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GIS for Get-out-the-Vote Campaigns

One of the most basic, but perhaps least appreciated tenets of the American democracy, is the right to vote. Throughout our country's history, we have fought to protect that privilege while women, youth and minorities have fought to attain it. Yet in our presidential elections, barely half of all eligible voters actually go to the polls.

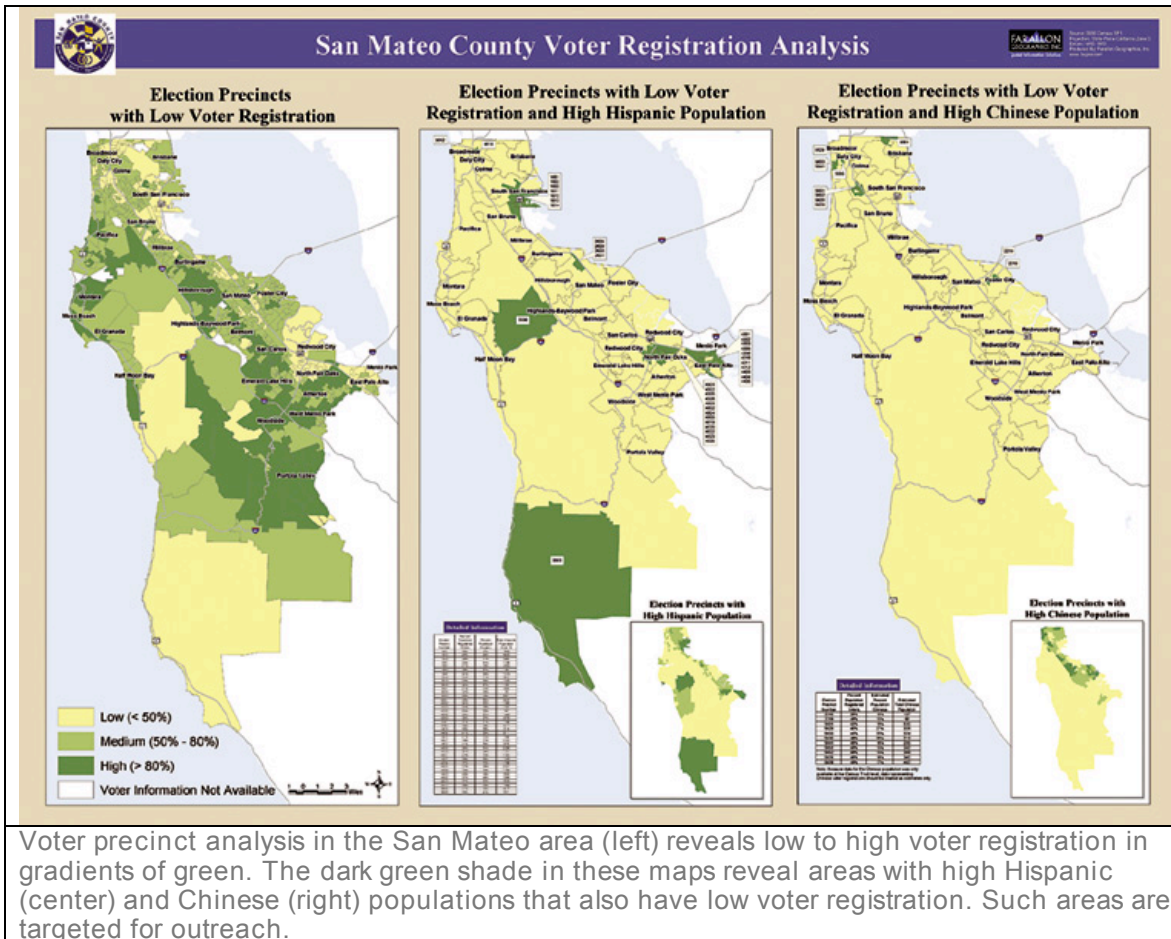
Polls are continuing to show Senator John Kerry and President George W. Bush in a tight race. With only a few percentage points separating the candidates, the outcome of the 2004 presidential election will likely be determined by voter registration and turnout. A multitude of media voter outreach programs, such as "Rock the Vote" and "Declare Yourself" have recently emerged to encourage participation. But what does voter registration have to do with GIS technology? Local governments are recognizing the importance of voter outreach programs but, more importantly, they are realizing the integral role that technology can play in locating underrepresented communities with low voter registration. They understand that GIS can make get-out-the-vote drives smarter, faster, and more cost-efficient.

Converging Politics and GIS Technology For years, cities, counties, and states have tried various voter registration campaigns. Because failure to register and vote correlate with such characteristics as race, ethnicity, age, income/poverty, and education, these campaigns often target ethnic minorities. For example, the State of California established a Website and media campaign called *Mi Voto Cuenta* (My Vote Counts) to educate and provide essential information to nonregistered Latino voters. But programs like these are broad, untargeted, and can be costly. Smaller communities that also want to increase voter registration and voter turnout do not have the resources to spend on a blitzkrieg of ads and media spots. They need to find more focused and cost-effective solutions. Enter GIS.

San Mateo County, just south of San Francisco, is one local government trying to implement and monitor a countywide voter outreach program targeting underrepresented ethnic communities. Its goal is to distribute language-appropriate voter registration materials and send out culturally trained personnel. The cost-benefit challenge for San Mateo was to specifically identify and target areas that have high population concentrations of ethnic communities but low voter registration. This was accomplished through a combination of sophisticated technologies: mapping systems integrated with demographics databases.

San Mateo County was successfully using an Enterprise GIS that allowed them to integrate financial and business data with geographic and map data. The county had maintained voter registration records, and had access to the 2000 Census with information on ethnicity, age, and income. Now all that was needed was the technical wizardry to integrate the data, correlate low voter registration with ethnic identity and pinpoint this on a computer-generated map.

Putting the Pieces Together Farallon Geographics of San Francisco had helped develop the county's parcel assessment GIS database and Web portal. For this project, they used the parcel database for precinct information and mapping data and merged it with prepared Census 2000 information. But before the information could be merged, the census data had to be conflated to the election precinct boundaries. This task required that more than 7,000 census polygons be intersected with almost 550 election precinct polygons and then remerged to form the updated precinct areas. The conflation procedure required that the portion of the census populations, split by the election precincts during the intersection, be applied to their respective precinct polygon. After merging the intersected polygons back into election precincts, the populations were totaled from each census portion, thus giving accurate census information in the form of San Mateo County election precinct polygons. The resulting GIS solution produces on-the-fly-generated interactive maps that visually highlight areas with dense concentrations of ethnic communities that also have low voter registration.



Voter precinct analysis in the San Mateo area (left) reveals low to high voter registration in gradients of green. The dark green shade in these maps reveal areas with high Hispanic (center) and Chinese (right) populations that also have low voter registration. Such areas are targeted for outreach.

Previously, identifying these areas manually would have taken several employees and several weeks sorting through census numbers and charts as well as maps of streets and neighborhood jurisdictions. It now takes just a few hours to recognize communities for outreach. County personnel can, at a glance, determine where to direct efforts — whether in specific neighborhoods or even specific households. According to Carol Marks, Director of Communications and Special Programs at the San Mateo County Office of Elections, “The information provided in this project fundamentally informs the expenditure of resources and personnel and the development of appropriate materials. It takes the guesswork out of the planning process.”

To support this voter outreach effort, flyers and pamphlets written in the communities’ first language were produced in the exact quantities needed and distributed to the precise locations required. Potential voters use these flyers and pamphlets to access essential information such as the voting process, poll locations, and candidate platforms.

The highly targeted visual representation also made it feasible for language and culturally trained individuals to visit local community venues and even go door to door. These streamlined efforts have increased efficiency and effectiveness.

Whether this kind of targeted voter outreach works will be determined after the November 2nd election. San Mateo and Farallon will continue the GIS analysis after the election by correlating voter turnout with the areas where election outreach efforts were concentrated. Using visual map representations, impact and trends will be immediately analyzed and easily presented for future funding drives. Even without the analysis to discern success rates, the project can be regarded as a success for the GIS community in demonstrating the emerging relationship between politics and technology. As Warren Slocum, San Mateo County assessor-county clerk-recorder and chief elections officer, observes, "Our GIS-driven voter outreach program in San Mateo is one of the first of its kind, but surely not the last. The accuracy and speed that GIS technology lends to the process is overwhelming. I am certain that post-election analyses will provide the statistics for what we have already witnessed. GIS will be transforming how politics and elections are done."

On the Horizon Dennis Wurthrich, CEO of Farallon Geographics, sees the future applicability of GIS in realms other than politics. "Integrating existing databases containing demographic information with location analysis and display tools is revolutionizing how we mobilize and evaluate resources to maximize the impact of campaigns – political, media, or commercial" Here are just some of the many ways the United States will be using GIS in coming years.

Campaign Party Promotions:

Voter turnout and registration is of course not the lone province of unaffiliated county governments. Both Republican and Democrat parties could and are using similar GIS technology to pinpoint where they should target their campaign efforts. They can also visually and statistically correlate the impact of media buys in communities with donations, activism and registration.

Health Care:

Location is also a critical factor in determining health care services. Using GIS, you could correlate health services in local clinics and hospitals with ethnic populations. So for example, areas with high reports of STDs can be easily identified and mapped for any correlation with ethnic or economic information to determine educational outreach.

Applications to Marketing:

A GIS integrated with existing CRM lets you visually identify your most valuable customers, visualize demographic correlates with sales, and then target where new customers with similar demographic characteristics are located. This can be used to predict sales, design sales territories, choose store location, and tailor marketing campaigns and sales techniques in a region with better allocation of resources.