
Do You Know Where Your Addresses Are???

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Johnson County AIMS



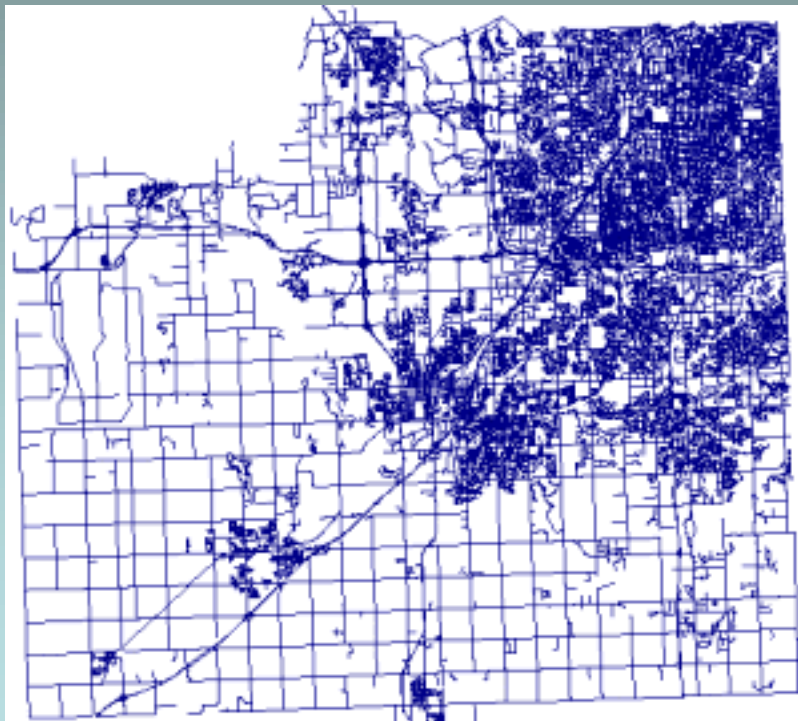
Abstract

Johnson County AIMS, with the cooperation of the cities of Overland Park, Olathe, Lenexa, Leawood and Shawnee, and the Johnson County Clerk's Office, has developed a process to collect and quality control all of the addresses within the county. These cities funnel their address points to a central server on a nightly basis and processes developed by AIMS combine these files with those controlled by AIMS and the Clerk's Office to produce a single county-wide dataset. This dataset is then exhaustively quality controlled through use of SQL statements and other software and made available to users in the county in several formats. AIMS has developed several websites allowing address assigners in the county access to view addresses that have failed QC as well as those that have been added, updated, or deleted during the previous day.

Ancient History

Johnson County
Situs Address DB
(Address
Repository)

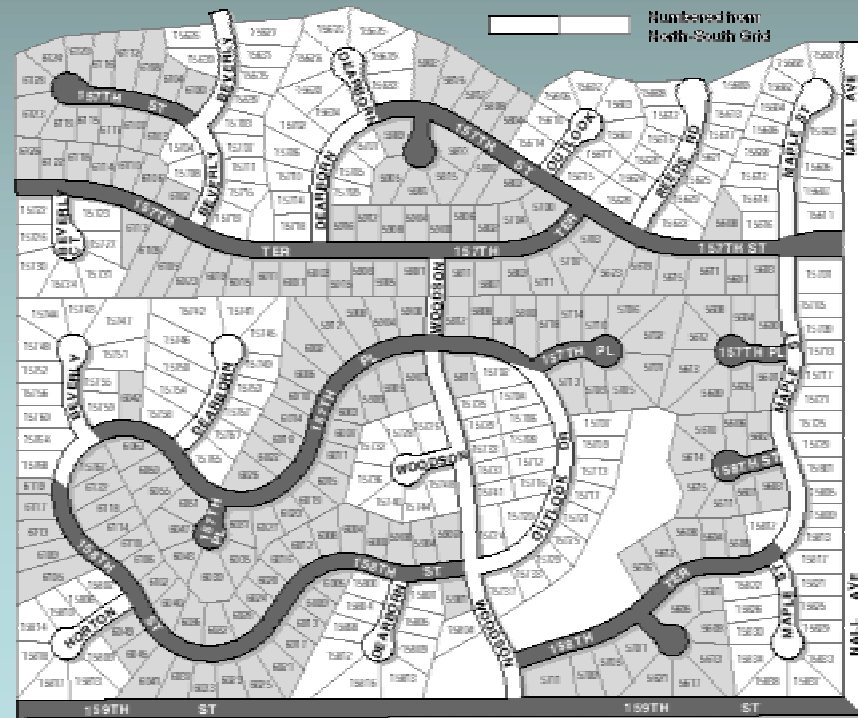
Johnson County
Street Centerline Dataset



Johnson County
Addressing Standards

Street Naming & Address Numbering

Numbered from
East-West Grid
Numbered from
North-South Grid



Address Point Dataset 10/02 – Present



Automated Information Mapping System
Geographic Data & Service Provider for Johnson County, Kansas

Starting Point, October 2002

- Why are we bothering with addresses?
 - I/CAD Implementation Project Initiated by the Sheriff's Department
- Result: JoCo Address Repository Ver 1
 - ArcView/Avenue app for consolidating address points from various sources executing nightly
 - But dataset not “in use”

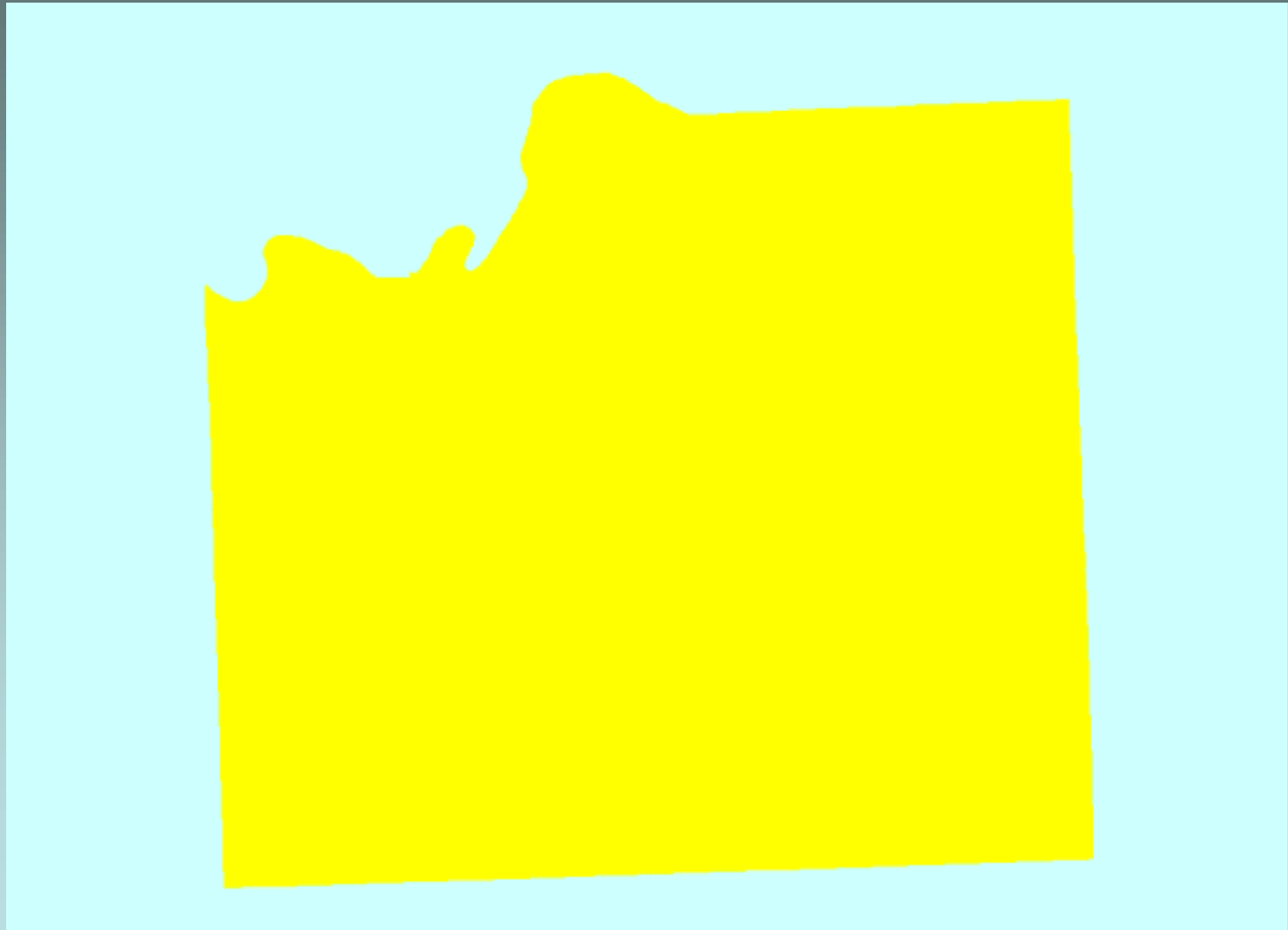


Starting Point, October 2002

- **Address Repository Ver 1 Input Sources**
 - **Johnson County Clerk: Real Estate Tax Roll**
 - **Johnson County PW: Unincorporated Addresses**
 - **City of Overland Park**
 - **City of Lenexa**
 - **City of Olathe**
 - **AIMS: Apartments (Non-OP, Olathe, Lenexa)**
- **Input appended together**
 - **Overlapping geography of input sources**
 - **True repository/depository/dump**



In the Beginning there were None



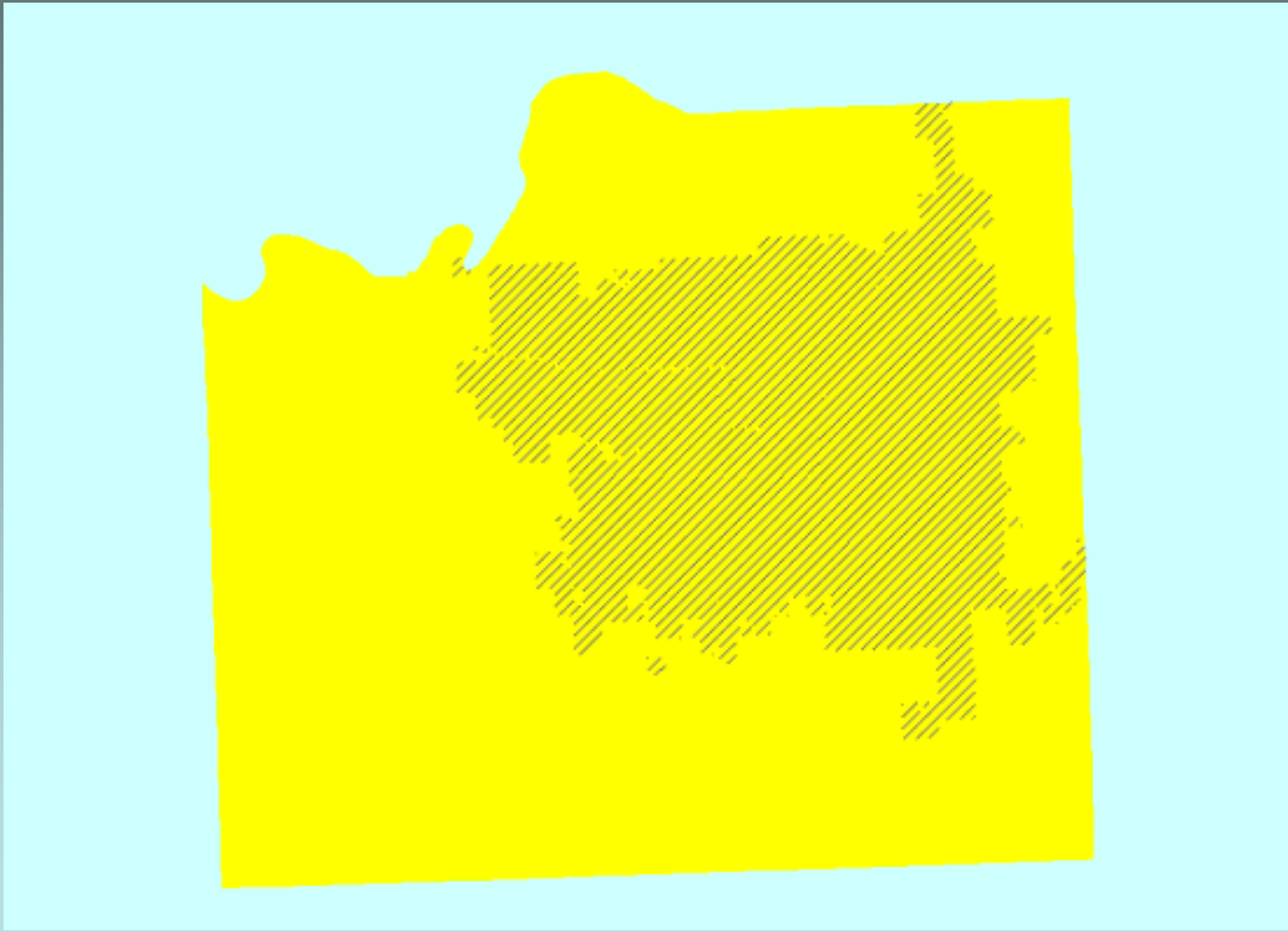
Address Point Dataset 10/02 – Present



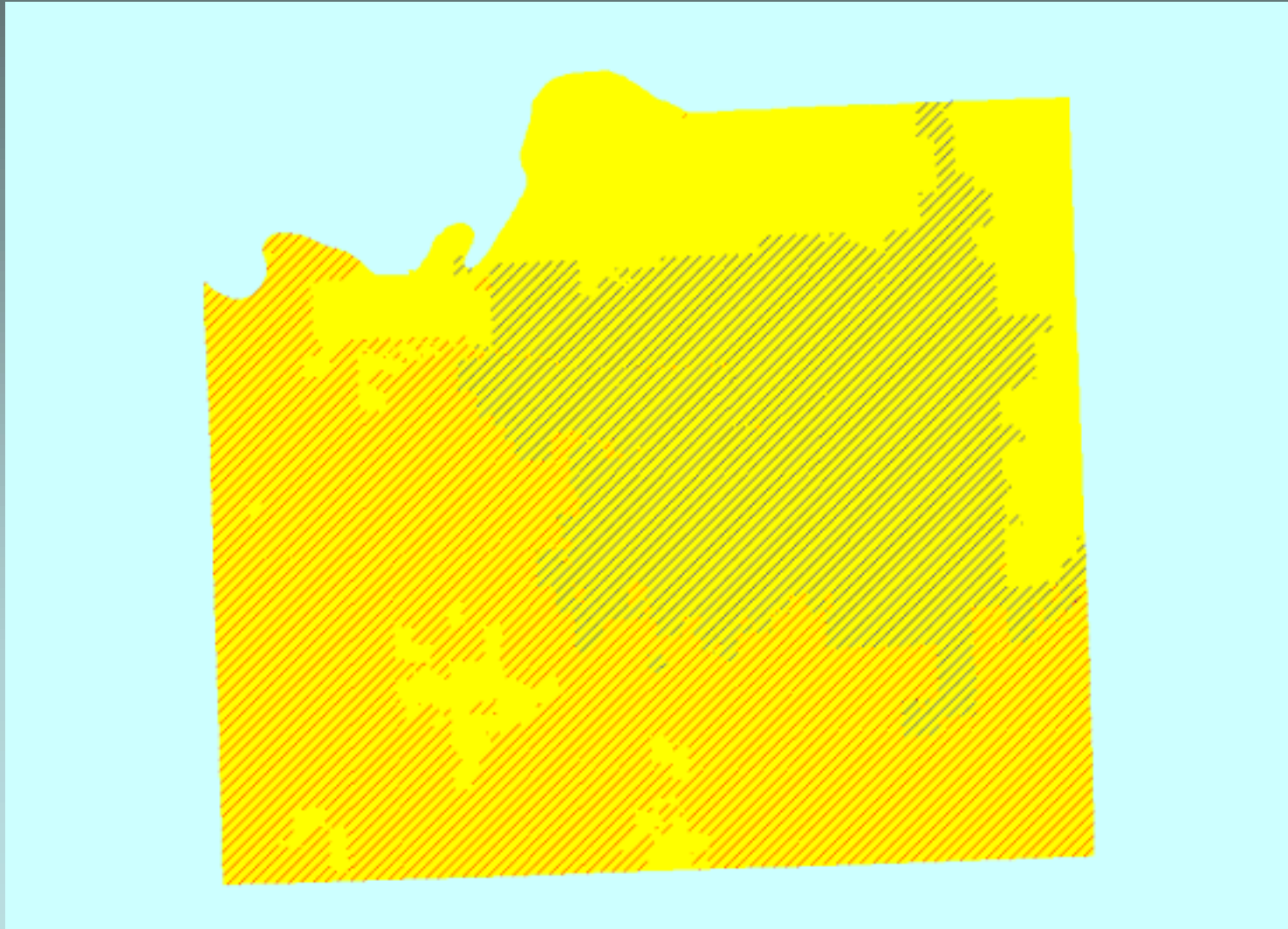
Automated Information Mapping System
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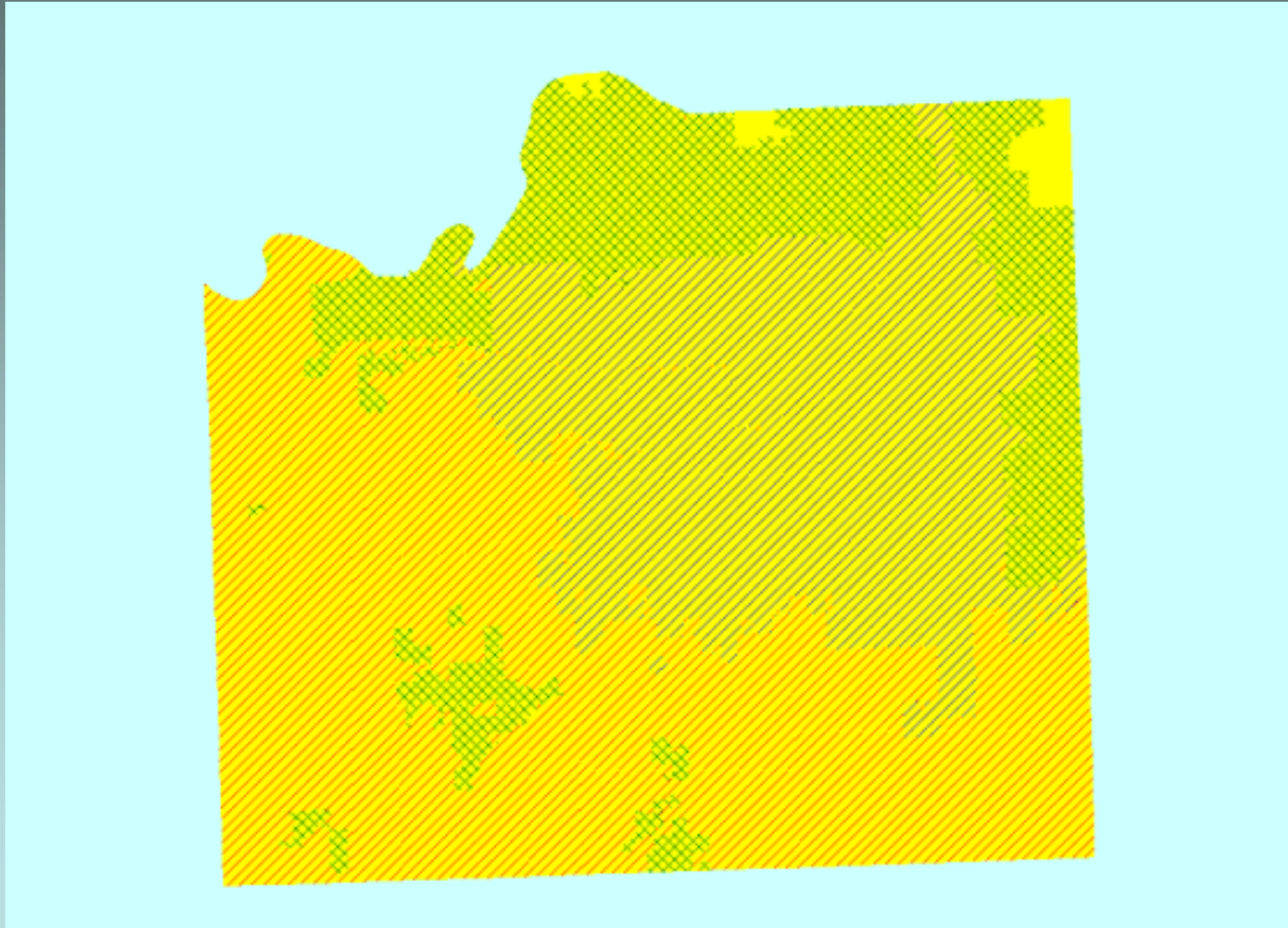
Addition of City Data



Addition of Clerk Data



The Rest Filled Out



Shortcomings of Version 1

- **Currency** ... “the data is not as timely as it could be”
- **Quality** ... “the data is not good enough for use by other applications”
- **Maintenance** ... “we lack the means to update the data”
- **Database Schema** ... “more complex than it needs to be”



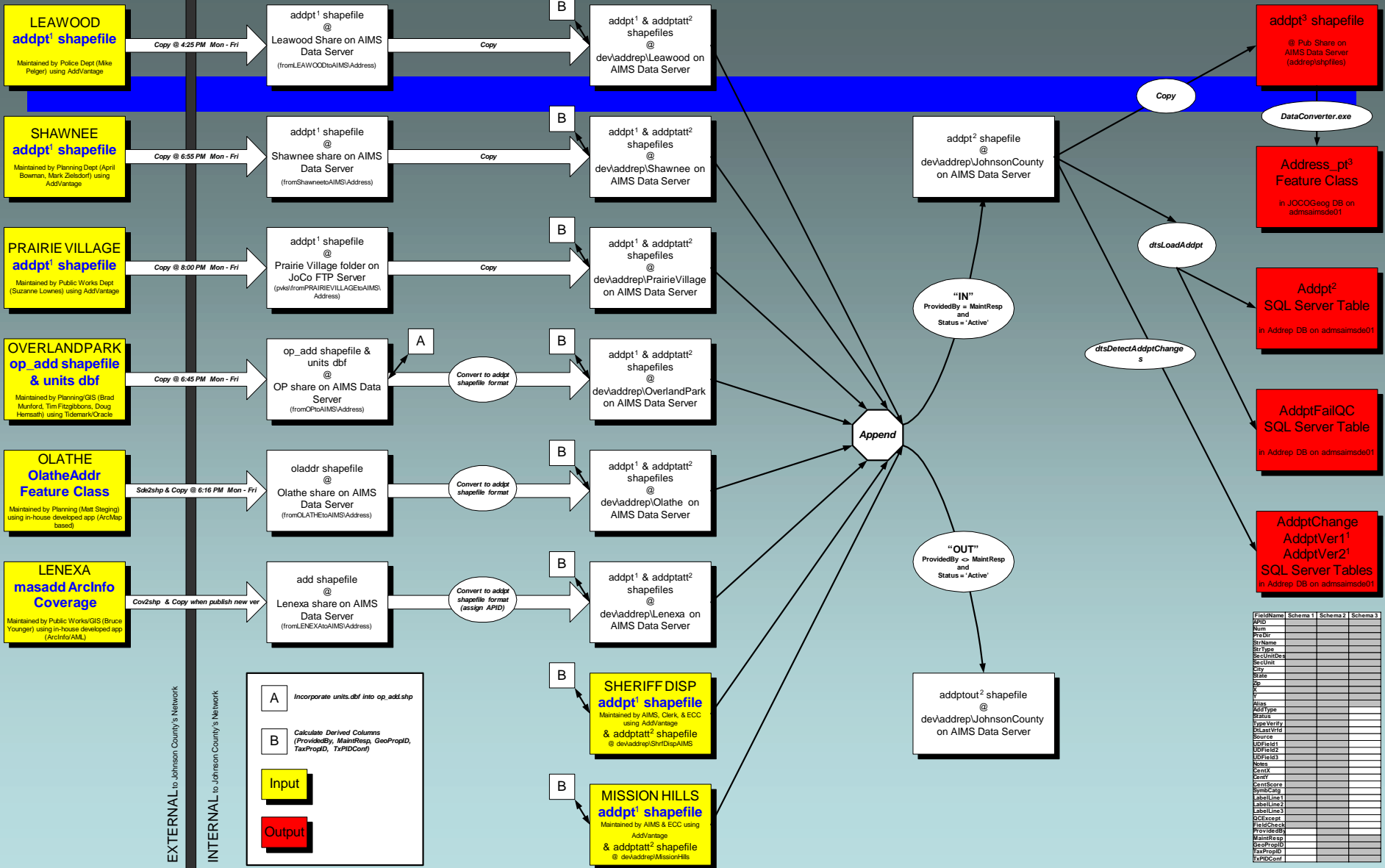
Currency

“the data is not as timely as it could be”

- Only one of the input sources had a regularly scheduled and fully automated process for updating its contribution to the address repository.
 - **Solution:** Work with suppliers to fully automate their upload to us and to execute that upload nightly.
- Points are not being added in a timely fashion.
 - **Solution:** Work with Planning Departments; Address Coordinator Position to ensure address points are entered during the platting process

Nightly Process for Rebuilding the Johnson County Address Point Dataset

27 April 2004



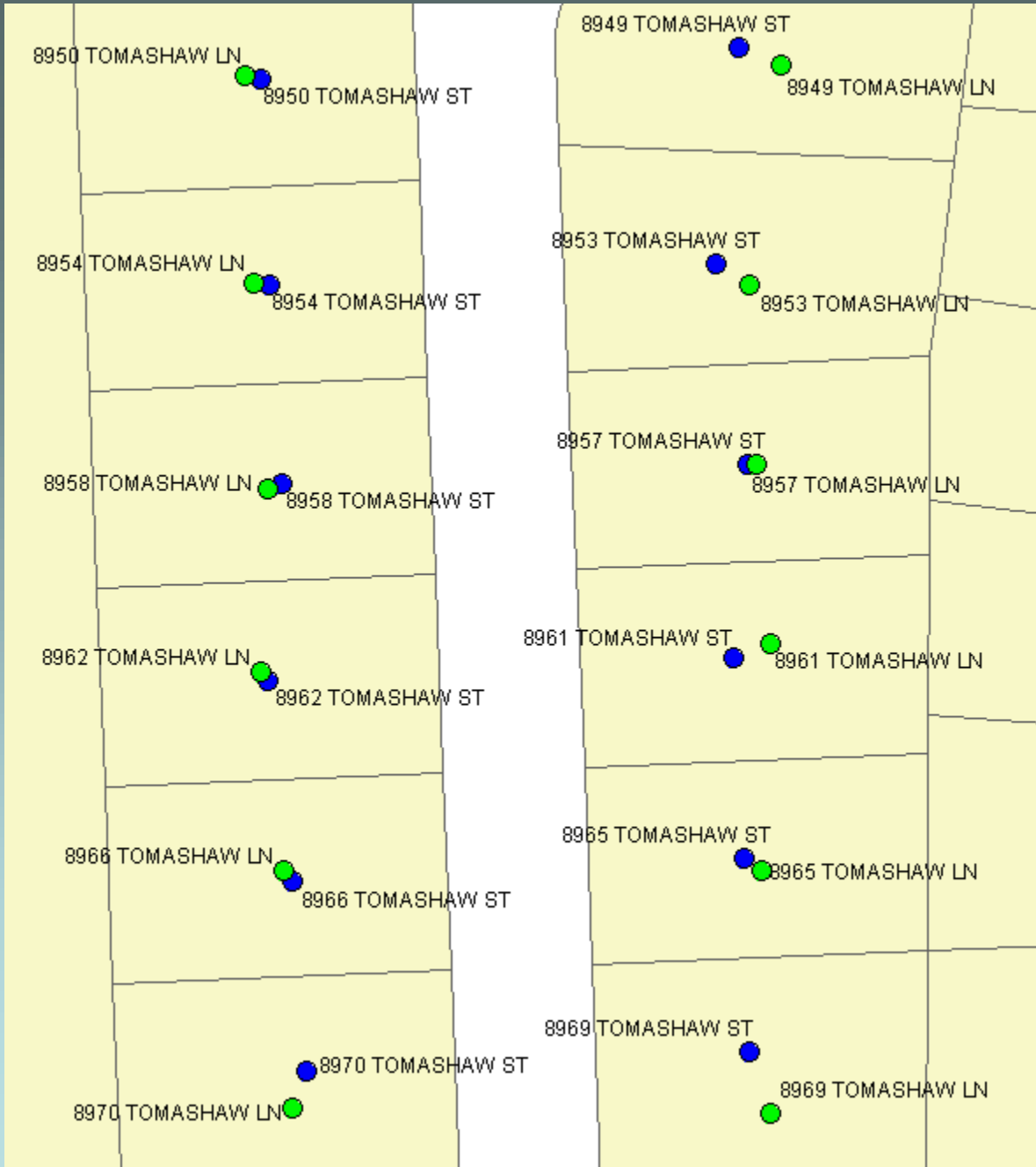
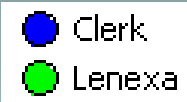
FieldName	Schema 1	Schema 2	Schema 3
APID			
Name			
PROUR			
StrName			
StrType			
SecUnitDes			
SecUnit			
City			
State			
Zip			
City			
State			
Address			
Status			
DaysValid			
DLLastWid			
Source			
LDFile1			
LDFile2			
LDFile3			
Notes			
City			
State			
CentScore			
SPIDCent			
LabelLine1			
LabelLine2			
LabelLine3			
DICCont			
ProvVer1			
ProvVer2			
MaintResp			
GeoPropID			
TaxPropID			
TxPIDCent			

Quality

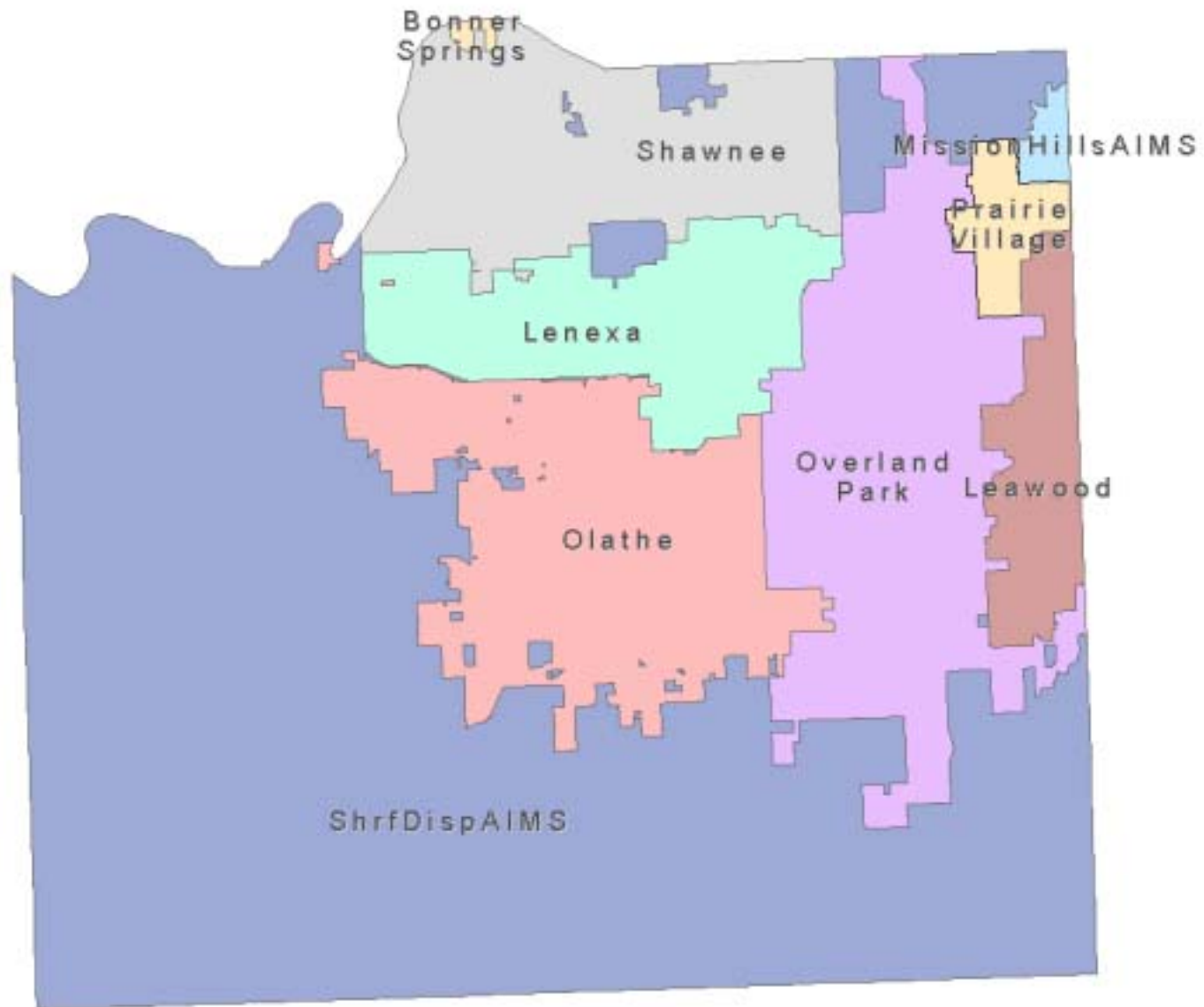
“the data is not good enough for use by other applications”

- Multiple Spellings of Street Names
Multiple Abbreviations for Street Types
Inconsistency with Centerline
 - **Solution**: Strict QC, Regular QC, Notification to Supplier of Points that Fail QC
 - **Solution**: Domains from Centerline
- Duplicate Addresses
 - **Solution**: Address Point Maintenance
Responsibility regions








Address Maintenance Regions





 Lenexa


8950 TOMASHAW LN 


8954 TOMASHAW LN 


8958 TOMASHAW LN 


8962 TOMASHAW LN 


8966 TOMASHAW LN 


8970 TOMASHAW LN 


8949 TOMASHAW LN 

8953 TOMASHAW LN 

8957 TOMASHAW LN 

8961 TOMASHAW LN 

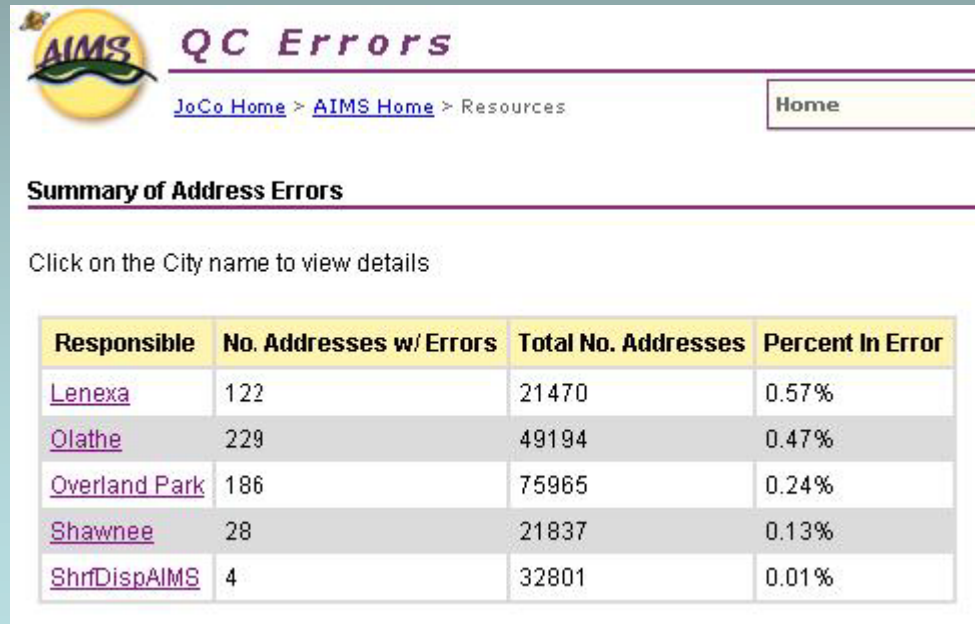
8965 TOMASHAW LN 

8969 TOMASHAW LN 

Quality

“the data is not good enough for use by other applications”

- **Solution** – Provide website showing errors that is updated nightly.
- <http://ims.jocogov.org/addrep/viewerrors.asp>



The screenshot shows the 'QC Errors' page from the AIMS website. It features a navigation bar with 'JoCo Home > AIMS Home > Resources' and a 'Home' button. Below the navigation is a section titled 'Summary of Address Errors' with a sub-header 'Click on the City name to view details'. A table lists the number of addresses with errors, total addresses, and the percentage in error for five categories: Lenexa, Olathe, Overland Park, Shawnee, and ShrfDispAIMS.

Responsible	No. Addresses w/ Errors	Total No. Addresses	Percent In Error
Lenexa	122	21470	0.57%
Olathe	229	49194	0.47%
Overland Park	186	75965	0.24%
Shawnee	28	21837	0.13%
ShrfDispAIMS	4	32801	0.01%

Quality

“the data is not good enough for use by other applications”

- **Solution** - Provide definition of errors for easy cleanup.



The screenshot shows the 'QC Errors' page in the myAIMS system. The page title is 'QC Errors' and it includes navigation links for 'Home', 'Products & Services >>', 'Data Partners >>', 'Other Resources >>', and 'About Us >>'. A search bar is also present. The main content area displays the following information:

Address Errors for ShriDispAIMS (No. Addresses w/ Errors: 4, Total Unique Addresses: 32801, Percent in Error: 0.01%)

[Return to Summary](#)

APID	Error Description	Number	Prefix	Street Name	Street Type	Unit	City	State	Zip
200404071408247005	Invalid value in Num field (value not within a range defined in centerline_in)	32584	W	173RD	ST		GARDNER	KS	66030
200302251358378545	Invalid value in Num field (value not within a range defined in centerline_in)	13811	S	LAKEHORE	DR		OLATHE	KS	66061
200401291238420568	Invalid value in Num field (value not within a range defined in centerline_in)	5900		MAIN	ST		STILWELL	KS	66085
200312220910159098	Invalid value in Num field (value not within a range defined in centerline_in)	19303		MOHAWK	ST		STILWELL	KS	66085

[Return to Summary](#)

Maintenance

“we lack an efficient means to update the data”

- Edits only made by data suppliers
 - **Solution**: Start with Address Repository Ver 1 and clean things up from there
- No Address Point Editing Application
 - **Solution**: AddVantage
 - **Solution**: Work with Leawood and Shawnee to use AddVantage to establish & maintain address points



AddVantage File Edit Navigate AddressMatch

Extent Back Forward Arrow ZoomFeat ZoomName ZoomIn ZoomOut Pan ZoomAPID UndoEdit ApplyEd Broken Fishbone

Zoom to Named Feature

- 2003-04-30 THE WINDMILL
- 2003-04-30 WEST FORK - 4TH PLAT
- 2003-05-08 VALLEY RIDGE
- 2003-05-13 HOLTGRAVER ADDITION NO. 1
- 2003-05-20 WINWOOD PARK III
- 2003-05-22 MAPLE VALLEY FARMS
- 2003-05-23 TIMBER LAKE
- 2003-06-27 WINWOOD PARK IV
- 2003-07-01 PLUM CREEK II
- 2003-07-03 SPRING HILL INDUSTRIAL PARK 6TH
- 2003-07-17 PLUM CREEK ESTATES II
- 2003-07-21 MASTIN PLACE
- 2003-07-22 LIVING HOPE CHURCH OF THE NAZARENE
- 2003-07-31 COTTAGE PARK WEST
- 2003-07-31 MAPLEWOOD PLACE**
- 2003-07-31 MOONLIGHT BUSINESS CENTER III
- 2003-08-01 COTTAGE PARK XI
- 2003-08-01 COTTAGE PARK XII
- 2003-08-01 COTTAGE PARK XIII
- 2003-08-15 WEST FORK - 5TH PLAT
- 2003-08-27 ELEMENTARY ON MADISON

OK Cancel

41TH STREET
55TH STREET
63RD STREET
71ST STREET
79TH STREET
87TH STREET
95TH STREET
103RD STREET
111TH STREET
119TH STREET
127TH STREET
135TH STREET
143RD STREET
151ST STREET
159TH STREET
167TH STREET
175TH STREET
183RD STREET
191ST STREET
199TH STREET
207TH STREET
215TH STREET

W18 (18-15-24) SE AddPtMR: ShrfDispAIMS Spring Hill Twp 66083 NEWTON ACRES SECOND PLAT Farm/Ranch Land - No Improvements

VIEW: 21 of 21 SCALE: 1" = 23,397' (or 1:280,769) X = 2,230,742 Y = 164,726

AddVantage File Edit Navigate AddressMatch

Extent Back Forward Arrow ZoomFeat ZoomName ZoomIn ZoomOut Pan ZoomAPID UndoEdit ApplyEd Broken Fishbone

200302251358240283 617 N WINWOOD ST GARDNER 66030

N24 (24-14-22) NE AddPTMR: ShrFDispAIMS Gardner 66030 WINWOOD PARK Single Family Residential

VIEW: 26 of 26 SCALE: 1" = 76' (or 1:921) X = 2,191,121 Y = 192,474 RANGE L/R: 512/513 - 624/635 N WINWOOD ST 23974

AddVantage File Edit Navigate AddressMatch

Extent Back Forward Arrow ZoomFeat ZoomName ZoomIn ZoomOut Pan ZoomAPID UndoEdit ApplyEd Broken Fishbone

200302251358250535 707 E VALERIE LN GARDNER 66030 RE Tax Roll

N24 (24-14-22) NE AddPtMR: ShrfDispAIMS Gardner 66030 PARMA Single Family Residential

VIEW: 19 of 19 SCALE: 1" = 122' (or 1:1,468) X = 2,191,617 Y = 192,219 RANGE L/R: 630/641 - 728/727 E VALERIE LN 20024

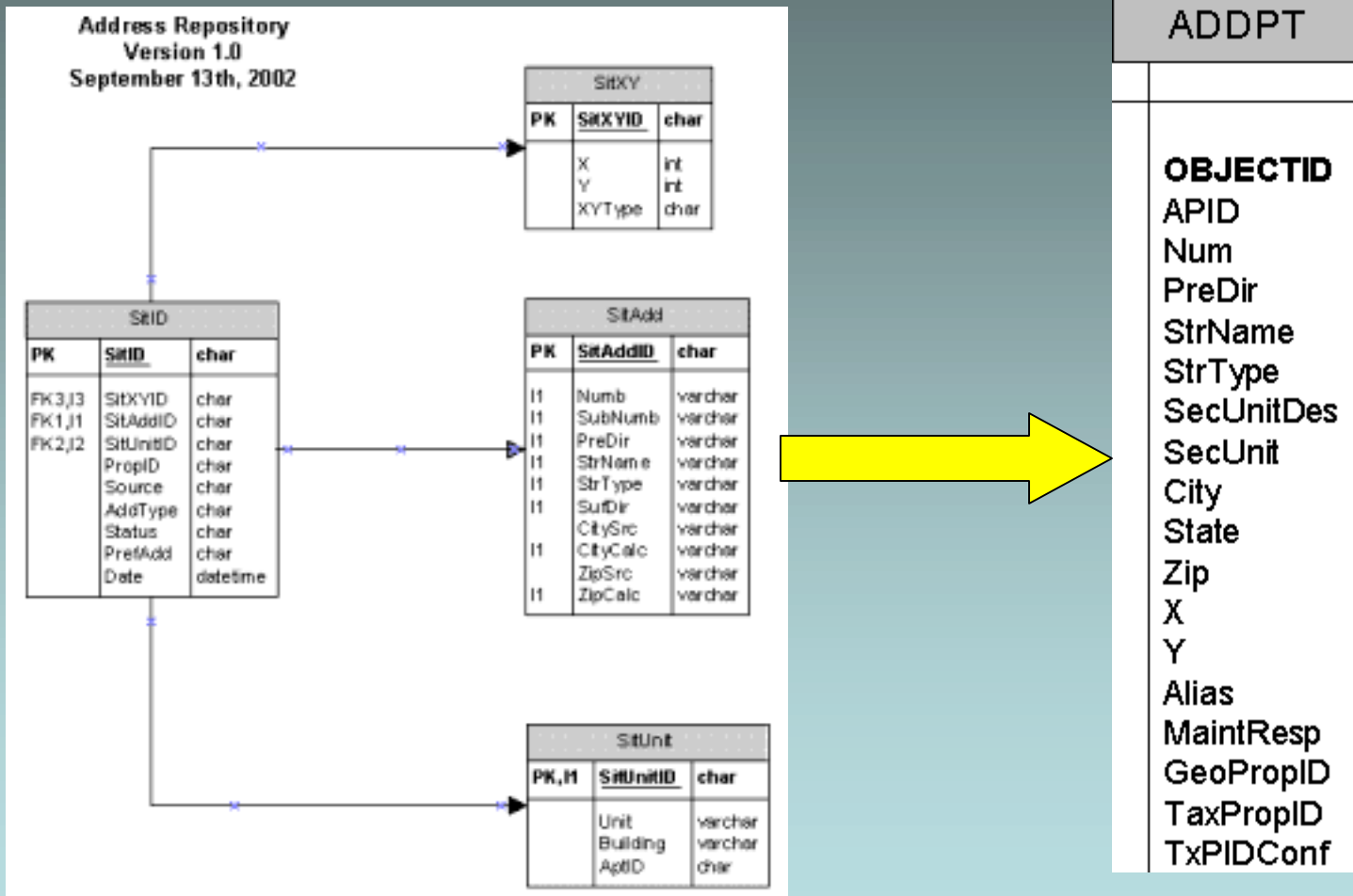
Database Schema

“more complex than it needs to be”

- “Costs” of the 4 table implementation Address Repository Ver 1 used were greater than “Benefits”
 - **Solution**: One table
- Ever Changing Key Value
 - **Solution**: APID
 - A unique ID across all suppliers
 - Assigned by suppliers at time an address point added



4 Tables → 1 Table



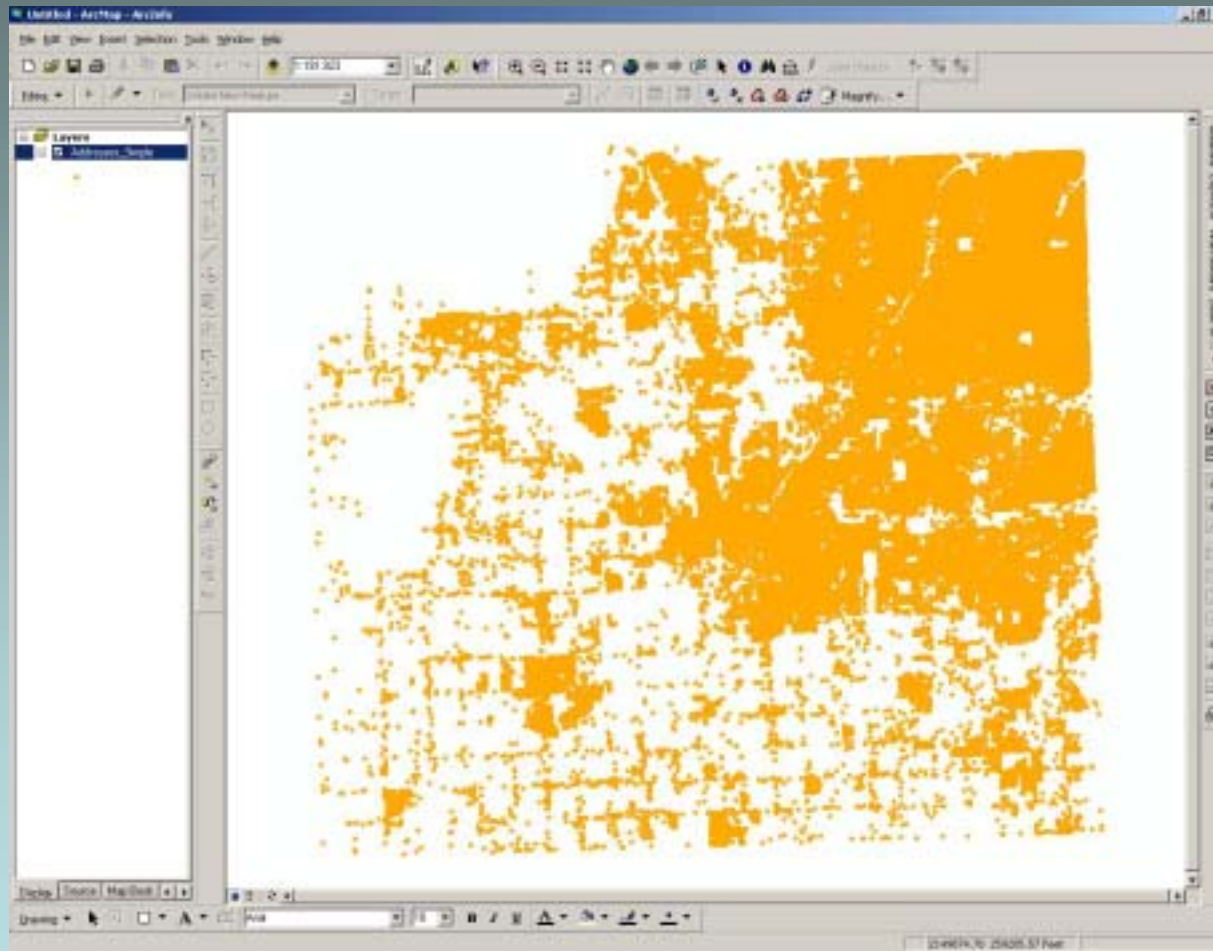
APID = Address Point Identifier

- 18 Digit APID
 - 200310140615001234
 - yyyy (year)
 - mm (month)
 - dd (day)
 - hh (hour)
 - mm (minute)
 - ss (second)
 - rrrr (random number)



The Final Outcome

The Johnson County Address Dataset - 225738 Address Points



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