CONVERGENCE – INNOVATION AND CHANGE OF MARKET STRUCTURES BETWEEN TELEVISION AND ONLINE SERVICES

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ABSTRACT AND INTRODUCTION

Convergence is an often used but rarely defined concept. Ideas such as the creation of synergies, disappearance of industry boundaries, integration, or overlapping of markets, are all used to describe this phenomenon. Where is convergence occurring and what effects has this phenomenon for the industries involved? We give an overview of the current competition and changes in the television and online services industries where important technological, customer-focused and corporate innovations are moving them "closer together". We define "convergence" in a strategic management context by distinguishing the dimensions of convergence and analyzing the implications for the industry structure. Does convergence mean the need for closer cooperation between industries or does it imply substitution of products or services? Dealing with altered industry structures through mutual innovation, traditional frameworks have to be reevaluated and will be modified or extended in order to give direction for an adequate strategy.

COMPETITION IN THE TELEVISION AND ONLINE SERVICES INDUSTRIES

THE TELEVISION INDUSTRY IS BECOMING LESS ATTRACTIVE

The introduction of 'private' television in Germany in the 1980s and the upcoming special interest channels in recent years have lead to the development of a highly dynamic market with increasing rivalry among competitors. The threat of substitutes is high and increasing. There are actually three different market segments to be distinguished: public television, Free-TV and Pay-TV. These markets have a mutually high substitutive power in terms of viewing time and limiting potential viewers for the other segments. If the public or Free-TV stations gain an audience with more attractive programs, the consequences might be diminished income for Pay TV broadcasters. The audience might not be willing to pay the subscription fees given almost equally attractive offers – a zero sum game with direct impact on the advertising revenues rated in cost per thousand contacts (CPM). Online Services and the Internet are slowly becoming substitutes as users are watching less TV even in prime time. With TV the threat of market entry is low and decreasing, the barriers of entry are numerous and high. Bargaining power of suppliers is increasingly high due to limited program supply and exploding production costs from film production corporations, film distribution companies and TV production firms. Price increases are directly passed on the TV stations. Some media companies are therefore integrating backwards. Bargaining power of buyers is high as the average TV viewing time is stagnating. Advertising budgets are limited and stagnating while there is overcapacity of advertising space and alternative forms of advertising (e.g. promotions or event marketing) are competing heavily with TV advertising for shares of the overall media budgets. Opportunities to innovate are highly limited by innovations in consumer electronics, considering the fact that TV sets have a relatively long product life cycle of 8 to 12 years. As a Consequence, over the last few years the TV industry has become increasingly unattractive. The big players are attempting to change the market structure. The introduction of digital TV was seen as an opportunity to break the old marketing systems of TV stations if the innovating company would be able to establish a quasi monopoly in the sense of Schumpeter. TV programmers are also attempting to reduce the bargaining power of advertising agencies through new marketing concepts and the expansion of services. TV stations are even entering into Online services with television-related content in search for other revenue streams.

THE ONLINE SERVICES INDUSTRY FACES SOME BARRIERS TO GROWTH

Proprietary Online Services such as America Online (AOL) or T-Online as well as WWW-based Services like Yahoo are still in a comfortable position of growing market volume. Although, the threat of market entry is farely high as there are only moderate barriers to new entrants, e.g. creating websites is not a question of high capital investment. The threat of substitutes is low because of the unique and innovative functions of the new online medium. Suppliers' power is relatively high due to limited availability of premium attractive content, the influence of online users is increasing due to high price sensitivity. Overall rivalry among competitors is increasing, profitability of the business is often absent (at least in Germany) and thus a concentration of providers is likely as illustrated by the acquisition of Compuserve by AOL. Although still heavily acquiring new customers, the online service providers are facing an important barrier to growth: using a personal computer is still too complex for large portions of the mass media consumers and the penetration rate of PC will be more and more difficult to increase. This leads to the consideration of alternative devices for online access as well as more entertainment and general interest-like content presentations. Opportunities to innovate are frequently provided as the PC and software product life cycles are very short.

NEW CONCEPTS BETWEEN TV AND ONLINE SERVICES

From the perspective of online services, interactive television seems to be an incremental innovation that takes the form of broad band online services whereas from the perspective of the TV industry, online services were initially seen as a test market for interactive TV. Examples of new concepts are set-top boxes providing access to the Internet via TV, PCs integrated into TV-sets or "Inter-Cast"-technology transmitting the TV signal with additional information into the PC. Another example is plug-in-software for streaming video (e.g. "Real Video") on request from the internet or "Web-Casting"-technology pushing personalized content to online users via built-in channels in the latest browsers or screen-savers. Digital TV primarily means TV with digital technology but together with a back-channel further levels of interactive use become possible (e.g. video-on-demand, online services, video conferencing).

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Figure 1 illustrates fundamental innovation paths from the perspectives of TV stations and online service providers: Target groups can vary in terms of their homogeneous interest or the hardware platform (device) they use; the concept of media services vary in terms of the hardware platform used or the level of interactivity (variation of push versus pull elements). At this point it is necessary to make a clear distinction between these hybrid forms of products or services whether they only transfer existing functions from one to another media platform or whether they add new functionality through the combination of both media services. By adding a TV receiver card to a personal computer the broadcasting service is simply delivered through another platform. The emergence of push concepts within online applications in contrast is changing – at least partly – the logic of the medium.

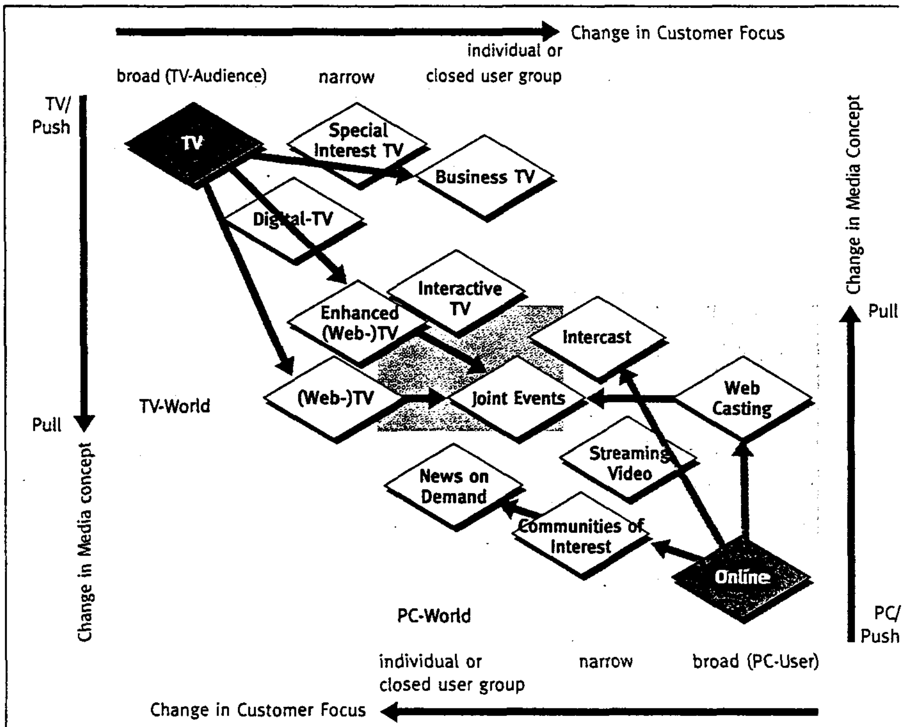

Figure 1 Innovation Paths between Television and Online Services

"WebTV" is a technology and an online service that started displaying websites on the TV-screen via a set-top-box. The concept was changed in its second version by introducing the additional functionality of "TV-crossover-links" enabling viewers to switch from the TV program to related websites for background information on the program or a product advertised in a commercial. Also AOL is expected to develop a WebTV-like solution with some technology partners.

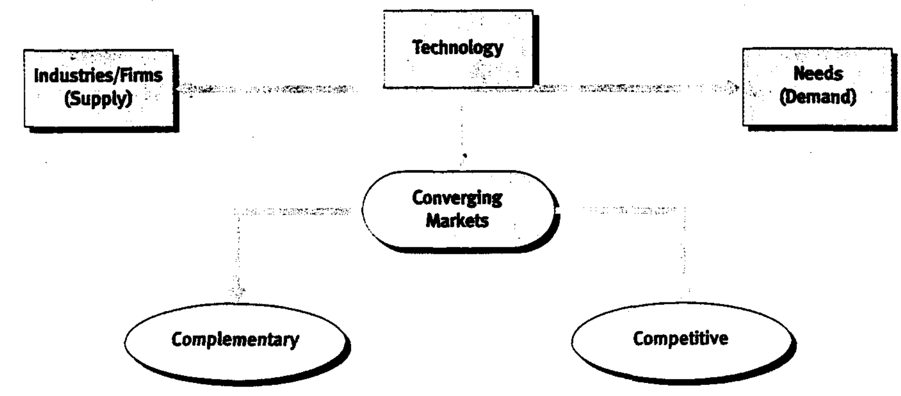

Figure 2
Dimension and Basic forms of Convergence

INNOVATIONS IN DIGITAL MEDIA AND DIMENSIONS OF CONVERGENCE

The numerous innovations that could lead to "convergence" between TV and Online services occur in various dimensions that need to be clearly distinguished in order to better define the concept of convergence:

THE TECHNOLOGY DIMENSION

... refers to the diffusion of technological innovations into various industries. The growing integration of functions into formerly separate products or services or the emergence of hybrid products with new functions is enabled primarily through digitalization and data compression. Different technologies for the combination of television and online services have been developed yet as illustrated above. Emphasizing the aspect of technological change Yoffie (Yoffie 1997) defines "... convergence as the unification of functions – the coming together of previously distinct products which employ digital technologies. (...) Firms (...) can bring together competencies through bundling their products in adjacent markets."

THE NEEDS DIMENSION

... refers to this functional basis of convergence: functions fulfill needs of customers which can also merge and develop from different areas. This depends of course on the customers willingness to accept new forms of need fulfillment or new products to fulfill old needs. When effective buying power creates a significant market demand for integrated functions then boundaries are likely to be dissolved between different consumer groups. "There is no reason to believe that convergence will take place simply because two functions can be merged into a single device" (Grant; Shamp 1997). TV with a coverage of more than 90% of the population is still the most important medium for users and advertisers. The needs of media consumers will remain stable in the short term due to an existing knowledge gap and the nature of latent needs that will be explored and adressed only in the long run. But, the diffusion of PC's both as a tool for work and entertainment may lead to the blurring of boundaries between business and private applications. New micro-marketing and service concepts are developed in perception of converging needs – e.g. narrowcasting Special-Interest TV or topic related online services creating niches like virtual communities or newsgroups, which are supposed to increase consumers' willingness to pay as well as creating more effective advertising with less spillover that should generate higher CPM or advertising revenues.

THE INDUSTRY AND FIRM DIMENSION

... refers to relevant industry variables that affect convergence (see also OECD 1992). Market barriers to convergence include industry cultures and traditions, regulation and antitrust-legislation prohibiting the creation of alliances, mergers & acquisitions, etc. Deregulation often leads to a removal of artificial barriers that then promotes industry convergence. Firm specific barriers to convergence include

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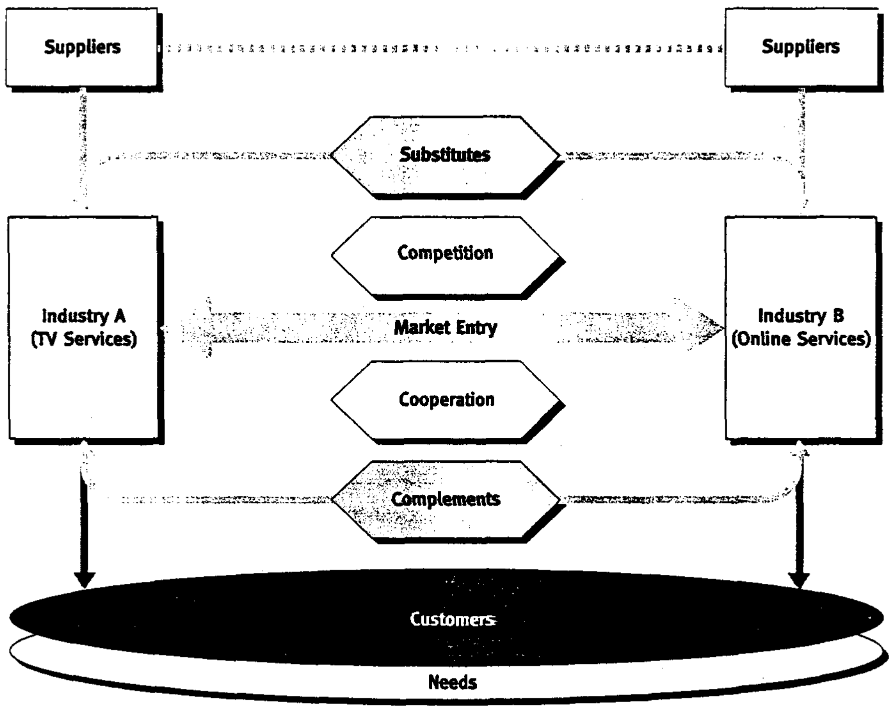

Figure 3 Analysis of Converging Industries with Customer Focus.

differences in company cultures and core competencies. Different activities along or across traditionally separated value chains may be merged by "management creativity" such as the creation of new businesses, acquisition or the constitution of strategic alliances and networks. As companies offering substantial components of the digital media market are historically players from different industries, their specific skills and technologies are combined in a cross-industry value chain which may lead to certain patterns of cross-industry cooperation or market entry. One focus of recent alliances in the U.S. has been the combination of telecommunication carriers and cable TV networks (e.g. AT&T-TCI), software companies and media firms (e.g. Microsoft-NBC) or network owners and media groups (e.g. MCI-NewsCorp.). Some authors suggest that there is a transformation of three vertical industries (media, telecommunication and information technology) into five overall horizontal segments of the emerging multimedia value chain: Content, Packaging, Processing, Trasmission and Devices (Bane; Bradley; Collis 1997).

BASIC FORMS OF CONVERGENCE

From the analysis of the multiple dimensions it is possible to define two basic forms of convergence that Greenstein and Khanna (Greenstein; Khanna 1997) recognized as substitutes and complements.

COMPETITIVE CONVERGENCE (1+1=1)

... as a "Substitutes Paradigm" occurs when products or services become interchangeable one for another to fulfill a set of certain user needs through bundling of functions. When these are provided from two different industries we can define convergence as a new single industry emerging (1+1=1) – often referred to as "blurring of boundaries" or "industry collision". Such convergence is not only based on the technological dimension but often followed by merger or acquisition of firms from the separate industries. However, substitution occurs when the price-performance ratio of the substitute for the same function is higher so we refer to competitive convergence occurring when the substitute takes over 50 % and more share of the market demand for a particular function.

COMPLEMENTARY CONVERGENCE (1+1=3)

... as a "Cooperative Paradigm" occurs when products or services from different industries are merged to meet a larger or new set of consumer needs simultaneously. In this sense, a new market emerges (1+1=3) that requires combination of resources and competencies from previously separate industries, e.g. through strategic alliances and other forms of cooperation, providing new functionality. It is not simply diversification of firms, technological innovation is often the key dimension in this type of convergence. Key criteria is faster growth of the shared additional market for combined complementary products or services than in the continued separate industries. The dimensions and basic forms of convergence leads us to the overall proposed definition:
Convergence describes a process change in industry structures that combines markets through technological and economic dimensions to meet merging consumer needs. It occurs either through competitive substitution or through the complementary merging of products or services or both at once.

INDUSTRY STRUCTURE IN CONVERGING MARKETS

The attractiveness or profitability of an industry is heavily determined by five competitive forces (Porter 1980) including the rivalry between existing competitors. This model may help to structure the complexity by using a functional definition of the industry boundaries when analyzing the threat of substitutes and likelihood of market entry. The aspects presented above suggest that the focal point should be the customer with his or her needs (see figure 3). From that perspective the structure of the industry and the relationships implied can be analyzed depending on whether competitive or complementary convergence is occurring.

Digital media services serve two different types of customers with different needs. Viewers or subscribers are interested in information and entertainment, advertisers are buying contact to broad or specific groups of media consumers. often seeking a feedback or a communication mechanism to consumers. The Free-TV business' main product is advertising contact and consumers are paying indirectly through receiving commercials. Online services have traditionally been sold through subscriptions (as Pay-TV channels) but increasingly forms of online advertising are tending to change this business model. The needs of both customer groups could conceivably be met through mixed models by bundling existing services or developing new ones. Internet service providers with personalized portal sites to the internet or services as "WebTV" have some of these attributes. Suppliers to converging industries can often increase their bargaining power as their services become important for meeting new customers' needs. The creative potential in the content providers' areas are increasingly demanded by both TV and online service providers. As two industries converge there is a threat of substitution as both services are increasingly competing for advertising services and budgets. Already some online services reach usage rates of relatively well viewed TV programs and their CPM is rated even higher than those of TV stations. Online services are seen primarily as complementary to TV programs, which can gauge viewer reactions and tie customers closer to their programs. Website addresses shown in TV programs can significantly drive online traffic and give advantage to cross-media provision. Complementary services may have a positive influence on rivalry and improve industry profitability. Adequately, depending on the type of convergence, different forms of new entries emerge. Firms with new technologies may seek to enter and take over existing markets (e.g. Microsoft's failed attempt to conquer the online services market by bundling its MSN service with Windows'95). In the other case, new entrants are interested in cooperating with current firms offering complementary products (e.g. Microsoft and NBC together created MSNBC). When competitive convergence is the dominating paradigm, the number of competitors in the relevant market increases rivalry. Complementary convergence tends to lessen rivalry, and in extreme cases it may cease as it was anticipated by the European Commission for the German digital Pay-TV market by rejecting the plans of the only two players Premiere and DF 1 to join forces. Finally, convergence also changes the basis for competitive advantage and firms must adapt their strategies depending on the dimensions, basic forms and degree of convergence.

Conclusion

Do we expect a convergence of those markets? Will online services offered by TV stations be able to boost the TV industry or will TV programming integrated into online services be able to increase radically their growth? A need convergence is only occurring on a limited basis yet; the functions and use of the two media are (at least for now) too different. "A merged television-computer would include a number of compromises that would diminish its ability to fully function as a television or a computer" (Grant; Shamp 1997). Therefore, competitive convergence is likely to be limited to a few niches, e.g. computer-oriented TV viewers or TV advertisers with PC users as target groups. Complementary convergence is likely to be increasingly observed where TV programs and online services are linked together. The further television is moving away from mass communication to more user specific communication the more important will be the fulfillment of customer needs in terms of service design and quality. This is currently not possible with standard Free-TV broadcasting. The further online services are moving to mass communication aspects the more limiting will be factors like the type of device, performance of delivery platform, pricing models (e.g. connection fees), and user convenience.

It is probable that innovation in these directions will take place soon in the online services industry.

The Three Commercial Functions of the Internet

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1 Introduction

The growth of the internet is exponential. (http://nw.com.) Current and potential customers can communicate at any one time from any location with a company that provides information online. Hence, it is necessary that the internet presence of a company is organized in a professional way, for it to build long term competitive advantage. The key to competitive advantage is an integrated marketing approach.

Due to the idiosyncratic combination of hypermedial possibilities of the internet and the WWW, the hypothesis can be set up, that it fulfils three primary functions combining the characteristics of a medium and a market in a time. The systemic integration of these medial characteristics are unique, i. e. other medias like radio or television do not possess it.

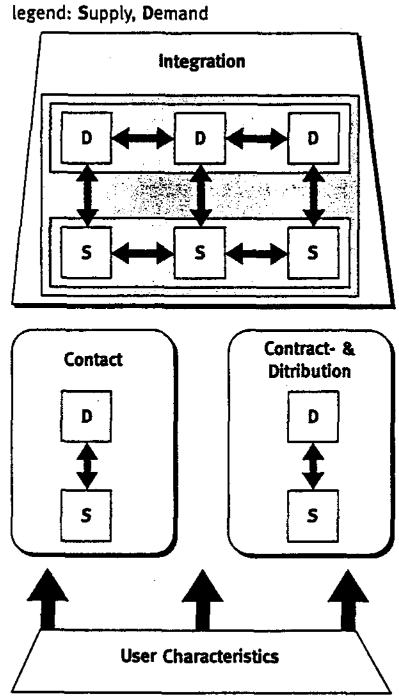

Exhibit 1
The three commercial functions of the internet