

Master Address Database is a Good Compliment to Municipal GIS

Spring NEARC

Smith College, Northhampton, MA

May 11, 2010

Jeff Amero, GIS Manager, City of Cambridge



Who cares about addressing?

- GIS types have always wanted to accurately map events.
- Municipal staff need good addressing for day-to-day operations
- The public wants services without confusion
- People want the ambulance to show up!



50+ NEARC ListServ e-mails on a Feb 2nd thread

Amers, Jeff

From: Northeast Arc Users Group [mailto:NEARC-@LISTSERV.UCONN.EDU] On Behalf of Copeland, Greg
Sent: Monday, February 01, 2010 5:01 PM
To: NEARC-@LISTSERV.UCONN.EDU
Subject: Re: Census address points

Back in 2008 the Census Bureau contacted me about collecting the data in our community. The rules were so restrictive regarding data collected and it's availability, that it will for all intents and purposes never be available to us for use. I forget the actual time frame they gave before the data could be released, but it was ridiculously long. 50 years, 70 years? They don't want data such as addresses and number of units getting out because they need an accurate count and they want people to be willing to respond to the census. They feel by protecting this information people will be more willing to be upfront with them. When I question the people at the census I purposely asked about what would happen if during the course of collecting data I was to find illegal apartments or housing units? I was told I couldn't say anything under penalty of law. I was told by the person at the census that this was one of the reasons the data would not become available. The count was of the utmost importance to them. The will not share their data.

Gregory J. Copeland, PLS
GIS Coordinator
City of Bliddeford Maine

-----Original Message-----
From: Northeast Arc Users Group [mailto:NEARC-@LISTSERV.UCONN.EDU] On Behalf of Andrew Kuether
Sent: Monday, February 01, 2010 4:13 PM
To: NEARC-@LISTSERV.UCONN.EDU
Subject: Census address points

Hello All --

My understanding is that the 2010 US Census has already created GPS points for all known USPS addresses (and then some). This would be a very useful layer for me but the data is locked up in a special legal agreement that prevents any other use than census planning.

Does anyone have a sense of if & when the Census will release this point & address (only) data for general use by cities and towns? I don't want to have to reinvent the wheel.

-- Andy

Andrew Kuether, GIS Coordinator,
Public Works, Engineering Division
125 Locust Street, Northampton, MA 01060 413-587-1570 x4388, akuether@northamptonma.gov

From: Nor Kuether
Sent: Mond.
To: NEARC-@
Subject: Cen

Hello All --

My understanding, addresses (and t up in a special l

Does anyone have a data for general us

-- Andy

From: Nor Kuether
Sent: Monday, February 01, 2010 4:13 PM
To: NEARC-@LISTSERV.UCONN.EDU
Subject: Census address points

Back in 2008 the Census Bureau contacted me about collecting the data in our community. The rules were so restrictive regarding data collected and it's availability, that it will for all intents and purposes never be available to us for use. I forget the actual time frame they gave before the data could be released, but it was ridiculously long. 50 years, 70 years? They don't want data such as addresses and number of units getting out because they need an accurate count and they want people to be willing to respond to the census. They feel by protecting this information people will be more willing to be upfront with them. When I question the people at the census I purposely asked about what would happen if during the course of collecting data I was to find illegal apartments or housing units? I was told I couldn't say anything under penalty of law. I was told by the person at the census that this was one of the reasons the data would not become available. The count was of the utmost importance to them. The will not share their data.

Gregory J. Copeland, PLS
GIS Coordinator
City of Bliddeford Maine

-----Original Message-----
From: Northeast Arc Users Group [mailto:NEARC-@LISTSERV.UCONN.EDU] On Behalf of Andrew Kuether
Sent: Monday, February 01, 2010 4:13 PM
To: NEARC-@LISTSERV.UCONN.EDU
Subject: Census address points

Hello All --

My understanding is that the 2010 US Census has already created GPS points for all known USPS addresses (and then some). This would be a very useful layer for me but the data is locked up in a special legal agreement that prevents any other use than census planning.

Does anyone have a sense of if & when the Census will release this point & address (only) data for general use by cities and towns? I don't want to have to reinvent the wheel.

-- Andy



The address issue...

- An address is the most commonly used identifier of places for most people.
- An address is a common geospatial aid to navigation

BUT

- **No one department is responsible for maintaining a comprehensive list of all addresses**
- **Different versions of the same address may exist in individual databases**



The Situation:

- There is no complete list of addresses
- Addresses and street names are stored in databases in different formats
- Some properties don't have addresses
- Exceptions are not handled consistently



The Result?

- People can't be found in emergencies
- Problems that cannot be located for repair
- Inefficient use of staff time
- Higher cost of doing business
- Higher liability and risk for the city



Addressing Problems

- Inconsistency (streets change names, ranges are not uniform)
- Aliases and obsolete street names
- Corner lots, multiple occupancies, garage apartments, shifting mall tenants
- Situs (location) addresses vs. mailing addresses
- Odd and even, potential vs. actual, diagonals and circles



How Do We Fix This?

- Inventory of existing lists of addresses
- Review existing conditions
- Standardize and clean up addresses
- Develop a master address database



How Do We Fix This?

- Develop tools that allow other systems to validate addresses.
- Match addresses to geographic entities (buildings, parcels, address points)
- Clean up addressing from the match
- Field checking



And...

- Assign addresses to parcels, structures and occupancies where they are missing.
- Develop workflows for address assignment
- Keep the database current and complete



Obstacles

- Lack of cooperation among departments
- Different formats for address data
- Things can change rapidly
- Need real time validation and verification of addresses



Organizational Issues

- Where are addresses created?
- What is the workflow for creation?
- Where are the newly created addresses kept?
- Who is advised of them, or has access to them?





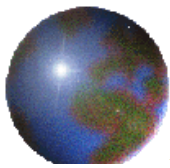
Organizational Issues

- How are address databases maintained?
- Any internal notification of other departments?
- Any external notification (P.O., utilities, etc.)?
- How are they integrated with other data sets?

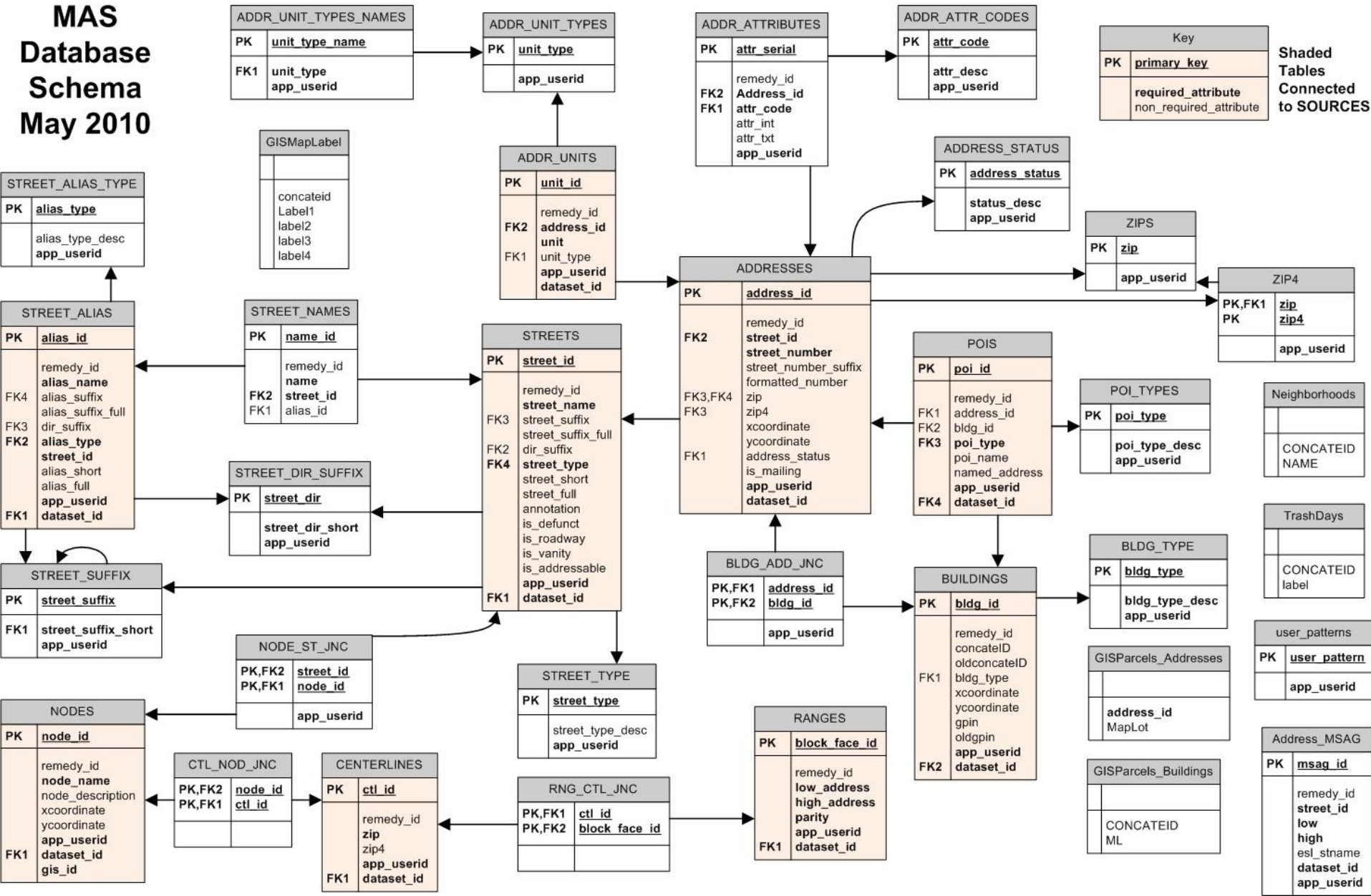


Opportunities and Rewards

- Everyone has the same information
- Faster average response time for both emergency and non-emergency personnel
- Better ability to manage infrastructure
- Better ability to serve customers
- Potential for significant revenues through geo-auditing



MAS Database Schema May 2010



Current mode: Modify

[Save](#) [New search](#) [Modify all](#) Searches: [Advanced search](#) [Clear](#) [Status history](#) [Logout](#) [Home](#)

Showing 1 - 131 of 131

[Preferences](#) [Refresh](#)

Request ID	Priority	Status	Full Name	Nu...	Street Name-To	Primary Asset Name
REQ227995	Low	Assigned	Robert Fitzgerald	24	Amory St	
REQ227997	Low	Assigned	Samuel Brooks	160	Hancock St	
REQ229142	Low	Resolved	Howard Baker		Binney St	

[Report](#) [Select all](#) [Deselect all](#)

1 rows selected



Modify Request

Category **Request ID**

Type **Status**

Item **Priority**

Summary

Description

Location [Advanced](#) [District](#)

Number **Suffix** **Unit** **GIS**

Street Number

Street Name

Cross Street

Point Of Interest

[General](#) [Activity/Dates](#) [Related Items](#) [Attachments](#) [Tasks](#) [Notifications](#)

Tasks for Change Request

6 entries returned - 6 entries matched

[Preferences](#) [Refresh](#)

S...	Task Summary	Status	Implementor Name	Planned ...	Planned E...
10	Research new street address request information	New	Eric Josephson		
20	Determination by Emergency Communications Regarding the Suit...	New	Paula Snow		
40	Modify MAS database to reflect new street address	New	Eric Josephson		
50	Notify New Street Address Has Been Created	New	Eric Josephson		
60	Provide Building Footprint Plan to Management Info Systems - GIS	New	Prazeres McDonald		
70	Edit the GIS Information	New	Sylvia Barnes		

[Create New Tasks](#)[Select Predefined Tasks](#)[Cancel Task](#)[View](#)[Refresh](#)[Save](#)[Reports](#)[Print](#)[Log Off](#)[Close](#)

MalSearch - Windows Internet Explorer

http://gromit/mal/MapLot.asp

File Edit View Favorites Tools Help

Google G Go Bookmarks Popups okay Check Look for Map AutoFill Settings

MalSearch

20 clinton street
795 Mass Ave
793 Massachusetts Ave

What would you like to see associated with your Address(es)?

☒ Units ☒ BuildingID ☒ Map-Lot ☒ Zip Code ☒ Points of Interest

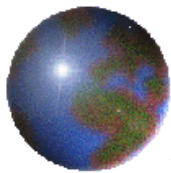
[Search](#)

Name	Hits	Possible Matches	Match Type	Unit	BuildingID	Map-Lot	Zip Code	POIs	Map Address
20 clinton street	7	20 Clinton St	Exact Match	APT 5	506-10	118-80	'02139		Map It!
20 clinton street	7	20 Clinton St	Exact Match	APT 4	506-10	118-80	'02139		Map It!
20 clinton street	7	20 Clinton St	Exact Match	APT 2	506-10	118-80	'02139		Map It!
20 clinton street	7	20 Clinton St	Exact Match	APT 3	506-10	118-80	'02139		Map It!
20 clinton street	7	20 Clinton St	Exact Match	APT 7	506-10	118-80	'02139		Map It!
20 clinton street	7	20 Clinton St	Exact Match	APT 6	506-10	118-80	'02139		Map It!
20 clinton street	7	20 Clinton St	Exact Match	APT 1	506-10	118-80	'02139		Map It!
793 Massachusetts Ave	2	795 Massachusetts Ave	Nearest matches		517-38	118-33	'02139	City Hall	Map It!
793 Massachusetts Ave	2	765 Massachusetts Ave	Nearest matches		570-5	107-1	'02139		Map It!
795 Mass Ave	1	795 Massachusetts Ave	Exact Match		517-38	118-33	'02139	City Hall	Map It!

[Map All](#)

[Save to Excel](#)

Local intranet 100%



Historical Viewer

CambridgeMA.gov

Cambridge CityViewer



CITY MANAGER

CITY COUNCIL

MAYOR'S OFFICE

DEPARTMENTS

JOB

NEWS

PUBLICATIONS

HOME

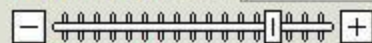
Historical Areas

2003 Photo

1947 Photo

1865 Map

Size



Help

Scale 1" = 65 ft



Google Maps

Go

v3.1.1 AppGeo

Save Map

as Image

Selection

Legend

Location

Markup



Select

Buildings



(show all)

Building ID

676-15

676-16

676-17

676-18

676-19

676-20

676-21

676-22

676-23

16 selected

To Mailing Labels

To Spreadsheet

Building Info

Print

Address 135 Pearl St

Building Name

Neighborhood CAMBRIDGEPORT

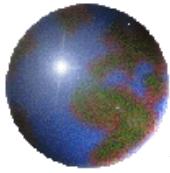
Address 137 Pearl St

Building Name

Neighborhood CAMBRIDGEPORT

Address 139 Pearl St

Building Name



*For more information about
Cambridge GIS and addressing:*

Jeff Amero - GIS Manager

City of Cambridge

617-349-6015

jamero@cambridgema.gov