정보시스템 부정행위 신고시스템 설계

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Design of Fraudulent Process Notification for Management Information Systems

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요 약

많은 기업에서 부정행위나 절차가 만연하고 있다. 하지만, 직원들은 방어적 또는 반응적 보복을 당할까 두려워 불법적인 행위들을 고발하지 않고 있다. 이러한 배경에서 부정행위를 신고할 수 있는 시스템을 제안한다. 본 설계는 기업현장에서 정보시스템을 사용함에 있어서 발생하는 부정적 절차에 대해 효과적인데, 이 부정절차 신고는 신고처리, 신고방법, 저장매체 등과도 연관을 가지고 있다. 우리는 시스템과 신고자의 관점에서 부정절차 신고에 관한 전체적인 구조를 설계하고, 추가적인 신고 세부방법에 대한 설계를 덧붙이고자 한다.

ABSTRACT

In many enterprises, fraudulent activities and processes are widely prevalent. But, their employees would not report the illegal activities since they would be attacked by defensive and reactive retaliations in their enterprises. Against this backdrop, we design notification systems for whistle blowing. The design would certainly be useful for fraudulent process notification while using management information systems in the field of business. The fraudulent process notification is related to whistle blowing systems, methods, storage media, and so on. Also, we establish the whole architecture of fraudulent process notification with functional structure from the viewpoint of systems and whistle blower. The flow diagram of notification method is added.

키워드

Fraudulent Process, Whistle Blowing, Audit, Notification

I. Introduction

Even though fraudulent activities and processes are widely prevalent in many enterprises, their employees would not report the illegal activities since they would be attacked by defensive and reactive retaliations in their enterprises. Against this backdrop, we design notification systems for whistle blowing. We firstly design the general structure of fraudulent process notification systems. And then, we secondly design the detailed modules of the systems. And lastly, we show its implemented website names as Whistleblower.

II. General Structure of Fraudulent Process Notification Systems

The fraudulent process notification is related to whistle blowing systems, methods, storage media, and so on. Also, we establish the whole architecture of fraudulent process notification systems with functional structure from the viewpoint of systems and whistle blower. In the architecture, fraudulent process

notification systems are linked with clients (of administrator and reporters), agency clients, and servers (of mobile telecommunication, reporter's banks, administrator's banks, and agency's banks) (Figure 1). The telecommunication network means the ordinary network like the Internet and includes both wire ones and wireless ones. Especially, in order to make it possible to link with mobile clients, mobile telecommunications such as WCDA or LTE are included. The agency means enterprise or public organization that receives and rectifies a notification of a reporter. A reporter is a person who reports a fraudulent process. A server of the reporter is a mobile client to execute the application of fraudulent process notification systems. A person in charge of fraudulent process notification uses the server of the agency.
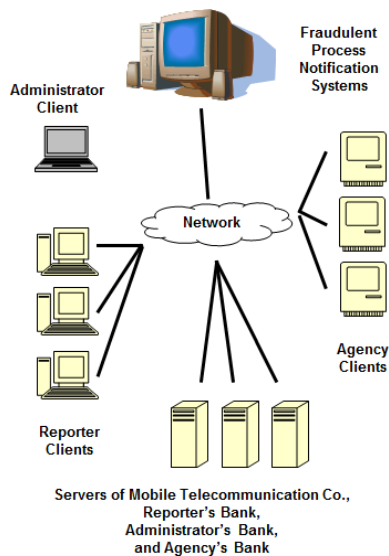

Figure 1. Structure of Fraudulent Process Notification Systems

III. Detailed Design of Fraudulent Process Notification Systems

The detailed design of our proposed systems is composed of the functional structure of fraudulent process notification systems, the functional structure of reporter clients, and the flow diagrams of fraudulent process notification method. (1) The functional structure of fraudulent process notification systems comprise five major procedural steps such as the linkage module of reporter client, the linkage module of agency client, the process module of compensation, the management module of application, and the module of administration. The procedural modules are supported by databases including information of agencies, notifications, response results, and compensation results. (2) The functional structure of reporter clients comprise six major procedural steps such as the input module of agency identification code, the input module of notification, the input module of

compensation account number, the linkage module of systems, the management module of telecommunication service provider's identification code, and the management module of application version.

IV. Practical Implementation of Fraudulent Process Notification Systems

We implement a practical websites named as Whistleblower by use of the general design of general structure and its detailed designs of fraudulent process notification systems (Figure 2).
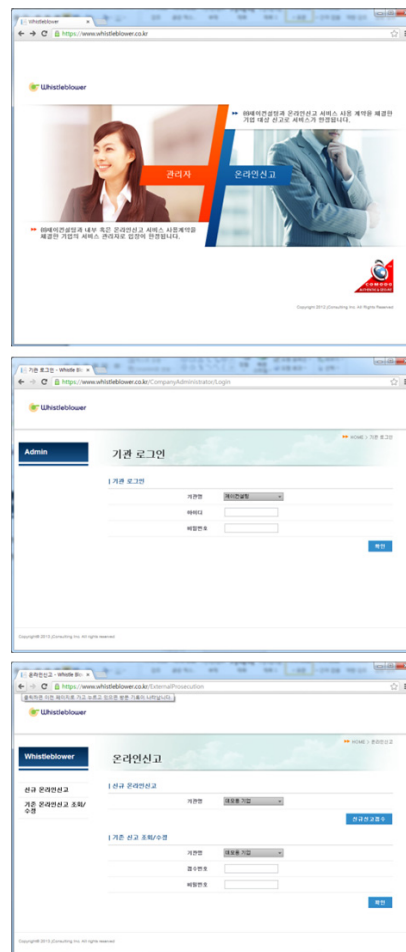

Figure 2. The Website of Whistleblower Systems

V. Conclusions

Our research on systems design of fraudulent process notification for management information systems would certainly be useful for fraudulent process notification while using management information systems in the field of business.

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