Chapter 121
Web 1.0, Web 2.0 and Web 3.0:
The Development of E-Business

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INTRODUCTION

Both, Web 1.0 and Web 2.0 were linked directly to new stages in the development of e-business. Whereas the distinction between Web 1.0 and Web 2.0 became widely accepted in literature and practice, we are merely at the beginning of the possibilities arising from current trends culminating in our information society. Information emerges increasingly as a major factor of production, allowing the activation of innovative business opportunities. However, over the past years, a sheer explosion of supplies has taken place. This development is both a blessing and a curse as it leads to an oversupply of information within the World Wide Web. Thus, the time needed for finding required information may take longer eventually. Therefore, a next generation technology is needed being capable to cope with these challenges. Due to the logic of this chain of ideas, Web 3.0 technologies are characterized particularly by demand-orientated systems, i.e. demand for objects and services are at the centre. Starting point are demand-driven registration and specification systems. The consumer is at the centre of these processes and will gain individual help, comparable to an information desk. Not only information but also individual products and services may be released (customized products).

Against the background of an increasing information overload, the question to be asked is how technological and market-oriented future developments will cope with these challenges. This paper aims at clarifying this overall development with the objective of giving impulses for the 3rd generation of e-business. For this purpose, the characteristics of each generation (Web 1.0, Web 2.0, and Web 3.0) are clearly highlighted.

BACKGROUND

Web 1.0: E-Procurement, E-Shop and E-Marketplace Systems

Web 1.0 is particularly characterized by supply-orientated systems, i.e. supply of objects and services is vital. Consequently, private or commercial suppliers try to use the internet as an additional distribution channel in order to provide products to the market using supply-orientated database systems as a starting point, yielding in three potential business opportunities:

E-Procurement-Systems

E-procurement enables the electronic purchasing of products and services from a company via digital networks using the integration of innovative information and communication technologies to support and conclude both operative and strategic tasks in the area of procurement. (Kollmann, 2006). As a matter of principle, e-procurement represents a collective term for electronically supported procurement. The basic idea of electronic procurement refers to the procurement-relevant activities between an entrepreneur (procurement-manager) and a distributor (vender).

E-Shop Systems

An e-shop is a company's virtual salesroom, allowing the electronic selling of products and services using digital networks. Thus, innovative information and communication technologies may be used supporting and concluding operative and strategic tasks for the buying process. (Kollmann, 2006). The increasing acceptance of electronic media by customers goes along with a rising supply of products and services being partially or exclusively distributed by "virtual shops" via the internet. The basic idea of electronic sale refers to the relationship and the sale-relevant activities between entrepreneurs (suppliers) and consum-

ers. Electronic sale consists of three fundamental aspects transferred from the actual sale (Choi et al., 1997): First, the shop owner himself aims at distributing products via the internet whereas traditionally, the seller is physically present in a shop. Second, contact merely takes place virtually, and selling from a customer's perspective is executed by the means of machine transactions. Finally, the product is either available in physical (e.g. computer) or in digital (e.g. software) form, which affects the buying process. If the product is available physically, the virtual sale will be combined with an actual distribution whereas digital products may be delivered electronically.

E-Marketplace Systems

An e-marketplace allows for electronic trade with products and/or services via digital networks (Pavlou & Gefen, 2005). Moreover, this represents the integration of innovative information and communication technologies to support and conclude, respectively, the matching process of supply and demand sides. (Kollmann, 2006). Whereas actual marketplaces are characterized by local circumstances (e.g. tradeshows or weekly farmers' markets), electronic marketplaces focus on the digital networking of their market participants (Kollmann, 2009b). Participants may electronically access any e-marketplace from any digital access point without actually being present at a particular place at a particular moment, since e-marketplaces are permanently accessible. Supplier and consumer do not meet personally to settle a transaction but conclude contracts via digital data paths. The e-marketplace concept refers to a digital meeting place in which suppliers and consumers are connected by the means of electronic data processing to close business transactions. The transaction itself is detached from actual restrictions such as location-based limitations and is facilitated by a higher market instance (market operator), who actively coordinates transaction requests (Kollmann, 2005).

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