Chapter 13
Preliminary Discussions on Several Characteristics of Service Value

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ABSTRACT

Service is defined as a provider-to-client co-production that creates and captures value while sharing risks. Value plays a central position in the lifecycle of services, for example, new values are defined in service mode, designing service models to support the proposed values, and developing service systems to deliver values to customers and providers. It is also necessary to make clear what kinds of characteristics service value has. In this paper, the authors make a classification on service values and discuss characteristics of service value, that is, transitivity, decomposability, partition, transformation, and dependency. The authors illuminate these characteristics by presenting several practical examples, as well as introducing value-aware service engineering and methodology (VASEM). Results of this paper will provide references to value-oriented service innovation, service design and service system development in SSME domain.

INTRODUCTION

Service is defined as a provider-to-client co-production that creates and captures value while sharing risks (IBM SSME, 2009). From the definition we see that value plays a central role in

services. The ultimate goal of a service system is to deliver the expected values to both customers and providers by collaborating people, resources, information, environments, etc, together (Spohrer, Bailey, & Gruhl, 2007).

"Value" is a generic term and it has quite different meanings in different domains, e.g., economics, mathematics, computer science,

laws, ethics, etc. Generally speaking, there are two types of values, i.e., tangible and intangible values (Wikipedia, 2009). The former refers to all exchanges of goods, services or revenue, including all transactions involving contracts, invoices, return receipt of orders, request for proposals, confirmations and payment, and the latter refers to "knowledge and benefits". Intangible knowledge exchanges include strategic information, planning knowledge, process knowledge, technical know-how, collaborative design and policy development; which support the product and service tangible value network. Intangible benefits are also considered favors that can be offered from one person to another (Stabell & Fjellstad, 1998). Detailed classification of values can be found in (Allee, 2002). Different from tangible products-centric value transferring in manufacturing domain, values in services are primarily intangible ones and seem more diversified (Wikipedia, 2009).

For a service provider, his attention focus more on tangible economic values, i.e., the amount of profit he could obtain and the degree such profit reaches to his expectation. For a service consumer, he focuses more on intangible values, i.e., the degree that one of his states is improved and the degree such improvement reaches to his expectation.

As values are produced through complex dynamic interactions between multiple participants, there forms value chain (Peppard & Rylander, 2006) and value network (Allee, 2002; Allee, 2000). Although the two terms has different backgrounds and meanings, one of their common goal is to describe, plan, organize, control and coordinate the process of value co-production between upstream suppliers, downstream channels to market, and ancillary providers by a chain or network model (Christensen, 2003), thereby help organizations optimize their service process to facilitate better business performance. In literatures there have been various methods for value chain and value network analysis (e.g., (VCA) Value Chain Analysis) (VCA) (Schmitz, 2005), value network analysis (VNA) (Allee, 2002), etc) to clarify where values locate in the network, how value is produced and delivered, what kind of value dependencies between organizations, what types of tangible and intangible values are exchanged. Especially, they assist organization make clear how and to which extent values delivered in value chain/network are leveraged by key decisions of organizations.

Today, as advanced information technologies (IT) are being comprehensively applied in modern service industry, massive software services (i.e., Software as a Service (Wikipedia, 2009)) appear in the form of Web Services, SCA, BPEL, etc and are publicized and accessed via Internet. Based on traditional value theory, researchers explore values in such software services to clarify by which mechanism SaaS produces values to its customers and how to evaluate and optimize such values (Gordijn &Yu, 2006).

Value plays a central position in service lifecycles. To design a good service, designers firstly specify what kinds of new values will be provided to customers and providers (we call it "value proposition"). Next step is to design service models (including behavior models, resource and capability models, etc (Xu, Mo, & Wang, 2007)) to find a way how the proposed values are actualized (we call it "value design"). Then, according to service models, corresponding service systems are developed and put into execution to deliver values to participants respectively (we call it "value delivery"). Values should be fully considered and aware in full lifecycle of a service and it is very essential to be conscious of characteristics of values.

In our research on service engineering in the past three years, we present a "Value-Aware Service Engineering and Methodology (VASEM)" (Xu &Wang, 2008). Besides functional and performance transformation from initial requirements to final service systems, VASEM especially emphasizes on being aware of values in service lifecycles, e.g., value expression, keeping, adding, realizing, optimizing, etc. For the sake of such objective, we must make clear the law of value transferring

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