Competition Competence Report

Convergence of Media & ICT: The New Regulatory Approach

Digitalisation boots the **convergence of media and telecommunications** industries, resulting in a mixture of technology, content and lifestyle. The outcome is that traditional content providers like print publishers and television broadcasters start to compete with network operators from the telecommunications, cable and satellite industries. This **battle** is of particular interest for telecommunications providers who would like to participate in the development either via fixed network DSL connections or via mobile solutions.

In order to evaluate the dynamic industry developments, **major media market players** commissioned a study with EE&MC. Stakeholders of the study were the German federal media authorities (Landesmedienanstalten), ARCOR, Burda Verlag, HanseNet, Kabel Deutschland, Microsoft, Premiere, RTL, SES Astra, Telefónica, Vodafone and the German public broadcaster ZDF. The task of EE&MC was to carry out an **in-depth economic analysis and forecast** of the electronic media sector. The results of the study served as a starting point for an intense discussion on **future regulatory requirements**. The responsibility for the legal appraisals in the study was with Professor Holznagel (University of Münster) and Professor Dörr (University of Mainz). The study itself was coordinated by the Münchner Kreis - http://www.muenchner-kreis.de/ - represented by Professor Picot, University of Munich. The **736-pages study** on "Electronic Media - development and regulatory requirements" was published in 2008.

With respect to the economic analysis, EE&MC evaluated more than **750 studies** to shape a comprehensive picture on the future developments in all relevant markets of telecommunications, media and the Internet. In evaluating these developments, the focus of the analysis was always on

the consumer perspective. This approach corresponds to the methodology applied by EE&MC which is known as the ***more economics based approach***.

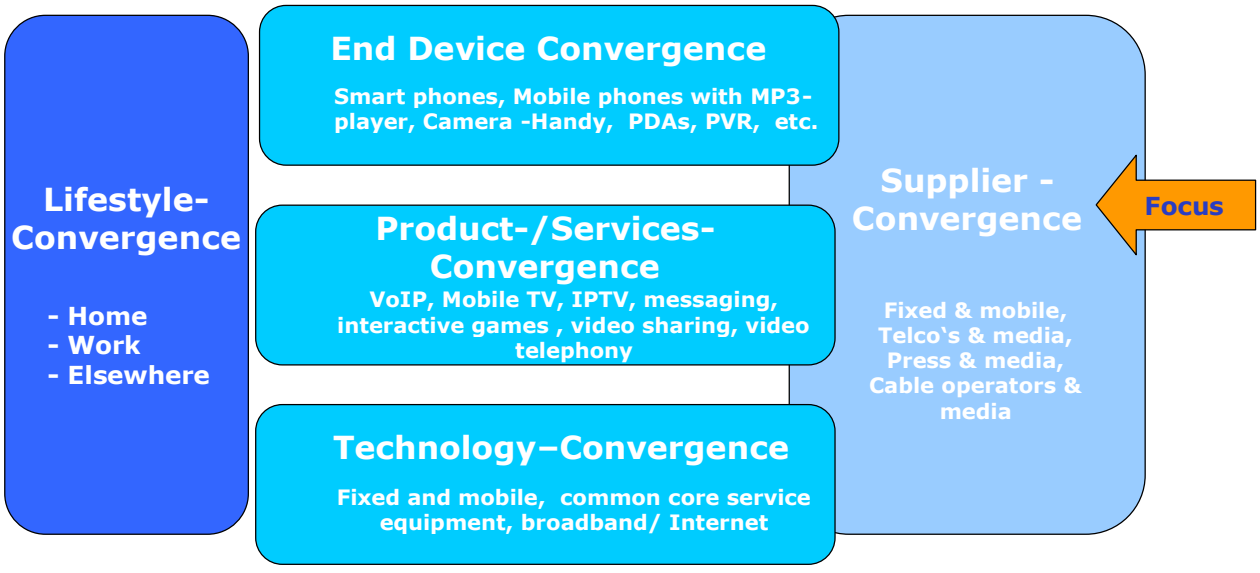
Commentators judge the media sector study unique in its type and quality.

Methodology of the Study

The methodology applied in the study is as follows: Based on the forecast of future consumer behaviour a few **scenarios** were developed - each of them featuring the concerns of the major market players in the new convergent industries. In addition, technology developments covering a time horizon of five years were assessed. The result of these analyses is that because of economic necessities all market players need to **adapt their business models**.

The following picture illustrates the different modes of convergence which were the basis for further analyses.

Modes of Convergence



Because of **consumers' lifestyle–convergence**, supplier-convergence will take place: The significant changes in consumer habits induce suppliers to adapt too in order to stay competitive. End device convergence, product & service convergence as well as technology convergence are just

means to enable consumers' lifestyle convergence. In the following, the main results of the EE&MC analyses are described.

- **Revolution in consumer behaviour**

Consumers will change their behaviour considerably. A significant part of their time budget will shift to the Internet. There are already numerous activities like banking, booking travel arrangements which are performed online. The **use of media content** over the Internet is the next ground-breaking change.

In the future, consumers will use a variety of media offerings independent from time and place. In addition, consumers will use their desired media services without having to change the device. From the users' perspective devices, products, services and technologies mingle. It is not longer important for users, on what technical standard or device the media performance is delivered. It is not relevant at all which kind of infrastructure is used to consume media services. What is important from the users' perspective is that their **needs are served in a comprehensive way** and that the media services correspond to their mobile and independent lifestyle.

- **Digitalization and Convergence: The two driving forces**

Digitalization enables consumers to be independent from end devices, infrastructures or certain technologies. Convergence can be understood as the visible result of the digitalization of media content. Convergence takes place because of standardization on the technical part as well as changed expectations and habits on the users' part.

These forces change our experience of media and the way we use media content completely: the individual user becomes addressable. In addition, digital transmission in a compact form transports a huge variety of programs and content. Costs are reduced and **choice for users increases.** The signal can be transmitted in high speed and in large quantities and can be received wherever and whenever the user demands it. The user can individually determine **what he uses, where he uses it, and when he uses it**. Platforms are of gaining importance too.

These two effects push each other forward. The result of convergence can be observed in various ways.

- **Different modes of convergence: Anytime and anywhere**

All types of electronic media can be used via different devices and technologies. **Various services via a multifunctional digital platform are available.** These developments change our lifestyle and evoke expectations on future products and services. The combination of functions on one device, as for example smartphones, is an expression of the convergence of devices. Transmission technologies, which were used separately so far (one might think of VoIP or mobile phones), converge too: **The world of infrastructures will never be the same.** Technology convergence finds consequently its expression in the combination of fixed and mobile telephony or broadband cable networks and the Internet. Content providers, access operators or distributors mingle in the function of one provider. This is understood as convergence of providers. Providers need to reconfigure their offerings.

- **Expression of convergence: New products, new platforms, new business models**

Driven by these vast technological developments it can be concluded that the Information Society has become a reality. **The future development is crammed with rapid technological changes which are transforming the information industries.** This development will lead to a complete and fast transformation of existing telecommunications, media and information technology services in such a way that the current separate groups of services will merge by substantially blurring the previously clear distinctions between them.

The convergence of lifestyle, services, technologies and devices will change product offerings. There will be new multifunctional devices, offering new services and new presentation formats such as interactive television which incorporates the audience and allows them to influence content. New business and distribution models will arise such as the distribution of films and television programs as **video on demand over the Internet** or **proprietary IPTV systems**. New platforms will come up that enlarge their already available product ranges to all types of digital content.

The advertising industry, which finances Free TV and publishers' offerings, will push convergence of providers further. Publishers will distribute their content online and (soon) via mobile phones.

These dynamics will move traditional media companies to a complete new dimension. They need to face the new structures in the market. The phenomenon is expressed by the business models of Google, Ebay, YouTube, Second Life or MySpace. These new models are freely accessible over the Internet. They partially use the content of traditional broadcasters and are independent of the type of network access. These new offerings require an **adjustment of the value-chain as well as the regulatory model**.

▪ Model for value chain and regulation

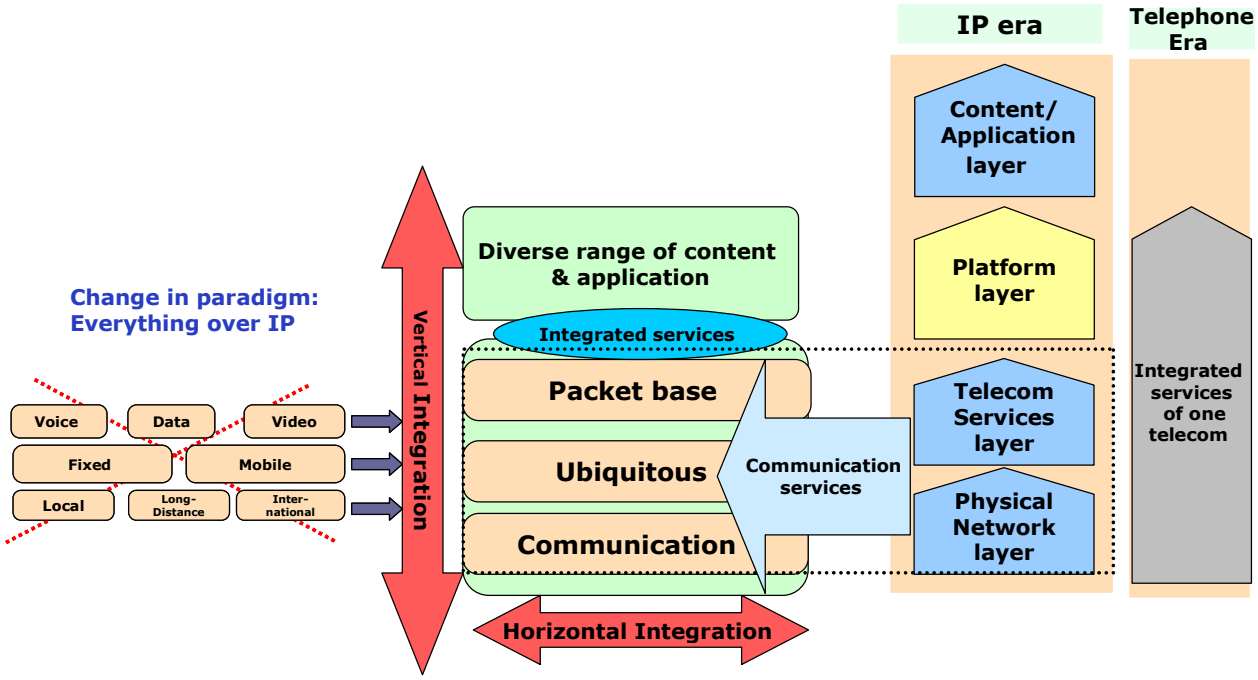
Because of these developments it becomes necessary to adapt the traditional approach. It is not adequate anymore to use a linear value chain to address the issues; convergence makes it a lot more complex. Therefore it is appropriate to use the model of **Business Webs**. A Business Web has a cyclic sequence, determined by formal and informal relationships between companies. There is a so called **"shaper"** in the centre of the Business Web, who defines and sets the standards and influences the system as a whole. The shaper controls the core and subsystems, in which the flow of information of the value-added-system comes together. The shaper determines by coordinating the other subsystems on a meta-level (for example, with the help of information on interface standards) the strategic development of the Business Web. Around the shaper, "**adapters"** can be found. These adapters are more or less dependent from the shaper. They can be distinguished by the degree of internalization between the shaper and adapters, and by the level of commitment.

A Business Web is accordingly defined by allocation of opportunities between the players and by partial delegation to sub-companies. The logic of production technology is within a Business Web characterized by reciprocity.

Due to the fact that the sequential value chain was not suitable anymore to mirror the convergence of media, EE&MC adapted the Business Web model in order to shape a new regulatory framework. The new system, the Business Web, consists of different interconnected, superimposed network levels or layers, in which various value-added activities are running at the same time.
Within the Business Web, companies produce independently from each other partial performances. **The shaper** is in the centre, the **adapters**, which add complementary products to the central platform are around it. In such a Business Web, the shaper is able to influence by small changes the parameters of the whole system.

These changes that go with the increase in convergence influence the way providers of content and infrastructure need to be treated in terms of regulation. **A new model for the regulatory approach was required.**

The change of the regulatory paradigm towards a layer model is a logical consequence. Technology developments favor such a layer model. In the future, the diverse range of contents and applications will be transmitted via the same infrastructure: **All networks will be IP-based.** The result of this convergence is a vertical and a horizontal integration towards a single layer. In the IP-era, the different services will be performed by different operators, but the product will be delivered as one system-product to the users. The following picture illustrates this new regulatory model.



Quelle: EE&MC

All data will be transmitted by using the same technology, IP. Regulation does not need to distinguish between different types of media or content either. Horizontal market integration will be the solution for previous critical issues: consumers receive integrated services. Competition will take place between integrated markets.

However this new era in regulation will need to be "**more sophisticated**". The focus of future regulatory measures will be on issues with respect to **vertical integration**. The accessibility of the network from the users' perspective will be in the centre of discussions too. The **last meter** to the customer will become the crucial point of regulation. Especially those market players which act as shapers on a certain layer need to be observed very closely.

In summary, it can be concluded that for the discussion of regulatory measures, the complexity of the new value-chain Business Web can be modelled in the four-layer model as illustrated above. The model is developed based on the results of convergence and serves as a basis for further discussions on the regulatory options. The EE&MC study features all the reliable options for necessary changes in the regulatory framework, which policymakers need to know. The options which are evaluated in the EE&MC study relate directly to the legal requirements of EU and German law. The discussion on these regulatory options is still ongoing.

Availability of the EE&MC study

During a major conference of the Münchner Kreis about 220 experts discussed the key findings of the study. The link to the presentations can be found at: http://www.muenchner-kreis.de/veranstaltungen/seit-2000/digitalisierung-und-konvergenz-der-medien.html. The book can be ordered with Beck: http://www.beck-shop.de/produktview.html?prodID=24828.