37.277 / 37.412 / 37.464 / 37.668 / 37.799 million TV homes in Germany

As many as 9.5 per cent of TV homes stated that they can watch video content in the internet which they can access via an internet-ready TV set. Adding internet-ready settop boxes, streaming boxes (e.g., Apple TV) internet-ready games consoles and Blu-Ray players to the number of the internet-ready TV sets, 16.5 per cent of the TV households state that they have at least one such set allowing them to bring the world-wide web onto the TV screen. A further 24.3 per cent state that they can connect a PC, laptop or tablet PC to the TV set. In total, 15.5 million TV households in Germany are in a position to make their TV set ready for the internet. The question, however, is, how many households can actually use these sets and how many sets are in fact connect to the internet.

The data show that not even half of the internet-ready TV sets in the homes are actually online. A mere 1.6 million households are currently connected to the internet; this is a share of 4.1 per cent of all TV households. Adding up all connected devices (TV set, settop box, streaming box, games console and Blu-Ray player), 3.6 million sets bring the world-wide web onto the television screen.

The figures are therefore still rather moderate. However, the sales figures of the receiver industry also show that more and more homes opt for internet-ready TV sets or boxes; it is therefore safe to assume that these sets will successively be connected to the internet. But these receivers will, only serve their purpose if the respective household also has a broadband connection at its disposal. This could presumably present another obstacle hampering a quick market penetration of internet-ready television sets. According to the current study, some 29.4 per cent of the television households stated that they have no broadband connection. For these homes, internet-ready TV sets are, of course, of no interest whatsoever.

It will be interesting for broadcasters and network operators alike to watch the development of media consumption via traditionally distributed broadcast content vis-à-vis internet media. The media authorities will also pay attention to this development in their future digitisation reports

Three quarters of all European TV households are digital

Mario Hubert

The digitisation of TV households in Europe continues unabated with the rate of digitisation last year expanding considerably; this had already been the case for the last decade. By the end of 2011, 75 per cent of all European television homes had switched to digital television reception via digital satellite (DTH), digital cable, IP-TV or digital terrestrial transmission (DTT). The resulting total of 186 million households exceeds the rate at year-end 2010 by almost 18 million homes or more than 10 per cent.

Status of digitisation in Europe

The shares of the digital infrastructures, however, have remained largely unchanged. Following a growth of 6.2 million households in 2011 to more than 81 million homes, direct satellite reception continues to rank top in the digital TV transmission league securing a share of 44 per cent. Thanks to this increase reception with a satellite dish overall (i.e. both digital and analogue satellite which was still on air at the end of 2011) has become the most popular infrastructure used in Europe, overtaking terrestrial transmission (analogue and digital).

DTT continues to hold second place as the mode of reception used by more than 55 million households. This is equivalent to a market share of 30 per cent, followed by digital cable (33 million homes or 18 per cent) while IP-TV is the mode of supply for 16 million homes (9 per cent).

IP-TV once more scored the greatest rate of growth: an increase by 33 per cent or 3.9 million new IP-TV households. The lion share of the increase in a single country was scored in France with 2.5 million new homes. France leads the market in IP-TV reception by a considerable margin at almost 7 million homes or 44 per cent of all IP-TV households in Europe.

The comparison of Western and Eastern Europe does not reveal any major changes either. Considerable regional differences as regards the rate of digitisation continue to persist. Whereas in Western Europe, almost 85 per cent of all television households resort to digital reception, the rate in Eastern Europe has only reached 46 per cent. This is due to the fact that DTT and IP-TV coverage in Eastern Europe rank lower than in Western Europe; in addition, the digitisation of cable is also lower

(59 per cent in Western Europe, 29 per cent in Eastern Europe). By equal measure, the differences concerning the various modes of reception and their rates of digitisation have also remained unaltered. Despite some progress during 2011, terrestrial transmission has reached 70 per cent only while cable at currently 48 per cent also still has quite some way to go to reach full digitisation. Concerning satellite reception, by year-end 2011 some 2.2 million households were still tuned to analogue-only reception. In other words: 97 per cent of all European satellite households have already switched to digital reception.

Following the switch-off of the last analogue channels on 30 April 2012, all satellite homes are now geared to digital reception, enjoying the benefits of digital television. One key feature in this respect is presented by high-definition television (HDTV) which has already turned into a mass market in most countries in Western Europe. In

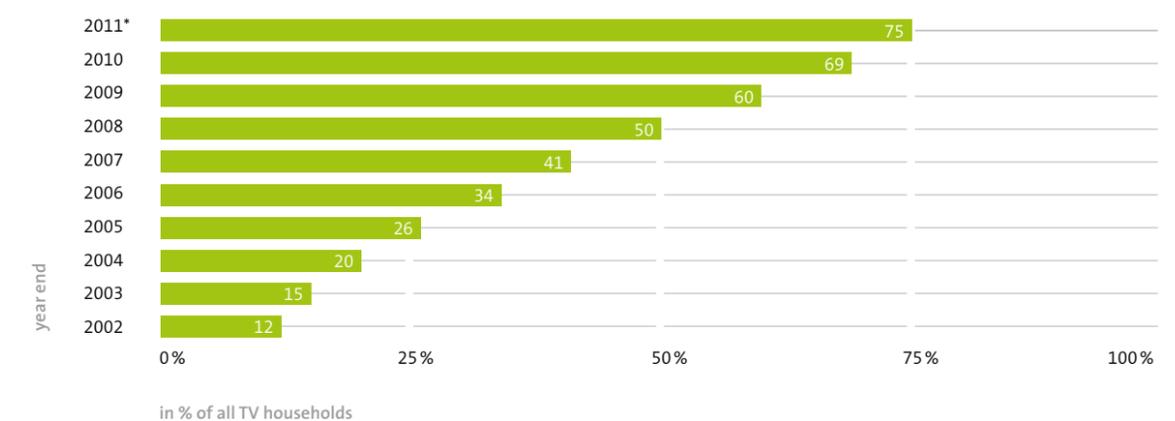
Germany, for instance, every household on average already owns more than one HD-ready flat screen set. The range of services transmitted in HD quality is also growing with the various television providers in Germany currently offering more than 50 HD channels via satellite alone.

In Europe overall, by the end of 2011 almost 30 million satellite households received HD services; this is an increase in the number by almost ten million compared to the year before. In total, more than a third of all digital satellite households already resort to increased picture quality; satellite has thus turned into the HD platform enjoying the widest reach in Europe.

The divergence between Western and Eastern Europe is also clearly evident in this respect: Western Europe is home to just under 25 of the 30 million satellite HD households, corresponding to 38 per cent of all digital satellite households in the regi-

Fig. 1

Digitisation in Europe



* Source: Belarus, Bosnia, Norway, Finland, Portugal and Serbia SES ASTRA Satellite Monitor, Year End 2010 / other European countries SES ASTRA Satellite Monitor, Year End 2011

on. By comparison, the share of 5 million satellite households in Eastern Europe corresponds to a regional rate of just 28 per cent.

Status of digitisation in Germany

Germany can certainly attribute the leap in digitisation experienced in 2011 not least to the communication measures focusing on the switch-off of analogue satellite; at the end of 2011, the rate of 71 per cent (year-end 2010: 62 per cent) again puts it slightly below European average in the digitisation league where it ranks in the lower middle positions.¹

Some 26.8 million of the 37.9 million German television households now receive digital television – this is an increase of 3.3 million during 2011. Calculated in per cent, the increase was 14 per cent, a rate clearly higher than in the preceding years (2010: 10 per cent, 2009: 5 per cent).

In line with the situation in Europe overall, digital satellite scores the highest market share in Germany at 59 per cent. Compared to 2011, the shares of the digital infrastructures have seen little change: digital cable (30 per cent), DTT (7 per cent) and IP-TV (5 per cent) make up the remaining 41 per cent.

Following the switch-off of analogue satellite transmission, analogue television households in Germany are now limited to those cable homes which have not yet opted for digital reception (slightly over 9 million households).

Comparing the European countries

A comparison of the rates of digitisation in the various countries in Europe shows that some countries rank far above the European average rate of digitisation which is 75 per cent, and have almost completed digitisation while some other countries still feature a majority of analogue television households.

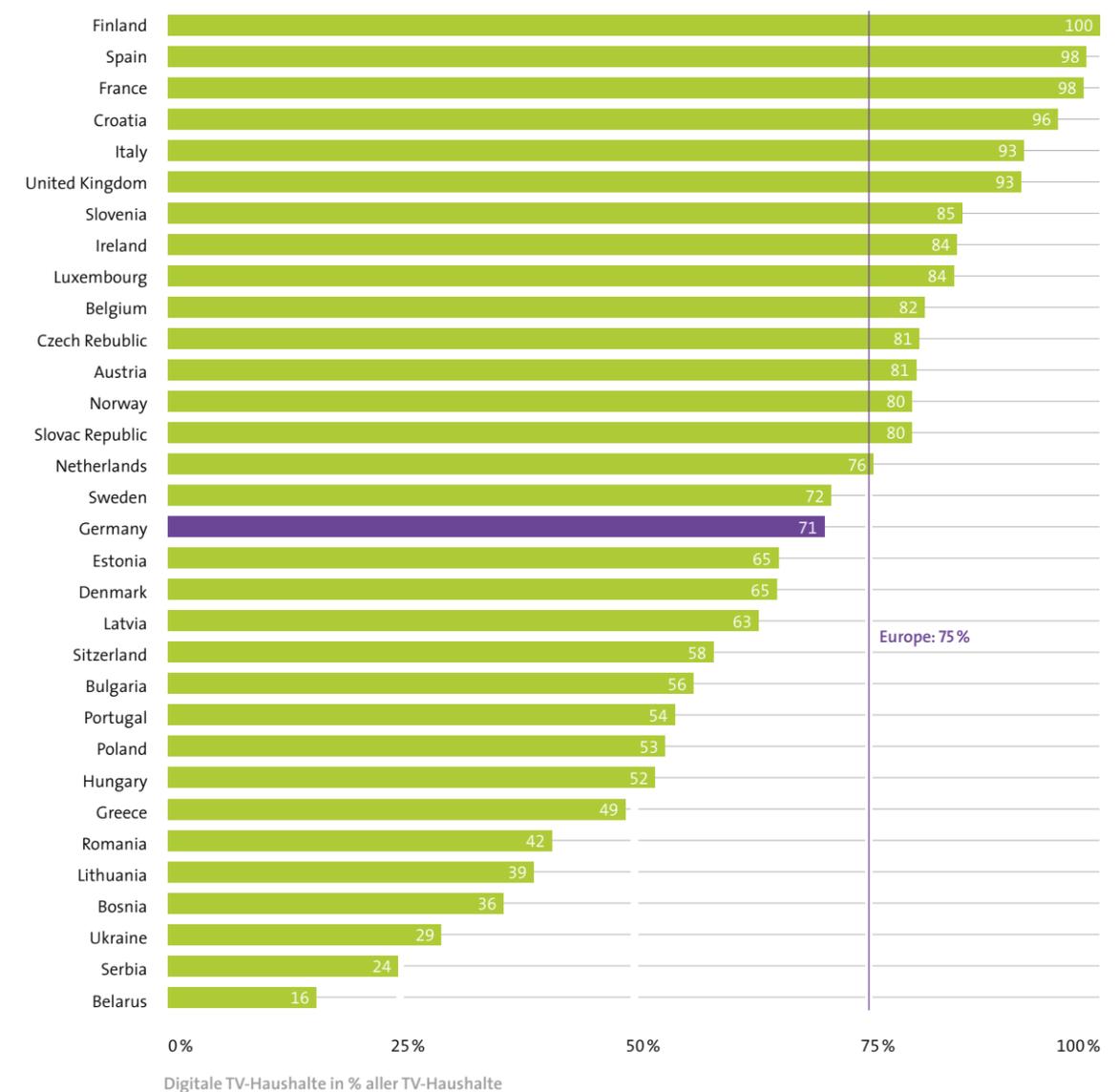
At the end of 2011, Finland had completed digitisation of television reception as the first – and so far – the only country in Europe. As early as 2009, all 2.3 million television households had been switched to digital reception for all transmission infrastructures. The main modes of reception are DTT (49 per cent of all households) which is available as both free-to-air and pay TV (PlusTV) as well as cable (44 per cent). The rest of the market is shared by two satellite pay-TV providers (Canal Digital and Viasat) as well as a number of IP-TV services.

Spain and France (both at 98 per cent), Italy and the UK (both at 93 per cent) present the four largest television markets in Europe which will shortly reach full digitisation. While in France and Spain, a very small number of households are still tuned to analogue cable reception, some last scattered regions in the UK still feature analogue terrestrial television. A similar situation applied in Italy at the end of 2011; the last regions have since been switched to digital reception, making Italy the second country to be rated fully digitised.

A more detailed comparison of the scenarios prevailing in the various countries of Europe shows that the televisions markets are divided up in very different ways. The market shares of the various infrastructures show considerable variations looked at country by country. In countries such as Spain, Greece, Italy, Finland, the Czech Republic, France, Croatia, Lithuania or Sweden, DTT domi-

Fig. 2

Rates of digitisation in Europe



* Source: Belarus, Bosnia, Norway, Finland, Portugal and Serbia SES ASTRA Satellite Monitor, Year End 2010 / other European countries SES ASTRA Satellite Monitor, Year End 2011

nates the market whereas many countries in Eastern Europe as well as Ireland, Austria, Germany, the UK and Norway are ruled by digital direct satellite transmission as the main mode of reception. Digital cable is top of the league above all in the Benelux states but also enjoys great popularity in Switzerland as well as in Portugal, Serbia and Denmark. The only countries in which IP-TV is the most popular mode of reception – albeit by a very narrow margin – are Slovenia and Estonia. The largest IP-TV market, however, continues to be France where 27 per cent of all television household watch TV via the telephone landline.

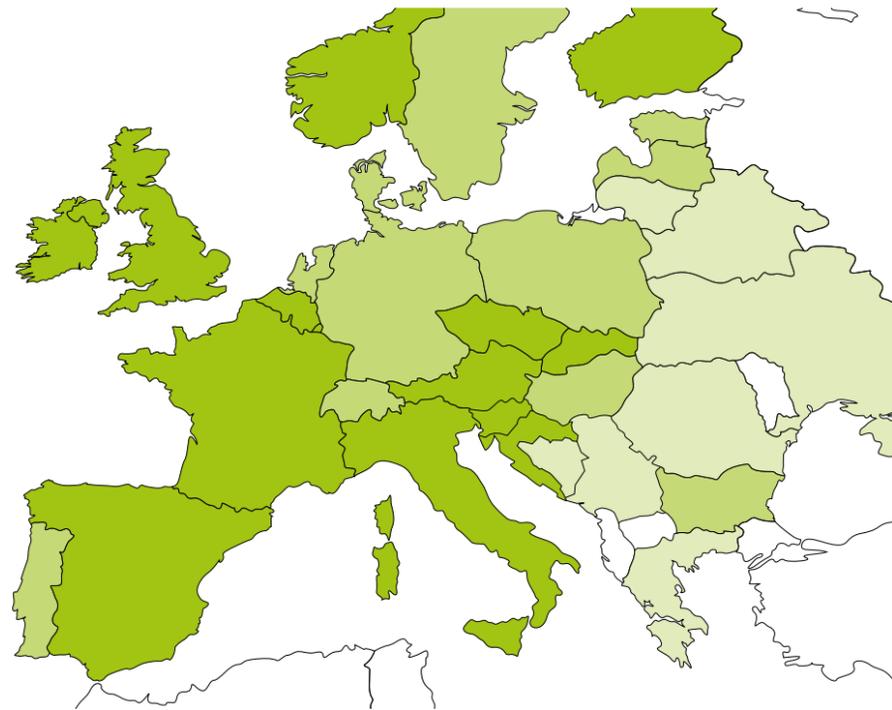
Conclusion

Concluding the findings, the tendency in Europe towards complete digitisation clearly continues. Some countries have already largely completed this process while others, mainly in Eastern Europe, still have some considerable distance to cover.

In Germany the rate of digitisation now depends on the cable network operators and their strategy as well as their customers who still watch analogue cable television. Their approach will be the key factor determining when the German television market will be fully digitised

Fig. 3

Digitalisation of TV households – Year End 2011



Legend: ■ > 80% ■ 50-80% ■ < 50%

Source: Satellite Monitor

Methodology

This survey employed computer-assisted telephone interviews (CATI) on the basis of the telephone random sampling system used by the “Arbeitsgemeinschaft der deutschen Marktforschungsinstitute” (association of German market research institutes, ADM). The interviews were held during the period 20 May – 28 June 2010. The survey was carried out by TNS Infratest MediaResearch on the basis of a questionnaire which largely corresponds to the German Satellite Monitor (SES Astra). By aligning the survey instruments, the results of the two surveys can be better harmonised.

The overall population basis for the survey was represented by all German-language private households in Germany. Since the 2007 survey, the projection has no longer been based on households of Germans only, but also includes households of non-Germans. The definition of the term “overall population basis” this year for the first time corresponds to the definition used by ma (media analysis consortium) for German-language households (= German households plus households with a EU 26 head of household plus household with a non-EU head of household with completed school education).

In 2012, the overall population basis was approx. 39.52 million households. Of these, 96.1 per cent (37.98 million) own a television set, forming the basis for the presentation of results. The survey was based on a net number of 8,000 interviews. In each case, the interview was conducted with the person in the household stating that they knew best about television consumption and reception in the household.

The 8,000 interviews were conducted disproportionately (500 interviews per state) in order to warrant a sufficiently solid basis for each German state. The disproportionality was balanced later during weighting to give representative results on a “total” basis.

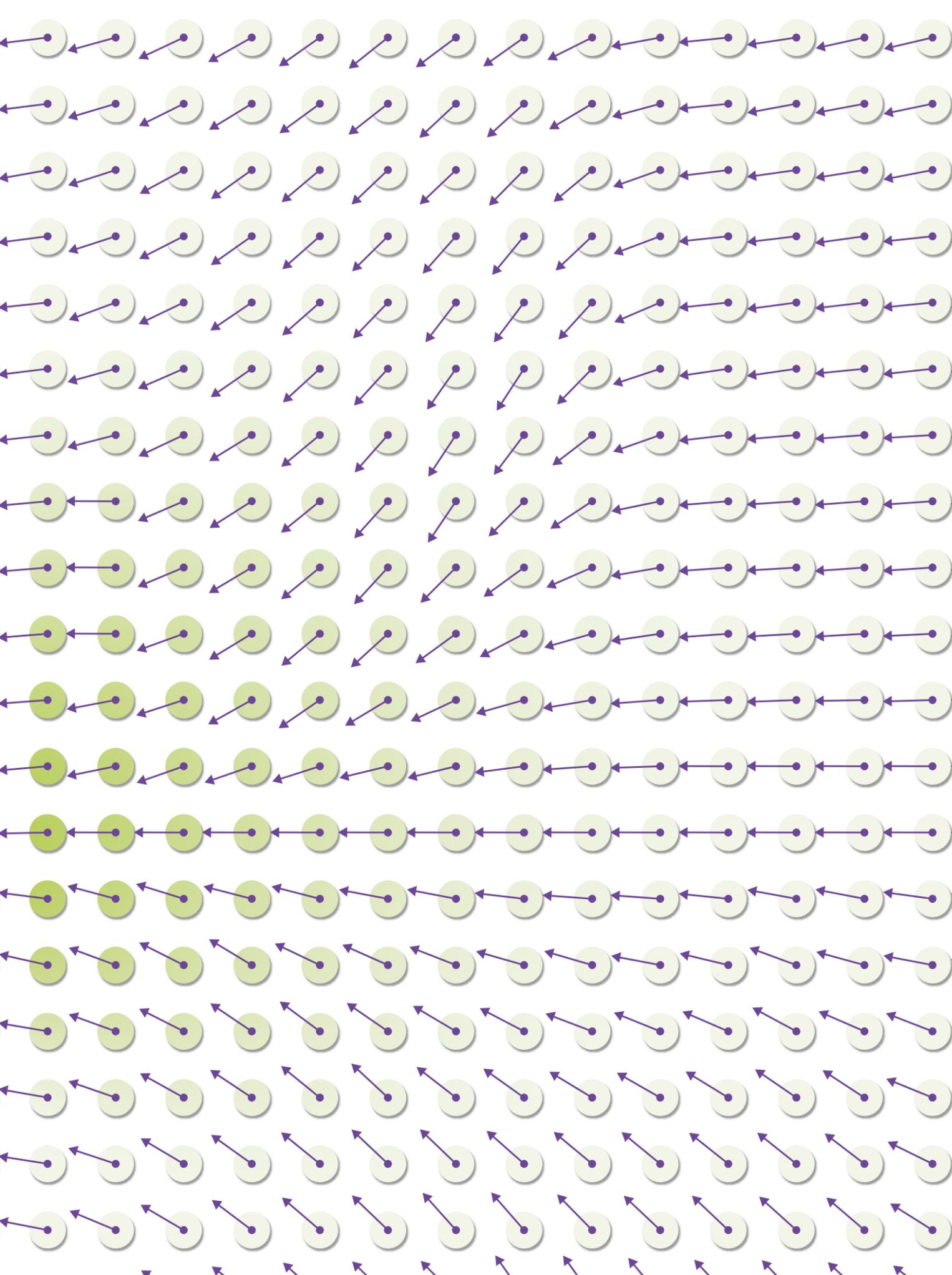
Defining cable and satellite reception

Television sets connected to a satellite master antenna system (SMATV) which require no separate receiver for TV reception are counted as cable reception. In these households (approx. 333.000 homes), the high-frequency satellite signals employed for transmission are converted for transmission in the low-frequency SMATV cable networks. The range of services available is predefined as is the case for customers supplied by level 3 network operators. Satellite reception therefore only comprises television sets using a satellite receiver. The rationale for this definition is that the survey was devised to analyse reception from the viewpoint of the television households.

Establishing transmission platforms and transmission technologies

For each of the television sets in the households investigated (with up to nine sets being counted), all available transmission platforms were analysed. Households receiving both terrestrial and satellite services with the same set were included in both transmission categories for the analysis of television reception in the homes. This can in some cases result in a sum total exceeding 100 per cent. The 4.9 million PCs or laptops which can receive television are not included in the analysis.

In the analysis of the transmission technologies (analogue or digital), cable reception forms an exception: Television households with cable reception using a television set which is connected to a digital cable receiver are able to continue watching analogue services. As this form of simultaneous analogue and digital reception does not exist for satellite distribution or terrestrial transmission, all cable television sets with a digital receiver are counted as digital units for the benefit of uniform presentation.



The remit of the regulatory authorities

Regulating platforms and securing digital access

Digitisation means radical change: It widens the range of content available and thus generates a need for a new basis of funding; it overcomes the barrier that traditionally separated media and thus puts their traded financing models into question. Digital transmission infrastructures and digital receivers bring new challenges for users facing navigation and orientation. Even if television still retains its leading position for the formation of public opinion and broadband cable holds on to first place among infrastructures in Germany, the traditional positions of power are waning. In their place, new key players battle it out for top place, especially as regards platforms.

Digitisation means new major tasks for media legislation and media politics: The issue at stake is no longer the allocation of scarce and correspondingly valuable transmission capacities to foster the variety of services on offer. The classical objective of securing and supporting a varied range of media content now has to be achieved by resorting to new means which are determined by the digital era, independently of transmission infrastructures, receivers and technologies. The convergence of the media is matched by the broadcasting order evolving into a media order.

Regulating platforms

The former clear separation between the content and the distribution of media is giving way to vertical integration: Network operators are no longer mere transporters of content, but put together and market content to their customers. They gain influence on receivers and the way in which they

are used. The principle of receiving all broadcast content on one set which was a truism in the old days can today be realised under complex technical and economic conditions only.

On the other hand, the convergence of transmission infrastructures generates new choice for the consumer: he can now watch TV via the fixed telephony line, make telephone calls or surf the internet using the cable network. Television becomes portable and mobile, as does the internet. Regulation has to face the challenging task of securing variety of choice for consumers and warranting identical conditions for the competition of platforms while at the same time taking into consideration the specificities of each use with regard to its relevance regarding the formation of public opinion.

The Interstate Broadcasting Treaty has adopted a technology-neutral approach concerning platform regulation for which the German state media authorities developed concrete provisions. The statute on access and platform regulation merges platform regulation and the rules for securing digital access.

Digital access

Access to media is a core element of any media order. Securing access has to take various forms: For one thing, access to networks and technical platforms must be ensured for content and service providers. For another, concentration of the power of opinion must be prevented as has been the case for a long time. Access is much more important for the formation of public opinion es-

pecially for new and innovative enterprises than in the economy in general. The negotiating clout which the major television groups hold in the digital world must also be taken into account. And lastly, access to a varied range of media content must be safeguarded for consumers and citizens. They have to be protected in their sovereign choice and navigation through content, irrespective of the extension of technical options impacting their behaviour as users of media.

Analogue-digital switchover

The transition from analogue to digital transmission holds great opportunities both for the media industry and for consumers. Organising it to the benefit of all involved presents a great challenge for media regulation. In the case of terrestrial TV transmission, the media authorities successfully moderated an extension of the range of content which paid attention to the interests of consumers. Switchover of satellite to digital transmission has been also completed in April 2021. For cable as the most important transmission platform, this challenge has yet to be mastered.

Tools of regulation and convergence of the media

Moderating and balancing the differing interests constitutes a major element of platform regulation, taking its position between content providers and platform operators, consumers and media providers.

When it comes to the digital world, managing scarce resources is no longer the key concern. The issues at stake are specifications for digital receivers, provisions for channel listings and electronic navigation, rules for the packaging of content, and fine-tuning the framework applying to individual providers.

Digitisation has led to increased overlaps between media and telecommunications law; as a consequence, cooperation with the Federal Network Agency is an important element. The changes of the economic framework which characterise the process of digitisation also raise competition issues. However, media politics still has to take on the challenge of deciding on the structures of the industry and ensuring openness, not only with a view to economic considerations.

The media authorities can work towards realising the objectives defined by the legislator and safeguard the interests of consumers and citizens in their neutral position. They want to master the challenge of ensuring transparency for digital developments and offering advice to politics.

The Commission on Licensing and Supervision (ZAK) coordinates these tasks through its representative for platform regulation and digital access who prepares the decisions of the ZAK with the support of the expert staff of all media authorities.

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She studied communication science in Muenster and Vienna and worked several semesters as research assistant at the University of Muenster. While writing her doctoral thesis she was working for a Member of the German Bundestag. In 2010 she graduated at the faculty of philosophy at the University of Muenster. Since 2010 she is consultant for platform regulation and media policy at the joint management office in Berlin and is concerned with topics regarding the digitisation of broadcasting.



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Glossary

addressability

A receiver or connexion will be clearly and individually identified by a service. This enables service providers (e.g. cable operators) to activate a service or channel for specific receivers, for instance for subscribers of programme packages, while keeping it disconnected for others. Activation is usually effected employing encrypted signals and a so-called smart card. In the case of IP networks, every connexion is identified by its IP address. In contrast to broadcasting networks, the signal or content is not automatically available for every consumer, but is targeted at users who have requested a specific content. Addressability differs from the identification of users; e.g., smart cards can be obtained anonymously.

basic encryption

encryption of all content transmitted via one transmission platform to allow access for entitled users only.

Common Interface (CI/CI+)

standardised interface via which a conditional access module (CAM) in the form of a plug-in card can be inserted into the set-top box. CI+ as the CI successor system is to provide better copy protection.

digital dividend

transmission spectrum freed up as a result of digitisation, as digital transmission of content takes up less frequency capacity than analogue transmission.

DSL (digital subscriber line)

telephone line used for high bit rate transmission. ADSL: asymmetrical digital subscriber line. Data rates in the downlink are up to 6 MBit/s; ADSL2+ up to 20 MBit/s. VDSL: very high bit rate digital subscriber line: up to 50 MBit/s in the downlink.

DSL-TV

transmission of content and telemedia services via wired DSL networks. Transmission is based on the internet protocol (IP); the term "IP-TV via DSL" is therefore equivalent to DSL-TV. → IP-TV

DSL networks are comparable to traditional cable networks in that they are accessible only for closed user groups against subscription and the content provider offers only a pre-defined, limited range of TV content or telemedia services.

As a system-inherent feature, each customer point is individually connected to the point of delivery for the TV and telemedia services of the network and provides a return channel. This permits the definite addressability of the user. In addition, interactive applications can also be realised at acceptable cost.

DTT-2

successor standard to DTT, aiming in particular at more efficient encoding and allowing for encryption.

EPG

electronic programme guide, an application allowing search and selection of digital TV services in the form of an "electronic TV magazine" and in many cases also offering other functions such as programming for recordings or access to recorded broadcasts, media libraries or similar.

HbbTV (Hybrid broadcast broadband TV)

standard published by ETSI (European Telecommunications Standards Institute) for the simultaneous presentation of television and internet content on the TV screen. HbbTV was developed by an industrial consortium and the Broadcast Technology Institute (IRT) and is based on a programming language version which was developed for the entertainment industry.

HTML (CE-HTML).

The standard has not yet been adopted by all receiver manufacturers some of which use their own systems for the presentation of internet sites on the TV screen.

HDTV (high-definition television)

high-resolution technology using a 16 : 9 aspect ratio and a minimum rate of 1280 x 720 = 921.600 pixels (full HD: 1920 x 1080 pixels).

IP-TV (internet protocol television)

television delivery using the internet protocol. The term does not, however, specify the network used for transmission. This requires additional details, e.g. IP-TV via DSL. In general terms, IP-TV is often equated with DSL-TV to distinguish it from → Web TV.

MHP (Multimedia Home Platform)

standard permitting the transmission of digital content in the sense of an extended, more modern videotext as well as interactive applications. MHP could not establish itself in the market; in Germany, there are hardly any MHP-ready sets available in the market.

mobile TV

transmission of multi-media content to handheld devices. Transmission can be along different routes, e.g., mobile internet or broadcast infrastructures featuring standards such as DMB (digital multimedia broadcasting) or DVB-H (digital video broadcasting for handhelds).

MPEG (Moving Pictures Expert Group)

related group of standards compressing audio and video signals. For TV transmission, MPEG 2 and MPEG 4 are usually employed with MPEG 4 offering higher compression rates. MPEG 4 is used for HDTV transmission.

navigator

system indicating and starting digital programmes based on service information (SI) transmitted in the DVB transport stream. The navigator or base navigator provides only basic technical functions; by contrast, the EPG also offers content and extended services.

set-top box (STB)

receiver device for digital television. For the various transmission platforms (satellite, cable, terrestrial, DSL), different types of set-top box are required.

simulcast

simultaneous transmission of content (programmes, services) of the same type on different platforms (e.g., analogue and digital cable).

SMATV

satellite master antenna system using multiple satellite and broadcast cable signals to create a single integrated cable signal for distribution to a cabling network for several flats or houses (see Methodology section on page 48).

triple play

simultaneous supply of broadcast content, internet access and telephony services.

Web TV

“internet television” accessible in the open internet. In contrast to DSL-TV, the range of services is not linked to a specific (internet) provider whose content is packaged by the provider of the infrastructure. Web TV is available across the entire world-wide web as far as the bandwidth permits sufficient transmission quality. Independently from the unrestricted distribution across the www, content can be encrypted and can necessitate registration and/or activation.

