Chapter 4.13
Telecommunication Customer Detainment Management

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ABSTRACT
This chapter proposes an integrated methodological system of telecommunication customer detention management, including telecommunication customer churn prediction and strategy formulation of customer detention management. The formulation of churn customer detention management strategy includes customer detention value assessment, customer detention level determination, enterprise-attribution approach based on customer detention strategy analysis, evaluation and implementation, and so forth. Future research in this field is discussed at the end of this chapter.

INTRODUCTION
With the increasing competition in the telecommunication market, customer-winning battles between telecom operators are becoming fiercer and fiercer. In order to gain more market share, telecom operators continually launch and offer new products and services. However, this increases the volatilities of customers to a large extent, leading to the frequent occurrences of customer churn.

A report from Gartner’s survey reveals the cost of developing a new customer is usually 4-5 times greater than that of retaining an old customer. Another study shows that, with reducing customer churn rate by 5%, a company’s profit can increase by 25%-85%. Hence, it is obvious that the loss of
a large number of customers can lead to huge losses of the operators.

According to the statistics, in 2003, the average telecommunication customer churn rate in the United States was 30%, while the one in Europe was 25%, and in Asia 48%. The churn of customers would cause huge losses to the telecom operators. Firstly, it accounts for direct losses of the operators’ profits; secondly, it makes the costs spent during the development periods of the churn customers become futile; finally, it has a negative impact on the images of the operators. So, it is becoming common knowledge in business, that retaining existing customers is the best core marketing strategy to survive in industry. (Kim, et al., 2004)

In recent years, as the international telecommunication market gradually has become saturated and the increment of new customers has slowed down, maintaining and retaining customers has become the focus of attention more than ever. How to actively develop new customers and at the same time reduce the churn rate of old customers has received extensive attention from both domestic and foreign major telecom operators. At the same time, a large scale implementation of information systems has provided support for computerized customer detainment management for telecom operators. The predictions of behavior, customer value, customer satisfaction and customer loyalty are examples of some of the information that can be extracted from the data that should already be stored within a company’s database (Hadden et al, 2005).

Under this background, customer detainment has been paid attention to and widely adopted by the telecom operators.

**BACKGROUND**

According to the telecommunication customer life cycle theory, telecommunication customer detainment management is the key management task in the declining stage of customer relationship. (Shu & Qi, 2004) Telecommunication customer detainment management includes identifying whether a customer has entered a declining stage; once the customer has entered a declining stage, re-defining customer relationship and re-establishing customer relationship to start a new cycle of customer relationship with the customer if the customer is worth detainment; or stopping investing resources in unrecoverable customer relationship and terminating the relationship in appropriate ways. In other words, identifying potential churn customers and segmenting them, formulating, evaluating and optimizing targeted customer detainment strategies are the main tasks of telecommunication customer detainment management. Through these tasks, the telecom operators can detect churn tendencies of customers and then take effective measures to win potential churn customers back or terminate customer relationships with them in appropriate ways.

Though customer detainment management is very important in telecom operators’ daily work, most studies are mainly conducted on constructing customer churn prediction system, while rarely being conducted on selecting detainment targets, formulating detainment strategies, detainment effect evaluation and so on, even more rarely on integrated methodological systems of telecommunication customer detainment management. From the 1990s to date, a large number of international journals and the international conferences have focused on designing churn prediction models and algorithms by using data mining technologies to construct more effective churn prediction models (Lian & Richard, 2004; Kristof & Dirk, 2006; Au, & Yao, 2003; Wei & Chiu, 2002; Bloemer et al., 2002; Mozer et al., 2000; Ng & Liu, 2001; Wei & Chiu, 2002), while only a few researches have been done on other aspects of customer detainment management. Shu and Qi proposed a methodological system in regard to telecommunication customer detainment management in “Telecommunication Customer Life Cycle Man-
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