Quantitative Evaluation for Service Design

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A design method that deals product and service simultaneously is becoming necessary through recent great growth of service industry. Motivated by the situation, a new discipline called Service Engineering stated its goals: visualize requirements of service receivers, evaluate and simulate services, and develop CAD tool that supports service design process. Service designer needs an evaluation method that returns quantitative value to choose the best design solution. Therefore, we are working on analysis of value provided by service and the quantitative evaluation development.

In our approach, satisfaction of service receiver is regarded as value provided by service. Until now, we proposed a method that uses S-AV (Satisfaction-Attribute Value) function. The method uses service models written in the form of view model[1]. As figure 1 shows, RSP (Receiver State Parameter, a requirement of the receiver) and FPs (function parameter) influencing the RSP are written as a network in the view model. The S-AV function is a bunch of mappings between satisfaction of the receiver for an RSP and FP values of the service. Here, satisfaction is expressed as a real number from -1 to 1. The actual functions are decided by the designer from results of questionnaires. As the function changes by personality of the receiver, the designer uses Persona model[1] to describe the personality. Additionally, we proposed 3 shapes of S-AV function (Fig.2) based on Kano model[2] and Prospect Theory[2] to allow the designer to reflect nature of human's decision making easily. After all, we applied our method to a case of door-to-door parcel delivery service (Fig.3) and verified that the designer can evaluate the service quantitatively.

Keywords: Customer Satisfaction, Service Engineering, Kano Model, Prospect Theory

References

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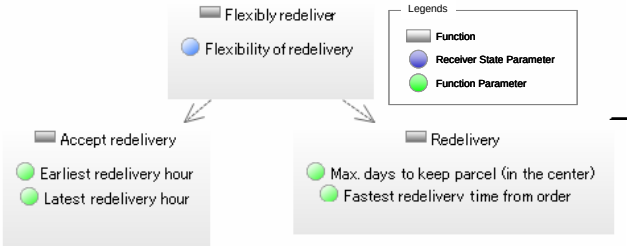

Fig. 1 View model for RSP "flexibly redeliver"

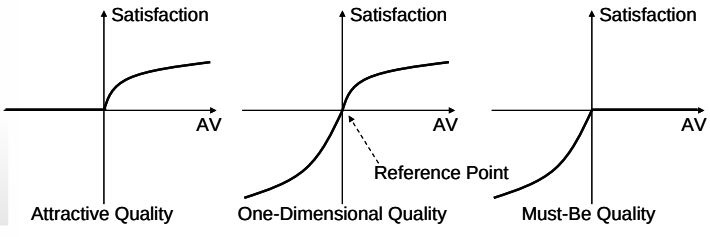

Fig. 2 Three types of Satisfaction-Attribute Value function

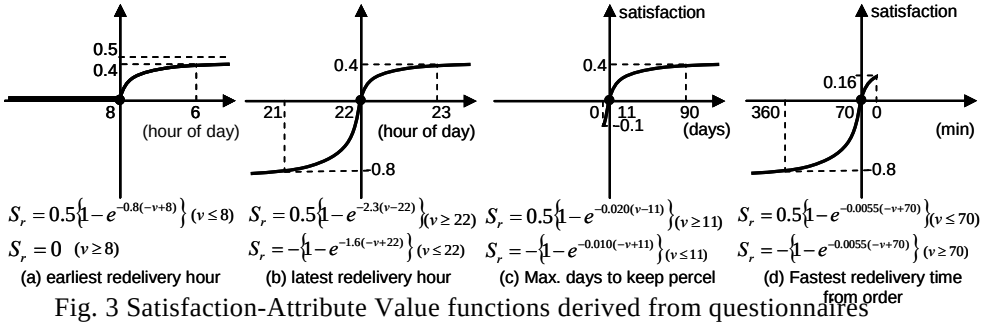

Fig. 3 Satisfaction-Attribute Value functions derived from questionnaires