



■ *Active-X Business Objects*
■ *Technical Reference*
■ *Version 8080*
■
■

ISS45 Active-X Business Objects Technical Reference

Date of Issue	Product Identification Number	Part Number	Brief Description
June 1999	45001/041	No Part Number	Preliminary
October 2000	45001/041	89000014	Preliminary
April 2004	45001/041	89000176	With 8080

**Copyright® StoreNext Retail Technologies LLC 1995-2004
All rights reserved**

This publication is protected by federal copyright law into any human or computer language in any form or by any means, electronic, mechanical, magnetic or manual. No part of this publication may be copied or distributed, stored in a retrieval system, or translated or otherwise, or disclosed to third parties without the express written permission of StoreNext Retail Technologies LLC.

StoreNext Retail Technologies LLC makes no representation or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for a particular purpose. StoreNext Retail Technologies LLC further reserves the right to revise this publication and to make changes from time to time in the contents hereof without obligation of StoreNext Retail Technologies LLC to notify any person or organization of such revision or changes.

StoreNext Retail Technologies LLC has prepared this manual for use by users, authorized third parties and personnel of StoreNext Retail Technologies LLC as a guide to the proper installation, operation, customization and/or maintenance of StoreNext Retail Technologies LLC equipment and software. The drawings and specifications contained herein are the property of StoreNext Retail Technologies LLC.

Address comments and corrections to:

StoreNext Retail Technologies LLC
ISS45 Program Director
1250 East Arques Avenue
M/S 363
Sunnyvale, CA 94085

Table of Contents

V8 Business Objects	1
Overview	1
Object Types.....	1
Programming Concepts	2
Common Methods and Properties	2
Project Settings.....	5
Reading Single Record	6
Updating/Inserting Single Record.....	7
Deleting Single Record	8
Exceptions and Errors	9
Sample Code	10
Declare Objects	10
Initialize Objects When Loading the Form	10
PLU Lookup	11
Applying Changes to Database	12
Destroying Objects	12
Setting Object Properties	13
Sample Business Objects	14
PLU	14
Member Promotion	23
Member Promotion Linked.....	29

V8 Business Objects

This reference describes the business objects used by V8. It contains general explanations about those objects, programming overview, examples, and detailed list of methods and properties available by those objects.

Overview

V8 business objects are ActiveX DLL's. Each object is responsible for one or more subjects in the system. Those subjects can be tables (PLU, Promotion etc.), areas (Cash Office) and more.

The objects encapsulate all the business functionality needed to implement the subject. This functionality is usually made of:

- Reading object from database
- Writing object to database
- Updating QDX where needed, including sending maintenance to POS terminals
- Updating related tables.
- Business rules (validations)

Object Types

Basically, for each table in the system, there are 2 business objects:

- Single: Handles a single object (a single PLU, a single department etc.). Single objects are implemented as a class that is usually named CDEP, CPlu, CDiscount etc.
- Multi: Handles multiple objects (list of departments, list of discounts etc). Multiple objects are implemented as a class that is usually named CDEPS, CPluS, CDiscountS etc.

Programming Concepts

This section describes how to write programs that use V8 business objects. Since most objects are similar in their concepts, the concepts described below apply to most V8 business objects. Once you understand them and have managed to use one object, using other should be quite similar.

Common Methods and Properties

The following concepts (object types, method, properties) are common to all objects in the system (PLU, Department, Promotion etc.).

“Single” Object

The single object is made of the following parts:

- Property IsNew
- Property IsDirty
- Property IsDeleted
- Property CastObject
- Properties and methods unique to the specific object.

Common Properties (Read Only Properties)

These properties are common to all single objects and they indicate the object status. These properties are:

Property Name	Description
IsNew	Indicates that the lookup item is not found in the database. This property is set after calling the Load() method, which reads the record from database. If the item was found, IsNew will be FALSE. If the item was not found, IsNew will be TRUE.
IsDeleted	Indicate intention to delete the object. This property is set after the Delete() method is called.

Property Name	Description
IsDirty	Indicate that the object one or more of the object properties were modified.

CastObject

CastObject is an object inherited by all business objects. It contains the basic methods and properties common to all objects.

These methods are used to implement the general interface business objects.

Name	Description
Load(ByVal vKey1, Optional ByVal vKey2, Optional ByVal vKey3, Optional ByVal vKey4, Optional ByVal vKey5)	Reads object from database. Pass object keys (PLU number, promotion number etc.) to this method to read the item. The IsNew property will be set true or false if the record was found or not.
Edit()	Allow editing the object. Before you change any of the object properties (price, name, etc.) or add new item you must call this method to switch the object into edit mode.
CancelEdit()	Cancel any changes to the object and restore its initial values (after load or reset)
Apply()	Save changes to database.
Delete()	Put the object in delete state. After calling Apply the object is deleted from storage.
IsEdit	The object is in edit mode
IsNew	The object is new. See above.
IsValid	The object is valid. Run all business rule validations of this object to make sure the record is valid.
AddNew()	Private to PLU
IsDeleted	The object is marked for delete. See above.
IsDirty	Object is dirty (properties were changed). See above.

Unique Properties (Read/Write Properties)

These properties differ from one object to the other. On the PLU object they will be PLU number, description, price etc. On department they will be department number, name, active etc.

“Multi” Object

The multi object is made of the following parts:

- Property CastObject
- Method Item
- Properties and methods unique to the specific object.

CastObject

CastObject is an object inherited by all business objects. It contains the basic methods and properties common to all objects:

Name	Description
Load()	Read all records into the “Items” collection (see below)
MoveFirst()	Move to first record in collection
MoveLast()	Move to last record in collection
MoveNext()	Move to next record
MovePrevious()	Move to previous record
Refresh()	Refresh collection
RemoveCurrent()	Delete current record from the “Item” collection
GetOrder()	Get order as string
Bookmark	Bookmark of current record in collection. Updated as you move through the collection.
Count	Number of records in collection. Set after calling Load()
IsFirst	Is it the 1st record in collection
IsLast	Is it the last record in collection
OrderBy	Determines if Load() sorts records in ascending/descending order

Item

Item() enables you to access the collection of records read by the Load() method. Records are kept in a collection, which can be accessed using an index number.

For example: DepS.Item(1). Description

Project Settings

When starting a new program, you must first create reference to the objects you want to use.

VB

Add a reference to relevant object. Usually it will be “v8 Business logic objects”, found in POSWare\Office\Components\Dll\v8busobj.dll

VC++

- Add the following to your application STDAFX.H:

```
#import "C:\Program  
Files\POSWare\Office\Components\Dll\v8Intf.dll"
```

```
#import "C:\Program  
Files\POSWare\Office\Components\Dll\v8BusObj.dll"
```

- Add the following to your class .H files:

```
using namespace v8BusObj ;
```

Initialization

Create object, single or multi, according to your need.

Define variable of the object type you need. Initialize it. For example:

VB

```
Dim oPlu As Cplu            ‘ “Single” PLU object
```

```
Dim oDepS as CdepS ' "Multi" department object
Set oPlu = New Cplu
Set oDepS = new CDepS
```

VC++

```
_CpluPtr pPlu; ' "Single" PLU object
_CdepSPtr pDep; ' "Multi" department object
pPlu = _CPluPtr(__uuidof(CPlu)) ;
pDep = _CDepSPtr(__uuidof(CDepS)) ;
```

Reading Single Record

In order to read a record, you need to use the Load() method

- Call the Load method in the CastObject object to read single record.
- Check the "IsNew" property to determine if record was found or not.

VB

```
oPlu.CastObject.Load PluNumber
If oPlu.IsNew Then
    ' item not found
Else
    ' item found
endif
```

VC++

```
pPlu->GetCastObject()->Load(PluNumber);
if ( pPlu->IsNew )
{
```

```
    // item not found  
}  
else  
{  
    // item found  
}
```

Updating/Inserting Single Record

Writing changes to the database requires the following steps:

- Calling the Load() method to read the item
- Set the object to edit mode.
- Set object properties
- Validate data
- Apply changes

VB

```
If Not oPlu.CastObject.IsEdit Then  
    oPlu.CastObject.Edit  
End If  
oPlu.RetailPrice = txtPrice  
If oPlu.CastObject.IsValid Then  
    oPlu.CastObject.Apply  
Else  
    MsgBox "Invalid data"  
End If
```

VC++

```
if ( !pPlu->CastObject->GetIsEdit() )
```

```
pPlu->CastObject->Edit() ;
pPlu->PutDepartmentID(m_Dep);
if ( pPlu->CastObject->GetIsValid() )
{
    Plu->CastObject->Apply();
}
else
{
    AfxMessageBox("Invalid data");
}
```

Deleting Single Record

To delete a record from database:

- Load the record
- Set object state to edit mode
- Delete record
- Apply changes to database

VB

```
oPlu.CastObject.Edit
oPlu.CastObject.Delete
oPlu.CastObject.Apply
```

VC++

```
pPlu->CastObject->Edit();
pPlu->CastObject->Delete();
pPlu->CastObject->Apply();
```

Exceptions and Errors

All business objects raise errors in case of errors and illegal operations.

Exceptions might be raised when trying to perform illegal operation (like accessing a read only property, deleting a non-existing item). Exception may also be raised due to violation of business rules. For example: setting a zero price to an item.

You must add exception handling to your code and handle those errors.

Sample Code

Below is a piece of source sample written in Visual Basic 5.0.

Full sample code package in VB and VC is also available.

Declare Objects

```
Dim oPlu As CPlu
Dim oDeps As CDepS
Dim oDep As CDEPDisplay
Dim oErr As cErrService
Dim cnt As Control
```

Initialize Objects When Loading the Form

```
Private Sub Form_Load()
    Set oPlu = New Cplu      ' PLU object
    Set oDeps = New CdepS   ' Departments collection
    oDeps.CastObject.Load ' loading the collection
    Set cnt = txtDesc
    //Populating combo box with department names
    iCount = oDeps.CastObject.Count
    For i = 1 To iCount
        Set oDep = oDeps(i)
        cmbDep.AddItem oDep.Description
        cmbDep.ItemData(cmbDep.NewIndex) = oDep.Depld
        oDeps.CastObject.MoveNext
    Next
End sub
```

PLU Lookup

```
Private Sub cmdLookup_Click()  
Dim pe As PosError  
On Error GoTo errr  
ClearControls ' clear the screen controls  
Form1.MousePointer = 11  
oPlu.CastObject.Load Val(txtId) //loading the PLU with the ID.  
If Not oPlu.IsNew Then ' Item was found. Loading controls from object.  
    txtDesc = oPlu.DisplayDescription  
    txtPrice = oPlu.RetailPrice  
    txtDep = oPlu.DepartmentID  
    cmbDep.ListIndex = oDeps("k" & oPlu.DepartmentID).Position - 1  
    txtDesc.SetFocus  
    lblStatus = "Exists"  
Else ' Item not found  
    MsgBox "PLU not Found"  
    txtId.SetFocus  
    txtId.SelStart = 0  
    txtId.SelLength = Len(txtId)  
    lblStatus = "New"  
End If  
End If  
Form1.MousePointer = 0  
Exit Sub  
errr:  
    Set oErr = New cErrService  
    oErr.ErrorHandle "PLU Demo", Log_Msg, Err
```

```
Exit Sub
```

```
End Sub
```

Applying Changes to Database

```
Private Sub cmdApply_Click()
```

```
On Error GoTo errr
```

```
If Not oPlu.CastObject.IsEdit Then
```

```
    oPlu.CastObject.Edit
```

```
End If
```

```
SetObject
```

```
If oPlu.CastObject.IsValid Then
```

```
    oPlu.CastObject.Apply
```

```
End If
```

```
txtId.SetFocus
```

```
Exit Sub
```

```
errr:
```

```
MsgBox Err.Description
```

```
Exit Sub
```

```
End Sub
```

Destroying Objects

```
Private Sub Form_Unload(Cancel As Integer)
```

```
    Set oPlu = Nothing
```

```
    Set oDeps = Nothing
```

```
End Sub
```

```
' Procedure to clear screen
```

```
Private Sub ClearControls()
```

```
    txtDesc = ""
```

```
    txtPrice = "0"
```

End Sub

Setting Object Properties

Private Sub SetObject()

oPlu.DisplayDescription = txtDesc

oPlu.RetailPrice = txtPrice

'oPlu.DepartmentID = txtDep

oPlu.DepartmentID = oDeps(cmbDep.ListIndex + 1).DepId

End Sub

Sample Business Objects

This section describes some of V8 business objects. Since most objects share a lot in common, we describe here only the properties and methods that are unique to each object. The common parts were listed above.

PLU

This section describes properties, methods and other things unique to the PLU object only.

Other methods and properties available by all objects are described under "Programming Methods and Properties".

As for now, there is no "Multi" object for the PLU object. This object will be provided with later versions of V8. In order to scan the PLU tables, use standard VB/VC++ database functions.

Unique Properties - Read/Write

Name	Description
AllowDiscountGreaterThanPrice	Override business rule and allow discount greater than price.
APISourceName	Name of external device ("Telxon")
AssumeQuantity	Assume quantity
BonusBuyDescription	Bonus buy description
BonusBuyOpCode	Bonus buy opcode- always 4.
BonusCoupon	Item is bonus coupon
BucketNumber	NR
BulkTaxGrp	Bulk tax group
CarWashFlag	Item is car wash item
CastObject	Property that exposes Business objects interface that is a general interface to all POS business object.
CenterPrice	The head office price of the item.
CenterPriceDate	The date of the head office price of the

Name	Description
	item.
ComparativeUOM	Comparative UOM
CompareQty	Compare quantity
CompareUnit	Compare unit
ComparsionDate	Comparision date
ComparsionPrice	Comparison price.
ComparsionQty	Comparison quantity
ComparsionType	(0-5) 0 No comparison to be done 1 Bonus buy saving 2 Advertised saving 3 Match advertised saving 4 private label saving 5 competitor compare saving.
CopyDataFromDepartment	Value of system parameter "PLU follow department flags as default"
CostPerCasePrice	Cost per case price.
CostPerCasePriceDate	Date of cost per case price change
CostPlus	The item is cost plus item.
CouponNumber	Coupon number
DEAGroup	DEA group ID.
DecimalQtyFlag	The item is sold in decimal quantity.
DefaultReturnLoc	Future V9
DeleteDate	When using delayed item deletion, this marks the date the item was logiacally deleted to be used at end-of-day for detrmining if item should be phusicly deleted from database.
DeletePLU	When using delayed item deletion, this flag marks that the item was logiacally deleted (before it's phusycally being deleted from database)
DepartmentDefault	Whether to copy the department flags to the item when department is set
DepartmentID	Department ID
DiscountID	Discount Id in discount table
DisplayDescription	Full Description of the Item.
EnhancedFrequentShopper	NR

Name	Description
ExchangeTenderID	Exchange tender code for bookkeeping items
ExciseTaxID	Excise tax id
ExcludeMinPurch	OEM – Exclude from Minimum Purchase
ExtendedBucketID	NR
ExtendedPromotionID	NR
FamilyID	Family code number 1.
FoodStamp	Payment by food-stamps allowed
ForceDelete	When using delayed item deletion, this flag is turned on at end-of-day when it's the item's time to be deleted
FreqShopLimit	Frequent shopper limit
FreqShopType	Frequent shopper type
FreqShopVal	frequent shopper value
FromBatch	Source of the change(Internal)
FsQuantity	Frequent shopper quantity
FuelFlag	Item is fuel item
HeadOfficeDepID	Head Office department ID.
HostDelete	Item was deleted by host batch (When using delayed item deletion)
InhibitQtyFlag	Prohibit quantity flag
InternalID	Internal code ID.
InternalNumberCDV	Value of system parameter "CDV scheme for PLU internal number"
InternalNumberHaveCheckDigit	Value of system parameter "Internal number must have a valid check digit"
IsCarWashLinkedItem	If item is link to fuel car wash
IsFuelLinkedItem	If item is linked to fuel grade
IsMasterFile	The PLU is updated through master batch, some object validations are skipped and properties that relate to promotions are not set
ItemID	PLU item id
ItemLinkedToPromotions	Item is linked to promotion (ICL or member promotions)

Name	Description
ItemOnMemberPromotion	Item is linked to member promotion
ItemOnPromotion	Item has active promotion.
ItemOnSale	The item is on sale.
ItemPoint	OEM – Item points
iTotalSize	Read only = 680
LabelQty	Future V9 Label quantity
LineItemCode	Future V9
LocalDelete	Item was deleted locally from PLU maintenance or local batch (When using delayed item deletion)
ManualPrice	The price of the item must entered manually during the sale.
ManualPriceLevel	Future V9
MarkDown	Future V9
MaxMerchAmount	Future V9.
MerchandiseCrossRe	Future V9 pointer to merchandise category.
MessageId	The POS message Id link to the item.
MinimumMerchAmount	Future V9
MixMatchID	The mix and match code id.
MixMatchIDFiveDigit	5 digits mix & match code
NegativeEntry	Is Negative item.
NoneDiscount	Item can't have discount.
NoneMerchID	Future V9 pointer to non merchandise category.
OldPrice	Previous price.
OperatingSource	<p>The source of the item update – used to determine what properties are allowed to be updated and by whom. Values include:</p> <ul style="list-style-type: none"> 1 = GUI 2 = Local batch 3 = HOST batch 7 = PLU maintenance 8 = Fuel Maintenance

Name	Description
	9 = Fuel grades batch 10 = PLU/Fuel sales mode link
OriginalPrice	When an item's price is updated through sales batch, this fields saves the original price before the batch applied
OriginalUnitQty	When an item's quantity is updated through sales batch, this fields saves the original quantity before the batch applied
PackageSize	Package size
PackageUOM	Package unit of measure
PerpetualInventory	Future V9.
PluHaveCheckDigit	Plu is with check digit.
POSMessgae	Id of POS message linked to item.
PriceGroupID	OEM – Price group
PriceOverride	Future V9
PriceReasonID	Price change reason ID.
PriceVerify	Future V9
PrintItemIDOnReceipt	Print item ID on receipt
PromotionID	Promotion ID linked to item.
QDX_FREQ_SHOP_VAL	Frequent shopper value for QDX – read only
QtyAllowed	Future V9
QtyRequired	The sale quantity is required
ReceiptDescription	The description of the item on ticket.
RecieptDescription1	First receipt description for multilingual support
RecieptDescription2	Second receipt description for multilingual support
RecieptDescription3	Third receipt description for multilingual support
RecieptDescription4	Fourth receipt description for multilingual support
RestrictionLayout	Restriction layout ID.
RetailPrice	The sale price of the item
RetailPriceDate	Date of the last retail price.

Name	Description
ReturnCode	The return code id.
ReverseBatch	Item is updated through reverse sale batch
SaleAuth	The item can be sold.
SaleRestrict	Pointer to sale restriction group.
SaveDiscount	Future V9
ScaleFl	Future V9
SecondFamily	Family code number 2.
SerializedMerch	Future V9
ShelfLablesRequired	The Item must have shelf label.-Future V9
ShelfLifeDay	Shelf life time in days V9
ShelfStockFg	Shelf stock flag
SkipAudit	Skip audit
SkipQdxMaint	Skip QDX maintenance
SspProduct	SSP product flag
StoreCoupon	Is store coupon
SubDepartmentID	Sub department Id.
SubProductCount	Future V9
SuperAuthRequired	Supervisor authorization required
SupplierPromotion	Future V9
SwwCode	SWW tax code
TareWeightNumber	TARE weight ID number
TaxabilityID	V9 pointer to taxability group.
TaxRate1	Connected to tax id 1
TaxRate2	Connected to tax id 2
TaxRate3	Connected to tax id 3
TaxRate4	Connected to tax id 4
TaxRate5	Connected to tax id 5
TaxRate6	Connected to tax id 6
TaxRate7	Connected to tax id 7
TaxRate8	Connected to tax id 8
UnitCase	The number of units of the item in the case.
UnitConversion	Units conversion

Name	Description
UnitCost	The cost price of item.
UnitFactor	Unit factor
UnitOfMeasure	Pointer to Unit of measure table. Not Used.
UnitQty	The quantity for one unit of sale of item.
UpdateBatchId	Not in use – need to use UpdateBatchId2
UpdateBatchId2	If item updated from batch, this is the batch number
UpdateLinkedItemsByInternalID	Value of system parameter "Update ALL items linked to internal code if one PLU changed"
UpdateLinkedItemsByMixMatchCode	Value of system parameter "Update All Mix and Match groups if one PLU changed"
UpdateOrigin	Origin of item update
UpdateUserId	Front Office user ID who updated the item
UserID	Front Office user for audit
VendorCoupon	Is vendor coupon.
VendorID	Vendor ID
VendorItemID	Vendor item ID.
VendorItemSZ	Vendor item description.
WeightScale	Weight On scale
WIC	WIC item.
ZeroPriceAllowed	Value of system parameter "Zero price PLU allowed"

Methods

The following methods are unique to the PLU object.

Name	Description
ResetObj()	Create new empty objects and reset its properties to empty values.
Validate()	Apply business rules against object. This method is also executed automatically before applying changes.
AddNew()	Create new PLU object.

Object Validations and Error Codes

The following are error codes and their descriptions. The PLU object raises these errors.

Number	Description
10001	String too long
10002	Invalid item number
10003	Invalid check digit In item number
10004	Invalid Internal Number
10005	Weighted item and decimal
10006	Force Prohibit Qty
10007	Invalid Department
10008	Invalid Negative Entry
10009	Display Description Too Long
10010	Receipt Description Too Long
10011	Zero Price Not Allowed
10012	Discount Not Allowed
10013	Frequent shopper Discount Not
10014	Discount Greater than Price
10015	Invalid Store Vendor
10016	Invalid Frequent shopper Discount
10017	Plu Must Be Linked To Sub dep
10018	Invalid Plu Price
10019	Invalid Cost Per Case Price
10020	Department 0 not allowed
10021	Bonus Buy Description Too long
10022	Wrong Date
10023	Item Not Exist
10024	The excise tax you selected not exists.
10025	Invalid Comparison Type
10026	Enhanced Frequent shopper in the
10027	Invalid Arguments for compressed code
10028	Item on promotion
10029	Item on promotion By Department

Number	Description
10030	Item on promotion By MixMatch
10031	The coupon you selected not exists.
10032	The department you selected not exists.
10033	The sub department you selected not exists.
10034	The tare weight you selected not exists.
10035	The discount you selected not exists.
10036	The return code you selected not exists.
10037	The pos item message you selected not exists.
10038	The DEA group you selected not exists.
10039	The change price reason you selected not exists.
10040	Item On sale
10041	Active Promotion By MixMatch
10042	Active Promotion By Department
10043	Invalid Source Plu Item Number !
10044	You are trying to copy to the same Plu Item Number !
10045	This item is already on file.
10046	Item on Promotion by Manufacture
10047	Item Linked To Grade
10048	Item Must Link To Grade Department
10049	Fuel in the system is off!
10050	Not allowed. Negative Entry flag set
10051	Not allowed. Coupon flag set
10052	Prohibit changes to Negative Entry flag
10053	Prohibit Manual Changes To Non Merchandise Flag
10054	The department you selected is not active !
10055	Invalid Internal code check digit
10056	Shelf life day should be between 0 to 999
310160	The number entered is smaller than 0 or greater than 999
310161	Weighed and Not weighed items cannot belong to the same Bulk Tax Group
310162	Exchange Tender ID is not valid.
310163	Unable to change price of item, price should be

Number	Description
	changed from Fuel.
310164	Unable to change price of "Drive Off" item, price should be changed from "Normal".
310165	Unable to change price of "Pump Test" item, price should be changed from "Normal".
310166	An item cannot be both "Fuel Item" and "Car Wash Item".
310167	Unable to change price of item, price should be changed from Fuel - Car Wash.
310168	Item linked to Car Wash.
310169	Invalid Match between Package and Comparative UOM
310170	Invalid Unit Factor
310359	Update operation is not permitted for this item.
310360	Insert operation is not permitted for this item.
310361	Delete operation is not permitted for this item.
310362	Query operation is not permitted for this item.
310363	You have chosen to add or update more than 100,000 records. This process may take several minutes. Would you like to continue?

Member Promotion

This section describes properties, methods and other things unique to the Member promotion and Member promotion linked only.

Other methods and properties available by all objects are described under "Programming Methods and Properties".

Member Promotion uses the parent - child technique. Which mean that single promotion has multiple child objects and they are linked to single child object. The child objects can also be used as a regular Multi and Single objects.

Member promotion (Parent):

Unique Properties – Read/Write

Name	Description
ActvFg	This property is not used. We use the start date and end date to calculate the activation of the promotion.
AllwOffInFg	Not used
AllSchemAvail	Promotion available for all card scheme.
CouponRqrd	Coupon required – PLU code.
CouponReqType	Coupon type. Values include: 0 = Not required 1 = One time only 2 = One time per reward
CrDpndncyFg	Member card required.
CreditProgram	Credit program
DelayedPromFg	Delayed promotion-will be given at the end of the ticket.
Description	Promotion description.
EndDate	Active Promotion activating date
EndTm	End time of the Promotion
ExtStepQty	Not used
ExtTrsholdQty	Not used
FriEndTm	Promotion specific day end time. Friday
FriFg	Promotion specific day active. Friday
FriStrtTm	Promotion specific day start time. Friday
Grp1Type, Grp#Typ 1-10	Group type 1-units. 2-weighted. 3- By Value. 4-Points (in groups it's 1-10). In enhanced the group type field is grp1type.
LevelAmount# 1-5	Level value for level member promotions
LevelQty# 1-5	Level quantity for level member promotions
LevelRewardAmount# 1-5	Level reward for level member promotions
LinkedProm	Linked promotion to promotion
LmtQty	Limit Quantity of items to buy.
LowHighFg	The reward will be given on the highest priced item or the lowest priced item

Name	Description
MaxItemWeight	Maximum item weight
MaxReward	Not used
MinPurchase	Minimum Purchase value.
MinValue	Minimum item value.
MinWeight	Minimum weight value.
MmbrPromLnkdS	Object of the links of the promotion
MonEndTm	Promotion specific day end time. Monday
MonFg	Promotion specific day active. Monday
MonStrtTm	Promotion specific day start time. Monday
NonNettedFg	Non netted discount
OperatingBatch	For audit use
OperatingSource	For audit use
PointsRedemptionApproval FG	Points redemption approval
PointsRequiredToRedeem	Point required to redeem
PromId	Member Promotion id
PromotionExtandedId	
PromotionIdentifier	
RewardGroup# 1-10	Fixed group for promotion for group member promotions
PromType	Member Promotion type- 1.Immmediate 2.Enhanced 3.groupPromotion
RwdByThreshold	Reward by threshold
RwrTyp	Reward Type. 1-Amount off(cash). 2-Percentage off. 3-Points. 4-Per item discount. 8-New price. 9-Amount off per pound. 10- Amount off per item. 11-New price per pound. 12-Target message. 13-Percent of order. 14-Amount of order. 15-Free item.
RwrVal	Reward value.
SatEndTm	Promotion specific day end time. Saturday
SatFg	Promotion specific day active. Saturday
SatStrtTm	Promotion specific day start time. Saturday

Name	Description
SchmId# 1-10	Card scheme Id 1-10.
Segment# 1-16	Segment# flag for loyalty server
StrHierId	Mark down department. A department that takes the reward charge.
StrtDate	Promotion Start activating date
StrtTm	Start time of the Promotion
SunEndTm	Promotion specific day end time. Sunday.
SunFg	Promotion specific day active. Sunday.
SunStrtTm	Promotion specific day start time. Sunday.
ThuEndTm	Promotion specific day end time Thursday
ThuFg	Promotion specific day active. Thursday
ThuStrtTm	Promotion specific day start time Thursday
Trig#Fg 1-10	Triggers. Used in groups. The reward charge will be on the same group number.
Trshold#Qty 1-10	Threshold. The delta needed for getting the next promotion. (in groups it's 1-10 according the group type). In enhanced it's 1 and 2.
TueEndTm	Promotion specific day end time. Tuesday
TueFg	Promotion specific day active. Tuesday
TueStrtTm	Promotion specific day start time. Tuesday
UpdateLoyaltySrv	Update loyalty server
UserID	For audir use
ValByCshierFg	Reward value entered by cashiers.
WedEndTm	Promotion specific day end tm Wednesday
WedFg	Promotion specific day active. Wednesday
WedStrtTm	Promotion specific day strt tm Wednesday

Object Validations and Error Codes

The following are error codes and their descriptions. The Member Promotion object raises these errors.

Number	Description
21401	Description is too long

Number	Description
21402	Promotion type is not between 1-6.
21403	Date is not valid
21404	Time is not valid
21405	Invalid Group Type Number
21406	Invalid Reward Type Number
21408	Member Promotion Id Should be between 1 to 9999
21409	Reward value Should be between 0 to 9999.99
21410	Limit Quantity Should be between 0 to 429000
21411	Threshold Quantity Should be between 0 to 999999
21412	Threshold Weight Should be between 0 to 999.999
21413	Threshold Value Should be between 0 to 9999.99
21414	Invalid Reward value
21415	You should choose at least one group.
21416	Invalid Minimum Item Value
21417	Invalid Minimum Weight
21418	Invalid Minimum Purchase
21420	Invalid Linked Promotion
21421	The about to delete Promotion is also Linked Promotion
21422	Invalid Maximum Weight
21424	Level Reward Value must not exceed Reward Value
21425	Current level quantity must not be less than previous level quantity
21426	Current level value must not be less than previous level value
21427	Invalid level quantity
21428	One trigger should be chosen with this reward group
21429	When chosing this reward type Second Threshold should be 0
21430	Second Threshold(maximum weight) should be greater than First Threshold(minimum weight)
21431	This Promotion Id already Exists in different type other than Enhanced Promotion.
21432	This Promotion Id already Exists in different type

Number	Description
	other than Group Promotion.
21433	This Promotion Id already Exists in different type other than Level Promotion.
21434	Member Promotion Is not allowed to be updated from HOST pc in this range
310306	Reward by threshold only applies to Free Item reward type.
310308	Invalid value for Points Redemption Approval Flag when Member Card Required Flag is off !
310309	Invalid value for Points Required to Redeem when Member Card Required Flag is off !
310310	Points Required To Redeem should be between 0 to 999999 !
310311	Invalid value for Linked Promotion when Points Redemption Approval Flag is on!
310312	Invalid value for Coupon Required Type when Points Redemption Approval Flag is on!
310313	Invalid value for Coupon Required when Points Redemption Approval Flag is on!
310314	Invalid value for Delayed Promotion Flag when Points Redemption Approval Flag is on!
310315	Invalid value for Non Netted Flag when Points Redemption Approval Flag is on!
310316	Invalid value for Group Type (3,4,5) when Points Redemption Approval Flag is on!
310317	Invalid value for Reward Type (3,12,13,14,16) when Points Redemption Approval Flag is on!
310318	Invalid value for Reward By Cashier Flag when Points Redemption Approval Flag is on!
310319	Invalid value for Give Reward On when Points Redemption Approval Flag is on!
310320	Invalid value for Threshold1 Quantity when Points Redemption Approval Flag is on!
310321	Invalid value for Threshold2 Quantity when Points Redemption Approval Flag is on!
310323	Promotion identifier is too long.

Member Promotion Linked

Unique Properties – Read/Write

Name	Description
GrpId	If working with groups. 1-10
LnkId	Linked Id
LnkType	Linked type- 0.PLU 1.Department 2.Mix & Match 3.Manufacture 4.Price group
OperatingBatch	For audit use
OperatingSource	For audit use.
PromId	Member Promotion id
UserID	For audit use.

Methods

The following methods are unique to the Member Promotion Linked object.

Name	Description
SendToQDX()	Saving Info to qdx after the saving transaction to the sql DB was over.
SaveToAudit()	writing changes to Audit object after the saving transaction to the sql DB was over.

Object Validations and Error Codes

The following are error codes and their descriptions. The Member Promotion object raises these errors.

Number	Description
21701	Description is too long
21702	Invalid Promotion Linked Item Type
21703	This Plu Item does not exist
21704	This Department Item does not exist
21705	This Mix And Match does not exist

Number	Description
21706	Group Id should be between 1 to 10
21707	Non exist promotion Id
21708	Wrong Manufacturer Id Range
21709	This Corema segment Id does not exist

© StoreNext Retail Technologies LLC 2004

StoreNext Retail Technologies LLC endeavors to ensure that the information in this document is correct and fairly stated but does not accept liability for any error or omission.

The development of StoreNext products and services is continuous and published information may not be up to date. It is important to check the current position with StoreNext. This document is not part of a contract or license save insofar as may be expressly agreed.

**StoreNext Retail Technologies LLC
1250 East Arques Avenue, M/S 363
Sunnyvale, CA 94085**

**P/N 89000176
PIN 45001/041**