



Comverse Training Group  
*Delivering Knowledge*

Section 7

# Promotions and Recharges

# Agenda

7.1 Rating-Time Promotions

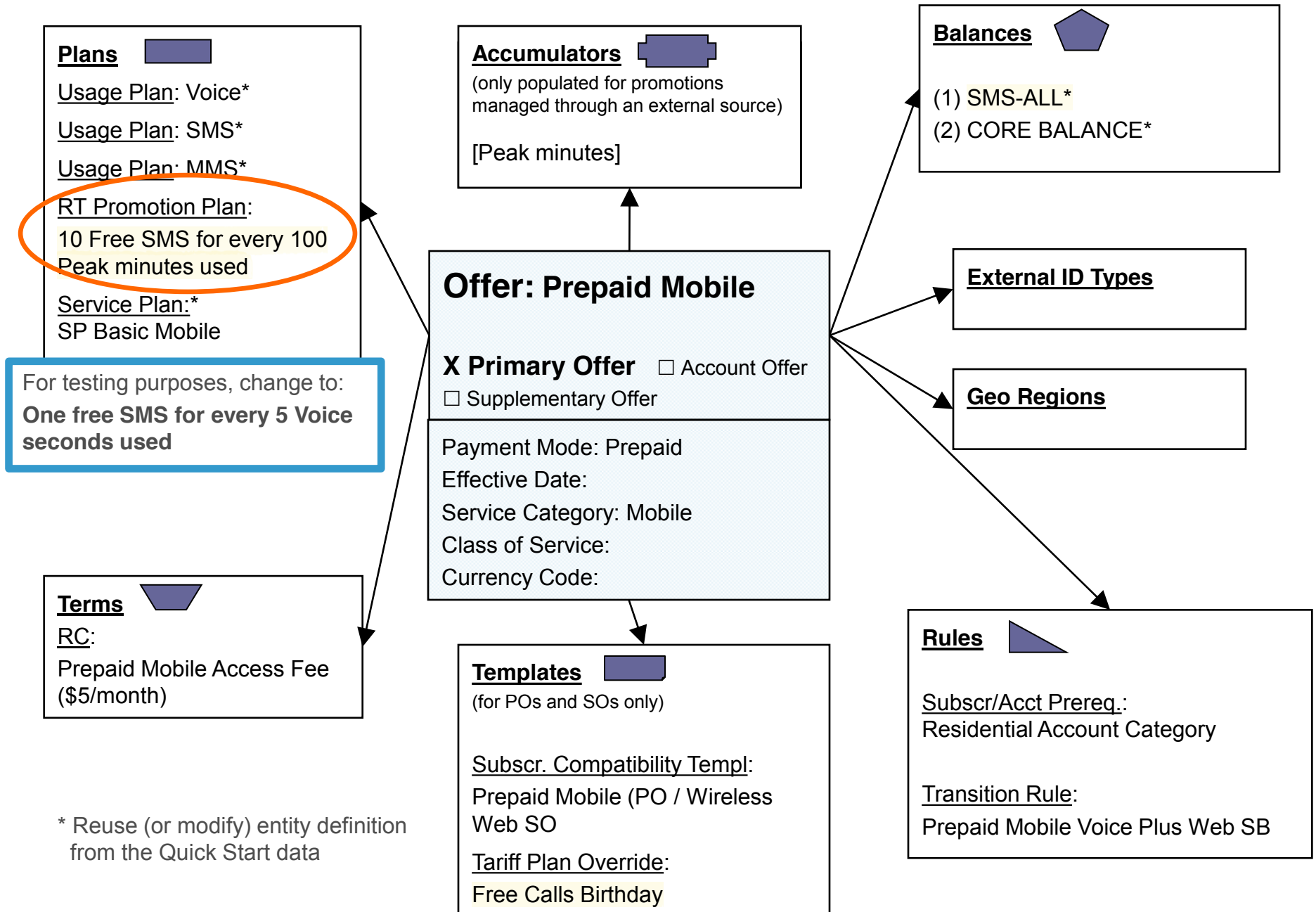
7.2 Bill-Time Promotions

7.3 Recharge Control Table (RCT)



# Module Objectives

- Define the purpose of Rating-Time Promotions
- Explain the difference between a RT discount and RT bonus
- List the five elements that can be involved in configuring a RT promotion
- Discuss the purpose of accumulators, and define the main attributes
- Given a business scenario, identify and configure the RT promotions



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## Rating-time Promotions

RT Promotion Basics

Accumulators

RT Bonus

RT Discount

RT Promotion Plan



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## RT Promotion Basics





# Rating-Time Promotions Basics

- RT Promotions are discounts and bonuses that are calculated and issued as each usage event is rated
- Allow subscribers to be rewarded immediately (in real time or deferred mode), upon reaching certain usage levels within a configurable period of time
- Target general or specific usage
- Promote usage within a service or across convergent services
- Notify subscribers of near award thresholds to promote additional usage
- RT promotions are not limited to prepaid usage. You can have a promotion on usage charged to a postpaid balance that takes affect at rating time (Awards are added as they are earned, for example)



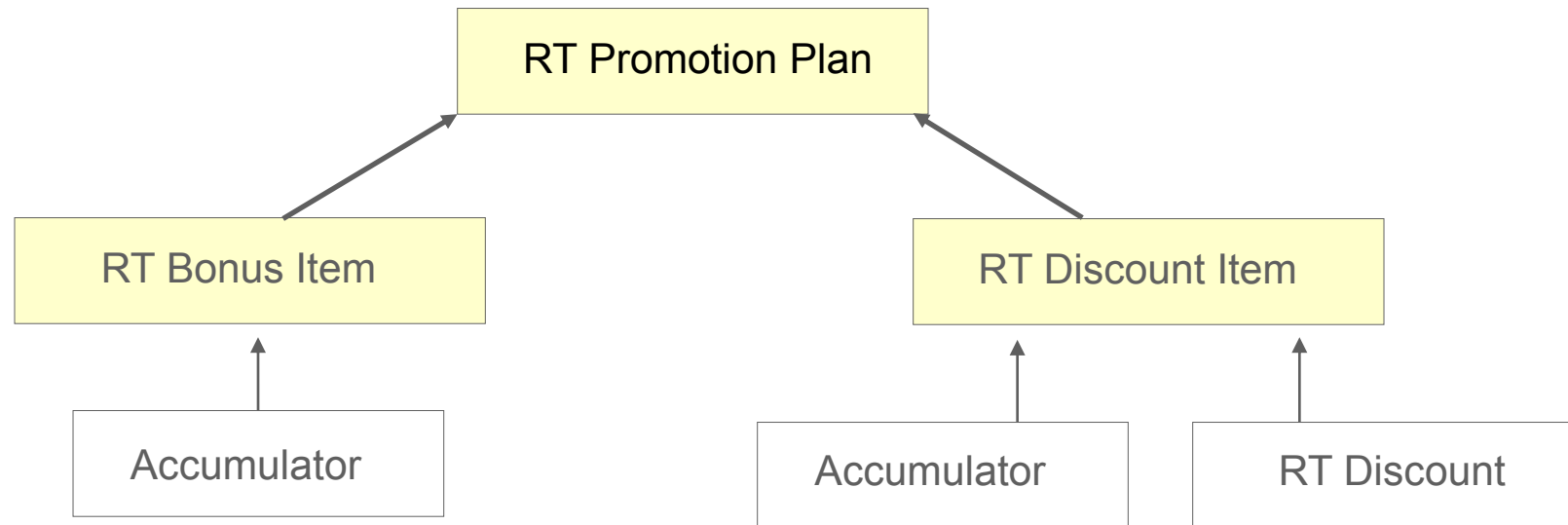
# Rating-Time Promotions & Examples

- **Discounts** include percentage discounts or a fixed monetary amount
- **Bonuses** provide monetary awards or a bonus offer
- **Rating-Time Discounts**
  - 10% discount on international direct dialing calls after 100 minutes of roaming calls in a month
  - Use 250 minutes in a month and get 1 cent off each SMS
- **Rating-Time Bonuses (Awards)**
  - Send 200 SMS messages in a month and get 10 SMS messages free
  - Order five PPV movies within a week and get a bonus supplementary offer that provides discounted movies for a month



# Rating-Time Promotion Elements

- Promotion Plans package together discounts and/or bonuses
- There are three functional parts: Accumulator, Bonus Item and/or Discount Item\*, and a Promotion Plan

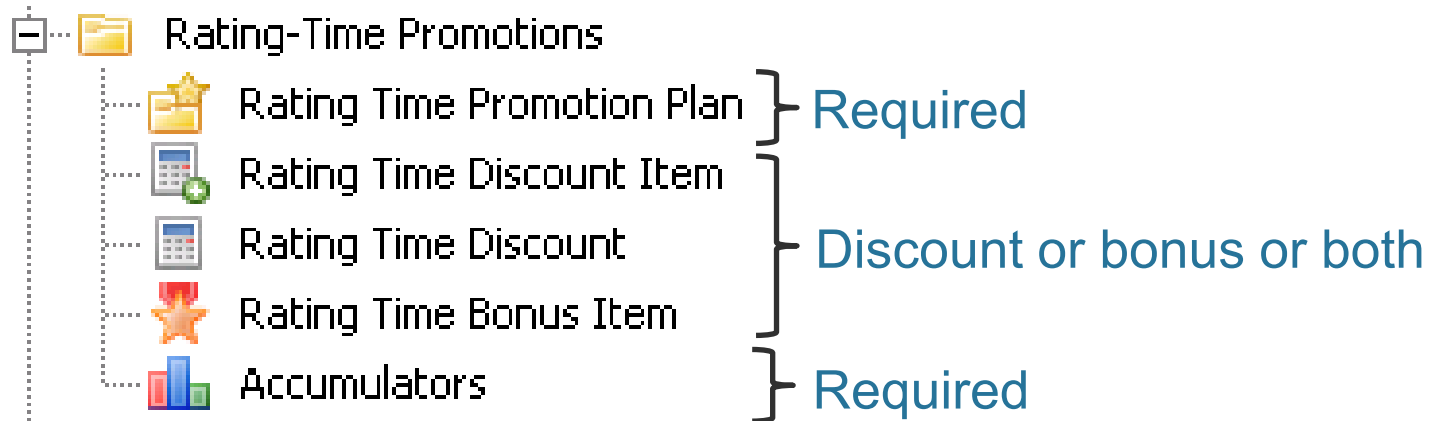


\* Note that for discounts, configuration of the discount and discount item are separate steps.

# Flow to Define Rating-Time Promotions

Define the main entities in this order (all are required):

1. Accumulators
2. Discount Items (first configure the discounts)  
*and/or* Bonus Items
3. Promotion Plan



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## Accumulators

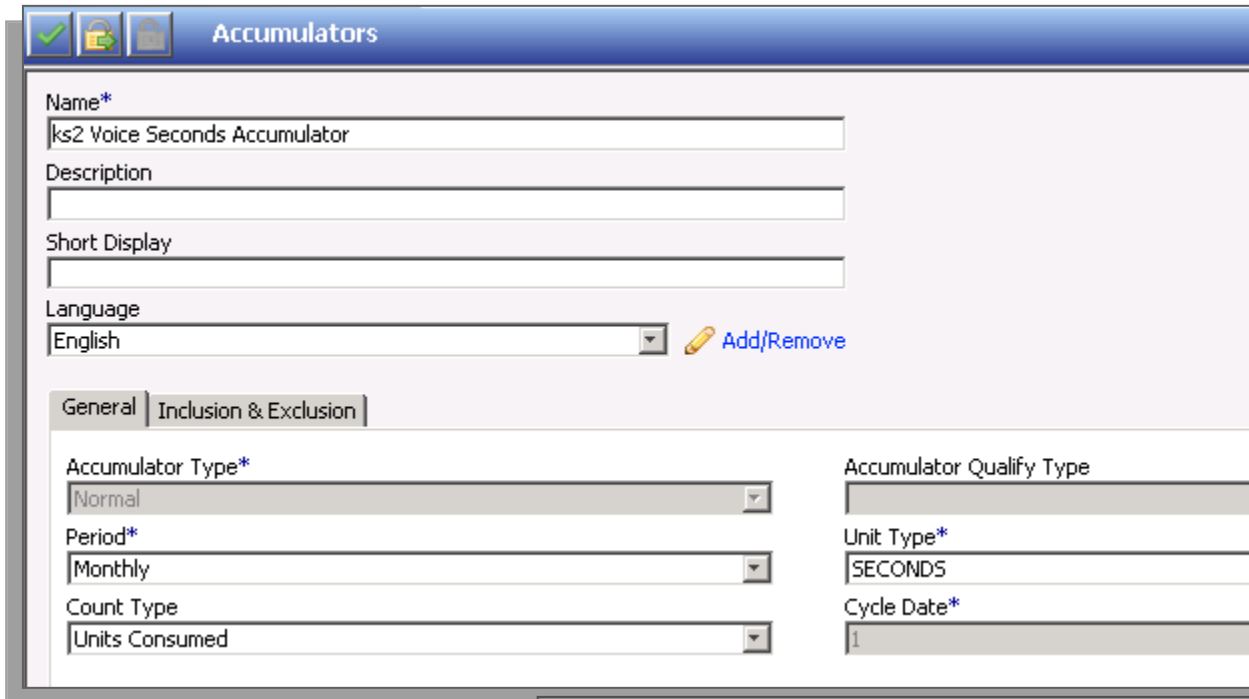


# Accumulators

- Accumulators are registers capable of counting or measuring all user-generated chargeable activity
- Configured to count units of usage, usage charges, or events
- One accumulator counts one type of usage
- Each discount award or bonus award is configured with an accumulator
- Qualification criteria includes the minimum value before accumulation begins and the maximum value at which accumulation stops
- Includes a rate, or multiplier, of accumulation
- At the account level, accumulators can accumulate against all child subscriber charges

Ở Account Level, accumulator có thể accumulate đối với tất cả các subs con => Dùng cho Group & Family

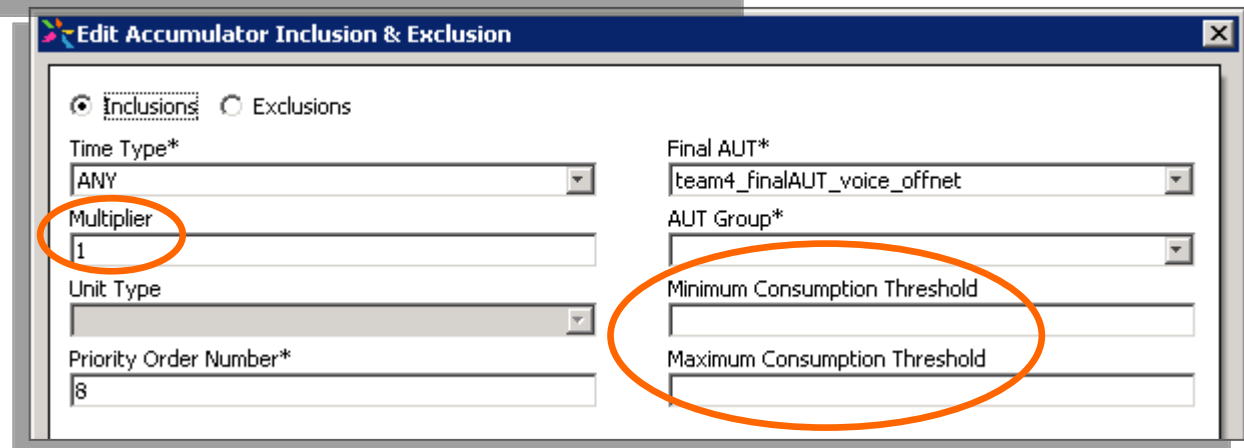
# Defining an Accumulator



The 'Accumulators' window has a blue header bar with three icons (checkmark, folder, lock) and the title 'Accumulators'. Below the header, there are several input fields: 'Name\*' (containing 'ks2 Voice Seconds Accumulator'), 'Description', 'Short Display', and 'Language' (a dropdown menu set to 'English' with an 'Add/Remove' link). Below these fields are two tabs: 'General' (selected) and 'Inclusion & Exclusion'. The 'General' tab contains two columns of settings. The left column has 'Accumulator Type\*' (dropdown set to 'Normal'), 'Period\*' (dropdown set to 'Monthly'), and 'Count Type' (dropdown set to 'Units Consumed'). The right column has 'Accumulator Qualify Type', 'Unit Type\*' (dropdown set to 'SECONDS'), and 'Cycle Date\*' (dropdown set to '1').

To increment accumulator for every minute (60 seconds) x a Rate of 1

Rate or multiplier of accumulation after min/max applied (see next slide)



The 'Edit Accumulator Inclusion & Exclusion' window has a blue header bar with a multi-colored icon and the title 'Edit Accumulator Inclusion & Exclusion'. Below the header, there are two radio buttons: 'Inclusions' (selected) and 'Exclusions'. Below the radio buttons are several input fields: 'Time Type\*' (dropdown set to 'ANY'), 'Multiplier' (text box containing '1', circled in orange), 'Unit Type' (dropdown), 'Priority Order Number\*' (text box containing '8'), 'Final AUT\*' (dropdown set to 'team4\_finalAUT\_voice\_offnet'), 'AUT Group\*' (dropdown), 'Minimum Consumption Threshold' (text box, circled in orange), and 'Maximum Consumption Threshold' (text box, circled in orange).

# Accumulator Qualification Criteria

- Minimum/Maximum Consumption Threshold
  - **Minimum** – Define which usage contributes towards the accumulation (the count always starts from 1)
  - **Maximum** – Sets a limit on the accumulation per usage event
- Multiplier
  - The amount accumulated can be multiplied by a rate
  - The multiplier is applied to accumulators after any minimum and maximum criteria are applied
- Example
  - Accumulate seconds for all calls of one minute or more ( $\geq 60$ -seconds), but only accumulate up to 4 minutes (240 seconds). Double the “points” accumulated.
  - **Min=60 Max=240 Multiplier=2**
  - Call of duration 0:59 does not increment accumulator
  - Call of duration 1:30 increments accumulator by 180 seconds
  - Call of duration 5:30 increments accumulator by 480 seconds

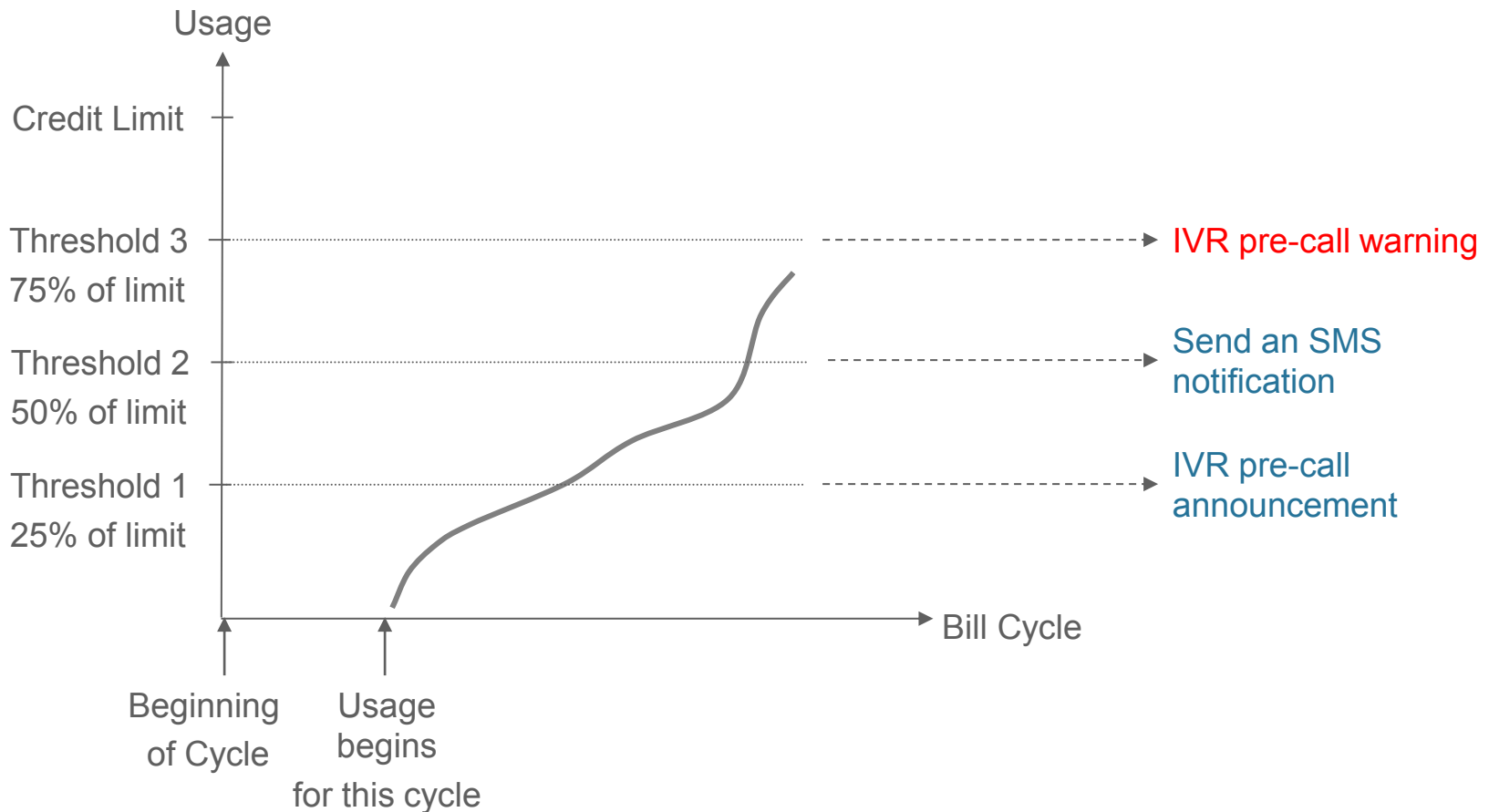
# Accumulator Inclusion Rules Examples

#	Time Type / Rate Period	AUT / AUT Group	Minimum Consum Thresh	Maximum Accum Thresh	Units	Rate of Accum	Comments
1	Peak	Voice_Calls			Sec	1	Accumulate seconds of usage for all Peak voice calls
2	Peak	Voice_Calls	30		Sec	1	Accumulate seconds of usage for all Peak voice calls of than 30 seconds or more
3	Peak	Voice_Calls	30	601	Sec	1	Accumulate seconds of usage for all Peak voice calls of 30 seconds or more, but stop accumulating at 600 seconds
4	Peak	Voice_Calls	30		# Occur	1	Count Peak voice calls of more than 30 seconds or more,
5	*	Voice_Calls	0.30		Cur	1	Accumulate currency for all calls charged 0.30 or more
6	*	Voice_Calls	0.30		# Occur	1	Count all calls charged 0.30 or more (Same as above, but with Event Accumulator)
7	*	Voice_Calls	0.30	1.01	Cur	1	Accumulate currency for all calls charged 0.30 or more, but stop accumulating at 1.00
8	Peak	Voice_Calls		31	Sec	1	Accumulate seconds of usage for all Peak voice calls, but stop accumulating at 30 seconds.



# More on Accumulators: Flexible Thresholding

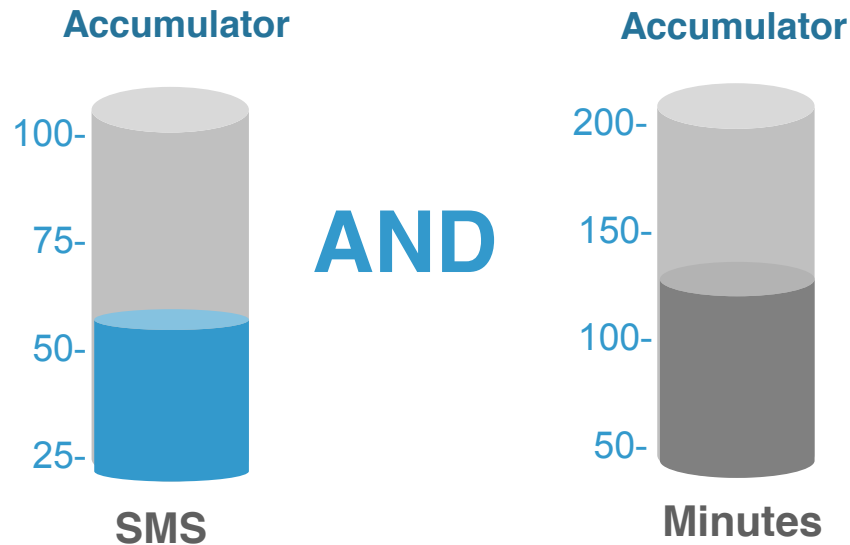
When configured thresholds are reached, we can notify the subscriber.



# Multiple Accumulators

A maximum of up to 5 accumulators with an “AND” operation can be used as eligible criteria for rating-time bonuses and discounts

IF number of SMS  
accumulates to 50  
**AND**  
number of Minutes  
accumulate to 100:  
receive  
Promotion Plan



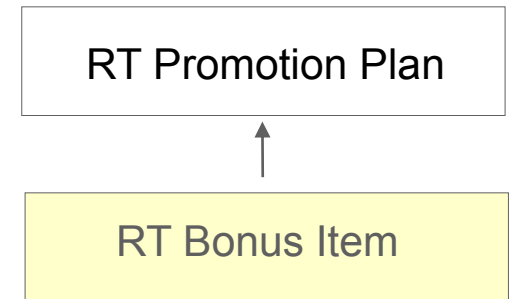
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RT Bonus



# Rating-Time Bonus

- Defines a bonus based on the subscriber's usage
- Subscriber receives a balance award or a bonus offer (Supplementary Offer) for using a particular service beyond a configurable threshold
- Can be granted for immediate use or for future use (deferred awards)
- Can be awarded to more than one balance upon reaching specified thresholds



Note: To make testing easier, in class we will configure:  
**1 Free SMS for every 5 seconds of Voice calls**

# Defining Rating-Time Bonus Item (Accumulator)

**Rating Time Bonus Item** Version 3.0

Name\*: ks 10 free SMS for every Voice minute used

Description:

Short Display: ☐ Is Default

Language: English [Add/Remove](#)

**Accumulators**

	Name	Accumulator Type	Unit Type
1	Primary		

2 [Edit](#) [Delete](#)

*You may add Threshold Criteria after the Bonus Item has been saved.*

Currency\*: US Dollars

☐ Reset Primary Accumulator for Last Threshold?

**Edit Accumulator**

Name	Accumulator Type	Unit Type
All Usage Currency Accumulator	Normal	Money/Currency
All Usage Units Accumulator	Normal	SECONDS
BA SMS Accumulator	Normal	Event
Deferred Award Usage Unit Accumulator	Normal	SECONDS
Download KB Accumulator	Normal	K Bytes
General Recharge Currency Accumulator	Recharge	Money/Currency
General Voice SMS MMS Currency Accumulator	Normal	Money/Currency
General Voice SMS MMS Occurances Accumulator	Normal	Event
3 ks Voice Seconds Accumulator	Normal	SECONDS
Local Offnet Minutes Accumulator	Normal	SECONDS
MCN Accumulator	Normal	Money/Currency
Offnet Calls Accumulator	Normal	Event
SMS Accumulator	Normal	Money/Currency

# Defining Rating-Time Bonus Item (Thresholds & Notification)

- 1 To begin, click Add at the bottom of the window.

**Edit Bonus Threshold**

**Accumulators**

	Name	Accumulator Type	Unit Type	Threshold
Primary	ks2 Voice Seconds Accumulator	Normal	SECONDS	5

**Bonus Item Name**  
ks 1 free SMS for every 5 Voice seconds

**Currency**  
US Dollars

☒ Reset Primary Accumulator?

☐ Award on Next Recharge?

**Awards and Notifications Description**

**Notification Event Type\***  
Award


**Notification Text**  
Congratulations, you've earned an SMS!

Characters: 38

**Edit Threshold**

Threshold  
5

OK Cancel

**3**  [Edit](#)

**4**

# Defining Rating-Time Bonus Item (Bonus Award or Offer Award)

1 To begin, click Add at the bottom of the window.

**Edit Bonus Award**

Bonus Type\*  
Fixed Amount

Expiration Type\*  
Independent

Target Balance  
SMS-ALL

Amount  
1

Balance Unit Type: **SMS**

Primary Accumulator Name: **ks2 Voice Seconds Accumulator**

Primary Accumulator Unit Type: **SECONDS**

Start Date

☐ Enter specific date

☒ Use today's date plus Offset 0

End Date

☐ Enter specific date

☒ Use Start Date plus Duration 10

Result:

Another option is to award an offer upon reaching the threshold

Balance Awards Offer Awards

**Awards**

Target Balance	Bonus Type	Award Amount	Unit Type	Availability	Days	Duration	Start Date	End Date
SMS-ALL	Fixed Amount	1 SMS	Independent	0	10			



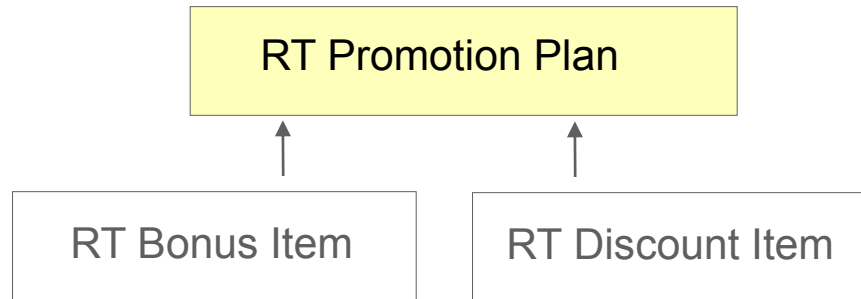
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## RT Promotion Plan



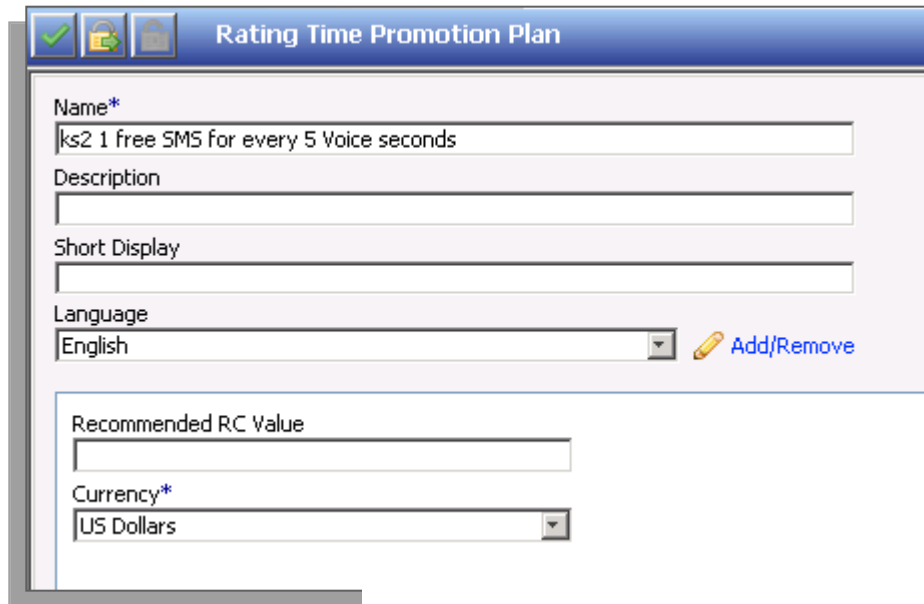
# Rating-Time Promotion Plan

- After defining the bonus or discount, package it in a rating-time promotion plan
- Plans are added to an offer for provisioning to the customer



# Defining Rating-Time Promotion Plan

- Consists of one or more of the following items:
  - Rating time bonus items
  - Rating time discount items




Rating Time Promotion Plan

Name\*  
ks2 1 free SMS for every 5 Voice seconds

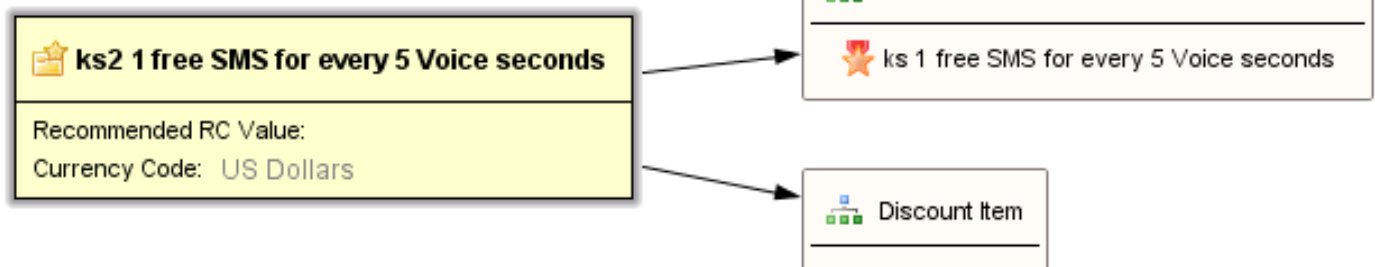
Description

Short Display

Language  
English  Add/Remove

Recommended RC Value

Currency\*  
US Dollars



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RT Discount





# Rating-Time Discounts

- Discounts are percentage or fixed-amount reductions in real time against the total charge of the event
- Only monetary balances can be discounted
- Discounts can be awarded to any activity or part of activity upon reaching predefined thresholds
- Discounts expire at the end of the period of the accumulator from which it was awarded



# Defining Discount (Accumulator)




 **This entity may not be modified because it also exists in versions other than the**

Name\*  
General Voice SMS MMS Currency Accumulator

Description

Short Display

Language  
English  [Add/Remove](#)

General | Inclusion & Exclusion

Accumulator Type\*  
Normal


Period\*  
Monthly

Count Type  
Currency Consumed

Accumulator Qualify Type

Unit Type\*  
Money/Currency

Cycle Date\*  
1



☒ Inclusions ☐ Exclusions

Time Type\*  
ANY

Multiplier  
1

Unit Type

Priority Order Number\*  
30

Final AUT\*

AUT Group\*  
Voice SMS MMS Group

Minimum Consumption Threshold

Maximum Consumption Threshold

# Defining Discount (Thresholds, Notification & Amount)

**Rating Time Discount**

Name\*  
10% Discount

Description

Short Display  
 ☐ Is Default

Language  
English [Add/Remove](#)

**Discounts** | Time Type Exclusions

**Accumulators**

	Name	Accumulator Type	Unit Type
1	Primary	General Voice SMS MMS Occurances Accumulator	Normal
	Qual 1		Event

2 [Edit](#)

**Threshold Criteria**

Primary	Qual 1	Qual 2	Qual 3	Qual 4	Discount Amount	Notification Event Type	Notification Text
0					10.0000%	No Notification	

5 [Add](#) | [Edit](#) |

**Awards and Notifications Description**

Notification Event Type  
No Notification

Notification Text

6 **Discount Amount**  
10.00%

Discount Type\*  
Percentage

Currency  
US Dollars

☐ Reset Primary Accumulator for Last Threshold?



# Defining Rating-Time Discount Item

A rating time discount item associates a rating-time discount with a Final AUT or usage type group to be discounted

Rating Time Discount Item

Name\*  
10% Discount on Voice/SMS/MMS

Description

Short Display

Language  
English

Is Default

Discount\*  
10% Discount

AUT

AUT Group  
Voice SMS MMS Group



See the previous section to put the Discount Item into a Promotion Plan

# Summary

- Rating-Time Promotions are discounts and bonuses that are calculated and issued as each usage event is rated; they allow subscribers to be rewarded upon reaching certain usage levels within a configurable period of time
- Discounts include percentage discounts or a fixed monetary amount
- Bonuses provide monetary awards or a bonus offer
- Accumulators measure the amount of usage an account or subscriber is consuming
- Promotion Plans package together discounts and/or bonuses, with the relevant accumulators

# Agenda

7.1 Rating-Time Promotions

7.2 Bill-Time Promotions

7.3 Recharge Control Table (RCT)



# Module Objectives

- Explain the difference between a Rating-Time Promotion and Bill-Time Promotion
- Match examples of BT promotions with their promotion types
- List the three main elements to configure a BT promotion

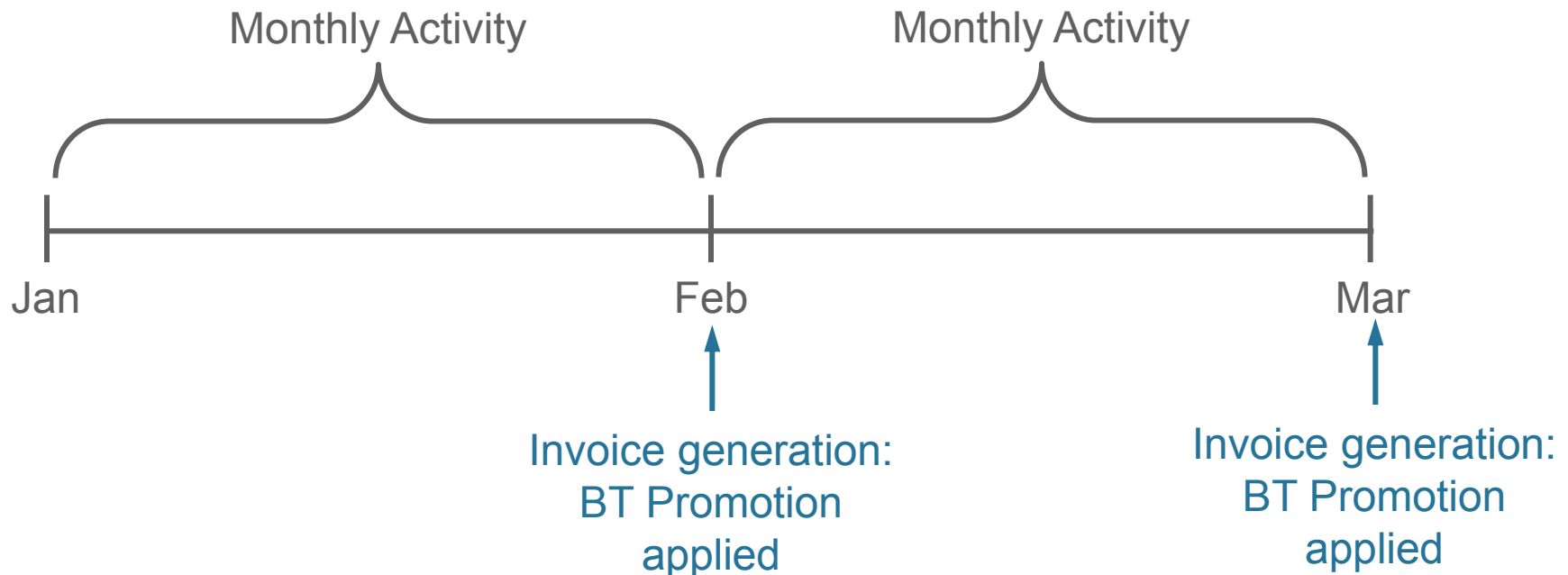
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## BT Promotion Basics

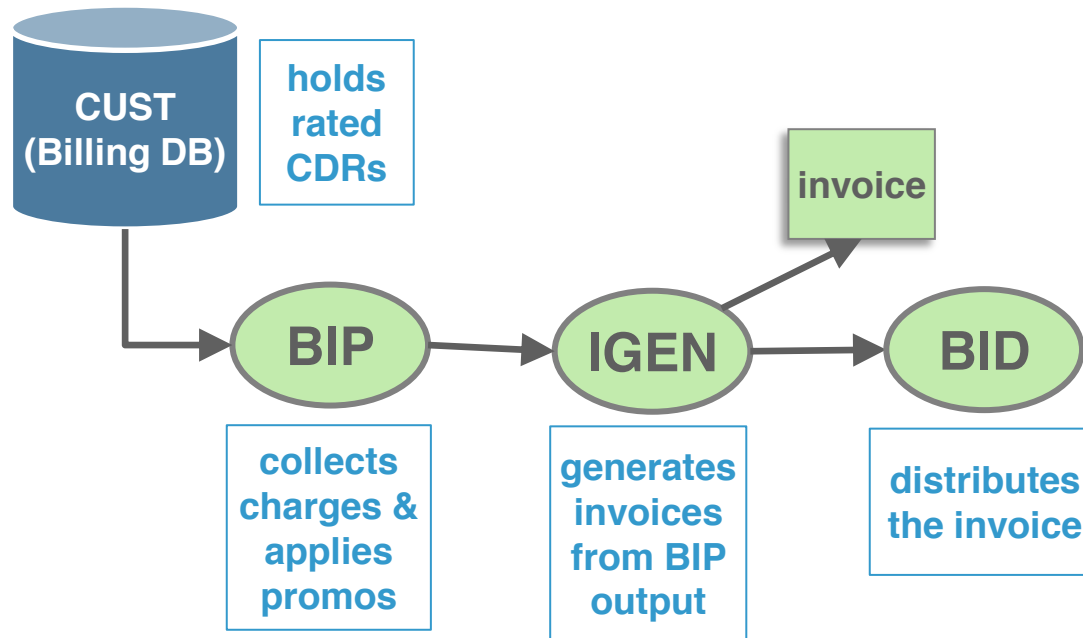


# Bill-Time Promotion Calculation

- Discounts and unit credits are calculated and issued *at the end of the bill period*, when the invoice is generated
- Bill-time promotions do not use accumulators



# Billing Flow





# Bill-Time Promotions

- Discounts can be percentage-based or a flat rate, incremental or tiered, or a grant for future usage
- BT promotions can apply to postpaid, converged, and even prepaid subscribers
- Promotion cycle can be based on any configurable period
- Can apply to all charges on an invoice or to a subset of charges
- Can apply across services
- Target (or restrict to) any group or type of charge or rate period
- Can apply across multiple subscribers within an account

# Simple BT Promotion Examples

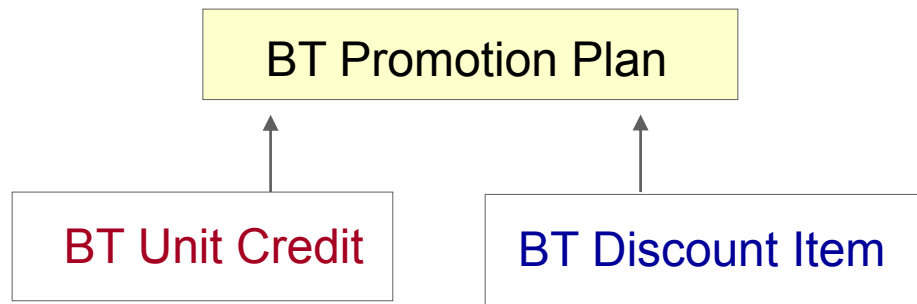
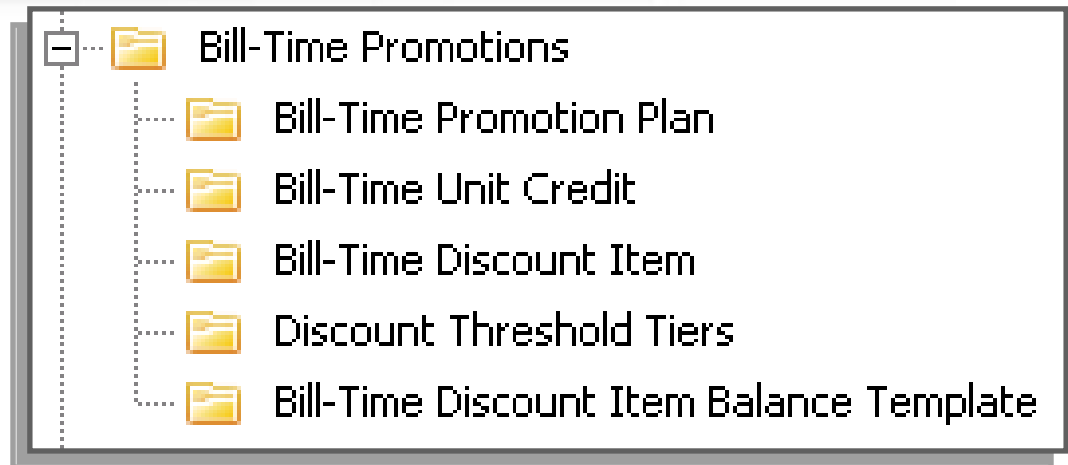
- **Standard** examples – per bill period:
  - 10% discount off the monthly subscription fee
  - \$50 rebate on a cellular device purchase
  - 15% off usage with a minimum threshold of \$150 in charges
  - 5% off 0 to 100 SMSs, and 10% off of more than 100 SMSs
  - 500 free MMSs every bill period
- **Cycle-independent Free Usage** examples – not tied to bill period, available until used (expire only when the offer expires):
  - 100 minutes free for local calls
  - 20 free SMSs

# Promotion Types

- Comverse ONE offers many types of BT promotions:
  - Standard promotion (most common)
  - Free usage (cycle-independent)
  - Rollover unit credits
  - Commitment promotion
  - Hierarchy branch discount
  - Historic discount/payback
  - Global promotion
  - Bonus points

# Bill-Time Promotion Elements

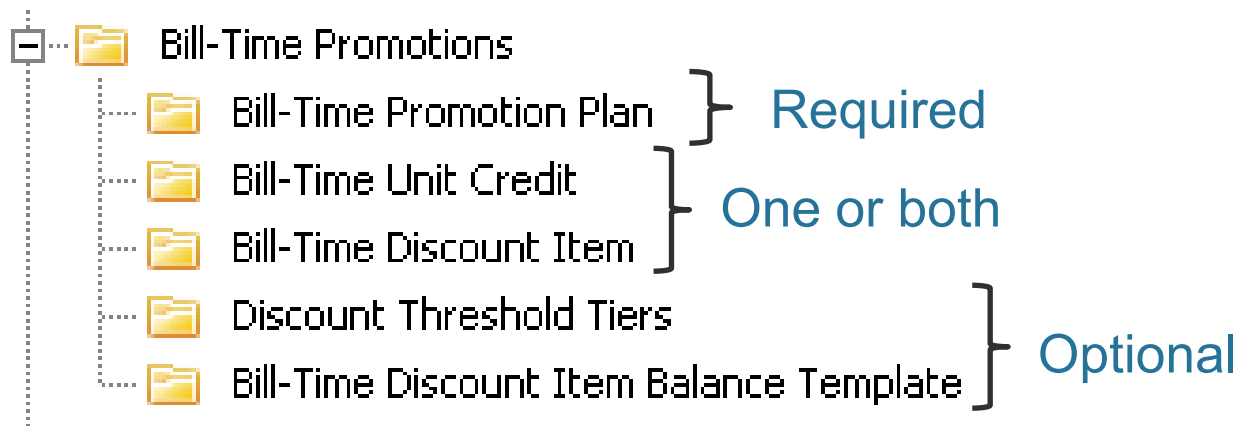
- BT Promotion Plans package together unit credits and/or discounts



# Flow to Define Bill-Time Promotions

Define the main entities in this order:

1. BT Discount Item or Unit Credit
2. BT Promotion Plan



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BT Discount



# Bill-Time Discount Item

- A Bill-time Discount Item defines a cyclical (bill-time) discount as a percentage or a monetary amount off
- Defined by its targets and restrictions
- Applied to any charge domain (usage, RC, NRC)
- Can be calculated as Bulk, Incremental or other



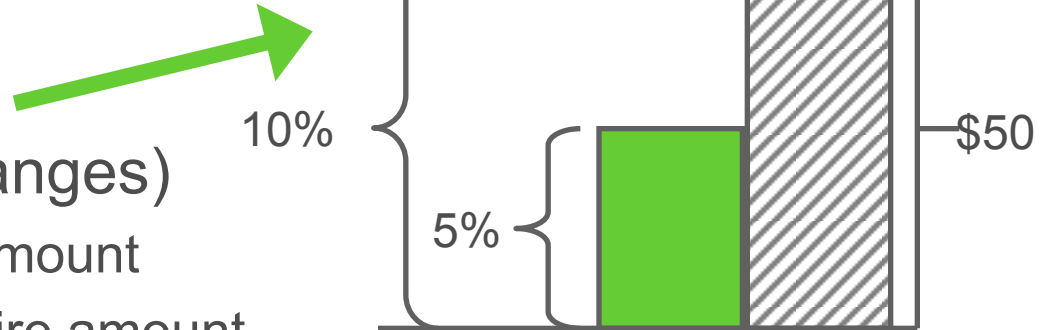
# Discounts Types / Examples

- **Bulk** (single rate)

- 10% off
- \$5 rebate

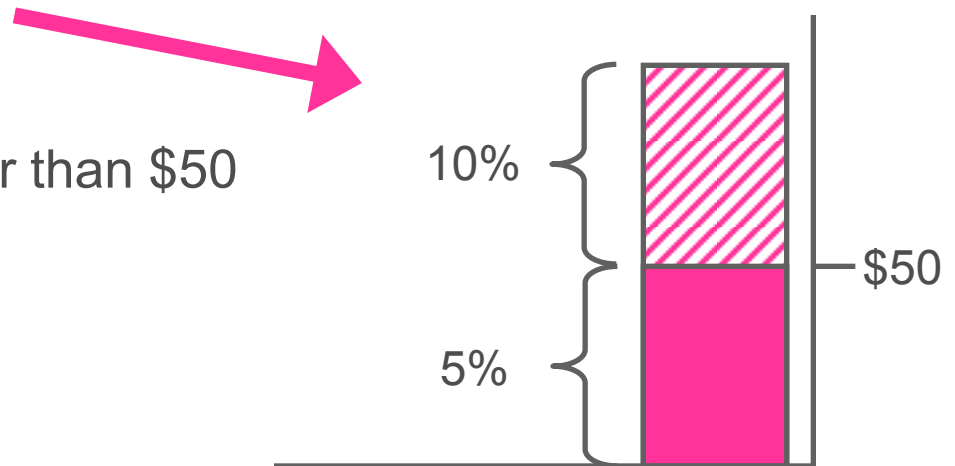
- **Bulk multiple tier** (rate ranges)

- Up to \$50, 5% off entire amount
- Or: Over \$50, 10% off entire amount



- **Incremental** (rate ranges)




- 5% off first \$50
- And: 10% off amounts greater than \$50



- Other types supported




# Defining Discount Item (1)

 **Bill-Time Discount Item** Version 3.0

Name\*  
2% Flat Discount

Description

Short Display  
2FDIS

Language  
English  [Add/Remove](#)

**General** | Rate Discounts | Restrictions/Exclusions | Targets



☒ Single Restriction Discount ☐ Multiple Restriction Discount

Discount Level\*  
Subscriber Level

Discount Type\*  
Bulk

Discount Quantum  
Charge Amounts

Discount Domain  
All

Domain Element  
 Edit  Clear

Time Type

Date Active\*  
Tue 01/01/2008

Date Inactive

Product Line

Usage Plan

Service Provider

Format Code

External Identifier for Discount Item

Save Records: ☒ Aggregated ☐ Detailed

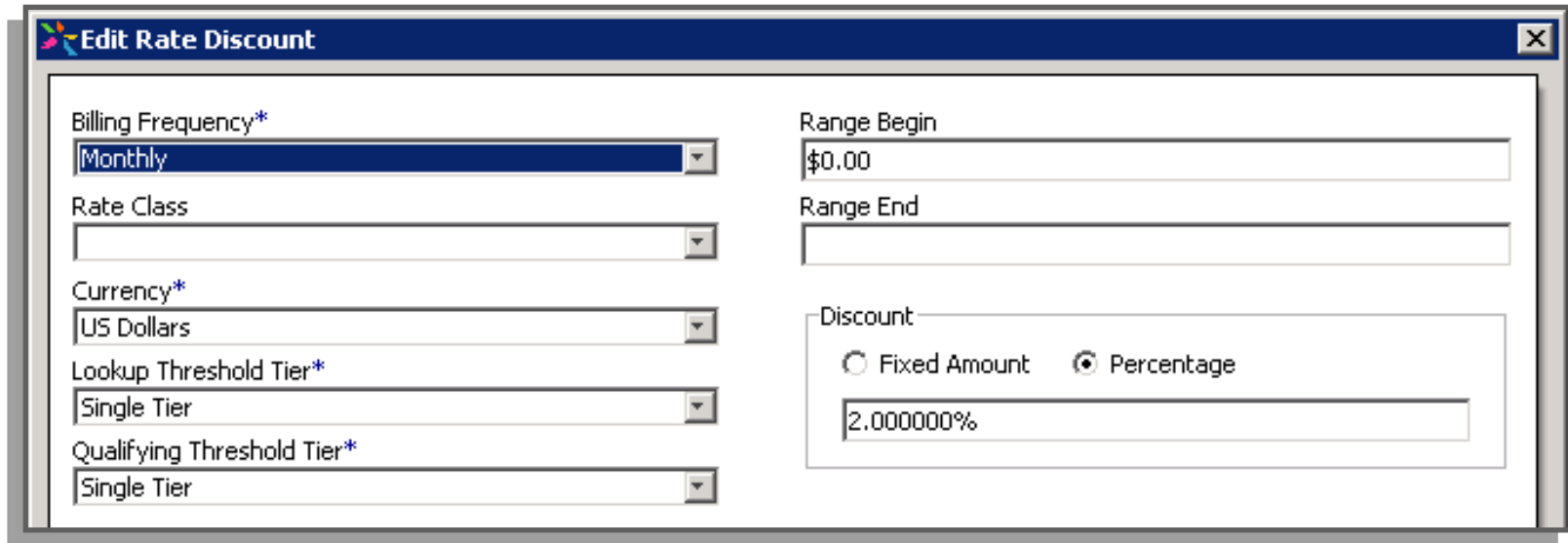
☐ Gross

☐ Is Exclusive

☐ Allow CSR to provision specific rates (ICB)

Example from the Quick Start data:  
**2% flat discount**

# Defining Discount Item (2)



The screenshot shows a software window titled "Edit Rate Discount" with a close button in the top right corner. The window is divided into two main sections. The left section contains five dropdown menus: "Billing Frequency\*" (set to "Monthly"), "Rate Class" (empty), "Currency\*" (set to "US Dollars"), "Lookup Threshold Tier\*" (set to "Single Tier"), and "Qualifying Threshold Tier\*" (set to "Single Tier"). The right section contains two text input fields: "Range Begin" (set to "\$0.00") and "Range End" (empty). Below these is a "Discount" section with two radio buttons: "Fixed Amount" (unselected) and "Percentage" (selected). A text input field below the radio buttons contains the value "2.000000%".

Field	Value
Billing Frequency*	Monthly
Rate Class	
Currency*	US Dollars
Lookup Threshold Tier*	Single Tier
Qualifying Threshold Tier*	Single Tier
Range Begin	\$0.00
Range End	
Discount Type	Percentage
Discount Value	2.000000%

# Defining Bill-Time Promotion Plan

Bill-Time Promotion Plan

Name\*

Three Month Loyalty Discount Plan - Std

Description

2% flat discount after 3 months staying in the Plan

Short Display

2FDIS

Language

English

General

Prorate

Promotion Type\*

standard promotion

Recommended RC Value

Bill Period

Bonus Point Id

External Identifier for Promotion Plan

Discount Base Period

Rollover Grouping

Rollover Order

Minimum Duration Units\*

None

Minimum Duration

Minimum Notice Units\*

None

Minimum Notice Delay

Global Contract Start Date

Global Contract End Date

☐ Partial Periods

☐ MultiThreshold

☐ Is Exclusive

**Three Month Loyalty Discount Plan - Std**

Promotion Type: standard promotion

Recommended RC Value:

Discount Item

2% Flat Discount

Unit Credit Items

# Bill-Time Discount Restrictions

- Used only when multiple restrictions or exclusions are required for a particular discount
- Restrictions/exclusions can be based on:
  - Charge Domain
  - Time Type
  - Product Line
  - Unit Type
  - Charge Type
  - Offer
  - Jurisdiction
  - Others ...
- Examples:
  - 20% Off of Mobile Product Line for RC terms and Usage (but not NRCs)
  - \$5 Back for Voice calls except for Off Peak and Weekends

# Bill-Time Discount Targets

- Creates discounts that are calculated based on one set of charges, but applied to a different set of charges
- These are called “Cross-Product Discounts”
- Examples:
  - 10% off Monthly Access if customer purchases a mobile phone
  - 5% off all RC terms if the customer spends at least \$50 on long distance usage
  - 5% off Internet charges if the customer spends \$100 or more on telephone charges

# Multi-threshold Discount

- A multi-threshold discount is used when to combine two different quanta (i.e., amount and minutes) to qualify for a discount
- Two *normal* bulk-tiered Discount Items:
  - A 5% discount on RCs if the total cost of RCs in a month exceeds \$50
  - A 10% discount on usage charges if usage exceeds 100 minutes
- Combine them to form a Multi-tiered Discount:

Spend \$50 in recurring charges  
AND 100 minutes of usage:  
GET 5% discount on RCs  
plus 10% discount on usage

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BT Unit Credit



# Bill-Time Unit Credits

Bill-Time Unit Credits (UCs) issue rewards to subscribers based on the usage and charges they accumulate

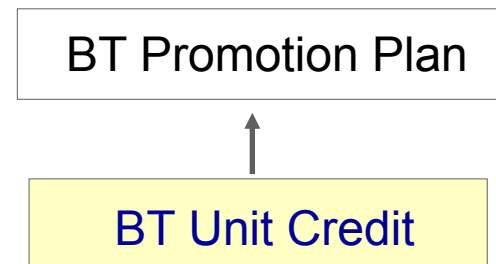
- Applies free usage or monetary rebate
- Applied to account or subscriber level
- May be dependent or independent of account bill cycle
- UCs are applied before currency balances are decremented

## Bill-Time Unit Credits Example: **Free Local Broadband Minutes**

Residential – 500

Standard – 1500

Business – 2500





# Unit Credit Restrictions

- Used only when multiple restrictions or exclusions are required for a particular UC
- Restrictions/exclusions can be based on:
  - Charge Domain
  - Product Line
  - Charge Type
  - Jurisdiction
  - Time Type
  - Unit Type
  - Offer
  - Others ...
- Examples:
  - 200 free minutes for all calls except international calls
  - \$5.00 off all international calls associated with Jurisdictions A or B

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## Balance Template



# Balance Template

- A Bill-time Discount can be applied to a real-time balance by use of a Balance Template
- Built as a collection of balances the discount item could target
- Only monetary balances are involved (rating-time or bill-time)
- Allows setting the upper limit of the balance
- Required that the offer the discount is attached to includes at least one balance of the discount's balance template
- A standard bill-time promotion is created with a bulk discount at the service level to usage that will be applied to a monetary real-time balance

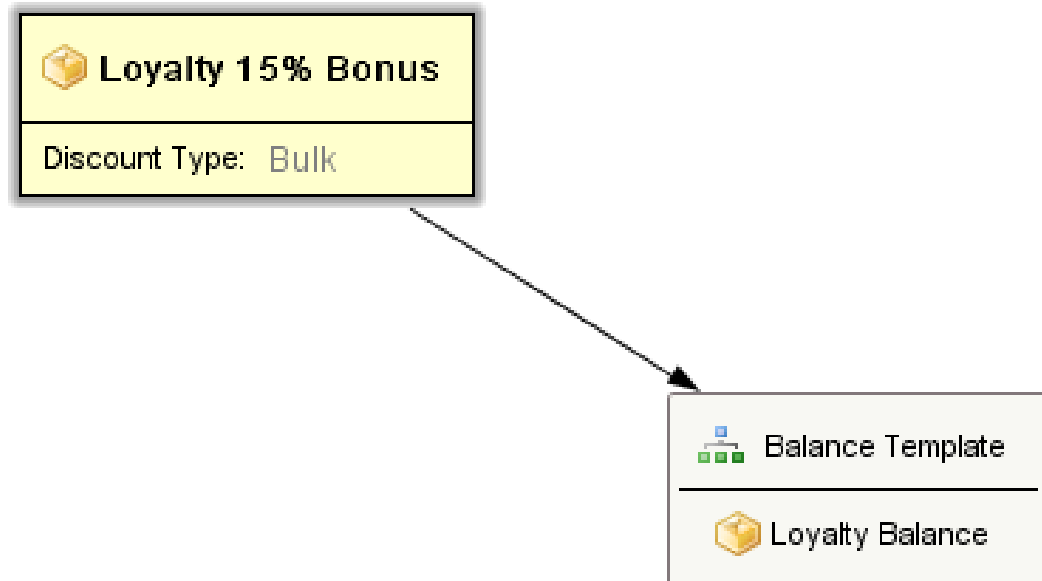
# Loyalty Bonus Promotion Plan

Promotion Type*	Standard Promotion	Minimum Duration Units*	None
standard promotion		Minimum Duration	
Rollover Grouping		Minimum Notice Units*	None
		Minimum Notice Delay	
Rollover Order		Global Contract Start Date	
		Global Contract End Date	
Bill Period		Discount Base Period	Use bill_period
Bonus Point Id			
Foreign Code			
Recommended RC Value			
<input type="checkbox"/> Prorate Contract Start		<input type="checkbox"/> Prorate Target Threshold	
<input type="checkbox"/> Prorate Contract End		<input type="checkbox"/> Prorate Target Rebates	
<input type="checkbox"/> Prorate Interim Bill		<input type="checkbox"/> Partial Periods	
<input type="checkbox"/> Prorate Period Change		<input type="checkbox"/> MultiThreshold	
<input type="checkbox"/> Prorate Account Start		<input type="checkbox"/> Exclusive	
<input type="checkbox"/> Prorate Account End			

To associate this plan with a BT discount must select calculation period

# Loyalty Bonus Balance Template Example

- This BT Item Balance Template associates the “Loyalty Balance” to the Discount Item called “Loyalty 15% Bonus”
- By this association, the Bill Time Discount will get applied to a real-time balance



# Summary

- Discounts and Unit Credits for Bill-Time Promotions are calculated and issued *at the end of the bill period*, when the invoice is generated
- There are several types: Standard promotion, Free usage (cycle-independent), Rollover, Hierarchy branch discount, Historic discount/Payback, Global, Bonus Points
- Promotion Plans package together discounts and/or unit credits; accumulators are not used

# Agenda

7.1 Rating-Time Promotions

7.2 Bill-Time Promotions

7.3 Recharge Control Table (RCT)



# Module Objectives

- Name the two balance attributes that can be affected by recharging
- Describe the difference between a “default” recharge and a recharge operation involving the Recharge Control Table (RCT)
- Given simple business scenario, configure the required rows in the RCT



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## Recharge Basics



# Recharge Basics

- Prepaid balances are replenished by recharging
- Recharging usually extends the balance expiration date
- The Recharge Control Table (RCT) modifies the behavior of a recharge
- Two recharge types are supported:
  - Voucher
  - Non-voucher
- Recharge requests can be made via:
  - IVR
  - USSD
  - Comverse ONE Self-Service
  - Customer Care
- Currency conversion is supported
- Recharges are not applied to shadow balances

# Default Recharge

- The most basic recharge operation only affects the core balance, and extends the expiration date of the balance (and thus the subscriber)
  - **Face Value** – Amount added to the balance in a recharge
  - **Face Offset** – Number of days by which the expiration date is extended during a recharge
- Example:
  - Face Value = \$10  
Face Offset = 30 days
  - This recharge operation adds \$10 to the core balance and extends the core balance expiration date by 30 days

# Recharge Grants

- A grant is an amount with an activate date and expiration date that deliver funds or units to non-cyclical balances
- Recharge grants are always available immediately – they never have a deferred start date
- Grants awarded through a recharge have an expiration date tied to the balance expiration date – this can be extended by using a Face Offset

# Accumulating Recharge Events

- Recharges can be captured as events by accumulators, so that bonuses or discounts can be granted based on recharges
- Either the face value or the effective face value (with any core balance adjustment) can be used as the qualification
- **Example:**
  - A recharge event accumulator is configured to count recharges with a **face value** (FV) greater than \$50
    - Counted – a recharge using a \$55 voucher
    - Not counted – a recharge using a \$25 voucher with an **effective** value of \$55 (the RCT core value is configured as  $100\%FV + \$30$ )

# Recharge Control Table (RCT)

- Every recharge operation consults the RCT
- If a match is found between the characteristics of a specific recharge and an entry in the RCT, the effect of the recharge is changed
- If no match is found, only the core balance is recharged (in units of currency)
- Only one RCT entry can apply to any given recharge event
- Rows in the RCT are defined by Resellers

# RCT Examples

- Different subscribers recharging with the same amount can get different results, if different RCT criteria are met
- Examples:
  - A \$5.00 recharge replenishes the balance by \$6.00
  - Balance is extended by 15 days instead of 10
  - Affect multiple balances: a \$30.00 voucher replenishes the core balance with \$25.00 plus 100 SMSs to the SMS balance
  - Upon recharge, the subscriber's primary offer can be swapped for a different primary offer, or a supplementary offer can be added

[Learn how to configure the RCT later in this section.](#)

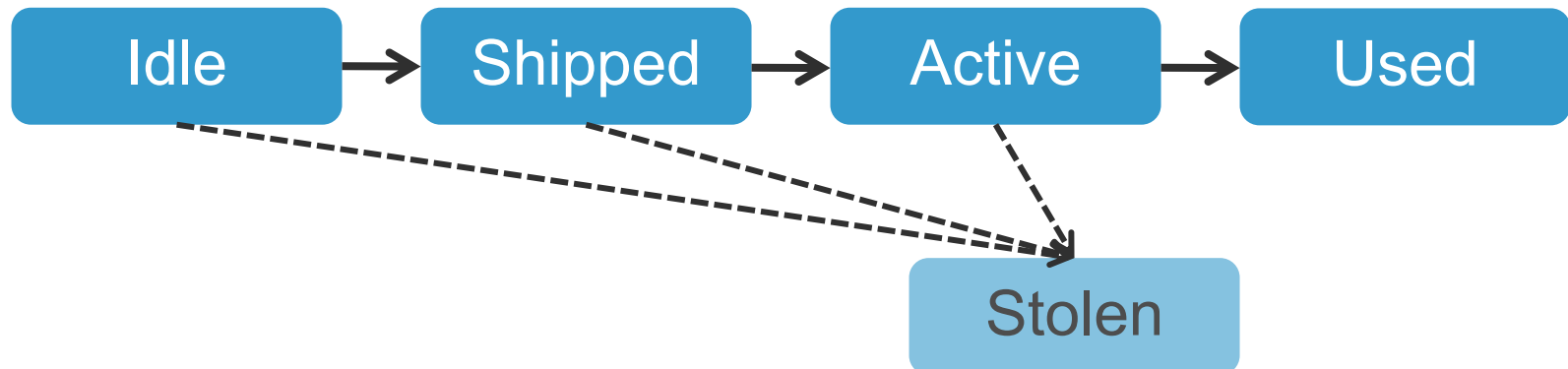
# Recharge Access Methods

- Voucher recharge:
  - IVR
  - USSD
  - Comverse ONE Self-Service
- Non-voucher recharge:
  - Customer Care or third party system

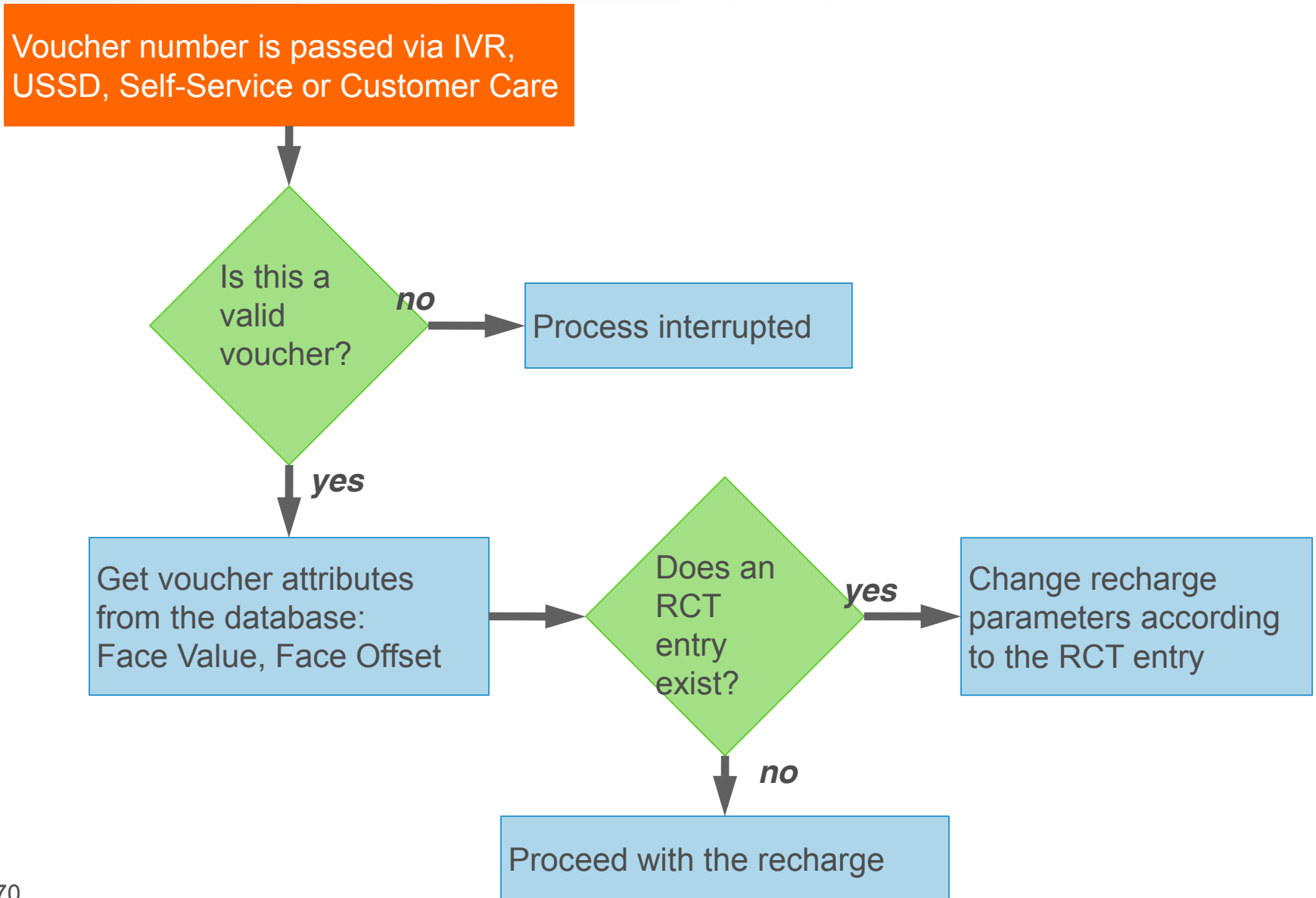


# Voucher Recharge

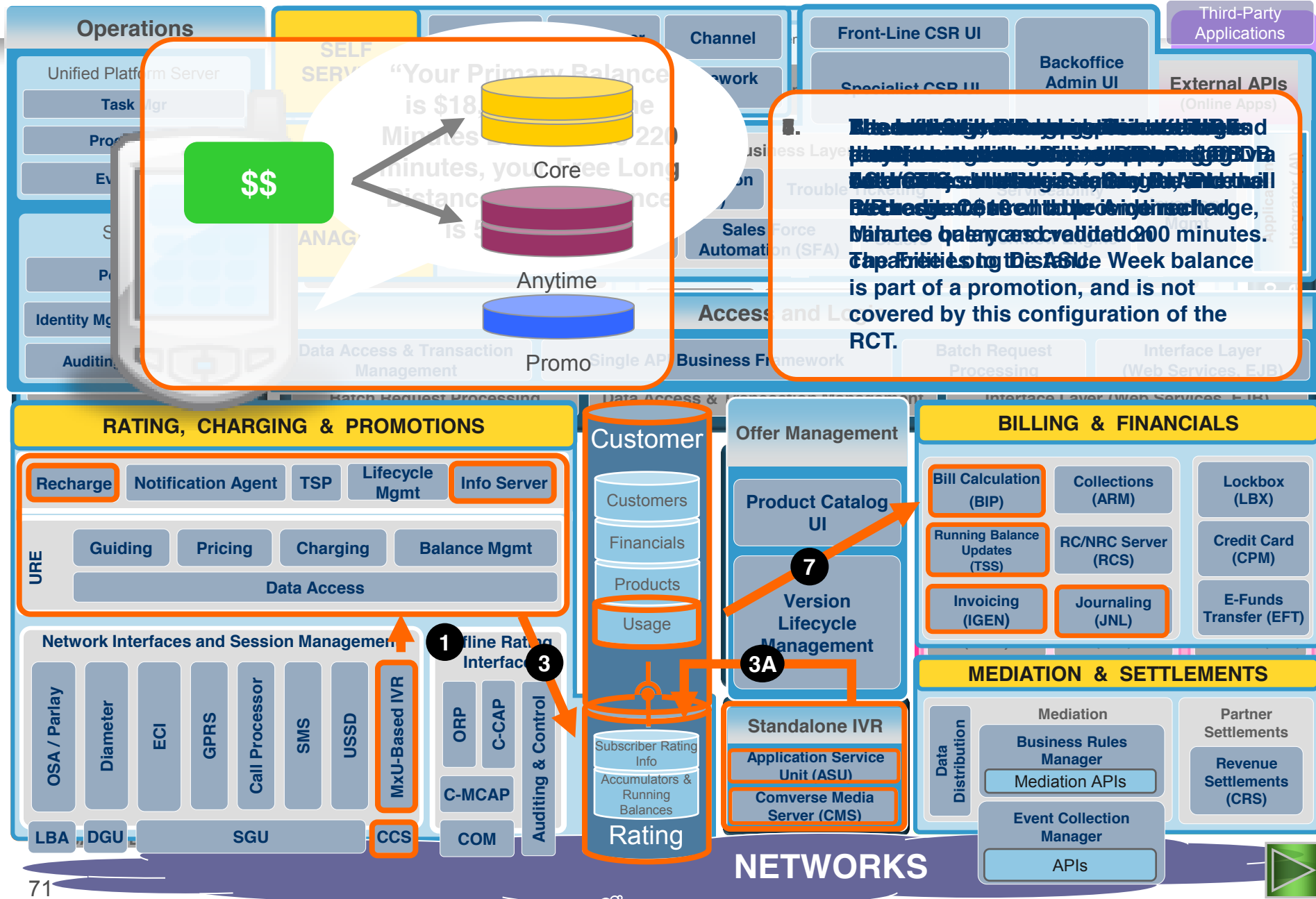
- A recharge voucher is a disposable card that subscribers buy at shops, kiosks, airports, etc.
- When a subscriber buys a voucher, the money is not available until the voucher is used
- Every recharge voucher has a corresponding record in the Comverse ONE database containing the face value, face offset, and identifying number
- Every card goes through a lifecycle of state transitions. The most common lifecycle is shown here:



# Recharge Process Flow – Voucher Recharge



# Data Flow – Voucher Recharge via IVR



# Non-Voucher Recharge

- In many countries operators are moving to an electronic solution. Instead of printing, recharges are compared against a list of valid voucher numbers
- Comverse ONE provides an API for non-voucher recharge, as part of the Unified API
- The recharge is performed by an external system
- Support for non-currency recharge requests via the non-voucher recharge API
  - For example, recharge with 100 SMS units

# Recharging **Account-level** Balances

- The recharge process is the same as for subscriber-level balances, except:
  - Account-level recharges must be done with the RCT (Remember that in a default recharge the Face Value and Face Offset are applied to the **core** balance, and **accounts** do not have a core balance)
  - A recharge cannot be used to modify an account's billing state or rating state

Note: Only accounts with an Active rating state can be recharged

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## Configure the Recharge Control Table (RCT)



# RCT Basics

- The RCT modifies the behavior of a recharge
- The RCT is made up of multiple rows, ranked by priority
- When a recharge is performed, the RCT is searched row by row, starting with the first row, for a match between the recharging conditions and the RCT matching criteria
- If a match is found, the characteristics of the recharge are changed according to other information in that RCT row


List - Recharge Control (Non-Versioned)						
Pri... ▲	Name	Start Date	End Date	Low Face Value	High Face Value	Unit Type
50 ks2	\$20.01 provides 50 SMS - Prepaid Mobile	Feb 23, 2010	Mar 31, 2010	20.01	20.02	Money/Currency

Batch Number	Offer	Reseller	Application	Entity Type	Currency
-1 ks2	Prepaid Mobile	SHAPE Reseller	ANY	Subscriber	US Dollars

Note: To make testing easier, in class we will configure:  
**\$20.01 recharge (linked to our PO) provides 50 SMSs**

# Defining General Tab

- Contains only the row **Name** and **Priority** field, which specifies the order in which the row is search for a match


 **Recharge Control (Non-Versioned)**


**Name\***


**Description**

**Short Display**

**Language**



 [Add/Remove](#)

 **General**

**Matching Criteria**

**Balance Adjustments / Awards**

**Offer Adjustments / Awards**

**Priority**



# Defining Matching Criteria Tab

- Contains information about the conditions of the recharge; how the system differentiates how a recharge is applied

**Dates are  
required  
fields**

General **Matching Criteria** Balance Adjustments / Awards Offer Adjustments / Awards

Recharge Effective Dates

Start Date  
Tue 02/23/2010

End Date  
Wed 03/31/2010

Offer

Primary Offer  
ks2 Prepaid Mobile

When a match is found, the Balance Adjustments/Awards and Offer Adjustments/Awards sections configured on that row determine the effect on the recharged entry

Face Value

Units\*  
Money/Currency

Offer's Currency\*  
US Dollars

Low Face Value\*  
20.01

High Face Value\*  
20.02

Miscellaneous

Recharge Channel\*  
ANY

Batch Number  
-1

Recharging Entity Type  
Subscriber

**Batch  
Number is  
required**

# Recharge Channels

- This example is from the Quick Start data
- For a Comverse-generated voucher, the channel is:
  - IVR\_Voucher
  - USSD\_Voucher or
  - Fast\_IVR Voucher
- For a third-party type of recharge (e.g., customer's kiosk), the operator can choose the Recharge Channel. Any value can be passed in, as long as it's been provisioned in the system

## Recharge Channel\*

ANY

ANY

CSM Non Voucher Recharge

CSM Voucher Recharge

External\_non\_voucher

External\_voucher

Fast\_IVR\_Voucher

IVR\_Vouchers

Reserved for Future Internal Purpose

Roaming

Self\_Care\_non\_voucher

Self\_Care\_voucher

UNKNOWN

USSD\_Voucher

# Example RCT Matching Criteria

Row #	Recharge Date		Face Value		Units	Batch	Primary Offer	Reseller	Application	Sub / Acct	Currency (of entity being recharged)
	Start	End	Low	High							
EX 1a	01-May-08	01-Jun-08	ANY	ANY	Currency	-1	ANY	Reseller 1	ANY	Sub	ANY
EX 1b	01-May-08	01-Jun-08	ANY	ANY	Currency	-1	ANY	Reseller 1	ANY	Acct	ANY
EX 2	ANY	ANY	20.00	30.00	Currency	-1	ANY	Reseller 1	ANY	Acct	USD
EX 3a	ANY	ANY	ANY	ANY	SMS	-1	ANY	Reseller 1	ANY	Sub	ANY
EX 3b	ANY	ANY	ANY	ANY	SMS	-1	ANY	Reseller 1	ANY	Acct	ANY
4	ANY	ANY	ANY	ANY	Currency	1234	ANY	Reseller 1	ANY	Sub	ANY
5a	ANY	ANY	ANY	ANY	Currency	-1	ANY	Reseller 1	USSD	Sub	ANY
5b	ANY	ANY	ANY	ANY	SMS	-1	ANY	Reseller 1	USSD	Sub	ANY
5c	ANY	ANY	ANY	ANY	MMS	-1	ANY	Reseller 1	USSD	Sub	ANY
5n	Repeat for each recharge units supported										
6	01-Jan-08	02-Jan-08	22.00	22.01	Currency	-1	PRI01	Reseller 1	IVR	Sub	USD

End Date ranges are exclusive (cannot be the same as the Start Date).  
So the month of May = May 1 – June 1.

# Defining Balance Adjustments/Awards

- Contains information on how a recharge affects balances
- For example, recharge a different balance and/or change the expiration of the balance

General Matching Criteria <b>Balance Adjustments / Awards</b> Offer Adjustments / Awards				
Balance Name	Value	Expiration Offset	Expiration Type	
CORE BALANCE	-100%	14	Balance Based	
SMS-ALL	50	14	Balance Based	

Remember to add another Balance Adjustment so \$20 doesn't *also* go to the Core balance

**Edit Balance**

Balance

Name  
SMS-ALL

Unit Type  
SMS

☐ Is Core

Expiration Offset (Days)  
BalanceBased

Expiration Offset (Days)  
14

☐ Use a Percentage

Value\*  
50

Percentage

**Edit Balance**

Balance

Name  
CORE BALANCE

Unit Type  
Money/Currency

☒ Is Core

Expiration Offset (Days)  
BalanceBased

Expiration Offset (Days)  
14

☒ Use a Percentage

Value

Percentage\*  
-100.0000%

# Example RCT Balance Adjustments/Awards

In each of these examples, assume that a recharge voucher with a face value of \$15.00 is used.

The “RCT Entry” column below represents the **Value** or **Percentage** field in Product Catalog.

Example	Core Balance		Other Balances		
	RCT Entry	Value Added to Balance	Balance Name	RCT Entry	Value Added to Balance
1	+\$5.00	+\$20.00	N/A	N/A	N/A
2	0	+\$15.00	Bal10	+5 SMSs	+5 SMSs
3	0	+\$15.00	Bal20	+100% FV	+\$15.00
4	-100% FV	No Change	Bal10	+100% FV	+\$15.00
5	+10% FV	+\$16.50	Bal11	+5% FV	+\$0.75
6	-\$20.00	No Change	Bal11	+\$20.00	+\$20.00

# Example RCT Balance Expiration Adjustments

In each of these examples, assume that a recharge is performed with a voucher having a face value of \$15.00 and a face offset of 30 days

Ex.	Core Balance				Other Balances				
	RCT Entry	Value Added to Balance	RCT Offset Entry	Expiration Offset (Days)	Balance Name	RCT Entry	Value Added to Balance	RCT Offset Entry	Expiration Offset (Days)
1	+\$5.00	+\$20.00	+10 days	+40 days	N/A	N/A	N/A	N/A	N/A
2	0	+\$15.00	0	+30 days	Bal10	+5 SMSs	+5 SMSs	+7 days	+7 days
3	0	+\$15.00	0	+30 days	Bal20	+100% FV	+\$15.00	+20 days	+20 days
4	-100% FV	No Change	0	No Change	Bal10	+100% FV	+\$15.00	FV offset	+30 days
5	+10% FV	+\$16.50	0	+30 days	Bal11	+5% FV	+\$0.75	+15 days	+15 days
6	-\$20.00	No Change	-20 days	10 days	Bal11	+\$20.00	+\$20.00	+20 days	20 days

# Defining Offer Adjustments/Awards Tab

- Contains information on how the recharge affects the recharge entity's offers
- For example:
  - The subscriber's primary offer may be swapped with another primary offer
  - Supplementary offer(s) may be added to the subscriber or account

The screenshot shows a software interface with a tabbed menu at the top. The tabs are 'General', 'Matching Criteria', 'Balance Adjustments / Awards', and 'Offer Adjustments / Awards'. The 'Offer Adjustments / Awards' tab is selected and highlighted with an orange oval. Below the tabs, there are two radio buttons: 'Swap Primary Offer' (which is selected) and 'Add Supplementary Offer'. Under the 'Swap Primary Offer' section, there is a text label 'Swap Primary Offer' followed by a dropdown menu labeled 'Offer'. Under the 'Add Supplementary Offer' section, there is a text label 'Add Supplementary Offer' followed by a table. The table has a single header row with the text 'Offer' and a small icon on the right. Below the header row, there is an empty row for data entry.

# Summary

- Prepaid balances are replenished by recharging
- Recharging usually extends the balance expiration date
- Every recharge operation consults the Recharge Control Table (RCT); if a match is found between the characteristics of a specific recharge and an entry in the RCT, the effect of the recharge is changed