

# Integrating GIS into a 311 Call Center

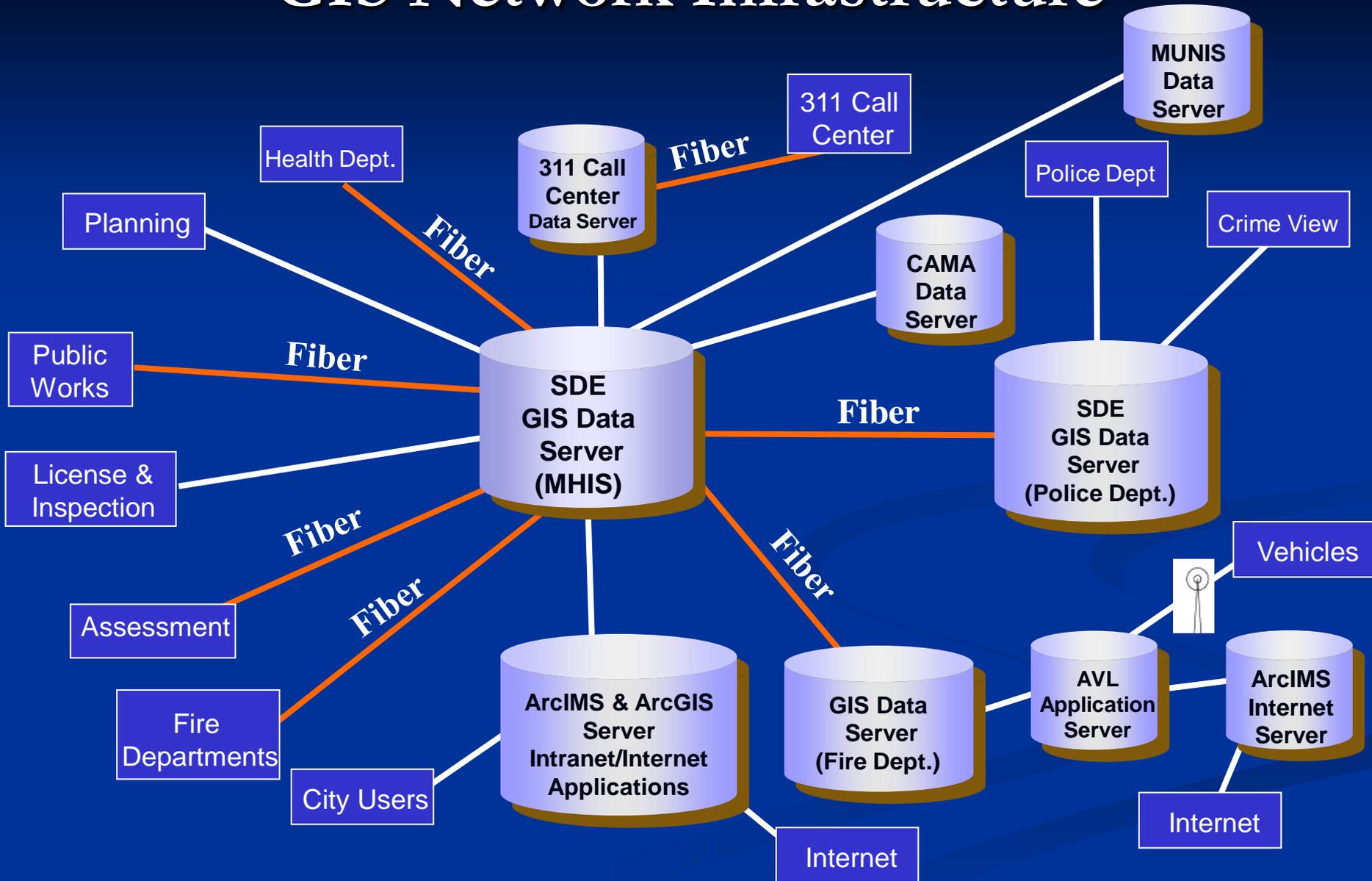
## NEURISA 2009 Sturbridge, MA



# 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

**Location Not Found in Database - Message (Plain Text)**

From: 311@hartford.gov  
 To: Flodine, Brett W.  
 Cc:  
 Subject: Location Not Found in Database

Sent: Tue 10/2/2007 2:31 PM

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 [mazar001]  
 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

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
Meleouris, Nikitas S.	Toughbooks	Mon 10/1/2007 8:40 AM	2 KB



# 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  
From most Hartford phone lines - Orders dial 860-757-9311  
**Hartford 311**  
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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



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.

Site Information

Done

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

Internet 100% 7:59 AM

# Integrating ArcGIS Server with 311

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www.hartford.gov

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Active Tool: Zoom In

Mapping Layers	Search Legend
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	

Site Information

Done

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

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8:02 AM

# Integrating ArcGIS Server with 311 cont...

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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

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

NAME CLAY-ARSENAL

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 Freance 5.0.0.2502 - TDC Group Inc. - Windows Internet Explorer

http://gis.hartford.gov/Freance/Client/PublicAccess1/index.html?appconfig=311\_dpw\_data

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

www.hartford.gov

From 1000 Hartford phone lines, call 866-752-9311

**Hartford 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

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100%

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

# Integrating ArcGIS Server with 311 cont...

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

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**311**

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City of Hartford - GIS Services

CITY OF HARTFORD  
CONNECTICUT

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Done

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# Call Summary of 311 Data

	<u>2007</u>	<u>2008</u>
<b>Total Calls Received</b>	<b>108,421</b>	<b>114,819</b>
Information Only	72,352 (66%)	74,703 (65%)
Top Topics		
Taxes	16,399	21,281
Vital Records	8,019	7,849
<b>Cases Created for Departments</b>	<b>10,488 (10%)</b>	<b>12,531 (11%)</b>
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

