

통신산업의 정보시스템 감사를 위한 정보일치 검사

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Provision Check to Audit Information Systems for Telecommunication Industry

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● 요약 ●

In the most of the telecommunication industry, it is necessary to secure consistency to overcome gaps between business logics and information systems logics. We propose a model of provision check in order to secure information consistency of customer information among information systems. First of all, we understand the concept of provision check and design a proposed model for provision check. After an experiment in a business company, we analyze its experimental results and make proposals for effective and efficient provision check in the telecommunication industry.

키워드: Information Systems, Audit, Provision

I. 서론

The number of users and the volume of transactions in the telecommunication industry are much larger than those in other industries. So, the volume of information to manipulate and control is also much larger. In the most of the telecommunication industry, it is necessary to secure consistency to overcome gaps between business logics and information systems logics. The consistency is composed of completeness, accuracy, and timeliness. Completeness is the status where any data, information, and services of customers are not omitted. Accuracy is the status where information of customers and communication usages is correct. And, timeliness is the status where any transactions of data and

information are not delayed. If the consistency were not guaranteed, information will be leaked and then cause some problems in reliability of information systems in an enterprise. This would certainly decrease its sales in the near future. Against this backdrop, we propose a model of provision check in order to secure information consistency of customer information among information systems.

II. Design for Provision Check

To perform provision check, we need to establish the structure of revenue assurance with three phases such as identify, quantify, and capture (Fig. 1).

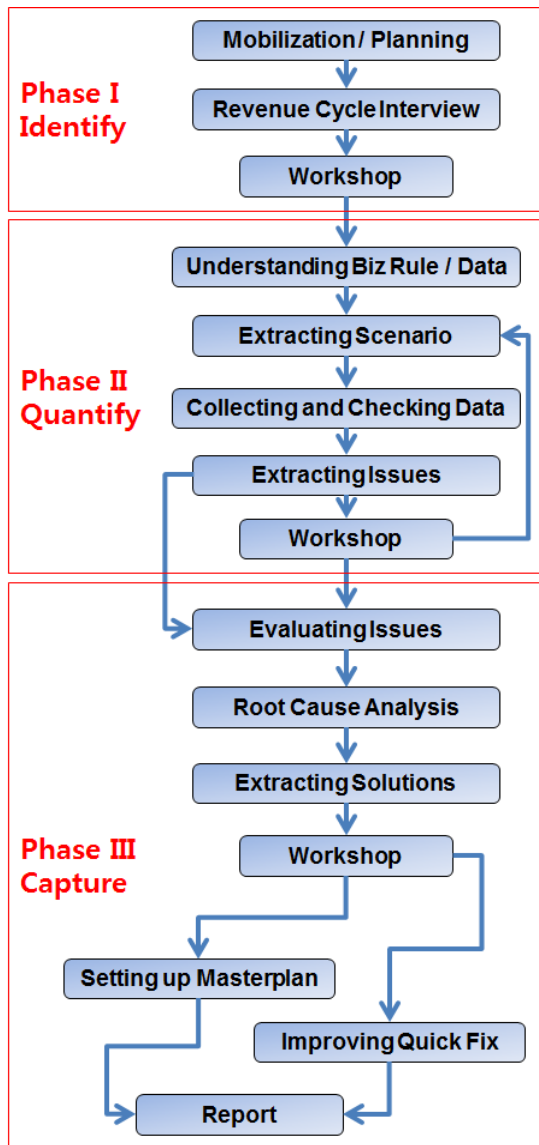


Fig. 1. Structure of Revenue Assurance

Provision check is a process to check the consistency of customer information among information systems. In general, the check is performed in the account level or feature level. But we research on provision check from the viewpoint of two billing such as under-billing and over-billing. The provision checking is composed of three modules; WIN(Wireless Intelligent Network) for intelligent service of audit information, HLR(Home Location Register) for location information of customers and audit information of voice telecommunications, and AAA(Wireless Intelligent Network) for audit information of data telecommunications of customers. Fig. 2 shows our proposed model for provision check.

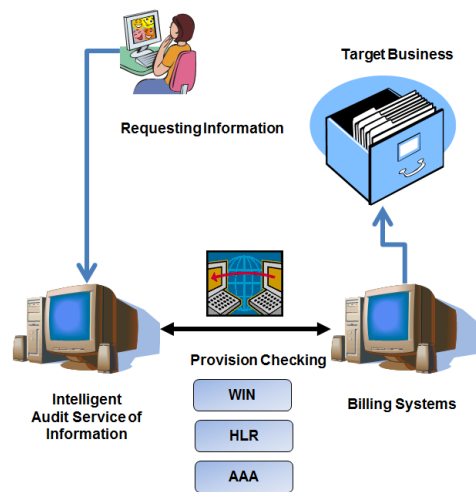


Fig. 2. Model for Provision Check

III. Experiment of Provision Check

We performed an experiment of provision check in a telecommunication company in Taiwan. In the experiment, we tested the consistency between audit information on the intelligent network and registration information of (about 24,512,000 customers in information systems of A company. We focused on customers who have authentication for payment-in-advance products (such multi-level payment, teenager payment, pre-payment, and so on) and additional products with some services (such as campus zone service, ring-to-me service, two-number service, number-change notice service, and so on). Our model found over-billing transactions for 530 customers and under-billing transactions for 42 customers. Even though the company has performed a task to control the consistency one or more a month since 2003, it continues to have some inconsistency of customer information. The number of the inconsistency is bigger than expected.

IV. Conclusions

We proposed a model for provision check and performed an experiment by use of the model. We makes a conclusion that there are too many inconsistencies among audit information on the intelligent network and registration information. It is absolutely required to perform provision check continuously, since the consistencies of customer information occurs repetitively.

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