

MECHATRONICS

BOOK SERIES

SYSTEM DESIGN AND SIGNAL PROCESSING

VOLUME 2

Editors

Md. Raisuddin Khan

Md. Mozasser Rahman

Muhammad Mahbubur Rashid

Shahrul Na'im Sidek



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CHAPTER 30

AUTOMATIC SMART CARD PURCHASING SYSTEM FOR EXPRESS KIOSK

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30.1 Introduction

The field of Electrical and Electronics Engineering covers many aspects and it is interrelated in our daily lives. It is through engineering that many problems in our daily lives can be overcome. In certain scenarios, we see that the problem necessitates the solution whereby the society or people dictate the need for the change. However, this is not necessarily the rule. We can also see that new ideas, technology and systems are introduced and will change the way people and society act. This chapter presents an automatic smart card purchasing system which can be used at an express kiosk. It involves three major phases which are Database Collection Centre, Menu Selection Base as well as the Prepaid Card Detector. A database system which contains of all related information is build and available for user to access via the visual user interface. The Graphical User Interface (GUI) for both server and client application is developed using Visual Basic 6.0. Moreover as the advent of the information age has produced enormous demand for increased storage capacity and for the consequent increases in the amount of information that can be stored in a small space so therefore, a prepaid card system is introduced as the final stage. The endeavor of the project is to construct a networking application to a real basis life. The established system can minimize or eliminate the use of manhandling food counter at the express kiosk. Few alternatives are verified and judgments are made in order to choose the best networking system used together with the tools implemented and thus Smart Card system has met the requirement as an expended application field of electronic money.

30.2 Hardware Design for Prepaid Card Detector

A prepaid smart card contains stored value which the person holding it can spend at retailers. After accepting stored value from cards, retailers are periodically reimbursed with actual money by system providers. A system provider receives money in advance from people and stores corresponding value onto their cards. During each of these three kinds of transactions, secured data representing value is exchanged for actual money or