Marion County, Florida

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Wesley Wilcox, Supervisor of Elections in Marion County, Florida, shared the following information on how they geo-enabled their elections about nineteen years ago.

WHY?

We embarked on our journey of geo-enabling our election data management system out of necessity, as reapportionment and redistricting were imminent.

In late 2001, I was hired as the systems administrator, just a few months before the next round of reapportionment and redistricting was to take place. Late 2001 also marked a point when Florida was about to implement sweeping election administration changes and instate numerous new systems. As the one and only member of the IT department for the Supervisor of Elections, I needed a way to quickly and, most importantly, accurately change about 150,000 voter registration records. The only way I could envision completing this work was to link the registration database to a GIS map.

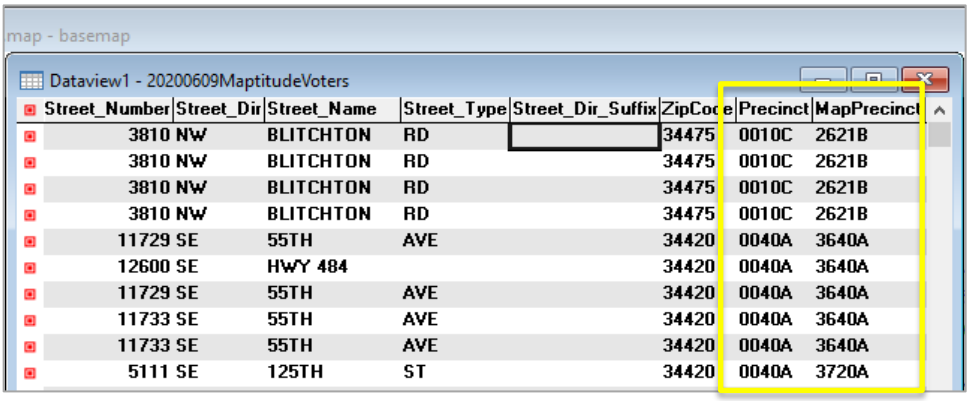
I am uncertain exactly how my predecessors performed this same process. In conversations with some of them, it seems they would obtain large maps of all the different district layers and a large map of the county. They would then lay them on the floor, and with colored markers, they would start drawing the precincts. Then, they would go into the registration system and change individual voter records.

In Florida, specifically Marion County, district data owners determine district boundaries. These owners draw the districts and provide the Supervisor of Elections with the information. The Supervisor of Elections determines the precincts. There are multiple factors in determining precinct boundaries. In this work, I ensure that each precinct has the same Congressional, State Senate, and State House District. Next, I review the density versus capacity of the polling places available in that area. Consideration is given to natural boundaries, such as rivers, lakes, and forests.

Our current system for correctly precincting voters is two separate systems that work together through import and export processes. The systems work

collaboratively to perform spatial data audits of our election data, ensuring citizens are voting in the correct contests. We export a voter file from the voter registration system (VRS) and then import it into the GIS system. In the GIS, we then geocode each voter. During the geocoding process, the MapPrecinct field, found in the resulting geocoded point file, is automatically calculated.

We then compare the precinct field's value in the VRS to the MapPrecinct field in the geocoded point file. If we discover an anomaly, we address it. How we handle it depends on the anomaly identified. We review all anomalies manually - updating the errors. Errors may include a street layer update, modifying the beginning or ending range of a street range file, or modifying a zip code. This process ensures that our two systems are in sync.



Street_Number	Street_Dir	Street_Name	Street_Type	Street_Dir_Suffix	ZipCode	Precinct	MapPrecinct
3810	NW	BLITCHTON	RD		34475	0010C	2621B
3810	NW	BLITCHTON	RD		34475	0010C	2621B
3810	NW	BLITCHTON	RD		34475	0010C	2621B
3810	NW	BLITCHTON	RD		34475	0010C	2621B
11729	SE	55TH	AVE		34420	0040A	3640A
12600	SE	HWY 484			34420	0040A	3640A
11729	SE	55TH	AVE		34420	0040A	3640A
11733	SE	55TH	AVE		34420	0040A	3640A
11733	SE	55TH	AVE		34420	0040A	3640A
5111	SE	125TH	ST		34420	0040A	3720A

GIS is the best tool for election data management. The adage, a picture is worth a thousand words comes to mind. Several times recently, we have had polling locations become unavailable. The only way to truly visualize what sites might be available was to use our GIS system.

WHO?

It is not efficient or productive to reinvent the wheel. Implementing an election system integrated with GIS takes time, resources, and determination. In Marion County, most, if not all, the district layers are available and used to geo-enable the elections.

When I started as Supervisor of Elections in Marion County, Florida, I had someone reach out to me and offer help. This person had extensive knowledge of districting in Florida and knew a fair amount about the available software. Working with this subject matter expert helped to put me on a path to success.

IMPROVEMENTS

As mentioned earlier, several manual steps must be completed, specifically within the import and export processes. Although we have fine-tuned the process, it takes some time to arrive at the "comparison" step due to a fairly large number of records. If we could automate this process, we could then schedule it. So that each day, we could go straight to work on the anomalies.

CHALLENGES

By far, the biggest challenges we face are time and commitment. It takes a large amount of time and commitment to prepare your data, especially in the beginning. Unfortunately, when we began, we had thousands of discrepancies between our GIS date and the VRS data. Although periodically, the difference may have been something as simple as a zip code, where a change would correct 50-100 records, the vast majority of the differences affected a small number of records, 1, 2, maybe 5. Each one of these must be individually researched.

Although for most of us, redistricting/reapportionment will not begin until 2022, data cleansing is a long and arduous task. And to have the best chance at success, we believe it is imperative to cleanse data, prior to 2022.

SUCCESSES

We have had success in geo-enabling our elections. Our advice to other states who are interested in geo-enabling their elections would be to start now.

We are less than two years away from redistricting. It takes a lot of hard work to get your data prepared. What I mean by data preparation is ensuring your VRS

data agrees with your GIS data. As Supervisor of Elections, I use a strict geocoding algorithm, where each address component (number, direction, type, etc.) must match exactly between the VRS and GIS systems. Ensuring these two separate systems match allows me to have a higher degree of confidence.

To be ready for redistricting, the time to do this data cleanse is now. You want to make sure your systems are as clean as possible before all redistricting efforts.

Please contact Wesley Wilcox if you have any questions. Thank you.

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