Communities - Business Models and System Architectures: The Blueprint of MP3.com, Napster and Gnutella Revisited

Ulrike Lechner, Beat F. Schmid

mcm institute for Media and Communications Management, University of St.Gallen
Müller Friedberg Strasse 8, CH-9000 St.Gallen
Ulrike.Lechner@unisg.ch, Beat.Schmid@unisg.ch, mcm.unisg.ch, www.netacademy.org

Abstract. Information and communication technology opens up an unprecedented space of design options for the creation of economic value. The business model "community" and the role "community organizer" are determined to become pivotal in the digital economy. We argue that any online business model needs to take communities and community organizing in the design of communication and the system architecture into account.

Our discussion is guided by the media model [9]. We characterize the relation between a community and its medium and we analyze the role of communities in business models. We illustrate the means to organize communities with the cases (1) information services, (2) price mechanisms and (3) music sector online with MP3.com, Napster and Gnutella. We analyze the interdependence between business model and system architecture and explore the trend towards the business model "community".

Keywords. Business model, community, medium, system architecture, communication.

1. Motivation and Introduction

Information and communication technology is determined to renew the way economic value is being created. We observe that traditional business models are often not successful as the online implementations. We observe furthermore that only few novel and valid business models have been implemented by now online. Those successful models set themselves apart in their communication design leading to a deconstruction of traditional value chains and the emergence of value-webs [12,20]. The music sector online with MP3.com, Napster and Gnutella is a prominent example for successful implementations of novel business models.

We argue that information and communication technologies provide only the design options for communication. Various authors have pointed out that novel designs are needed. Rheingold [8] and Schubert [13] explore the communities that emerge online. The cluetrain manifesto suggests to consider online markets as communication within communities [5]. Hagel and Armstrong [2] analyze the economic impact of communities and the need for novel business models. Tapscott et al. [20,21] and Selz [15] explore the emerging value webs. [12] describes the need for a novel communication design and the proceeding digitalization of communities. Those authors lie their emphasis on social or economic issues.

We take a more holistic perspective. We consider communities as to be constituted by agents and a medium and we are interested in the interrelation between a business model and the system architecture that implements this business model. We argue that communication and information technology facilitates reverse markets, in which customers eventually have more information and power than producers and intermediaries. We argue that therefore any business model has to be designed first to meet the needs of consumers and second to acknowledge that superior role of customers. The community organizer structures and organizes a community and its communication accordingly. We argue that in various cases, community organizing remains as the only role.

This paper contributes to the discussion on the design of business models and the design their of interaction platforms. We contribute an analysis framework to capture design and implementation issues in a structured way.

Our approach is structured as follows. First, we give with the media model the analysis framework that guides our discussion (Sect. 2).

In the first part of our analysis, we discuss the relation between a community and its medium and distinguish communities according to the way in which they are supported by a platform (Sect. 3).

In the second part, we analyze the role of communities in business models. We consider contribution, motivation, values and economic impact of communities (Sect. 4).

In a third part (Sect. 5), we analyze how organized communities take over roles in business models and relate those business models to system architectures. We illustrate with three cases and various examples implemented online, (1) information services, (2) price mechanisms and (3) music sector online. We argue that the four cases provide a blueprint for the design of business models, system architectures and communication. They illustrate the trend towards the business model community and the role of community organizing in the digital economy.

2. The Model of Media

The model of media [9] guides our analysis of communities and their media, of business models and system architectures, and of communication and service design.

We follow the notion of a medium as developed in sociology. Societies can be defined as 'system of places', where every agent has an place with rights and obligations. Those societies are called media and they bind the agent at a place [11].

A community is a set of agents together with a medium, i.e., Community = set of agents + medium. Clans, firms, nations, marketplaces are examples for communities con-