RESEARCH ARTICLE

Multi-Platform Television and Business Models: A Babylonian Clutter of Definitions and Concepts

Sabine Baumann and Tim Christopher Hasenpusch

Jade University, DE

Corresponding author: Sabine Baumann (sabine.baumann@jade-hs.de)

The field of multi-platform television is suffering from a Babylonian clutter of definitions and concepts hampering its development especially in terms of establishing new business models for it. Thus, a clear notion of the concepts and definitions within an emerging business field is necessary to identify and develop new opportunities for value creation. To enhance the research field of multi-platform TV the article disentangles the clutter of concepts by defining and aggregating the terms into two groups: Hybrid TV and multi-screening. Based on this differentiation between Hybrid TV and multi-screening and recent studies on customer behaviour, the authors discuss emerging business model opportunities for TV broadcasters within a reconfigured framework differentiating between three dimensions: content, apps and services, and revenues. Finally, the framework is used within a case study of the ProSiebenSat.1 Media Group – Germany's second largest and most innovative private TV broadcaster – to describe and analyse the actions of ProSiebenSat.1 in response to the rapidly changing environment.

Keywords: Multi-Platform; connected viewing; business models; hybrid TV; second screening; multi-screening; television; TV audiences

Introduction

'One secret to maintaining a thriving business is recognizing when it needs a fundamental change' (Johnson/Christensen/Kagermann, 2008)

In the past decade, the environment for TV broadcasters has undergone tremendous changes. TV has progressed from a stand-alone to a multi-platform medium with the TV programming element being complemented by websites, online-video streaming, chat rooms, and live events. The convergence of telecommunication, information technology and electronic media provides the foundation for a hyper-dynamic proliferation of platforms with new forms of access and interaction – and – ultimately new media products (Curtin, 2009: 9). As indicated by several studies (Knab, Pezzei & Dancu, 2015; Ofcom, 2013; Rhody, Adler, González & Neumüller, 2014; Stroehmann and Oetjen, 2013) consumers already use the

possibilities of connected devices and digital distribution channels to access audio-visual content anywhere (with a connection), anytime and on any device, whether they are at home, on the go or at work. Besides this extended mobility, such technology enables TV viewers to switch from the passive, lean-back consumption mode of linear television towards an interactive, lean-forward, and online multi-screen TV experience (Adams, 2008: 67). In this context, internet and mobile are about to become *the* future content distribution media for TV content (Colapinto, 2010: 59–60; Doyle, 2010: 432; Roscoe, 2004: 364) as they provide greater reach at lower costs than traditional broadcast television (Dvorak, 2012). Telecommunication providers, consumer electronics manufacturers, and internet companies already use the new distribution outlets and formats (e.g. IPTV, Hybrid TV) to enter the TV business (Christian, 2006: 29–30; Curtin, 2009; Fenez, 2012; Glover, 2011; Potter, 2012: 530–1) challenging the traditional, oligopolistic and vertically integrated market structure and gatekeeper function of legacy broadcasters (Simon, 2012: 6–7).

Threatened by the potential loss of profit margins due to the increasing competition (Ytreberg, 2009: 470) many commercial TV broadcasters adopted a multi-platform approach (Doyle, 2010: 431; Doyle, 2015b: 49) by following trends like multi-channel delivery and personalization (Colapinto, 2010: 60; Doyle, 2015a: 3; Doyle, 2015b: 49; Ytreberg, 2009: 470). Besides the obvious motives of generating new revenues and improving cost-effective exploitation of media resources (economies of scale and scope), many broadcasters see multi-platform as a defensive approach to stay relevant for advertisers and audiences (Doyle, 2010; Doyle, 2015a). However, revenues from online media content supply are still very difficult to generate because of the free-of-charge expectations of customers (Tryhorn, 2009). Therefore, the industry still searches for viable digital business models compensating losses within the linear TV business.

The aim of this article is to shed light on the multitude of developments in the converging TV environment, in order to frame, explore and analyse emerging business opportunities for TV broadcasters in a multi-platform business environment. Thus, a clear notion of the multitude of developments in the TV ecosystem is a necessary condition to discuss emerging business model opportunities. To address the issue of ambiguous definitions and concepts hampering the development of TV business models the paper is twofold: firstly, we develop a business model framework distinguishing between Hybrid TV and multi-screening as well as between the dimensions: content, apps and services and revenues. Secondly, we use the framework to describe and analyse the actions of the ProSiebenSat.1 Media Group (P7S1) – the second largest player on the German TV market – to deal with this rapidly changing TV environment. Over the last years, P7S1 gained the reputation to be a pioneer for innovative concepts to fulfil customer needs (König, Benninghoff & Prosch, 2013: 201) and is now labelled as one of the most auspicious of media firms in Europe (Herrmann, 2013; Reuters, 2014). Thus, P7S1 is a suitable object of investigation to highlight recent initiatives in the direction of Hybrid TV and multi-screening from a TV broadcaster's perspective.

The paper starts by consolidating the Babylonian clutter of concepts and definitions surrounding the multi-platform TV business environment into the two categories: Hybrid TV and multi-screening (section 2). After that, recent developments in customer usage are described to highlight the current state of multi-platform TV usage (section 3). The results of both sections are merged into an integrative business model framework highlighting the trends and challenges within both categories of multi-platform TV alongside the dimensions of content, apps and services and revenues (section 4). Finally, the framework is used to describe and analyse P7S1's actions to engage with changes in customer behaviour through an approach of 'trial and error' (section 5). The paper closes with summarising remarks and an outline of further investigations (section 6).

Definitions and concepts

A Babylonian clutter of definitions and concepts characterises the multi-platform TV environment. Buzzwords like Hybrid TV, IPTV, Web-TV, Over-The-Top-TV (OTT-TV), multi-screening, second-screening, and social TV seem to be on all agendas. Despite the high degree of attention of practitioners and researchers, there has been little agreement on definitions and concepts (Baumann and Hasenpusch, 2014: 12; Dinter and Pagel, 2014: 159; van Eimeren and Frees, 2014b, 408). To distinguish between the different types of multi-platform TV and to ensure a consistent understanding, the article differentiates between two segments: Hybrid TV and multi-screening. Hybrid TV captures mainly technology and device-driven concepts while multi-screening refers to mainly customer behaviour driven terms and concepts (see **Figure 1**).
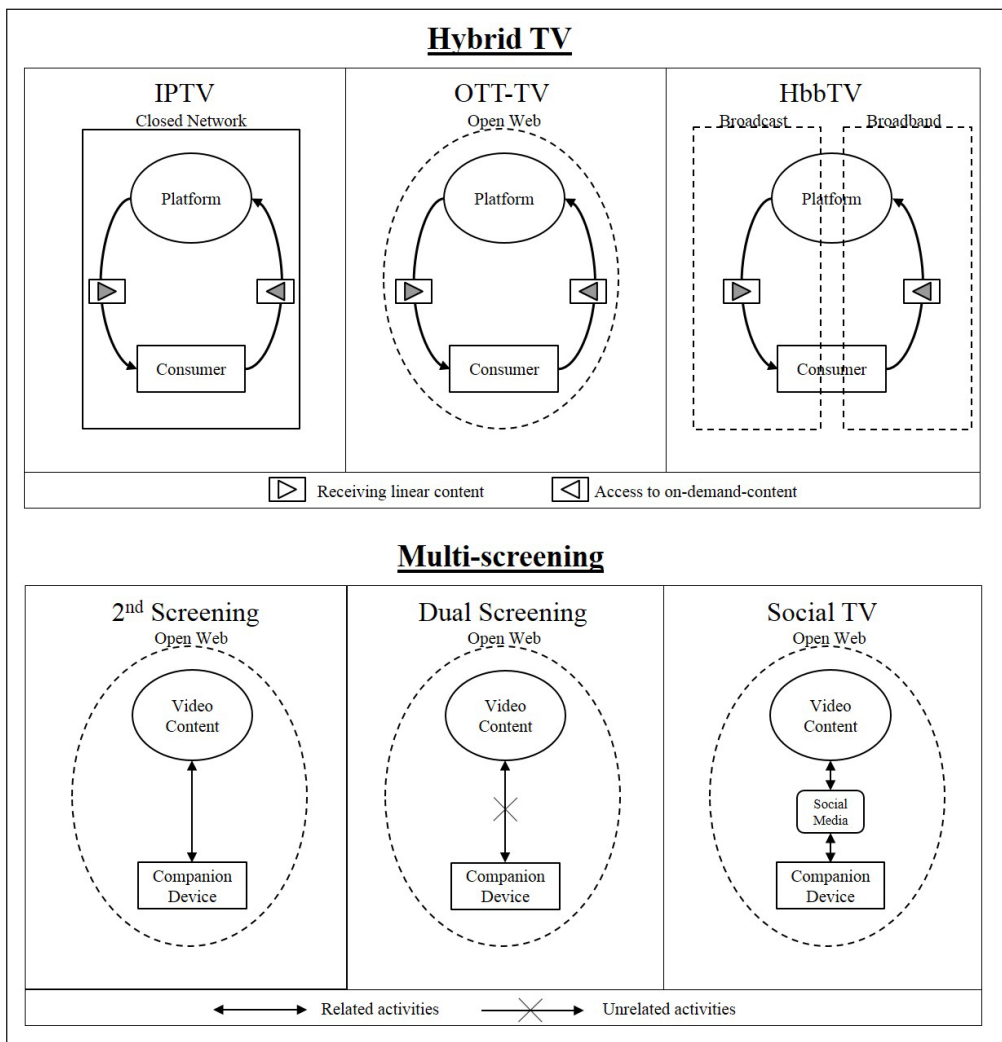
Figure 1: *Hybrid TV outlets and multi-screening:* Resource: Own illustration with reference to Böhm et al. (2012: 5).

The term 'Hybrid TV' serves as an umbrella term for IPTV, HbbTV (Hybrid Broadcast Broadband) and Over-The-Top TV (OTT-TV) with its sub-elements (Brecht et al., 2012: 6). As indicated by the word 'hybrid' the segment captures all distribution outlets combining TV broadcasting signals with the internet. Thereby, the main difference between the Hybrid TV outlets is the structure of the network that allows consumers to receive linear and access on-demand content (see **Figure 1**).

The term Internet Protocol Television (IPTV) refers to the distribution of audio-visual content over a managed and closed network which ensures a higher control of quality compared to open web-based transition types (Quayle, 2012: 18; Simon, 2012: 37). In other words, IPTV providers stream linear broadcasting signals over the internet.

The delivery of audio-visual content without an information provider being in control of the signals is called OTT-TV (2nd Screen Society; Sewczyk and Wenk, 2012: 184). Respective to the end-user device and availability of audio-visual content terms like Web-TV, Mobile-TV, Widget-TV, App-TV, Catch-Up TV and TV Everywhere are sub-forms of OTT-TV. Web-TV or Web-Video is mostly used to describe online video consumption on a PC or laptop (Böhm, Mensch and Materzok, 2012: 5). The consumption of audio-visual content via mobile devices (smartphones, tablets) helped coin the term Mobile TV. App- or widget TV describes the streaming of video content via applications or widgets on a TV set (Potter, 2012: 30–1).

The terms Catch-Up TV and TV Everywhere are not differentiated from a technological but a business model perspective. Both terms describe the offer of traditional broadcasting via IP-delivery to all kinds of connected devices to allow consumers to watch their desired program wherever and whenever they want. This on-demand and time independent consumption of audio-visual content is often also described as video-on-demand (VoD) (2nd Screen Society; Quayle, 2012: 19).

Another combination of broadcasting signals and broadband internet is the open, pan European technology standard HbbTV (Cugnini, 2012; Institute for Broadcasting Technique (IRT), 2013; Kuzmanovic, Mihic, Maruna, Vidakovic & Teslic, 2012). HbbTV is based on existing HTML- and web-standards and, like the other Hybrid TV outlets, allows for services such as video-on-demand, interactive advertising, personalization, and social networking (Brecht et al., 2012:13; Institute for Broadcasting Technique (IRT), 2013).

In addition to Hybrid TV, the term 'multi-screening' serves as an umbrella term for all parallel and screen-based media consumption activities (see **Figure 1**) (Comscore, 2012). The literature differentiates activities such as actual parallel actions on companion devices and the relatedness of these activities to the consumed audio-visual content. Following Dempsey (2012: 28) and Pham (2013: 34), the paper distinguishes between the term 'second screening' for related activities and 'dual screening' for unrelated activities (as indicated by the arrow (related) and broken arrow (unrelated) – see **Figure 1**). Of special interest for TV broadcasters are related activities, which are initialized by the linear TV program, as for example discussions on behalf of a show via social networks (Pham, 2013: 34). This combination of audio-visual content and social networking is commonly called Social TV (see **Figure 1**) (Dinter and Pagel, 2014: 161; Giglietto and Selva, 2014: 260; Mann, 2013; van Eimeren and Frees, 2014b: 408). Regarding the connection between viewers via social networks, some researchers also use the term connected viewing (Holt and Sanson, 2014).

In general, second screening, dual screening, Social TV or connected viewing refer to the usage of at least one companion device during linear audio-visual consumption on a TV set. Nevertheless, all kinds of combinations between devices, linear/non-linear, and related or unrelated activities as well as the usage of more than two devices occur (Stroehmann and Oetjen, 2013). The term 'multi-screening' captures all these consumption possibilities.

Summarising, the differentiation between 'Hybrid TV' and 'multi-screening' describes multi-platform TV developments from a technological as well as consumer behaviour perspective and helps to clarify the definitions and concepts. Thus, the section shows the increasing variety for consumers to access audio-visual content. However, to evaluate the effect of these expanding customer possibilities a detailed look at the consumer usage of Hybrid TV and multi-screening is necessary as a foundation for valid business model developments (Johnson, Christensen, & Kagermann, 2008: 52; Margretta, 2002: 87).

Media usage in converging multi-platform environments

Driven by technological developments and the increasing availability of broadband access, media usage is undergoing tremendous changes. Platforms such as laptops, tablets, smart phones, game consoles and similar devices provide additional consumption options besides traditional TV sets. The presence of multiple devices in the same location allows for a simultaneous multi-screen consumption of content or interaction with others. This section of the article provides an overview of media usage in multi-platform environments.

Regardless of the distribution of new devices, media usage patterns change more slowly than initially anticipated due to the well-established TV ecosystem (Quale 2012: 20). Overall, worldwide audience reach of linear TV is still strong: more than 75 per cent of global consumers watch linear TV every day and the actual viewing time is the highest ever measured (Giersberg, 2014). However, several effects of online TV consumption can be noted: time-shifted TV content consumption, substitution of TV content by content from online video platforms, and consumption of TV content on computers (Jones, 2012: 7; Böhm et al., 2012: 4; Cha and Chan-Olmested, 2012). Especially younger age groups consume online video regularly indicating that media usage patterns change more across generations than on an ad hoc basis (Rhody et al., 2014: 49; van Eimeren and Frees, 2014a: 388–90). Consumers who flexibly rotate between platforms for the same content or change their location can start watching a film on a smart phone on their way from work, continue on the TV screen and finish on a tablet in bed. These consumers are aptly named: 'digital omnivore' (Comscore, 2012: 3).

Explanations for the continuing strength of linear TV lie in the live broadcasts of events, the provided daily structure of similar program schedules and the relaxing comforts of physical inactivity (Böhm et al., 2012: 4; van Eimeren and Frees, 2010: 353). If TV consumption of a particular program is delayed, it is typically being watched within a day after broadcast, i.e. within a very close timeframe. And even though younger people have already adapted to online video, current studies indicate no significant change for the next years (Böhm et al., 2012: 4).

The most prominent trend is the parallel usage of two or more digital devices while watching TV (Gudorf 2012: 18). Simultaneous activities with TV content consumption are not a new phenomenon. People have been reading magazines or newspapers or ironing their shirts while the TV or radio was on (van Eimeren and Frees, 2014b, 413). However, parallel use of TV and Internet is now much more common than that of other media and the growth continues driven by the multitude of smaller computers and mobile devices (Adler et al., 2012: 14–15).

Contrary to common belief (Adler et al., 2012: 29; Gudorf, 2012: 18) activities on different screens are largely independent (Lohmüller, 2013; Stroehmann and Oetjen, 2013: 24). Nevertheless, the question of what constitutes the first screen in a multi-screen setting is thus by no means predetermined as being the TV, but depends on the attention time of the user. Furthermore, users often switch from TV to mobile devices when they become bored, an advertising block starts or a message/email comes in (Lohmüller, 2013;

Stroehmann and Oetjen, 2013: 18). Interesting and fascinating content is then needed to draw attention back to the TV screen (Stroehmann and Oetjen, 2013: 31). In general, the potential of multi-screening depends on the content and format of the first screen. Overall, new usage patterns emerge in multi-platform environments where the formerly separate lean-back and lean-forward modes and passive and active media usage alternate.

Summarising it can be said that the initial notion of Hybrid TV being both a way to consume audio-visual content at the most convenient times and use internet content on the big screen does not hold true. The delinearisation of TV viewing grows, albeit at a low rate because of consumers' perceived conveniences of scheduled programme structure and passive media consumption. The predicted interactivity of consumers and the interest of additional content complementing the TV programme moved to computers and mobile devices rather than the TV screen. Nevertheless, the increased online consumption of Catch-up TV and Live TV online indicates changing viewing habits. Therefore, TV broadcasters need to be aware of Hybrid TV developments, when exploring new business potentials. So far, the analysis of the concepts and media usage highlights two interrelated business fields for TV broadcasters: on the one hand, a TV broadcaster can create new media outlets (Hybrid TV) or on the other hand can produce new interactive TV formats (multi-screening) to increase viewer engagement and establish new revenue streams. Both categories offer a variety of opportunities to develop new business models, specifically revenue streams to cover the potential loss of profit margins due to the increasing competition (Ytreberg, 2009: 470). The following section highlights the emerging opportunities and challenges for both categories regarding content, apps and services, and revenues.
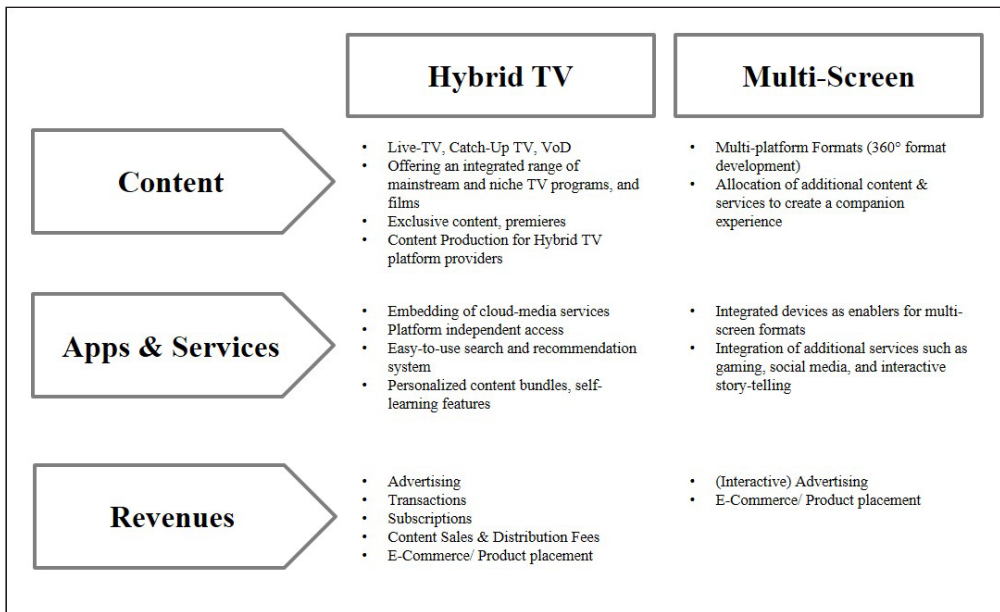
Multi-platform business models for TV broadcasters

The current state of business model development within the media industry shows that 'the 'ah ha' moment has not yet occurred and no one has discovered the panacea to all of media's challenges' (Lawson-Borders, 2010: 42). This section investigates emerging business model opportunities for TV broadcasters and introduces an integrative business model framework based on the consolidation of concepts and definitions (section 2) and multi-platform media usage (section 3). Thereby, the framework differentiates along the dimensions: content, apps and services and revenues (see **Figure 2**). The 'content' dimension of the business model framework covers all new opportunities for TV broadcasters to leverage their content libraries as well as to produce additional content to enhance the customer experience in a multi-screen scenario. The 'apps & services' dimension highlights the challenges and opportunities originating from TV broadcasters, presence on several platforms to offer consumers an all-embracing user experience. New revenue opportunities extending content production and distribution beyond the traditional paid advertising business model (Lawson-Borders, 2010: 42) are captured in the 'revenue' dimension.

Content

Regardless of the technological developments that provide wider choices, more access points and flexible usage opportunities, the decision whether viewers choose to consume audio-visual content remains firmly rooted in the attractiveness and quality of the content (Böhm et al., 2012: 21). The expression 'Content is King' still holds true and content differentiation determines competitive advantage. More than ever, all players in the chain, be they app, service or infrastructure providers, need exclusive, high-quality content (Curtin, 2009: 17; Hempel, 2011: 53). Therefore, a content library should include a broad and comprehensive selection of popular and niche videos with viewing scheduled either as concurrent (linear) or

Hybrid TV	**Multi-Screen**
Content	• Live-TV, Catch-Up TV, VoD • Offering an integrated range of mainstream and niche TV programs, and films • Exclusive content, premieres • Content Production for Hybrid TV platform providers	• Multi-platform Formats (360° format development) • Allocation of additional content & services to create a companion experience
Apps & Services	• Embedding of cloud-media services • Platform independent access • Easy-to-use search and recommendation system • Personalized content bundles, self-learning features	• Integrated devices as enablers for multi-screen formats • Integration of additional services such as gaming, social media, and interactive story-telling
Revenues	• Advertising • Transactions • Subscriptions • Content Sales & Distribution Fees • E-Commerce/ Product placement	• (Interactive) Advertising • E-Commerce/ Product placement

Figure 2: Business model framework for TV broadcasters. *Source*: Own Illustration.

on-demand programmes (Wildstrom, 2009: 66; Potter, 2012: 530; Heng, 2013: 3–4). These consumer preferences (see also section 3) enable TV broadcasters to aggressively step into the non-linear TV market by using their brands and content archives (Potter, 2012: 530–1). Furthermore, as long as this domination of content persists, TV broadcasters as content owners are in a commanding position to form partnerships with broadband networks, telcos, cable and satellite companies (Christian, 2006: 29–30) to increase content sales and distribution fees.

Besides these new cooperation and distribution possibilities a multi-screen development approach means that from the onset multiple outlets are considered in format development (Doyle, 2015a: 3). So instead of using the new platforms only as additional outlets for linear and on-demand distribution of blockbusters and niche content (Potter, 2012: 530; Wildstrom, 2009: 66) TV broadcasters can use integrated platforms to create a comprehensive customer journey and enhance customer experience and brand awareness (Colapinto, 2010: 70; Enli, 2008: 105; Sorensen, 2014: 46). The extension and re-use of content across several platforms is not new and has been discussed as windowing, cross-media, transmedia, interactive TV, etc. Nevertheless, due to technology changes, increasing customer market power and multi-screen usage, these concepts are more relevant than ever before (Pham, 2013; van Eimeren and Frees, 2014b: 413).

However, research shows that multi-screen activities are still largely disconnected (see section 3). This may be explained by the fact that users still need to actively search for additional content and this contrasts with the lean-back usage situation still common for a large part of the audience. Nevertheless, as multi-screen is becoming a growing phenomenon, being active with other screens will be less of an issue if a viewer is interested enough in what happens on the other screens. Technology like Shazam that automatically recognizes the content being watched or listened to and which then triggers additional

content on a second screen could provide the necessary convenience for passive audience members (Pham, 2013: 35). Regardless of the activity level, specific storytelling is needed to capture and direct viewers' attention between the screens as interruptions, such as advertising breaks or incoming messages, occur (Stroehmann and Oetjen, 2013: 3). Overall, a good show will not be enough to keep an audience (Roscoe, 2004: 365) and broadcasters need to use the connectivity of devices as well as two-way communication possibilities to offer a far richer, more interactive consumer experience across all platforms (Doyle, 2015b: 56; König et al., 2013; Marx, 2011: 15; Ytreberg, 2009). Opportunities for an enhanced consumer experience derive from social media integration, interactive storytelling, 3D games, integration of user-generated content into the TV experience (Sasso and Absalom, 2010) to content personalization and recommendations according to customer preferences, location, demographics and platform (Christian, 2006: 29). Successful multi-platform format genres are sports and reality (Stephen, 2012: 17; van Eimeren and Frees, 2014b: 415; Ytreberg, 2009: 470) and show that even in multi-platform formats, the main part remains a broadcast component (Roscoe, 2004: 363; Ytreberg, 2009: 468).

Apps and services

The 'content' dimension already indicates that consumers demand platform-independent audio-visual content as well as additional services such as gaming, social media and interactive storytelling. The importance and challenges of the combination of content and services into a customer-friendly application are highlighted in the framework dimension 'apps & services'.

'Consumers buy content and services, not access technologies' (Wilson, 2010: 28). This statement condenses neatly that TV customers have no interest in understanding the technology behind delivering audio-visual content, but expect the quality to be of the same high standard with respect to reliability, quality, and functionality regardless of the platform (Wilson, 2010: 29; Gudorf, 2012: 18; Price-Stephens, 2012). Once the perceived audio-visual quality drops, the user regards the whole experience as mediocre or failed, even though the content itself may have been of interest (Garcia, Schleicher & Raake, 2011: 13). As indicated by the marginal usage of web-enabled TV sets (see section 3), the convenient usage of web content challenges TV to be equally 'social, mobile, searchable, and instantly available' (Hempel 2011: 50). So without an easy-to-use user interface many of these new opportunities to enhance the customer experience as described in the content section are likely to fail. Already, customers feel overstrained and need additional guidance through the new offers (Wilson, 2010: 29). So far navigation and search function – whether electronic programing guides, voice or gesture-control – are proving more disturbing for viewers than solving this issue (Lee, Modarressi & Mohan, 2012; Reedy, 2008: 4). One possible solution to overcome these obstacles may be the use of a second device (Schneble, 2013) as described in multi-screening scenarios.

Besides quality and navigation issues, customers expect content to be available anytime, anywhere on any device (Böhm et al., 2012: 10; Chorianopoulos, 2008: 569–571; Zax, 2012). In this context, content availability in integrated multi-screen environments and embedding of cloud-media services become strategically important, as they amalgamate previously fragmented and often confusing IP-video-offerings (Böhm et al., 2012: 19–20). Nevertheless, truly interactive applications for TV that integrate the broadcast and web worlds are still in their development phase. Currently most applications are essentially separate means of consuming content on a common display. As a result, business models that are based on multi-platform interactivity such as ad verification, interactive polling, interactive overlays, chat sessions or

e-commerce remain largely untested (Cugnini, 2012: 20; Shin, Hwang and Choo, 2013). This might be the reason why most multi-screen activities in combination with a TV set are largely independent. Overall, the development of an integrated TV experience suffers somewhat from the 'chicken-or-egg' problem. On the one hand, the integration of additional services and content does not offer enough value for consumers to engage with the TV programme and to overcome the burden of facile integration and on the other hand broadcasters' budgets are limited since the interaction rate of consumers is lower than expected. This is supported by the observation that multi-screening activities are high during reality and sport events, where the personal involvement of consumers is expected to be high.

Revenues

The 'revenue' dimension explores potential revenue models arising through the exploitation of Hybrid TV and multi-screen formats. In general, traditional private television relies on subscription fees and advertising as primary income sources as well as format and content sales, call in fees and charges for supplementary services as additional revenues on a lower scale (Kirkpatrick and Lashinsky, 2008: 20). The 'apps & services' and 'content' dimensions already indicate that – through the convergence of TV and the internet – new revenue possibilities for TV broadcasters arise (e.g. e-commerce) in addition to which the importance of secondary income sources (format and content sales) increases. According to Parker (2013), the highest potential for generating extraordinary revenues from multi-screening consumer behaviour lies in the fields of advertising and online shopping.

From an advertising perspective, the connectivity of devices and two-way communication enable the transfer of web-based advertising formats from online advertising (e.g. pre-rolls) to the TV world (Dinter and Pagel, 2014: 11) as well as new forms deviating from the traditional 30 second spot (Loughney, Eichholz & Hagger, 2008: 321). These new forms aim to stimulate the interplay between lean-forward and lean-backward behaviour of consumers (Stroehmann & Oetjen, 2013: 38–41). Thereby, spots potentially include narrative or episodal elements and provide entertaining diversion, which may better prevent the viewer from ad skipping. Interactive elements include links, company websites, quizzes, and direct sales. Recent studies indicate that the simultaneous allocation of TV and internet advertising in a multi-screen situation increases viewers' attention-span, reliability, purchase intention (Fleischmann, 2013) and that advertising in multi-screen settings is perceived as less intrusive than interruptions on the big screen (Bellman, Treleaven-Hassard, Robinson, Rask & Varan, 2012: 6).

Besides advertising, online retailing is a major revenue opportunity within Hybrid TV and multi-screen environments (Glover, 2011: 24). Online retailers try to benefit by attracting customers in a relaxed lean-back position, fostering spontaneous shopping activities either directly on the TV set or via a companion device (Stroehmann and Oetjen, 2013). Thereby, the connectivity of the devices allows for an accurate measurement of access data (Glover, 2011), which can be further used for TV advertising targeting based on individual customer profiles (demographics, location, etc.), platform, and previous e-commerce buying history (Böhm et al., 2012: 24; Brooks, 2006: 4; Dean, 2011: 46).

From a Hybrid TV perspective revenue models like subscription or transaction based Video-on-Demand offers, performance-related revenue-sharing models with consumer electronic companies, bundle-offers, distribution fees from IPTV providers and advertising-free up-selling opportunities are possible revenue drivers for TV broadcasters (Bellman et al., 2012: 5; Böhm et al., 2012: 24; Marx, 2011: 15; Vriendt, Degrande & Verhoeyen, 2011: 247–8). Therewith, Hybrid TV offers the opportunity to decrease the dependence of private TV broadcasters on the advertising markets.

Summarising, the three dimensions of the business model framework help to structure past and actual business development opportunities for TV broadcasters and show the attractive business potential of Hybrid TV in conjunction with multi-screening. The new opportunities allow broadcasters to leverage their content to decrease production costs in terms of economies of scale and scope and to create new revenue streams to decrease the dependence on the traditional advertising business. The content archives and content creation competencies of TV broadcasters represent another competitive advantage over new market participants. A case study of the ProSiebenSat.1 Media Group serves to highlight how TV broadcasters use this advantage and to prove the accuracy and applicability of the developed business model framework.

The Case of ProSiebenSat.1 Media Group

Over the last years, ProSiebenSat.1 (P7S1) – the second largest player on the German TV market – has gained the reputation of a pioneer for developing innovative concepts to fulfil customer needs (König et al., 2013: 201). The digital strategy of P7S1 has proved so successful that it has significantly increased its shareholder value and is now one of the most auspicious media firms in Europe (Herrmann, 2013; Reuters, 2014). Therefore, P7S1 is a suitable object of investigation to test this business model framework within the fields of Hybrid TV and multi-screening.

The case study is based on an extensive review of articles, press releases and annual statements. For the literature review, the authors used Google Scholar and the WISO database. The WISO (www.wiso-net.de) database contains about 250 million German-language articles, press releases, business statements and market data of German companies. Referring to the Babylonian clutter of concepts and definitions (section 2) the authors searched for articles including one of the following keywords: 'Hybrid TV', 'Over the Top TV', 'Web-TV', 'Social-TV', 'Video on Demand', 'Catch Up TV', 'Connected TV', 'Dual-Screening' and 'Multi-Screening' in combination with 'ProSiebenSat.1'. As result, the authors identified more than 450 documents between 2010 and 2015 dealing with P7S1, Hybrid TV and multi-screening activities. According to the high number of documents and P7S1's extensive and detailed annual statements (Palan, 2013), a literature-based case study of P7S1 fits the assigned purpose of the paper to frame, explore and highlight the actions of TV broadcasters to deal with the rapidly changing business environment. All documents were analysed along the dimensions of the developed framework (section 4) starting with a short overview of the ProSiebenSat.1 Media Group.

Overview

The ProSiebenSat.1 Media Group is one of the biggest independent media houses in Europe with more than 4,800 employees and 3,261 million EUR of revenues in 2015. Since the beginning of 2016, P7S1 became the first media firm to be listed in the German index of leading shares. Thus, P7S1 is now one of the 30 biggest listed companies in Germany indicating that investors value the overall strategic approach.

The businesses of P7S1 are structured within three segments: Broadcasting German-speaking, Digital and Adjacent, and Content Production and Global Sales. Despite the increasing digital business and the decline of traditional revenues within the media industry (Lawson-Borders, 2010), the broadcasting business still remains P7S1's main revenue driver with 2,150 million EUR and a growth rate of 4.3 per cent. However, the digital business growth rates (+38.6 per cent) in conjunction with a rapidly growing content production and

sales business (+29.7) indicate a fit between P7S1's strategic approaches and the changing multi-platform TV environment. Overall, the growth rates confirm that content ownership and digital business models are necessary to create substantial growth and to fulfil shareholder expectations.

Content

The digital TV strategy of ProSiebenSat.1 follows five trends: mobile first, 360° format development, virtual reality, interactive TV, and TV everywhere. Corresponding to these principles, P7S1 was the first private TV broadcaster in Germany to adopt the HbbTV technology in 2010. Furthermore, following an exclusive content and cooperation approach to establish its VoD services maxdome and MyVideo, P7S1 became Germany's second largest VoD provider behind YouTube (ALM, 2013: 46). The success of P7S1's VoD service maxdome is based on several cooperations with telecommunication providers and their IPTV platforms (e.g. T-Entertain) as well as on extensive promotions over the P7S1 TV network. To increase the audience of MyVideo – a former YouTube replication bought by P7S1 in 2006/7 – P7S1 extended the offers of MyVideo by integrating professional and exclusive content (ALM, 2013: 74). Pursuing this exclusive web-content strategy and to further push MyVideo, P7S1 established the multi-channel network Studio71 in 2013 (Paperlein, 2013). Studio71 aggregates, distributes and produces web-only content for over 100 channels distributed via MyVideo and is one of the leading multi-channel networks in the German-speaking region. Besides the establishment of MyVideo for new online channels, all mainstream and newly created niche TV channels of P7S1 are implemented in its Catch-up service '7TV'. Overall, P7S1 established six new TV channels since 2007 (Schulze, 2013) to adjust the linear TV business. These niche channels allow P7S1 to offer specific, target audiences on the advertising market while increasing market barriers for new linear and non-linear channels (Schulze, 2013).

From a multi-screen perspective, P7S1 established a 360° format development process to create a virtual experience for their customers containing additional content (e.g. interviews), live-streams and social interaction. Because of the costs and efforts, the process is limited to formats, which have a mass-audience potential (e.g. reality shows). Besides these 360° productions, P7S1 produces and sells different show formats to U.S. channels (e.g. ABC, CBS) and leading digital players (e.g. Netflix, Hulu, Amazon). Overall, about 80% of P7S1 formats are produced for external customers. Altogether, the content-based strategy approaches of P7S1 cover nearly all aspects of the 'content' dimension of the provided framework.

Apps and services

P7S1s attempts to offer both an integrated Hybrid TV and a multi-screen experience demonstrate the challenges associated with integrating services and content and 360° formats. Although P7S1's Hybrid TV offers are available on various kinds of online and mobile platforms, there are only limited features such as automatic content personalisation through learning algorithms, recommendation systems and an overall customer multi-screen linear TV experience. For example, the live TV viewing feature of P7S1 Catch-up service is restricted to its mobile applications due to content rights. Furthermore, personalization functions or algorithms only allow the creation of 'favourites' with a notification being sent to the customer once a new episode is available.

With the launch of their own social TV application P7S1 tried to offer a valuable multi-screen TV experience. The application aggregated social media streams on networks like Twitter and Facebook as well as additional features (e.g. voting) to increase social interaction.

Nevertheless, the application was taken out of the app store last year and partly merged with P7S1's Catch-up service 7TV. As no official statement is available, a possible reason for the integration of the social TV application into 7TV may be that the usage of the social features was limited to only a few formats. Otherwise, the attempt to offer only one single application combining all additional services can be seen as a next step for a more integrated user experience. However, the examples highlight a 'trial and error'-mentality of P7S1 and show that the integration of different services and content is still a challenging issue for TV broadcasters.

Revenues

Following an innovative 'trial and error'-approach, ProsiebenSat.1 experiments with the development of new revenue streams (e.g. e-commerce, subscriptions, etc.) and the extension of the traditional 30 seconds TV spot. An outstanding example for the extension of TV advertising on a second screen is the cooperation with 'TV smiles'. The application of 'TV smiles' transfers P7S1 advertising spots on a second screen by offering additional information. Customers using the application receive bonus points each time they check-in. These bonus points can be converted into coupons for the presented products and services. While these applications might encourage consumers to engage on their second device with reference to the first screen these 'payments' to customers to ensure the reliability of the traditional advertising-based business model highlight the need for TV broadcasters to further develop new revenue streams. Besides these attempts to extend TV advertising onto a second device and to benefit from direct sales via online shopping, P7S1 uses HbbTV and the red button to sell presented products directly via the TV set. Both examples illustrate P7S1's efforts to combine the TV and e-commerce worlds to reach customers in a relaxed lean-back situation and convert them into buyers. In addition to these novel e-commerce orientated approaches, P7S1 established a solid distribution and content sales business to become more independent from advertising revenues (Trares, 2014). P7S1 charges IPTV providers for the distribution of its channels as well as transaction and subscription fees for its VoD (maxdome) and Catch-up (7TV) services. However, new players like Netflix with their successful 'House of Cards' format are also entering the content production business. Thus, TV broadcasters need to further develop these activities to defend such core business opportunities against new rivals.

Summarising P7S1 multi-platform activities (see **Figure 3**) show that P7S1 is very active on the Hybrid TV market while limiting its multi-screen activities to trial and error scenarios (e.g. TV Smiles) or to mass audience formats. Nevertheless, the strategic moves of ProSiebenSat.1 fit into the provided business model framework and verify its accuracy and feasibility. With the launch of linear TV channels, the establishment of a 360 degree format development process, the 'TV Smiles' application and their own social TV application, P7S1 is very active in respect of multi-screen trial and error scenarios. Furthermore, with their Hybrid TV offers maxdome and MyVideo the ProSiebenSat.1 Media Group established two of the main VoD players in the German-speaking region through cooperations with telecommunication providers and exclusive content offerings. Moreover, with its Catch-Up service 7TV all channels of P7S1 are combined into one single application, allowing consumers to watch audio-visual content whenever and wherever they want. Furthermore, by establishing a content and production business division and the multi-channel network Studio71, P7S1 realized the value and business opportunity of content creation. The increasing revenues of the content division and the fact that 80 per cent of all productions are produced for external customers underline the potential of this business segment. Furthermore, the ProSiebenSat.1 Media Group significantly increased their distribution business to become more independent of traditional TV advertising.
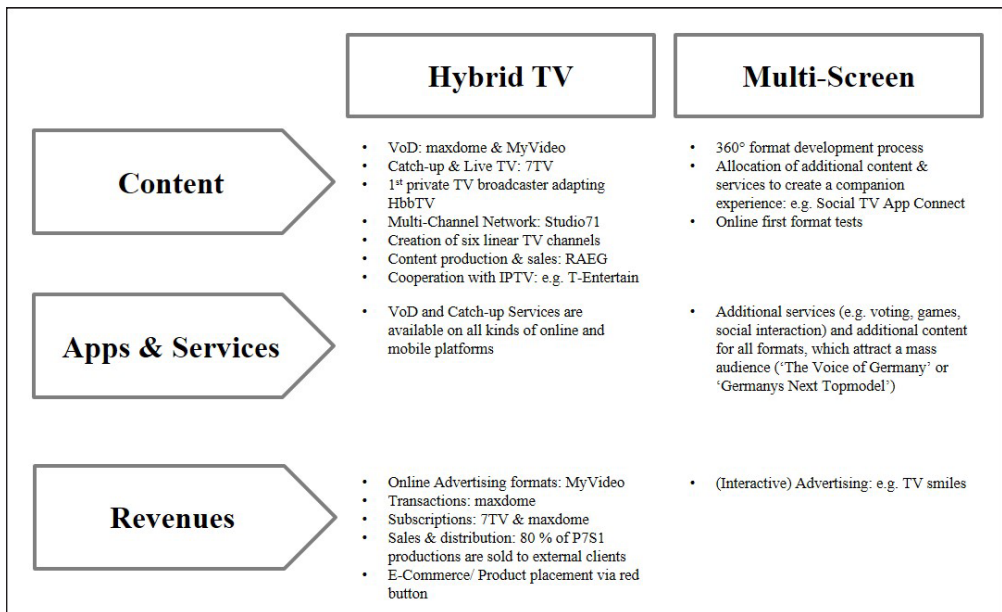
Figure 3: Business model framework: Case of ProSiebenSat.1.

Conclusion and Further Research

The aim of the article was to shed light on the multitude of developments in the converging TV environments in order to frame changes in TV usage and technologies and to explore and analyse the emerging business opportunities of Hybrid TV in conjunction with multi-screen activities. Therefore, the paper disentangles the Babylonian clutter of definitions and concepts by aggregating the terms into two groups: Hybrid TV and multi-screening. The differentiation between 'Hybrid TV' and 'multi-screening' describes multi-platform TV developments from a technological as well as consumer behaviour perspective and structures the definitions and concepts. Furthermore, it creates the basis to identify emerging business models from a TV broadcaster perspective.

In order to discover emerging business model trends a detailed look at the consumer usage of Hybrid TV and multi-screening was necessary to validate the acceptance of the new developments. Media usage highlights two interrelated business fields for TV broadcasters: firstly, TV broadcasters can create new media outlets for their content archives (Hybrid TV). Secondly, they can produce new interactive TV formats (multi-screening) to increase viewer engagement and establish new revenue streams. The authors introduce a reconfigured framework by investigating and analysing emerging business model opportunities for TV broadcasters along the dimensions: content, apps and services and revenues. Each dimension of the framework highlights the characteristics and difficulties for TV broadcasters addressing Hybrid TV and multi-screen business opportunities. Finally, a case study of the ProSiebenSat.1 Media Group verified the accuracy and applicability of the developed business model framework and shows how TV broadcasters deal with the challenges and threats of a rapidly changing environment.

The developed business model framework structures and highlights emerging business model trends for multi-platform TV environments to focus on an underestimated but relevant topic within academia and praxis. To evaluate, enhance, and challenge the applied framework more case or qualitative studies (e.g. interviews, surveys, etc.) are necessary and

might offer more details into the complexity of multi-platform business model development. Especially, case studies from different European countries as well as from the USA might offer an opportunity to discover more business model opportunities and highlight regional differences. Furthermore, single analyses of social TV and e-commerce businesses, approaches might improve the understanding of the interplay between TV and internet businesses and discover new revenue streams.

The case study of ProSiebenSat.1 indicated the importance of cooperations to establish new products (e.g. maxdome) and to increase distribution revenues in a converging digital environment. Therefore, analysing media firm's venturing approaches from a strategic management and entrepreneurship perspective might offer further interesting insights into the strategic use of corporate venturing.

Competing Interests
The authors have no competing interests to declare.

Author Information
Prof. Dr. Sabine Baumann is a professor for Business Administration in the Department of Management, Information, Technology at Jade University in Wilhelmshaven, Germany. Before rejoining academia as a professor of Business Administration and Media Management she worked for Bertelsmann, Germany's largest media conglomerate, in various positions including director of the Content Management Competence Center. Her current research interests lie in social media networks, media branding, and big data analytics/graph-based methods/algorithmic data mining. She serves on the editorial board of the *Journal of Media Business Studies* and the *Journal of Media Innovations*. Her research has been published in leading journals such as the *Journal of Media Innovations*, *International Business and Economics Review*, and the *Journal of Business Economics.*

Tim C. Hasenpusch (M.Sc.) is a research associate and doctoral student in the Department of Management, Information, Technology at Jade University in Wilhelmshaven, Germany. Before starting his work at Jade University, he studied business economics at Wedel University (Germany) and the University of Cape Town (South Africa). His doctoral work concentrates on media firms' strategic use of Corporate Venture Capital to deal with the challenges and threats of a high-velocity business environment. Besides Corporate Venture Capital activities, his recent work focuses on hybrid and multi-platform TV business models. In general, his research interests lie in strategic management, entrepreneurship, and big-data analytics/data-mining.

References
2nd Screen Society. *Lexicon for the 2nd Screen Society,* from http://www.2ndscreensociety.com/lexicon.

Adams, J. W. (2008). Innovation management and U.S. weekly newspaper web sites: An examination of newspaper managers and emerging technology. *The International Journal on Media Management,* 10(4): 64–73. Retrieved January 09, 2014. DOI: http://dx.doi.org/10.1080/14241270802000454

Adler, M., Knuth, L., & **Neumüller, G.** (2012). *Navigator Mediennutzung,* Unterföhring: SevenOne Media GmbH.

ALM. (2013). *Jahrbuch 2012/2013: Landesmedienanstalten und privater Rundfunk in Deutschland.* Berlin: Vistas.

Baumann, S., & **Hasenpusch, T.** (2014). Konvergierende Technologien – Konvergierende Geschäftsmodelle: Hybrid TV und Multiscreen. In Wuschig, I., Goutrié, C., & Falk-Bartz, S. (Eds.), *Think CROSS – Change MEDIA. Crossmedia im Jahr 2014; eine Standortbestimmung.* Norderstedt: Books on Demand, pp. 9–20.

Bellman, S., Treleaven-Hassard, S., Robinson, J. A., Rask, A., & **Varan, D.** (2012). Getting the Balance Right. *Journal of Advertising,* 41(2): 5–24. DOI: http://dx.doi.org/10.2753/JOA0091-3367410201

Böhm, K., Mensch, C., & **Materzok, C.** (2012). *TV of the Future?: Aussichten für IP-Video in Deutschland.* München, Deloitte & Touche GmbH Wirtschaftsprüfungsgesellschaft.

Brecht, R., Busch G., Chardon, C., Freyer, U., Hornbostel, A., Karanas, A., et al. (2012). *White Book Hybrid TV / Smart TV: Smart TV Working Group of the German TV-Platform.* Frankfurt: German TV-Platform.

Brooks, G. (2006). Your KindaTV enters market with hybrid You Me and niche TV experience. *New Media Age*, 4.

Cha, J., & **Chan-Olmested, S. M.** (2012). Substitutability between online video platforms and television. *Journalism & Mass Communication Quarterly,* 89(2): 261–78. DOI: http://dx.doi.org/10.1177/1077699012439035

Chorianopoulos, K. (2008). User interface design principles for interactive television applications. *International Journal of Human-Computer Interaction,* 24(6): 556–73. DOI: http://dx.doi.org/10.1080/10447310802205750

Christian, P. (2006). Let a thousand TV channels bloom. *Engineering & Technology,* 1(7): 28–31. DOI: http://dx.doi.org/10.1049/et:20060701

Colapinto, C. (2010). Moving to a multichannel and multiplatform company in the emerging and digital media ecosystem: The case of Mediaset Group. *International Journal on Media Management,* 12(2): 59–75. DOI: http://dx.doi.org/10.1080/14241277.2010.510459

Comscore (2012). *Brave New Digital World.* Reston, Virgina.

Cugnini, A. (2012). Interactive TV: Development on truly tying broadcast and connected worlds together is under way. *Broadcast Engineering (World Edition),* 54(5): 20–21.

Curtin, M. (2009). Matrix Media. In Turner, G., & Tay, J. (Eds.), In *Television Studies After TV. Understanding Television in the Post-Broadcast Era.* London: Routledge, pp. 9–20.

Dean, R. (2011). Hybrid TV – friend or foe? *TVB Europe News & Analysis*, 46.

Dempsey, P. (2012). Second screen services are the big story at IBC. *Engineering & Technology,* 7(9): 28. DOI: http://dx.doi.org/10.1049/et.2012.0925

Dinter, B., & **Pagel, S.** (2014). Werbekommunikation in digitalen Medienumfeldern – Hybrid TV, Social TV & Co. In Schramm, H., & Knoll, J. (Eds.), *Innovationen der Persuasion. Die Qualität der Werbe- und Markenkommunikation in neuen Medienwelten.* Köln: Herbert von Halem, pp. 158–76.

Doyle, G. (2010). From television to multi-platform: Less from more or more for less? *Convergence: The International Journal of Research into New Media Technologies,* 16(4): 1–19. DOI: http://dx.doi.org/10.1177/1354856510375145

Doyle, G. (2015a). Guest editor's introduction to the special issue: multi-platform strategies. *Journal of Media Business Studies,* 12(1): 3–6. DOI: http://dx.doi.org/10.1080/16522354.2015.1027116

Doyle, G. (2015b). Multi-platform media and the miracle of the loaves and fishes. *Journal of Media Business Studies,* 12(1): 49–65. DOI: http://dx.doi.org/10.1080/16522354.2015.1027113

Dvorak, J. (2012). Why IPTV is the Future. *PC Magazine*, 1.

van Eimeren, B., & **Frees, B.** (2010). Bewegtbild im Web – Multioptional im digitalen Zeitalter. *Media Perspektiven*, (7–8): 350–8.

van Eimeren, B., & **Frees, B.** (2014a). 79 Prozent der Deutschen online – Zuwachs bei mobiler Internetnutzung und Bewegtbild. *Media Perspektiven*, (7–8): 378–96.

van Eimeren, B., & **Frees, B.** (2014b). Second Screen: Parallelnutzung von Fernsehen und Internet. *Media Perspektiven*. (7–8): 408–15.

Enli, G. S. (2008). Redefining public service broadcasting: Multi-platform participation. *Convergence: The International Journal of Research into New Media Technologies,* 14(1): 105–20. DOI: http://dx.doi.org/10.1177/1354856507084422

Fenez, M. (2012). Insight: Marcel Fenez on Media . . . Smart TV shakes off the idiot box tag. *Campaign Asia-Pacific*, 52.

Fleischmann, M. (2013). *TV ad targeting now generally available; lifts brand metrics and engagement.* Retrieved June 23, 2013, from Twitter Blogs: https://blog.twitter.com/2013/tv-ad-targeting-now-generally-available-lifts-brand-metrics-and-engagement.

Garcia, M. N., Schleicher, R., & **Raake, A.** (2011). Impairment-factor-based audiovisual quality model for IPTV: Influence of video resolution, degradation type, and content type. *EURASIP Journal on Image and Video Processing,* 2011(5): 1–14. DOI: http://dx.doi.org/10.1155/2011/629284

Giersberg, F. (2014). *Internationale TV-Marktdaten 2014,* from Verband Privater Rundfunk und Telemedien e.V.

Giglietto, F., & **Selva, D.** (2014). Second screen and participation: A content analysis on a full season dataset of tweets. *Journal of Communication,* 64(2): 260–277. DOI: http://dx.doi.org/10.1111/jcom.12085

Glover, T. (2011). *The Future of Connected TV: Key Players, emerging battlegrounds and market disruption.* Business Insights Ltd.

Gudorf, G. (2012). With TV, simple is better than smart. IBE: International Broadcast Engineer: 18–20

Hempel, J. (2011). *What the hell is going on with TV?* Retrieved May 13, 2016, from Fortune: http://fortune.com/2011/01/03/what-the-hell-is-going-on-with-tv/.

Heng, S. (2013). Visuelle Medien; Fernsehen mit neuen Akteuren aus verwandten Branchen, Frankfurt am Mein: Deutsche Bank Research.

Herrmann, M. (2013). *ProSiebenSat.1 nach Übernahme: Schöne 20-Prozent-Chance.* Retrieved December 20, 2013, from BÖRSENMEDIEN AG: http://www.deraktionaer.de/aktie/prosiebensat-1-nach-uebernahme--schoene-20-prozent-chance-19830.htm.

Holt, J., & **Sanson, K.** (Eds.). (2014). *Connected Viewing: Selling, Streaming & Sharing Media in the Digital Era.* New York: Routledge.

Institute for Broadcasting Technique (IRT) (2013). *HbbTV = More entertainment at your command.* Retrieved August 19, 2013, from Institute for Broadcasting Technique (IRT): http://www.hbbtv.org/.

Johnson, M. W., Christensen, C. M., & **Kagermann, H.** (2008). Reinventing your business model, 86(12): 50–9.

Jones, J. (2012). Computer-based video consumption rivaling traditional TV, Nielsen Reports. *Response,* 20(10): 7.

Kirkpatrick, D., & **Lashinsky, A.** (2008). A new way to watch TV: EBSCOhost. *Fortune,* 157(5): 33–40.

Knab, S., Pezzei, M., & **Dancu, S.** (2015). *Mobile Effects: 2015: Always on.* München: Tomorrow Focus Media.

König, K., Benninghoff, A., & **Prosch, M.** (2013). Social TV als Chance für neue Geschäftsmodelle mit ePace am Beispiel von ProSiebenSat.1. In Springer Gabler (Ed.), *Digitalisierung des Handels mit ePace,* pp. 201–12. DOI: http://dx.doi.org/10.1007/978-3-658-01300-4_12

Kuzmanovic, N., Mihic, V., Maruna, T., Vidakovic, M., & **Teslic, N.** (2012). Hybrid broadcast broadband TV implementation in Java based applications on digital TV devices. *IEEE Transactions on Consumer Electronics,* 58(3): 1056–62. DOI: http://dx.doi.org/10.1109/TCE.2012.6311356

Lawson-Borders, G. (2010). More Than a Mouse Trap: Effective Business Models in a Digital World. *International Journal on Media Management,* 12(1): 41–45. DOI: http://dx.doi.org/10.1080/14241270903558400

Lee, A., Modarressi, A., & **Mohan, S.** (2012). Convergence of application services in next-generation networks [Guest Editorial]. *IEEE Communications Magazine,* 50(3): 16–17. DOI: http://dx.doi.org/10.1109/MCOM.2012.6163577

Lohmüller, C. (2013). *Was im TV läuft, ist egal: Studie dämpft Second-Screen-Träume.* Retrieved August 19, 2013, from aberratio GmbH: http://mobilszene.tumblr.com/post/58685963413/iphone5.

Loughney, M., Eichholz, M., & **Hagger, M.** (2008). Exploring the effectiveness of advertising in the ABC.com full episode player. *Journal of Advertising Research,* 48(3): 320. DOI: http://dx.doi.org/10.2501/S0021849908080483

Mann, C. (2013). *Facebook's Rose: 2nd screen pushing people towards TV.* Retrieved from Advanced Television: http://advanced-television.com/2013/10/07/facebooks-rose-2nd-screen-pushing-people-towards-tv/.

Margretta, J. (2002). Why business models matter. *Harvard Business Review,* 80(5): 86–92.

Marx, N. (2011). "The missing link moment": Web comedy in new media industries. *Velvet Light Trap: A Critical Journal of Film & Television,* 68: 14–23.

Ofcom. (2013). *Communications Market Report.* London.

Palan, D. (2013). *Dax: Allianz gewinnt Auszeichnung "Bester Geschäftsbericht".* Available at: http://www.manager-magazin.de/unternehmen/artikel/dax-allianz-gewinnt-auszeichnung-bester-geschaeftsbericht-a-919271.html.

Paperlein, J. (2013). *Studio 71: P7S1 startet eigenes Multi-Channel-Network.* Retrieved May 05, 2014, from http://www.horizont.net/aktuell/medien/pages/protected/Studio-71-P7S1-startet-eigenes-Multi-Channel-Network_116680.html.

Parker, C. (2013). *The intersection: Second screen turns the corner towards monetization with clear examples in sight,* from Second Screen Society: http://digitalvideospace.blogspot.de/2013/05/second-screen-turns-corner-towards.html.

Pham, A. (2013). The second screen takes center stage. *Billboard,* 125(3): 34.

Potter, K. (2012). Driving HbbTV forward. *International Broadcast Engineer,* 30–1.

Price-Stephens, H. (2012). Ensuring a superior QoE in a multiscreen world. *IBE: International Broadcast Engineer,* S22.

Quayle, A. (2012). *TV Delivery Evolution: Hybrid TV, Over the top (Internet) TV, and TV everywhere (Multi-Screen TV).* www.alanquayle.com.

Reedy, S. (2008). Surfing the web. *Telephony,* 4.

Reuters. (2014). *TOP-THEMA-Wie Phönix aus der Asche – ProSiebenSat.1 auf Dax-Kurs | Unternehmen | Reuters.* Retrieved April 28, 2014, from http://de.reuters.com/article/companiesNews/idDEBEEA0G03C20140117.

Rhody, A., Adler, M., González, R. R., & **Neumüller, G.** (2014). *Media Activity Guide 2014.* Unterföhring, SevenOne Media.

Roscoe, J. (2004). Multi-platform event television: Reconceptualizing our relationship with television. *The Communication Review,* 7(4): 363–69. DOI: http://dx.doi.org/10.1080/10714420490886961

Sasso, M., & **Absalom, R.** (2010). *The Future of TV: The evolving broadcast and on demand landscape.* Business Insights Ltd.

Schneble, C. (2013). *Second Screen − die Wiederentdeckung des Fernsehens.* Retrieved July 26, 2015, from http://blog.sybit.de/2013/01/second-screen-die-wiederentdeckung-des-fernsehens/.

Schulze, P. (2013). *Senderflut durch Digitalisierung: Die Privatsender im Umbruch.* Retrieved April 28, 2014, from http://www.digitalfernsehen.de/Senderflut-durch-Digitalisierung-Die-Privatsender-im-Umbruch.103721.0.html.

Sewczyk, J., & **Wenk, H.** (2012). Mehr als Fernsehen: Smart-TV, HbbTV & Co. *Media Perspektiven,* 4/2012: 178–88.

Shin, D.-H., Hwang, Y., & **Choo, H.** (2013). Smart TV: are they really smart in interacting with people? Understanding the interactivity of Korean Smart TV. *Behaviour & Information Technology,* 32(2): 156–72. DOI: http://dx.doi.org/10.1080/0144929X.2011.603360

Simon, J. P. (2012). *The Dynamics of the Media and Content Industries: A Synthesis,* Luxemburg: European Commission Joint Research Centre Institute for Prospective Technologies.

Sorensen, I. E. (2014). Channels as content curators: Multiplatform strategies for documentary film and factual content in British public service broadcasting. *European Journal of Communication,* 29(1): 34–9. DOI: http://dx.doi.org/10.1177/0267323113504856

Stephen, M. (2012). Social networks and the second screen: TV is being revolutionized by alternate – if distracted – communications from the sofa. (40).

Stroehmann, M., & **Oetjen, J.** (2013). *Catch Me If You Can!: Grundlagenstudie zur Multi-Screen-Nutzung.* München: United Internet Media AG.

Trares, T. (2014). *RTL und ProSiebenSat.1 − die privaten Fernsehsender sparen sich in die Gewinnzone.* Retrieved May 06, 2014, from http://www.genios.de/branchen/rtl_und_prosiebensat_1_die_privaten/s_med_20100331.html.

Tryhorn, C. (2009). Leading the charge. *The Guardian*, 11 May. Retrieved from http://www.theguardian.com/media/2009/may/11/rupert-murdoch-charging-online-news.

de Vriendt, J., Degrande, N., & **Verhoeyen, M.** (2011). Video content recommendation: An overview and discussion on technologies and business models. *Bell Labs Technical Journal,* 16(2), 235–50. DOI: http://dx.doi.org/10.1002/bltj.20513

Wildstrom, S. H. (2009). Internet TV Just Got a Lot Closer. *Business Week.* (4123), pp. 65–6.

Wilson, G. (2010). Broadcast-IP hybrids will redefine Pay-TV. *IBE: International Broadcast Engineer*, 28–9.

Ytreberg, E. (2009). Extended liveness and eventfulness in mulit-platform reality formats. *New Media & Society,* 11(4): 467–85. DOI: http://dx.doi.org/10.1177/1461444809102955

Zax, D. (2012). Lessons Learned at Google TV. *Fast Company, 169,* p.74.