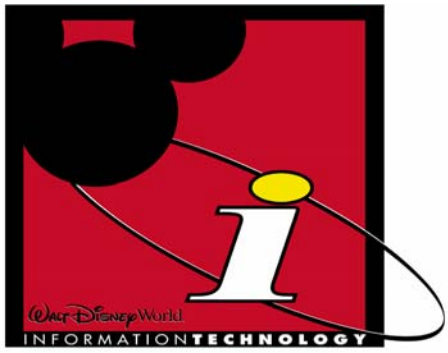

DREAMS Campus

Disney Reservation Entry And Management System

Functional Overview

For Business Users

DRAFT

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Contents

1 Introduction

This document provides a high level overview of the DREAMS Campus Application for general audience. It elaborates the business architecture implemented in Campus, the business processes that Campus supports and the different interactions that Campus application has with the Composite applications. It also documents the different client channels that interface with Campus for booking reservations. This document also provides an overview of the technical architecture of the Campus application.

2 Functional Overview

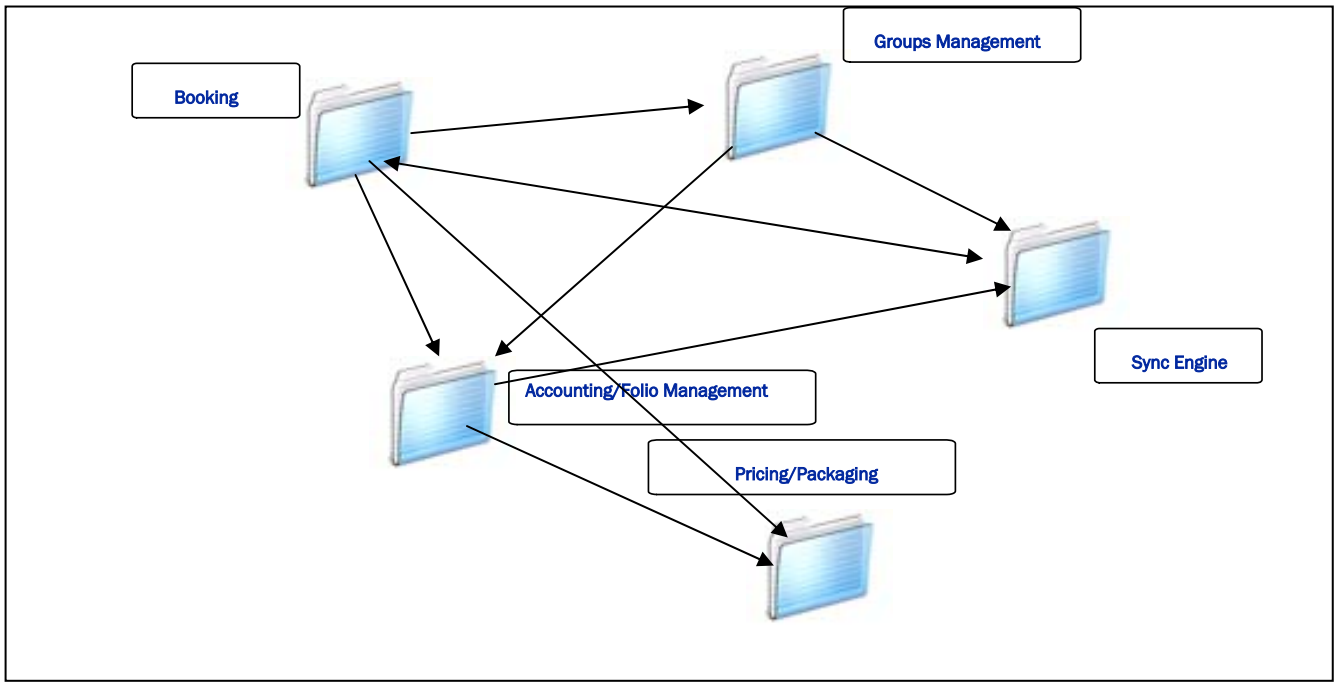
DREAMS Campus is primarily a booking system of record (SOR) for Reservations for Walt Disney World. It houses 4 major functional modules, which are the core components of a booking system.

- Booking
- Accounting
- Groups Management
- Pricing / Packaging

Additionally, it also houses a Sync Engine module, which acts as a synchronization engine between the booking system (Campus) and the fulfillment system (DPMS Property).

2.1 Business Architecture

This section documents the business architecture within Campus. It also captures the functional responsibility of each module within Campus and the dependencies between each module.



2.2 Business users

This section describes the different business users and the types of bookings.

Business Users/ System	Types of Bookings	Application Used
Disney Reservation Center Agents	Consumer Direct Bookings Travel Agency Bookings All Accovia Package Bookings	SBC->EAI , Campus UI
Groups Office Agents	Group Convention Bookings	Campus UI
DPMS Property Front Desk Personnel	Walk ins Check ins Check outs Modifications	Front Desk Application , Campus UI
Travel Wholesalers	External Wholesaler Bookings	Wholesaler->ABS->EAI
DCL Agents	Disney Cruise Line bookings	DCL->ABS->EAI
Special Events Agents	Special Events Bookings	Special events->ABS->EAI
Internet Users	Internet Bookings , Accovia Internet Package Bookings	WDPro->TAP->Accovia->LABS->EAI
(WorldSpan,Galileo,Sabre,Amadeus,Apollo) GDSComponent	GDS Travel Agency bookings	GDSComp->ECM->EAI
Accovia Users	All Accovia Package Bookings	Accovia Green Screen ->LABS->EAI
RSR Agents	RSR bookings	Campus UI
Shades of Green	Shades of Green Bookings	ABS->EAI, Campus UI

2.2.1 Consumer Direct Bookings

These are bookings directly booked in Campus as a result of a Guest making a booking by calling DRC. A DRC agent uses either SBC or Campus UI to make this kind of booking. These are bookings for which DREAMS is the System of Record. These can be for Disney or Non Disney (DDRAH) Resorts.

2.2.2 Travel Agency Bookings

A Travel Agent/Agency books on behalf of the Guest by calling DRC. These bookings are also made via SBC or Campus UI into Campus. Campus is the system of record for these bookings. The commissions are handled at Property.

2.2.3 Accovia Bookings

2.2.3.1 Accovia Package Bookings

Accovia Package bookings are mainly booked from SBC and Accovia Green Screens. These bookings include bookings for different sales zones such as Canada, UK etc. These include Internet Packages also which can booked from the Internet.In addition to these bookings, accovia packages are also setup for affiliations such as Airline employees, Interline, Co Branded Credit Card etc.

2.2.3.2 AAA Accovia Bookings

These are Packages which are mainly booked from SBC. These are packages that are setup for booking accovia packages against AAA Travel Agencies against several sales channels for Accovia.

2.2.3.3 Internet Bookings

Internet bookings are made thru WDPro. These are primarily of two Types.

2.2.3.3.1 Internet Room Only Bookings

These are bookings primarily booked from the Internet which have room component. These are booked from WDPro which are then downloaded to Campus via LABS.

2.2.3.3.2

Internet Room Only Cast Member Bookings

These are bookings primarily booked from the Internet which have room component for Cast Members. These are booked from WDPro which are then downloaded to Campus via LABS.

2.2.4 Group Convention Bookings

These bookings are for conventions held in Disney resorts. A contract is generally negotiated for rates and inventory. The Group Profile, blocks and block inventory are created for the convention period and subsequent bookings are made. Campus UI will be used for these bookings. Campus is the system of record for these bookings.

Some examples of Convention Bookings are:

- Weddings
- Conventions
- Sports
- Banquets

2.2.5 Special Events Bookings

These are Special events bookings which are treated by Campus as another type of internal wholesaler booking.

2.2.6 Disney Cruise Line Bookings

2.2.6.1 DCL Bookings

These are land sea packages which are booked along with the cruise bookings. The land package is booked in Campus which is sent by DCL. DCL is considered as an internal wholesaler.

2.2.6.2 DCL FIT Bookings

These are groups setup which book cruise line packages. As these are groups, the billing profiles and rates are setup differently than DCL Packages. They however can share the inventory from the DCL Block. These groups are not wholesaler groups.

2.2.7 GDS Component Bookings

These are bookings which originate from global distribution systems which are as follows:

- WorldSpan
- Galileo
- Sabre
- Amadeus
- Apollo

These are primarily Room Only bookings and are routed to Campus via GDS Component thru ECM.

2.2.8 External Wholesaler Bookings

These are wholesalers across different sales zones which send bookings to Campus. In this case, these bookings are maintained by the wholesalers and Campus maintains a shadow of the wholesaler booking.

2.2.9 Resort Special Reservations

These are bookings which are settled against a Internal Job number. There are two kinds of RSR bookings done in Campus.

- Resort Special bookings made against that Sales Channel.
- Groups which have been setup as Resort Special Reservations.

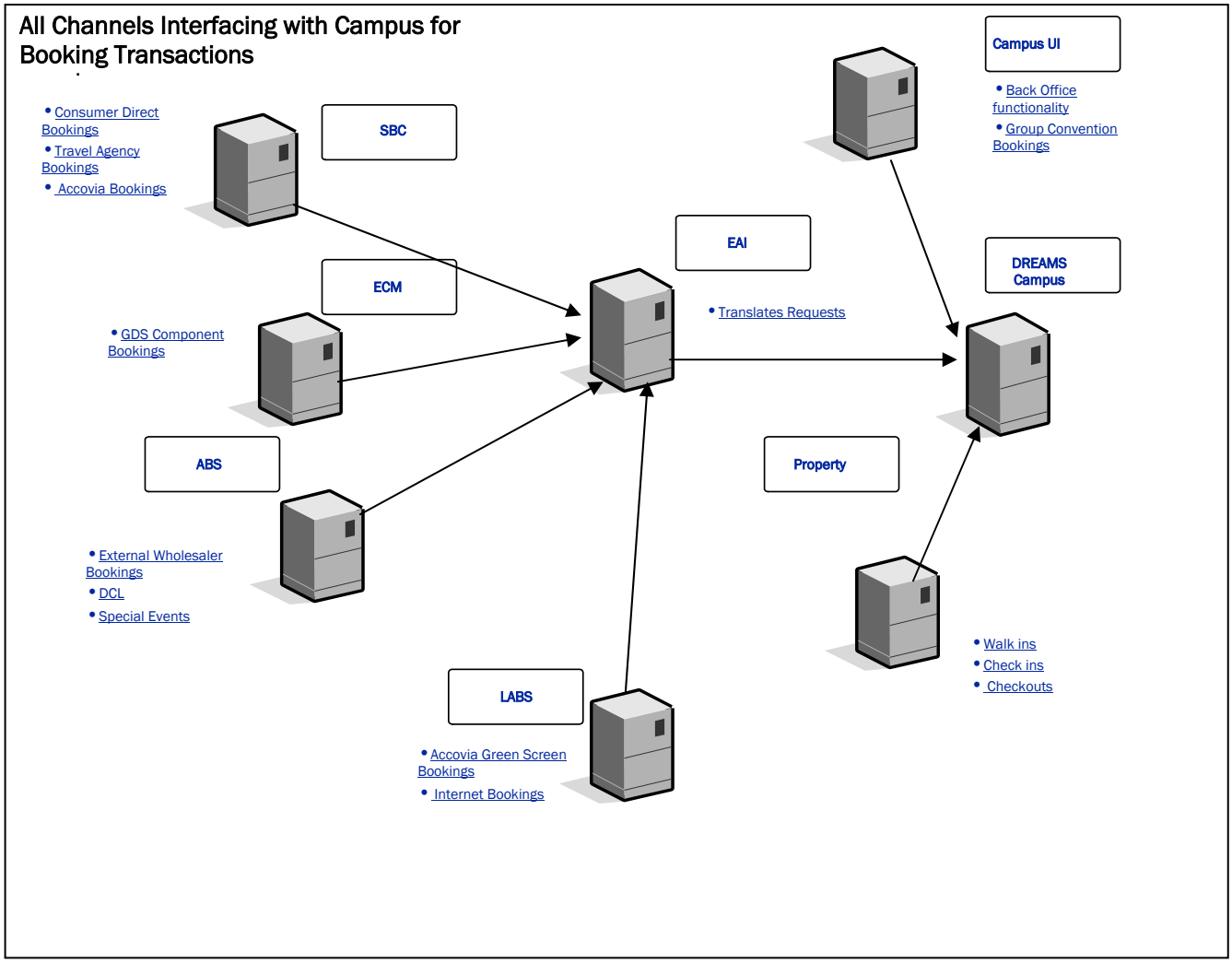
Campus does not account for these bookings but these reservations are accounted for at the Property.

2.2.10 Shades of Green Bookings

These are bookings for military personnel. A special Group with contracted rates is created and the bookings are made against this group. This group is setup as a wholesaler but Campus is the system of record for these bookings. Campus is also responsible for sending confirmations to the vendors for these kinds of bookings.

2.3 Client Channels

This section documents all the client system channels that send booking related transactions to Campus. Campus stores the channel specific information but the processing of the booking is channel agnostic. Campus coordinates the workflow for booking reservations with downstream composite applications.



There are 3 distinct channels that book into Campus:

- Front end booking systems
- DPMS Property
- Campus UI

2.3.1 Front end booking systems

The different front end systems like SBC, Accovia green screen, DCL, Wholesaler systems, Internet etc , book into Campus via EAI hub using XML messages. The requests are translated by EAI to the Campus interfaces. Campus stores the channel specific information but the processing of the booking is channel agnostic.

The different front end systems send the following transactions to Campus:

- New reservation booking and modifying
- Cancellations
- Posting Payments
- Shadow bookings

2.3.2 DPMS Property

Campus acts as a key component for holding reservation information for DPMS Property. With the introduction of Travel plan segment (TPS), multiple Property Reservations (RES) can be held together under a single TPS. This helps in folio maintenance, deposit handling and maintaining guarantee statuses across multiple property reservations. The entire Group maintenance functionality is moved from DPMS Property into Campus.

DPMS Property sends the following transactions to Campus:

- Walk-ins
- Check-ins/Check-outs
- Rate overrides
- Share/Unshare reservations
- Split / Merge reservations

2.3.3 Campus UI

Campus UI primarily caters to the Groups and Convention business users. It supports a similar sale and book process like SBC for the Groups users.

It provides the following functionalities:

- Group maintenance
- Block & Inventory management (UI only)
- Maintain Customized packages
- Group bookings
- Reservation and Guest folio management
- Transfer funds between Group master and Guest folios
- Rate overrides
- Inventory overrides
- Share / Unshare reservations
- Fixing shadow reservations

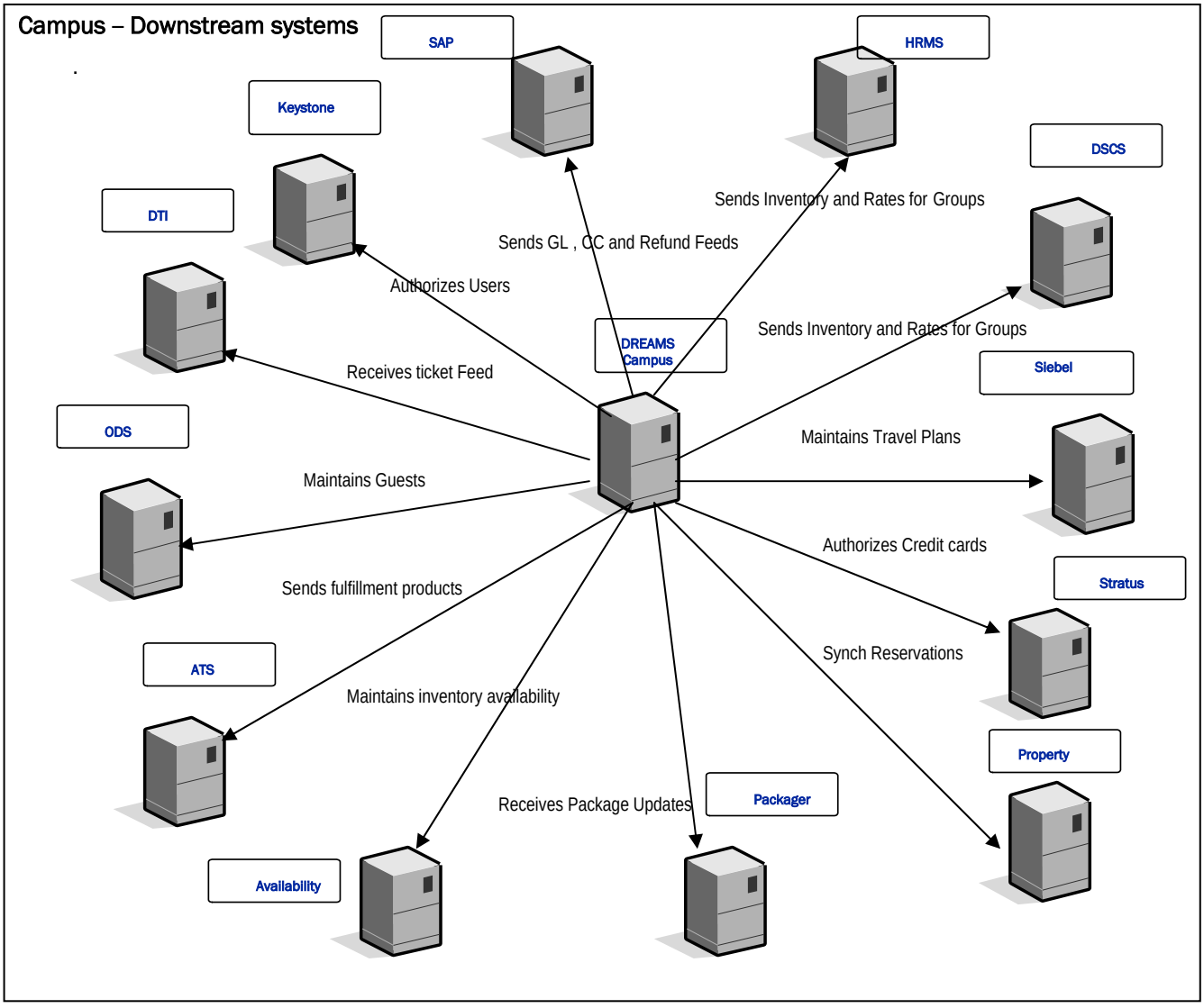
2.4 Downstream Systems

Campus interacts with different downstream systems in order to cater to the booking needs of its clients. This section briefly describes the functional significance of the Campus interaction with these downstream systems

There are 3 kinds of downstream systems that Campus interacts with:

- Systems which feed configuration data to Campus which is later used in the booking process (One source, DTI etc).
- Systems which are owners of key entities (e.g. Inventory, Guest, Authorization etc) and participate in the different booking transactions. (Availability ODS etc).
- Systems which consume booking information from Campus in an asynchronous mode (SAP, DPMS, HRMS etc)

The diagram below lists the composite applications and their functional responsibilities.



2.4.1 Availability

Availability is the system of record for Block and Inventory management. It is responsible for the following functional elements:

- Maintain Block
- Maintaining Logical Inventory
- Provide Inventory availability based on the Product Value (Bid Price Curve)
-

Campus keeps the logical inventory in sync with Availability for every booking transaction. It also reconciles inventory at the end of each day. Campus also presents offers in the sales process based on the available inventory determined by the Availability Server.

2.4.2 Keystone

Keystone is a security framework used across Walt Disney Company to maintain users, user roles and functional abilities. Campus leverages this framework for enforcing security restrictions.

2.4.3 ODS

ODS maintains Guest Information. Campus creates and updates guests in ODS related to all bookings in Campus.

2.4.4 Siebel

Siebel is the CRM System which maintains Guest and Household Information for marketing purposes. It also maintains Group Profiles. Campus creates a Travel Plan in Siebel for every reservation created.

2.4.5 HRMS

HRMS is the revenue management system. Campus provides an inventory and rate extract for Group Convention blocks EOD each day to HRMS.

2.4.6 DSCS

DSCS is the system of record for Convention/Event management. Campus sends inventory and rate extracts real time for all blocks. Campus also sends inventory and rate information for Group Convention blocks EOD each day.

2.4.7 ATS

ATS is the fulfillment system for all non-room package components like pins, lanyards, keepsake certificates etc. Campus sends ATS, the component information along with a packages for all the reservations booked in Campus.

2.4.8 SAP

SAP is the backend accounting system for Disney. Campus sends summarized General Ledger, Credit Settlement and Account Payables information to SAP on a nightly basis.

2.4.9 Stratus

Campus authorizes Credit Card information using Stratus.

2.4.10 OneSource

Onesource provides the initial Product Feed to Campus.

2.4.11 DTI

DTI provides the ticket feed to Campus (Pricing) daily.

2.4.12 DPMS Property

DPMS Property is the fulfillment system for Walt Disney World Resorts. Campus downloads all bookings to Property 10 days prior to arrival and sends the deposits on day of arrival. Campus also keeps the reservations in synch with Property for subsequent modifications.

2.4.13 Packager/PMA

Packager, which is responsible for maintenance of Packages, sends Package updates to Campus.

3 Business Processes

This section documents the various business processes in the Campus system.

3.1 Booking

Booking is the primary module of the Campus system. It houses the Sales and Booking processes of the DREAMS campus application.

3.1.1 Sales Process

This section describes the sales process for rooms and tickets performed from the Campus UI.

3.1.1.1 Determine Offers

The Campus UI provides agents to shop for available offers for rooms and tickets. The shopping process for offers is almost analogous to the SBC process. The difference is that Campus is *not a preference based sales engine*.
SBC provides an agent to specify preferences such as resort tiers, entertainment options, location etc which provides offers.
In Campus, the agent can specify a maximum of three resort-room Types and up to three packages.
Also, Since the Campus UI is primarily meant for Group Convention bookings, the agent can specify the Group against which the reservations are being booked. Campus also handles Travel Agency Bookings and bookings against Non Disney Resorts as well.
Besides the actual sales process, Campus UI also can be leveraged for fixing issues with modifications of any reservations which were not successful from external systems.
Also, as mentioned above Campus provides a sales process for Key to the world tickets for room only bookings and also for adding Magic your way tickets for Packages with selectable tickets.

As part of determining offers to be presented, Campus performs the following validations:

- Prevents accommodations inside a reservation to be booked with different Travel Agencies.
- Defaults the Travel Agency in case of Group Bookings.
- Validates the Group Status for bookings to be made against that Group. The Group status should be Definite, Tentative or Inhouse.
- Prevents bookings across Non Disney Resorts inside a reservation.
- Prevents Key to the world tickets to be booked against Non Disney Resorts.
- Ensures the accommodations being booked are against the same booking source inside a reservation.
- Validates the Package against the sales channel which it is being booked.

On successful validation of the above, Campus performs a general availability check which returns all the available offers. Campus then proceeds to price the package to display the nightly rates when the offers are presented. As part of pricing the package, Campus does several validations which are mentioned in the Pricing section.
Campus allows for assignment of the Guests to Rooms before booking the reservations.

The Ticket sales process allows an agent to select the ticket group and the number of days. All the tickets which meet the criteria are offered. The tickets process is only allowed from Campus if at least one of the rooms is being booked. Also, the KTTW Tickets sales process is allowed only for room bookings.

The addition of MYW Tickets is considered as a modification of the package booking.

3.1.1.2 Block Offers

After the offers are presented, the agent can select the offers for subsequent bookings. This process involves blocking the inventory for the offers which are selected. Campus allows the agents to block multiple rooms. Also as part of the modification process, Campus sends the existing inventory information to Availability with the new inventory information being requested for Availability.

3.1.1.3 Calculate Options based on Offerings

Campus allows for offer options by allowing the agents to compare prices for shopped and booked accommodations. The room's quotes are displayed based on agent's selections

3.1.1.4

Quote Available Offers

The total price of the offer is displayed thus allowing the agent to discuss the price of the offers being selected.

3.1.1.5 Override Inventory for Unavailable Offers

The inventory is subject to availability at all times. In the event of the agent not able to determine offers based on the shopping criteria, Campus allows the agent to override the inventory availability failure.

The following availability failures can be overridden by agents who are authorized:

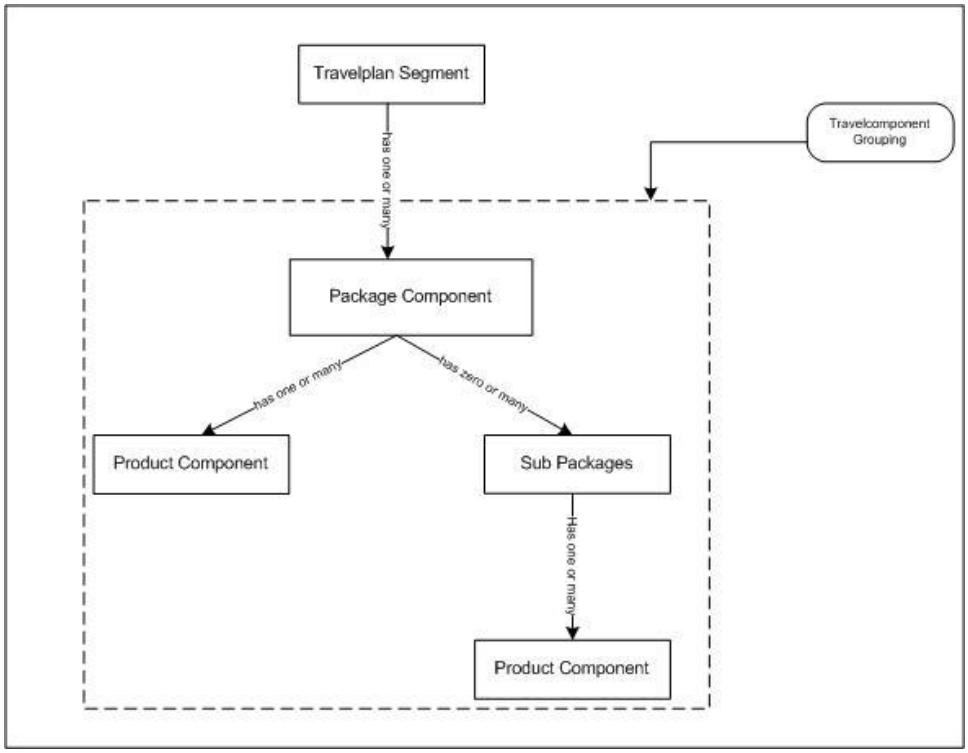
- LOS Restrictions - A Package being booked has a minimum and maximum length of stay defined. If the LOS being requested does not match the above, Availability does not block inventory. The agent can override this by allowing the package inventory to be offered.
- Block Override – There are several rules on a block related to the inventory. Any rule which is getting violated by an inventory request is not allowed. The agent can override these restrictions. The details of the block restrictions are listed in the Block maintenance Section.
- Booking Override – The inventory for the requested criteria is not available. This override allows the agent to overbook the inventory.
- Auth Remaining – The agent is not authorized for the remaining inventory.
- Boxed Restrictions - The inventory is boxed by Availability for business purposes. Campus cannot override this restriction.

3.1.2 Book Process

This section describes the high level booking process involved in Campus for all booking channels.

3.1.2.1 Book Room Reservations

The Campus booking process is a channel agnostic process which books reservations. The outcome of a Campus reservation is the creation of a *Travel Plan Segment*. Each Travel Plan Segment created in Campus creates an associated Travel Plan in Siebel. Elementary information such as the travel dates, party mix and concierge level of the room Types booked is given to Siebel as part of the Travel Plan creation.



3.1.2.1.1 Booking Information

Campus stores important information regarding reservations such as the primary guest and address information which are used for confirmation and billing purposes. It also stores the travel agency information, if any was involved in the booking.

3.1.2.1.2 Booking Channels

Campus has the ability of receiving multiple rooms in a single request for a reservation. Some channels like SBC send information at the room level like party mix, comments etc. Other channels like ABS for wholesalers, DCL and Special Events send information at the Reservation level. Campus assigns the party mix to the rooms sent in the request by the room occupancy rules. The Guest Information sent to Campus is sent to ODS for every booking.

3.1.2.1.3 Package Bookings

Every booking in Campus is made against a package. There are packages created which have room components only. Every wholesaler package has other components besides room (eg. Tickets etc). Campus prices each package with the resort, room Type, travel dates, booking date and the party mix. Pricing explodes the package into the package sub components. Each component is priced based on pricing rules detailed in the Pricing Section. Campus creates components for every package product and groups all the components. Each Component has an associated Party Mix information and component specific information such as the product which it represents.

3.1.2.1.4 Package Charges

Campus posts charges in Accounting for all components. Please refer to Posting Charges for further details. These charges are maintained in Folios which are explained in the Folios Section.

3.1.2.1.5 *Inventory Maintenance*

Campus validates the inventory with Availability for every booking request. It also maintains inventory for booked reservations and synchronizes real time with availability server.

3.1.2.1.6 *Reservation downloads*

Campus houses the rules for downloading reservations real time to DPMS Property. Currently in Campus, if the reservation is booked within 10 days of arrival, it is downloaded to DPMS Property immediately.

3.1.2.2

Modify Room Reservations

Campus allows modifications of reservations after the initial bookings. Modification in Campus is not performed as a Cancel and Re-book but it updates the existing components with the modified information.

Campus supports the following types of modification:

- Resort
- RoomType
- Travel Dates
- Party Mix
- Group
- Comments
- Tax Exempt Information
- Modification of Tickets

3.1.2.2.1 Characteristics of a Modification

The following are the characteristics of a modification:

- Campus does a detailed modification analysis and decides to reprice a package if the modification affects the price of the booking.
- Reverses the old charges and posts new charges and maintains the folio balance on every modification.
- Campus updates inventory information appropriately within Campus and availability.
- Any modification in Campus is updated with Travel Plan Information in Siebel.
- It is synchronized real time to DPMS Property if that Reservation has already been downloaded.
- The guaranteed status of each reservation is re-evaluated on every modification
- Modifications which are sent from wholesalers that decrease the number of rooms result in cancellation of individual rooms in Campus. No cancellation fees are applied for such scenarios.

3.1.2.2.2 Non-Disney Resort reservation Modification

Modification of a Non Disney Resort reservation is handled as a special case. Any modification to a Non-Disney resort reservation when the modification involves change of resort ends up as a cancel to the original reservation and booking a new reservation in the same TPS in Campus.

The following modification scenarios which will cause Cancel/Re-book:

- From a Non-Disney resort to a Disney resort
- From a Non-Disney resort to another Non-Disney resort
- From a Disney resort to a Non-Disney resort

3.1.2.2.3 Check ins , Check outs and Post Check-in Modifications

A check-in or a check-out sent from DPMS Property is also considered as a modification in Campus. Campus does not consider reversing charges for previous dates as they are considered to be fulfilled at the Property. In the event of a post check-in modification on the day of arrival, Campus will allow package modification for any booking. A package modification is not allowed after the day of arrival with the exception of Group Convention bookings.

3.1.2.3

Override Accommodation Rates

This is a back office functionality offered from the Campus UI. This allows the agents to override the nightly rates at the room level. The overridden rates cannot exceed the rack rate of the resort, room Type. This is a security enabled process. Campus maintains the overridden state of the rates until the reservation is booked. Any manual cancellation removes the overridden rate. Currently, the agent overrides the nightly rates for the entire length of stay. Overrides on a nightly basis are not allowed from Campus.

Besides the nightly rate, the Agent can override the Additional Adult Rate. From Campus, the additional adult charge can be waived. There is no ability to specify an overridden additional charge.

3.1.2.4 Book Tickets

Campus allows for booking and modification of ticket information. There are essentially four kinds of ticket bookings in Campus. Campus downloads KTTW and MYW Tickets only to Property for fulfillment.

3.1.2.4.1 Key to the World Tickets

The Key to the World Ticket (KTTW) is offered on packages with only a room component. The KTTW tickets can be booked either from SBC or using the Campus UI. KTTW tickets can be booked for any number of guests within the party mix. Also each guest can have a different kind of ticket e.g. a 4 day park hopper vs. a 3 Day Park hopper. The assignments of KTTW tickets to guests have to be done by agents as part of the sales process.

The tickets are associated with guests. If a guest is moved between rooms in case of multiple room reservation, the corresponding KTTW ticket will be moved along with the guest. These type of tickets are not bound by the length of stay at the resort and are flexible.

A room only booking cannot be cancelled if there are KTTW tickets in that component grouping.

3.1.2.4.2 Magic Your Way Tickets

The Magic Your Way (MYW) Tickets are tickets which are part of the Package. These tickets are restricted to the entire party mix for the package booking. Also, the entire party mix can buy only one type of ticket. SBC and Campus UI have the ability of booking selectable tickets. The addition of selectable tickets is considered as a modification to the original booking. As the name suggests, these tickets can be chosen by the user even though they are bundled as part of the package. This implies that these tickets are subject to modification. These types of tickets are not bound by the length of stay at the resort and can be flexible. These types of tickets are fulfilled on the Key to the World Card.

3.1.2.4.3 Fixed Tickets

The Fixed tickets are tickets that are part of the package. DCL packages have included tickets which are booked along with a room. The agent cannot choose these types of tickets. These tickets are booked for the entire party mix. These tickets cannot be modified. The validity of these tickets is tied with the length of the stay at the resort. These types of tickets are fulfilled on the Key to the World Card.

3.1.2.4.4 Freesell Tickets

SBC is the only channel that can book Freesell tickets. These tickets are not associated with any room bookings. They are booked in SBC and fulfilled in ATS. Campus stores information for these tickets for Siebel. Campus does not account for these tickets. They are stored as additional information on a Travel Plan. These tickets are either delivered to the guest or picked up at the Guest Services.

3.1.2.5

Share / Unshare Rooms

Group Convention bookings have finite inventory allocated for bookings. Group delegates book individual reservations booked against separate rooms. If the number of group delegates exceeds the inventory available, sharing of reservations is allowed. Sharing allows releasing inventory for other group delegates. Campus UI allows all reservations to be shared though it will frequently be used for Group Convention bookings. Sharing is allowed for reservations which share the same group, resort, room type and overlapping dates.

Also, sharing is allowed in room types if the party mix occupancy rules for the room type being shared are not violated. Sharing releases inventory for the overlapped period. The Group delegates also share the price of the room. Sharing guarantees the reservations and they can no longer be auto cancelled.

Campus also provides agents to Unshare reservations. Once the reservation is unshared, inventory for each reservation is requested again and the Group delegates do not share the price.

Campus also allows modifications to shared bookings if it does not violate the sharing criteria mentioned above. Sharing can be done on reservations which have overridden rates in which case the prices will be not divided for the reservation which has overridden rates. Alternatively, the rates can be overridden on shared reservations. The overridden rates will be considered for posting charges and not the shared rates.

3.1.2.6 Cancel Reservations

Campus UI allows the agents to manually cancel reservations at the Travel Plan segment and the Accommodation level. There are other booking channels which also send cancellations for bookings. A cancellation in Campus will apply the appropriate cancellation fees based on the policies set on the package being cancelled. In case of Group bookings, the group policies override the package policies for cancellations. A cancellation reverses all charges of the reservations folio. The payments made on cancelled reservations are refunded to the responsible party. Any rates overridden prior to cancellation are not retained.

3.1.2.7 Reinstate Reservations

A cancelled reservation in Campus can be reinstated. On a reinstate, Campus retains the same reservation number. Campus does not retain the original price of the booking and reprices the package based on the date the reservation is being reinstated. It also posts new charges. A reinstate process does not back out cancellation charges applied as part of the manual cancellation process.

3.1.2.8 Auto Cancel Reservations

Auto cancellation is an end of day process which cancels all non guaranteed reservations. This process releases inventory for future reservations and avoids overbooking. An auto cancellation also retains the overridden rates. If auto reinstated, the reservation will retain the overridden rates. An auto cancellation does not apply cancellation fees.

3.1.3 Special Booking Scenarios

3.1.3.1 Shadow Bookings

For reservations primarily booked in external systems e.g. Accovia, DCL and Wholesalers etc., a representation of the reservation (shadow) is stored in Campus. This shadow contains only the package components. Other components like Air, Car, Cruise etc booked in systems like Accovia, DCL are not shadowed in Campus. From SBC, Accovia Package bookings made against Non Disney Resorts do not get shadowed in Campus.

The bookings are sent to Campus where a shadow is stored. The original reservation number is stored as an external reference against the reservation created in Campus. Every subsequent updates to these reservations are synchronized with Campus by the external systems. This shadow essentially is maintained for downloading these reservations to DPMS Property. Campus acts as a single interface to DPMS Property for reservation downloads across all channels.

3.1.3.2 Shell TPS

SBC has the ability to book reservations across Accovia and Campus. SBC can book a room only package in Campus for which Campus creates a TPS and then can add an Air Component which is booked in Accovia. Since Campus does not store components booked in Accovia with the exception of DME, Campus stores the external reference to the Client File number of the Air Booking in Accovia. Campus relates this together by the same Travel Plan. This allows the agent to view the itinerary with the room and air booking.

Also, Campus stores the external references for Accovia Package bookings for Non Disney Resorts. Since Campus does not download these bookings to Non Disney Resorts, there is no need for the reservation to be shadowed in Campus. Campus still has to store the external reference (CFN) to retrieve the reservation information from Accovia.

3.1.3.3 Book DME Components

Today, a CRS reservation number uniquely identifies a DPMS Property reservation number. TAG uses CRS Reservation number to notify DPMS Property when a guest lands. With the introduction of TPS in Campus, a Campus TPS can be associated to multiple Property reservations. Hence it becomes difficult to determine which resort/room the guest luggage should be sent to.

The solution implemented is to have TAG/Property communicate to Campus at the TPS level. For every Accovia DME reservation, a DME component is booked in Campus and is associated to the TPS. SBC provides ODS IDs for guests assigned to DME components in Campus.

Campus does not post charges for DME components. Campus essentially stores these components for D3 to reconcile the guest information with the Accovia booking of DME Components. Campus also does not support canceling a DME component.

3.2 Accounting

The following sections elaborate the different entities in Accounting and explain how accounting workflows use these entities for its functionality.

3.2.1 Charge Groups

A Charge group is the primary entity in Accounting. It represents a billable entity against which payments and charges are posted.

Examples of charge groups:

- Travel Plan Segment
- Travel Component Grouping
- Group Profile
- Block

3.2.2 Folio

A folio is a "bucket" representing the billable entity which traps the following accounting transactions:

- Balance
- Deposit requirements
- Charges
- Payments
- Transfers
- Redemptions

There are three kinds of folios in Campus.

3.2.2.1 Group Master Folio

A group master folio is created for every group created in Campus. All the group delegate reservations booked against this group settle to this folio.

3.2.2.2 Group Pay Folio

A group pay folio is created for every group delegate reservation booking against a group / block. It traps all the charges and payments that are to be posted against the specific group. When a reservation checks out or cancels, the charges or payments posted on the group pay folio is settled against the group master folio of the group. Group pay folios always settle to a Group master folio.

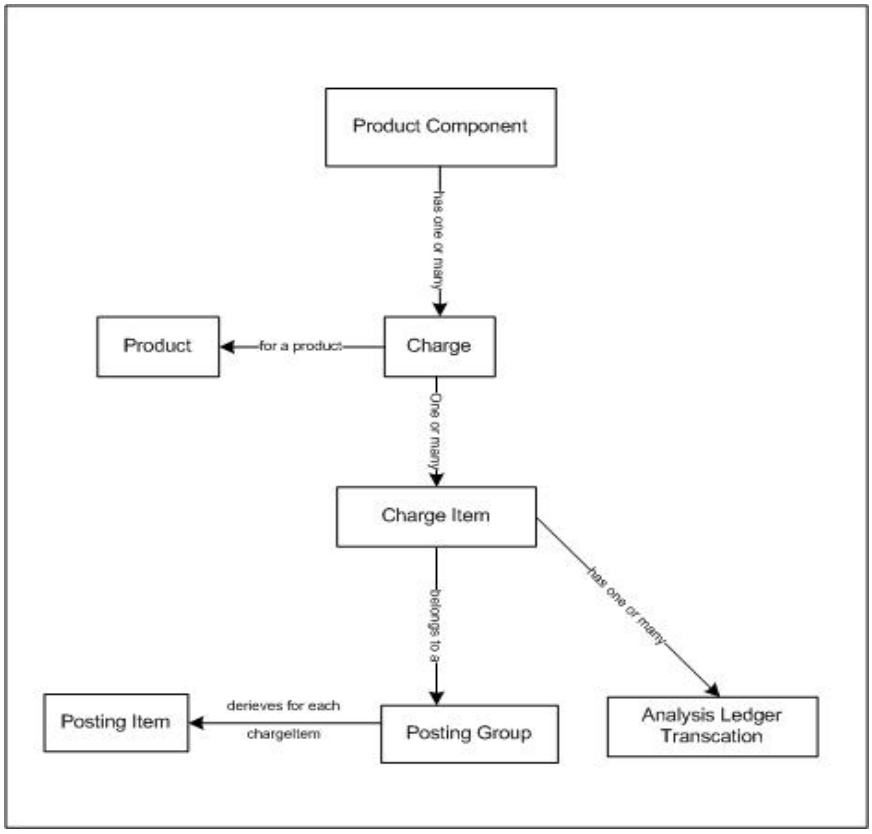
3.2.2.3 Guest Pay Folio

A guest pay folio is created for every reservation created in Campus. It traps all the payments and charges for which the guest / travel agency is responsible for. The primary guest or the Travel agency is the responsible Party for this folio. When a reservation checks out or cancels, the charges or payments posted against the guest pay folio is settled by the guest or the Travel agency.

3.2.3 Posting Charges

Charge Posting is one of the two accounting functional workflows. Any bookings made in Campus create corresponding charges in Accounting. Campus Booking posts charges in Accounting for each Product component that is part of a package being booked.

The following picture depicts the entity model for Charge Posting:



3.2.3.1 Charge

A charge is a unit of posting which is based on the requirement frequency of a component product. For example: A room is priced per night. (In accounting, a room equates to a charge per night). A ticket is priced per person / per reservation (In accounting, a ticket equates to a charge per person per reservation).

3.2.3.2 Charge Items

Each charge posted in Accounting is further categorized into charge items. The following are the charge items defined in Accounting:

- Base price
- Additional price
- Discount
- Taxes
- Deposit requirements

3.2.3.3 Posting Groups

A Posting group defines how different types of charge items are posted in different Customer accounts in Accounting based on certain criteria. The information contained within a Charge and a Charge Item is used to derive a Posting Group. The following are some of the criteria defined for deriving a Posting group:

- Revenue Classification
- Revenue Type
- Product
- Sales Channel

- Package

The listing below explains the match criteria in the order of evaluation used for deriving the Posting group. If the match criterion does not yield a posting group, the charge will be posted to a suspense account.

	Revenue Classification	Revenue Type	Product ID	Sales Channel	Package
1	Match	Match	Match	Match	Match
2	Match	Match		Match	Match
3	Match	Match		Match	
4	Match	Match			
5		Match			
6					

These are some of the Posting Groups setup in Campus::

- ROOM
- TICKET
- Souvenirs
- Snacks
- Additional Adult
- Deposit Requirement
- TAXES (Resort , County etc)

For example, while posting charges for 1 night's room and taxes, the room component will be posted into 3 posting groups (one for base price of the room, one for resort tax and one for County tax). Additionally, deposit requirements will be posted into a separate Posting group as necessary.

3.2.3.4 Posting Items

A Posting Group can further classified into one or more Posting items. A posting item associates to a unique Customer account. Currently, one Posting item is setup for each Posting group. Campus is extensible to define multiple Posting items for a single Posting group, configurable by percentages or fixed dollar amounts.

Once the posting item is derived, the charges are posted to the Analysis ledger transaction at the posting item level.

Posting items are directly related to Bill Traps which help in determining a Folio for posting the charges. The following section details the significance of Bill Codes and Billing Profiles and the role they play in the Bill trap process.

3.2.3.5 Billing Profiles

Billing Profiles define the configuration of how the charges are paid for by the customer. A billing profile defines the following:

- WHO pays for a charge?
- WHEN it is paid for?
- For WHAT it is paid for?

3.2.3.5.1 Bill Codes

A Bill Code defines WHO pays for the charges. Some of the example bill codes defined are as follows:

- GNADA – Group Pays No Charges
- *DCL – Disney Cruise Line Pays the Charges
- *WDTC – Walt Disney Travel Company Pays the Charges.

Apart from a bill code, a billing profile also defines the following:

- Billing Period - A billing period defines WHEN a charge is paid for.
- Facility – defines for WHAT resort the charge is paid for.
- Product – defines for WHAT product the charge is paid for.

3.2.3.5.2 Group / Block Billing Profile

A group / block billing profile is defined at a group / block level. Reservations booking against a group / block can utilize the billing profile defined at the block level in order to derive who/what is paid by the group versus the individual guest. In addition, a group / block will always have a default billing profile of GNADA (Group pays nothing, for any resorts, for any period).

Any change in the group / block billing profile triggers a re-filter process, which re-filters the charges on all the reservations booked against that specific group / block.

3.2.3.5.3 Reservation Billing Profile

Apart from a group / block billing profile, a group reservation can choose define a new billing profile. The bill trap process for these reservations will now prefer the reservation billing profile over the group / block billing profile.

Any change to a reservation billing profile triggers a re-filter process, which re-filters all the charges on the specific reservation.

3.2.3.6 Bill Trap Process

A Bill trap process determines the folio to which a given charge will be posted. It uses the following criteria for determining the specific folio:

- Block
- Posting Item
- Product
- Package
- Transaction Type
- Transaction Accounting Center
- Fulfillment Date
- Product Type

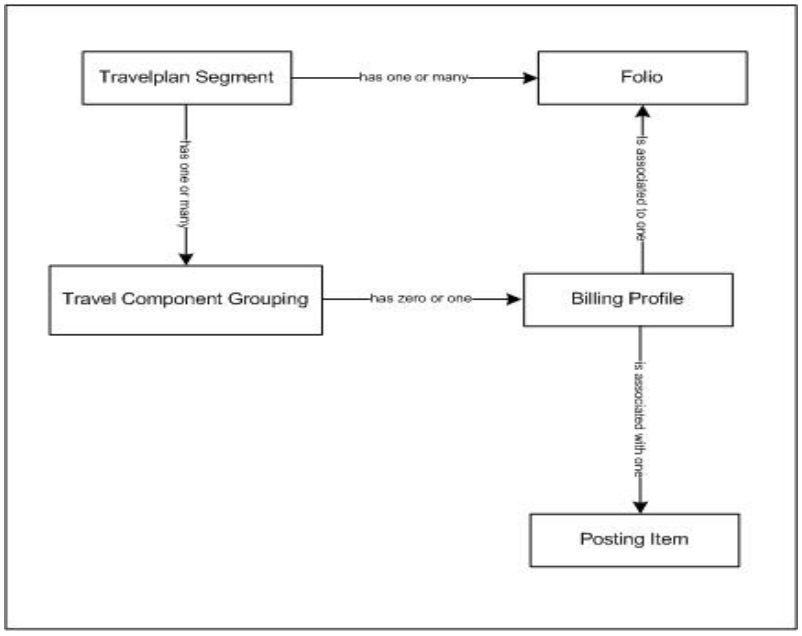
3.2.3.6.1 When are charges posted to a Group pay folio?

In the bill trap process for a group delegate reservation, the billing profile defined at the group / block level is referred. The reservation billing profile overrides the group / block billing profile, if present. If the group / block billing profile is able to trap charges based on the above criteria, the charges would be posted to the Group pay folio. If there are multiple groups with their Billing profiles, the Bill trap process determines the folio based in the order of precedence.

3.2.3.6.2 When are charges posted to a Guest pay folio?

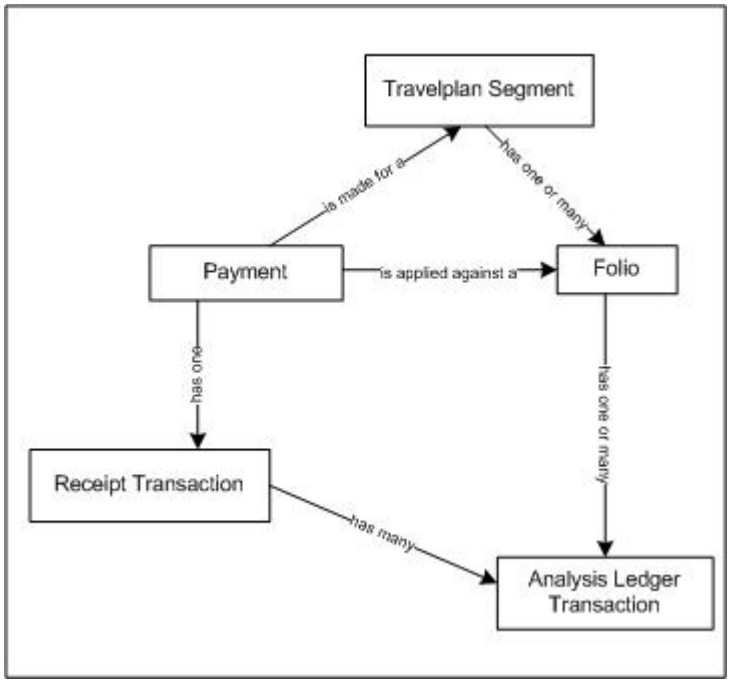
For a group delegate reservation, if the bill trap process does not yield a valid group / block billing profile or if it is a non-group booking, then the charges are directly posted to the guest pay folio.

The diagram below illustrates the association of a Folio with the Billing Profiles and the Posting Items.



3.2.4 Post Payments

Payment posting is the other functional workflow in Accounting. It defines how money is posted to the different folios of the charge groups (TPS / Groups) in Accounting.



3.2.4.1 Client Channels for Payment

Campus receives payments from the following channels:

- SBC
- Accovia
- DCL
- Special events
- Lockbox
- Campus UI.

3.2.4.2 Modes of Payment

These payments are received by Campus in a batch mode or an individual mode.

3.2.4.3 Payment Methods

There are several payment methods that Campus supports.

- Credit card
- Check
- vouchers
- Cash
- Rewards Card
- Gift Card

3.2.4.4 Characteristics of a Payment Process

- The Payment request has the information about the reservation and the group , if applicable.
- Campus posts these payments to appropriate folios(Group Pay or Guest Pay) created for reservations.
- Every payment posted reevaluates the guaranteed status of the reservation.
- Payments are posted to unapplied folios if the folios cannot be located for reservations.
- Payments can be searched in Campus later for posting them to appropriate folios by several search criteria.
- Payments made in Campus are downloaded to Property on the day of check in of the reservation.
- Any payment made in Campus after the day of check in is downloaded to Property real time.

- Campus sends all the credit card transactions to SAP at EOD each day.

3.2.5 Other Payment Transactions

Accounting supports the following types of transactions that can be operated on the payments received.

3.2.5.1.1 Transfer Transaction

Campus allows transfer of money between folios. The amount to transfer would be spread across based on the folio balance. Campus also supports money to be transferred from a Group Master Folio to all its delegate folios.

3.2.5.1.2 Refund Transaction

If Campus receives a payment after the reservation has checked out or cancelled with an existing deposit, a refund transaction is created and the remaining money on the guest pay folio would be settled to the guest. In case where there is a folio balance on the group pay folio, the money has to be manually transferred to the Group master folio.

When a Group profile is checked out or cancelled with a folio balance, the money on the group master folio is settled according to the settlement method on the group master folio.

Note: For a Non-Disney resort reservation, any payment received is immediately processed as a refund and the money is refunded to the specific Non-Disney resort.

3.2.5.1.3 Reversal Transaction

Some accounting transactions in Campus can be reversed. The folio balance would be adjusted based on the transaction that was reversed.

3.2.5.1.4 Fee Charges

Campus allows posting of Fee charges as well as reversing the cancellation fees from the Campus UI.

3.2.5.1.5 Adjustment Transaction

Campus allows adjustment of a specific payment posted. Usually the adjustment deals with the exchange rate changes associated to the payment.

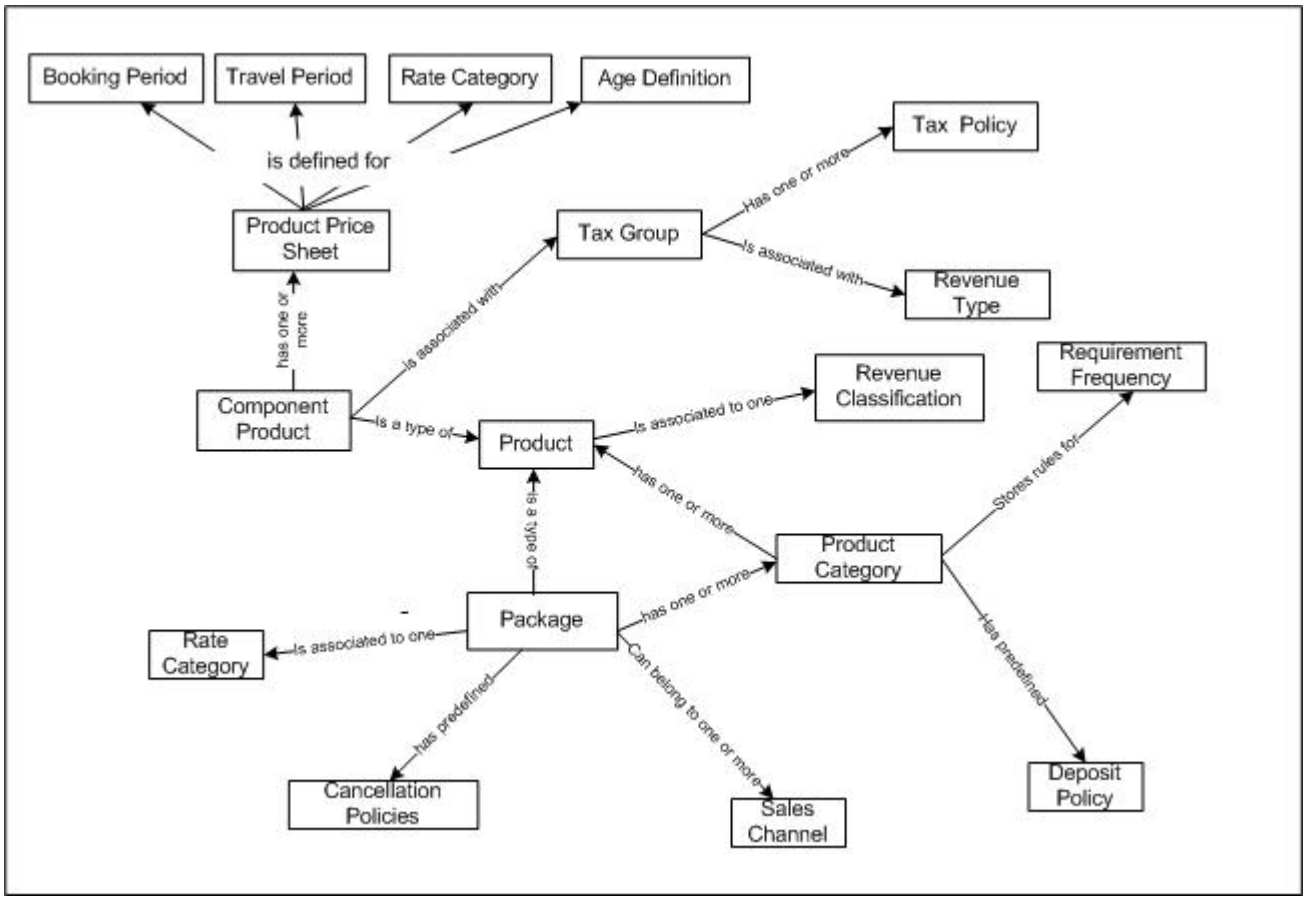
3.2.5.1.6 Bank Return Transaction

Based on business criteria, certain payments are returned to the Bank. Example: When a check is received with insufficient funds, the payment is sent back to the bank via a Bank Return transaction.

3.3 Pricing/Packaging

3.3.1 Maintain Package/Product Information

3.3.1.1 Package Load Data



Campus Packaging receives a feed from OneSource which it uses to create Product Information.

3.3.1.1.1 Product

This is the entity which is created by the feed from OneSource in Campus. A Product in Campus represents a room , ticket , package , coupon etc. Each Product is defined with its associated characteristics. Campus defines specializations of products are packages etc.

3.3.1.1.2 Package Information (Booking dates, Travel dates etc)

Packages are the types of products which are sold from Campus. Packages are setup to contain one or more product categories. The characteristics of a Package in Campus are as follows:

- Length of Stay Rules for which the Package can be booked
- Does the Package have sub Packages?
- Does the Package only contain Room Products?
- Is the Package Active?
- The Booking Window of the Package
- The Travel Period for which this Package can be booked.
- If the Package has guaranteed Rates?
- If this Package can be sold against Freesell Inventory?
- If this is a Rack Package?
- The Rate Category of the Package

A Package also has other associations like:
Sales Channel

- Each package created is associated with one or more sales channels against which it can be sold.

Cancellation Policies

- The cancellation policies are setup at the Package level. The total price of the package is considered for applying the cancellation policy.

3.3.1.1.3 Product Categories within a Package

A Package has defined product categories for each Product type. Some of the product categories defined in Campus are Accommodation, Admission, etc. Each product category has associated rate grids and requirement frequencies for the product type.

3.3.1.1.4 Rate Grids for Package, Resort, and Room Types and dates.

The rate grids are setup for a combination of a booking date and the arrival date. There are rates defined for different age definitions and rate categories.

3.3.1.1.5 Age Definitions for Products

Unique age definitions are defined for each Product . e.g. An admission product has two age definitions. The Child age definition for a Child for a Admission Product is defined for an age between 3 to 9 inclusive. The adult age definition for an admission product is for 10 yrs old and above where as for a Accommodation product the child age definition is defined from 3 to 18 yrs.

3.3.1.1.6 Requirement Frequency for Products

Requirement frequency is defined for each product category within a package .These frequencies are used in pricing a package.

Example of the above is as follows:

- The Room is priced Per Room Per Night
- Ticket is priced Per Individual One Time

3.3.1.1.7 Policies (Deposit and Tax)

Unlike the cancellation policies, the deposit policies are setup at the Product category level and the tax policies are setup at each Component Product Level. All subsequent updates to a Package are sent by Packager. These updates to Packages trigger updates within Campus.

3.3.1.2 Ticket Load and Setup

Campus also receives a ticket feed from DTI for Ticket data (KTTW Tickets, MYW Tickets, Fixed Tickets, and Freesell Tickets).
The tickets are setup in Campus as Admission Products. The Admission Product is a general definition which relates to many ATS Ticket Codes. An ATS Ticket can be defined for a combination of the following:

- Admission product
- Age Definition
- Ticket Group

3.3.1.3 Sales Channel for Packages

Each Sales Channel is recognized as follows

- Distribution Channel
- Membership
- Travel Wholesaler-Sales Zone.

3.3.1.4 Revenue Classification

Revenue Classifications which follow a hierarchical pattern are defined in Packaging. Each product created is associated to a revenue classification. The Highest Level is setup as Revenue which is level 0. The Revenue is further classified for Level 1 as follows:

- Accommodation
- Activity
- Admission
- Cruise
- Fee

- Menu Item
- Package
- Product
- Service

These revenue classifications are used in the Accounting processes.

3.3.2 Price a Product /Package

Campus prices a package based on package, resort, room Type, party mix, booking date, travel Period and selectable products for that package.

There are several validations which Campus performs before Pricing

- Package can be sold for a Booking Date
- Package can be sold for a Travel Period
- The length of stay of the travel period is valid for the package.
- Resort, Room Type is valid for the Package
- Party Mix can be accommodated in the Room Type being priced.
- Selectable products are valid for that Package.

3.3.2.1 Package Explosion

Pricing prices the package by exploding the package into its associated Product Categories. A Package in Pricing can contain zero or more sub packages. Each sub package has one or more products.
Pricing does the price based on the arrival date.

3.3.2.2 Requirement Frequency

Each product is priced based on the requirement frequency specified for that product. e.g. Ticket is priced per person per reservation, Room is priced nightly and Table Service is priced three times per person per night for the length of stay. The multiplier decides the number of charges for that product.

3.3.2.3 Taxes

Pricing also calculates the taxes based on tax policies setup for each product. There can be one or more taxes which are calculated per charge.

3.3.2.4 Discounts

Pricing calculates the discounts on a product based on the discount policies setup for that package

3.3.2.5 Deposit Requirements

The Deposit Requirements are setup at the product category level. The deposit requirement is calculated at each product category level for the number of products but the total deposit requirement is summarized at the Package Level.

3.3.2.6 Selectable Components

Selectable Components are components that are setup as part of the package but have to be chosen by the user .

3.3.3 Pricing Tickets

Pricing also prices KTTW Tickets based on the ticket code, booking date and the travel period. As mentioned earlier a ticket is priced per person per reservation.

3.3.4 Calculating taxes for overridden rates

Pricing also supports calculating taxes off rates that are overridden.

3.3.5 Searching of Packages

Packaging allows Campus to search for packages based on search criteria of a booking date, sales Channel, travel period, resort and room Type.

3.3.6 Create Customized Packages for Group Bookings

Campus UI allows for creation of customized Packages from existing base packages for group conventions. The creation of customized packages involves setting up of rate grids for the Group Booking Period and selection of Resort, Room Types for that Package. These customized packages are published to Property, Availability and PMA after they are created. Every subsequent update to these packages is republished by Campus.

3.4 Sync Engine

3.4.1 Campus Downloads

The definition of a Property Reservation and Campus Travel Plan Segment are different. A Campus Travel Plan Segment can span across many room reservations each belonging to a different property, travel period, packages etc. The only constraint in Campus for all room reservations within a Travel Plan Segment is that all the rooms be booked against the same booking source. The major significance of the Sync Engine is to determine the number of property reservations from the Campus Travel Plan segment's room reservations. This process involves merging of Campus room reservations by merge criteria.

The factors which influence the merging of room reservations in Campus in a single Property Reservation are as follows:

- Resort – Have to belong to the same resort
- Travel Period – Share the same Travel Period
- Tickets – Have the same Type of Tickets (Magic Your Way Tickets) , if applicable(This rule is only for Packages with MYW Tickets)
- Billing Profiles – In case of Group Bookings , all room reservations either share the same Group Billing Profile OR The overridden billing profile is same for each room reservation .
- Group – Have to be booked against the same Group.
- Group Team – Need to be from the same Group Team , if applicable
- Reservation Status- All rooms need to have the same reservation status i.e. booked or checked in.
- Guaranteed Status – Need to be guaranteed.
- RSR Reservation – RSR Reservations cannot be merged
- Shared Reservation – A shared reservation cannot be merged.
- Overridden Rates – All Room reservations should have nightly rates that are overridden (Campus does not consider the rates at each room level , they can be different).

As seen from the above, the room types are not factored in the Property reservation definition.

Campus sends the following transactions down to Property under various circumstances

3.4.1.1 Downloading of Reservations

Campus downloads reservations to Property. They will be merged on the criteria mentioned above. This is applicable for a new booking, modification, share, un-share or a cancellation for reservations. All reservations in Campus which are 10 days out are not synched up real time. Only bookings which already have been downloaded to Property or within the 10 day window are downloaded real time. In case of multiple rooms with overridden rates are merged , the overridden rate of the first Campus room is downloaded to the Property.

3.4.1.2 Deposit Downloads

Campus downloads the deposits for checked in reservations or reservations to be checked in (on Day of Arrival) to Property. Property redeems money to Campus if reservation is split at Property or the arrival date is shifted in the future and it has deposits on the reservation already downloaded from Campus.

3.4.1.3 Download Groups

Campus sends all Groups created and modified in Campus to Property real time.

3.4.2 Property Uploads

DPMS Property sends the following transactions up to Campus under various circumstances:

3.4.2.1 Splitting Property Reservations

In property, reservations are split which have multiple rooms within the same Property reservation. If this request comes before the campus booking is checked in, Campus updates the property reservation numbers. If this request is sent after the reservations in Campus are checked in. Campus checks out the existing bookings with the old property reservation number and creates two new bookings with the new Property reservation numbers.

3.4.2.2 *Synching Reservations from Property*

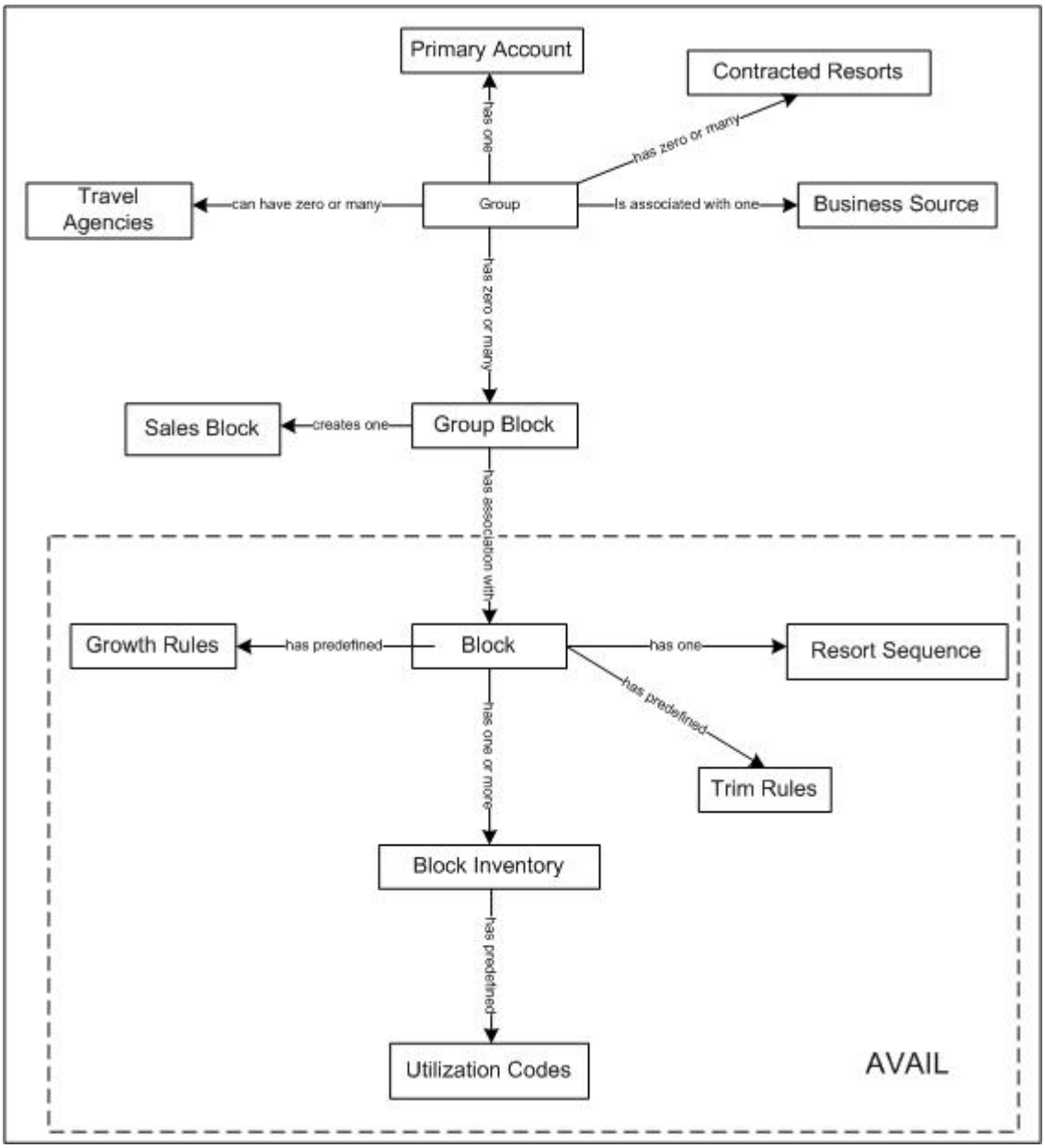
Property sends check ins, checkouts, rate overrides, shares, Unshare and cancellations from Property to Campus.
Property sends mass checkouts for guaranteed reservations downloaded by Campus for no shows.
Campus updates the credit Card information for continuous reservations across multiple resorts for modifications coming from Property for one property reservation.

3.4.2.3 *Maintain Off the Market Inventory*

Property also takes inventory off the market and synchs to Campus which maintains the off the market inventory and reconciles with Availability.

3.5 Groups Management

Campus UI provides centralized profile management of wholesalers, conventions and various special purpose groups. It also provides for the maintenance of inventory, rate and billing profile information.



3.5.1 Maintain Group Profiles

A group represents a business entity such as partner, vendor or client of the WDW with following profile information-

- Responsible account
- Contacts
- Accounting policies
- Booking policies

Campus allows the agents to maintain (search, create, view, update and delete) this profile information. This process begins with creating a tentative profile which can be stored, searched, retrieved and reworked until it reaches a definite form. At this stage, bookings can be made and payments can be received against the group. The system provides group policies to the Booking and Accounting Modules. The group profile is valid for a specific duration after which it is checked-out or cancelled.

3.5.1.1

Group Profile Details

A group can be created with minimal information such as- a unique code, duration, home resort, primary party and opportunity type. However this can be further extended into following details-

3.5.1.1.1 Contacts

Contact information from ODS can be associated for 163 different roles related to a Group such as – billing contact, wedding planner, meeting coordinator etc.

3.5.1.1.2 Travel Agencies

A group can choose to have bookings done via a preferred travel agency. Multiple travel agencies in ODS can be associated to a Group effective at different times.

3.5.1.1.3 Special considerations

These are important annotations about the Group which could be used by the other systems or an agent during booking and fulfillment processes. A few examples are - tax exception information and indicators such as express checkout, magical express and deposit exception.

3.5.1.1.4 Contracted resorts

A group can maintain elaborate systematic notes about the party's interest in specific resorts at specific rates. This information can be further used by the Agent to customize packages for this group.

3.5.1.1.5 Attrition schedule

A group can maintain systematic projection of attrition schedule of guests. For example, after 10 days of arrival 50% of the delegate members would be departing. This information can be further used as an input for blocking inventory.

3.5.1.1.6 Comments and Coded remarks

Comments are itemized notes that can be viewed and manually interpreted by agents whereas coded remarks are systematic notes that can be accessed and processed automatically by the System. These comments are organized by sections and types and can also be propagated to subsequent blocks.

3.5.1.1.7 Confirmation Details

A group level confirmation policy describes mode and destination of reservation confirmations. Confirmations in the Email and Fax mode are generated almost real-time whereas Print confirmations are sent once a day. Internal confirmations are formatted and generated by Campus whereas External confirmations are sent through the corresponding travel agency.

3.5.1.1.8 Affiliated Profiles

A kinship among Groups can be established by affiliating them. For example, a Company and its subdivisions can be grouped together yet maintaining different identities. This is further used to establish parent-child relations between blocks.

3.5.1.2 Life cycle of a Group

A group transitions from an abstract notepad into a definitive business entity through a number of stages -

- Typically a group is created with the descriptive information gathered manually via phone or paperwork. This is the "Tentative" stage where the group is no more than abstract notes.
- After finalizing most of the details and policies, the agent matures the group into a "Definite" state where bookings can be received against it.
- On the date of arrival, the System automatically turns the group "In-house" and deposits are downloaded to the Property. Delegates arrive while the group is in-house.
- The group is manually "Checked-out" after the departure of he last delegate.
- A group can be "Cancelled" only in tentative and definite stages. In definite stage it is ensured that there are no bookings against it.

3.5.2 Maintain Blocks (VIP, Staff etc)

A block represents the rate and inventory and their utilization policies related to a group. Though this information is stored and managed by Pricing and Availability Systems respectively, Group Management System provides the user interface for maintaining it.

The current release of the System maintains one block per group profile. However the System is designed to accommodate multiple blocks in future.

The information which pertains to managing a block is as follows:

3.5.2.1 Rate category

A block has a default rate category that holds well beyond its date range. This is called the 'rate-period' of the block during which bookings can be accepted at the group rate.

3.5.2.2 Utilization codes

These are inventory rules for blocks which Availability System applies when determining available inventory. Based on these rules, a block can grow into its parent block or the freesell in the search of availability. These rules can be defined as granular as rate category and dates.

3.5.2.3 Trim policies

Block is trimmed based on policies to release unused inventory. In the simplest policy, x% of the block's unused inventory is trimmed y days prior to arrival. In a more advance setting, specific room type can be specified with different trimming formulae. This process can be kept rolling until the day of departure.

3.5.2.4 Block Hierarchy

These are setup to determine for sharing inventory between blocks. By means of parent child relationship. This is restricted to one generation of the block family which can be view on the screen

Campus also maintains the following information with the block which is used in the booking and accounting processes.

3.5.2.5 Booking source

This represents a source system that will be receiving bookings against this block. Typically wholesalers will have a predefined booking source; whereas groups and conventions will maintain their own booking source.

3.5.2.6 Customizable sales channels

A sales channel is a set of packages that can be associated to a group. Wholesalers have such predefined sets in the form of zone, memberships or distribution channels. Groups and conventions typically create their own sales channels by customizing packages with specific resort, room and rate information.

3.5.3 Maintain Block Inventory

Inventory is the availability of a room type on a date for a rate category. A block can reserve a subset of the available rooms from its parent block or from the free-sell inventory. The usage and allocation of the inventory is maintained by Availability System using complex utilization codes which can be specified at various levels. This drives the need for an extensive user interface for searching and manipulating this data.
Campus UI provides this feature as an extension to the block screens. Inventory administrators can create, update, increase, decrease or delete this information at various levels. Booking agents can search, view, sum-up and export it to facilitate the booking process.

Inventory information consists contains following important details-

3.5.3.1 Allotment count

This represents the inventory promised by contract to a group. It is specified for a specific resort, room type, rate category and date.

3.5.3.2 Block count

This represents the actually inventory blocked against the promised allotment. This is calculated based upon the forecasting models and is typically less than the allotment.

3.5.3.3 Utilization codes

These are extensions of the block' utilization codes such as wash factor sometimes override them.

3.5.3.4 Length of Stay

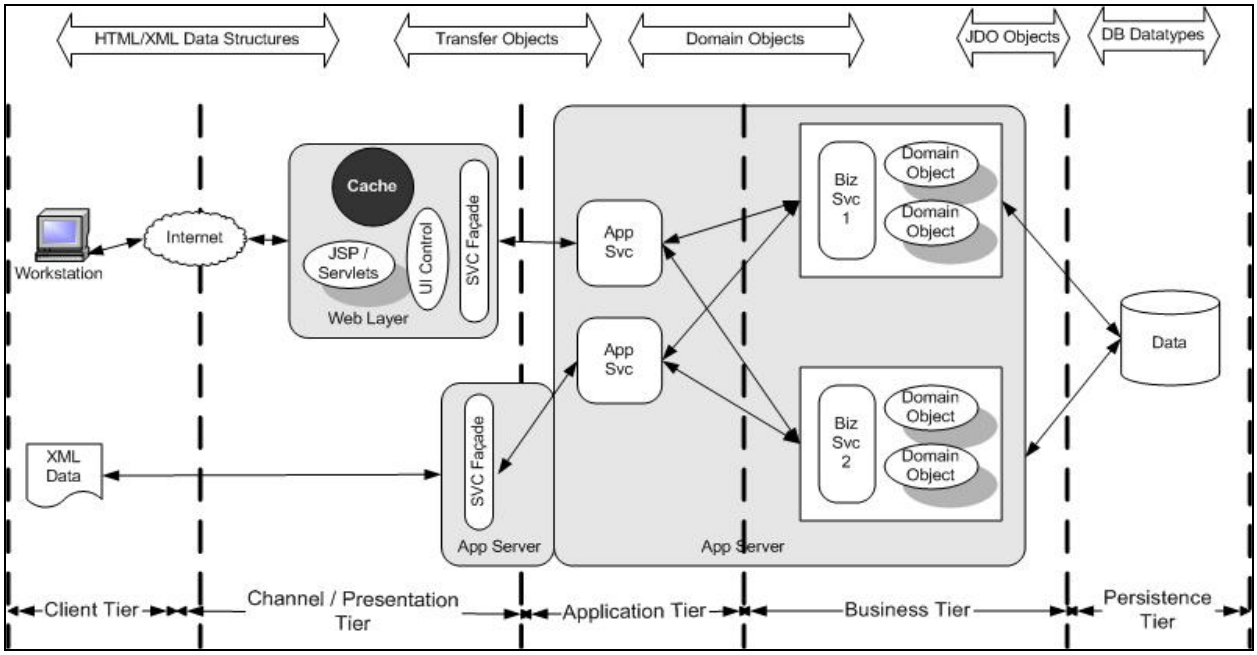
This restricts the duration of a reservation for based on arrival date. It is a 20-day pattern which can be keyed in manually of specified by group functions such as min/max and to/from boundaries.

4 Technical Architecture

The business architecture and processes defined above have been implemented in Campus with a technical architecture. This section attempts to describe the various architectures implemented within Campus and for communication with external systems.

4.1 Application Architecture

This section provides a brief overview of the Implementation architecture for the Campus Online Application.



4.1.1 Presentation Tier

The presentation tier has been implemented using Java Server Pages and Struts Framework. The Java Server Pages use form elements to display the content on the UI. The Struts Action Components transfer the information to the application tier by creating transfer objects. The communication from the Struts Action to the application tier is through an application service façade,

4.1.2 Application Tier

The application tier invokes the appropriate business service EJB method by passing the transfer objects from the presentation tier to the business tier. They provide an additional level of indirection for any mapping required for the input to be passed to the Business Service.

4.1.3 Business Tier

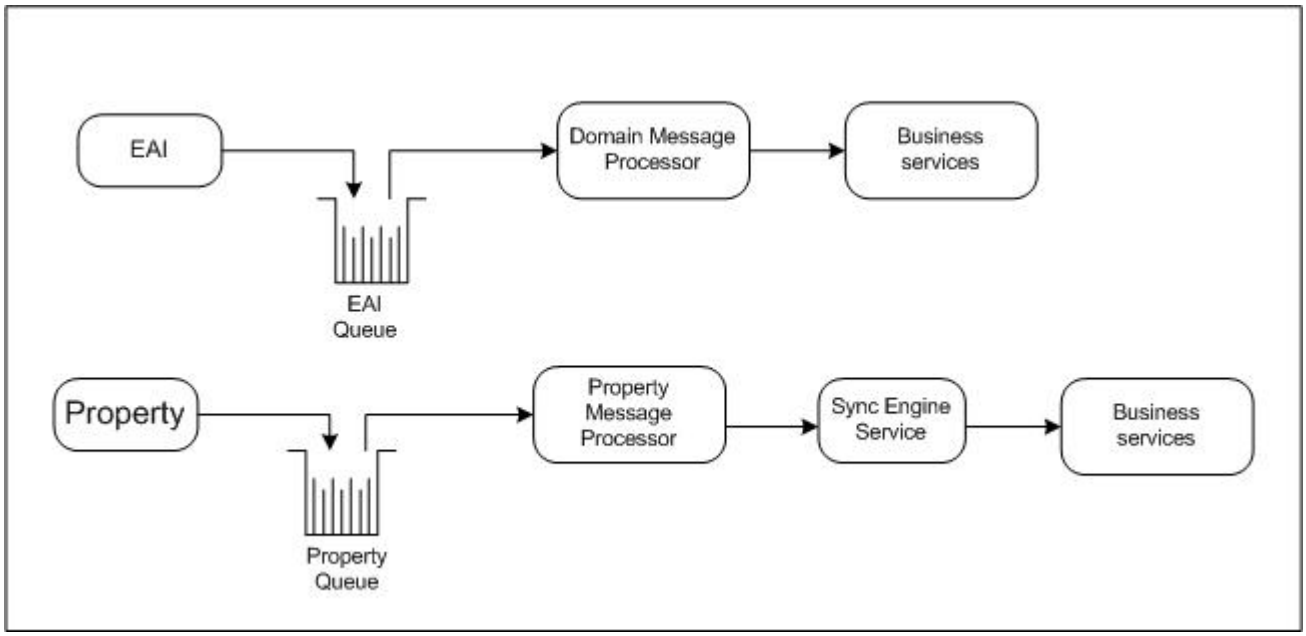
The Business tier is implemented using Stateless Session Beans as a Service oriented architecture. Each functional module is implemented as an EJB. Each Business Service has method implementations for services offered by that module. Each method invokes a command. The command invokes the implementation logic of the business process. The business processes converts the transfer objects to domain objects which are persistent. The domain objects are then transferred to the Life Cycle Boundary Services for persistence.

4.1.4 Data Access Tier

The Life Cycle boundary Services for each domain object uses the Java Data Objects as an Object Relational Mapping technology to persist the domain objects. The mapping information of the Objects to the Database tables is provided which is used by JDO for database interactions. The connection and the transaction management are handled by the JDO layer.

4.2 XML Messaging Architecture

The xml messaging is mainly used by external systems mainly EAI and Property to communicate with Campus. This section describes the architecture for the same.



4.2.1 Inbound Message Queues

Campus primarily receives and sends messages through two queues.

- Domain Message queue
- Property Queue

4.2.2 Domain Message Queue

This queue is primarily used by EAI for sending XML messages from all the client channels for several booking and accounting transactions.

4.2.3 Property Queue

This queue is setup per property and is used by Campus Synch Engine and Property to send messages for business transactions.

4.2.4 Message Processors

For all messages, the listener looks up the appropriate Message Processor from a properties file (Domain_msgs.properties) located in the /config folder of each server. The listener routes the XML Message to the Message Processor. The Message Processor will then invoke the appropriate business service. In case of property XML Messages, Campus Sync Engine is called which then invokes the Business Services inside Campus.

4.3 Security Architecture

DREAMS Campus is using Keystone for enabling security for its UI components. Keystone is a security framework adopted in Walt Disney Company for authentication and authorization purposes. This security framework is restricted to Campus UI only.

4.3.1 Authentication

When a user logs on to Campus application, Campus application sends the authentication information (user ID/Password or a Single sign-on credential) to Keystone. Keystone in-turn authenticates the user against Disney Active Directory using Site minder.

The Campus application is then responsible for securing itself based on the information that was returned in the assertion (Roles, Functional Abilities, Secured Entities, User Attributes, etc.).

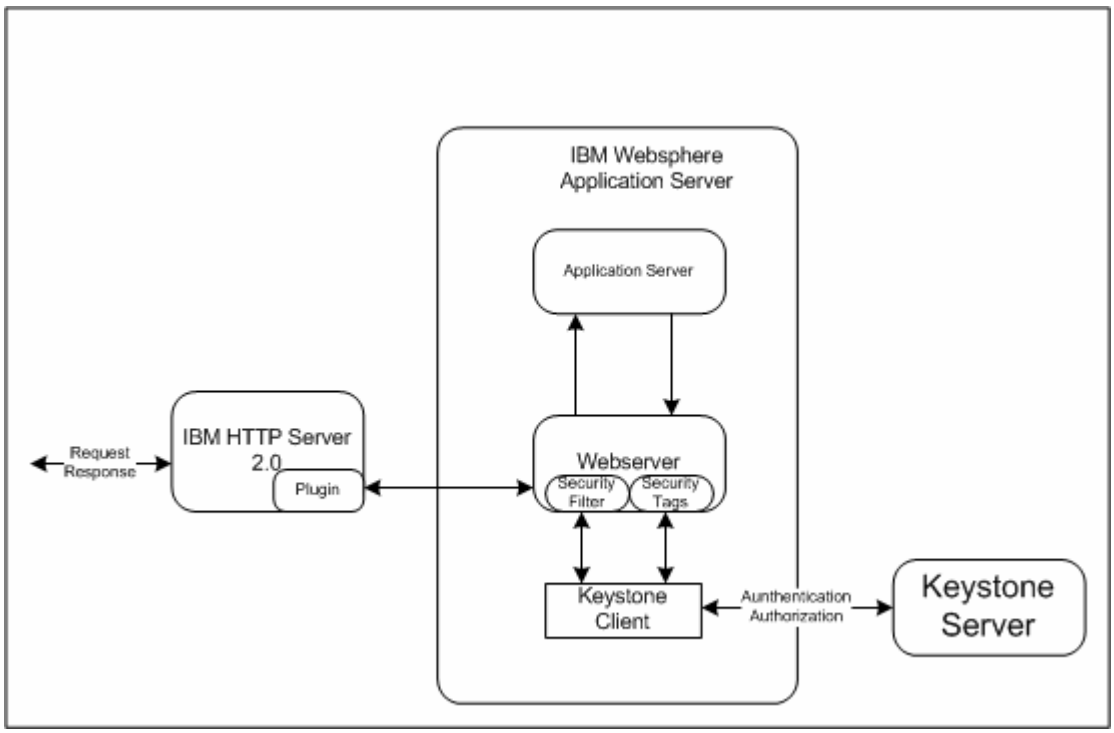
4.3.2 Authorization

Upon authenticating a user to the Campus application, Keystone provides a set of authorization rules in terms of User Roles, Functional Abilities, Secured Entities and User Attributes.

Keystone authorization is implemented by defining a set of functional abilities for an application. Functional ability controls the UI elements as follows:

- Enable or Disable a field (fields like text box / button / hyperlinks)
- Show or Hide a field / data on the screen
- Restrict the items in a drop down (choice list)

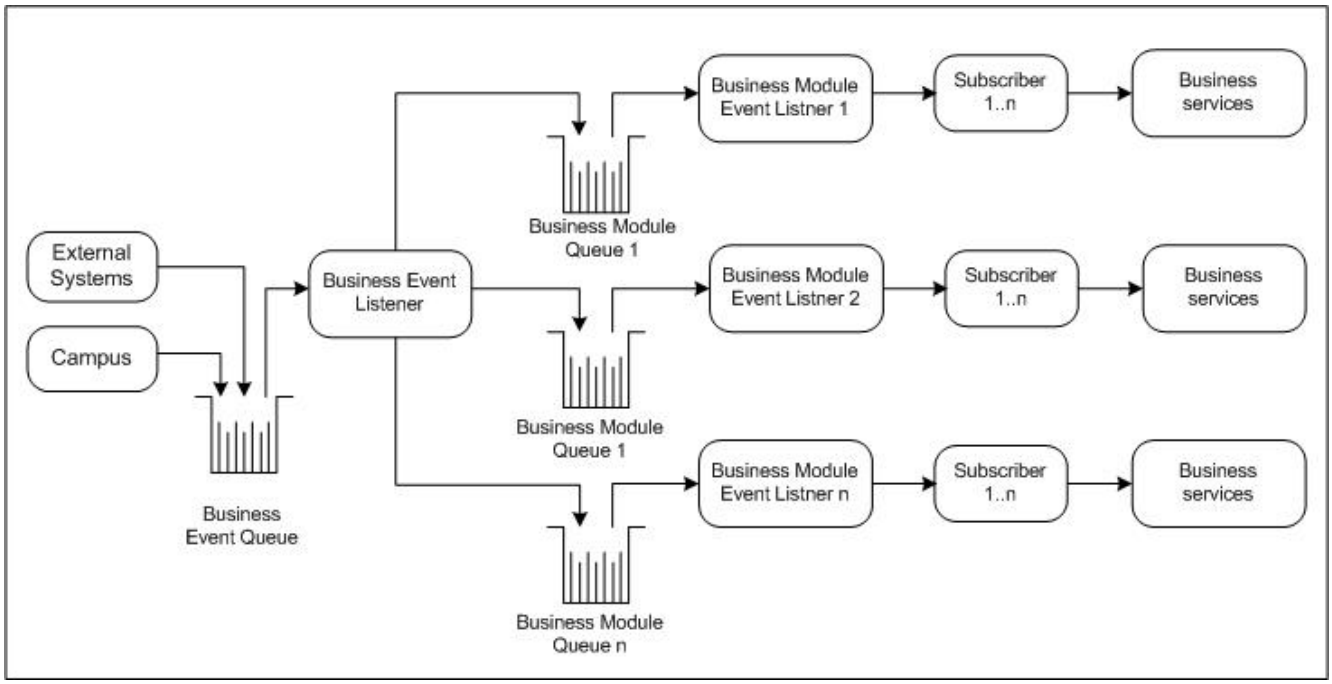
A user (of Campus UI) can be assigned one or more roles. Based on the security requirements for each Campus module, certain functional abilities have been assigned for each role. Campus system validates the user's authorization rules against the functional abilities available for each user to enable or disable the specific access to a UI control for the user.



4.4 Business Events Architecture

Campus uses business events within modules and also publishes events which are consumed by external systems. This section describes the architecture of the business event framework.

The Event Framework is used for clients to publish events asynchronously to subscribers who are interested in the event. More than one subscriber can receive the same event. In case of the transaction failure in the client system publishing the event, the event will be removed from the queue so no subscriber can receive it.
All events are published into a centralized queue (campus queue) and then forwarded to the list of subscriber queues that are interested in that event. In case the subscriber system is down, the events are queued up and processed later.



4.4.1 Business Events

Business Events are Objects which contain some information required to process a business flow. Campus application and external systems publish business events to the centralized Campus Message Event listener.

4.4.2 Campus Message Event Listener

The Campus Message event listener is a centralized message event listener for all the Campus modules. This listener routes the business events to the appropriate Module subscriber listeners. The Campus Message event listener uses BusinessEvents.properties file to determine the module queue it forwards the event.

4.4.3 Subscriber Module listener

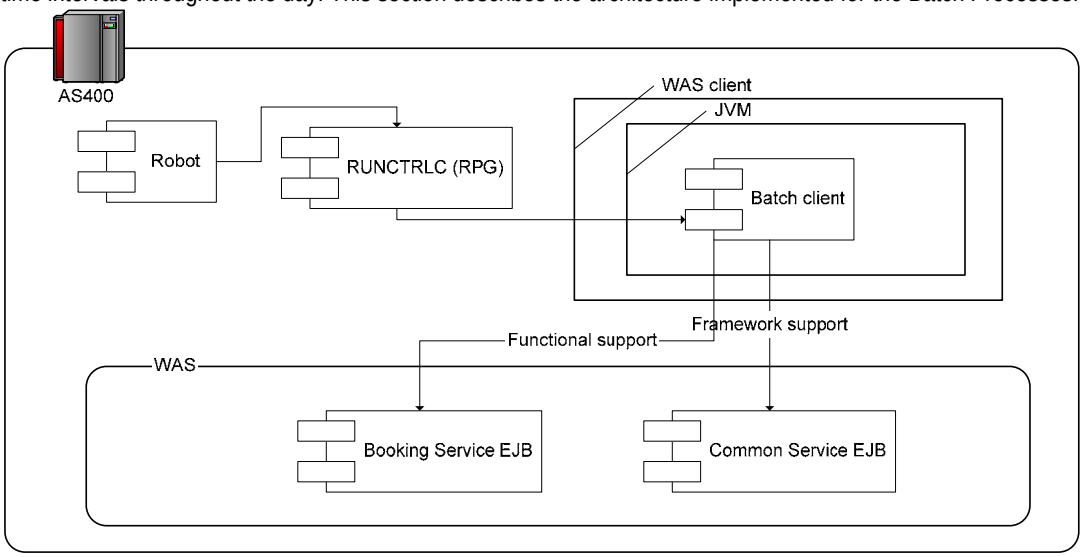
Each Subscriber Module listener subscribes to the events it is responsible for processing. This module listener then invokes the appropriate subscriber for this event by a lookup in BusinessEvents.properties.

4.4.4 Module Event Subscriber

Each Module event subscriber then notifies the appropriate business services.

4.5 Batch Architecture

Campus processes many EOD jobs which produces feeds for sending to external systems. Also, there are jobs scheduled at regular time intervals throughout the day. This section describes the architecture implemented for the Batch Processes.



4.5.1 Important Terminology

Batch definition – is identified by a process code. The definition involves – executer java class, driver date, number of parallel threads etc. It is also the logical linkage between the RPG and the Java code. (An entry in CMPS_PROC table)

Batch job – is an AS400 job uniquely identified by job-name / job-number / user-id combination. Campus job-names follow a pattern of NIT*. The user-id is QSYSOPR for all jobs triggered by Robot. (An entry in PROC_JOB table)

Batch process – is a batch process running for a specific process-code and date. (An entry in PROC_JOB_RUN table)

Batch request – is a worker thread processing a business entity which can be independently executed as a unit of transaction. (One or more entries in REQ_MSG table)

4.5.2 Robot

A batch job is triggered at the scheduled time / sequence as an AS400 job through Robot.

4.5.3 RUNCTRLC

Robot calls into an RPG program RUNCTRLC with the specific process code.
This program performs native activities such as-

1) Classpath setup and launching of the Java process running batch client.
2) File Transfers etc

4.5.4 Batch client

Batch client is launched as a WAS enterprise application client (a Java runtime part of the Campus J2EE cluster). It is entered equipped with the process-code via main () method on the adapter class JobRunControl. The batch client performs the following steps –

1) Retrieve batch definition using process-code
2) Run batch processes serially for all eligible dates. This also involves catching-up with the processes those were failed / terminated / skipped previously.
3) For each batch process, throttle requests in parallel for eligible business entities.
4) Mark completion status at the end of the process along with the process statistics such as- total requests, processed requests and failed requests.

It is important to note that each batch job runs in its own JVM as a native AS400 process. This fact is useful especially in terminating undesired batch process.

4.5.5 Common Service

Batch client uses Common EJB for framework level activities such as – status and statistics updates, application date manipulation etc.

4.5.6 Application Services

Individual batch processes / requests use services provided by Booking / Accounting / Groups EJBs for functional processing. These EJBs typically expose two interfaces -1) get eligible business entities 2) process individual business entity for each batch definition.

4.6 System Architecture

This section describes basic system information for Campus.

System Layer	Technology / Tools
Machine Name	AS400
Operating System	OS/400
Technology Platform	J2EE
Web Server	IBM HTTP Server
Application Server	Websphere Application Server
Data Access layer	JDO / Solarmetric KODO
Messaging infrastructure	MQ Series
Security	Keystone
Database	IBM DB2
Intrusion detection	Power Systems / Power Lock