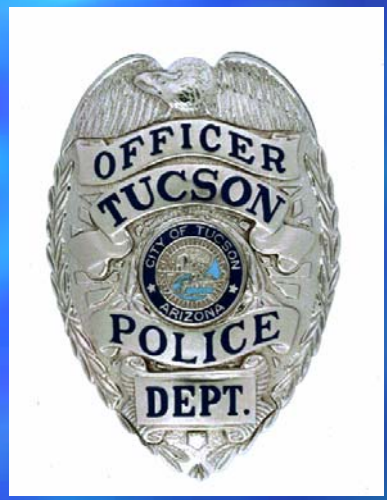
ADDRESS MATCHING



As Implemented at the Tucson Police Department

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TWO TYPES OF ADDRESS MATCHING ARE USED

- Street network based (stnetall)
- Database based (City IT's Master Addresses database)

DATA SOURCE

- TPD uses a SQL extract of its Records Management System (police incidents) as its data source
- The addresses are edited when entered
- (ZP4 from Semaphore Corporation can be used if addresses are not “clean”)
- The SQL extract produces a text file on the Alpha server on a daily scheduled basis.

ADDRESS MATCHER PROCESSING

- A batch program is scheduled to execute every day on the Map server.
- This batch copies the SQL extract from the Alpha server to the Map server
- It then invokes the AddressMatcher program to geocode the addresses in the SQL extract.
- The result is an ESRI shapefile.

ADDRESS MATCHER PROGRAM

- Uses ESRI's MapObjects library
- Written in C++ but could have been written in Visual Basic or Delphi (ESRI has a Java version of MapObjects that might also support geocoding.
- Is a console program (non-GUI)
- Requires two command line parameters (name of a configuration file and name of a log file)

ESRI MapObects Objects For Address Matching

- Geocoder - Object which is used with a GeoDataset that uses address information to specify geographic locations, performs both interactive and batch address matching
- Standardizer - Object which parses an address or street intersection into standard fields and converts the fields into standard values before the address is matched

ESRI MapObects Objects For Address Matching (continued)

- AddressLocation - Object which represents the results of a successful, single record address match. It contains a score indicating the closeness of the match and the geographic position of the matched address.

ESRI MapObects Objects For Address Matching (continued)

- Place Locator - Object which is used with a GeoDataset that contain place names; it finds the locations of these places

CONFIGURATION FILE

- Specifies name of shapefile to create
- Specifies name of street network file
- Specifies name of address file
- Specifies field layout of address file and determines which fields will be included in the created database (.dbf) file
- Specifies the name of the unmatched file

CONFIGURATION FILE (Continued)

- Specifies the street translation file
- Specifies the fictitious addresses file
- Specifies the minimum match score
- Specifies spelling sensitivity
- Specifies leeway

CREATED SHAPEFILE SET

- The .shp file contains the x, y coordinates in state plane feet as binary data (not text)
- The .shx file is an index file
- The .dbf file is a dBase file that contains fields from the address file as specified by the configuration file. It also contains the x, y coordinates (as text)