Digital technology and convergence are changing the media market. On the one hand, potential opportunities are opening up for both long-standing players and the associated retailers as well as for the skilled technicians, who are positioning themselves in the market with ancillary services. On the other, the competitive intensity will also increase as a result of companies from other sectors now entering the media market.

Television making greater use of personalised, mobile and interactive elements. Intelligent search functions that factor in both personal media usage habits as well as information from social networks provide viewers with a virtually limitless range of services. This is intended to ensure that viewers continue to enjoy ease of use and to make the services more appealing.

Viewers are supposed to regard advertising as welcome. Using new interactive components advertising is to be developed in such a way that increasing benefits accrue not only to advertisers and broadcasters but also to viewers. The objective is to provide situation-dependent information that precisely corresponds with the interests of the viewer at that particular moment.

Television to remain the number one medium and not be dethroned by the internet. Despite all the innovations television will not completely relinquish its original and highly successful character and it will continue to appeal to viewers. This is all the more so as the new developments in hardware, such as Smart TV, ultra-high definition screens and 3D, can arouse new interest.

Proprietary offerings do not guarantee commercial success. Some companies seek to generate customer loyalty and secure market share via proprietary offerings. Such a strategy may, however, be counterproductive and make the desired market success more difficult to achieve.

The business model is to be expanded via alliances and acquisitions. Companies will rely on brand strategies to do this. The brand is to be used to make the offering stand out from the mass of alternatives and thus be more likely to win customers. The offerings that are particularly promising in this regard are those which, over and above this brand strategy, seek to appeal to the customer's emotions and desire for mobility.

Long-term strategies and ample capital reserves are essential. The dynamic media sector is set for another increase in market concentration following a period of segmentation – admittedly with a new group of players and names that are already familiar from related sectors.
Compared with developments in other segments of the electronics sector the advances in television have occurred only slowly to date (see chart 1). Now, however, technological advances are creating the basis for a new dynamism, in which the traditional combination of TV set, remote control and TV guide is being fundamentally called into question and the diversity in the media market is increasing rapidly (see chart 3). This development is connected not only with technological progress in consumer electronics but also with consumer demands for content and usage options. Applications that are familiar from the internet will thus gain a foothold in the established media landscape. In this dynamic environment the existing competition framework is changing fundamentally for content providers and hardware manufacturers.

In order to provide a structured approach to the complex developments, this report is divided into three sections. The first section starts with a look at the new diversity in the range of media offerings and their usage. The second section describes the innovations in the devices themselves that enable completely new uses. The third section discusses the innovations in the business models in the media sector along with the economic opportunities and risks in the changing market.

Visual media: TV segment attracting newcomers from related sectors

— Secondly, TV viewers, who used to be condemned to a passive existence, can now even watch their own selection of programmes at a time of their choosing. Furthermore, viewers can even distribute their own media content themselves.

— Thirdly, the parallel use of internet and television is also increasing with the new options offered by the devices.

The new television is multifaceted

The types of web TV

Media offering categorised according to topicality

Current TV and radio programming draws a distinction between linear and non-linear services. Linear media offerings can only be seen or heard at the time stipulated by the broadcaster. With non-linear media offerings, by contrast, it is the viewers/listeners themselves who are free to choose the programme's scheduling. One alternative to this distinction between linear and non-linear that can be found in a number of analyses is the use of the terms "live" (also known as simultaneous or concurrent) vs "time-shifted" (also called non-concurrent).

With time-shifted video streaming in turn a differentiation has to be made between video streaming on video portals and those on video-on-demand platforms. The differences between these two options lie not so much in the technology, but more in the business model and especially in the quality of the content. The majority of video portals, for instance, offer content in the form of brief clips that are provided to users free of charge. By contrast, all the content on video-on-demand portals is provided by the operator for a fee (e.g. on a pay-per-view or subscription basis). The fee is predicated on the higher quality of the content and the longer duration of the content.

The categorisation of a video from the user's point of view determines the topicality of the content in particular. Typical formats for simultaneous consumption are thus reports on (sporting) events or also live shows. Films and TV series are, by contrast, typical formats for time-shifted consumption. One familiar example of non-linear content is the second-window programming provided by broadcasters in media libraries.

parallel usage, the internet appears to be functioning more as a supplementary medium that opens the door to a diverse selection of media, ranging from non-linear television and audio content right through to more detailed written information.

Especially in situations where the focus is on relaxation and entertainment (that is in the so-called lean-back position), the television – thanks to its picture and sound quality as well as reliability – knocks the spots off other devices. The long-term usage trend for television is increasing slightly. The average German watches nearly 4 hours of television every day (see chart 7).

… and remains popular in the process

With the younger generation of digital natives joining the band of (self-determining) media users, the divide between television and internet looks set to narrow again. Nevertheless, linear television will probably remain the primary medium (see charts 8 and 9). This dominant position is also founded on the fact that digital technology is considerably expanding the stock of moving images – and this is also the case in the traditional medium of television itself. The average German TV viewer now has access to twice as many channels (that is roughly 80) as 10 years ago.5 There has been a rise in particular in the number of special interest channels targeted at, for example, the ever increasing number of affluent older people.

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3 In Germany, for example, the already respectable usage of traditional media is supplemented by an average 80 minutes of internet use per day.
5 In this case a broadcaster is regarded as available if it is selected at least once for one second in a household. This criterion thus encompasses more than the technical reach and measures whether someone actually also tunes in to the broadcaster.
But even though the group of the four most popular broadcasters has remained constant for many years, the market share of the individual programmes are declining significantly. Whereas in the 1990s the leading broadcasters had a 30% market share, this figure is now 15% at best. By contrast, the dwell times on TV channels have been rising steadily for the last 20 years; and this has been the case across all socio-demographic groups. Broadcasters thus have fewer and fewer viewers who, however, continue watching the same channel for longer and longer. Advertisers will have to take this development into account when assessing broadcasters.

Dwell time is becoming increasingly important for the assessment of programming

For the assessment of a programme dwell time is increasingly being used as a supplementary criterion to reach. Since, however, the informative value of dwell time also depends on the format length, this criterion should only be used with circumspection. On the one hand, it should be taken into account that longer formats are also watched for longer. On the other, as the format length increases so does the discrepancy between the programme that is broadcast and what the viewer actually watches.6

Modest growth in online audio

In contrast with moving images the importance of online audio has increased only very moderately (see chart 10). Whereas in 2006 no less than 44% of online users accessed music files or radio (live and time-shifted), in 2011 the figure was 51%. As is already the case with videos the offering is less appealing to the older age cohorts. In the meantime 60% of the under-50s have listened to audio content online in some shape or form; among the over-50s, by contrast, the figure is just 29%. The online live radio segment grew particularly vigorously, however. The number of listeners to online live radio in Germany rose from 9 million to 14 million between 2007 and 2011 – which is nearly three times as high as the number of people who listen to time-shifted radio.

Interest in online video rising moderately

With non-linear television it is younger online users in particular who are showing a great deal of interest – but strikingly, however, they are not the only ones to do so. Whereas in 2007 just 22% of under-30s used non-linear TV, in 2011 the figure had risen to no less than 54%. At the same time, the share of online TV viewers overall rose from 14% to 30%. Although younger users still remain the most active, watching online videos has long since become established in all age groups. For instance, 22% of 30 to 59-year-olds and 23% of over-60s have watched time-shifted TV shows online.7

While the number of online video viewers doubled between 2006 and 2008, it is currently growing only very modestly. Accordingly, time-shifted, non-linear programming currently still constitutes only a very small proportion of total TV consumption; it represents just one minute of the 220 minutes of TV watched each day on average. For example, the 80,000 online viewers of Tatort, Germany’s most popular TV series, currently represent just 1% of the show’s total viewership.

The reason for this comparatively small number of online TV viewers is undoubtedly that only a few households even have the technical equipment required. However, leaving aside this technical reason it is also the case that even in households with the required technical equipment non-linear TV accounts for just 1% of media consumption; in the tech-savvy group of 14 to 29-

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6 In their study Peters, Niederauer-Kopf and Eckert point out that with programmes lasting up to 45 minutes the average dwell time is 20 minutes, while for programmes lasting between 60 and 90 minutes the figure is merely slightly higher at 28 minutes (Peters, Bärbel, Kerstin Niederauer-Kopf and Matthias Eckert (2012). Die digitalisierte Fernsehnutzung. Media Perspektiven.

Visual media: TV segment attracting newcomers from related sectors

Accordingly, the companies involved need sufficient staying power to remain on course in the new media landscape by offering attractive hardware and content.

Consumer devices: Using image quality to provide fascinating new media offerings

The innovations on the media offering side go hand in hand with the innovations in consumer devices. The particularly appealing technologies are Full HD and organic light-emitting diodes (OLED) that deliver much better image quality. High-definition panels with 4K Full HD are already on sale now – and the twice-as-large 8K version is already being planned. The 4K version, which is modelled on cinema formats and has a resolution of 4096 pixels, is designated as Ultra High Definition (UHD).

Along with the pixels a new generation of diodes is also designed to deliver enhanced picture quality. For instance, OLED technology helps to deliver better contrast and reduce energy consumption and enables screens to be made even flatter than those using conventional liquid crystal technology.

3D and augmented reality making their way into the living room

Innovative Full HD not only delivers enhanced picture quality, but allows 3D TV viewing without special glasses and even augmented reality in future. Filtering technology, which feeds both our eyes with images from different angles, creates a sense of depth. Over time augmented reality will thus also become an increasingly frequent feature on the TV landscape. The visual linking of the environmental reality with virtual objects should make this innovative TV a completely new emotional experience.

3D offerings are already winning over more and more viewers. Accordingly, 1 in 3 new TV sets now sold in Germany has 3D capability, and the 3D segment is generating over half of the total sales of TV sets. This development is being fanned by the falling price of TV sets and a growing selection of 3D films (see charts 11 and 12).

Vendors looking to increase their vertical integration

Besides using the actual hardware technology the makers of hardware and infrastructure and the media companies are also trying to improve their market position by increasing their degree of vertical integration. Smart TV (also known as Connected TV and Hybrid TV), which is proving to be a particular stimulus for TV manufacturers, plays an important role in this strategy. Smart TV refers to a receiver that is capable of providing access to both radio programmes and the internet and other innovative applications (see chart 13).

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Smart TV provides a foot in the door

Providers hope to use smart TV and its reverse channel capability to generate new business potential, for example in the areas of communication, product information, e-commerce and advertising. Hardware manufacturers are relying on alliances with providers of all types of content – ranging from video, TV apps (especially TV broadcasters, internet service providers and publishers in particular are offering not only video but also other media content), games and online services right through to social networks.

The interactive supplementary services that are taking shape include the electronic programme guide (EPG), media libraries and digital videotext (HD Videotext). These functions are usually called up by clicking the “red button”. This click provides access to a TV programme’s complementary information, chat forums and shopping platforms, without the user having to switch device. In free-to-air German TV there are currently over 30 broadcasters providing such supplementary functions.

In Germany 50% of the 9 million-plus new TVs sold have online connectivity (see chart 14), while one in four households has one smart device. The appeal of smart TV sets is further increased by the fact that in most cases they are also fitted with a hard disk recorder, triple tuner (for digital terrestrial, satellite and cable TV) and a webcam. That is why smart TV sets are currently generating some 70% of TV sales revenues – despite rapidly falling prices (in the last five years their selling price has fallen by no less than 25% in Germany).

Obstacles to emergence of new business models

Although vendors are currently launching the new generation of consumer electronic hardware with gusto, the dissemination of content on the supply side is being slowed by the fact that not all TV manufacturers are using the same standard, such as HbbTV. Instead they are falling back on a variety of technical

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10 These services are available via the open HbbTV (Hybrid Broadcast Broadband TV) standard for example.
solutions for their portals. External service providers thus face the prospect of having to tailor their service to a variety of technical requirements and conduct negotiations about access to manufacturers’ portals. This sends the costs of a broad market entry rising astronomically.

In addition, content providers with their own offerings have to stand out sufficiently from the products of their competitors in the fast-growing, often intrapressive overall market in order to even be found. Furthermore, the objective is to fascinate users who are prepared to pay for high-quality content – a very challenging task (see chart 15). Because of the habits acquired in using fixed internet this will currently be far more difficult with offerings primarily geared towards fixed online use than with mobile offerings that benefit from their proximity to fee-based mobile services.

Besides these barriers one qualification that should be attached to the clearly high sales figures for TV sets is that the owners of smart TVs are by no means all also intensive users of the expanded offering. To date, 1 in 3 smart TV owners in Germany makes regular use (i.e. at least once a month) of the expanded online functionality of their TV, whereas 1 in 2 owners has never used it at all. Accordingly, no sustainable revenue model with a significantly broader focus than advertising income has managed to prove itself to date.

Mobile entertainment with a nomadic lifestyle

As described, media use is changing in many respects; in particular it is becoming increasingly mobile – both in terms of devices used and the usage situation. Depending on the setting, smartphones and tablet PCs are already popular means of accessing not only audio but also video content, especially in shorter formats. This trend will continue to intensify. The speed at which this occurs admittedly depends directly not only on the developments in mobile devices (see charts 16 and 17), but also on the transmission networks. With the expansion of high-performance transmission networks (especially in the mobile segment) that cover extensive geographical areas, their appeal will thus continue to increase. In addition, with increasingly powerful mobile devices the opportunities to use them for media consumption will grow rapidly. The size and performance of the display is, however, pivotal. Accordingly, the formats used on mobile devices are likely to be shorter than those used on a fixed devices.

The particularly impressive factor in this respect is the increased sophistication of devices. The number of internet-enabled devices is rising sharply. By 2017, tablets are likely to have grown from 5% of all new devices sold (in 2010) to a dominant 48%. At the same time, sales of laptops can no longer increase very rapidly in absolute figures, so their share of total new sales is likely to decline from 55% to 33%. This means that 1 in 4 online users in Germany now has a smartphone or a tablet.  

Content providers vs infrastructure operators: Who calls the shots?

In the dynamic media market long-standing stable relations are being called into question. As in other network industries (that is telecommunications in particular), market reorientation also uncovers new areas of friction between content providers and infrastructure operators. Accordingly, the public service broadcasters in Germany want to renegotiate the terms under which their programmes are fed into the cable network. They therefore terminated their contracts with the major cable network operators in 2012. They claim that the feed-in fee that they pay to the cable operators is now outdated. They argue that the feed-in fee was introduced 30 years ago to enable the then state-owned Deutsche Bundespost to speed up the expansion of the TV network, but that this justification has long since ceased to apply now that cable network operators are commercial undertakings.

For the offering to be successful, diverse offerings have to be accessible

New user-friendly control facilities are needed for the fast-growing functionality and complexity of the entire offering. Far removed from the traditional remote control device, hardware manufacturers are currently bringing out enticing control concepts and intelligent navigation that are as intuitive as possible. Intelligent navigation seeks to assist viewers as they make their selections from the complex diversity of offerings. This assistance is based on algorithms that rely for example on collective intelligence and the evaluation of personal viewing habits. The control concepts are mainly geared towards sensory methods and speech and gesture activation at present. A usage-based combination of different control methods is the most promising concept.

Advertising continues to develop

In an environment in which viewers only rarely see the need to pay for content and in which the development of advertising revenue makes it increasingly difficult to finance via this channel (see charts 18 and 19), media providers have to refine their business models.

With the TV set changing into a hybrid networked multifunctional device, traditional TV advertising can and must develop further. The advances in hardware and the linking of television with the internet open up new advertising opportunities.

Avoiding wastage

In the traditional TV market there was very little precise information available about the individual viewer. Advertising could therefore only be conducted with correspondingly high levels of wastage. Decision makers now want to utilise the new opportunities provided by the internet to tailor advertising to the user.

The parallel use of internet and television now means that focus groups can be provided with targeted, topical information and new (also interactive) forms of advertising. Smart TV opens up the major opportunity of utilising user data to tailor and target advertising to the individual user profile. Correspondingly high hopes for these new options are held by advertisers and TV broadcasters – especially the commercial broadcasters that are financed mainly via advertising budgets. But public service broadcasters, whose steady flow of licence fee income has hitherto enabled them to operate more independently, are also working on the appeal of their programming and the structuring of advertising (see chart 20).

Modern advertising should be unobtrusive

Above and beyond individualisation advertisers also want to develop advertising more strongly with respect to its emotional appeal and interactivity. The basis they are using is the online video advertising approach. Online video advertising (that is in particular in-stream video, in-baner video and in-text video) is now established in the internet. The basic idea is to place the actual content together with advertising video images in the most target-group-oriented manner possible.

TV advertising is thus likely to develop with online advertising over the medium term. Nevertheless, cross-media TV advertising, which has changed with regard...
to its emotional appeal, interactivity and demographic focus, is also likely to retain its leading position among all alternative channels.

The “embedded advertising” trend could transform advertising to such a degree that not only advertisers and broadcasters benefit, but also TV viewers. Instead of advertising being perceived by viewers as disruptive, information tailored to the situation could precisely match the viewer's interest at that time – and thus also be regarded as welcome. Of course the likelihood of success does depend directly on the basic individual attitude and perception of each individual viewer.  

New opportunities along the value chain …

Technical advances are changing the media landscape fundamentally. The new options are bringing with them changes in both consumer demands and the financing situation. This applies especially to advertising revenues where appreciable growth is only occurring in the innovative online and social media segments (see chart 21).

The incumbent media participants therefore see themselves obliged to factor in the new possibilities as they refine their business models. The strategies that can currently be observed are aimed at extending the business models along the value chain. Accordingly, the media firms whose origins lie in content are now seeking to position themselves in the market with their technical platforms on a grander scale.

There are opportunities for both the actual media companies and their trade partners and the skilled technicians. The prospects are good for bundled offerings, which with their combination of appealing content, hardware and complementary services make entering the new media era as customer friendly as possible.

… with a new competition situation …

Furthermore, companies from previously disparate sectors are also expanding their business models and entering the media market. These are in particular the big telecommunications and internet firms that are currently using innovative offerings as they intensify their efforts to secure a slice of the lucrative media market.

Just like the incumbent media firms, the firms that are new to the media market are pursuing a strategy that straddles the value chain with comprehensive bundled offerings for end-consumers that can include, for example, television, internet, telephony, gaming, social media and specifically tailored devices.

A new competition situation already exists between hardware makers and network operators as regards control of the user interface, and the same applies to TV broadcasters and internet companies with regard to the use of media content (see chart 22).

Competition across sector boundaries looks set to intensify rapidly. This means that, for example, network operators are increasingly also appearing as providers of products from segments such as consumer electronics (stationary and mobile), technical platforms and media content (from video rights through to games).

Companies are developing their business models – depending on the expertise and capital at their disposal – either independently or allied with other firms along the value chain. Efforts are repeatedly being made to establish proprietary offerings. The companies hope by doing so to gain loyal customers and thereby to lock in market share. Such a strategy is, however, no guarantee at all of commercial success and can definitely prove counterproductive. Firstly, proprietary offerings automatically scare away certain groups of customers. This invariably makes it more difficult to achieve market success. Secondly, proprietary solutions have been replaced by innovative solutions again and again. The history of software and internet platforms provides a salutary warning in this respect.

In this extremely dynamic situation incumbents and newcomers to the media market rely on brand names. The brand is intended to signify the quality of the specific media offering. This brand is then to be used to distinguish the offering from the mass of alternatives and thus win customers.

In the advanced TV segment new players from related sectors are also calling the tune

Technical advances are changing the media landscape fundamentally. With the technical innovations in hardware and content, changes are occurring in both consumer demands and the competition situation between providers.

The developing television industry is now incorporating more personalised, mobile and interactive elements. Intelligent search functions that factor in both personal media usage habits as well as information from social networks provide viewers with a virtually limitless range of services. This is designed to
Television will not be dethroned as the primary medium by the internet

maintain the ease of use for the viewer and also boost the appeal – especially for the less tech-savvy and the older generation.

At the same time advertising could change in such a way that not only advertisers and broadcasters benefit, but viewers as well. The objective is to provide situation-adjusted information that precisely corresponds with the interests of the viewer at that particular moment. The viewer might thus be more inclined to perceive advertising as welcome.

Despite all these innovations television will not completely relinquish its very successful original character. Television will thus remain the number one medium and not be dethroned by the internet. This applies all the more as the new developments in hardware, such as Smart TV, ultra-high definition panels and 3D, can generate enthusiasm for advanced TV among lots of viewers.

Overall, the media market will continue to expand extremely vigorously. The firms operating in the media market want to fashion the most comprehensive bundled offering possible for end-consumers, which can comprise television, internet, telephony, gaming, social media and specially tailored devices. This means that we will repeatedly witness not only market entries and new business models, but also takeovers and market exits. In the end, in the changing media market long-term strategies and abundant capital reserves are essential.

Accordingly, following a period of segmentation there is set to be market consolidation once again going forward. This will then of course be a newly assembled group of players with some names that we certainly already know from related segments.

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