Figure 1. Algorithm for using a raster tile mapping schema to search for particular organizations of interest within specified geographic areas using the Google Maps platform and its Places API.

Establish Search Criteria
Organization Type & Geographic Area

↓

Generate Array of Tiles that Covers
Entire Geographic Area of Interest

↓

Initiate Nearby Search Request
on Next Square Tile in Queue
Radius of search area = $l(\sqrt{2})/2$
l is the length of tile being searched

← Divide Square Tile
into Four Equal Tiles
Put Them at Front of Queue

↓

Retrieve Organizations in Search Area
that Match Search Type Criteria

↓

# of Organizations Returned < 60?

Yes → (loop back to Initiate Nearby Search Request)

No → Delete Results of Nearby Search Request → (up to Divide Square Tile)

Yes ↓

Place ID of Returned Organization Already Stored in the Database?

Yes → Delete Returned Organization

No ↓

Store Returned Organization in Database

↓

Initiate Place Details Request for Organizations in Database

↓

Retrieve and Store Organizations' Contact Info in Database

l

$l(\sqrt{2})/2$