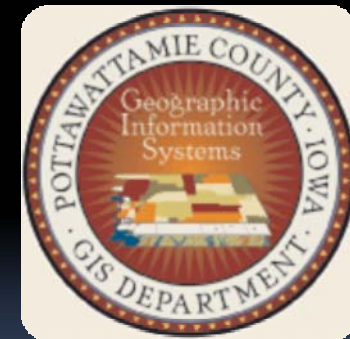


Pottawattamie County, Iowa  
David Bayer | GIS Coordinator  
Jamie Petersen | GIS Analyst



# WEB MAPPING DECISIONS & SOLUTIONS

# Paradigm Shift

- ArcIMS

- It's still very relevant
- Proven technology

- ArcGIS Server (*Advanced Enterprise*)

- Potential uses are great (*Toolbox, Editing, Mobile*)
- Slow, but apparently will be resolved in v. 10



- ArcGIS Explorer

- A nice Google Earth-like 3D tool
- Great for fringe applications (in County Gov't.)

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- Google Maps API

- Let them maintain the base map
- They've made mapping easy and attainable for the masses



# Decisions for Web GIS

## Decision #1

### Problem:

Our current ArcIMS Parcel site is difficult for non-technical users - even prohibitive

### Solution #1:

Develop a simple parcel viewing site that has a high quality, intelligent map with lots of scale dependency built in – no layer list

### Solution #2:

Use less popups, expose the buried tools, use logic in tool design that requires less clicks for the user

## Decision #2

### Problem:

We still have advanced users out there that do create mailing labels, use other layers besides parcels, create buffers, etc...

### Solution:

Develop focused sites for those individuals or include more logic when building those tools

- Focused by data or function: a census data site, an election site
- Focused by audience: Emergency Management Site, Flood Map Site, Planning & Zoning Site

# Plan of Action

- Continue to use our current ArcIMS site
- When new web opportunities arise we pick the best web mapping solution for the job, but lean towards Server
  - ArcIMS
  - ArcGIS Server
  - Google
  - ArcGIS Explorer
- In the meantime we redevelop our primary Parcel site using ArcGIS Server
  - Using knowledge we have gained from input about our current web site
  - Develop the site in-house instead of 3<sup>rd</sup> party which saves dollars and enables us tailor it for our users

# What we use today (or recent past)

## ■ Technology

- 3<sup>rd</sup> Party ArcIMS Site (*Varion's PV.Web*)
- IIS & Tomcat
- AXL file only
- Can join database data w/GIS layers
- Can create custom searches for users
- Displays metadata



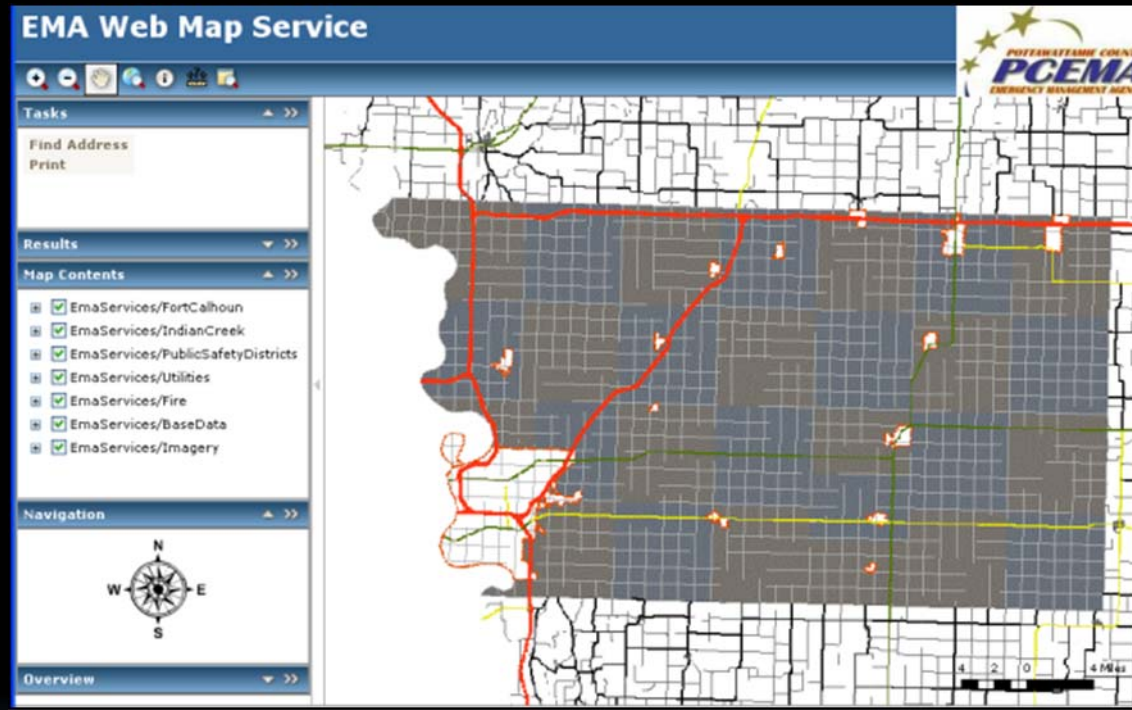
gis.pottcounty.com

## ■ What we've learned: most users

- ...just look up parcel data
- ...are not interested in looking for data in layers list
- ...are unaware of advanced functionality
  - Buffering
  - Thematic mapping
  - Mail labels
  - Redlining/Drawing Graphics
  - Query builder
  - Saving a map
- Non-technical users find this site cumbersome and complicated even for the basic tasks
- We've got too much data on this site

# Emergency Management Site

[gis.pottcounty.com/WebEMA/](http://gis.pottcounty.com/WebEMA/)

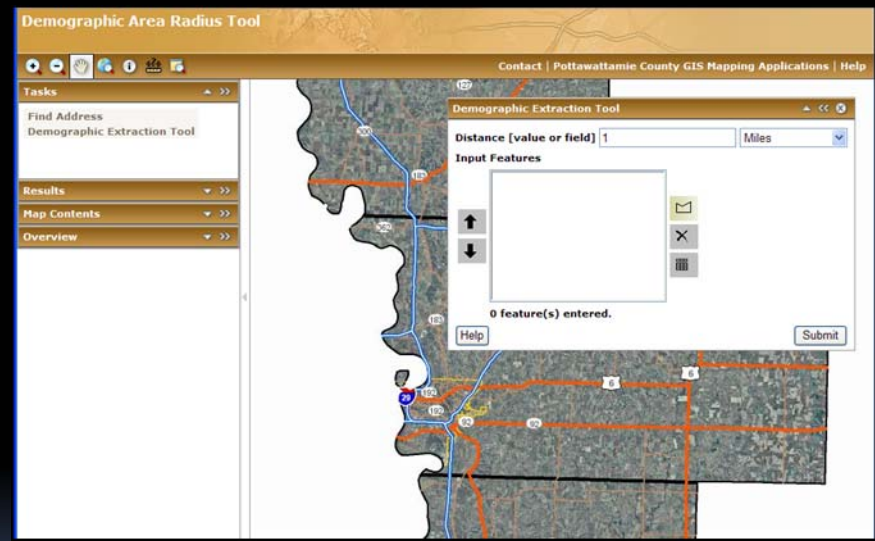


- Typical out-of-the-box ArcGIS Server Site
- Things we added/learned:
  - Uses Windows Authentication
  - Uses Layer Grouping

# Census/Demographics Tool

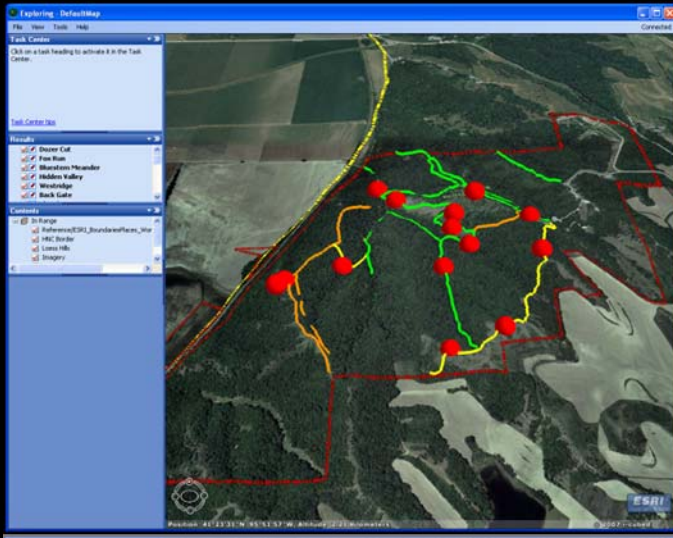
[gis.pottcounty.com/DART/](http://gis.pottcounty.com/DART/)

- ArcGIS Server (with some customization)
- Things we learned
  - Incorporated a Find Address Tool using an Address Locator
  - Incorporated a tool which summarizes data selected by a buffer
- To make it useful we need to:
  - Make the buffer tool more logical/easier to use
  - Make the results of the summary user-friendly





# Nature Center Application



- Pros
  - Interactive
  - Dynamic
  - Simple to maintain
- Cons
  - Less Detailed
  - Slight learning curve for users
  - Users can zoom anywhere (no geo-fencing)

- Requires installs of *Microsoft .NET Framework* and ArcGIS Explorer
- Uses base data and globe from ArcGIS Online
- Shows a 3D view of one of our county parks w/clickable photo points





# Human Services Site

countyconnection.org

- Uses Google Maps API
- Shapefile data exported to xml then loaded on top of their map
- List of services grows/shrinks based on map envelope
- Very easy for our non-technical users
- Launched June 1<sup>st</sup>

**CountyConnection.org** PROVIDING CURRENT, ONLINE INFORMATION ABOUT HUMAN SERVICE AND HEALTH RESOURCES AVAILABLE TO THE RESIDENTS OF POTTAWATTAMIE COUNTY.

Check a Category(s) below to display services on the map. Only information for services within the map extent is displayed.

<input type="checkbox"/> Childcare/Youth Programs	<input type="checkbox"/> In Home Services	<input type="checkbox"/> Domestic Violence	<input type="checkbox"/> Legal Concerns
<input type="checkbox"/> Disability/Accommodations	<input checked="" type="checkbox"/> Mental Health/Substance Abuse	<input type="checkbox"/> Health Care	<input type="checkbox"/> Seasonal
<input type="checkbox"/> Emergency Financial Assistance	<input type="checkbox"/> Social Security Benefits	<input type="checkbox"/> Food Assistance	<input type="checkbox"/> Senior Programs
<input type="checkbox"/> Hotlines/Peer Support	<input type="checkbox"/> Training/Employment	<input type="checkbox"/> Housing/Shelters	<input type="checkbox"/> Transportation

Mark an Address on the Map - Enter Address Below  
515 5th Ave Council Bluffs, IA

Reset Map Show Bus Routes Update/Submit View Table

Map Satellite Hybrid

**A** [Alegent Psychiatric Associates-Mental Health/Substance abuse](#)  
(712) 328-2609  
801 Harmony, Suite 302, Council Bluffs, IA 51503  
Sliding Fee Scale. Psychiatrist available. mental health and substance abuse evaluations and treatment  
[Website](#)  
Email Unavailable  
Last Updated: 5/19/2008

**B** [Assertive Community Treatment \(ACT\)](#)  
(712) 322-1347  
1722 Ave C, Council Bluffs, IA 51503  
An evidence-based recovery approach, provides comprehensive, community-based treatment to persons with severe and persistent mental illnesses. Must meet admission criteria.  
Website Unavailable  
Email Unavailable  
Last Updated: 5/19/2008

**C** [Bluffs Mental Health](#)  
(712) 328-3940  
25 S. 15th St. Council Bluffs, IA  
Sliding Fee Scale  
Website Unavailable  
Email Unavailable  
Last Updated: 5/19/2008

**D** [Campus for Hope](#)

About Disclaimer Contact Survey

This website is a joint effort provided by the Transition Advisory Committee and the Pottawattamie County GIS Department. This website is intended to help local residents of Pottawattamie County find the services they need.

# ArcGIS Server: New Parcel

## Site Look and Feel

- All content in one browser window – No more pop-ups
- Text vs. Symbols as Buttons – Text uses more space but is more user friendly
- Layer Management – No Table of Contents to turn layers on and off (exception: Orthophotos)
- Better Cartography – Because there is no ability to turn layers on and off, scale dependency with symbology and labels/annotation is now very important



## Technical

- Developed using Visual Web Developer 2008 Express Edition - free
- Multiple Map Resources – Cached base map (visible), Interactive (not visible – used for server-side processing), Graphics, and multiple Cached Orthophotography services
- Implement Auto complete – Reduce “Not Found” by using client-side JavaScript to Auto complete entries
- Using Stored Procedures in SQL Server for all data retrieval

## Challenges

- Cadastral data changes daily – Cached base map must reflect those changes
- In-house development – Coding takes a backseat to daily tasks
- Finding technical resources/documentation – Always improving

# Monitor Web Site Usage

- **Webalizer** (<http://www.mrunix.net/webalizer/>)
  - Free
  - Customizable
- **Geocortex Statistics** ([www.latitudegeo.com](http://www.latitudegeo.com))
  - Designed for ArcIMS sites
  - Maps users maps
  - Which layers are used most/least
  - Which layers are fastest/slowest
  - Will have a comparable ArcGIS Server monitor (called Optimizer)
- **Google Analytics**

# Questions/Comments

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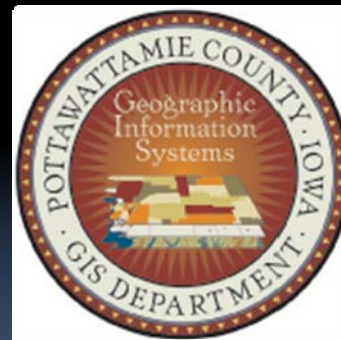
712.328.4882

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712.328.4869



# Thank You