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Overview

- County's move to a "Shared Dispatch System"
- Master Address File Creation
- Street Centerline Conversion
- Data QA/QC and Cleanup
- Custom ArcGIS tools
- Summary and lessons learned





Shared Dispatch Participants

Non- Participants

- Town of Brookfield
- Town of Delafield
- Town of Eagle
- Town of Genesee
- Town of Lisbon
- Town of Merton
- Town of Mukwonago
- Town of Oconomowoc
- Town of Ottawa
- Town of Summit
- Town of Vernon
- Town of Waukesha
- Village of Big Bend
- Village of Butler
- Village of Chenequa
- Village of Dousman
- Village of Eagle
- Village of Elm Grove
- Village of Hartland

- Village of Lac La Belle
- Village of Merton
- Village of Nashotah
- Village of North Prairie
- Village of Oconomowoc Lake
- Village of Pewaukee
- Village of Sussex
- Village of Wales
- City of Pewaukee
- City of Oonomowoc (Just signed on)

City of Muskego

City of New Berlin

City of Waukesha

Village of Menomonee Falls

Village of Mukwonago

Village of Lannon





Pieces to the puzzle

- •Co. has a mix of 100 Range and coordinate addresses
 - •123 E MAIN ST
 - •W332N5983 CEDAR BAY DR
- •70 responding agencies in the County. Police, Fire EMS, Sheriff
- •Dispatch zones, Response plan zones, Reporting areas, Special areas
- Pilot area of 11 jurisdictions (Lake Country)



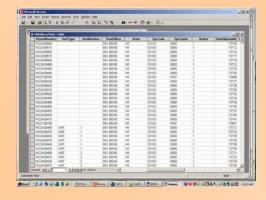


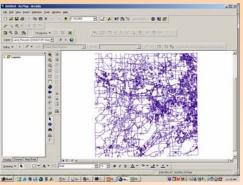
What we had to start with...

- Master Address File
 - Linked to parcels
 - Out-of-date

"Dumb" Planimetric Centerline file

SDE Parcel GDB











Master Address File

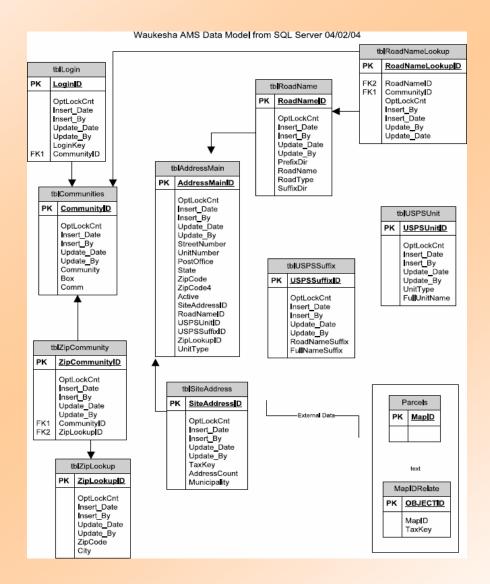
Created in 2002

Parcel based

Maintained using ArcIMS Address Maintenance System Application (AMS)



AMS Database Diagram

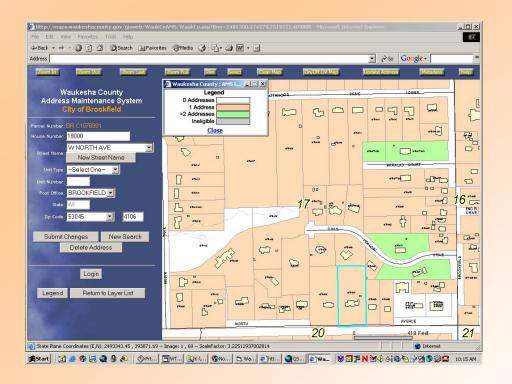






AMS Application

- Allows address input and editing of master address file
- Deployable to Municipalities
- Can "plug-in" this AMS service to ArcMap
- Links parcels in GDB to AMS
 Database using an SDE
 Spatial View
- Allows real-time rendering of address counts







More About SDE Spatial Views

- Create simple view in SDE first
 - C:\Documents and Settings\sdeadmin>sdetable -o create_view -T parcel_count_view -t TAXPARCEL -c shape,OBJECTID,MAPID -u GISEDITOR -p <passwd> -s <server> -D <db> -i <service>
 - Creates necessary SDE tables
 - Edit this view in SQL server to link tables/columns
- Appears as a "virtual feature class"





Centerline Data Population

- Provided to vendor;
- MRF Geosystems Corporation
- Dumb Planimetric Centerline
- Master Address DB
- Parcels
- Received from vendor;
 - Fully attributed centerline
 - ≥ 31,000 segments
 - Some gaps where parcel address data not available





Centerline Data Update/QC

- Four Summer "Interns"
 - Two data entry and verification
 - 1 former Tele Atlas employee
 - 1 UWM Graduate student
 - Two field personnel





Other centerline items to consider

- Interstates
 - Segmented by mile marker
- Railroads
 - All named 'RR'
- Trails
 - Named to account for intersections w/roads
- Lakes
 - Bogus segments put into lakes to aid dispatch to lake emergencies
- Street Aliases





Street Alias File

In GeoDatabase as:

✓ CTH CW

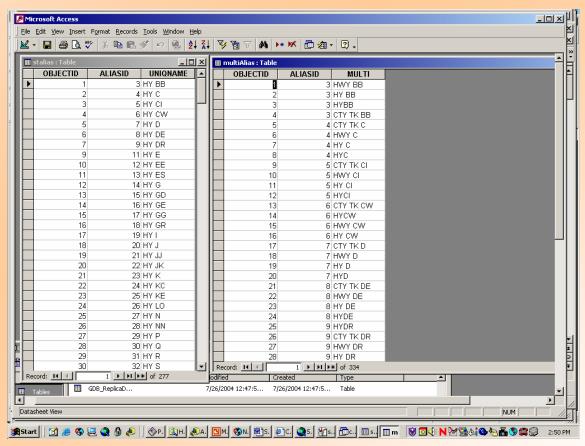
In Alias db as:

✓ CTY TK CW

✓ HWY CW

✓ HY CW

✓ HYCW







GIS ("US")

VS.

(Dispatch)"THEM"

•	ID	INPUT NAME	CONVERTED NAME
•	11	ANCHOR RODE LA	ANCHOR RODE ST
•	12	BROKEN BOW TRL	BROKEN BOW TR
0	13	BRUMDER RD	BRUMDER DR
0	14	CAMPBELL TRCE	CAMPBELL TRACE
0	15	CEDAR BND	CEDAR BEND

- Handling of misspellings
 - McArthur, Mc Arthur, MacArthur, Mac Arthur
 - Third St (GDB) > 3RD ST (.shp) > Third St (Dispatcher)





ArcMap Centerline Toolset

Modify Attributes tool



Add Line tool



Modify Linework tool



Modify Linework and Attributes tool



Copy feature values tool

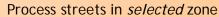


Flip tool





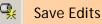
Select streets for mapzone processing







Alias tool - add, delete, manage aliases



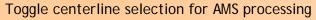
Stop Editing



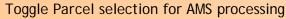
Zone Check



AMS Road name selection









AMS Road name update process



Reset toolbar







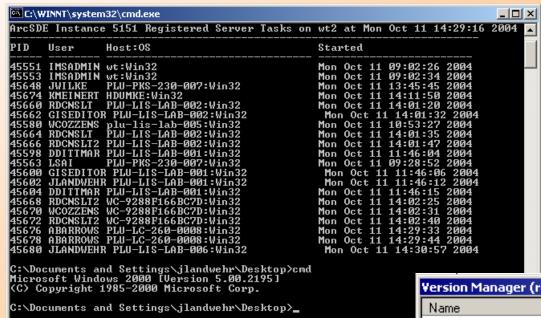
ArcMap Centerline Toolset

- Encapsulates most used functions into single toolbar
- Written in VBA
- Integrated with AMS database using SQL views
- On demand...
- Work in an SDE GDB versioned environment



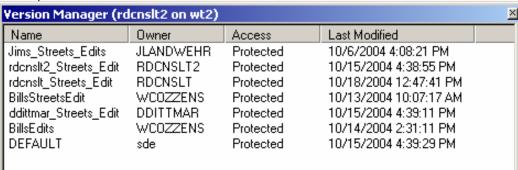


Versioning unleashed...Hey, this really works!*



Short turn-around time necessitated multi-user editing.

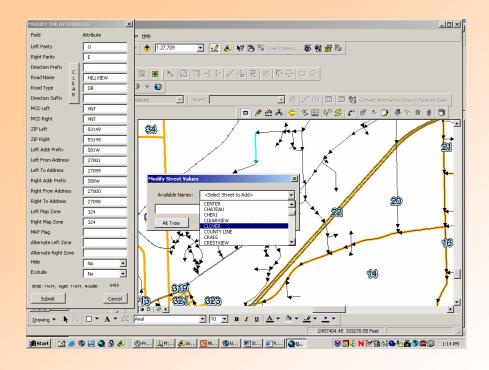
*In some cases we had 5 people editing the same feature class





Cool tools...

- Modify Attributes
 - Linked to AMS DB to control street name domain list
 - Presents all attributes in easyto-edit manner
 - Manages SEGMENTID and ROADNAMEID for uniqueness



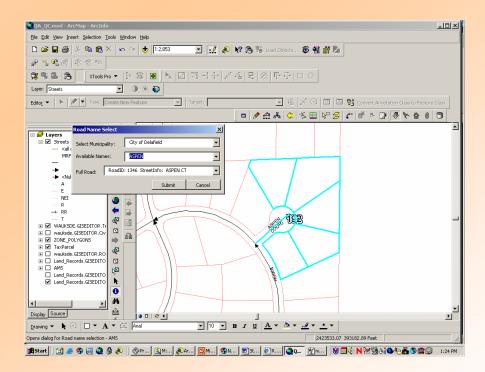




Really cool tools...

Street select

- Searches by street name for all parcels linked to name
- If none linked, option to delete Road from AMS is presented
- Uses an SDE spatial view

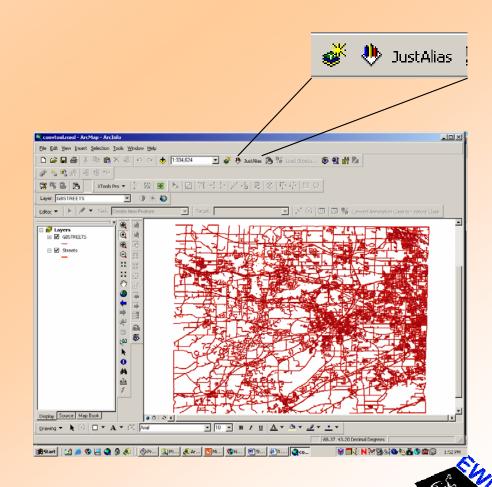






The coolest tool of them all!

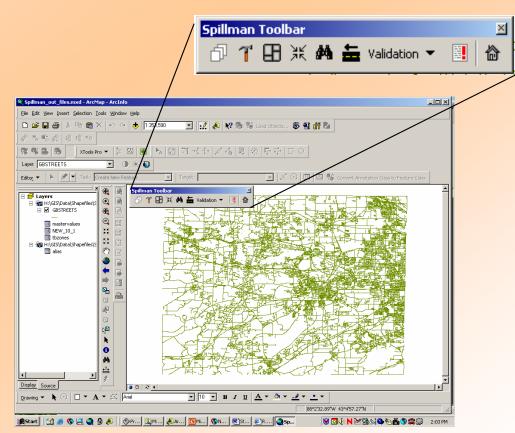
- Duplicates segments where needed
- Builds alias file for input to Spillman processing
- Projects from SPCS to Lat/Lon
- Exports to .shp for input to Spillman processing





Not so cool tools*

- Provided by Dispatch software Company (Spillman Technologies, Inc.)
- Provide some data validation measures
- Create .out files for input to Dispatch System
- *Dependent on .shp files
- *Not ESRI 9.0 compliant
- *Not looking to GDB real soon







More not so cool tools...

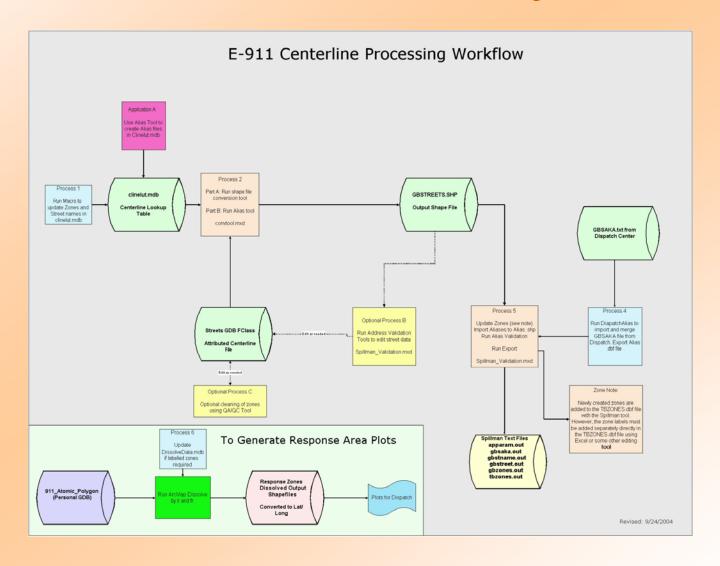
- Dispatch software
 - Search for 355 HILL, Get:

Search for 355 HILL ST, Get:





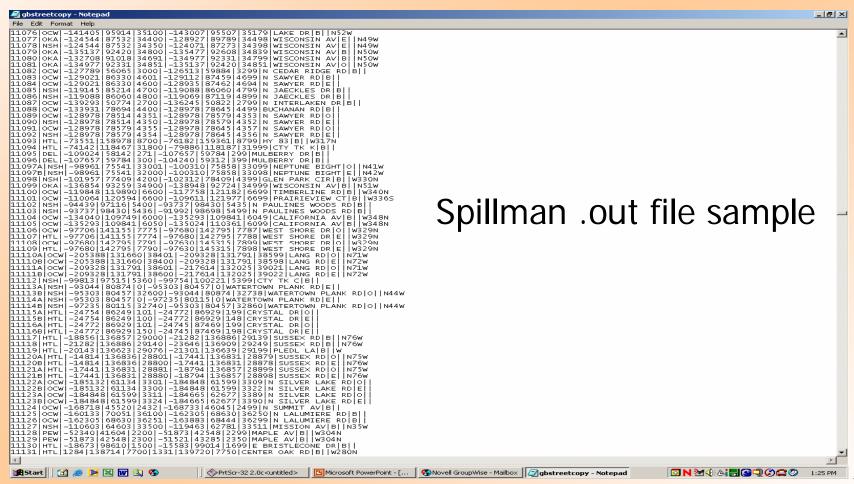
911 Process Workflow







Show me the map...Hmmm





Phase II Compliance

E-Mail from Dispatch Center on 7/23/04

"Today at 9:39am, we received the State's *first* wireless 9-1-1 Phase II call from US Cellular. The x/y coordinates transferred from the Positron 9-1-1 phone system to the Spillman CAD system and then plotted on the map, and we were within a couple of meters of where the caller was. This process is an example of a team effort and I really appreciated all the work from the WCC staff, SBC, Positron, US Cellular, Waukesha County Staff, and the Wisconsin Public Service Commission in making this happen."





Phase II Compliance



Tuesday, October 5

Waukesha - Waukesha County became the first emergency dispatch center in Wisconsin to be able to locate 911 calls placed with cell phones. Advocates say they're afraid some counties, particularly rural ones, may never install the technology upgrades because of the high cost. In southeastern Wisconsin, cellular callers already make up half the 911 calls.





Summary and Suggestions

- Go Live" for entire Co. is in mid Nov.
- Current address match rate is >97%
- Get good help
 - LIS staff
 - Interns/Part time staff
 - Consultants
- Keep the guys with the guns happy
- Commit yourself to a life of worry...

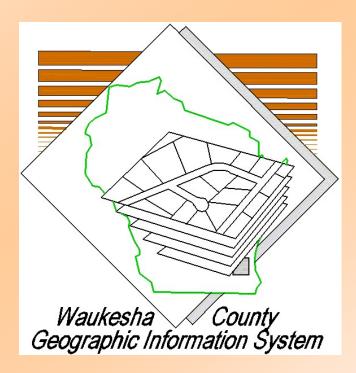




Questions?

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http://www.waukeshacounty.gov/landandparks/lisd/



Thank You.

