

Integrating GIS into a 311 Call Center

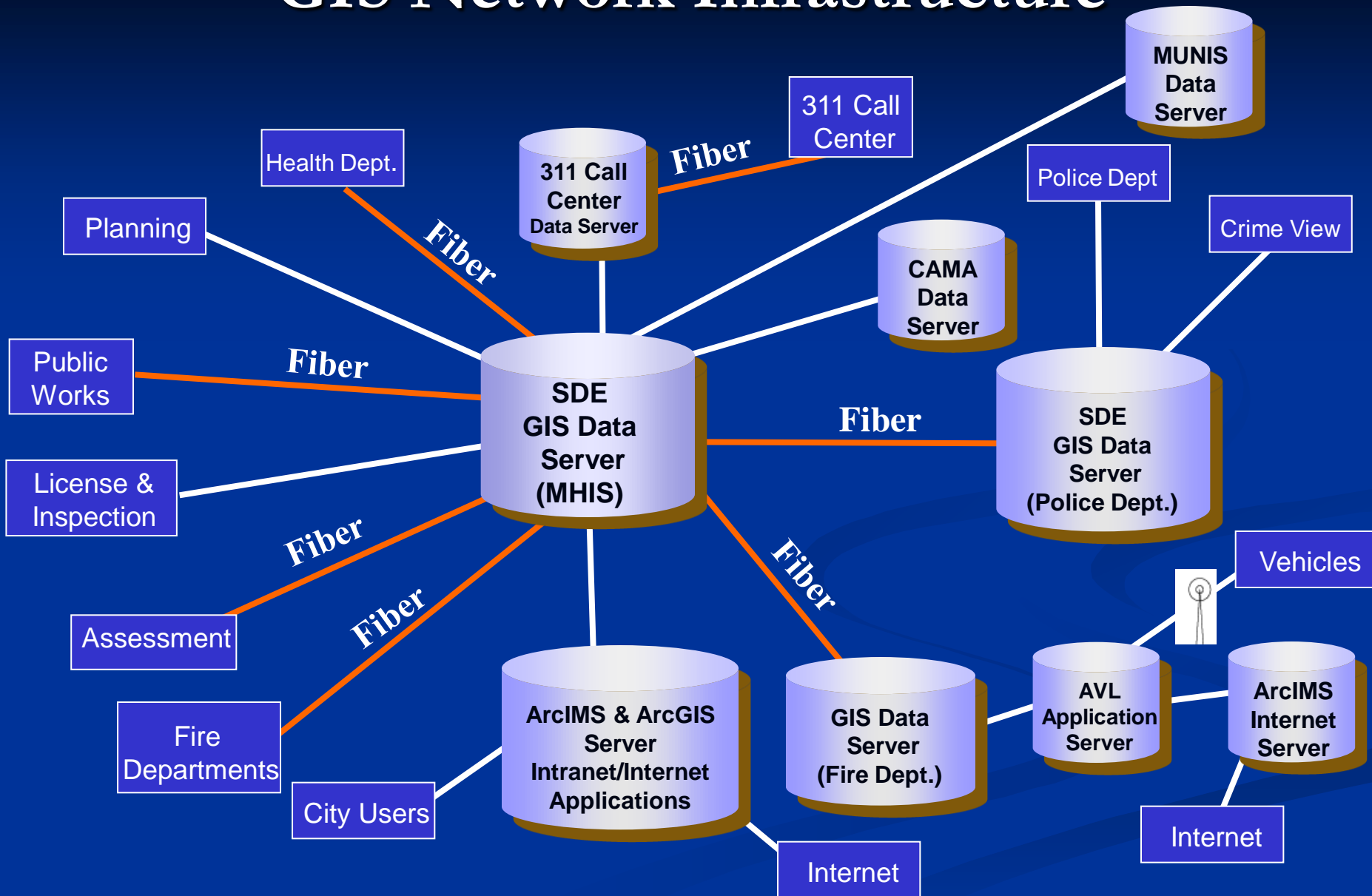
NEURISA 2009 Sturbridge, MA



Overview

- City of Hartford - GIS Network Infrastructure
- Addressing and Property Ownership
- Integrating 311 and GIS
- Sample Maps Using BI Report Exports for Data
- Integrating ArcGIS Server with 311
- Call Summary of 311 Data
- Address Match Summary of 311 Data

GIS Network Infrastructure



Addressing and Property Ownership

■ Addressing & Property Ownership Maintenance Directly Affects the Following:

- 311 Call Center
- Fire Department
- Assessors Office
- Planning Department
- Public Works Department
- Police Department
- Board of Education
- Environmental Health
- License & Inspection

Addressing and Property Ownership (cont...)

- Currently have 22,000 Parcels & 45,000 Address Pts
- Address Points Maintained through GIS
- Property Ownership Maintained in Assessors Office
- Owner/Property Information Linked to Each Address
- Addresses are Coded as Active and Inactive

Integrating 311 and GIS

- What is 311 CRM (Customer Relationship Management) System
- Why was it Implemented
- How Does it Work
- Why was it Integrated with GIS
- How does it Benefit our Enterprise GIS System

Integrating 311 and GIS (cont..)

- We Created Unique FrontLink ID for Each Address
- GIS Data is Integrated through the Lagan Property Loader
- When a Search is Done in the CSP we Only Search the Active Addresses
- When an Address is not Found a “Location not Found” Case is Created

FrontLink Sample Search Screen

LAGAN Frontlink

File View Go Actions History Help

Customer Service Guide

Can I have your name and address please?
Use the Search screen to search for the callers details.
Select the option below.

Found
Not Found
Wishes to Remain Anonymous

Brief Details

Property

Address No 651
Address Line 1 BROADVIEW TER
Address Line 2
Town/City HARTFORD
State Name CT

Relationship With

Search

Search Type: Property/Intersection

Place Name:
Street Number:
Street Name: BROADVIEW
Street Name 2:
Town/City: State:

☐ Use sounds like search

Reset Cancel search Search

Description	Source Type
452 BROADVIEW TER, HARTFORD, CT	Frontlink
453 BROADVIEW TER, HARTFORD, CT	Frontlink
456 BROADVIEW TER, HARTFORD, CT	Frontlink
459 BROADVIEW TER, HARTFORD, CT	Frontlink
462 BROADVIEW TER, HARTFORD, CT	Frontlink
463 BROADVIEW TER, HARTFORD, CT	Frontlink
466 BROADVIEW TER, HARTFORD, CT	Frontlink
467 BROADVIEW TER, HARTFORD, CT	Frontlink
470 BROADVIEW TER, HARTFORD, CT	Frontlink
475 BROADVIEW TER, HARTFORD, CT	Frontlink
479 BROADVIEW TER, HARTFORD, CT	Frontlink
483 BROADVIEW TER, HARTFORD, CT	Frontlink
484 BROADVIEW TER, HARTFORD, CT	Frontlink
487 BROADVIEW TER, HARTFORD, CT	Frontlink
488 BROADVIEW TER, HARTFORD, CT	Frontlink
492 BROADVIEW TER, HARTFORD, CT	Frontlink
493 BROADVIEW TER, HARTFORD, CT	Frontlink
496 BROADVIEW TER, HARTFORD, CT	Frontlink
506 BROADVIEW TER, HARTFORD, CT	Frontlink
514 BROADVIEW TER, HARTFORD, CT	Frontlink
522 BROADVIEW TER, HARTFORD, CT	Frontlink
528 BROADVIEW TER, HARTFORD, CT	Frontlink
540 BROADVIEW TER, HARTFORD, CT	Frontlink
554 BROADVIEW TER, HARTFORD, CT	Frontlink
565 BROADVIEW TER, HARTFORD, CT	Frontlink
567 BROADVIEW TER, HARTFORD, CT	Frontlink
570 BROADVIEW TER, HARTFORD, CT	Frontlink
571 BROADVIEW TER, HARTFORD, CT	Frontlink
575 BROADVIEW TER, HARTFORD, CT	Frontlink
580 BROADVIEW TER, HARTFORD, CT	Frontlink
581 BROADVIEW TER, HARTFORD, CT	Frontlink
583 BROADVIEW TER, HARTFORD, CT	Frontlink
584 BROADVIEW TER, HARTFORD, CT	Frontlink
587 BROADVIEW TER, HARTFORD, CT	Frontlink

Rows Found:100

Dealing with interaction on channel: Voice In

No associated client

Start LAGAN Frontlink

9:21 PM

Current FrontLink ArcIMS Map Screen

LAGAN Frontlink

Customer Service Guide

Can I have your name and address please?
Use the Search screen to search for the callers details.
Select the option below.

Found
Not Found
Wishes to Remain Anonymous

Brief Details

Property

Address No 522
Address Line 1 BROADVIEW TER.
Address Line 2
Town/City HARTFORD
State Name CT

Relationship With

ArcIMS Viewer

Map created with ArcIMS - Copyright (C) 1992-2007 ESRI Inc.

Legend

FrontLink Cases

process

- <Null>
- Faulty Hydrant
- GIS Example
- GIS Example 2
- Report Pothole Servi
- Street Light Out - Ser
- Fire Hydrant
- Light pole
- Transmission Pole
- Utility pole
- Address
- Road Centerline
- Parcels

Orthophoto April 2003

RGB

- Red: Band_1
- Green: Band_2
- Blue: Band_3

Map: 1013324.24 , 830009.64 -- Image: 236 , 27 -- ScaleFactor: 0.6060606060647441

Dealing with interaction on channel: Voice In

No associated client

Start LAGAN Frontlink

City of Hartford - GIS Services

Sample Location Not Found

The screenshot displays the Microsoft Outlook 2003 interface. The main window shows an email titled "Location Not Found in Database - Message (Plain Text)" from "311@hartford.gov" to "Flodine, Brett W.", dated Tuesday, October 2, 2007, at 2:31 PM. The email body contains the following text:

The address in the form was not found in the database. Case number 101000012447. Case Details:

Case ID: 101000012447
Classification: 3-1-1>>Call Center>>Location Not Found
Title: Location Not Found
Associated With: 861 ALBANY AV, HARTFORD, CT
SLA: 10/31/07
Allocation: Location Not Found
Status: Opened
Priority: 0
Severity: 0
Created: 10/2/07 [mazer001]
Further Description: CALLER SAID THAT ON EDGEWOOD ST THERE ARE 2 ADDRESSES THAT I COULDN'T FIND ON THE MAP NOR THE DATABASE. 86 AND 88 EDGEWOOD ST. WHEN THE CALLER EXPLAIN THAT THIS WAS PART OF A CORNER BUILDING THAT HAS STORES IN THE FIRST FLOOR I REALIZE THAT SHE WAS REFERRING TO 861 AND 863 ALBANY AVE. BECAUSE SHE EXPLAIN THAT IT WAS NEXT TO 80 EDGEWOOD ST.

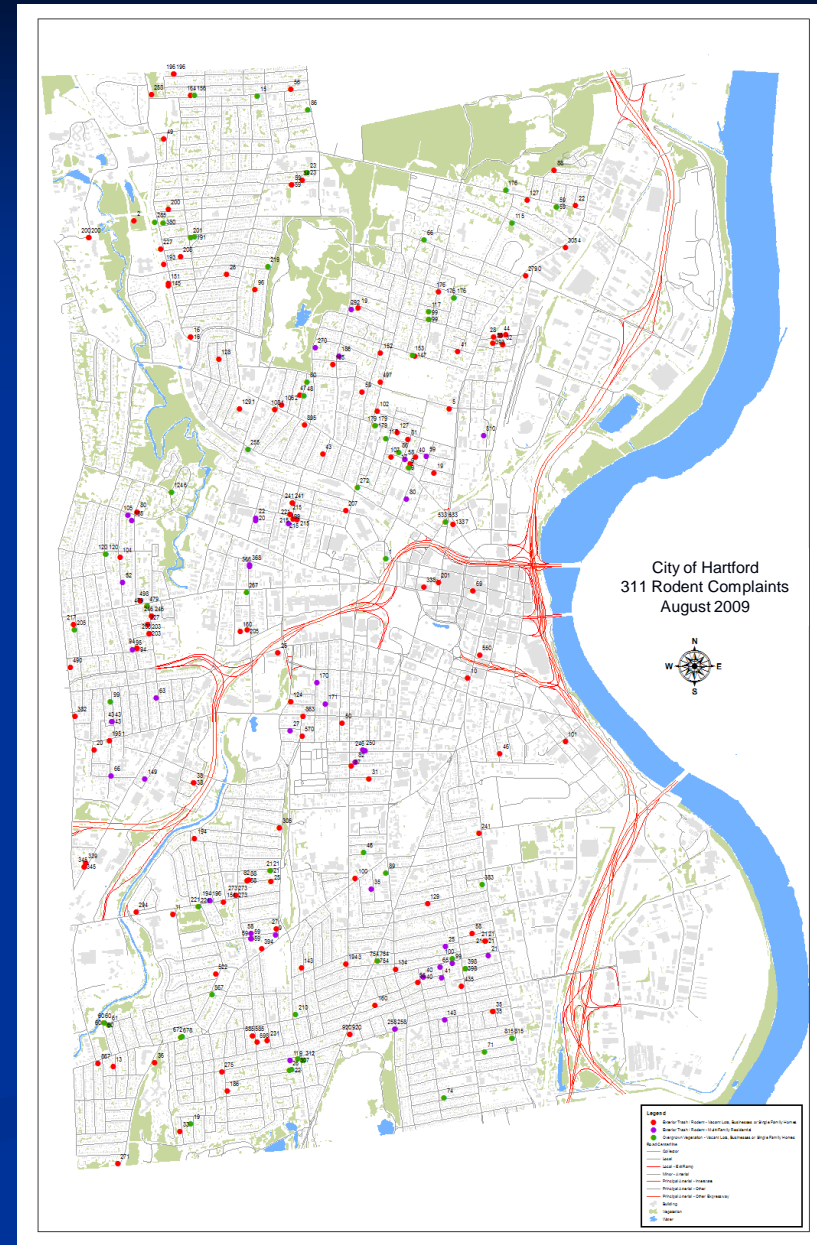
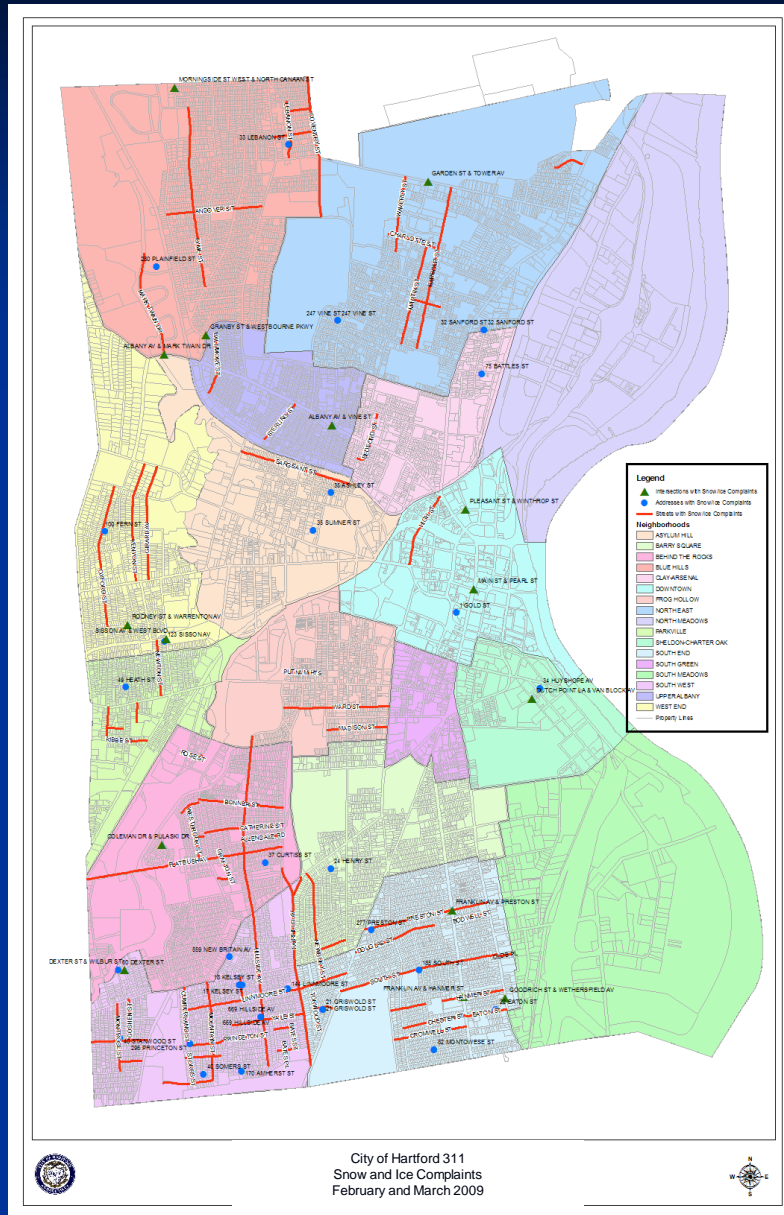
Thank you,
311 Call Center

The left sidebar shows the "Mail" folder tree with "Inbox (11)" selected. The right sidebar shows a list of folders with sizes. The bottom status bar indicates "238 Items" and "Online".

Folder	Size
Deleted Items	11 KB
Drafts	21 KB
Inbox (11)	8 KB
Junk E-mail [1]	13 KB
Outbox	3 KB
quarantine	5 KB
Sent Items	2 KB
z:Personal Folders	3 KB
311 email	3 KB
311 System (3)	13 KB
Addresses Not Found	187 KB
Addressing	47 KB
Anapod	5 KB
Assessor	2 KB
AutoCAD	25 KB
AutoCAD Training & Installation	2 KB
CityView	20 KB
CRCOG	25 KB
Digital Submissions	2 KB
EMA	7 KB
Environmental Health	593 B
ESRI	43 KB
ESRI Learning Center	3 KB
ESRI Learning Center Licenses	8 KB
ESRI License Files	29 KB
ESRI Maintenance	3 KB
ESRI Software Pricing	12 KB
F&O Application	2 KB
Fire Dept	24 KB
GIS Council	7 KB
GIS User Group	9 KB
Hardware & Software Purchases	2 KB
Hartford Public Schools	20 KB
Holidays	5 KB
In House Seminars	1 KB
Job Applications-Career Builder	1 KB
Job Descriptions	13 KB
Library	7 KB
MAGIC Helpdesk	158 KB
MDC	2 KB

From	Subject	Date	Size
Martha Page	Re: Confusion on seminar location... It is in Department of Community Medicine and Health Car...	Mon 10/1/2007 4:39 PM	13 KB
Franceschi, Carmen R.	RE: Toughbook PC's	Mon 10/1/2007 2:55 PM	7 KB
Pickford, Randi Lyn	RE: we are here	Mon 10/1/2007 11:15 AM	15 KB
@ McMullen, Susan M.	US Conf of Mayors Article	Mon 10/1/2007 9:45 AM	158 KB
Brooks, Webster	RE: monday	Mon 10/1/2007 9:40 AM	2 KB
Sartori, Luigi	FW: Toughbook PC's	Mon 10/1/2007 9:01 AM	7 KB
Meleounis, Nikitas S.	Toughbooks	Mon 10/1/2007 8:40 AM	2 KB

Sample Maps Using BI Report Exports for Data



Integrating ArcGIS Server with 311

311 OpenCaseViewer: Powered By Freeance 5.0.0.2313 - TDC Group Inc. - Windows Internet Explorer

http://gis.hartford.gov/Freeance/Client/PublicAccess1/index.html?appconfig=311opencaseviewer

File Edit View Favorites Tools Help

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311 OpenCaseViewer: Powered By Freeance 5.0.0.2...

www.hartford.gov

Hartford 311

For quick and easy access to City services and information

From most Hartford phone lines - Dial 860-757-9311

Entire City Blue Hills


Mapping Search

Welcome to the 311 Call Center Open Case Interactive Map

Use the Map toolbar or the click the Map Tools link above to get started

The 311 Open Case information displayed in this application is updated on a nightly bases.

City of Hartford - GIS Services



Site Information

2 Mi 2 km

Map Tool Options

Active Tool: Zoom In

The current cursor mode is set to 'Zoom In'. Clicking on the map directly will zoom in on the map centered at the point clicked. Dragging on the map will create a 'Zoom Window' which will be used to approximate the new extent of the map.

Done

Start MobileFrame Desktop Microsoft PowerPoint - [...] T:\Administrative\presen... 311 OpenCaseViewer...

Internet 100%

7:59 AM

Integrating ArcGIS Server with 311

311 OpenCaseViewer: Powered By Freeance 5.0.0.2313 - TDC Group Inc. - Windows Internet Explorer

http://gis.hartford.gov/Freeance/Client/PublicAccess1/index.html?appconfig=311opencaseviewer

File Edit View Favorites Tools Help

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311 OpenCaseViewer: Powered By Freeance 5.0.0.2...

www.hartford.gov

Hartford 311

For quick and easy access to City services and information

Entire City Blue Hills

Map Tool Options

The current cursor mode is set to 'Zoom In'. Clicking on the map directly will zoom in on the map centered at the point clicked. Dragging on the map will create a 'Zoom Window' which will be used to approximate the new extent of the map.

Active Tool: Zoom In

Mapping Layers

- Assessor Service Request
- Constituant Services Request
- DPW Service Requests
- DPW Tree Service Request
- EHD & HHS Service Request
- General Health Dept Service Request
- Graffiti Complaint
- L & I Service Request
- New Streetlight Request
- Sidewalks
- Single Stream Recycling Pilot Program
- Street Signs
- Streetlight Out - City Owned
- Streetlight Out - Referred to CL&P
- Streetpole Replacement
- Tax Service Request
- Traffic Signal Not Urgent
- Zoning Parking on Front Lawn
- Zoning Violation Complaints

Search Legend

Site Information

Done

Start MobileFrame Desktop Microsoft PowerPoint - [...] T:\Administrative\presen... 311 OpenCaseViewer...

Internet 100% 8:02 AM

Integrating ArcGIS Server with 311 cont...

311 OpenCaseViewer: Powered By Freeance 5.0.0.2313 - TDC Group Inc. - Windows Internet Explorer

http://gis.hartford.gov/Freeance/Client/PublicAccess1/index.html?appconfig=311opencaseviewer

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311 OpenCaseViewer: Powered By Freeance 5.0.0.2...

Hartford 311

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Entire City Blue Hills

Mapping Search

Show All Selections

Selection Options Clear

Print Selection Attributes

Buffer from Selection

Target Theme 311 Open Cases

Buffer Distance 0 Feet

Create Buffer Clear Buffer

Zoom to selected map feature

NAME CLAY-ARSENAL

CaseID addressNum AddressLine1 OpenedDateTime Name

1101000018118	24	IRVING ST	2008-05-12T09:04:28	L&I Housing Condition Non-urgent Service Request
2101000016860	308	GARDEN ST	2008-04-03T12:51:54	L&I Housing Condition Non-urgent Service Request
3101000018565	313	GARDEN ST	2008-05-20T11:23:09	EHD Exterior Trash Rodent Complaint
4101000017209	63	BEDFORD ST	2008-04-14T13:36:25	L&I Housing Condition Non-urgent Service Request
5101000016841	47	SEYMS ST	2008-04-03T08:45:07	L&I Housing Condition Non-urgent Service Request
6101000019874	9	SANFORD ST	2008-06-23T11:52:42	L&I Housing Condition Non-urgent Service Request
7101000017973	2084	MAIN ST	2008-05-06T14:10:04	Streetpole Replacement
8101000019058	2048	MAIN ST	2008-06-02T17:49:18	L&I Housing Condition Non-urgent Service Request
9101000018501	2280	MAIN ST	2008-05-19T09:02:28	Zoning Parking on Front Lawn
10101000020666	51	SANFORD ST	2008-07-09T08:28:30	Streetlight Out - Referred to CL&P

Site Information

Done

Start MobileFrame Desktop Microsoft PowerPoint - [...] T:\Administrative\presen... 311 OpenCaseViewer...

Internet 100%

8:27 AM

Integrating ArcGIS Server with 311 cont...

311 DPW Data: Powered By Freespace 5.0.0.2502 - TDC Group Inc. - Windows Internet Explorer

http://gis.hartford.gov/Freespace/Client/PublicAccess1/index.html?appconfig=311_dpw_data

File Edit View Favorites Tools Help

311 DPW Data: Powered By Freespace 5.0.0.2502 - ...

www.hartford.gov

From 10000
Hartford phone
area 860
dial 860-752-9311

311

For quick and easy
access to City services
and information

Mapping


Welcome to the 311 DPW Streets
Open Case Interactive Map.

This Map Service Shows the DPW
Streets Cases that have been
Opened in the Last 7 Days

Use the Map toolbar on the left
to Navigate and Print a Map

The 311 DPW Open Case information
displayed in this application is a Live
Connection to the 311 Database.

City of Hartford - GIS Services



Map Tool Options

The current cursor mode is set to 'Zoom In'. Clicking on the map directly will zoom in on the map centered at the point clicked. Dragging on the map will create a 'Zoom Window' which will be used to approximate the new extent of the map.

Active Tool: Zoom In

Done

Trusted sites | Protected Mode: Off

100%

Microsoft PowerPoint... C:\Users\bfloodine\A... 311 DPW Data: Pow...

Integrating ArcGIS Server with 311 cont...

311 DPW Data: Powered By Freeance 5.0.0.2502 - TDC Group Inc. - Windows Internet Explorer

http://gis.hartford.gov/Freeance/Client/PublicAccess1/index.html?appconfig=311_dpw_data

File Edit View Favorites Tools Help

311 DPW Data: Powered By Freeance 5.0.0.2502 - ...

www.hartford.gov

Hartford 311

For quick and easy access to City services and information

From most Hartford phone lines - Other dial 860-757-9311

Case ID: 37967 Streets - Other
Intersection of ASYLUM AV and WOODSIDE CIR

Case ID: 37966 Pothole complaint
31 WOODLAND ST, Unit 10A

Case ID: 37942 Pothole complaint
Intersection of GRAY ST and SISSON AV

Case ID: 38008 Pothole complaint
Intersection of SISSON AV and WARRENTON AV

Elizabeth Park

Sigourney Square Park

Delucco Park

Park Unknown Monument

Bushnell Park

Pope Park North

George H. Day Playground

Map Tool Options

The current cursor mode is set to 'Zoom In'. Clicking on the map directly will zoom in on the map centered at the point clicked. Dragging on the map will create a 'Zoom Window' which will be used to approximate the new extent of the map.

Active Tool: Zoom In

City of Hartford - GIS Services

Mapping

Welcome to the 311 DPW Streets Open Case Interactive Map.

This Map Service Shows the DPW Streets Cases that have been Opened in the Last 7 Days

Use the Map toolbar on the left to Navigate and Print a Map

The 311 DPW Open Case information displayed in this application is a Live Connection to the 311 Database.

City of Hartford - GIS Services

Site Information

Done

Trusted sites | Protected Mode: Off

100%

Microsoft PowerPoint

C:\Users\bflo...A...

311 DPW Data: Pow...

Call Summary of 311 Data

		<u>2007</u>	<u>2008</u>
Total Calls Received		108,421	114,819
Information Only		72,352 (66%)	74,703 (65%)
Top Topics	Taxes	16,399	21,281
	Vital Records	8,019	7,849
Cases Created for Departments		10,488 (10%)	12,531 (11%)
Top Topics	Trash/Recycling	2,225	2,392
	Housing Code	1,702	1,889
	Street Conditions	1,782	1,505

Address Match Summary of 311 Data

- Total FrontLink Cases = 12,531
 - Address Match 7,644 = 61%
 - No Address Match 4,887 = 39%
-

- No Title or Description 1,661 = 34%
- Complaints/Compliments 586 = 12%
- Misc. DPW Requests 489 = 10%
- Finance Service Requests 440 = 9%
- Vital Records Service Requests 195 = 4%
- Pot Hole Service Requests 147 = 3%
- Location Not Found 147 = 3%

- These Values Represent 75% of Non-Address Matchable Cases

Questions

