

# **Business Media: A New Approach to Overcome Current Problems of Electronic Commerce**

**Hans-Dieter Zimmermann**

Institute for Media and Communications Management  
University of St. Gallen

## **Abstract**

*The paper proposes a new perspective on value creation in the information age. At first there will be a brief analysis of the current developments in the field of Electronic Markets and Electronic Commerce. Then the fundamental shifts in value creation will be illustrated using the financial industry sector. At the end a new framework for Business Media will be introduced.*

## **The Challenges**

On the way into the information age the utilization of new information and communication technologies (ICT) is changing the way we communicate, organize our work and companies or do business in general. The significance of these developments is obvious, e.g., in financial markets. Since the emergence of the World Wide Web the topic of Electronic Commerce (EC) has become a big issue also in retail markets. In the following context Electronic Commerce will be understood very broadly: The utilization of ICT in order to support the processes of creating value added in an economical sense.

Analyzing the current situation we are observing different developments:

- An increasing utilization of networks and network services in businesses and households.
- Globalization of the business. The major driving force behind globalization is the ICT.
- Modularization of the economy [1]: Not only products will be de-composed, e.g., newspapers [8], but also companies will be divided increasingly into smaller organizational units concentrating on their core competencies. Virtual organizations and 'Net Enterprises' are emerging.
- Shift of power towards consumers due to open access to networks and information sources, e.g., in the financial industry [4].

The results of these developments are obvious: More and more smaller organizational units – companies as well as private households - all over the world are connected with each other utilizing open networks like the Internet. New and additional interfaces emerge requiring some form of mechanisms to coordinate the adjacent steps in the value creation process. These network-like structures provide a huge potential for creating new, 'reconfigured' value chains and 'value webs', business models and business processes.

Nevertheless, most of the effort nowadays is put into the support and rationalization of traditionally organized value chains and business processes with means of new ICT and especially the Internet, but following existing business models. One typical approach in this sense is to consider ICT to be only the means for additional sales, distribution and communication channels, while applying the present business model and thus without redesigning the underlying business processes and models.

Companies try to benefit from new technologies from a bottom-up and company-centric perspective. From the company's viewpoint this pragmatic approach is understandable. But as a result we are getting plenty of different EC applications and systems that are efficient and specialized, but are often proprietary, not compatible at all, and stand alone systems. Typical examples are electronic product catalogs or electronic payment systems. Thus the seamless settlement of electronic business transactions is not possible without manual intervention. This hinders a structured and prosperous development of Electronic Commerce and Electronic Markets and thus demands for a new approach.

## **A Case from the Financial Industry**

Especially in information intensive industries the fundamental changes of the basic business models can be described very clearly and convincingly [4]. Based on the developments described above one can watch a disintegration of traditional value chains very clearly. We will illustrate this analyzing the financial industry as an example for the necessary transformation of traditional business models. Other interesting cases to analyze this phenomenon are, for example, the music business [2] or publishing companies where traditional newspapers get more and more de-composed into their basic elements, which then can be re-configured in a different context [8].

Traditionally the retail banking business is founded on a long-term relationship between the bank and its customers. In Europe, a checking account constitutes the foundation for a business relationship. Even if the checking accounts are often not profitable they build the basis for all cross selling activities in sense of a 'one-stop-shopping' philosophy. The bank offers their product portfolio to its customers through available distribution channels, which are traditional counters, ATMs, and electronic

banking, all owned and operated by the bank. Consequently the customer relationship based on the checking account is a very important cornerstone for the business model in traditional retail banking.

In the future retail customers will be able to access all relevant financial data and services around the world from their home or office. They either use their Web browser, their personal financial management software, like MS Money or Intuit Quicken, or they even access the bank's information system through proprietary channels. This causes two different developments.

On the one hand the customers will get more 'power' because they will be able to access sources on their own which were not accessible for them before without an intervention by the customer's bank. For example, customers may take up a loan, do an investment, pay their bills, or buy stocks through direct channels utilizing the Internet. Customers gain more information transparency than they ever had before and they are no longer dependent on their bank to get necessary information or to obtain a service.

On the other hand customers will obviously suffer from the huge amount of data and information which will be available and which have to be analyzed and applied to the customer's own needs. Therefore new kinds of intermediaries will offer services assisting the customer to design the appropriate bundle of services concerning their respective needs [9].

These developments mean a reconstruction of the traditional value chains in the financial industry and require fundamental new business models.

### The New Approach of Business Media

To cope with these radical changes we propose a new view on the field of Electronic Commerce and Electronic Markets applying the new media concept as developed in [7]. Electronic Commerce platforms are considered as multi agent systems (MAS). Core of those MAS are media as spaces or platforms for exchange of information and goods. Therefore we introduce the term 'Business Media'. Referring to the new media concept Business Media are considered as platforms providing the means for the creation and exchange of values like goods and services between independent agents. This holistic approach brings together technological, communicational, business, and managerial issues [7]. Typical Business Media are Electronic Markets (EM) in the sense of open platforms, for example based on the Internet, or inter-organizational systems like Extranets. The main challenges within the field of Business Media are (1) to manage them and (2) to apply them in terms of setting up and realizing new kinds of business models [11].

### A Research Framework for Business Media

In order to support the analysis and redesign of current and the development of future Business Media we propose a framework that is specified in the following.

The basic model distinguishes on the vertical axis the three basic phases of a transaction: the information, agreement and settlement phase. On the horizontal axis we define four different views of Business Media: The community, process, transaction, and infrastructure view (see Figure 1). This basic setting is derived from the model described in [10].

The community view defines the relevant business community and its underlying, basic business model. Business communities are understood as a quantity of agents (e.g., people, organizations, computers). Rights and duties of agents are defined through the assignment of roles. The agents communicate with each other in a semantic space which reflects the common view of the participating agents. In business communities agents have economically motivated interests in common. Media constitute the space for an exchange of goods within the community. We therefore define Media for business communities as Business Media. The role of every agent determines the organizational structures of the respective medium. Protocols and rules are the basis for the model of coordination, for example, hierarchically or market-oriented, and therefore the design of processes. Thus the community view defines the basic business-, organization-, and communication models of a specific business community. The significance of communities for conducting business in general is described in [5].

The goal of the process view is to define the inter-organizational business procedures and processes along the value chain of the respective business community. These processes enable the business community to realize their defined business models.

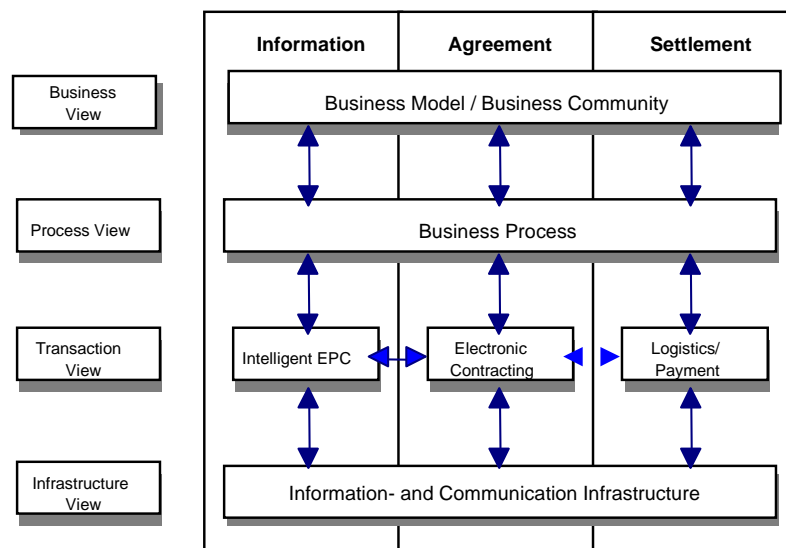


Figure 1. The Business Media Framework

Therefore in each phase of a transaction specialized processes have to be developed, e.g., for information gathering in the information phase, electronic contracting in the agreement phase, or the settlement of payments and logistic services in the settlement phase.

At the transaction view level generic services have to be defined that enable the realization of the defined business processes. The offered services shall support the different functions in the three distinguished phases. Examples are intelligent electronic product catalogs including search functions, services supporting the negotiation of contracts, logistic and payment systems to settle the transaction. Because the basic functions in each transaction are very much the same, at least on an abstract level, these services shall be designed generically. The overall goal is to enable a continuous settlement of business transactions without incompatible interfaces and to provide an infrastructure of services that is available to different business communities.

The infrastructure view defines the necessary network services and other technical components to realize the settlement of the transaction from a technical point of view. Examples are message handling-, EDI-, and clearing center services.

### **Conclusion**

As we have shown the prosperous growth of Electronic Commerce is hindered by applying traditional concepts in the new field of Electronic Markets. The analysis of the financial industry indicates very clearly that fundamental changes are emerging, at least in certain industries. Therefore we propose the new and holistic view of Business Media. In our understanding media are to be considered as spaces or platforms for the exchange of information and goods between different agents. Following this approach industries should be able to meet the requirements of future business challenges.

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