Chapter 17
Prosumerization of Mobile Service Provision: A Conceptual Approach

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ABSTRACT
Prosumerization is the enabling of users to act as producers. Prosumerization of content for the mobile internet, in which users are consumers and producers of content, is a recent trend. However, user-generated mobile services are the next big step for mobile service provision emerging from the prosumerization of content. Benefits for platform and telecommunication providers can be significant, especially if information released by prosumers is used wisely by providers. This article derives implications for providers and their applied information technology. An architectural proposal is described which focuses on the usage of prosumers’ information for internal business adaptations of providers as well as creation of feedback to the prosumers. Since prosumers as additional creative force in the development process move much closer to a provider’s business, user-centricity has to go beyond improved customer relationship management.

INTRODUCTION
In the last decades enterprises try to better capture customers’ needs and requirements; stable customer relationship and products that are aligned with customers’ individual expectations. In addition, enterprises have massively invested in information technology in order to personalize their products. Service orientation, customer orientation and user centricity have – amongst others – supported a paradigm shift towards the prosumer. In this context, IT (information technology) systems were
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affected as well. Developments of private IT were incorporated in enterprise IT. Particularly, the Web 2.0 movement opened a broader perspective on the consumer and the consumer’s capabilities and users’ interactions and collaborative aspects become more important (Gerhardt, 2010).

These technologies also opened the floor for a new generation of consumers: “Power users” that not only become external experts, but also provide their knowledge to others. This degree of interaction influences the product as well, e.g., aspects of products are defined by the customer. Following this line of thought, customers start to produce their own products. These so-called “prosumers” (merging of producers and consumers) strongly influence products are developed and sold. Many definitions exist for prosumers and many investigations in different domains have been conducted.

In this paper we will focus on the aspect of prosumerization within the context of mobile services. A brief overview is provided on the state of research on the prosumer movement and generic characteristics described. Then the prosumer concept is applied to the domain of mobile services, consequences for mobile service providers are discussed and implications for information systems are derived. An IT-architecture is described that supports the provision of prosumerized mobile services. The paper concludes with a use case scenario that illustrates the results of this paper.

MOBILE SERVICES

Services are a special kind of added value that is generated by a business. Its main characteristics are that they are nonphysical and intangible in the dimensions output potential, process execution and process result (Vargo & Lusch, 2004). In the context of this paper, we concentrate on IT based services. These are services that are provided or solely operated by computer systems and where the access is only possible via IT (Sahai, Machiraju, & Wurster, 2000). Such services are nowadays widespread and the majority of information-related services belong to this category.

Mobile services are services that are accessed by mobile devices. They represent a specialization of IT-based services, i.e., the main specialization of such mobile services is mobility, both in regards of the service access/invocation and of the service provision/usage. However, mobility has strong implications on the properties of mobile services, which are diverging from classical IT-based ones (Kaasinen, 2003; Pagani, 2004):

- **Portability**: Mobile services can be accessed independent from a specific location. Moreover the user can move while using a mobile service.
- **Always-On**: Users usually rarely turn off their mobile device. In consequence, they keep online and can potentially keep using mobile services timely infinitely.
- **Localization**: Mobile service can include the location of the user into their processing. So mobile service can be location-aware and –specific.
- **Personalization**: Mobile devices are usually not shared. Therefore mobile services can directly identify the individual user and adapt their offer depending on the profiled preferences and needs.
- **Limited Capabilities**: Since the mobile devices are used to access and utilize the mobile services, these are limited in the resources they request (e.g., bandwidth, screen, keyboard, …).
- **Security**: Mobile services are usually utilized in a more open environment in contrast to stationary services. This puts special requirements to secure them.
- **Routing**: Often, mobile devices have routing capabilities. These can be utilized in the service provision, e.g., to navigate the user to a specific location.
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