

# MPRA

Munich Personal RePEc Archive

## **Media industry facing biggest upheaval since Gutenberg. Media consumers morphing into media makers**

Heng, Stefan  
Deutsche Bank Research

16. October 2006

Online at <http://mpra.ub.uni-muenchen.de/3250/>  
MPRA Paper No. 3250, posted 07. November 2007 / 03:04



# Media industry facing biggest upheaval since Gutenberg

Media consumers morphing into media makers

October 12, 2006



**Innovative technologies are changing the way the media industry operates.** Technological advances are reforming the conventional media model in which information flows exclusively from professional media makers to passive media consumers.

**New electronic offers improve contact between media makers and media consumers.** Supra-regional newspapers, radio stations and TV broadcasters, in particular, are keen to shore up their shares in the dynamic media market by offering constantly updated online articles, audio features, and interactive and personalised programming.

**Despite personalisation of programming, advertising will not be crowded out;** however, advertising forms will undergo a fundamental transition. During this phase, advertising revenues will come under pressure. In the light of falling revenues Germany's private-sector broadcasters currently offering free TV will also be compelled to consider new forms of advertising as well as pay-per-view programming.

**Brand recognition will attract additional customers and foster further growth.** Given the information overkill on the Web 2.0, establishing a brand there is even more important than in the conventional media segment.

**There will still be a place for media empires in future.** As the third era of media history unfolds, media groups will be compelled to respond directly to their recipients' opinions. Despite the growing number of active recipients the pronounced network effect will ensure that the media market remains highly concentrated. This is one reason why the conventional media groups are taking interest in the new segment. They know that only the houses that tune in at an early stage will play a role on the journalistic front going forward.

www.dbresearch.com

**Author**  
Stefan Heng  
+49 69 910-31774  
stefan.heng@db.com

**Editor**  
Antje Stobbe

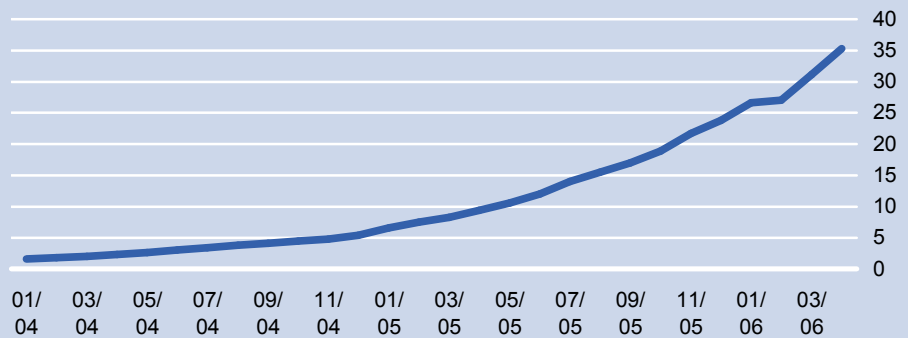
**Technical Assistant**  
Martina Ebling

Deutsche Bank Research  
Frankfurt am Main  
Germany  
**Internet:** www.dbresearch.com  
**E-mail:** marketing.dbr@db.com  
**Fax:** +49 69 910-31877

**Managing Director**  
Norbert Walter

## Modern recipient has need to communicate

Blogs worldwide, million



Source: technorati, 2006





The radio would be the finest possible communication apparatus in public life, a vast network of pipes. That is to say, it would be if it knew how to receive as well as to transmit, how to let the listener speak as well as hear, how to bring him into a relationship instead of isolating him. (Bertholt Brecht's Theory of Media, 1927)<sup>1</sup>

## Technology leading to upheaval in the media industry

Since the invention of the printing press the media business has, in principle, remained virtually unchanged. To this day, a few professional media groups and a plethora of passive consumers shape this important sector in society. The advance of innovative information and communication technologies (ICT) is now triggering a fundamental upheaval in the media industry. The changes can be seen in the conventional (mass) media themselves, but they are even more evident in the new offers available on the internet. This report investigates the impact of digital technology on the media industry. Our initial focus will be on the economic environment of the media; subsequently we will analyse the changes in the conventional media and the developments in cyberspace.

### Theoretical underpinning for government intervention

Around the world, government authorities hold direct stakes in one-third of all newspaper publishing companies and two-thirds of all broadcasting companies.<sup>2</sup> Given this major involvement there is a heated debate about the societal impact of government intervention in the industry. With its statements on production structures and the properties of goods produced, the academic community certainly offers serious arguments in favour of a government presence. For one thing, analysis of the market structure shows that radio and television broadcasting is a typical natural monopoly, especially because of the large proportion of fixed costs, the resultant decline in average costs and the related economies of scale. In this production function, the media industry is dominated by just a few companies; imperfect competition is prevalent. For another thing, analysis of the properties of the goods produced shows that the media content cannot only be understood as a public good but also in fact as a merit good. While the two criteria of (economically sensible and desired) exclusivity and competition of consumption are used when defining public goods (Figure 1), the paternalistic argument of low individual demand from a society's point of view is key in defining merit goods.<sup>3</sup> Individual demand is too low owing to the misassessment (from the viewpoint of the beneficent central decision-maker) of actual utility, so on the basis of this logic this demand has to be promoted through government intervention. These analyses of the media industry cast doubt – given free market forces without any government intervention – on the possibility that there can be a high-quality media supply which guarantees a variety of publications, the protection of minors and also the fostering of talent.

The given arguments of imperfect competition in the media market and the provision of high-quality journalism for the media users are taken by some states as a reason to intervene – even directly – in the media industry. In terms of social policy, direct government

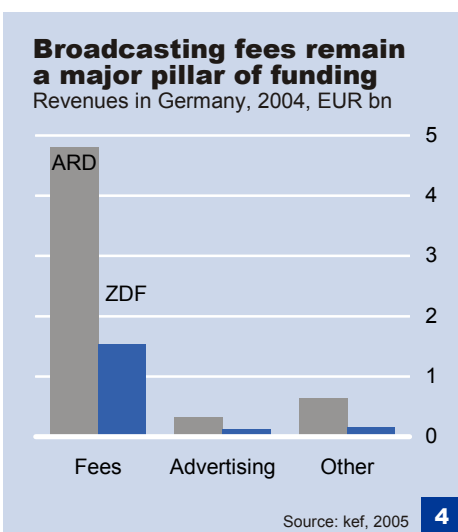
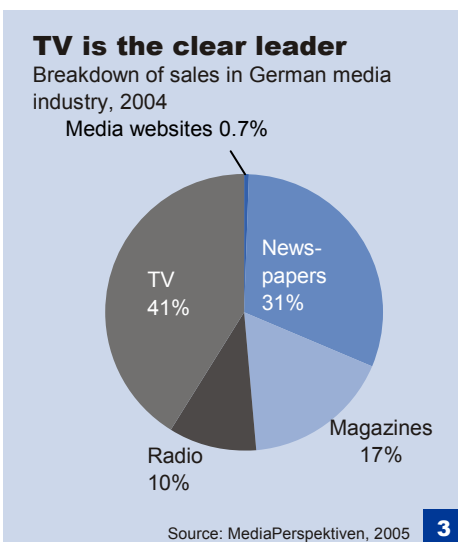
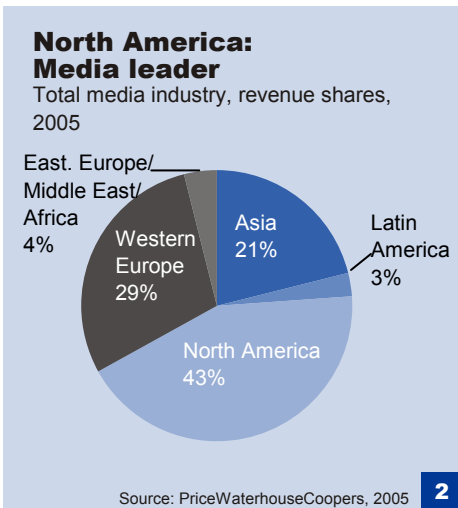
<b>What is a public good?</b>		
Categories of economic goods		
Consumption is ...	... non-competing (perhaps only up to a certain capacity level)	... competing (perhaps from a certain capacity level)
... not exclusive (in economically sensible way), or exclusivity is not desired politically	Public good (e.g. dam)	Allmende good (e.g. overcrowded city street)
... exclusive (in economically sensible way), or exclusivity is desired politically	Club good (e.g. cinema)	Individual good (e.g. apple wine)

Source: DB Research, 2006 **1**

<sup>1</sup> Brecht, Bertholt. The Radio as an Apparatus of Communication. Brecht on Theater, ed. and trans. John Willett (1964) New York.

<sup>2</sup> See Djankov, Simeon et al. (2003). Who owns the media? In Journal of Law and Economics. Vol. 46. pp. 341-382.

<sup>3</sup> Besides broadcasting, some classic examples of merit goods include social security, third-party vehicle insurance and school education.



intervention (e.g. via direct investments in media businesses) is worrying. Society derives greater benefits from a media policy that confines itself to regulatory intervention. This policy covers various instruments, such as extensive antitrust investigation into mergers and the licensing of broadcasters. For Germany's public broadcasters the intervention also includes the setting of licence fees, the scope for allocation of expenditure and a say in programming.

Ultimately, the different forms of government intervention shape the market conditions – which vary widely from country to country and according to type of medium – and in this way have a profound impact on the development of the entire media industry.

**Media market has countless facets**

The media industry as a whole (TV, radio, newspapers, magazines, media websites) posted revenues of EUR 1.3 tr worldwide in 2005; the total will hit EUR 1.8 tr by 2010 (+7% p.a.). North America is the biggest market, with Western Europe and Asia trailing far behind (Figure 2). Germany's media businesses generate a combined EUR 30 bn. With a contribution of one hundred-fiftieth of this amount, media websites (from online newspapers to interactive weblogs) still constitute a very small segment of the German media industry when compared with the conventional media. With total revenues of EUR 13 bn, TV is the branch of media with the highest turnover, far outstripping newspapers, news magazines and radio (Figure 3). Germany's private TV broadcasters ring up EUR 5 bn p.a. in advertising revenues, and public broadcasting corporations merely one-tenth of this amount, with three-quarters going to ARD. Radio and TV licence fees are similar to a tax and are set by political authorities; these fees are the most important source of funding for the public broadcasters by far (Figure 4).

**Societal and technological trends behind the upheaval**

When designing their formats the media industry players keep their eyes on both the media user (recipient) market as well as the advertising market. The competition for advertisers is based mainly on impact intensity (the metric being the so-called thousand-contact-price, TCP), while the competition for the recipients focuses above all on content. A certain influence is exerted by special effects, such as intensively advertised major events (e.g. Olympic Games, football World Cup), as well as by structural factors, such as political intervention (especially by national regulators), societal changes and technological developments in the media industry.

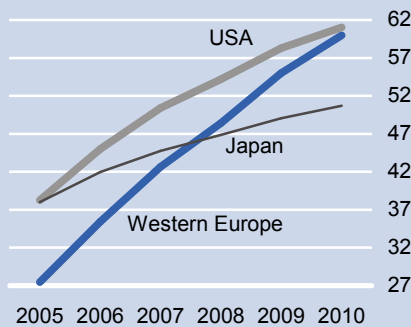
At present, the advances in ICT and the related societal changes are triggering a fundamental upheaval of the media industry. There are two particularly important trends: the digitisation of content generally and the heightened need of recipients to make their voices heard. On the technical side, the changes in the market are mainly being driven by the increasing acceptance of broadband transmission technologies in the fixed-line (xDSL, cable modem and powerline)<sup>4</sup> and wireless (UMTS, WLAN and Wimax)<sup>5</sup> networks as well as by the greater acceptance of the internet which goes hand in hand with this trend (in 2010 some 64% of Western Europeans will

<sup>4</sup> See Heng, Stefan (2005). Broadband: Europe needs more than DSL. Deutsche Bank Research. E-economics No. 54. Frankfurt am Main.  
<sup>5</sup> See Heng, Stefan (2006). UMTS broadband mobile technology rolled out. Confounding many expectations. Deutsche Bank Research. E-economics No. 57. Frankfurt am Main.



### Broadband continuing to spread

Fixed broadband connections per 100 households

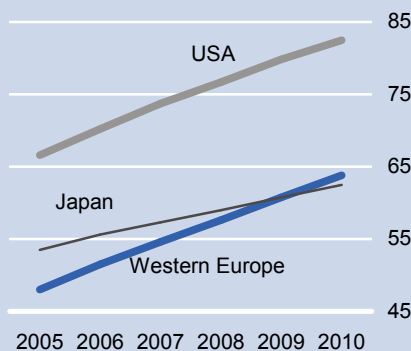


Source: DB Research, 2006

5

### Internet attracting more and more users

Internet users per 100 inhabitants

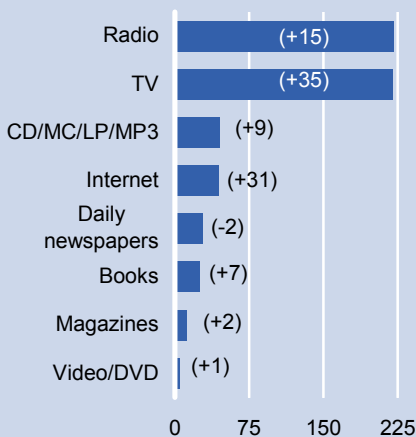


Source: DB Research, 2006

6

### Only newspapers losing

Media consumption [minutes per day], Germany 2005



In brackets: Change 2005 vs 2000 [minutes]

Source: IW, 2006

7

use the internet; today the figure is 51%) (Figures 5 and 6). Broadband access to multimedia services will become more attractive still thanks to innovative triple-play offers (voice telephony, internet and TV) from a single telecommunications or cable TV operator. These packages will additionally spur the transformation of the media industry.

### Newspapers have mixed feelings about their options

More and more readers are choosing to read the eye-catching, constantly updated information offered by media websites rather than newspapers. The more supra-regional the interest and the more topical the news (e.g. major sporting events, disasters), the more likely that the reader will opt for media websites. Accordingly, the time Germans spend on reading newspapers is stagnating while the media websites are making strong gains, and they alone are responsible for one-quarter of the rapid increase in the overall media time budget (between 2000 and 2005: +98 minutes per day) (Figure 7). With circulation declining, advertising rates falling and standard commercial, classified and job-market advertisements shifting away from newspapers to other types of media, newspaper revenues are coming under pressure.

In light of the reduction in revenues, publishers are increasingly considering the use of innovative ICT. While some newspapers emphasise the risk of cannibalisation, others have long since recognised that the web is an option for addressing the changed needs of their readership.<sup>6</sup> Constantly updated news reports on a complementary website and audio features (podcasts) transferred to digital handheld terminals by push-based services are a widespread phenomenon. However, prominent supra-regional newspapers are also featuring changes which far exceed these additional offers.

- The Guardian, The Times of London and the Financial Times have merged their respective print and online editorial desks and now follow the principle of “web first”. They no longer want to wait for the print product to appear, preferring to post the latest news immediately on the web instead.
- El País takes a slightly different tack with its (electronic) “teaser newspaper”. There is a charge for this offer which aims at readers who want to be kept abreast of current news even when they are on the go. With the teaser newspaper, readers regularly receive news stories on their mobile handset by push service – sometimes several times per day.
- The Los Angeles Times went even further with its web strategy, having discontinued its national print edition in favour of its online version back at the end of 2005.

ICT is gaining significance for newspapers. The newspapers welcoming innovation with wide open arms should manage to curb the loss of attractiveness attributable to the internet with supplementary multimedia offers boasting the quality inherent in their brand.

<sup>6</sup> Kaiser, Ulrich and Hans Christian Kongsted (2005). Do Magazines’ “Companion Websites” Cannibalize the Demand for the Print Version? ZEW Discussion Paper 05-49. Mannheim; the authors deliver arguments derived from empirical testing which support the complementary relationship between print and online editions.

**Information and communication technologies complement business model of radio broadcasters****Radio complements its business without revolutionising it**

Radio broadcasters also want to use constantly updated websites with links to their current programmes (web radio) and podcasts to raise the satisfaction of customers and attract their attention worldwide. Listeners typically make passive use of radio, for a particular mood in the background. With this situation not requiring interaction with users, innovative ICT will complement the business model of radio broadcasters but not completely revolutionise it.

**TV broadcasters seeking closer contact with viewers****TV offering interactive and personalised programming**

Above and beyond the complementary offers from newspapers and radio stations the TV business additionally benefits from special interactive and personalised programming. With this new content the TV broadcasters are seeking to tailor their programming to the changes in their viewers' needs: having the choice of dozens of linear broadcasts alone will not satisfy the modern viewer. Instead of settling for the role of passive consumer, the active recipients will want to compile their own personalised programmes from digitised content and watch them when they please regardless of the actual broadcast times.

**Personalisation also harbours risks**

At present, viewers mainly focus on the advantages in personalisation. Being able to skip over commercial messages, which are considered annoying, is particularly interesting. While these advantages of personalisation are clearly obvious, the disadvantages – particularly as regards data protection – tend to be ignored. Personalised media consumption harbours the risk that detailed confidential data of each and every viewer may be misused by unauthorised third parties.

**Alternative forms ousting rigid advertising block****TV stations are restructuring their business models**

The idea of personalised TV without any prime time or advertising blocks undermines the financing of conventional TV. Owing to the innovations of ICT, the media industry will turn away from the concept of advertising blocks in the medium term. Alternative advertising forms, such as split screens (programme and commercial shown simultaneously), crawl messages (advertisement scrolled across the bottom of the screen), branded entertainment (advertisement integrated into programme introduction) and website referrals for context-sensitive advertising, are being upgraded and refined. This means that digitisation will not crowd out TV advertising per se. However, digital technology will ensure that advertising undergoes a fundamental transition. During this phase, advertising revenues will feel the squeeze – with broadcasters that fail to find an adequate response even facing substantial declines.

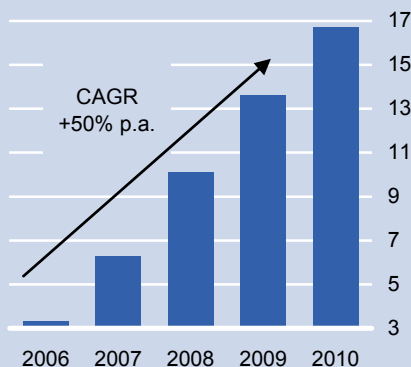
**Concrete plans to encrypt digital TV signals**

Given the decline in advertising revenues, the private-sector broadcasters currently offering free TV have started to consider additional distribution channels (e.g. an intensively advertised website, podcast or mobile TV) as well as pay-per-view programming. The plans to encrypt broadcasts of currently free programming for certain transmission channels are already very concrete. During the introductory phase, broadcasters in Germany in particular will have to reckon with substantial acceptance problems since German audiences have from the outset always been used to having free TV. The announcements from private broadcasters of plans to encrypt digital satellite signals starting in 2007 are merely harbingers of the fundamental restructuring of TV programming that is still to come. In the foreseeable future, the



### Web TV attracting more viewers

Western European households with an IPTV subscription, million



Source: Gartner, 2006

8

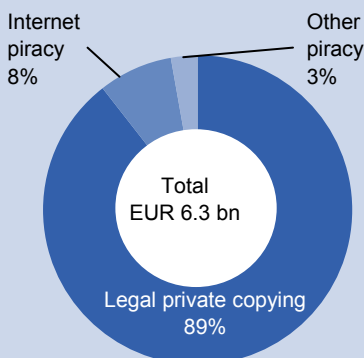
expansion of pay-TV programming will offer the telecommunications and cable TV operators new content in the triple-play model (Figure 8).<sup>7</sup> Additionally, as other TV broadcasters enter the scene, competition for market share in Germany's pay-TV segment will intensify even more.

### Public TV broadcasters gearing themselves to market-based criteria

The reshaping of the TV landscape is also affecting the public broadcasters. In the multimedia world of omnipresent information the public broadcasters justify their existence today not so much by providing a basic service as by offering the variety of journalistically sound, high-quality programmes that viewers need. Sparking considerable controversy, the German authorities plan to charge a licence fee for internet-enabled PCs from 2007, showing for one thing that this form of financing continues to be desired politically. For another, the dispute over the introduction of such a fee offers various associations a platform for calling on public broadcasters to become more business-minded. In this competition for viewers, the public broadcasters are by no means fighting a losing battle. With the flood of information rising, the public corporations are counting on creating a brand that stands for credibility and reliability. This premium strategy should help them to shore up their market shares. In the best of cases, they could hope to generate new advertising revenues by appealing to specific target groups in affluent segments of the viewing audience.

### One in ten copies is illegal

Lost revenue in the German music industry due to illegal copying, 2005



Source: BV Phono, 2006

9

### Piracy is widespread in the digital world

With digitisation, the problem of illegal copying of media content rises exponentially. The International Federation of the Phonographic Industry (ifpi) estimates that the music industry loses more than 35% of its sales worldwide owing to piracy. In 2005 alone, the German music industry suffered damage to the tune of EUR 670 m on account of the various illegal forms of copying (Figure 9). The *Gesellschaft zur Verfolgung von Urheberrechtsverletzungen (GVU)*, a company that tracks down copyright infringements, says that the number of illegal film copies in Germany jumped by 16% yoy in 2005, with piracy having become widespread around the world and now anything but a youthful misdemeanour. By 2005, 1.7 million Germans (roughly +30% yoy) had downloaded films illegally from the internet. The number of those over 50 who copy films illegally was thus up over 1.8 times on the year-earlier figure.

Considering the scale of piracy the media industry is urgently seeking new methods to protect digital content rights (catchphrase: Digital Rights Management, DRM) and new business models. These should use innovative distribution channels and price systems. Business models that make their contract terms and conditions increasingly opaque and thus allow unknowing recipients of private copies to commit crimes should be rejected.

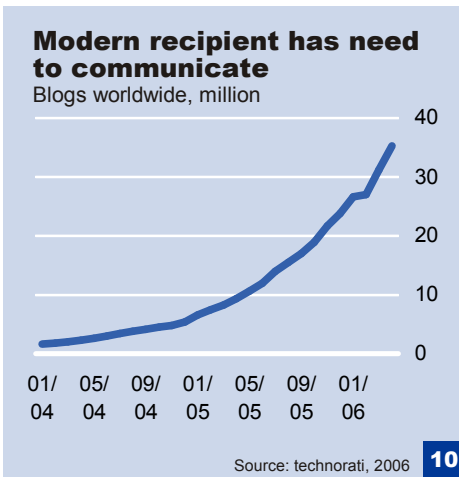
### Web rings in new era of media history

With innovative ICT, interactive and personalised programming are making inroads into the TV business. However, interaction and personalisation will not be confined to that conventional mass medium TV, but rather will find their ideal environment on the web. Researchers such as Norbert Bolz<sup>8</sup> see a new era of media history unfolding on the horizon here. They say that following the transition from oral to written communication, being the first era, and the

<sup>7</sup> See Stobbe, Antje and Tobias Just (2006). IT, telecoms & New Media: The dawn of technological convergence. Deutsche Bank Research, E-economics No. 56, Frankfurt am Main.

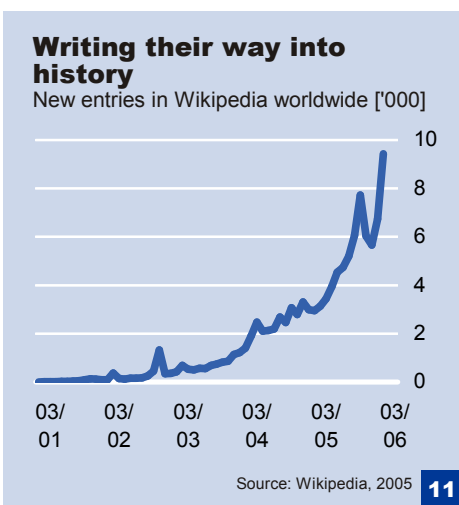
<sup>8</sup> See Bolz, Norbert (2002). Das konsumistische Manifest. Munich.





spread of mass media, being the second, the so-called Web 2.0 now heralds the third era of media history.

The developing Web 2.0 represents a first in that there are no longer only professional editors who, thanks solely to capital-intensive infrastructure, impart mass information to passive readers, listeners and viewers. Instead, the “communication apparatus in public life [that knows how] to let [the recipient] speak” described in Brecht’s “Theory of Media“ is materialising on the Web 2.0.<sup>9</sup> On the Web 2.0, the opinion of the masses is gaining significance relative to the well-founded information usually expected of journalism. The Web 2.0 offers recipients a platform for taking part in discussions, imparting information and shaping events. This suggests that many recipients are exchanging knowledge and opinions in web forums, such as online diaries (blogs)<sup>10</sup> or online libraries (wikis) – often with little regard for copyright (Figures 10 and 11).



#### Web 2.0: What does it really mean?

Even though there are masses of recipients, the Web 2.0 is not a mass medium in the traditional sense. The Web 2.0 lacks the uniform underlying structure needed for this. As a result of this diffuse structure all attempts to define the Web 2.0 become entangled in IT abbreviations (e.g. Atom, AJAX, API, RSS, SVG, XML, XUL) and visionary consultant-speak (e.g. prosumer, mini-preneur, generation tekki 2.0, collective intelligence, user generated content, citizen journalism, wisdom of the masses and ecocast). For unlike the Web 1.0, the Web 2.0 does not represent a basic technical innovation. With offers such as Blogger.com, Del.icio.us, facebook, Flickr, GarageBand, Habbo-Hotel, MySpace, LinkedIn, Spoke, Open BC, Studylounge, YouTube, Wer-weiss-was and Wikipedia, the Web 2.0 merely documents the realisation that the internet was never just a digital market place but always a social forum for exchanging opinions and knowledge.

#### Editorial desks obtaining latest information over the web

#### Conventional media taking interest in the new segment

Web 2.0 visionaries paint a picture of decentralised peer-to-peer networks in which the dividing line between media consumer and media maker is becoming blurred. Accordingly, the interest of the conventional media in Web 2.0 projects is immense. The signs heralding these fundamental changes are already materialising:

- The conventional media are increasingly relying on information from the web for their everyday operations. Journalists are conducting research and discussions in blogs. A photo platform called Flickr has also long been on the radar of the editing profession in the mass media. The founders of Flickr laud their platform as being the “eyes of the world” and promise to deliver more up-to-date pictures of major events and disasters than news agencies worldwide. In connection with the tsunami disaster in Southeast Asia, the pounding of the US coast by Hurricane Katrina in the Gulf of Mexico, the terrorist attacks in London and the student protests in Paris, Flickr showed it could deliver on its ambitious promise.
- Media tycoons are making headlines by paying millions for social networking platforms and search engines on the Web 2.0. The Web 2.0 projects are able to command such high purchase prices for strategic reasons. It is hard to justify these prices by the income generated today. Because of the recipients’

#### Conventional media buying space in Web 2.0

<sup>9</sup> Brecht, Bertholt, op. cit.

<sup>10</sup> See Stobbe, Antje and Claudia Jüch (2005). Blogs: The new magic formula for corporate communications? Deutsche Bank Research. E-economics No. 53. Frankfurt am Main.



reluctance to pay for the content of “citizen journalism”, the bulk of income still comes mainly from context-sensitive advertising. The purchases by the conventional media groups are aimed at helping them reach out to new customer groups and secure a base in the rapidly growing web-based segment.

### **Information overkill raises credibility to status of key selling proposition**

The conventional media groups know they have to tune in to the burgeoning Web 2.0 at an early stage and in various ways if they want to be able to play a decisive role on the journalistic front going forward. For given the flood of information, credibility and reliability can in most cases now only be assessed by looking at the number of hits offered by a search engine – similar to the “ask the audience” lifeline of a well-known TV game show. In the information overkill of the Web 2.0 well-known brands that stand for scale and credibility will attract more recipients and make the network of “citizen journalism” even more attractive. Via this network effect the Web 2.0 will also tend – no less than the conventional media industry – to become a highly concentrated market.

### **Conclusion: Technological advances bringing media industry closer to users**

### **Interactive and personalised programming conquer the media**

The development of the media industry hinges partly on structural factors, such as political intervention and technological advances, but partly also on special effects, such as heavily advertised major events. Information and communication technologies are thus leading to an upheaval in the media industry. Supra-regional newspapers along with radio and TV broadcasters in particular are using the technologies to improve their contacts with readers, listeners and viewers via complementary offers. Digital technology is changing the conventional media model in which information flows exclusively from a media institution to passive media consumers. The media mix will become more varied. Interactive and personalised elements will gain a foothold in the mass media.

### **Alternative forms of advertising on the advance**

The assertion that personalisation will crowd out advertising is wrong. However, personalisation will ensure that the form of advertising undergoes a fundamental transition. The risk of a decline in advertising revenues also compels private-sector broadcasters currently offering viewers free TV to consider additional distribution channels and pay-per-view programming. During the introductory phase, German broadcasters in particular will have to reckon with acceptance problems since German audiences are used to having virtually only free TV.

### **Major involvement of conventional media in Web 2.0**

Interaction and personalisation will not be confined to the conventional (mass) media, though, but rather will find their ideal milieu on the web. In the dynamic media industry expanded by the Web 2.0 the companies will be compelled to address the opinions and needs of their recipients directly. However, in the overkill of information on the Web 2.0 a decisive role will be played – to an even greater extent than in conventional media segments – by the existence of brands that exude scale and credibility. Owing to this pronounced network effect the Web 2.0 has long become a strategic battleground for conventional media groups. As a result, we will continue to see a media industry with influential players that shape public opinion going forward.

Stefan Heng (+49 69 910-31774, stefan.heng@db.com)



# Current Issues

ISSN 1612-314X

Available faster by e-mail:  
marketing.dbr@db.com

- US house prices declining: Is Europe next?..... October 11, 2006
- Asia 2006 - What would Mark Twain's take be?..... October 4, 2006
- Steel market in India: Companies set for expansion ..... September 27, 2006
- Japan 2020 - the decline in trend growth is home-made:  
Falling labour input and sluggish opening slow growth ..... September 26, 2006
- Technology boosts trade boosts migration  
On the interplay of three key globalisation phenomena ..... September 26, 2006
- Measures of well-being – There is more to it than GDP..... September 8, 2006
- Sailing in calmer waters  
The prospects for domestic bond markets in Latin America..... August 31, 2006
- German retail property: Opportunities despite oversupply ..... August 23, 2006
- The future of the hub strategy in the air transport industry..... August 18, 2006
- Technological progress in the household sector  
An approach to explain the post-war baby boom  
Demography Special..... August 16, 2006
- Global champions in waiting  
Perspectives on China's overseas direct investment  
China Special..... August 4, 2006
- China's commodity hunger – Implications for Africa and Latin America  
China Special..... June 13, 2006
- Health policy in Germany: Health reforms need a dose of market medicine  
More growth for Germany..... June 13, 2006

All our publications can be accessed, free of charge, on our website [www.dbresearch.com](http://www.dbresearch.com)  
You can also register there to receive our publications regularly by e-mail.

## Ordering address for the print version:

Deutsche Bank Research  
Marketing  
60262 Frankfurt am Main  
Fax: +49 69 910-31877  
E-mail: [marketing.dbr@db.com](mailto:marketing.dbr@db.com)

Media industry facing biggest upheaval since Gutenberg, No. 59 .....	October 12, 2006
Venture capital in Europe - Spice for European economies, No. 60 .....	October 2, 2006
Offshoring to new shores: Nearshoring to Central and Eastern Europe, No. 58 .....	August 14, 2006
UMTS broadband mobile technology rolled out: Confounding many expectations, No. 57 .....	June 13, 2006
IT, telecoms & New Media: The dawn of technological convergence, No. 56 .....	May 2, 2006
RFID chips: Future technology on everyone's lips, No. 55 .....	February 20, 2006
Broadband: Europe needs more than DSL, No. 54 .....	August 30, 2005
Blogs: The new magic formula for corporate communications? No. 53 .....	August 22, 2005
Offshoring Report 2005 – Ready for take-off, No. 52 .....	July 7, 2005
E-government in Germany: Much achieved – still much to do! No. 51 .....	June 8, 2005

All our publications can be accessed, free of charge, on our website [www.dbresearch.com](http://www.dbresearch.com)  
You can also register there to receive our publications regularly by e-mail.

**Ordering address for the print version:**

Deutsche Bank Research  
Marketing  
60262 Frankfurt am Main  
Fax: +49 69 910-31877  
E-mail: [marketing.dbr@db.com](mailto:marketing.dbr@db.com)

© Copyright 2006. Deutsche Bank AG, DB Research, D-60262 Frankfurt am Main, Germany. All rights reserved. When quoting please cite "Deutsche Bank Research".

The above information does not constitute the provision of investment advice. Any views expressed reflect the current views of the author, which do not necessarily correspond to the opinions of Deutsche Bank AG or its affiliates. Opinions expressed may change without notice. Opinions expressed may differ from views set out in other documents, including research, published by Deutsche Bank. The above information is provided for informational purposes only and without any obligation, whether contractual or otherwise. No warranty or representation is made as to the correctness, completeness and accuracy of the information given or the assessments made.

In the United States this information is approved and/or distributed by Deutsche Bank Securities Inc., a member of the NYSE, the NASD, NFA and SIPC. In Germany this information is approved and/or communicated by Deutsche Bank AG Frankfurt, authorised by Bundesanstalt für Finanzdienstleistungsaufsicht. In the United Kingdom this information is approved and/or communicated by Deutsche Bank AG London, a member of the London Stock Exchange regulated by the Financial Services Authority for the conduct of investment business in the UK. This information is distributed in Hong Kong by Deutsche Bank AG, Hong Kong Branch, in Korea by Deutsche Securities Korea Co. and in Singapore by Deutsche Bank AG, Singapore Branch. In Japan this information is approved and/or distributed by Deutsche Securities Limited, Tokyo Branch. In Australia, retail clients should obtain a copy of a Product Disclosure Statement (PDS) relating to any financial product referred to in this report and consider the PDS before making any decision about whether to acquire the product.

Printed by: HST Offsetdruck Schadt & Tetzlaff GbR, Dieburg