STOCK REGISTER TRACKING SYSTEM

Abstract

This paper describes the  *Stock Register Tracking System* sufficiently to determine the feasibility and usability of a finished system. The core concept is to track the no of items from the department with additional features for interpreting the data. It uses a client-server model with a connected database to allow multiple departments and databases to be connected. This allows for later expansion while still supporting the targeted small businesses.

1. Operational Concepts

The *Stock Register Tracking System* is a real-time inventory database capable of connecting multiple departments. This can be used to track the inventory of a single department, or to manage the distribution of stock between several branches of a larger college or university. However, the system merely records sales and restocking data and provides notification of low stock at any location through email at a specified interval. The goal is to reduce the strain of tracking rather than to handle all store maintenance. Further features may include the ability to generate reports of sales, but again the interpretation is left to the management. In addition, since theft does occasionally occur, the system provides solutions for confirming the store inventory and for correcting stock quantities.

2. System Requirements

The *Stock Register Tracking System* uses a web-based interface to display inventory data to the stock manager client. The product will use of open-source software primarily due to cost of implementation. A PHP servlet will be hosted by a Wamp web server (on top of any choice of operating system, although a flavor of Unix is recommend). The first feature of the Stock Manager Client web interface component allows the Stock Manager Client to view the current stock of products, along with the capabilities of searching and sorting the products. The second feature of the Stock Manager Client web interface will allow the user to modify application settings, such as the threshold for email notifications, frequency of inventory scans (daily at a particular hour, weekly, monthly, etc.), and security settings. The third feature of the Stock Manager Client web interface will allow the user to update the inventory during the restocking process. Since a web interface will be used, a network that supports the HTTP/HTTPS protocol must exist, whether it is a private network for an isolated customer deployment or an Internet connection for a multi-site customer deployment. The bandwidth of the network depends on the frequency of transactions. A bandwidth of at least 10 Mbps is recommended (small commercial deployment). The database to store the inventory data will use a MySQL database.

Since the software and hardware resources of cash registers are not available due to the variation in software and cost, we will be developing an emulated Register client to interface with actual cash registers. The Cash Register client will emulate purchases by having a simple graphical interface with fields for a quantity and a button to make a purchase. As these resources become available, the actual implementation for specific cash register models will be considered for future releases of the *Stock Register Tracking System*.

Alternatively, commercially licensed products are available. In particular, the Microsoft ASP.NET (Active Server Pages) framework can be used. This requires a Microsoft ASP.NET web server and a Microsoft SQL Server database, which also requires a Microsoft operating system. However, these alternative system requirements will increase the overall costs for both implementation and deployment.