

iLCLP: IdentLogic Systems Customer Loyalty Program

Overview

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1 Introduction

We are committed to the development and deployment of reliable, sophisticated and futuristic customer loyalty programs (CLP) for strong & sustained long-term client and client customer benefit.

The IdentLogic Systems Customer Loyalty Program[®] (iLCLP[™] - pronounced 'eye-el-clip') is our main package offering. It is a comprehensive & universal solution covering all aspects of a CLP. An extremely easy to use and easily deployed system envelopes the extreme variety of the package.

It is also known as the Universal Customer Loyalty Program[®] (UCLP[™] - pronounced 'you-clip').

1.1 Target audience

This document is produced for Marketing Managers familiar with the operations of a CLP and who would like to make an initial assessment of how the marketing benefits of iLCLP would enhance the loyalty of their customers.

The following issues should have already been resolved before investigating

- ✘ The way consumer spending or activity will be converted to points
- ✘ Enrolling and Tier promotion criteria
- ✘ Rewards found attractive by most targeted members and the points needed to redeem these rewards
- ✘ An estimate of the increase in benefits due to the program
- ✘ The number of locations where this solution will be implemented
- ✘ Current customers; how many expected to be members of the loyalty program after the first & second year
- ✘ Number of transactions per month / year
- ✘ How will members redeem their points in the program?
- ✘ What kind of promotions are planned with approximate frequency
- ✘ What kind of communications are planned with approximate frequency
 - by medium (email, text-message/SMS, phone, letter)
- ✘ Is multi currency functionality needed
- ✘ Is multi time zone functionality needed
- ✘ The top 5 to 10 business, contractual, technical and business continuity issues

For those not fully familiar with loyalty, help is available for developing a customer loyalty concept that will assist in deciding the best way to organise a CLP tailored to their requirements.

1.2 Vision

Our vision for iLCLP 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 tactical initiatives to improve their CLP.

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

The package motto is "*Ille qui meritis est praemium habeat*"[™], which is Latin for "Let him who has earned it bear the reward".



1.3 Solution summary

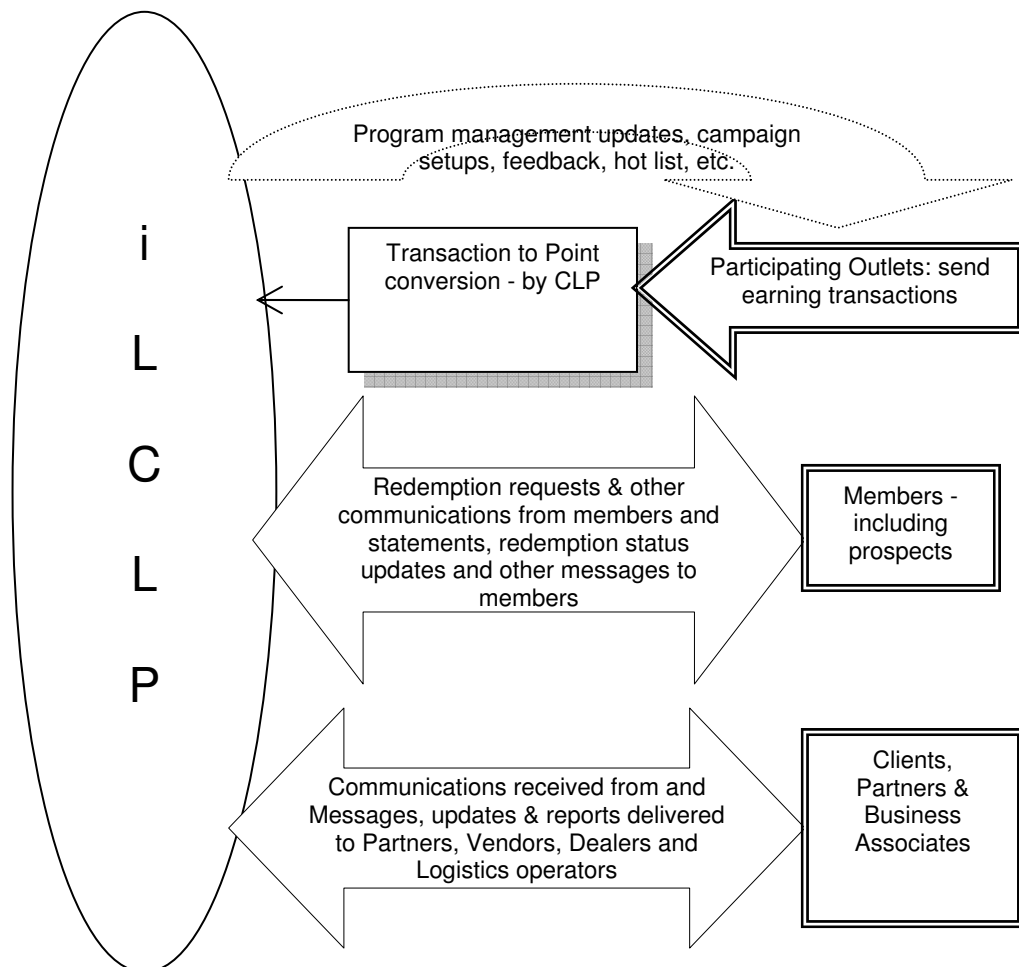
While many processes are identical between CLP's, point conversion logic including campaign promotional points, tier up / down grading and a few other processes can be greatly different. To handle these separate areas of extreme diversity and total similarity, iLCLP handles enrolment, input processing of (billing) transactions & campaign activity with conversion to points, activity statement formatting / fulfilment, and, tier changes in a bespoke (tailor made) system for each client running in their own satellite system (schema). The common processes of redemption, campaign definition, coupons and vouchers, messaging, customer relationship management and inter party accounting for clients, partners, vendors & dealers are handled by the common core software.

Tables of program, point earning, tier, campaign, redemption & other behaviour 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 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 post-billing system repository of loyalty transactions including messages, points earned and awards redeemed. The system facilitates easy capture of bills, invoices and payment transactions and their conversion to loyalty points as a satellite system within the umbrella of iLCLP. Once points are determined, the entire life cycle of the loyalty process is handled by the main iLCLP system.

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

Figure 1 - iLCLP schematic





1.4 Benefits

- Tremendous flexibility in defining CLP configuration, particularly in point earning policies, campaign set up, redemption rules, tier up / down gradation strategy
- Flexibility of solution - suits any media, any channel
- Fast CLP configuration & roll out after comprehensive structure definition
- MIS-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 - 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 for whom iLCLP is already operational
- Speed of operation
- Effective campaign management with timely reminders, tracking & measurability
- Global scope - multi country, multi currency, multiple time zones with daylight saving adjustment engine

1.5 Solution deployment

iLCLP is best operated by us. In case a client would like to deploy iLCLP under their own control, we strongly recommend that we operate the system for some time before handing over operations. During this period client personnel can be trained on the job & internalise the basic way of thinking of the package.

We can operate the system "remotely", i.e. on a hosted server anywhere in the world including the client data centre.

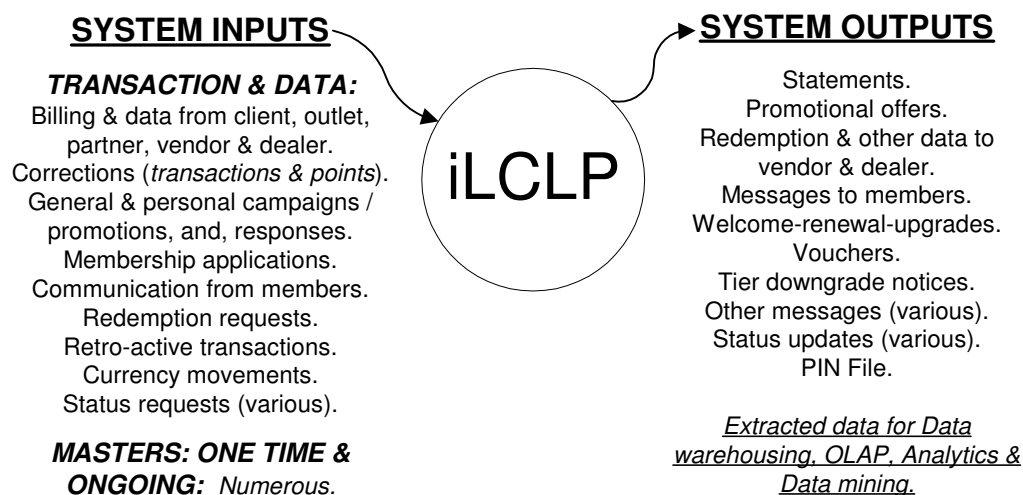
Package support & maintenance is provided from Mumbai, India. System training of client personnel is best done at Mumbai, who will in turn provide training and support to marketing personnel.

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. It would be prudent to allow for two to three months of customisation time for a reasonably sophisticated & extensively tailored solution.

1.6 Components

A figure giving a high-level view of information flows into & out of iLCLP is below.

Figure 2 - Context diagram



The major functional components of iLCLP, 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” - 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

The major deployment components of iLCLP, also described later in this document, are:

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

Annexures contain details of Parameterisation, Reports & Technical Background.

1.7 Credentials

iLCLP is the culmination of knowledge and experience based on CLP development and operations for various clients for over a decade preceded by a strong exposure to marketing systems. Initially, the CLP's ran as separate stand-alone systems developed in xBase. In 1998, 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. This version was developed using the Oracle¹ database. In 2002, development of some new CLP systems used other modern databases, middleware and front ends. Please see the Annexure - Technical Background for more detail.

These CLP's have stood the test of time. They are also expected to be future proof. The largest system services around 2 million members with a continuous sustained daily load of 100 to 150 thousand transactions for over a half decade as a complex yet sturdy solution. The oldest system is over a decade old. Stability and security are the hallmarks of all our CLP systems.

iLCLP has 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. Of course, it can be easily adapted to any kind of CLP.

In 1998 itself, 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 envelope as well as gain the benefit of lower award costs and award handling expenses through larger economies of scale.

Design and development started in parallel with ongoing support and development of existing systems. Care was taken to incorporate needed technology into existing systems and to incorporate all existing & anticipated functionality in iLCLP. In early 2004, the first generalised implementation was rolled out. The table below gives our expertise obtained in developing & operating CLP's for an internal client.

Organisational & Individual Expertise of selected Customer Loyalty Programs

Client & Brand	Audience / Target segment	Role	Member base & years managed
BPCL PetroBonus™	Vehicle owners (individual drivers)	Writing system specifications, design, develop, maintain, system integrate & operate solution; email & voice customer contact centre	2 million members - 10 years - ongoing
Colgate Palmolive: Phir Dil Se	FMCG Trade: Wholesalers	as above	25,000 - 3 years - ongoing

¹ All trademarks are the property of their respective owners



Client & Brand	Audience / Target segment	Role	Member base & years managed
ICICI Bank - Home Loans High Rise and Rising Star	Trade: Direct Sales Agencies and Sales Teams	as above	4,000 - 7 years
Indian Hotels - Taj Innercircle	Hotel & Restaurant patrons	Design software, operate loyalty centre	10,000 members - 2 years

1.8 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 iLCLP. Client organisations are advised to investigate the system thoroughly and satisfy themselves in further detail as to exactly what is and what is not possible with iLCLP and determine how it should be used as part of their overall marketing mix.



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. On grant of membership, personal details such as name, address, etc., are easily updateable.

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

Duplicates can optionally be screened using the multilingual & multi-country Identity Search System™ package from Identity Systems, Inc. This will enable detection at enrolment form entry 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 the global AddressDoctor™ solution.

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. Each earning module operates in a CLP specific area to handle the logic of converting member activity to points. Typically, invoices constitute the main input for point conversion. However, input can be of any nature with multiple formats, e.g. apart from invoices attendance at an event may also be included for point earnings.

Three 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:

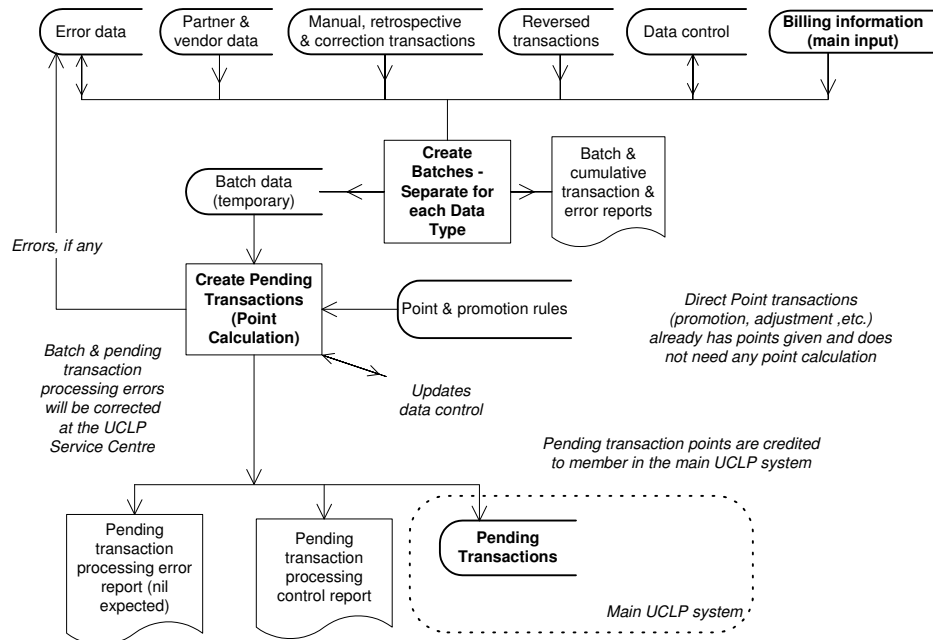
- Handling of taxes, discounts, invoice format, payment methods, activity, quantity or value thresholds
- Generation of bonus points depending on campaign participation
- Historical invoices available on-line as per client requirement (resource usage implications)
- Duplicate records checked
- Frequency of earning run controlled by client specified parameters
- Multiple cycles
- Member can view itemised or summary invoices on web (resource intensive)
- Event based earning - 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 schematic on the earning mechanism is given below. Warning: this is very technical & may be skipped.



Figure 3 - Typical earning schematic

Data to Point Conversion: Separate for each CLP



Billing information is the main input for calculating points (see top right of schematic). Other inputs controlling points are reversed, manual, retrospective (retro) & correction transactions, along with partner and vendor generated transactions. Error data, after corrections, is also re-introduced. Data control information is updated with each run.

The data is batched & is put into the Pending {for processing} table. Control & error reports are generated.

Pending transactions are then handled in the standard way within the main iLCLP 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:

- o Personalisation available based on any segmentation rules
- o 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.
- o Errors bypassed - recovery separately
- o Multiple runs can be performed simultaneously
- o Customers assigned to a specific cycle

2.4 Campaigns

Campaign management is an important part of a CLP offering. iLCLP offers tremendous flexibility in both personalisation as well as tracking response. Multi stage promotions can be set up where the next initiative may be programmed to take place based on member response.

- o 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
- Captures customer profile for one-to-one marketing

2.5 Burnings

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).

Points may also be optionally redeemed on a "FIFO" basis, i.e. points earned earlier are burned first. This is always recommended when the CLP has a points expiry feature.

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
- Customized 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.
- Open design with 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

Up to three 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. 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 iLCLP, 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, details updation, activation, deactivation, termination, renewal, hot listing, 'do not communicate' and other status updation of members. Enables the 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 & can be easily integrated (with some resource & integration implications).

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) 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.

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 and to update their profile. A very strict anti spam policy with a double stage opt-in process is enforced within the relationship email system. Within iLCLP, 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. These flags are updated across the two systems.



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, 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 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

Hierarchies manage various structural aspects of iLCLP. The entire system is designed around hierarchies that serve to organise the solution and organise reports. The "prime" hierarchy is of System → Association → (Customer Loyalty) Program → Tier. "System" represents the overall iLCLP. An association is a set of related CLP's related in some business purpose; usually from the same client.

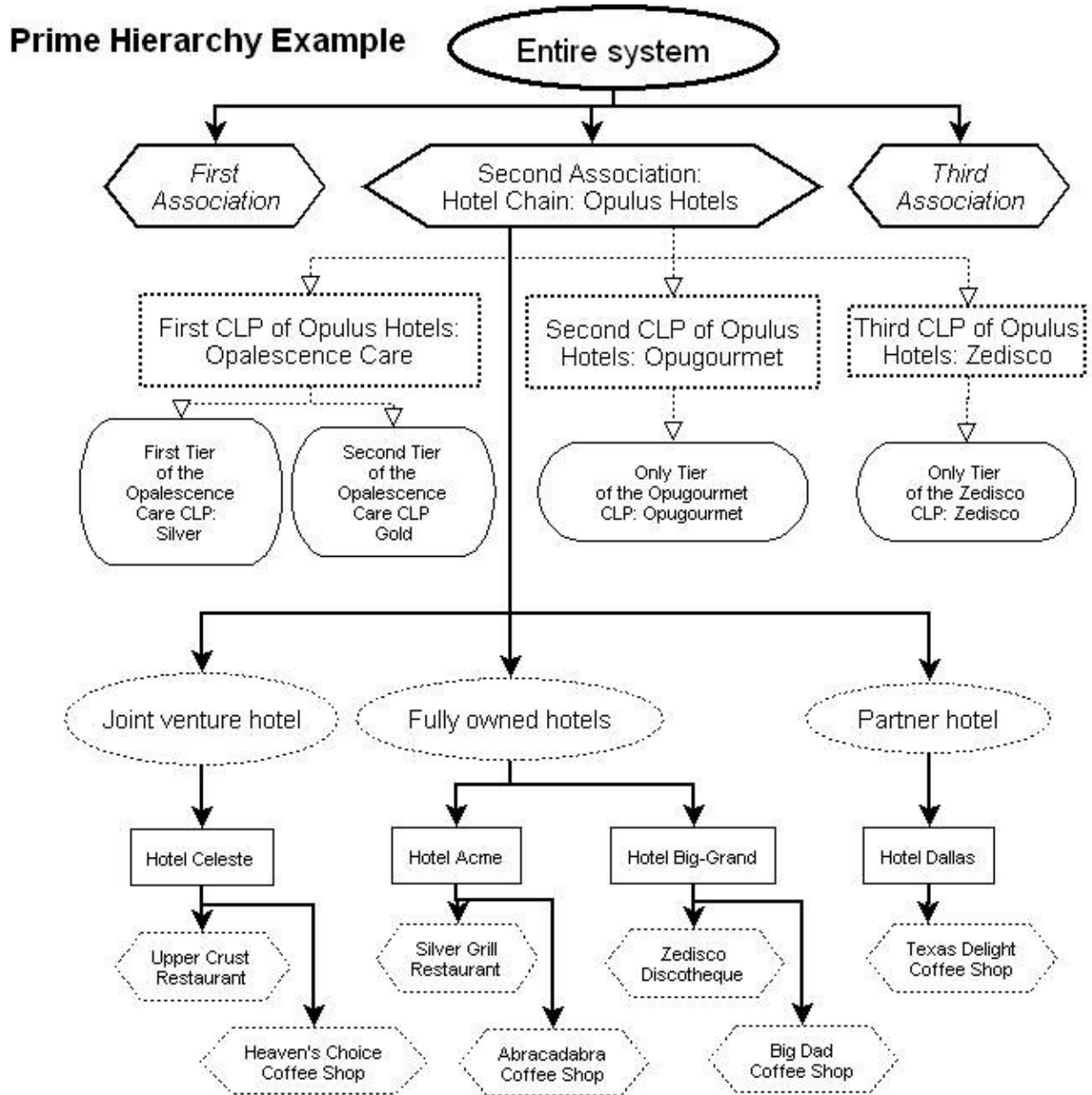
As an example, consider a hypothetical Hotel Chain - Opulus Hotels, which has two hotels of its own, Hotel Acme & Hotel Big-Grand; a joint venture (J.V.) hotel, Hotel Celeste, and a partner hotel, Hotel Dallas. Each of these hotels has different restaurants as part of the hotel.

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 and discotheques at all its own, J.V. 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 J.V. 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 figure below. Additionally, separate hierarchies should be defined for each CLP, i.e. Opalescence Care, Opugourmet & Zedisco.



Figure 4 - Hierarchy example



Other Hierarchies:

1. *Opalescence Care: All property types - all hotels, all restaurants, all coffee shops & discotheque*
2. *Opugourmet: Upper Crust & Silver Grill restaurants*
3. *Zedisco: Zedisco discotheque*
4. *Other hierarchies of the First & Second Associations*

Participating outlets are under a CLP or an association, as required. There can be sub-outlets, e.g. hotels can be defined as participating in a CLP & restaurants in the hotels can be part of the respective hotel. If necessary sub-outlets may have sub-sub-outlets to any depth, even though having too many stages is confusing from a customer-understanding point of view.

In the case of a single tiered CLP with no associated CLP's, it 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.

The system facilitates any combination of geographical or business hierarchies, e.g. region → country → state → district or county → city or town → locality → post code, and, area → country → zone → state → district → sales territory, etc.



2.12.1 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, a normal hierarchy can be used.

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 iLCLP is on more conventional loyalty operations and not on multi-level marketing. The system can track referrals and transactions on multiple levels.

2.12.2 Clustering

Related to hierarchy is the concept of clustering. Any number of clusters can be defined. Each cluster may relate to a tier, a CLP, an association or for the entire System. A member may belong to any number of desired 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 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 (decade 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.

2.14 Reports

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

Further details are given in the Annexure - Reporting.

2.14.1 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



2.14.2 Dashboard

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

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

2.15 Internationalisation

2.15.1 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. This suffices for most cases; the remaining few can be improved by hand translation.

Partial translation is a workable solution where translation efforts are focused on those screens and reports where there is the most interaction. On start up the system looks for the browser 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 some text is not available in that locale, it looks for the missing text in the "French in France" (fr_FR) locale; and if some text is still not available it looks for the missing text in the "French" (fr) locale; and if some text is still not available it looks in the English (en) locale for which the UK English (en_UK) locale is the standard. Similarly for a person specified to have an US English (en_US) locale, the system first searches for text in the US English (en_US) locale and then in the English (en) locale.

Information is always entered and stored in the system language of the keyboard of the user's personal computer.

A translation menu facilitates the hand translation of text from English to other languages and locales.

Any Unicode 3+ language supported by Oracle (& MS-Windows / Linux client) can be used.

Notes:

1. Text in right to left languages will be displayed in right to left format. However, screens will have a left to right "bias", e.g. labels will mostly appear to the left of information fields. In addition, in rare cases, some system messages may display in either English or the database or the operating system specific language.
2. Hand translation is strongly recommended for screens that will be seen by members, partners, vendors & dealers.

2.15.2 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 used at the originating location is usually assigned to the transaction. 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.

While multiple currencies are supported, usage of multiple currencies in a single bill is not advised but can be handed in the Earning system.

2.15.3 Time zones with daylight saving time

Our time zone & daylight saving time engine stores each transaction & stake holder contact in system time in parallel so that all events are viewed in a harmonious manner from a time sequence perspective.

2.16 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.

The entire system is turned around to be looked at from a single member viewpoint.



2.17 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 some fraud detection & prevention algorithms to minimize loss due to fraud. Note: The main onus on managing fraud is by the clients directly by themselves.
- Strict silo management of access to data designed into the system from scratch - ensures near foolproof security
- All insertions, deletions & modifications tracked by user, time, terminal & program used - information before update or delete moved to history files
- All procedure start and end times tracked. Comprehensive procedure log also maintained.
- System may be run on SSL, if needed

2.18 Member interface

Members can log on at the iLCLP Member web site and view their point balance, transactions for the last six months and open campaigns. They can view the award catalogue, place an award redemption request and view the status of all redemption requests which are open and which have been requested within the last six months. They can also leave behind a communication which be handled as any other communication from the member.

Individual web sites can be developed which enhance the basic member interface in a highly customised manner with further CLP specific creative elements.

2.19 Vendor interface

Vendors may log in and see their purchase orders and update status & dispatch details. This functionality will be released in early 2008.

3 Conclusion

iLCLP 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 (Talisma) or an ERP system (Tally)
6	Holiday	List of holidays at a site
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
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 iLCLP 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 iLCLP 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		



#	TYPE PARAMETER	DESCRIPTION	USER CAN ADD
12	Frequency of run	How frequently an event should take place	
13	Language		New ISO codes can be added
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

- | # | Description |
|----|--|
| 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 |
| 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 |



#	Description
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
- iLCLP 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
- Create 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



iLCLP Overview

- 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, the CLP's were separate stand-alone systems developed in xBase. In 1998 use of Oracle data base version 8i and Oracle Forms version 6 was started. In 2002, development of some new CLP's was based on DB2, WebSphere & J2EE. Some CLP solutions were also developed using PostGreSQL and PHP.

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

Oracle Apex, Crystal Reports and Perl are used for reporting.

The current iLCLP Oracle database version is 11g and the Oracle Apex version is 3.1.

Specifics:

- No hardware specific limitations to the package
 - Known upper boundary of performance: Minimum 100,000 transactions per day sustained continuously over 5 years on a 2 GB dual Pentium III Xeon 700 MHz Linux / Oracle 9i system with 150 million transactions & 1.8 million member details online. Note: It is expected that this system can handle three to five times this volume 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
- Interface to the Tivoli system monitoring tool tested earlier
- Interface to the Talisma eCRM possible
- Applications can be run from physically diverse and geographically distributed locations

Developed keeping an ISO 9001:2000 & SEI-CMM conceptual framework in mind (no formal certification but compliance with a certified organisation can be achieved with less effort by a certified organisation)

The diagram below illustrates the relationship between different computing components of the iLCLP system. The tight coupling of the Oracle infrastructure leads to large efficiencies in operations & development, as well as, lesser computing resources.

Figure 5 - System component Interaction

iLCLP Technical Architecture

