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# SMART e - PURSE

On Contactless or Contact Chip Smart Card

#### Overview

Many successful E-purse schemes have been implemented in "close communities" including college campuses, clubs, food malls, shopping complexand massive transportation services. Generally speaking, debit and prepaid cards for small value payments will soon be common when more merchants accept this payment scheme.

The future of smart card in electronic commerce is not just in payment cards, but also loyalty cards, airline tickets and other value-added cards. Customers' preferences, bonus and other information could be kept in the card. Companies could then obtain their customers' preferences and shopping histories for planning more customeroriented marketing strategies. The card could also be personalized to hold the cardholder's profile. In this way, companies could become more competitive in attracting customers.

#### Smart card as electronic wallet

In the future, the smart card would be used for payment in different aspects. They could be used for both bankcard and prepaid debit card functions. Furthermore, because the smart card is easily portable, it could be used for both online and offline payment.

In the area of electronic commerce, smart cards can be used for storing and protecting a number of keys. With the use of smart card for payment, security risk could be reduced as each transaction is considered an individual event. Furthermore, even if a particular smart card is hacked, the user account will still be safe.

Together with the use of the pin number, biometrics and visual verification smart cards can prevent unauthorized access and user's privacy and security could be achieved.

When electronic payment is widely accepted in daily uses, transactions would become more efficient. A single card could be used for different applications.

### Smart e-Purse

The Smart Card system application software enables simple administration of the smart card's electronic purse. The member details are easily maintained on the system with the ability to add a member onto the system, edit an existing member's information and delete a member from the system. Members are maintained in categories where, among other things, the category determines the credit limit and access privileges for the member. Clicking one button will initialize a Smart card for a member. If lost, a Smart card can be hot listed. A new card can be issued by clicking a button and the member's current balance will be automatically transferred. Funds can be added or removed from the card by simply showing the card to the reader Clicking on a transaction type (Credit, Debit) Entering an amount Clicking "Write to Card". A statement can be printed detailing the member's purchase history. Transactions can be listed in detail or summary format by date and location. This software can be in integrated with the existing system

Balance Checker

The secure Smart Card can hold 16 different applications in ONE SINGLE CARD, i.e E- Purse, Loyalty Program, Parking Ticket, Access Control etc.

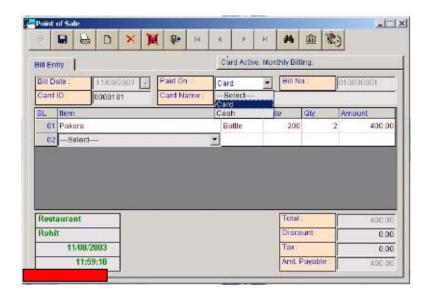
Based on type of facility the Smart card system will perform the following function:

- a. If a member comes in, the PC/POS can be used to issue new card, check for available balance on existing card, recharge or refund card balance, block/suspend card usage, transact with card at available locations.
- b. All transactions are written on the chip of card in encrypted form to preserve data and also compile incase of loss of data at server.
- c. The secure chip can only be accessed by authorized personals through the software only.
- d. The complete system can also work incase of network failure and foolproof transactions can be carried on without hampering business and on restoration of connectivity complete data can be updated to centralized database.
- e. Optional features like remote location transactions recharge through handheld readers/writers.

The food kiosk/counters and other facilities in operational infrastructure will consist of one PC/POS fitted with one Smart Card Terminal to define a POS terminal. The PC/POS will be loaded with Application module and a Smart Card Terminal will be connected to it. The PC/POS will in turn be networked to the central server.

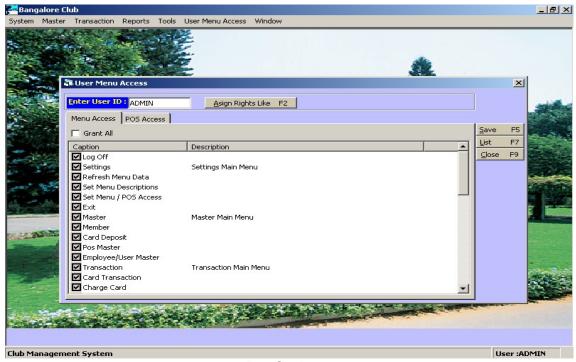
A member with his Smart e-purse Card can purchase through a cashless environment at all available counters. Online bill is generated from all counters and automatically the amount is deducted from his Smart e-purse Card and also transactions details are updated on backend database.



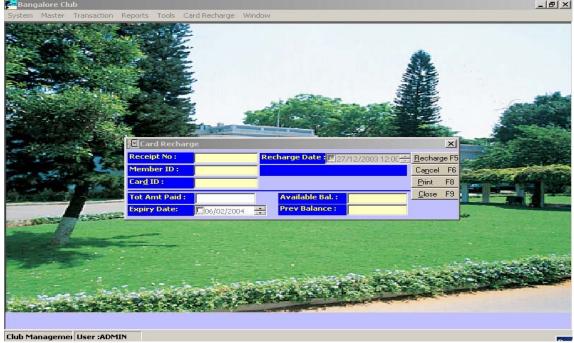


The Smart card system located in the centralized server will enable the administrator to perform the following tasks

- a. Electrical personalization (writing data into the chip) of the card. Once the card is electrically and graphically personalized the cards can be issued to the members.
- b. The administrator can have complete control of the issuing of cards to members and the dependents. The Card can be issued for a new member, simply by clicking "new card".
- c. Provide user level security for transactions and MIS generation.
- d. Recharge/Refund.



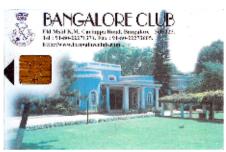
Pos Setting Screen



Smart e-Purse Card Issuance or Recharge

### **Smart Card System Features**

- 1) Printed Four Color Card Design with Serial Number
- 2) Pre-payment for cashless spending or E-Purse
- 3) Charges incurred by Members at the various facilities written in the card
- 4) Easy to follow Windows based software
- 5) Menu driven stand-alone/networked Smart card terminal software
- 6) The above separate transactions are collated into a member profile. The Administrator can build up purchasing / usage profiles of what, and when a member buys / uses, irrespective of the fact that the purchases / usages were made in numerous different facilities.



Visual of Bangalore Club Smart e-Purse Card

The one card operates everything needed for the smooth operation and streamlining its administration, accounting and management tasks.

Handheld Smart Card Terminals (OPTIONAL)

Handheld Smart Card Reader/Writer can also be provided at various input points that can download data to the host PC from time to time.



# Applicable Smart Cards

- 1. Magnetic Strip Smart Card
- 2. Barcode Plastic Card
- 3. Contact Memory Chip based Smart Card
- 4. Contactless Memory Chip based Smart Card