Master Address Repository (MAR) Presentation

octo | Office of the Chief Technology Officer

October 2021

What is the MAR?

Comprehensive Location Search

- Intelligent search functionality to find addresses, place names, blocks and intersections

Standards

- An official syntax for addresses and address components.

Data

- Addresses
- Place Names
- Blocks
- Intersections

Applications & Web Services

- Web services that can be embedded into other applications.
- A Web site.
- A stand alone batch geocoder.

Purpose and Importance of the MAR

- Create a repository that is real time and contains 99.95% valid DC addresses, intersections, blocks, and significant place names.

- Create an enterprise system that is capable of allowing ALL DC government agencies to verifying addresses for their business purposes.

- Create an enterprise application tool that is capable of cleaning address data and purging incorrect address data.

- The MAR has established a unified addressing standard. It allows DC Agencies to easily compare information about an address, block or intersection locations across their respective databases to the MAR.

- Enables easy reporting of administrative boundaries and political boundaries.

Sources of MAR

- Voter Rolls
- Office of Tax & Revenue
- E911 Calls
- Building Permits
- Driver Licenses
- Basic Business Licenses
- Occupancy Permits
- US Postal Service
- Aerial Imagery
- Internet Search
- Local DC Blogs
- Online News
- Site Visits
- DC Council Legislation
- User Feedback
- And More…

Why Use the MAR?

- Spatially Accurate Data
- Point Geocoding
- Easy boundary reporting
- More flexible
- Open Data / No Cost
- Verify and Validate
- Scrub Addresses
- Links to Property Information

MAR Maintenance & Responsibility

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- MAR Database maintenance and updates
- MAR Web Services
- Address Field Verification Research
- Research MAR address submissions from DC residents
- Research Special Address Cases
- Maintain and update Addresses, Address Anomalies, Residential Units, Aliases, Street Name Aliases, Blocks, and Intersections

DCRA

- Assigning New Addresses
- Regulating Addresses

DDOT

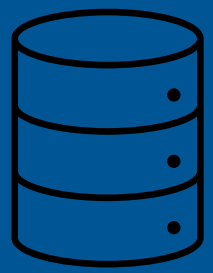
- Street Centerline File
- Street Names

MAR Web Services

- **A large number of XML based queries including (.NET and SOAP)**
  - Find Address (corrects misspellings, formatting issue)
  - Find Block
  - Find Intersection
  - Find Place Name
  - Find Property
  - Find Condo Unit

- **MAR 1 Web Services** (http://citizenatlas.dc.gov/newwebservices/locationverifier.asmx)
- **MAR 2 Web Services** (https://developers.data.dc.gov/marviewer/home)

Status of MAR: Data: Oct 2021



- **ADDRESSES POINTS**: 148,600
- **RESIDENTIAL UNITS:** 270,000
- **ALIASES (PLACE NAMES)** 9,400
- **BLOCKS:** 16,200
- **INTERSECTIONS**: 18,800
- **STREET NAME ALIASES** 1,000

Addresses

Street Addresses including the address's components.

Examples:

- 441 4TH STREET NW
- 3660 ALABAMA AVENUE SE
- 2500 Q STREET NW
- 4510 EAST CAPITOL STREET NE
- 50 IRVING STREET NW

Address Attributes (some of them)

Attribute Name	Description / Example
MARID	Unique Identifier for each address record
Address Number	Street Number - 3621
Street Name	BENNING
Street Type	ROAD
Quadrant	NE
Full Address	3621 BENNING ROAD NE
X Coordinates	X Coordinate in Maryland State Place NAD 1984 Meters
Y Coordinates	Y Coordinate in Maryland State Place NAD 1984 Meters
SSL	Square, Suffix, Lot – A property identifier
Boundaries Information	Such as Ward, ANC, SMD, Police District, Vote Precinct, Census Tract

Address Anomalies

Description: Address anomalies are ILLOGICAL addresses which do NOT fit logically into DC's address grid system. These address anomalies are significant because they have exist and can cause confusion and delay. The following types of anomalies were found while working on the MAR:

Examples of Address Anomalies:

- Out of Sequence
- Address Far from Its Associated Street Name
- No Address Pattern Along The Same Street Segment
- Even Addresses on the Odd Side of the Street
- Odd Addresses on the Even Side of the Street

The MAR Address Anomalies Report can be found on the MAR Website

Residential Units

Contains secondary address designations for housing units within condo and apartment buildings. These units have unit numbers such as 101, 1, A. It also contains the property identifier. Most of these residential units have an interior entrance to the location.

Examples:

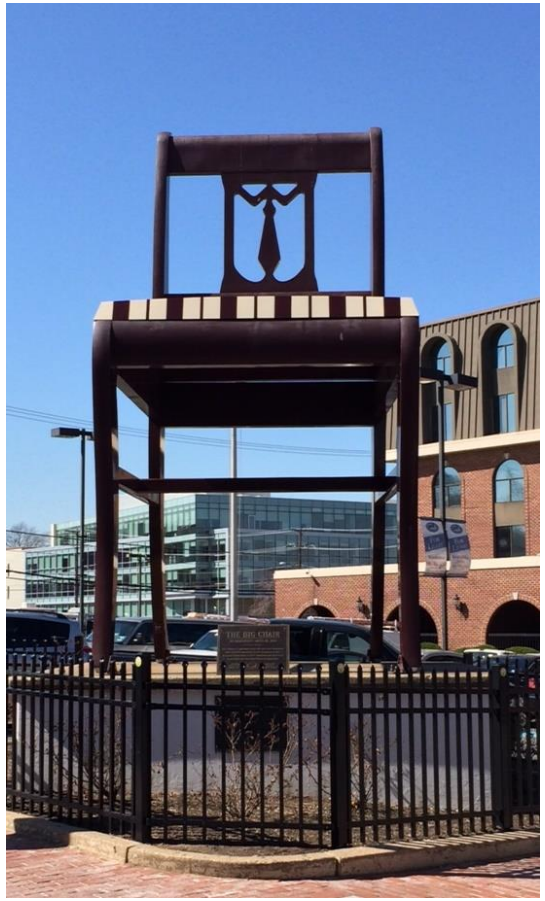
- 1 JOHN STREET NW 101 *
- 21 JOE STREET SE 2 *
- 3110 FAKE STREET NE A *

Aliases (Place Names)

Stores place names. Types of places. include: Museums, Historical Sites, Building Numbers on Military Sites, Names of Buildings on Universities, Metro Station Entrances, Traffic Circles, Names of Condos, Apartment buildings, DC Government named buildings, Federal Buildings, Cultural Sites. Monuments & Statues. Police & Fire Stations, and Embassies.

Examples:

- WHITE HOUSE
- THE BIG CHAIR
- BUFFALO BRIDGE
- O STREET MARKET
- ANACOSTIA COMMUNITY MUSEUM



Street Name Aliases

Contains abbreviated, misspelled and alternative names for streets.

AliasName	Street Name
GA	GEORGIA
MLK	MARTIN LUTHER KING JR
ILL	ILLINOIS
WISC	WISCONSIN
CONECTICUT	CONNECTICUT
NHB	NANNIE HELEN BURROUGHS
EYE	I

Examples:

- MLK : MARTIN LUTHER KING JR
- GA : GEORGIA
- NY : NY
- EYE : I

Intersections

An Intersection is a road junction where two or more street join together. The intersection records also include intersections that are not at grade (bridges).

Examples:

- MLK : MARTIN LUTHER KING JR
- GA : GEORGIA
- NY : NY
- EYE : I

Blocks

A block represents a street segment which usually has two bordering streets. The coordinates for the blocks are located at the midpoint of the street segment. Typically, each block is assigned 100 numbers, such that the address numbers on that block vary only in the two least significant digits. For example, 7th Street NW From D Street NW To E Street NW is designated as the 400 Block of 7th Street NW, meaning that street numbers on that Block are in the range from 400 to 499. On street signs in DC the block numbers are visible below the street names.

Examples:

- 2500 – 2599 BLOCK OF QUEEN ANNES LANE NW
- 100 – 199 BLOCK OF 3RD STREET NE
- 4200 - 4299 BLOCK OF BOWEN ROAD SE
- 1344 – 1399 BLOCK OF SOUTHERN AVENUE SE
- E STREET NW FROM 3rD STREET NW TO 4TH STREET NW

Cross Reference Table

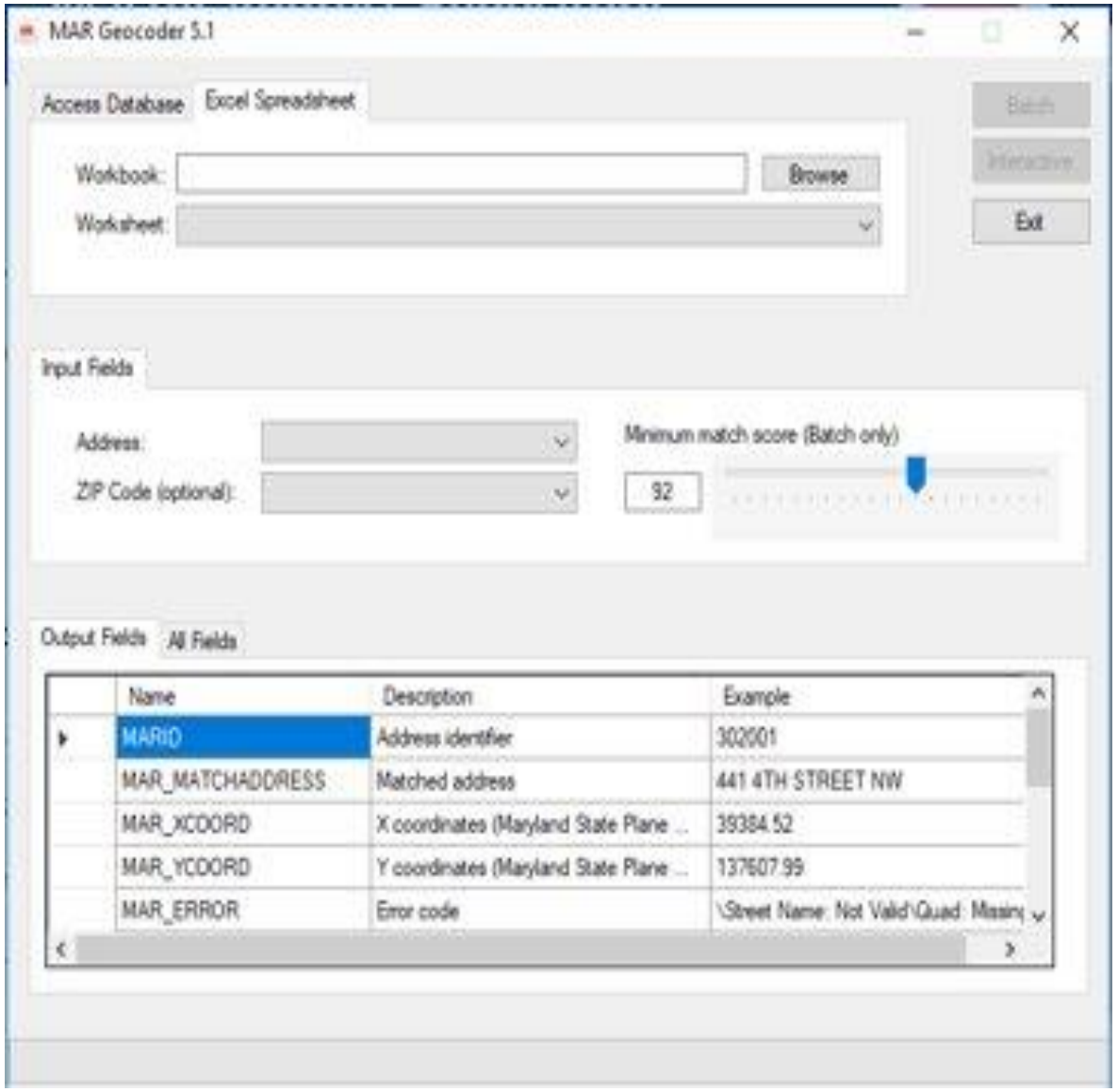
A many to many table showing the complex relationship between a SSL (Property Lot) and an address. A series of spatial overlays have been automated to produce this table.

MARDBA.VW_ADDRESS_SSL_XREF

SSL	ADDRESS_ID	SQUARE	SUFFIX	LOT	COL	PARCEL	RESERVATION	LOT_TYPE
5397 0062	28061	5397	<Null>	0062	Y	<Null>	<Null>	RECORD LOT
2740 0017	256312	2740	<Null>	0017	Y	<Null>	<Null>	RECORD LOT
2741 0036	256327	2741	<Null>	0036	Y	<Null>	<Null>	RECORD LOT
5398E 0052	22970	5398	E	0052	Y	<Null>	<Null>	RECORD LOT
5390 0070	23114	5390	<Null>	0070	Y	<Null>	<Null>	RECORD LOT
0836 0074	28137	0836	<Null>	0074	Y	<Null>	<Null>	RECORD LOT
3761 0808	28158	3761	<Null>	0808	Y	<Null>	<Null>	TAX LOT

MAR Batch Geocoder

- Stand alone Application (Windows)
- Compatible with Excel or MS Access
- It works by sending requests to the MAR Web Services
- Provides various DC geographies such as
  - Police District
  - Ward
  - Census Tract
  - Zipcode
  - Advisory Neighborhood Commission (ANC)
  - Single Member District (SMD)



Contact Information / Resources

- **MAR Main Page:** http://octo.dc.gov/node/715602
- **Addressing in DC:** https://opendata.dc.gov/pages/addressing-in-dc
- **Email:** dcgis@dc.gov