Introduction

Traditional media companies face the fact that their product, e.g. entertainment and information, is affected by digitisation and the Internet. The Internet lowers the cost of distributing content, it enables interactivity, and it eliminates barriers to entry, e.g. those barriers erected through broadcast licensing systems. While access to distribution channels constitutes a severe bottleneck for traditional media companies (e.g. Habann 1999), the Internet provides the opportunity to cope with this scarce resource.

Lower entry barriers to the distribution infrastructure offer new players an opportunity to enter the market. Evans and Wurster (1997) describe this phenomenon for the case of newspapers. Vogel (1998, p. 213) states it more generally: ‘...the Internet has evolved into a low-cost, mass communication medium that empowers anyone to instantly publish – anywhere around the world – words, moving pictures, music, computer software, and anything else that can be digitised.’

Towards a Definition of Broadcasting and Internet-Based TV

Broadcasting can be defined as ‘...sending out sound and pictures by means of radio waves through space for reception by the general public.’ (Head & Sterling 1990, p. 4) or as Bittner (1991, p. 14) states, ‘...broadcast can mean scattered over a wide area.’ Broadcasting includes radio as well as TV. However, ‘pure on demand’ services, which are not streamed live, are not classified as broadcasting in this paper. (For an approach including ‘video on demand’ see for instance Waterman 2001). We further exclude approaches like ‘Business TV’, i.e. communication within a corporation, because they are not directed at the general public.

Based on our definition of broadcasting, the activity of ‘broadcasting’ audio-visual content via the Internet needs to be defined. There are several definitions for activities which include elements of traditional TV and the Internet. (See, for instance, Owen 1999 for several definitions of Internet TV). Webcasting is defined as ‘...sending digital information
over the Internet for reception, viewing and/or listening by the public, possibly involving some interaction between the sender and the recipient’ (Miles 1998, p. 1). This definition of webcasting includes all transmissions of audio as well as visual data via the Internet. In contrast, displaying Internet content on a TV screen is often called ‘Internet TV’, ‘Web-TV’ (leads to mix-ups with the company, ‘WebTV’, which belongs to Microsoft), or ‘Cyber-TV’ (Goldhammer & Zerdick 2000).

To us, the main criterion determining whether a web-based activity can be described as ‘broadcasting’ is the existence of live streaming or any related technology-based application. Therefore, the term ‘Internet-based TV’ is used in this work to describe any transmission of audio-visual broadcasting content which fulfills the following conditions: (1) directed at the general public, (2) IP-based transmission, and (3) using live audio or video streaming. For the purpose of our analysis, we maintain this definition even if practitioners (e.g. Odlyzko 2001) claim that file transfers, and not real time streaming, will likely become the predominant mode of video traffic on the web.

Research Framework and Research Approach

Towards a Research Framework

To examine the industry and the broader environment faced by Internet-based TV market entrants, and to analyse the options for attacking traditional TV markets via Internet-based TV, we developed a sequential framework using the following three key questions:

- Is the respective TV-market attractive for new entrants?
- Is an Internet-based market entrance feasible considering technical (transmission, diffusion) and legal (media law, copyright) issues?
- What revenue sources might be tapped?

The framework is termed ‘sequential’ because at every stage an immediate exit is suggested if the result of the analysis is not satisfactory (see Figure 1).

Research Approach: Framework Application

To test the framework outlined above, we applied it to the German TV market, and thus tried to assess the market potential for Internet-based TV in Germany. The results of this analysis, based on secondary data sources, are presented in this paper.

Data Collection

After selecting Germany as the test market for applying the framework, a market survey based on secondary data was conducted to judge the attractiveness of the German TV market. For industry-wide data-gathering, using secondary data seems appropriate (Emory 1976). Furthermore, the collection of primary data would have been impractical and inefficient. The main source of information was the German ‘Commission on Concentration in the Media’ (KEK). We also analysed data provided by the leading publication for media information in Germany, ‘Media Perspektiven’, published monthly by the ‘Arbeitsgemeinschaft der ARD-Werbegesellschaften.’ Further, specific additional data was collected from other sources and is referenced individually.

Definition and General Characteristics of TV Markets

TV products and services have specific characteristics. TV programs possess some of the attributes of public goods. Disregarding costs for content rights, marginal costs for additional distribution tend to be almost zero (Spence & Owen 1978). TV programs are experience goods as defined by Nelson (1970). The information paradox (Akerlof 1970) describes the fact that consumers have to experience a good in order to value it. However, after they have ex-
experienced the good, they hardly have any incentive to demand the product (Shackle 1952). Due to this information-paradox, in this case better termed 'entertainment-paradox' (Dietl & Franck 2000), providers do not have an incentive to let customers inspect, i.e. experience, the goods before acquiring them. This leads to customer uncertainty and therefore to customer willingness to pay the same price for 'good' programs as for 'bad' ones. Ex-ante, they do not know which programs are 'good' and which are 'bad'. If 'good' programs are not able to overcome this uncertainty, they risk being driven out of the market.

With the exception of Pay-per-view or Pay-per-channel-providers, TV stations usually act in two different markets: (1) the market for audience and (2) the market for advertising. This is the so-called 'dual-market phenomenon' (see among others Picard 1989). Both markets can be analysed along the dimensions of 'customer functions', 'customer groups', and 'alternative technologies' (see also Abell 1980). For an application of these functions to TV markets, see also Habann (1999).

The dimension 'customer function' can vary. If TV providers offer Pay-TV, their function is to deliver content (information, entertainment) to the recipients. If they provide commercial Free-TV, their function is to attract attention to commercials as their main customers are advertisers to whom they sell the attention of their recipients (Blumenthal & Geedenough 1998, Picard 1989).

Internet-based TV could serve the same market as traditional broadcasting insofar as customer groups are concerned. Technically speaking, the potential reach of Internet-based TV – limited only by the access constraints of the web – is broader than the reach of traditional TV stations which operate primarily on a national basis. Practically speaking, however, TV programs are produced in a given language and cater to national culture(s), information needs and taste. Whether they are distributed via broadcast or the Internet is immaterial. One might then argue that the potential viewers of Internet-based TV and traditional TV stations are the same. This also holds true where sizeable national populations speaking a minority language exist (e.g. there are approximately one million Turkish-speakers in Germany). If they are already served by TV channels, then they represent a sufficiently large group to be an attractive market for Internet TV entrants. Therefore, the decision to mainly focus on a geographical target area does not depend on whether traditional or Internet-based TV is deployed. If the potential public is scattered in foreign countries, Internet TV may also have additional potential when cost-efficient solutions for clearing rights are available. Currently, cost efficiency is only possible for Internet-original content (see Waterman 2001) or station-made content (see public broadcasters streaming their own news and documentaries).

Traditional TV and Internet-based TV differ in their distribution technology. However, due to convergence on the receiving side, i.e. the customer side, differentiating between transmission modes is losing relevance as a distinctive criterion. We use the term 'traditional TV' when terrestrial, cable, or satellite transmission technology is employed (e.g. Brown & Quaal 1998, Dominick, et al. 2000), and we use the term 'Internet-TV' whenever telecom cables or even wireless networks are used to carry the Internet Protocol. To avoid confusion and reduce complexity, we disregard other entertainment and information substitutes like newspapers and radio stations.

The German TV Market

With 36.5 million TV households, Germany is the largest television market in Europe (IDATE 2000, Zeidler 2002). The German market is characterised by a very strong public broadcasting sector. Besides the public stations ‘ARD’ (including 11 regional stations) and ‘ZDF’, two other major players exist: The Kirch-Group and the RTL-Group, dominated by CLT-UFA in which Bertelsmann holds a 89% share (see Table 1).

No other country in the world offers as many national Free-TV programs as Germany (Johns 1998). About 84% of all TV households can receive more than 30 free-to-air programs (Zeidler 2002). However, several entries into the German TV market failed recently. A rather prominent example with little success is the small station, ‘TM3’, in which Robert Murdoch was involved. For the first two years, this station targeted female audiences. With funds invested by Rupert Murdoch, ‘TM3’ then repositioned itself by acquiring the exclusive German rights to the soccer Champions League in 1998/1999. In 2000, ‘TM3’ sold the Champions League rights to RTL and became, again, a niche player.

Despite news reports announcing declining advertising revenues within the past 12 months and the insolvency claim registered by the Kirch Group in April 2002, investment offers from Murdoch and Berlusconi hint at a persisting market attractiveness.

In the next three sections, we will analyse the German TV market following the steps described in our research framework.

Market Attractiveness of the German TV Market

We analyse the structure of the German TV markets for advertising and audience by considering two characteristics: (1) the market form, e. g. concentration, and (2) contestability, e. g. the impact of low entry barriers. (For the contestability concept, see among others Baumol 1982 and Baumol et al. 1982).
Concentration in the German TV Market

We illustrate the concentration of the German TV sector by using the Hirschmann–Herfindahl-Index (HHI) for both the audience — and the advertising market. The HHI serves as an appropriate measure for TV markets (Heinrich 1999). It is defined as the (normalised) sum of the squares of the firm’s market shares and is calculated as follows

\[ \text{HHI} = \sum_{i} (x_i)^2 \]

where \( x_i \) represents the market share of each single firm ‘i’ of n firms in the market.

The range of the HHI is 0<HHI<1, if the market share \( X_i \) is expressed in decimal form, or 0<HHI<10.000, if \( x_i \) is expressed as an absolute figure. In this paper, the market share is expressed as an absolute number.

The HHI is interpreted by the ‘merger-guidelines’ of the US Department of Justice. A market with an HHI below 1,000 is considered as ‘slightly concentrated’ or ‘not concentrated at all’, a market with an HHI between 1,000–1,800 as ‘somewhat concentrated’, with an HHI between 1,800–2,700 as ‘highly concentrated’, and a market with an HHI above 2,700 as ‘very highly concentrated’ (Bates 1999).

The HHI for the German TV market has been calculated based on the numbers presented in Table 1. Selected HHI resulting from the calculations are shown in Table 2.

Table 1: Audience and Advertising Shares of German TV Stations

<table>
<thead>
<tr>
<th>Station/Programm</th>
<th>Audience/Station (in %)</th>
<th>Audience/Group (in %)</th>
<th>Audience/Station (in %)</th>
<th>Audience/Group (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT.1</td>
<td>10,20</td>
<td>20,87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pro7</td>
<td>8,10</td>
<td>18,75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kabel 1</td>
<td>5,10</td>
<td>4,82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSF</td>
<td>1,10</td>
<td>0,03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kirch Group</td>
<td>24,50</td>
<td>44,47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RTL</td>
<td>14,80</td>
<td>28,60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RTL II</td>
<td>4,00</td>
<td>6,24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Super RTL</td>
<td>2,80</td>
<td>1,97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOX</td>
<td>3,10</td>
<td>4,03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RTL Group</td>
<td>24,70</td>
<td>40,84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARD</td>
<td>26,80</td>
<td>4,09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZDF</td>
<td>13,10</td>
<td>3,80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publ. Broadcasting</td>
<td>39,90</td>
<td>7,89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (18 Prog.)</td>
<td>n.a.</td>
<td>10,90</td>
<td>n.a.</td>
<td>6,80</td>
</tr>
<tr>
<td>Sum</td>
<td>100,00</td>
<td>100,00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: AGF/GfK Fernsehforschung 2001; Media Perspektiven 2001; RTL Season Guide 2001; own calculation

Table 2: Hirschmann - Herfindahl - Index (HHI) for the German TV Market

<table>
<thead>
<tr>
<th>Single Station/Programm</th>
<th>Audience</th>
<th>Advertising</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,339,21</td>
<td>1,718,54</td>
</tr>
<tr>
<td>Group</td>
<td>2,921,16</td>
<td>3,753,98</td>
</tr>
</tbody>
</table>

Table 2 reveals the audience market as being ‘somewhat concentrated’ if single stations are considered (HHI = 1,339,21) or as being ‘very highly concentrated’ if corporate groups are considered (HHI = 2,921,16). The advertising market is ‘highly concentrated’ for single stations (HHI = 1,718,54) and ‘very highly concentrated’ for groups (HHI = 3,753,98).

The assumption underlying the calculation of concentration figures is that high concentrations lead to extraordinary gains. This is supported by the profit margins registered by the two big private German players: 14.1% at Kirch Group and 14.2% at RTL-Group (Media Perspektiven 2001). Nevertheless, the importance of the market form is no longer indisputable. One may question whether the correlation between concentration and profits always holds (see among others Daughety 1990, Farrell & Shapiro 1990).

Contestability

Following the theory of contestable markets (Baumol 1982, Baumol et al. 1982), the attractiveness of a market for potential entrants depends more on the entry conditions than on concentration. Potential market entrants may be more attracted by the condition of ‘no sunk costs’ than by high concentration (Young 2000). Internet TV has lower sunk costs than broadcast TV since it benefits from existing communications networks and does not require heavy investment in broadcasting infrastructure. Traditionally, broadcasting markets have had strict barriers to entry and little variation in the degree of concentration (Bates 1993, Heinrich 1999). Based on the theory of contestability, new technologies like web-casting could become a threat to traditional broadcasters. This coincides with Barrett’s (2000) observations on the Irish media industry where, amongst other factors, new technologies have played a role in increasing contestability.
Internet TV market entry barriers are lowered through reduced ‘sunk costs’, achieved both through lower investments in infrastructure and through the absence of license fees. Internet TV providers can therefore thrive with lower scale economies than those needed by traditional broadcasters. Hence, Internet TV providers would be less dependent on a highly concentrated market than traditional broadcasters to recoup their investments (e.g. also Demsetz 1973).

In conclusion, having analysed the attractiveness of the German TV market based on the two criteria ‘market structure’ and ‘contestability’, it can be stated that market attractiveness is high, even if the market structures seems to put an extra burden on new entrants. Due to the positive answer to question ‘1’ of the framework, we now proceed to its second layer.

Feasibility of Internet-based Entries

Diffusion and Technical Aspects

Diffusion describes the process by which an innovation is communicated and adapted over time among the members of a social system (Rogers 1995). The diffusion of Internet-based TV is partially hindered by technical restrictions.

The number of online households is important for Internet-based TV providers because they determine the so-called ‘technical reach’. As of January 2001, 34.8% of all Germans older than 14 years of age were connected to the Internet (e.g. www.digi-tv.de). Even though Internet user share is growing, some ‘offliners’ do not plan to get access to the Internet (Grajczyk & Mende 2000). Furthermore, the number of households connected via broadband Internet access is still much lower. In 2001, approximately 2.1 million people in Germany used broadband cable (primarily DSL) (see Regulierungsbehoerden fuer Telekommunikation und Post 2002; www.emarketer.com, however, speaks about only 1.0% of the German population). Obviously, broadband technology is still in its infancy in Germany. Bandwidth must undergo significant improvements to make Internet-based TV a viable alternative to traditional TV. Nevertheless, online access and bandwidth will increase and thus improve the chances of Internet-based TV.

Another technical issue is the standardisation of media players. The reception of audio-visual content via the Internet is dependent on such players which enable consumers to view streamed video. So far, there is no accepted player standard. However there are quasi-standards, and growing efforts to achieve compatibility are underway. Nonetheless, in some cases, the best-known software programs to run TV on the web (Realplayer, Quicktime, Windows Mediaplayer) still do not share the same file formats. Consumers have trouble with additional hard-drive space and the necessity to update their different media players regularly. This lack of standardisation is an obstacle to the diffusion of Internet-based TV.

Thirdly, the computer is a barely adequate device for watching TV (Dvorak 2000). The display is limited compared to a TV screen. Further, the transmission procedure is comparatively unreliable. But the quality of transmission is improving rapidly. Streaming software is capable of transmitting 30 frames per second compared to only 8 in 1998 (Bhandari et al. 2000, Steinmetz 2002). As the standard in Germany for analogue TV (PAL) is 25 frames per second (Himmelstein & Livisach 2000), 30 frames would be sufficient for displaying content in the accustomed quality.

Finally, when considering the consumer perspective, the diffusion of Internet-based TV is limited by access costs. If the access is expensive, the viewers’ willingness to pay for the content is relatively low (Dewan et al. 1998, Thielmann & Dowling 1999). The costs for Internet access in Germany declined by 31% in 2001. Heavy users saved almost 42.3% from 2000 to 2001 due to the rising popularity of flat rates (Federal Statistics Office Germany, 2001). Declining access costs certainly improve the opportunity for Internet-based TV offers.

Seen from the perspective of Internet TV providers, media player standards and scaling economies emerge as issues to address. The lack of player standards has implications for program providers who must encode their content for different players. Each format requires its own pool of servers and its own transmission system (Careless 2000). Further, negative economies of scale registered by Internet TV providers seems to be the greater impediment: The greater the market success, the worse the risk of economic failure. As the reach of an Internet TV station increases, its costs per customer do not decrease since they must cover the additional costs charged by an ISP (or telco) for each additional stream to every additional viewer. According to Noam (2000), Internet distribution of TV programs is more expensive than cable and some other media. But as Internet bandwidth develops, Internet TV transmission is likely to become more economical (Waterman 2001). Another consequence of major success, as experienced with the 1999 Victoria’s Secret Fashion Show marketing event, can be server meltdown. In that case, the organisers held the event in 2000 over a six month period using video on demand to decongest online requests for live streams. However, such a video on demand approach remains outside of our previously stated definition of Internet-based TV.

Legal Issues

While the legal situation of Internet-based TV providers is confusing and unstable, traditional TV stations face tighter constraints than Internet-based
TV providers. Traditional broadcasters have to accept licensing restrictions, whereas Internet-based TV providers are confronted with contradictory regulations in the area of media law (Goldhammer, Zerdick 2000). The main regulatory basis for TV via the Internet in Germany is the ‘Mediendienst- Staatsvertrag (MDStV)’, which is mainly designed for online services directed at the general public. Internet-TV providers need neither a registration nor a license (§ 4 MDStV), but there is uncertainty regarding future jurisdiction.

An important legal consideration for Internet-based TV is the issue of copyrights (for technical solutions on the Internet see – among others – Clarke & Nees 2000). Most traditional broadcasting rights are sold either regionally or nationally. A world-wide license, which would be necessary for Internet-based TV, is connected with prohibitively high costs. This builds a strong barrier for online transmission of movies and similar content.

Another facet of copyrights can be illustrated by the case of ‘iCraveTV’. The Canadian station, ‘iCraveTV’ broadcasted 17 Canadian and American TV programs via the Internet (Standeford 2000). They did so by receiving the programs and transmitting them to the Internet without any authorisation from the TV stations. After copying the analogue signals of the TV stations and transforming them into digitised signals, ‘iCraveTV’ barely faced any further marginal costs. Industry giants, especially content providers like Twentieth Century Fox, Disney, ABC and ‘Time Warner successfully took legal action to stop ‘iCraveTV’. ‘iCraveTV’ had to face a court-ordered shutdown of its website (Cave 2000).

Copying TV programs from third parties into the Internet does not seem to be a viable solution for Internet-based TV. Hence, entering TV markets via Internet-based TV seems feasible at the moment only if entrants are prepared to invest in the rights to content or limit their program to in-house productions (e. g. news or documentaries).

### Revenue Sources of Internet-based TV

Even when technical restrictions are overcome and the legal situation is clarified, important questions about revenues have to be answered.

Business models for online content can be based on (1) subscription, (2) usage-based fees, (3) advertising and (4) online sales (Alison et al. 1998, Lšbbecke 1998, Lšbbecke et al. 1998, see also Zerdick et al. 1999, Weill & Vitale 2001). This means that, with the exception of online sales for TV stations, the business models of Internet-based TV providers (see also Waterman 2001) are similar to those used by traditional broadcasters. In the following, the four different revenue streams are discussed and their benefits and drawbacks are elaborated (see Table 3).

### Subscription

The marginal payment disposition for additional entertainment and information services in Germany is limited because of the rich offer of Free-TV stations (Stark & Schenk 1999). This weakens the prospects of subscription-based business models. Subscriptions raise the risk the consumer bears because they confront consumers with a longer-term obligation compared to free or fee-based offers. The risks, embedded in the ‘experience good characteristic’, i.e. the uncertainty about the product quality, can be reduced by brand names or with guarantees (Akerlof 1970). This requires Internet-based TV to have gained a certain reputation before a subscription-based business model becomes a valid strategy.

Further, subscription represents a way of bundling the content offered (Shapiro & Varian 1999). Bundling describes the aggregation of separate goods into a bundle of goods. From a provider’s point of view, it increases profits by smoothing the demand curve and thus shifts parts of the consumer rent to the producer. The benefits of bundling increase as the number of

<table>
<thead>
<tr>
<th>Evaluation of Revenue Sources</th>
<th>Benefits</th>
<th>Drawbacks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subscription</strong></td>
<td>Bundling</td>
<td>High reputation required</td>
</tr>
<tr>
<td><strong>Usage-Based Fees</strong></td>
<td>High marginal payment disposition; reduced uncertainty for customers due to exit options</td>
<td>Efficient micropayment systems required; only applicable to ‘premium content’</td>
</tr>
<tr>
<td><strong>Advertising</strong></td>
<td>Problems of uncertainty solved</td>
<td>Lowest possible amount of individual payment disposition</td>
</tr>
<tr>
<td><strong>Online Sales</strong></td>
<td>Overcoming other, esp. time, restrictions</td>
<td>Acceptance of interactive elements by TV audience not clear</td>
</tr>
</tbody>
</table>

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Table 3: Evaluation of Revenue Sources
goods in the bundle increases. Bundling is especially attractive if marginal costs are low and the customers’ valuation of the goods in the bundle are independent (Bakos & Brynjolfsson 1999, Bakos & Brynjolfsson 2000). Both conditions are fulfilled in the case of Internet-based TV. Hence bundling will generally increase the willingness to pay, thereby enhancing revenues.

Usage-Based Fees

Similar to Pay-per-view models in traditional TV, usage-based fees for single bits of content help to reduce the uncertainty described above by segmenting transactions (Dietl & Franck 2000). In contrast to subscription-based business models, the viewer has multiple ‘exit options’. Fee-based business models could be appropriate for providers offering ‘premium content’ for three reasons: Firstly, although handling charges for small payments outweigh the costs of the service (Pagani 2000), this is expected to change with the installation of efficient micropayment-systems based on e-cash or similar technologies (Turban et al. 2002). Secondly, they can capture the marginal payment disposition of viewers for premium content better than advertising-based models (Rawolle & Hess 2000). Thirdly, the streaming costs can be billed to the viewer, thus avoiding negative economies of scale.

Advertising

In spite of recent market downturns, advertising has been the most important private revenue base in the German TV sector (TV advertising volume in 2001 for all stations in Germany: approximately 7.5 billion). As of early 2002, only one traditional broadcaster in Germany, the Kirch-Group with its channel Premiere World, offered Pay-TV. Advertising business models rely on the concept of the dual market (viewers and advertisers) as described earlier. However, the current online share of advertising budgets is comparatively low in Germany. It accounts for about 1.2% of the country’s total advertising turnover (A. C. Nielsen 2001).

As we previously argued, where a sufficiently large, nationally based special interest public can support a traditional TV broadcaster, for example via advertising revenues, this market is equally pertinent for Internet TV entrants. The case of a minority language channel has a special twist for Internet TV due to its global reach. This potentially extended public (e.g. a Turkish language channel based in Germany which reaches Turkish-speakers worldwide), may or may not be of extra value to advertisers, depending on their product market. Culturally defined or interest defined Internet TV programs, although technically available across the globe, remain limited by their accompanying language reach. It can be expected that a special interest channel in English would have a higher potential for attracting advertising revenues for global products than a Finnish or Greek language special interest channel based on the number of people speaking those languages worldwide. Conversely, an advertiser with a product market closely linked with one country will be primarily interested in the size of the national viewer base, irrespective of the language.

Internet-based TV can offer a variety of different advertising formats. It remains to be seen how the standard TV spot and Internet advertising will merge and evolve. Advertising might also be based on such concepts as ‘content sponsorship’, i.e. the soap opera, which goes back to the early days of radio (Hanson 2000). In the Internet era, more customised approaches and new advertising concepts gain importance (Turban et al. 2002, Pramataris et al. 2000, Lekakos et al. 2001). In the United Kingdom, two large providers (Cable &Wireless, Sky) are experimenting with interactive advertising via TV (Pagani 2000). However, any predictions about the development of more personalised TV advertising thanks to Internet’s potential for interactivity are speculative at this stage (see also Brown-Kenyon et al. 2000).

Online Sales

Subscription, usage and advertising-based revenue sources suffer from customer time constraints. Consumers are willing to spend a defined amount of time and money on media consumption. Although this amount may rise, it is and will remain limited. Such limitations could be overcome by expanding the economic activity of TV providers to online sales. Due to the interactivity provided by web-based solutions, additional business models like online sales triggered by broadcasting elements might be implemented (Alison et al. 1998). In spite of the success of TV shopping channels (Gruninger-Hermann 1999), it is not clear yet whether recipients will take advantage of TV offers for transactions (e.g. Lee & Lee 1999, Margolis 1996).

TV causes rather passive media usage (Levy & Windahl 1984, McQuail 1972). This view is supported by Zimmer (2000), who predicts that active usage will gain importance only slowly. In the area of traditional TV, tele-shopping enjoys rising popularity (Gruninger-Hermann 1999). This might offer insights into the potential acceptance of online sales via Internet-based TV. However, the development of interactive features in the TV sector is at an early stage. Hence, any predictions about the future value of online sales solutions are problematic.

Overall Assessment of Revenue Sources

In conclusion: There is no reason why the traditional sources of revenue should fail in the case of Internet-based TV since the underlying business models are comparable. However, the economic relevance of the advertising model that drives traditional TV broad-
casters needs to be watched carefully. As of July 2002, the advertising income of traditional TV stations is much higher than the advertising income attributable to Internet-based TV or even to all web content. Valuing innovative revenue sources like online sales or customised advertising generated by growing interactivity in any detailed manner does not seem possible at this stage.

Conclusion and Critical Assessment

Our analysis shows that the German TV market could be attractive for potential entrants via the web. This conclusion is based, firstly, on the above average profits attributable to high market concentration and substantiated by the profit margins of the two largest private TV players in Germany. Secondly, the advent of the Internet has lowered entry barriers into TV markets due to decreased sunk costs, thereby triggering higher contestability. Both of these observations, when taken alone, indicate market attractiveness for potential Internet-based TV entrants. Seen together, they lead to a certain paradox: As new players enter the market, concentration will decrease putting pressure on profit margins and, hence, reducing overall market attractiveness. Additionally, the diffusion of Internet-based TV is hindered by technical restrictions such as the unsatisfactory quality of the transmitted pictures caused by bandwidth limitations (and the correlated access costs), by the absence of a common standard media player as well as by streaming costs for providers. As far as legal restrictions are concerned, the issue of copyrights and the general instability with regard to regulations are the most powerful barriers to the propagation of Internet-based TV.

While this paper observes that technical issues are moving towards a solution, estimates about the legal situation are still ambiguous. Internet-based TV is likely to tap the same revenue sources, such as advertising, as traditional TV stations. Innovative sources based on interactivity are at an early stage and thus cannot be evaluated properly. Their success will primarily depend on the acceptance by customers of interactive functions in the TV environment.

In summary, at least in Germany, there are moderate chances for the successful entry of Internet-based TV, depending on the content to be broadcasted. Internet-based TV streaming news, documentaries and in-house productions, where international copyrights have been cleared, are seen to have the best short-term chances.

Critically assessing the research framework developed, it has proven to be applicable and helpful for evaluating a total market, but also for consulting individual stations in their strategic decision to enter the Internet-based TV market. It is clear that the model lacks specific and detailed checkpoints which remain to be investigated in order to precisely assess market potential and market impacts. As a result, the validity of some of the statements made can and should certainly be questioned. Nevertheless, as long as the market and the literature are lacking any more in-depth approach which would be tested for validity, we feel that a proxy such as the one presented here not only provides important insights after a phase of exploratory research, but could also lead to further statistically relevant results that could ultimately be taken into account in political decision-making processes.

References


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