



**AVI INFOSYS**

Define → Design → Deploy

## Smartcard based Loyalty e-Rewards Solution & Prepaid e-Cash subsystem

www.smart-loyalty.net



- Contactless Smartcard
- Complete Backend Server Solution
- Embedded Web Server
- e-Rewards Advanced Reporting Software- Web Based



## AVI INFOSYS - Profile

AVI INFOSYS is an ISO 9001:2008 Certified Professional Consulting and Solution Provider Company based in Dubai, United Arab Emirates.

"AVI INFOSYS" is pleased to respond to Clients Project Requirements for Comprehensive and Total Integrated Solution for Enterprise-CRM & Loyalty/E-Cash Management Systems. Our review of the Market Place indicates that many Vendors can provide the Automated Systems; however only a few, such as "AVI INFOSYS" is Capable of Assisting Client in Plans, Develops and Implements of such a Highly Complex CRM & Loyalty/e-Cash Management & Information Technology Business continuity Projects.

"AVI INFOSYS" is a leader in Partnering with clients to achieve breakthrough performance through the intelligent use of Information Technology. "AVI INFOSYS" is Trusted and Valued by clients for the High Quality Services and Commitment to deliver real results.

### Summary

Hereby, "AVI INFOSYS" is one of the reputed organization in providing High-Level CRM & Loyalty/e-Cash Management solution & Information Technology Security Solutions and Services. We are a group of IT Professional with well Qualifications and Experiences. We can deliver IT services from Simple Department-wise Solutions until most Complexities like Multi Organization or Nation-wide Solutions.

We would like to express our highly appreciations to all our customers for the trust and thank our prospective customers for planning to have a professional relationship with our company

Our comprehensive involvement with clients' begins at the consultancy stage in order to understand and customize solutions that best suit the activity and volume of business. AVI Infosys has the capability in Planning, developing and Implementing complex management & technology Projects.

Our slogan, 'Define, Design, Deploy,' best illustrates our approach to implementation and utilization of IT management tools, defining your business needs and understanding your internal business processes is key to success.

At AVI INFOSYS, we first define your usage and goals, design appropriate solution, then Deploy that solution at your organization.

The team at AVI INFOSYS has a successful track record of helping clients' achieve breakthrough performance through use of intelligent technologies efficiently.



# AVI INFOSYS-Smartcardbased e-Rewards System

The AVI INFOSYS system, the next generation e-Rewards System with e-Cash subsystem, is based on the award winning technology of distributed embedded web server and contact-less smart card.

Members can enjoy real time balance checking and gift redemption with schemes tailored for their personal profile at eRewards online web reporting software. Additionally, the system also includes tools that provide analysis of member profile based CRM data, and reports that generate real time feedback of any marketing plan.

AVI INFOSYS e-Rewards System consists of 4 basic firmware components:

- **Contactless Smartcards.**
- **iBonus terminal.**
- **iBonus Server.**
- **e-Rewards Advanced Reporting Software.**

## Basic Features

Since the most current information about the members are stored on the member cards, this reduces the dependency of real time information from the centralized database server, as in the case of the traditional magnetic strip card e-Rewards Systems. 48 bytes of basic member information are stored on the ultra light card, or one of the sectors of the classic card in the following format.

## Overview

iBonus Terminal is the heart of the loyalty operation. It compactly contains an embedded web server, journal database with built-in software applications that operates independently without the need of an extra PC. Operation is carried out using a keypad for input and a built-in smart card reader to transfer information to and from the Member Card. Transaction records stored in the Terminal can be collected by iBonus Server software through TCP/IP network.

## Very easy to deploy

### Unattended Server Design

When deploying iBonus Terminal at each outlet, it only needs to enter the Server IP and Server port at each Terminal. iBonus Server automatically registers the Terminal when the Terminal connects to the server the first time. Deregistration is also to be done at Terminal side. The setup process can be done even there is no one attending the iBonus Server. It saves up the manpower during deployment.



## Dynamic Virtual IP Operation

Every TCP/IP connections between iBonus Terminal and iBonus Server is initiated at Terminal side. With the simplicity of the protocol, Terminals can work perfectly with just a dynamic virtual IP. Port forwarding at the Terminal side is not necessary. It saves the effort on configuring the tricky router settings.

## System Health Monitoring

The system health can be monitored at server side. Administrator can make use of the information shown at the eRewards Software to track the Terminal which needs maintenance. Web report viewing terminal status



## Advanced Card Control

Lost card replacement, expiry date extension and card repair can be done at any branches.

## Real Time Balance Checking

Members can enjoy real time balancing by simply presenting their card to iBonus Terminal. If the Terminal is connected to POS, the balance is also sent to POS.

## Receipt Reprint and Auto Reprint

When printer is connected, a receipt is printed whenever any transaction is made. Press the button A if you wish to reprint the receipt of the last transaction. If auto reprint is on, two receipts will be print for every transaction.



## Customizable Customer ID

Card issuing company may like their card number to be in their own format. Administrator can customize the customer ID of each member card. In case of customers losing their member card, the replaced member card can have the same customer ID. The range of customer ID is 0 – 9999999999999999.

## 4 Expiry Date Calculation Modes

There are 4 different choices of Member Card expiry schemes:

### 1. Always Valid

In scheme 1, member card never expires. This is simple. However card replace and blacklisting feature cannot be used.

### 2. Fixed Month

In scheme 2, Fixed Month, you simply decide which month of the year you want the Member Card to be expired. For example, the current month is February and the expiry month is set as January. The Member Card will not be able to use in January of next year.

### 3. Relative to Card Initializing Date

In scheme 3, Relative to Card Initializing Date, you have to define the number of months relative to the Member Card Initializing Date. For example, if you set 12 months and the Member Card is initialized on January 2002, the Member Card will be expired on January 2003.

### 4. Automatic expiry extension based on the last visit.

In scheme 4, Automatic Expiry Extension Based on the Last Visit, the expiry date will be automatically extended by the administrator defined periods (months) if Members purchase, redeem, or reload before the card expires.

## Staff Card Reconfirmation

Staff card is needed to be presented to the Terminal again for some transaction types which are less frequently used. It will ensure staff intention on using those transaction types.

## Staff Card Transaction Auditing

Staff Card ID is logged for every transaction. It will facilitate auditing at the server report. iBonus Report can summarize the amount collected by each individual staff.

## Maximum E-Cash Limit

iBonus Master Card defines the maximum e-Cash amount to be stored in each card. This safety measure enhances the safety for the card users.

## Maximum Transaction Limit

Maximum transaction limit must be defined in each staff card. All transaction that alters the accumulated spending or e-Cash balance is limited by this value.

## High Scalability

### Microsoft Access Support / Microsoft SQL Server 2005 support

iBonus Server connects to Microsoft Access database and also connects to Microsoft SQL Server 2005 through ADO .Net technology. For a large deployment with sophisticated reporting or clusters for database, Microsoft SQL Server 2005 can fit in to such purpose. Also by using the reporting service feature in SQL Server 2005, iBonus Reports – a web based report can be leveraged. The iBonus System instantly becomes a hub for generating sales a financial report centre.

## High Reliability

### 5000 Transaction Buffer

In case of temporary network failure, transaction is stored in the flash memory of iBonus Terminal. Up to 5000 transaction can be stored in the memory. As soon as the network is reestablished, the transaction is sent back to server. As the database in iBonus is used as buffer, the data integrity of the database is taken into great care. Journal database is implemented at iBonus Terminal. During Terminal start-up the flash memory

copy of the database is decompressed to RAM. During the transaction, each updating SQL command is recorded at the journal file after successful execution on the RAM copy of the database. The database is committed either periodically or when the journal file reaches a certain size. During write back, the RAM copy is written back to the Flash memory. In case of unexpected power shutdown, all the commands in the journal file are re-executed against the flash memory copy of database.

### Record Duplication Detection

iBonus Server ensures that no record is recorded twice in the database. This is done by recording the last record of that terminal in the Server. If the acknowledgement of the transfer of the last record is missed, the Terminal may send back the same record again. By comparing the record being transferred with the last record, Server can tell whether there is duplication and reject the record accordingly.

## High Security

### Anti-fraud Card Control feature

- The newly replaced card will reflect the pre-blacklist salvage value of the lost card even it is used at any other Terminals after reported loss,
- Only one replaced card is issued even the user intentionally report card loss in more than one terminal within a short time,
- The repaired card must reflect the latest card information even the card has done a transaction at another branch a short time before needing to repair,
- The blacklist will not be grown to an unlimited size by allowing only the card having expiry date to be blacklisted, only the valid card are blacklisted, and
- The card being renewed must not be a blacklisted card.

### iBonus Master Card Key Loading

iBonus Terminal guarantee to operate only with the card issue by the same company. This is achieved by loading key from iBonus Master Card. As the key and company code of iBonus Master Card delivered to each company is different. iBonus Terminal can only recognize the member card with the same key.

### Staff Card Transaction Auditing

Staff Card ID is logged for every transaction. It will facilitate auditing at the server report. iBonus Report can summarize the amount collected by each individual staff.



### Card Blacklisting

In case of losing member card, the lost card can be blacklisted by using Request Replace function. Within 1/4 day, all terminals will collect the newest blacklist from the server.

### Maximum Prepaid Limit

iBonus Master Card defines the maximum prepaid amount to be stored in each card. This safety measure enhances the safety for the card users.

### Maximum Transaction Limit

Maximum transaction limit must be defined in each staff card. All transaction that alters the accumulated spending or prepaid balance is limited by this value.

## Localizable

### Language localization

All the wordings and currency signs at the LCD display and receipt can be localized\*. Customer can have iBonus Terminal adapted to their language by submitting their translating table to us. Translated wordings are limited by the characters available at the LCD display and receipt printers

### Decimal and Integral Currency Support

iBonus System supports both integral currency and currency with two places. If decimal mode is chosen the maximum prepaid value is 83,886.07. If integer mode is chosen, the maximum prepaid value is 8,388,607. This setting is unified by the iBonus Master Card.



## iBonusTerminal

### iBonus Terminal

is the heart of the loyalty operation. It compactly contains an embedded web server, journal database with built-in software applications that operates independently without the need of an extra PC. Operation is carried out using a keypad for input and a built-in smart card reader to transfer information to and from the Member Card. Transaction records stored in the Terminal can be collected by iBonus Server software through TCP/IP network.



### Basic Functions

- Issue Member Cards
- Issue Staff Cards
- Perform Card Transactions
- Balance Checking
- Expiry Date Calculations
- Renew, Replace and Repair Cards
- Receipt Printing
- POS Connectivity
- Transaction Storing and Transferring



### Sending Transactions back to iBonus Server

After finishing a transaction, such as adding bonus points, redemptions, staff login, the transaction record is stored in the Terminal's transaction queue. There are 5,000 buffer in the transaction queue. The records in the transaction queue are sent to server as soon as the network connection is ready. The terminal stops accepting transaction when the queue is full.

### Advanced Card Handling

iBonus Terminal provides advanced card handling function which allows card expiry date extension (Card Renew), Lost card replacement and Corrupted card repair at Terminals of any branches. It saves up the establishment of central call center for card control purpose.

### Receipt Reprint and Auto Reprint

When printer is connected, a receipt is printed whenever any transaction is made. Press the button A if you wish to reprint the receipt of the last transaction. If auto reprint is on, two receipts will be print for every transaction.

### Connects to POS System (Cash Machines)

iBonus System unifies the smart card system with the POS system. All the transaction types in iBonus Terminal are accessible by POS through RS-232 serial port. Coming with a ready made Windows based API, all the generic transaction set and advanced card handling functions can be accessed with ease. In addition, with the help of read member card and read staff card functions, POS can command the most suitable transaction based on the POS side member profile.



POS application provided as sample code for the API

## Technical Specification

Power	12VDC, 600mA
Web and Database Server	1500 / 2500
Transaction Storage	Built-in
Transaction Buffer	5,000 records
Flash memory	32MB
Display	16 x 2 LCD with Backlight
Receipt Printer Connectivity	ESC/POS compatible, 42 CPL, Parallel Port
Communications	Ethernet (10-Base T), RS232 at 57600 bps, Parallel Port
Real Time Clock	Last for approx. 2 days without power
Supported Card Type	ISO 14443A Mifare 1k Classic, Mifare 512bit Ultralight
RF Frequency	13.56Mhz
Housing	Ploycarbonate
Footprint	Temperature: 0-45 degree C/ 32-115 degree F Humidity: Max 95%, non-condensing
Operating Environment	English ,Simplified Chinese, Traditional Chinese ,other Languages Optional:Simple access control (Electro control Directness relay output 3A/12VDC)
Foot print	4.22(W) x 7.63(D) x 2.56(H) (in) 106(W) x 190(D) x 65(H) (mm)
Weight	0.35 kg.

### Adding bonus points during purchase

Adding bonus point during purchase is done by entering the bonus points on the Terminal and then presenting the Member Card. By default, AED.1 (one Dhiram) purchase will generate one bonus point. In the case of key in error, the value can be adjusted by an undo action.

### Multi-shop Loyalty Capability

A Classic Card can be shared by 15 different shops using 15 different sectors of the card memory. Information on each sector is protected by an encryption key.



### Transaction log

Up to 5,000 transaction records such as adding bonus points, redemption, staff login, and Member profile can be recorded on the Terminal. The 5,001th record will overwrite the 1st record. These records can be retrieved through LAN / WAN or the Internet with AVI Infosys Server software. AVI Infosys Server can support record collection from multiple Terminals.

### Deducting bonus points upon confirmation of redemption

Terminal displays selected redemption item(s) and prompts for confirmation when a Member Card is presented. Once it is confirmed, bonus points will be deducted from the Member Card. Optionally, a coupon or a receipt can be printed if a receipt printer is connected to the Terminal. Consult your dealer for the recommended receipt printer model.

### Special Topics

MasterCardforuniquememberCardID6Company Code assignment In the AVI Infosys eRewards system, the Member Card ID (4 bytes) for Member identification, Company Code (2 bytes) for Company identification and maximum transaction value are assigned using a Master Card supplied by the factory. Member Cards will not be able to operate on Terminals if the Company Code of the Member Card is different from that of the Terminals.





Each Master Card is capable of issuing 100 at one go unique Member Card ID's in sequence. For example, a Master Card can assign a range of Member ID from 1000004550 to 1000004650. With this Master Card, new Member Card can be issued from any Terminal. Lost Master Card will not be replaced.

#### Staff Card and Staff Operation Auditing

The Member Card operation at the Terminal and E-Cash Terminal requires staff login. There are several kinds of staff actions: login, logout, force logout, purchase, undo purchase, etc, and they will be recorded as transactions. AVI InfosysServer can generate reports for a particular staff. For example, a report can show the total redemption operated by a particular staff in last month.

## iBonuse-CashSubsystem

iBonus e-Cash Subsystem operates the same way as iBonus Loyalty System except it manipulates both the e-Cash currency value and bonus points on the member card. Also, this subsystem requires the use of Classic Card which has more memory and higher security.

The basic components of the subsystem consist of iBonus e-Cash Terminal, and iBonus Server.

#### e-Cash iBonus Terminal

It operates the same way as Loyalty except it adds or deducts e-Cash dollar value on the Member Card.

#### Reload e-Cash Value

Reloading value is done by entering the amount on the Terminal and then presenting the Member Card. In the case of key-in error, the value can be adjusted by an undo action. Value on Member Card can be reloaded using the keypad of the e-Cash Terminal. By default, 1 bonus point will be added to the Member Card for every Local Currency spent.

#### Deduct AED or any Country currency Value on Purchase

Purchase selection is done on the Shopping Display unit. When the Member Card is presented on the Terminal, Terminal will display selected purchase item(s) and then prompt for confirmation. Once it is confirmed, currency value will be deducted from the Member Card.



Optionally, a coupon or a receipt can be printed if a receipt printer is connected to the Terminal. Consult your dealer for the recommended receipt printer model.

### Integration to third party PC-based Point-of-Sales system (POS)

IBonus terminal can be integrated to most third party Windows-based Point-of-Sales (POS) systems to receive the sales amount so as to eliminate the need of manual input of points and values. However, it requires the third party POS system to send out the sales amount (optionally with transaction ID) data through any COM port to AVI Infosys Terminal. AVI Infosys provides a Windows based programming library in .dll for this purpose. There are 3 functions in this library: AVI Infosys Init () to define the COM port used; AVI Infosys GetVersion () to obtain the version number of the IBonus terminal; and AVI Infosys\_send (Date\_Time, Amount, transaction ID, Type, Timeout) which returns the acknowledgment value.

### Member Card Replacement, Bad list and Card Expiry Schemes

In general, lost Member Card will not be replaced as this simplifies the operation; and it is the responsibility of the Members to store their cards in a safe place.

However, there will be some operators that require replacement of lost cards. In this case, Members can report lost card via any Terminal by inputting their Member ID and their date of birth. The validity of the

member ID and the date of birth will be verified by the iBonus Server. After the information is verified, the Card ID of the lost card will be included in the bad list which will be broadcasted to all terminals to deny future access of the lost card. The card replacement ID will be generated at the terminal and optionally printed on a receipt. The replacement card information plus card replacement ID will be sent to the terminal which originated the request. A replacement member card can now be issued at the terminal with of the newly generated card replacement ID.

Since there is always a limit of memory capacity, the bad list cannot be allowed to grow forever. Our system controls the length of the bad list by using an effective expiry scheme of member cards. 3 different choices of member card expiry schemes are employed: fixed date, fixed period, and automatic expiry extension.

## Member Smartcards

e-Rewards Program Improve Customer Retention and Spending. eRewards programs improve customer retention and encourage spending. Customer acquisition is improved by distinguishing you and your services from the competition. This is particularly true for the existing market, where smart cards are still considered unique.

Build e-Rewards with Smart Cards and Watch Your Business Grow. Showing appreciation will go a long way toward strengthening your relationships with your customers. One way to show customers that you value their business is to provide them with glossy, personalized eRewards smart cards. Customers can sign up for a eRewards program in-store as part of a marketing promotion or eRewards campaign.

With e-Rewards Programs, Customers Can Be Rewarded for Their Patronage. With smart cards you can acknowledge frequent customers and award points according to their level of spending - you can encourage repeat purchases by enabling a points-based reward system. You can offer customers discounts and points toward merchandise, and record valuable data about their buying preferences at the same time. e-Rewards solution can coordinate a customer e-Rewards campaign for just one business or for a group of affiliated companies. Merchants can team up to offer joint promotions.



## Benefits of Smart Card-based Customer e-Rewards Solutions.



Smart cards increase transaction efficiency and promote increased purchasing, while decreasing costs due to human error, magnetic strip failure, or fraud. Unlike systems with magnetic stripes, smart eRewards cards are processed off-line. They only require a smart card terminal and a smart eRewards card. There is no costly infrastructure on the backend and no additional transaction costs to worry about - you are in control. It is less likely that a customer will lose or discard a smart card.

### Rewards and Incentives.

Multiple reward and incentive options can be linked to the business location, purchase, smart card, product and or historical information. These options set the parameters for instant rewards and incentives to customers. Our e-Rewards systems let you create programs for a more direct and friendlier relationship between you and your customers.

Customers Accumulate Points on their Cards. With each visit, customers have their balance checked on an easy-to-use smart card terminal with built-in keypad; web server and display. You define how many points your customers can receive with each dirham spent. New cards can be activated at the same terminal. Customers can purchase and earn points and redeem them later.

### Smartcard e-Rewards Programs Manage the Following Campaign and Card Functions:

- e-Rewards point accumulation and redemption
- Transaction and customer data collected at a smart card terminal
- Loading and managing specific cardholder details.

You can use a smart card e-Rewards system as a smart card for e-Cash products and services. Instead of accumulating points, you load value onto the card. This is much better than paper gift vouchers which are often lost or discarded, hard to track, easy to duplicate and susceptible to fraud. Smartcard Gift Cards are easily traceable and can be immediately activated or deactivated.

Smart Cards Collect and Manage Marketing Data. In addition to coordinating e-Rewards cards and points, the e-Rewards system can collect and manage valuable marketing data from all transactions that use e-Rewards cards, including data about customer demographics, purchase frequency, product types purchased, and geographic area. Details of eRewards points and point-gaining transactions are captured by a stand-alone card terminal and transferred to a PC or a backend server for further analysis. You can review a customer's accrued points, redeemed points, and deleted points. The eRewards software maintains a complete database of all customer rewards and reward suppliers.

### AVI's e-Rewards Consulting Services

AVI has expertise suited to all your eRewards needs. Tell us about your requirements and we can provide you with a customized eRewards solution. We assist with the integration with most point of sale transaction environments including Point of Sales (POS) terminals, Efficient Consumer Response (ECR), web servers, and the payment system. AVI also provides installation and training. We customize our eRewards solutions to suit your eRewards campaign and provide a full-range of smart card solutions by integrating your smart eRewards system with other smart card solutions, including logical access control and physical access control.



Launch your e-Rewards Program with AVI's e-Rewards Starter Package. e-Rewards systems don't have to be expensive. You can easily start your own affordable eRewards program today and replace those old-fashioned paper gift vouchers and punch card frequency programs with smart cards. AVI's eRewards starter package contains everything you need to start your own eRewards program. We print and personalized 10000 eRewards cards with your unique artwork. The e-Rewards starter package comes with a



smart card terminal with integrated keypad and display. Windows software to configure your eRewards program, download, and analyze transaction reports is also included. All you need to do is plug the smart card terminal into an electrical & Network Port and you are ready to initiate your e-Rewards system.

### Two types of Member Cards are used

(a) Ultra light Card with less memory (48 bytes) and lower security for eRewards System (single redemption item stored)

(b) Classic Card with more memory (15 sectors of 48 bytes each) and high security (Triple Des) for both e-Rewards System and e-Cash subsystem.

## Member Cards

A member card is a contact-less smart card with the size of a credit card. Integrated within the card is built-in memory for storing the most up-to-date bonus points, e-Cash currency value and administrator defined member profile. Utilizing 13.56MHz radio frequency smart card technology, the transfer of data between smart card and terminal requires no physical contact.

### Smartcard Printing

Color graphics can be printed on both sides of the smart card using 4C color offset printing. In order to enable printing of good quality, 500 dpi artwork is recommended. Cards with quality designed images can act as a good advertisement tool to promote company image.

## iBonus Server

iBonus Server is bundled for free with iBonus Terminal. It is a windows based software, which collects transaction records from Terminals and stores them in Microsoft Access or Microsoft SQL Server 2005 or later, and manages the card renew, repair and replace queries from all the Terminals.

Easy System Administration



System administrator can conveniently monitor and exports the status of all Terminals thru a real time status report and event log.

iBonus Administrative Tools -- Administrator can monitor the transactions sending back to server.

### Supports Latest Microsoft .NET technology

Written on Microsoft .NET technology, iBonus Server can be installed in any Windows PC and collects transaction records from multiple Terminals through computer network.

Microsoft Access .MDB or Microsoft SQL Server 2005 can be selectively chosen for transaction storage.

### Maintains Advanced Card Control Security

iBonus Server is part which manages the security of all advanced card control functions. It makes sure that every card renewal, repair and replace operation to be done securely among all distributed Terminals without compromising the system integrity.



### Manages Card Blacklist

iBonus Server maintains a blacklist of the member card and staff card. iBonus Terminal download the blacklist periodically. Having a serial number match with an entry on the blacklist, the card is rejected at the Terminal.

### Unify Settings on Terminals

Some settings can be adjusted at server. Terminal will follow the setting defined in server. Settings include: Expiry Mode Settings (Can be overridden by terminals.) Request and blacklist downloading period iBonus Server, a comprehensive multilingual Windows based CRIH software tool collects transaction records from Terminals and stores them in ODBC database format. It provides a SQL report tool to generate results and reports based on different criteria: filters, grouping, and sorting

iBonus Server can collect records from Terminals as well as e-Cash Terminals. If we generate report grouped by branch code, we will able to see the net income of different branches.

Basic Features of SQL Report Tool: Range of records

can be selected based on different filters.

**Time:** a specific date, a period of day and time, this week, last week, this month, or last month.

**Member ID**

**Terminal Action Type :** There are different actions regarding the operation of the Terminal, such as presenting Master Card, Staff logout and Card Purchase. Each action has an internal code associated with it.

**Member Information:** Administrator requires to first upload the Member profile definition before using this filter.

## e-Rewards Overview

e-Rewards is provided for system developer to get an idea how the data in iBonus System be used to provide web based reports. it leverages latest Microsoft



ASP. Net and Reporting Service Technology to offer web based reporting functionality. Role capability can be defined and let people with different responsibility see the most relevant reports tailored for them.

e-Rewards Reports (Sample Code) is bundled with iBonus Server package. Microsoft SQL Server 2005 or later and Microsoft Reporting Services is required. If Microsoft SQL Server is not expected to be used in the eRewards System, the report application bundled with iBonus Server can be used for generating report without any further development.

**Login page:**

### User and Role Administration

Administrator can create, delete and disable user. They can also add, remove and change user's roles. By default, eRewards Report defines the role as follows:



### Reports for Administrator

- Add User Account
- Remove Account
- Manage Account
- Manage Role
- Manage Pages
- Change User's Password
- Report on Blacklist
- Report on Card Request
- Report on Database Size
- Report on Issue Card
- Report on Member Status
- Report on Terminal Status
- Report on Transaction.
- Report on points by branch.
- Report on spending range.

Administrators can see the status of all Terminals through the web

### Reports for Financial Controller

- Total cash from member retained
- Cash paid by member in advance in any particular month
- Cash Clearing by Branch
- Sum of the bonus of all member cards retained
- Bonus point monthly balance in any particular month
- Summary of balance e-Cash and bonus by branch which can be used for clearing

How much cash retained can be checked





## Reports for Marketing Manager

- Average days from last visit by Accumulated spending
- Purchase frequency by Accumulated spending
- Customers reload range per transaction
- Sales by Branch
- Daily Sales
- Hourly Sales
- Monthly Sales
- Weekly Sales
- Yearly Sales
- Number of transaction by month
- Number of transaction whose amount is within a specified range
- Transaction Detail
- Member Detail



Marketing manager can make analysis on the customer's buying behavior

## Reports for Branch Manager

- Branch sales by month
- Replace card detail
- Repair card detail
- Renew card detail
- Replace count of branch
- Cash collected by Terminal
- Terminal Status



## Reports for Member

### Card Balance

- Transaction history
- Renew, repair and replace status

Member can check the card balance through the web

# Warranty Statement

## End User Warranty

Supplier makes a limited one year warranty against manufacturing defects concerning the products to end users. Such warranty provides for a remedy of repair, replacement or refund of purchase price if the defective product is returned to Supplier.

SUPPLIER EXPRESSLY DISCLAIMS ANY WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OF ANY PRODUCTS.



## Staged deployment of loyalty solution for retail chains spanned over cities

As globalization prevails, retail chains consist of many small to medium size shops are expanding from within a city to other countries. Since it requires a highly reliable network and centralized database server, the traditional magnetic strip-based eRewards System faces the problem of costly installation and maintenance in the multi-sites environment.

Since most of the shops are small in size or franchise based, there is rarely in-house technical or R&D personnel, Thus, the operation at the shop has to be simple and the deployment of the system has to be in stages so as to reduce the risk of total investment loss.

**Solution:** The whole system deployment can be divided into 3 stages:

- Trial run in 1-2 shops
- Limited deployment at few shops
- Full scale deployment.



**In stage (a) - trial system, it requires a minimum of the following system components pre-configured by the administrator:**

- An Intranet, Internet, or telephone modem setup for the system allowing remote monitoring and administration.
- Issue limited number of Member Cards and some staff Cards using the Master Card supplied by the factory.
- Configure IBonus terminal(s) with specific Branch Code and Terminal Code to identify the branch location. Connect to power with a factory supplied power adapter.
- Make necessary configuration and definition of Member profile, Membership Class, etc on the AVI Infosys Display units. Mount those units on the wall and connect to power with a factory supplied power adapter.
- Test the remote network connection by using the web browser to access the IBonus terminal and the Display unit.
- Install AVI Infosys Server on a regular Windows based PC at the headquarter.
- Train the operators at the shop level to operate the system.

The system is ready for trial run.

**In stage (b) - limited deployment, it is simply a replication of the success of the trial system into different shops.**

- Make sure that all Terminals at each shop have the same Branch Code to identify the branch location.
- Color patterns can be designed and printed on the Member Cards for the purpose of corporate identity and for promotion.
- Member or Staff Cards can be issued from any Terminals using Master Cards supplied by the factory.
- Make sure that all staff is trained on the operation of the system.
- Prepare a spare set of Terminal and Display unit just in case of device failure.

**In stage (c) - full scale deployment is ready when administrator and operation staff are very familiar with the operation. After all, AVI Infosys eRewards System is scalable and easy to use.**





# International Loyalty Solution for Airlines and Hotels

Most international airlines and hotels have implemented magnetic-strip-card-based loyalty or membership systems. Other than having an advantage of a relatively low card production cost, these systems have the prominent problems of:

- (a) High technical maintenance of centralized database servers
- (b) Costly intranet or Internet connection worldwide
- (c) Extremely expensive mailing of account statements
- (d) Expensive local operators at each location.

Solution: Our AVI Infosys e-Rewards System can easily replace the traditional magnetic strip card system with the following benefits:

- The current information is stored on the Member Card and the transaction records are sent in batch to headquarters. This eliminates the dependency of real time information from the centralized database system and a reliable network connection. Large deployment of the system in remote locations become easy and inexpensive.
- iBonus Server stores transaction records in ODBC format which supports integration to the existing software system of airlines or hotels.
- Member Card can also be used for security access such as airline boarding and hotel room access using iGuard access control device.



## A clearing center for multi-stores e-Cash (prepaid) solution for franchise stores or food courts

Franchise stores or food courts typically consist of many franchisee or food stores with different owners. If a e-Cash system is used, there is an issue of cash settlement among stores, because some stores may collect more cash from reloading customer cards while other stores may give out a lot of products or services

without receiving cash. If it involves a lot of stores and large transaction amounts, a clearing center may be set up to handle the cash settlement.

Solution: Since each store can be identified by a branch code, e-Rewards Software can easily generate a daily, weekly, or monthly table showing the total reload value and total purchase value of each store.

## e-Cash (Prepaid) solution for schools / colleges

The e-Cash solution is a secure and innovative, e-Cash account that enables students to make on campus purchases without using cash. The program allows parents to load value and review purchase history online at their convenience. The e-Cash solution provides for much greater efficiency in the cafeteria as well as the accounting office.

### Schools/colleges love the e-Cash solution because:

- Speeds cafeteria transactions.
- Increased sales.
- Reduced time, error, and loss associated with accounting for cash
- Discreet payment method for subsidized meal programs
- Can use at other school venues such as bookstore, concession stands
- Delivers on a growing parent demand
- User friendly - easy to use for parents, students, and school cafeteria staff

### Parents love the e-Cash solution because:

- Convenient - no more fretting about having change every day, can load funds anytime
- No more issue of getting change back
- Eliminates worry - email notifications when balance gets low
- Safer than cash
- Control - where the money is spent
- Accountability - view purchase history
- Allergy Alerts
- Can monitor food choices, opening the door for discussion regarding health and nutrition

### Students love the e-Cash solution because:

- Never have to worry about having enough lunch money again!
- Safer than cash - no more lost or stolen cash
- Speeds cafeteria purchase and less lines
- Can make purchases beyond cafeteria - bookstore, concessions, etc.
- Discreet subsidize meal programs
- School Branding/School Spirit

www.smart-loyalty.net



**AVI INFOSYS**

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INTERNATIONAL OPERATIONS

