



ILCL: IdentLogic Systems Customer Loyalty Program

Overview

Ille qui meritis est praemium habeat™
(Let him who has earned it bear the reward)

9 January 2019

IdentLogic Systems

Phone: +91 22 4295-4471

sales@identlogic.com

www.identlogic.com



Table of Contents

1	Introduction	3
1.1	Short read	3
1.2	Target audience	3
1.3	Vision	4
1.4	Key game changing differentiators.....	4
1.4.1	Other benefits.....	5
1.5	Solution summary	5
1.6	Solution deployment	6
1.7	Components	7
1.8	Credentials.....	8
1.9	Caveat	9
2	Component description.....	10
2.1	Enrolments.....	10
2.2	Earnings.....	10
2.3	Statements.....	11
2.4	Campaigns.....	12
2.5	Burnings or redemptions.....	12
2.6	Program management	13
2.6.1	Point composition	13
2.6.2	Parameterisation	14
2.7	Member management.....	14
2.8	Tiers.....	14
2.9	Communications & messaging	14
2.9.1	Relationship email	15
2.10	Awards.....	15
2.10.1	Fulfilment	15
2.11	Partnering	16
2.12	Hierarchies	16
2.13	Clusters & links.....	19
2.13.1	Clustering.....	19
2.13.2	Linkage	19
2.14	Integration.....	19
2.15	Reports.....	20
2.15.1	Management Information	20
2.15.2	Dashboard	20
2.16	Internationalisation	20
2.16.1	Multiple countries, languages & locales	20
2.16.2	Currency	21
2.16.3	Time zones with daylight saving time.....	21
2.17	Customer Service	22
2.18	Security.....	22
2.19	Vendor interface	22
2.20	Member interface.....	22
3	Conclusion	22
4	Annexure - Parameterisation	23
5	Annexure - Reporting.....	27
6	Annexure - Technical background	29



Table of Figures

Figure 1 - ILCL schematic	6
Figure 2 - Context diagram	7
Figure 3 - Typical earning schematic	11
Figure 4 - Prime Hierarchy example - Part A	17
Figure 5 - Prime Hierarchy example - Part B	18
Figure 6 - Prime Hierarchy example - Part C	18



1 Introduction

We are committed to the on-going development and deployment of reliable, sophisticated and futuristic customer loyalty programs (CLP) for strong & sustained long-term benefits for our clients and their customers.

The IdentLogic Systems Customer Loyalty Program® (ILCL) is a package and service offering. The software can be deployed by a client or we can provide the entire solution.

It is a comprehensive & universal solution framework covering all aspects of a CLP. A standard CLP is implementable within a week (or less. Note: Preparing for it may take a bit longer). An extremely complicated CLP should be customised within a few weeks. Even then, initial operations could commence within a fortnight. Our farsighted and well-designed framework facilitates easy customisation.

The extreme variety, detail and intricacy of the package are enveloped in an extremely easy to use, secure and easily deployed system.

1.1 Short read

Reading the 8 page section 1 on Introduction will provide a good summarised view. The sub section 1.4 on Key game changing differentiators will enable you to understand the spirit of our offering.

1.2 Target audience

This document is for Marketing Managers and other stakeholders familiar with the operations of a CLP and would like to make an initial assessment of how ILCL would enhance the loyalty of their customers.

For best results, we suggest that the following issues should have been already investigated:

- ✘ Return on investment - budgetary estimates of CLP set up and running costs and the expected increased revenue and profit
- ✘ An estimate of the increase in other benefits due to the program
- ✘ The way consumer spending or activity will be converted to points
- ✘ The internal value or cost equivalence of a point
- ✘ If points don't expire or expire after some time
- ✘ Member enrolling and exiting criteria
- ✘ If Tiers (e.g. Silver, Gold, etc.) needed with tier promotion and demotion criteria
- ✘ New member canvassing strategy
- ✘ Awards expected to be found attractive by most targeted members and the points needed to redeem these awards
- ✘ What kind of campaigns? Any related to birthdays; marriage, joining or tier promotion anniversary special holidays such as Christmas & school vacations; traditionally lean business periods, etc.
- ✘ Locations where members could earn points
- ✘ Current customers: How many expected to be members of the loyalty program now and after the first & second year



- ✘ Number of transactions per month or year and growth percentage
- ✘ How will members redeem their points in the program and how often on average
- ✘ What kind of promotions are planned with approximate frequency
- ✘ What kind of communications are planned with approximate frequency
 - by medium (social media, email, text-message/SMS/MMS, phone, newsletter)
- ✘ Is multi currency functionality needed
- ✘ Which currency is primary
- ✘ Is multi time zone functionality needed
- ✘ Which time zone is primary
- ✘ If any time zones have daylight saving
- ✘ The top 5 to 10 business, contractual, technical and business continuity issues

For those not fully familiar with loyalty, we can develop a customer loyalty concept that will assist in deciding the best way to organise a CLP tailored to your requirements.

1.3 Vision

Our vision for ILCL is that it:

- ✘ Is instrumental in attracting & retaining our client's customers
- ✘ Enables our clients to offer a CLP offering by choosing a solution precisely tailored to their needs
- ✘ Provides for extreme variety of functionality
- ✘ Complete
- ✘ Global
- ✘ Fast implementation
- ✘ Fast operations
- ✘ Reliable
- ✘ Stable
- ✘ Rock solid
- ✘ Tested
- ✘ Low risk
- &
- ✘ Be a thing of beauty & a joy forever

We have translated our vision into a product that practically addresses the typical pain points associated with running a CLP. Our clients can focus on strategy & tactics, confident in the knowledge that it would be very easy to deploy any planned initiative to improve their CLP.

This foresighted, well architected & well-designed product will make everything easy for you & your organisation.

1.4 Key game changing differentiators

Comprehensive Framework: Covers almost any possible or conceivable scenario. Most requirements covered resulting in no or little customisation.

Globalisation Ready: Multi-Location, Multi-Locale (Multi-Lingual), Multi-Country, Multi-Currency and Multi-Time Zone (with Daylight Saving, if applicable).



Different Loyalty Point Wallets: Extremely fine tuned earning and burning (redeeming) methods possible. Enables special members to be rewarded especially.

Simple to Sophisticated: Simple standardised solutions can be configured and implemented in a week or less (see the section on Caveat). Extremely sophisticated solutions implementable in weeks.

Responsive Screens: Layout as most suitable for the mobile or personal computer.

Adaptive Screens: Content optimised for the mobile or personal computer.

Security: A comprehensive but easily implemented framework. Use of multiple hierarchies to control access to information (highlights follow).

Scripts or Cookies optional: Screens run with browser scripts (JavaScript) or cookies disabled, allowing members with stringent security requirements to operate unhindered. Even then, screen display speed or user convenience is only marginally affected.

1.4.1 Other benefits

- Tremendous flexibility in defining CLP configuration, particularly in point earning policies, campaign set up, redemption rules, tier upgrade and downgrade strategy, among others
- Flexibility of solution - suits any media, any channel
- M.I.S. friendly - generates user-friendly reports of all kinds and facilitates easy and relevant marketing analysis
- Customisation - can be fine-tuned to suit the particular needs of clients; extent of customisation possible is far more than comparative loyalty solutions
- Operational ease - easy to learn and operate - even if hosted at the client's end
- Scalability & Enterprise readiness - can be instantly scaled up to meet the demands of rapid growth
- Customer support - intensive training and customer service provided
- Assured success - based on the long time for clients using ILCL
- Speed of operation
- Effective campaign management with timely reminders, tracking & measurability
- LIFO of points if the point expiry option is chosen; enabling a limit on liability

1.5 Solution summary

While many processes are identical between CLP's, point conversion logic including campaign promotional points, tier up/down grading and a few other processes usually vary greatly. To handle these separate areas of extreme diversity and total similarity, ILCL handles enrolment, processing of input (billing) transactions & campaign activity with conversion to points, activity statement formatting and fulfilment, and, tier changes in a bespoke (tailor made) system for each client running in their own satellite system; that at the same time is tightly knit with the main system. The core software handles the common processes of redemption, campaign definition, coupons and vouchers, messaging, customer relationship management and inter-party accounting.



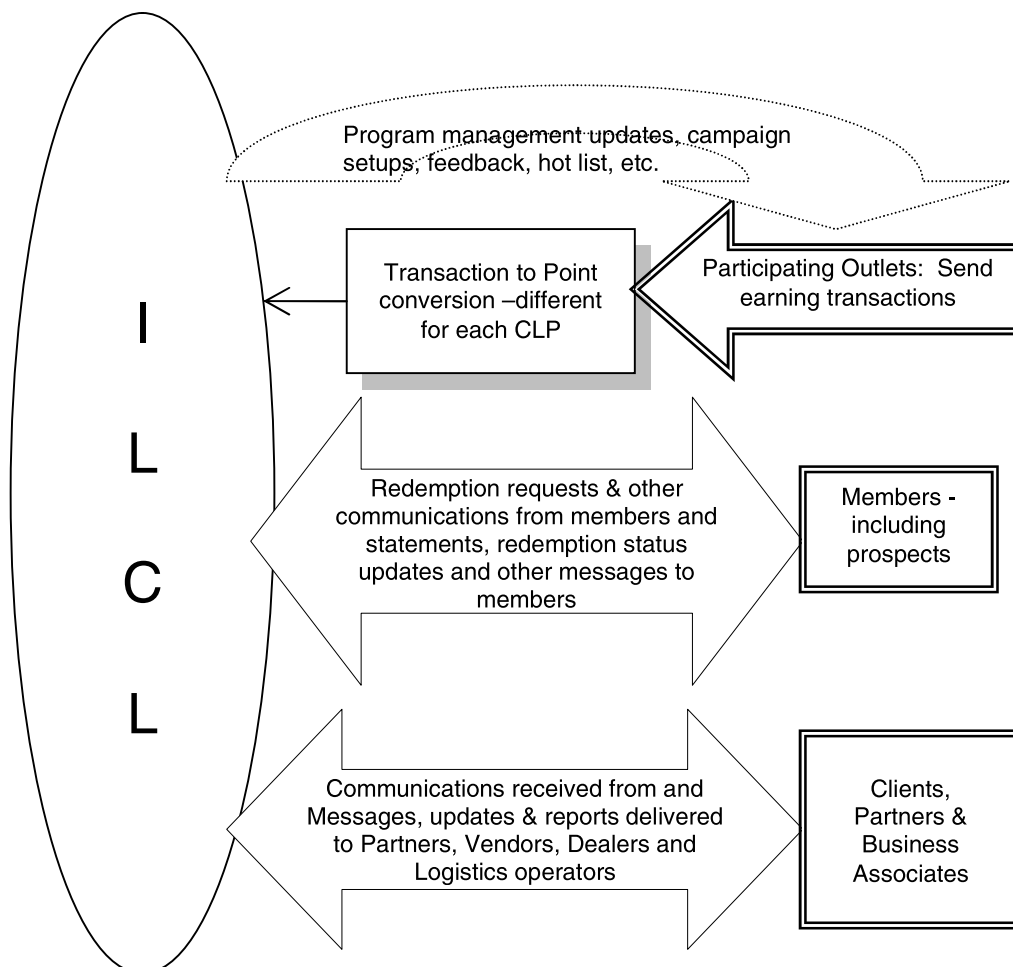
Program, point earning, tier, campaign, redemption & other behaviour set up define how the CLP is structured. The customized procedures on point earning & tier management convert the detailed logic rules into a powerful CLP system. Since there are already available a variety of logic systems covering a gamut of tried & tested CLP's, it is easy to quickly generate a new, reliably operating CLP.

The entire system operates as a repository of loyalty related transactions including invoices, messages, points earned and awards redeemed. The system facilitates easy capture of bills, invoices, payments and any related transactions and activity and their conversion to loyalty points as a satellite system within the umbrella of ILCL.

Once points are determined, the entire life cycle of the loyalty process is handled by the main ILCL system.

A figure giving a high-level view of the configuration of ILCL is below.

Figure 1 - ILCL schematic



1.6 Solution deployment

In case a client would like to deploy ILCL under their own control, we recommend that we operate the system for some time before handing over operations. During this period client personnel can be trained & internalise package logic.



We can operate the system remotely, i.e. on servers anywhere in the world including in a data centre at a client location.

Package support & maintenance is from Mumbai, India. Remote connectivity to the servers will be required initially and for diagnostic purposes later, if required.

We will train key client personnel. These trained people would in turn provide training and first level support to other client personnel.

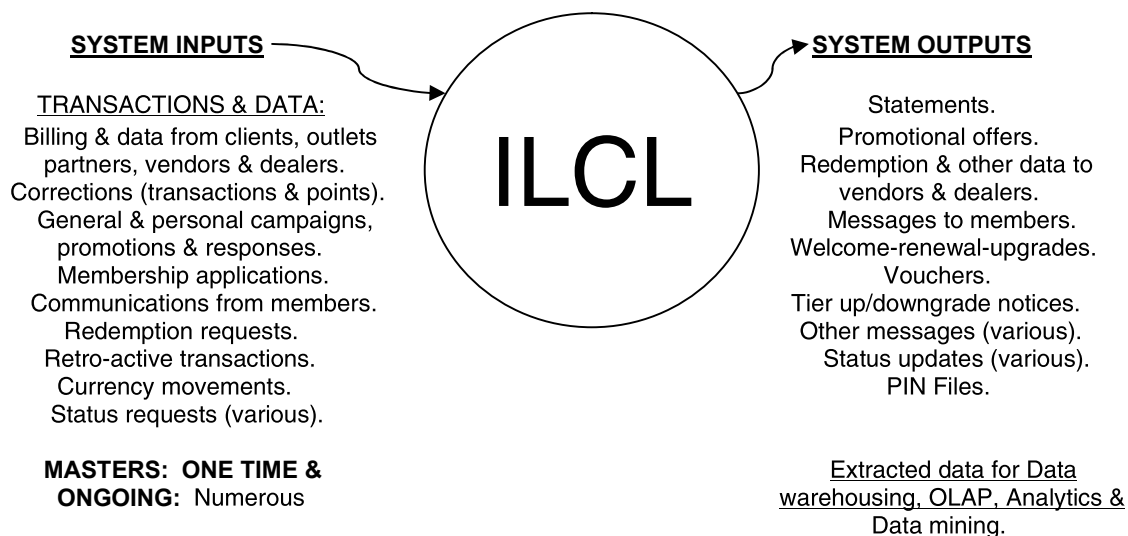
A firm estimate of the solution roll out time can only be made after all structural details are finalised. However, depending on CLP complexity, solution roll out may be soon as within one month, or even within a week or less.

It would be prudent to allow for one to two months for customisation of a very sophisticated & extensively tailored solution. Even then, start up operations should be able to commence in one or two weeks.

1.7 Components

A high-level view of information flows into & out of ILCL is below.

Figure 2 - Context diagram



The major functional components of ILCL, described later in this document, are:

- Enrolments: Attract suitable members
- “Earnings” - Point computation: Translate spending or transaction or other activity, including those related to a campaign, to points
- Statements: Communicate status to members with other marketing messages
- Campaigns: Encourage members to become more loyal & valuable and enable them to derive more benefits through promotions
- “Burnings” or redemptions - Award Redemption: Enable members enjoy the benefits of the CLP by redeeming the points they have earned through their participation in the CLP for Awards

Other main deployment components of ILCL, detailed later in this document, are:



- Program management
- Member management
- Tiers
- Communications & messaging
- Awards
- Partnering
- Hierarchies
- Clusters & links
- Integration
- Reports
- Internationalisation
- Customer Service
- Security
- Vendor interface
- Member interface

Annexures contain details of Parameterisation, Reports & Technical Background.

1.8 Credentials

ILCL is the culmination of knowledge & experience based on CLP development & operations for various clients for over three decades preceded by a strong exposure to marketing systems. It has stood the test of time. It is future proof by design. Stability & security are the hallmarks of our solution.

Please see the Annexure - Technical Background for more detail.

ILCL or its precursors have been operated or demonstrated for petroleum, fast moving consumer goods, insurance, airlines, mobile phones & other businesses for the retail & trade channel (wholesalers, distributors & agents) market segments.

It can be easily implemented in any kind of situation where desired activity is to be rewarded, e.g. patient compliance with medicine regimen, or, employee compliance with organisational rules, or, an insuree following activities beneficial to health or car.

The table below gives our expertise obtained in developing CLP's.

Organisational & Individual Expertise of selected Customer Loyalty Programs

Client & Brand	Audience - Target segment	Roles	Member base & years
Taj Hotels: InnerCircle	Hotel guests and restaurant patrons (individuals)	System specifications, design, test & operate solution; email & voice support	20,000 members - 2 years
Bharat Petroleum Corporation Limited: PetroBonus	Vehicle owners (individuals)	System specifications, design, develop, test, maintain, system integrate & operate solution; email & voice support	2 million members - 7 years



Client & Brand	Audience - Target segment	Roles	Member base & years
Colgate Palmolive: Phir Dil Se	FMCG Trade: Wholesalers & Stockists	as above	23,000 -2 & 3 years
ICICI Bank - Home Loans: High Rise and Rising Star	Trade: Direct Sales Agencies and Sales Teams	as above	4,000 - 7 years
Cadbury: Milan	Trade	as above	10,000 - 3 years
LG: Club ACE	Dealers	as above	1,000 - 1 year
Gujarat Ambuja: Aasman & Anand	Dealers	as above	12,000 - 4 years
Novartis: Unnati	Trade	as above	15,000 - 3 years

1.9 Caveat

A CLP is a complex system where decisions on structure and member offering may have far-reaching and extreme marketing consequences. In addition, this document, even though containing substantial detail, is an attempt to give the user a first flavour of the nuances of ILCL. Client organisations are advised to investigate the system thoroughly and satisfy themselves in further detail as to exactly what is and what is not immediately possible with ILCL and determine how it should be used as part of their overall marketing mix.

The entire loyalty program principles, policies and design should be carefully planned before any software solution is considered. The plan should include a few likely future scenarios of changes in the short and medium term, e.g. after 1, 3 and 5 years.

We offer our services to construct or analyse such a design.

A significant amount of information, images and possibly videos would be needed before proceeding. The effort of collating these should be considered.



2 Component description

Due to the integrated nature of the solution, some functionality is described more than once or just once even though it may affect other components.

2.1 Enrolments

Enrolment includes the recruitment of new members. It is possible to run a campaign to generate new members based on inputs available from the client or third parties.

Before, during or after grant of membership, personal details such as name, address, etc., can be easily updated.

Files needed for membership card generation and kit fulfilment can be generated.

Duplicates can optionally be screened using a multilingual & multi-country services offered separately. This will enable detection of the same individual, household or organisation based on name, address, phone, email, id and other personal identity data. Addresses can be cleaned and validated using these services.

2.2 Earnings

Earning is the conversion of member activity to points. Point conversions may incorporate tier, campaigns, sales growth, performance rules and other considerations. The earning module for each CLP operates independently. Typically, invoices constitute the main input for point conversion. However, points may be earned by any desired kind of activity or behaviour, e.g. when a member attends a festive event, or, walks a number of steps in a day as gathered from his activity tracker, or, purchases health food from a grocery chain, etc.

Multiple types (buckets) of points are available which can be labelled and treated separately, i.e. some special awards or campaigns or tier promotions may require balances of special points to fine-tune exclusivity to selected members. Most CLP's are expected to require only one type of point.

Some specific facilities are:

- Handling of taxes, discounts, invoice format, payment methods, activity, quantity or value thresholds
- Generation of bonus points depending on campaign participation
- Historical invoices available on-line as per client requirement (resource implications)
- Duplicate records checked
- Frequency of earning run controlled by client specified parameters
- Multiple cycles
- Member can view itemised or summary invoices on web (resource intensive)
- Event based earnings - in response to specific enrolment or other campaigns
- Handles electronic invoice formats
- Handles charges, credits & advances
- Partial, split and advance payments handled

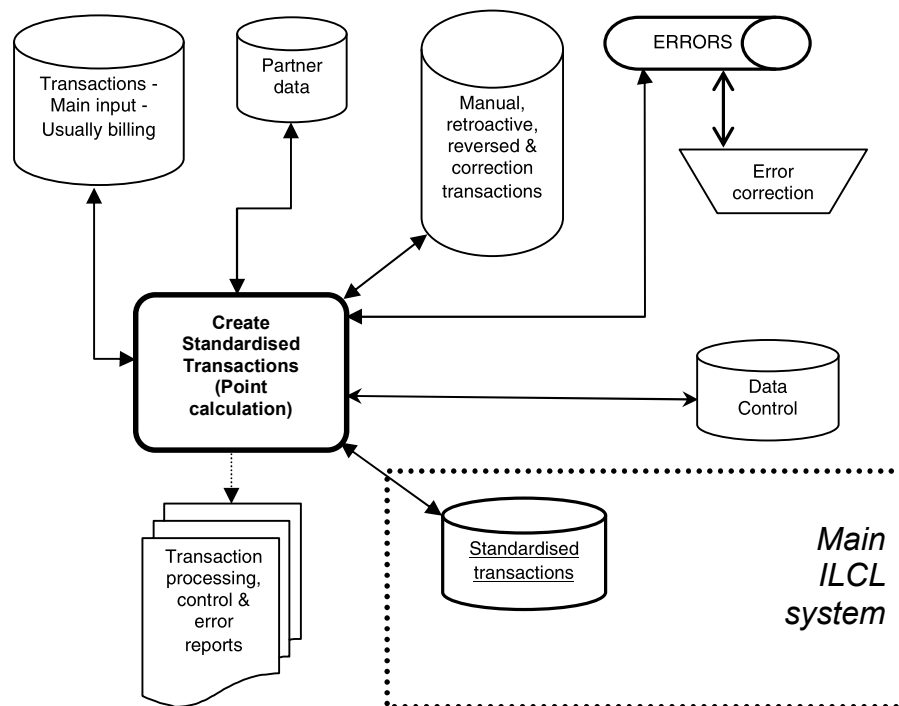


- Single payments across multiple services allowed
- Points may optionally be purchased for cash or exchanged for points of another CLP
- Points may optionally be set to expire after a certain time or manner
- Manages the Accrual of points

A typical example technical schematic on the earning mechanism follows.

Figure 3 -Typical earning schematic

Data to Point Conversion: Separate for each CLP



Billing information is the main input for calculating points (see top left of schematic). Other inputs controlling points are reversals, corrections, manual & retroactive transactions, along with partner generated transactions. Error data, after corrections, are re-processed. Data control information is updated with each run.

Standardised transactions are then handled within the main ILCL system.

The advantage is that only the minimum necessary bespoke system development & handling is done for each CLP.

2.3 Statements

Consists of three phases:

- i. Pre-processing - common
- ii. Extraction - usually common; bespoke supported
- iii. Fulfilment - always custom-built; existing templates easily adapted. Mail, email, Web status update & SMS supported



Facilities:

- Personalisation available based on any segmentation rules
- Extract printed or emailed in house or sent to a third party print or email fulfilment agency in CSV or other format. PDF or other customised text formats can be created.
- Errors bypassed - recovery separately
- Multiple runs can be performed simultaneously
- Customers assigned to a specific cycle

2.4 Campaigns

Campaign management is an important part of a CLP offering. ILCL offers tremendous flexibility in both personalisation as well as tracking response. “Gamified” or multi stage promotions can be set up where the next initiative may be triggered to take place based on member response. Some features are:

- Templates for replicating campaigns, contests and events
- Can identify key user variables and extend offers based on these variables
- Start and expiry times pre determined - open ended promotions possible, even though they should be used sparingly
- Different marketing campaigns can be targeted to various profile groups
- Supports one-to-one marketing
- Manages point, award, discount or other vouchers for multiple products with multiple members
- Benefit of multiple promotions possible on same transaction, even though this should be planned very carefully
- Bonus points and incentives can be offered at any time
- Offer members cash rebate or other vouchers as a reward for purchases and referrals resulting in purchases
- Campaign messages can be delivered and responses received in any supported media
- Cross CLP campaigns
- Management of voucher operations such as validity date, voucher value and confirmation
- Fully manages the fulfilment of deliverables to members
- Personalised messages where each message is an opportunity to further promote the client or partner
- Messages can be defined by groups
- Capture customer responses for one-to-one marketing

2.5 Burnings or redemptions

Burning enables members to redeem their accumulated points for awards. Redemption requests can be received through any media - mail, email, web or SMS. Once the redemption request is released - manually or automatically as per client option - the request is used by the Awards sub-system for fulfilment.



House holding of points possible, i.e. multiple members may combine their balances to redeem. This could be through either client option or using “Linkage” (please see the subsequent sub-section on Linkage).

When the CLP is set up to have points expire, points are redeemed on a “FIFO” basis, i.e. points earned earlier are burned first. This enables the member to avail the full benefit of points earned.

The operator may optionally manual adjust the point balance when an award is returned.

2.6 Program management

- The CLP solution’s campaign engine, member account, transaction management, member contact, relationship management, billing & settlement details and management information is integrated as a single solution
- Post Earning customization entirely through system parameter setting
- Earning & Statement printing through programming
- New programs can be established based on existing programs
- CLP’s can be simulated & tested before going live in a separate test data base
- Logos- for Point, CLP, tier, award, award volume, participating location, client & partner
- Customized nomenclature - for Point, CLP, tier, award, award volume, participating location, client & partner
- Rules to determine marketing actions for each customer
- Analysis of information for market segmentation
- Member information look-up gives access to each member’s address, demographics, member communications, and transaction activity. This is under strict operator security clearance.
- Fully customizable web based front end
- User & site settings customizable through table set up
- Ability to private label and customize for other countries
- Solution can be deployed in part or in phases
- Can restrict affiliate organisations to access data related to themselves

2.6.1 Point composition

Multiple types of points are possible. Each type can be tailored for specific attributes, e.g. “Normal”, “Superior” & “Secondary” - these names are chosen for this example & denote no particular internal relative importance. Each point type can be given a specific name, e.g. “Wonder Points”.

Some awards may be redeemed using, say, “Superior” points while others cannot be redeemed using “Secondary” points - the earnings of different types of points are dependent on different triggers, including transaction behaviour or response to campaigns, thereby allowing the client to tailor the CLP to segregate awards based on different behaviours or attributes.

Most CLP’s would require only one type of point.



2.6.2 Parameterisation

In ILCL, parameterisation is the ability to extensively define how various aspects of a CLP are set up, including program structure, tiers, upgrades & downgrades, campaigns, award redemption rules, etc. Thus, extreme flexibility of functionality can be achieved through parameter setting. Some aspects are covered in the Annexure – Parameterisation.

2.7 Member management

Membership management enables the addition, updating details, activation, deactivation, termination, renewal, hot listing, 'do not communicate' and other status member updates. Enables management of detailed member profiles and customer preferences such as preferred language (locale), favourite colours or area of interest. Enables viewing transaction and redemption history

2.8 Tiers

Tiers are to differentiate members based on different levels of loyalty by providing enhanced benefits to the most loyal & valuable members. It helps in creating an aspiration for members to move to a higher tier. Member tier is based on activity such as amount purchased, frequency of use, transaction type, fee paid or any other criteria defined by client. Tier upgrade and downgrade run at client set schedule.

Dynamic tiers are possible & are easily implemented (tier promotion evaluation after each transaction).

2.9 Communications & messaging

This ensures timely, complete and correct information delivery and receipt from all stakeholders. Any media - mail, email, mobile phone (SMS), web or fax - can be used. Some aspects are:

- Providing immediate status feedback to members and organizations (may be computing and communication resource intensive)
- Web, email, mobile phone technology (SMS/MMS) apart from mail & fax
- Inform up-to-date point balance information to members and other stakeholders
- Members may go online to enrol, access their account, and submit requests. Enrolment requests can be set to have automatic or manual acceptance.
- Members can view and modify some personal information
- Generates receipts via email or SMS
- Information distribution to members via email and other media for point balance or award redemption status
- Members & stakeholders can change their password
- Can generate personalized messages for each member
- Accommodates language preferences of member
- Deliver special offer messages to members and other stakeholders
- Push delivery of marketing messages to the existing and potential customers - however, spam severely discouraged



- Member messages may include special or personalised content, header or footer notes and personalised messages that are variable for each transaction or promotion or campaign
- Complaint management
- Ticketing of all communications
- Any format or media supported
- Each communication and message can be flexibly linked within each other. This is of great use when tracking campaign participation.

NOTE: The interface for sending and receiving emails, SMS, MMS or mobile messages may be different depending on the communications vendor chosen. Some vendors do not provide MMS. We do not expect significant effort here, as the interfaces used are very similar across vendors. Our framework makes it easy to accommodate the customisation needed.

2.9.1 Relationship email

Email fulfilment integrates with a relationship email system with web interface for members to participate in web based marketing interactions. A very strict anti spam policy with a double stage opt-in process is enforced within the email system. There are explicit flags for each member to allow or deny messages from the client, promotional messages from the client and promotional messages from client partners.

2.10 Awards

Manages award items, catalogues, award vendors & dealers, and, award redemption.

- Manage awards for different tiers
- Organizes and stores redemption item categories in logical order
- Redemption item search by name, volume, keywords and redemption points range
- Optional confirmation of orders
- Optional redemption status information distribution to members by email, SMS and other media
- Multiple awarding and redemption schemes
- A wide range of award types possible, including coupon and voucher certificates
- Coupon and voucher certificates can also be sent as email, SMS or MMS messages

2.10.1 Fulfilment

Fulfilment is all the post redemption request activity needed to manage the process of ensuring that an award is procured from a vendor & delivered to the member requesting the award.

- Real-time status of a redemption - Detailed tracking of redemption status from initial receipt to final receipt
- Automation of logistic functions such as shipping document, courier ticket or airway bill, etc.
- Fulfilment through courier, post or logistics vendor. Tracking of single stage (direct from vendor to customer) or multi stage deliveries. Combining &



- separating logistics of different redemptions, e.g. combine 10 refrigerator awards to 10 different people from factory to city warehouse and then dispatch to individual members.
- On-line, real time redemption process without re-entry of information
 - Optional ad-hoc adjustment to redemption items such as replacement of an award due to defects, non-deliverability, etc.
 - Highly flexible shipping order structure to handle different types of award fulfilment

2.11 Partnering

Partnering enables cooperation with other client's CLP's. The system design encourages the cooperation of different CLP partners to achieve enhanced benefits for both themselves and their members. Strict accounting of points earned and burned by members at own and partner's locations with point conversions enable up-to-date liability positions between partners as well as for members of each CLP.

This is the same as a coalition loyalty program.

This liability position is available between locations within a CLP as well.

Partners, with full security to see or update information related to their activity, may access the system remotely via the web.

2.12 Hierarchies

A hierarchy is how legal, organisational, CLP, Tier & physical entities are organised. The entire system is designed around hierarchies that serve to organise the solution and reports.

In case hierarchies are not important they may be ignored, even though there is a hierarchy in existence.

The "Prime" hierarchy is how all entities are organised. It includes "System" at the top representing the overall ILCL. Below it are the associations that are sets of connected CLP's related in some business purpose; usually from the same client. This can be represented as:

System ⇒ Association ⇒ (Customer Loyalty) Program ⇒ Tier

Also in the Prime hierarchy are all Vendors, Partners, Logistics agencies, Locations, Warehouses, Shops, Outlets, Outlet departments, etc. - as needed.

In the case of a single tiered CLP with no associated CLP's, the Tier would belong to an association & CLP of its own.

In addition to the main ("Prime") system hierarchy, any number of hierarchies can be defined - each going down to any number of levels. There is no difference of treatment between the Prime & other hierarchies, if any, except that the Prime hierarchy is used in case a hierarchy is needed and no hierarchy is specified. Hierarchies may cross



across each other, although such cases should be thought through carefully. The only condition is that they should not be cyclic or looping, i.e. a parent entity should not be its own child, directly or indirectly.

The system facilitates any combination of geographical or business hierarchies - Some typical examples:

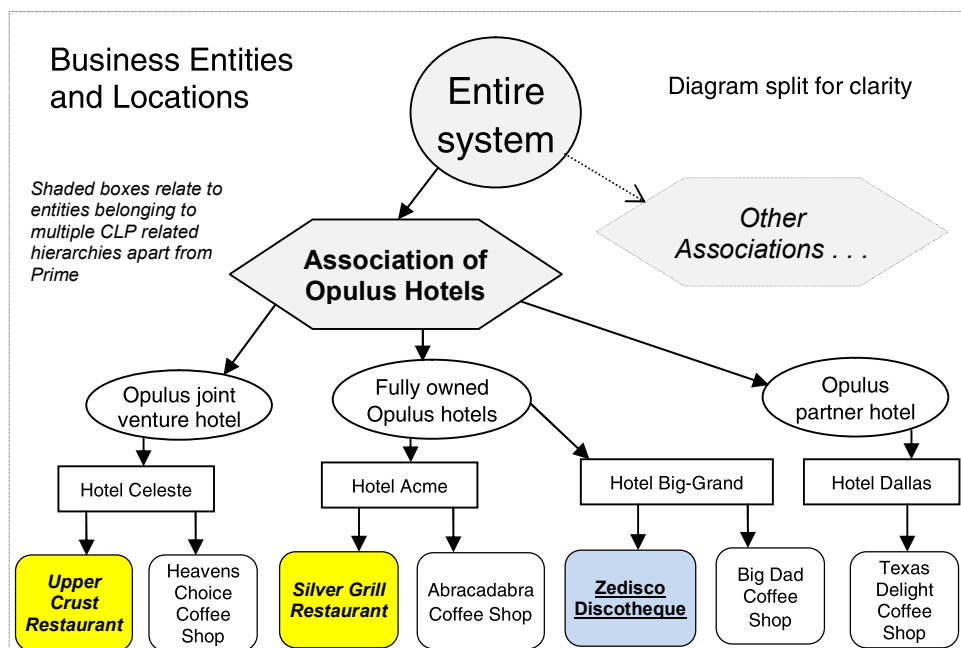
- i. SALES STRUCTURE: Organisation ⇒ Region ⇒ Country ⇒ Zone ⇒ State ⇒ District ⇒ Sales territory ⇒ Outlet ⇒ Department
- ii. COMPANY STRUCTURE: Organisation ⇒ Line of business ⇒ Brand ⇒ Sub brand ⇒ Variant ⇒ Packaging or Stock keeping unit
- iii. GEOGRAPHICAL: World ⇒ Region ⇒ Country ⇒ Zone ⇒ State ⇒ District or county ⇒ City or town ⇒ Locality ⇒ Sub locality ⇒ Post code ⇒ Street ⇒ Building ⇒ Floor ⇒ Apartment

As an example, consider a hypothetical Hotel Chain - Opulus Hotels, which has two hotels of its own, Hotel Acme & Hotel Big-Grand; a joint venture hotel, Hotel Celeste, and a partner hotel, Hotel Dallas. Each hotel has different restaurants as part of the hotel.

Opulus Hotels operates three CLP's as part of an "Association" of CLP's. The first CLP, Opalescence Care, is for spending at all hotels, restaurants, cafes and the discotheque at all its own, joint venture and partner owned properties. Opalescence Care has two tiers - Silver & Gold. It has a second CLP, Opugourmet, applicable to just two fine dining restaurants - Upper Crust & Silver Grill - the former being part of a joint venture hotel. This CLP has just a single tier. It also has a single tier CLP, Zedisco, applicable only at the Zedisco discotheque.

One way to express these relationships is to have all locations in an Association as part of the main ("Prime") system hierarchy represented as in the hierarchy example figures that follow. Part A shows all legal, organisational & physical entities.

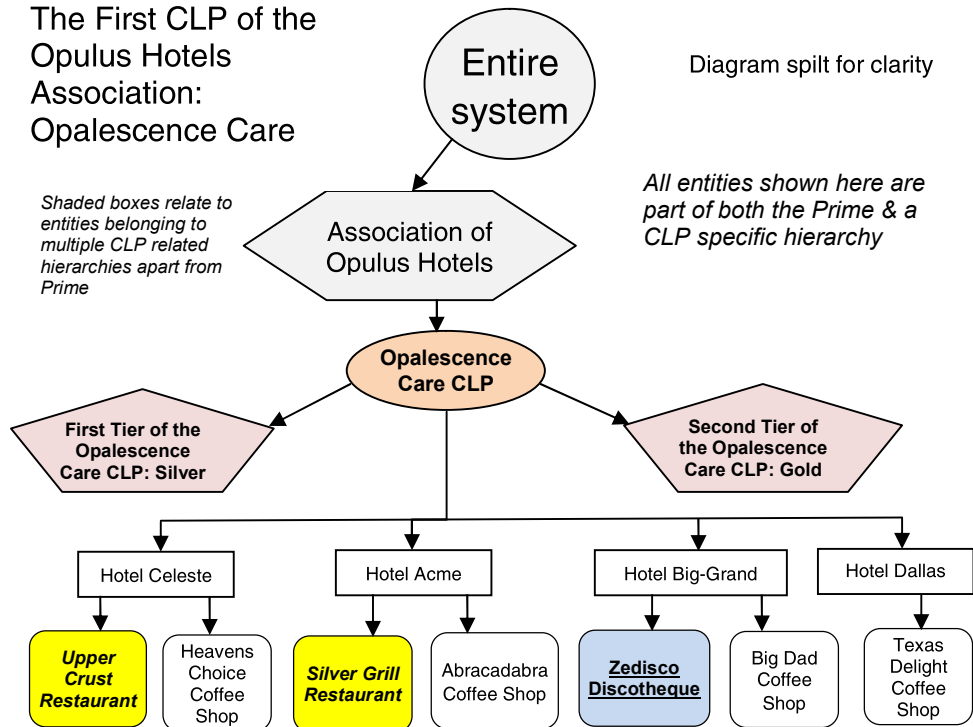
Figure 4 - Prime Hierarchy example - Part A





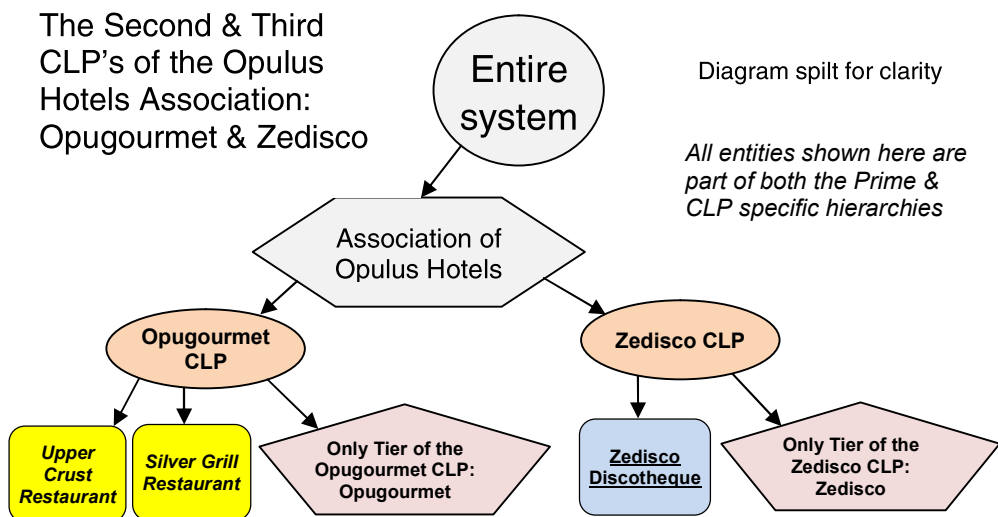
Part B shows the Prime Hierarchy of the First CLP as well as the separate CLP specific hierarchy.

Figure 5 - Prime Hierarchy example - Part B



Part C shows the Prime Hierarchy of the Second & Third CLP's as well as the separate CLP specific hierarchies.

Figure 6 - Prime Hierarchy example - Part C



Please note that the separate hierarchies defined for each CLP, i.e. Opalescence Care, Opugourmet & Zedisco, are all part of the Prime Hierarchy.

While there is no limit on hierarchy depth or width, it should be used prudently to avoid confusion.



2.13 Clusters & links

Both clusters & links help in grouping members & related individuals for organising CLP structure & for reporting. They are described below.

2.13.1 Clustering

A cluster is a collection of members or persons. Any number of clusters can be defined. Each cluster may relate to any criteria such as a tier, a CLP, an association or for the entire System. A member may belong to any number of clusters. Typically, clusters are used to segment members, e.g. on a Recency, Frequency & Monetary Value basis or on demographics, family status, income, geography, market segment, profession, usage, etc., or any combination thereof.

2.13.2 Linkage

It is possible to have a special type of separate hierarchy of CLP members defined as a linkage. At each level, members have or are denied rights of earning points and/or redeeming awards from the points of other members who are above, under or the same level as them. A typical use would be for a large organisation with many departments each having members who could either earn points and/or redeem awards, e.g. credit cards for employees of a company with points redeemed only by the administration department managers.

Up to five levels of linkage are possible. This should suffice for most CLP's as a marketing idea that can be clearly communicated to customers. For more levels, clustering or a normal hierarchy may be a solution.

Linkage can be used for a limited use of multi-level marketing offerings and hierarchy used for full multi-level marketing capabilities, even though the primary focus of ILCL is on more conventional loyalty operations and not on multi-level marketing. The system can track referrals and transactions on multiple levels.

2.14 Integration

This incorporates inputs from third party point of sale, billing and logistics systems

- Integrates with web & mobile phone technology (SMS)
- Capability to integrate with third party logistics, commercial and proprietary systems (decades old demonstrated ability to integrate with client systems)
- Can integrate with point of sale systems, stand-alone terminals, and e-commerce systems
- Data exchange with call centre, data warehousing, statistical analysis & data mining systems
- Integration with an advanced data warehousing & OLAP system tested & demonstrated

Has own inventory management system- can integrate with other systems if required for a particular CLP.



2.15 Reports

- CSV (Comma Separated - MS-Excel), TSV (Tab Separated), JSON, XML & YAML formats. PDF & customised text formats creatable.
- Large number of regular, operational, inquiry, forecasting, aging, liability and point credit & debit reports
- Regular & ad hoc reports using any third party tool such as Crystal Reports, Perl or most other reporting utilities such as Discovery, Business Objects, etc.

Further details are given in the Annexure - Reporting.

2.15.1 Management Information

- Generates management reports to evaluate program success
- Tracks:
 - ✕ Membership activity
 - ✕ Customer retention
 - ✕ Purchase behaviour
 - ✕ Results by location and product
 - ✕ Special offers
 - ✕ Return on Investment
- Churn
- Real-time web reporting
- Generates comprehensive reports on campaign management, redemption activity, fulfilment, etc.
- Integrated user tracking tools
- Report interface to the general ledger

2.15.2 Dashboard

Dashboards are fixed frequency reports on key performance indicators for the CLP.

- Detailed bespoke CLP dashboards produced
- Data mining capability tested & demonstrated

2.16 Internationalisation

2.16.1 Multiple countries, languages & locales

Internationalisation was envisioned and integrated from our initial design. Unicode is used as a basis for all system components. A unique system stores all labels, messages and mouse-overs by locale as text fields in the database. Adding a new locale involves translation of the text fields from English (UK) to the locale. For an immediate start, machine translation can be used to populate all locale specific text and then be improved by hand translation. Partial translation may be a workable solution where translation efforts are focused on those screens and reports where there is the most interaction.



For every string the system looks for the translation in the user's locale and if it is not found, looks at the next related locale, eventually displaying in English, e.g. if the person is specified to use the "Euro version of French in France" (fr_FR@EURO) locale and if the translated text is not available in that locale, it looks for the missing translation in the "French in France" (fr_FR) locale; and if the translation is still not available it looks for the missing text in the "French" (fr) locale; and if still not available it uses the original English (en) locale. Similarly for a person specified to have an US English (en_US) locale, the system first searches for the US English (en_US) locale translation and if not found the original English (en) locale is used.

This facility increases computing resource usage. If there is a resource constraint use simpler locale settings such as "en" for English or "fr" for French. Alternately, provide the complete translation for each locale needed.

Information is always entered and stored using the Unicode character entered by the user using the keyboard of the user's mobile or personal computer, or, as in any uploaded file.

A translation facility enables the hand translation of text from English to other languages and locales.

Any Unicode character supported by Oracle (currently Unicode 9.0 for version 18c) can be used and be seen on IOS, Android, MS-Windows, MAC OS & Linux clients.

Notes:

1. Text in right to left languages will be displayed in right to left format. However, dates and times will be displayed along the lines of Internet or ISO 8601 standards, e.g. 2012-11-23 for date and 23:45 for time. Numbers are displayed using digits 0 - 9 but the decimal point and grouping character depend on the user's locale, e.g. 123,456.78 in USA or UK, 123.456,78 in Germany and 1,23,456.78 in India.
2. Complete hand translation is strongly recommended for languages that will be used by members, partners, vendors & dealers.

2.16.2 Currency

All transactions are assigned a currency on capture - explicitly or implicitly depending on the CLP default. In case the currency is unspecified, the currency specified for the transacting location is used. Currency conversions can be tracked to any desired time interval. A CLP can opt to use the system currency conversion table or a conversion system specific to the CLP.

Multiple currencies are supported in a single transaction, even though unlikely.

2.16.3 Time zones with daylight saving time

Our time zone & daylight saving time engine converts each transaction time to the base system time zone so that all events are viewed in a harmonious manner from a time sequence perspective. Both these times are stored.



2.17 Customer Service

This enables operations of a Help Desk where the operator can easily view all touch points of the member & respond accordingly. All inputs from the member are tracked till closure & can be re-opened if needed.

All communications from a Member can be seen and responded.

2.18 Security

- Innovative, comprehensive and easily administered data security architecture: User allowed to read, insert, update or delete data as per rules governed by role and concerned CLP. Provides roles based security and allows multiple access levels.
- Alarms when client defined variances occur in data
- Has fraud detection & prevention algorithms to minimize loss due to fraud. Note: The main onus on managing fraud is by the clients themselves.
- Strict silo management of access to data designed into the system from scratch - ensures near fool proof security
- All insertions, deletions & modifications tracked by user, time, terminal & program used - information before update or delete moved to history files
- All job's user, TCP/IP address, start time and end time tracked
- The entire system may be run securely using SSL, if needed

2.19 Vendor interface

Vendors may log in and see or download their new purchase orders or award requirements and update or upload status & dispatch details.

2.20 Member interface

Members can log on at the ILCL Member web site and view their point balance, open campaigns and transactions. They can view the award catalogue, place an award redemption request and view the status of all redemption requests.

They can also enter a communication, which will be handled as any other communication from the member, and see all previous communications and messages sent to them.

All this in an attractive and easy to use system optimised for mobile or personal computer.

3 Conclusion

ILCL is a rich, stable & powerful marketing system enabling clients achieve sustained benefits, and a distinctive presence in today's crowded marketplace.

It enables clients to lock in members through a comprehensive umbrella of appropriate campaigns, offerings and initiatives.



4 Annexure - Parameterisation

Parameterisation is achieved through a set of methods. Most client-defined parameterisation is achieved by setting parameter masters; some of which are listed below.

Partial parameter master list

#	PARAMETER	DESCRIPTION
1	Archiving history purging rule	Determines the method of moving operational data to history and then offline (expunge)
2	Association	Code and information on business entities associated for a combined CLP
3	Campaign or survey template	Template of campaign or survey. Provides override-able defaults when creating a new campaign or survey - either general or personal.
4	Enrolment source nature	How member joined the CLP
5	External package	Information about other systems where lookup needed to see data on member absent in this system, e.g. a tailor made system, an eCRM system or an ERP system
6	Holiday	List of holidays at a location
7	Linked member person nature	Nature of relationship between members or persons
8	Member nature	
9	Message	Build up of standard messages
10	Other charges	
11	Personal preference nature	
12	Program	Each CLP program, i.e. family of loyalty membership, e.g. general card, local card, special services card, etc. Partner program details also stored.
13	Program site link	Membership of which Programs available at site
14	Report defaults	Contains sort order and report breaks for reports and inquiries
15	Site	Site attributes
16	Site hierarchy	Site hierarchy build up
17	Site hierarchy nature	Site hierarchy nature. Contains "Prime" which is used for normal and default processing.
18	Statementing cycle	Each processing statementing cycle
19	Tax nature	Taxes chargeable



#	PARAMETER	DESCRIPTION
20	Tier	Each membership tier, qualification and other parameters with effective dates. Member segregation for differential treatment. Tiers are intended to motivate higher usage and retention.
21	Tier site link	Tier of membership available at site if different from overall program settings

Type parameters are predefined in ILCL and are used to determine system behaviour. Clients may add new parameters in some cases. Flexibility is achieved by using the set of type parameters which when used together generates desired CLP functionality. Some type parameters are listed below.

Partial type parameter list

#	TYPE PARAMETER	DESCRIPTION	USER CAN ADD
1	Award		
2	Award availability status		
3	Campaign or survey	Override-able defaults when creating a new general or personal campaign or survey	Yes
4	Campaign or survey source	Includes solicitation	Yes
5	Campaign or survey status	Stage of campaign or survey process, including stop further message or solicitation	
6	Communication or message origination	How communication or message is received or sent	
7	Communication or message reason	Why a Person is communicating with the ILCL Service Centre or vice versa	Yes
8	Communication or message resolution status	Defining the status of member communications, e.g. open, closed, pending, etc.	
9	Country		New ISO codes can be added
10	Currency		New ISO codes can be added
11	Email		
12	Frequency of run	How frequently an event should take place	
13	Language		New ISO codes can be added



#	<u>TYPE</u> <u>PARAMETER</u>	<u>DESCRIPTION</u>	<u>USER CAN</u> <u>ADD</u>
14	Locale		New standard format codes can be added
15	Member status		
16	Person		
17	Phone		
18	Postal address		
19	Redemption status		
20	Shipment order		After system investigation
21	Shipping method	Different methods of delivering a redemption award to a member	
22	Site	Outlet, partner, vendor, dealer, self, geographical place, business organisation or place or hierarchy	Yes
23	Transaction	Types of transactions in the system	

Some other parameters that can be set are as given below.

Other parameters - Partial

- | # | <u>Description</u> |
|----------|--------------------------------------------------------------------------------------------------------------|
| 1 | Add on card membership allowed |
| 2 | All participants must belong to the same association |
| 3 | Award available only in site base country |
| 4 | Can issue in non program base currency |
| 5 | Client card id remains the same on continuation of same tier |
| 6 | Country printed in address for base country |
| 7 | Currency & symbol |
| 8 | Day of month or week for points accounting, else ordinal |
| 9 | Days after which archiving takes place |
| 10 | Days card valid |
| 11 | Days in which to earn amount to qualify for tier |
| 12 | Days points earned are valid |
| 13 | Days specified in which to earn points to qualify for tier |
| 14 | Default font |
| 15 | Direct redemptions possible at lower sites in prime hierarchy |
| 16 | Each award item tracked individually |
| 17 | Earning only in base country |
| 18 | Flat number of points to award for each transaction |
| 19 | Flat points to be given for each transaction |
| 20 | Fourth separation position of client card id for printing from right |
| 21 | Icon - CLP, award, tier, association, any location, etc. |
| 22 | Level name |
| 23 | Maximum & minimum amount in all transactions beyond or below which not considered for the promotion campaign |
| 24 | Maximum & minimum attempts allowed or needed |



#	Description
25	Maximum & minimum characters in post code of country
26	Maximum number of characters per line in an address including name and salutation
27	Maximum points allowed
28	Maximum tiers downgraded at a time
29	Member access web site
30	Non member allowed to receive award
31	Normal points included in qualifying lifetime points for tier
32	Other currencies allowed
33	Period client card days valid
34	Personal preference choice
35	Point clubbing for redemptions allowed within a program apart from linkages
36	Points charged for entry in tier
37	Points decimal digits
38	Pre computed points in transactions possible at lower sites in prime hierarchy
39	Print designation, department & organisation in address
40	Purchase of points allowed in association
41	Question to authenticate person
42	Redemption cancellations allowed
43	Related to a specific association
44	Remove data after archiving
45	Restrict points adjustment
46	Restrict to site number or below of system or association or program or tier
47	Round points
48	Secondary points allowed in association
49	Some tiers have different settings than for program at site
50	Sum of amount in all transactions beyond which not considered in entire campaign or survey
51	Sum of points earning amount in all transactions beyond which not considered in entire campaign or survey
52	Summarise points accounting to higher site in prime hierarchy
53	Variable name
54	Website



5 Annexure - Reporting

All Reports can optionally be viewed on screen, sent to a file or printed. Generally, there is filtering available on any or all of the criteria given below, subject to relevancy. The selection can be a range or a list.

- Association
- Country
- Date of redemption
- Date of statement
- Date of transaction
- Hierarchy
- Location
- Point type
- Points
- Program
- Promotion
- Promotion type
- Region
- Tier
- Transaction type
- ILCL operator
- Value

Some reports are:

- Ad hoc point allocation control report
- Awards processing (rank award by popularity)
- Batch processing
- Contact serial number log
- Contact serial number tracking enquiry
- Contact serial number tracking enquiry
- Pending transactions report
- Dealer voucher redemption
- Defection alert - Members in tier 'x' have no transaction for 'y' days
- Downgrade & probable upgrade alert & communication
- Duplicate or missing manual control numbers
- High usage of cards
- High value transactions
- Last processing date of each batch job
- Linked members
- Locations sending delayed or intermittent billing data
- Manual number log
- Manual number tracking enquiry
- Manual number tracking enquiry
- Member information update control report
- Member status
- Members with multiple card usage
- Multiple location usage on same dates
- New Member enrolment control
- Number of calls received
- Number of Members by CLP tier



- Number of upgrades & downgrades
- Open communications
- Partner points control
- Pending downgrade
- Periodic (weekly) enrolment processing
- Permanent tier less than or greater than nominal tier
- Point adjustment audit
- Point expiration - Location wise
- Point liability (Location wise earning, burning & expiry of points)
- Processing date of each batch job within a date range
- Redemption status
- Statements processed
- Summary of complaints
- Summary of points earned
- Tier changes where transactions may have been converted to points at a wrong tier
- Transaction log
- Transaction processing control report
- Unanswered queries
- Unutilised expired redemptions
- Upgrades
- Voucher status

There are some additional specific CLP reports. These can be easily generalised in case needed for a specific CLP.



6 Annexure - Technical background

Initially, CLP's were developed using Oracle¹ data base version 8i and Oracle Forms version 6. Later, based on customer preference and market forces, development of some new CLP's used DB2, PostgreSQL, WebSphere & J2EE and PHP. These CLP's ran as separate stand-alone systems. Afterwards, Oracle Forms were migrated to Oracle Apex.

In 2003, an entire sophisticated and rugged system was redesigned from scratch. It was based on business, operational and technical learnings coupled with industry state of the art practices.

The vision was to start developing a generalised and universal customer loyalty program to handle multiple clients each with possible multiple CLP's within the same system. This will enable a business group to structure different CLP's to target different clusters of customers within the same infrastructure as well as gain the benefit of lower award costs and award handling expenses through larger economies of scale. Care was taken to incorporate not only existing requirements but also anticipated functionality in ILCL. It provides excellent support for a coalition loyalty solution.

After evaluating current and future computing infrastructure scenarios, we chose the Oracle database & Perl as the ILCL development platform. Most business logic is handled through data base triggers & procedures. Current developments, techno-economic & market conditions and customer acceptability vindicate this stand.

The current ILCL development environment is Oracle Database 18c and Perl 5.26. Runs on Linux (preferred) & Windows Server. Proprietary Unix's could be used easily.

Specifics:

- No hardware specific limitations to the package
 - ✧ Sample performance details: Minimum 100,000 transactions per day sustained continuously over 7 years on a 2 GB dual Pentium III Xeon 700 MHz Linux / Oracle 9i system with 150 million transactions & 2 million member details online. Peak loads of 180,000 transactions a day. Trial stress test of 1 million transactions a day for a week - conducted in a day - without any extra computing or support resources.
- No operating system limitations to the package
- Database restrictions as per Oracle database limits
- 3 tiered architecture
- Package configurable by user
- Web based presentation layer
- Interfaces to the IBM DB2 Data Warehousing, OLAP & Intelligent Miner (IM) software tested earlier
- Use of the Tivoli system monitoring tool tested earlier (with DB2)
- Import to the Talisma eCRM tested earlier
- Can be run from physically diverse and geographically distributed locations

Developed keeping an ISO 9001:2000 & SEI-CMM conceptual frameworks in mind.

¹All trademarks are the property of their respective owners