BF Store Locator.doc

Last Updated: 3-Jul-2013

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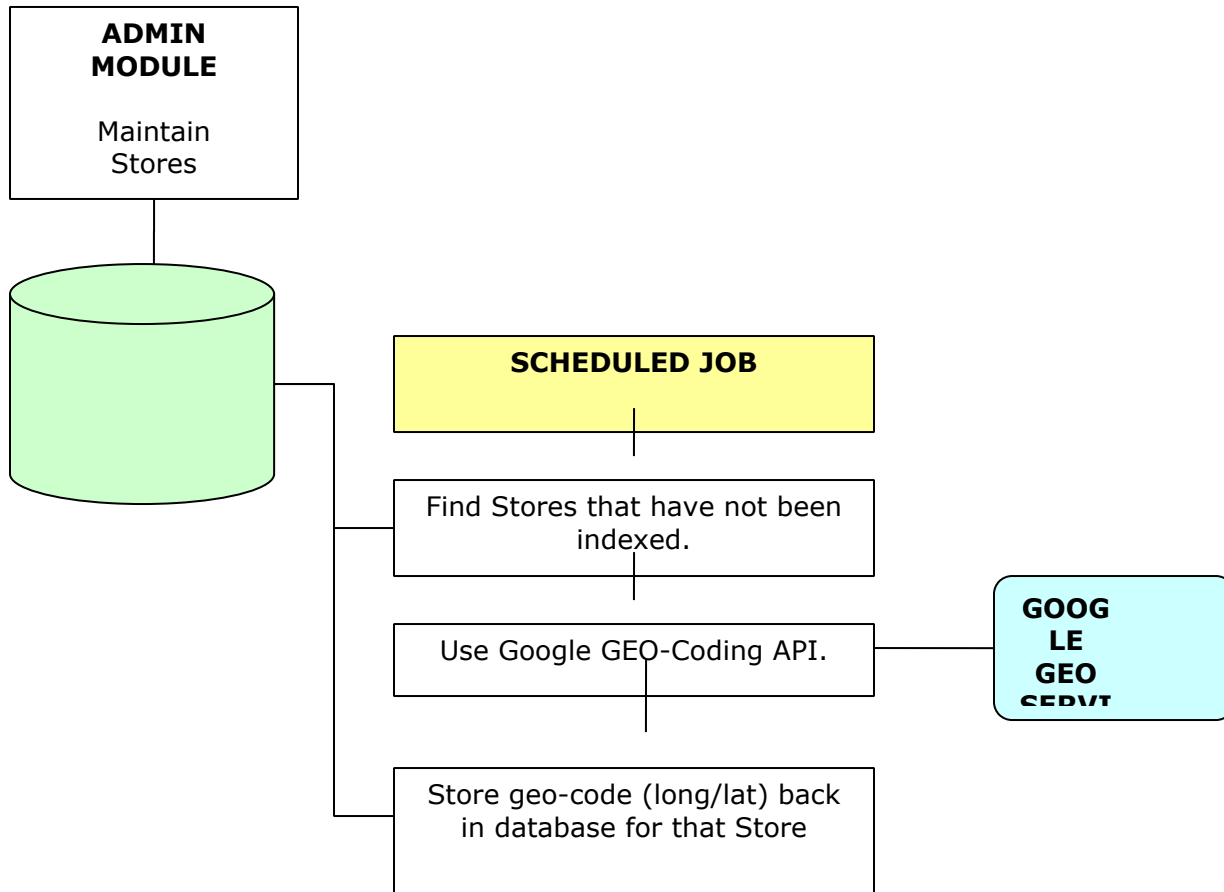
1   Modification History

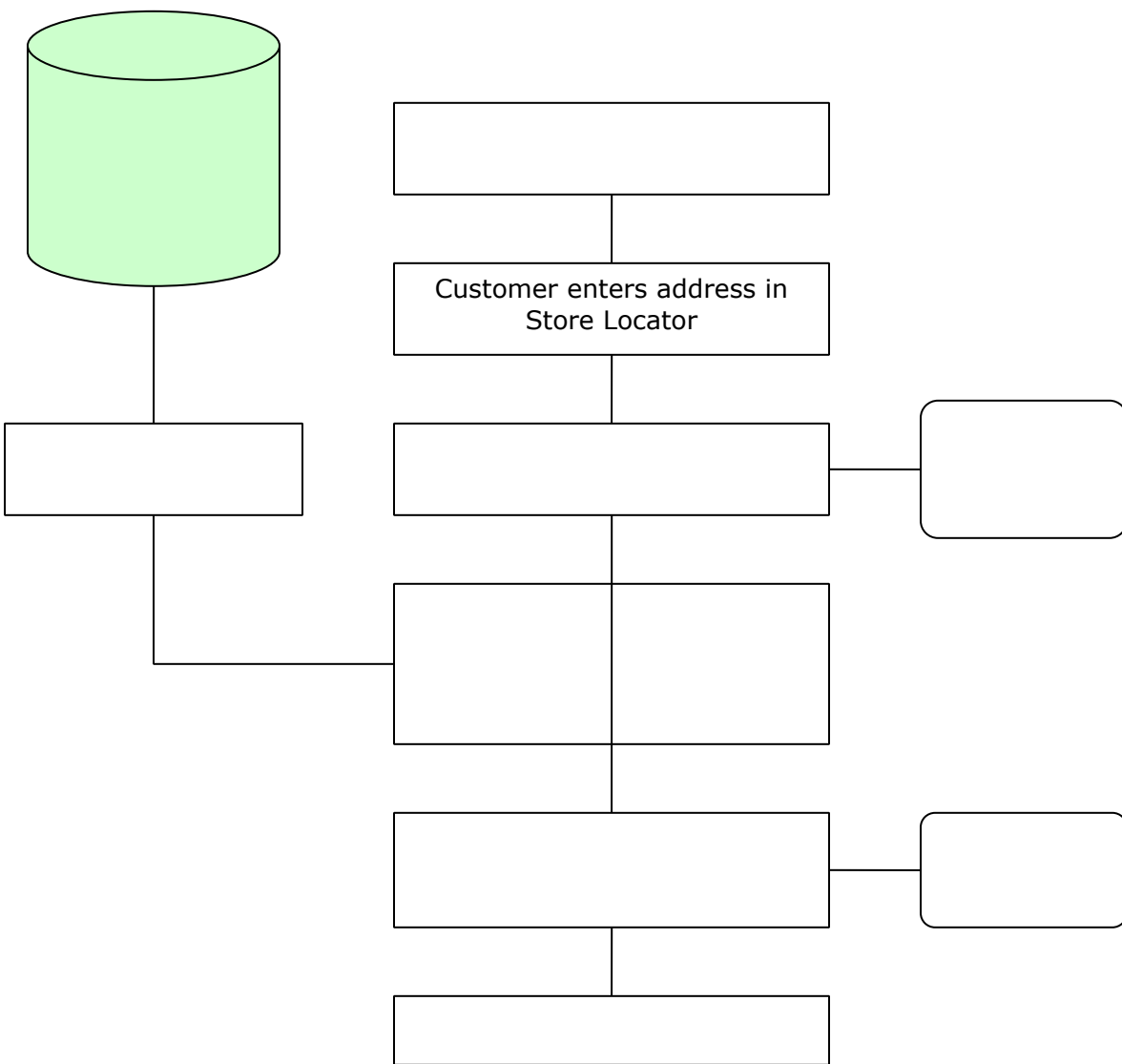| Date	Who	Comments
29-Nov-11	Solveda	Initial

1-Dec-11	Solveda	Added status:
		    PARTY_ENABLED = "Open"
		    PARTY_DISABLED = "Closed"

11-Jan-12	Solveda	Added icons for Directions (Car, Walk, Bicycle)
19-Jan-12	Solveda	Display new attribute "Store Notice"
19-Jan-12	Solveda	Allow Store-Locator to be used in "select" mode to accommodate the pickup-in-store function (see *BF-Cart-and-Check-Out* for related details)
16-Feb-12	Solveda	Added "Store Profile" page
31-Jul-12	Solveda	Added parameters GMAP_PICKUP_MAP_IMG_H and GMAP_PICKUP_MAP_W to control the size of the map displayed in the Select a Store function.
3-Jul-13	Solveda	Use GMAP_NOT_FOUND_ADDRESS when no results found using the customer request

2   Store Locator Overview

2.1   Store Locator Indexing

```
┌──────────────────┐
│   ADMIN          │
│   MODULE         │
│                  │
│   Maintain       │
│   Stores         │
└──────────────────┘
```

┌────────────────────────────────┐
│   SCHEDULED JOB   │
└────────────────────────────────┘

┌────────────────────────────────┐
│ Find Stores that have not been │
│   indexed.   │
└────────────────────────────────┘

┌────────────────────────────────┐   ┌──────────┐
│   Use Google GEO-Coding API.   │────────│ GOOG   │
│   │   │   LE   │
└────────────────────────────────┘   │ GEO   │
                                           │ SERVI   │
┌────────────────────────────────┐   └──────────┘
│ Store geo-code (long/lat) back │
│   in database for that Store   │
└────────────────────────────────┘

- ◼ OFBIZ DB: this is the repository for all the Store Information

- ◼ ADMIN MODULE: allows users to maintain Store Information

- ◼ SCHEDULED JOB: nightly or ad-hoc executed job that will read all Stores that do not have GEO-CODE information and update

2.2 Store Locator Function

One box contains:
Customer enters address in
Store Locator

- OFBIZ DB: this is the repository for all the Store Information

- ECOMMERCE: the client implementation, accepts an address from the user, converts the
  address to a geo-code and matches against available stores

3　Defining a Store

3.1　Basic Definition

- A Store will be defined as follows:

Attribute	Description
Store Name	A full name that describes the store
Store Code	An abbreviated code
Address-1	Address
Address-2	Address
City	City
State	State
Zip	Zip
Phone Number	Phone Number
Opening Hours	Text of store hours
Long	The longitude location of the Store
Lat	The latitude location of the Store
Status	PARTY_ENABLED = "Open" PARTY_DISABLED = "Closed"

- Stores with a PARTY_DISABLED status should NOT be displayed on the Store Locator Page

- Stores that have not yet been geo-coded should NOT be displayed on the Store Locator Page

3.2　Country Considerations

- The definition of a store should consider country

- See spec "*BF Country Considerations.doc*" for more details.

3.3　Future Considerations

- It is likely that future implementations will require additional content.

- Consider:
  - Manager's Photo and Bio
  - Staff Information
  - Store specific special offers
  - Other store specific content

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4   Store Locator

4.1   Access to Store Locator

- Typically the Store Locator will be implemented as a link with either the header or footer content ("SITE_INFO" components).

- The solution must be implementation in such a way so that it is easily included as a simple link / image within the final eCommerce solution.

- "Opening Hours" and "Store Notice" should only be displayed if content is available

4.2   Visual Guideline (Initial Display)

Store Locator

Page Content Spot:
          Content Menu: "PAGE_TOP_SPOT" (MENU_CONTAINER)
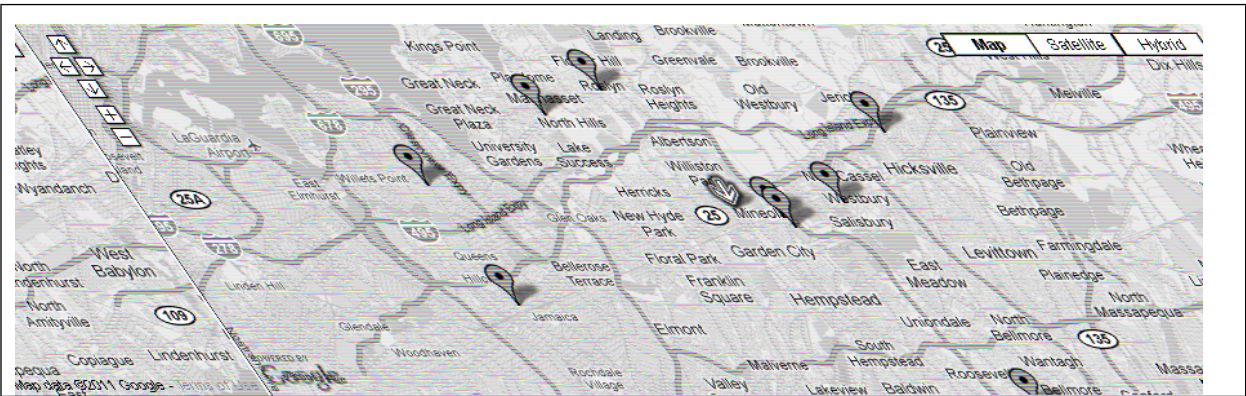   Content ID: "PTS_STORE_LOCATOR"

[Message Area]

Find a store nearby. Enter the address, city, state or zip from where you want to search for a store.

Address, City, State or Zip: **Search**

4.3 Visual Guideline (Return Results)

Store Locator

Page Content Spot:
        Content Menu: "PAGE_TOP_SPOT" (MENU_CONTAINER)
        Content ID: "PTS_STORE_LOCATOR"

[Message Area]

Find a store nearby. Enter the address, city, state or zip from where you want to search for a store.

Address, City, State or Zip: [   ]   **Search**

	City Store (CS)	
3.7 Miles	187 Main Street, Cityplace, NY 12345 **Hours**: Every Day 7am – 8pm **Store Notice**: Being renovated this weekend **Phone**: 123-999-8888	🏠 🚗 🚶 🚲
6.8 Miles	**Beach Store (BS)** 189 Shore Drive, Seaside, NY 98765 **Hours**: M-F 7am – 10pm, Sat-Sun 8am – 3pm **Phone**: 987-987-9876	🏠 🚗 🚶 🚲
13.3 Miles	**Faraway Store (FS)** 189 Faraway Place, Longtown, NY 11111 **Hours**: Wed only 7am – 8am **Phone**: 323-323-3232	🏠 🚗 🚶 🚲

- ■ The Store Detail options (the link and the 🏠 icon) are only displayed if there is available STORE_CONTENT_SPOT information

4.4 **No Results Found**

- If the initial query returns zero results then:
  - The system parameter GMAP_NOT_FOUND_ADDRESS may provide an alternative search
  - If this parameter is not blank, then re-execute the search
  - If results are found with the alternative search then display them with the message:

    We are sorry, we do not have stores within [GMAP_RADIUS] [GMAP_UOM] of the address you entered. Showing results for '[GMAP_NOT_FOUND_ADDRESS]' instead

- If no results are found
  - If the initial search returned zero results and the GMAP_NOT_FOUND_ADDRESS is blank
  - OR
  - If the initial search returned zero results AND the alternative search returned zero results

    We are sorry, we do not have stores within [GMAP_RADIUS] [GMAP_UOM] of the address you entered

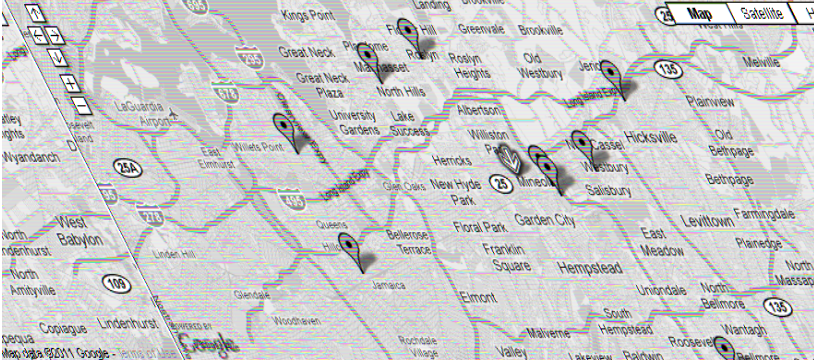- Message should be configurable via Labels-and-Captions

4.5 **Visual Guideline (Store Detail)**

- Accessed from clicking on the Store link or the Store icon
- Page title is the Store Name
- The "Store Content Spot" is displayed beneath the H1
- The map, with driving directions to the selected store is displayed
- The store details are displayed

City Store

Store Name:	**City Store (CS)**
Address:	**187 Main Street**
	CityPlace, NY 12345
Hours:	**Every Day 7am – 8pm**
Notices:	**Being renovated this weekend**
Phone:	**1-123-999-8888**

Store Content Spot goes here

TURN BY TURN DRIVING DIRECTIONS DISPLAYED IN THIS PANEL

3.7 Miles

Back

4.6   Visual Guideline (Store Selector Mode)

Store Locator

Page Content Spot:
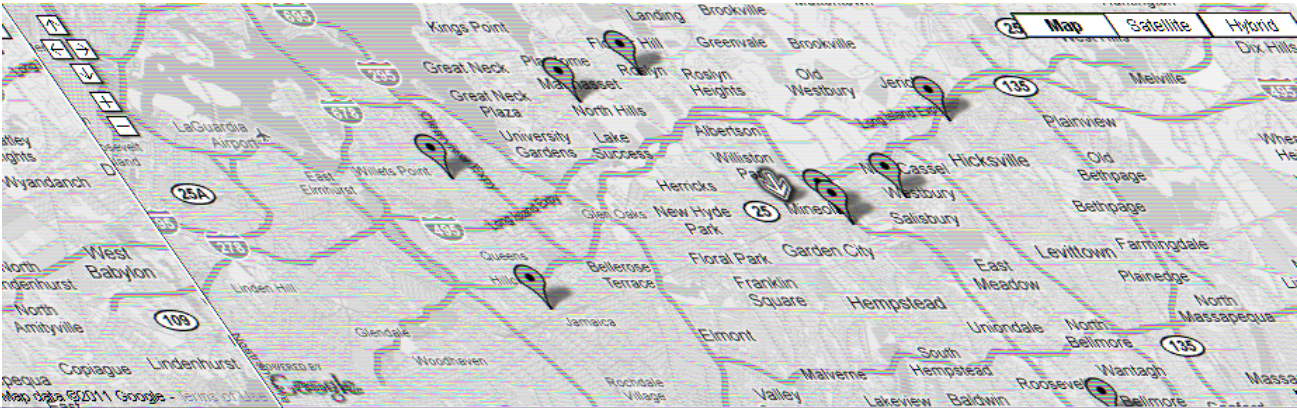   Content Menu: "PAGE_TOP_SPOT" (MENU_CONTAINER)
        Content ID: "PTS_STORE_LOCATOR"

[Message Area]

Find a store nearby. Enter the address, city, state or zip from where you want to search for a store.

Address, City, State or Zip: [   ]   **Search**

	City Store (CS) 187 Main Street, Cityplace, NY 12345 **Hours**: Every Day 7am – 8pm **Phone**: 123-999-8888	🚗 🚶 🚲
Select for Pickup 3.7 Miles		
	Beach Store (BS) 189 Shore Drive, Seaside, NY 98765 **Hours**: M-F 7am – 10pm, Sat-Sun 8am – 3pm **Phone**: 987-987-9876	🚗 🚶 🚲
Select for Pickup 6.8 Miles		
	Faraway Store (FS) 189 Faraway Place, Longtown, NY 11111 **Hours**: Wed only 7am – 8am **Phone**: 323-323-3232	🚗 🚶 🚲
Select for Pickup 13.3 Miles		

Cancel Store Select   This will return you to the check-out process

- ■ "Cancel Store Select" should be offered in the "Initial View" in order to provide a way to return to the check-out process before starting a store search or when stores are not available in the search area

- ■ Clicking on "Select for Pickup" will redirect back to the calling page with the selected Store

- ■ Clicking on "Cancel Store Selection" will execute a browser "back" action

5   Technical Notes

5.1   Related Documentation

- See document BF-Admin-Module-Stores for additional technical details

5.2   OFBiz Database Mapping

- The Store information will be held primarily within the PARTY and associated entities:

  o PARTY
  o PARTY_GROUP
  o PARTY_ROLE
  o PARTY_CONTENT
  o PRODUCT_STORE_ROLE

- Using the PARTY constructs will allow additional information to be stored without restriction in the PARTY_CONTENT entity

- The Role Type will be "STORE_LOCATION"

- Address and other contact information will be stored in the following entities:

  o CONTACT_MECH
  o POSTAL_ADDRESS
  o TELECOM_NUMBER

- GEO-Code information will be stored in the following entities:

  o GEO_POINT
  o PARTY_GEO_POINT

5.3   Multi-Store Considerations

- Stores are associated to a specific PRODUCT STORE via entity PRODUCT_STORE_ROLE associating parties with a role type of STORE_LOCATION.

5.4   Implementation Details

- For a PHP based example see:

http://code.google.com/apis/maps/articles/phpsqlsearch_v3.html

- When matching the available OFBiz Stores to the "entered location" use the following sample MySQL statement as a guide:

```
SELECT id, ( 3959 * acos( cos( radians(37) ) * cos( radians( ofbiz-store-table.lat
) ) * cos( radians(ofbiz-store-table.lng ) - radians(-122) ) + sin( radians(37) )
* sin( radians(ofbiz-store-table.lat ) ) ) )
AS distance
```

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```
FROM ofbiz-store-table
HAVING distance < 25
ORDER BY distance
LIMIT 0 , 20;

        Where:
        3959 is for miles, use 6371 for kilometers
        37 is the longitude of the "entered address"
        -122 is the latitude of the "entered address"
        25 indicates within 25 miles
        20 limits the result set to 20 stores
```

IMPORTANT 27-Jun-2013

It is important to restrict the number of results (as illustrated by the "`LIMIT 0, 20`"
statement above) since Google Maps restricts the number of "hits" from a specific
server. The "hits" (we think) include the number of "pins" served up by Google Maps.

The "limit" is based on the system parameter GMAP_NUM_TO_DISPLAY

5.5   Scheduled Job

- A scheduled job is required:
    - Retrieve all Stores with NO long/lat information
    - Call a Google API, accept long/lat and update

5.6   Parameters

Name	Key	Description	Seed Value
GMAP_MAP_IMG_W	GMAP	Width of store locator map	300
GMAP_MAP_IMG_H	GMAP	Height of store locator map	600
GMAP_PICKUP_MAP_IMG_W	GMAP	Width of store locator map when used in select a store	200
GMAP_PICKUP_MAP_IMG_H	GMAP	Height of store locator map when used in select a store	400
GMAP_MAP_ZOOM	GMAP	Initial zoom level of display map	4
GMAP_UOM	GMAP	Store Locator unit of measure. Values allowed are MILES or KILOMETERS.	MILES
GMAP_RADIUS	GMAP	The Miles/Kilometers to use as the radius when matching	20
GMAP_NUM_TO_DISPLAY	GMAP	The number of Store matches to display (within the Radius)	10

GMAP_NOT_FOUND_ADDRESS	GMAP	An address that is used when no stores are found using the customers request. This should be a value that ensures results.	
GMAP_GEOPT_API_URL	GMAP	Request URL for Getting Geo Point Input as Address	http://maps.googleapis.com/maps/api/geocode/xml?sensor=false
GMAP_JS_API_URL	GMAP	Request Url for Showing Google Map Input as Geo Point (Lat,Long)	http://maps.google.com/maps?file=api&v=2&key=
GMAP_JS_API_KEY	GMAP	Request Url Key for Showing Google Map Input as Geo Point (Lat,Long)	ABQIAAAAtt0d8djaYFkk8N5LJVcDSBQN-clGH2vvMMwJjYtcwF78UzZgEBTN70S6uIgRoAtXRkADNoesbw5etg

6   Admin Module

- ■   See *BF-Admin-Module-Admin* for details of Store Maintenance