**Task 2.23.2 FindMore Sold Mar 20, 2015**

The FindMore\_Sold process determines matching property listings that get used by the Valuation process when its algorithm cannot find enough listings.

Note: This process no longer performs any QWord comparisons and therefore no scoring or percentage match values are needed.

Start Processing

* Write process start record to the Process\_Status\_Log table

Script Name: findmore\_sold.php

Process name : FindMore Sold

Process id: 2.14

* Initialize (the following is similar to the FindMore process\_id 2.13)

UPDATE MoreLike\_Base

SET SoldBatch = -1

WHERE Property\_id IN

(SELECT Property\_id FROM Real\_Listing

WHERE Status NOT IN ("A","U"))

INSERT INTO MoreLike\_Base

( Propety\_id, MLS , PropertyType,

ListPrice, SquareFeet, Bedrooms, Bathrooms)

SELECT r.Property\_id, r.ListingNumber, r.PropertyType,

r.ListPrice, r.SquareFeet, r.TotalBedrooms, r.TotalBathrooms)

FROM Real\_Listing r, Real\_Location l

WHERE r.Location\_id = l.Location\_id

AND r.Status IN (“A”,”U”) AND l.Active=1

AND r.Property\_id NOT IN

(SELECT Property\_id FROM MoreLike\_Base)

DELETE FROM MoreLike\_Listings\_Sold

WHERE Property\_id IN

(SELECT Property\_id FROM MoreLike\_Base WHERE SoldBatch<>0)

DELETE FROM MoreLike\_Base

WHERE SoldBatch = -1

* For each Property\_id in the MoreLike\_Base table where SoldBatch=1 (default=1 during insert)
  + Execute the steps outlined below using property **listings Sold with the last x months**

(x = SystemSettings where keyname=”MORELIKE” and subkeyname=”SOLD\_MONTHS”)

* + Set SoldBatchCount = number of matching Sold listings
  + Set SoldBatch=0 when processing completed for the listing
  + Set SoldBatchDate to today’s date

FindMore Steps

1. Delete all previous data for the listings being processed
2. Retrieve the Polygon\_id for the base property.
3. Select all Sold listings by PropertyType, Style and Date (See Below)
4. Select listings by Polygon GeoDNA (see below)
5. Calculate distance, sort by proximity and delete unneeded listings.

Results are stored in MoreLike\_Listing\_Sold table

* Writeprocess end record to the Process\_Status\_Log table

**Select Listings by Style**

* Step 0: Base listing Polygon

SELECT s.Polygon\_id, s.MedianPrice, s.MedianPriceSqft,

c.geoDNA,c.Latitude,c.Longitude

FROM Real\_Listing r, Real\_Polygon p, Polygon\_Center c, Polygon\_Stats s

where r.Location\_id = p.Location\_id

and p.Polygon\_id = c.Polygon\_id

and c.Polygon\_id = s.Polygon\_id

and r.Property\_id = <base Property\_id>

* Step 1: Retrieve the equivalent styles (eStyles)

SELECT Child\_Style

FROM tb\_eStyle

WHERE Parent\_Style = <base Style>

ORDER BY Level

* Step 2: For each Child\_Style execute the following query, stepping through the Styles until enough properties have been found or there are no more Child Styles. For example, if the base style was “5L”, the above query returns “5L” (level 0), “4L” (level 1), “3S” (level 2) and “TR” (level 3). Each of the child styles would be used one at a time and checking each time if the MIN\_LISTINGS\_SOLD has been reached.

SELECT r.Property\_id, ….

FROM Real\_Listing r, Real\_Polygon p

WHERE r.Location\_id = p.Location\_id

AND p.Polygon\_id = <Base Polygon\_id>

AND r.PropertyType = <Base PropertyType>

AND r.Style = <Child Style>

AND r.CloseDate > <Within Last ## Months>

AND r.Status = “S”

Insert the results of the query into the FindMore\_Listings\_Sold table (add whatever additional fields are needed to the above query).

If after using the eStyles the total listing is less than MIN\_LISTINGS\_SOLD, process to select listings by Polygon GeoDNA.

**Select Listings by Polygon GeoDNA**

The goal of this step is to use the subdivision info to expand our search area to the surrounding polygons. Since our data is not very good we need to control for proximity and price per square foot to find polygons that are similar.

* Calculate Min?Max from base Polygon Stats
  + MinPriceSqft = INT(MedianPriceSqft – MedianPriceSqft \*0.20)
  + MaxPriceSqft = INT(MedianPriceSqft + MedianPriceSqft \*0.20)
  + MinPrice = INT(MedianPrice – MedianPrice \*0.25)
  + MaxPrice = INT(MedianPrice + MedianPrice \*0.25)
* Step 1: Select listings by GeoDNA

Use the geoDNA returned by the above query to search for more listings. Drop right most chars until we either return enough records (MIN\_LISTINGS\_SOLD number reached) or only 11 left most chars of the geoDNA remain.

As was done in the Select Listings by Style, the same is done here by stepping through the Child Styles for each shortening of the geoDNA string.

SELECT r.Property\_id,

r.ListingNumber AS MLS,

r.ClosePrice,

r.SquareFeet,

ROUND(r.ClosePrice/r.SquareFeet,0),

r.TotalBedrooms as Bedrooms,

r.TotalBathrooms as Bathrooms,

l.Latitude, l.Longitude

FROM Real\_Listing r, Real\_Location l, tb\_City t,

Real\_Polygon p, Polygon\_Center c, Polygon\_Stats s

where r.Location\_id = l.Location\_id

and l.City\_id = t.City\_id and t.Include

and l.Location\_id = p.Location\_id

and p.Polygon\_id = c.Polygon\_id

and p.Polygon\_id = s.Polygon\_id

and c.geoDNA LIKE “<Base Polygon geoDNA minus right most chars>%”

and r.PropertyType = <Base PropertyType>

and r.Style = <Child Style>

and r.CloseDate > <Within Last ## Months>

and s.MedianPrice BETWEEN <MinPrice> AND <MaxPrice>

and s. MedianPriceSqft BETWEEN <MinPriceSqft> AND <MaxPriceSqft>

Insert the results of the queries into the FindMore\_Listings\_Sold table

* Step 2: Calculate Proximity

Eliminate listings based on the following rules,

1. Deleting listings where Proximity > SOLD\_PROXIMITY\*2 if it still leave the total number of listings equal to or greater than MIN\_LISTINGS\_SOLD
2. Deleting listings where Proximity > SOLD\_PROXIMITY if it still leave the total number of listings equal to or greater than MIN\_LISTINGS\_SOLD
3. If number of listings exceeds MAX\_LISTINGS\_SOLD, then keep the closest MAX\_LISTINGS\_SOLD records based on proximity.