



# GIS @ UC San Diego

Geographic Information Systems – what  
are they?

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Social Sciences & Humanities Library  
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# Agenda & Introduction

- ③ 3 part agenda

- What is GIS (*Geographic information system*)
- Fundamentals of GIS
- Samples from campus and San Diego

# Who uses GIS at UCSD?

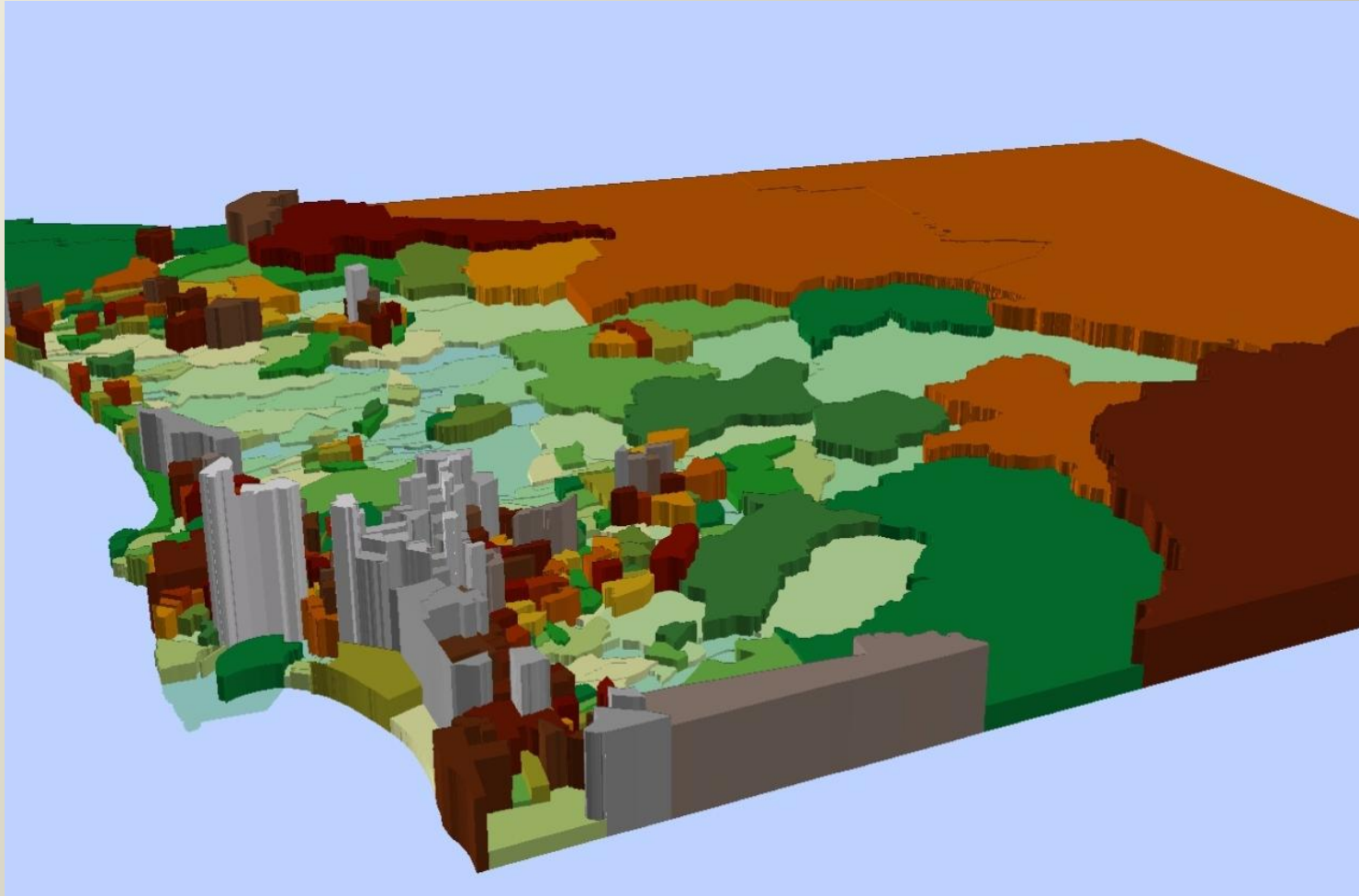
Over 50 departments including:

- **Archaeology**
- Anthropology
- Biological Anthropology
- Biological Sciences
- Center for Comparative Immigration Studies
- Center for Iberian and Latin American Studies
- Center for Immigration and Population Studies
- Center for US-Mexico Studies
- Chemistry
- Communication
- Computer Science
- **Economics**
- Engineering
- Environment & Sustainability Initiative
- Environmental Studies
- Environmental Systems
- Ethnic Studies
- **Family Medicine**
- Film
- Fraternity/Sorority
- Hazardous Materials Management
- History
- IRPS
- Medicine
- Medical Outreach
- Natural Resources
- Political Science
- Preuss School
- Regional Workbench Consortium
- **San Diego Supercomputer Center**
- **SIO**
- SIO Geologic Data Center
- SIO OARF Dry Lab
- Sixth College
- Sociology
- Spatial Ecology
- Superfund Basic Research Grant
- TRIO
- **Urban Studies & Planning**
- Visual Arts
- UCSD Decision Support
- **UCSD Environmental Health & Safety**
- UCSD Extension
- UCSD Facilities
- UCSD Forestry
- UCSD Natural Reserve System
- UCSD Upward Bound

# What is GIS?

- ⦿ **Geographic Information System (or Science)**
- ⦿ Software
- ⦿ Organize, analyze, visualize information
- ⦿ Layers & attributes
- ⦿ A tool for thinking spatially

# Looking at things anew



Created by Telesis

# Spatial thinking...

- Puzzles
- Space planning
- Imagine & visualize how to get somewhere and what the obstacles are
- Parking the car
- Problem solving
- Representations of the world
- Relationships
- Field-specific knowledge
- **TRYING TO UNDERSTAND OUR WORLD**

# Layers & Attributes

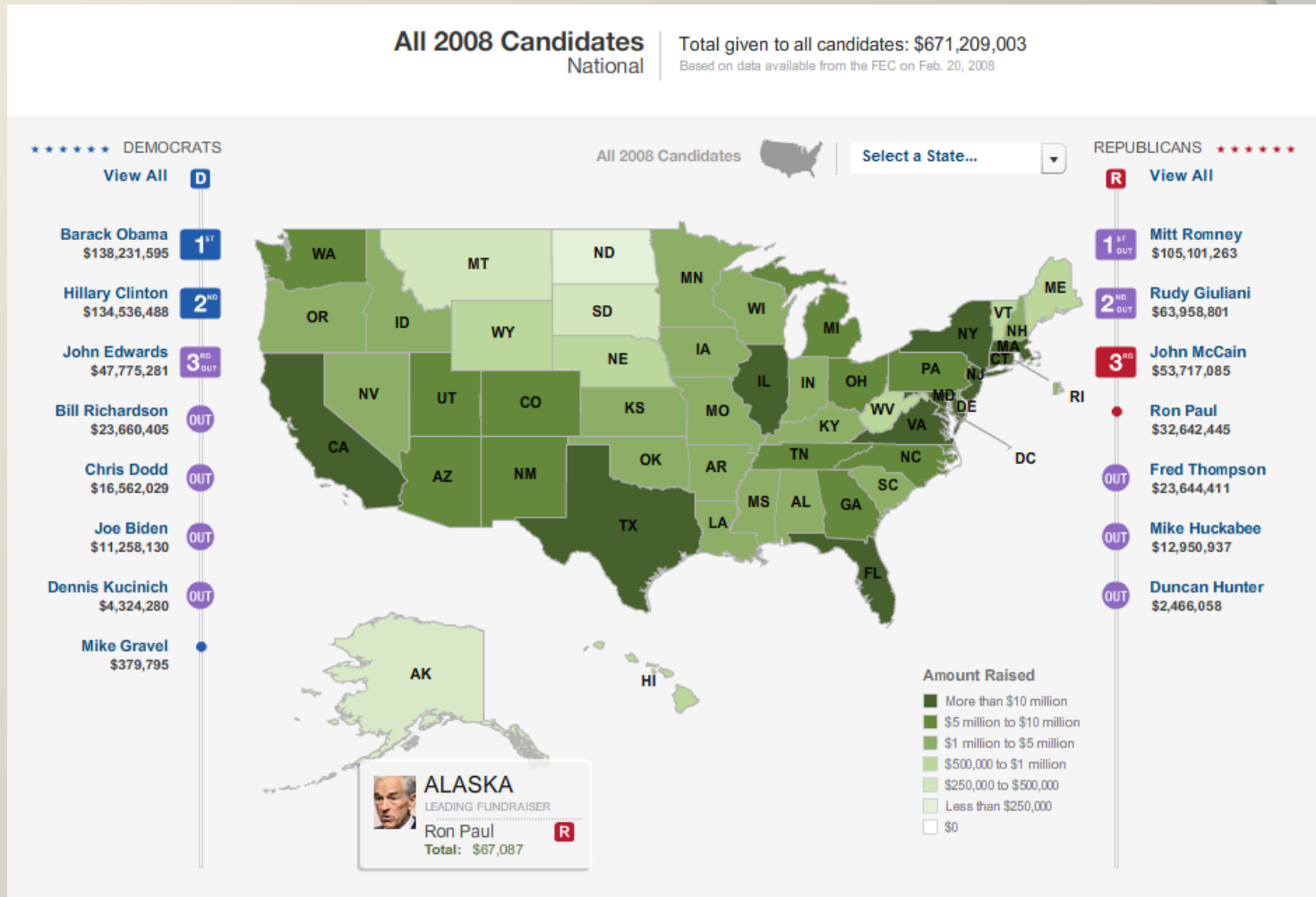


ID	ZIP_CODE	CITY	STATE	AREA_CODE	CITY_ALIAS_NAME
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2	00501	HOLTSMVILLE	NY	516	IRS SERVICE CENTER
3	00544	HOLTSMVILLE	NY	516	HOLTSMVILLE
4	00544	HOLTSMVILLE	NY	516	IRS SERVICE CENTER
5	00601	ADJUNTAS	PR	787	ADJUNTAS
6	00601	ADJUNTAS	PR	787	JARD DE ADJUNTAS
7	00601	ADJUNTAS	PR	787	URB SAN JOAQUIN
8	00602	AGUADA	PR	787	EXT LOS ROBLES
9	00602	AGUADA	PR	787	AGUADA
10	00602	AGUADA	PR	787	ALTS DE AGUADA
11	00602	AGUADA	PR	787	URB ISABEL LA CATOLICA
12	00602	AGUADA	PR	787	URB MONTEMAR

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# Real World Example



All campaign fundraising statistics are based on data provided by the Federal Election Commission and organized by the Center for Responsive Politics. The totals presented reflect donations from individual donors, political action committees and political parties. The data roughly covers the period January 1, 2007 through January 31, 2008. The statistics do not show the money candidates have spent during their campaigns and the amount they have on hand. For those details, please visit the [money page](#).

# More of the example

## Map: Campaign money race

Fundraising Candidate Polls

**Hillary Clinton**  
National



National Fundraising Total: \$134,536,488  
Based on data available from the FEC on Feb. 20, 2008

★★★★★ DEMOCRATS

View All **D**

**Barack Obama**  
\$138,231,595

1<sup>st</sup>

**Hillary Clinton**  
\$134,536,488

2<sup>nd</sup>

**John Edwards**  
\$47,775,281

3<sup>rd</sup> OUT

**Bill Richardson**  
\$23,660,405

OUT

**Chris Dodd**  
\$16,562,029

OUT

**Joe Biden**  
\$11,258,130

OUT

**Dennis Kucinich**  
\$4,324,280

OUT

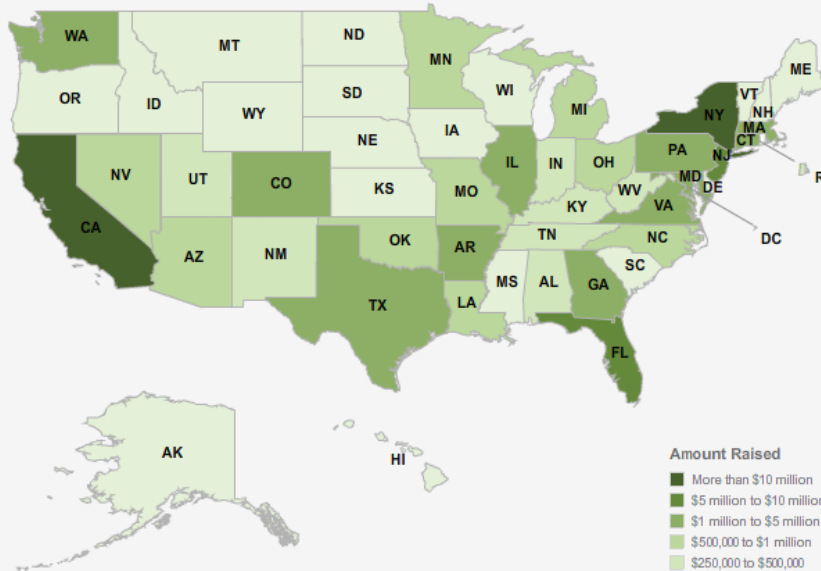
**Mike Gravel**  
\$379,795

OUT

All 2008 Candidates



Select a State...



**Barack Obama**  
National

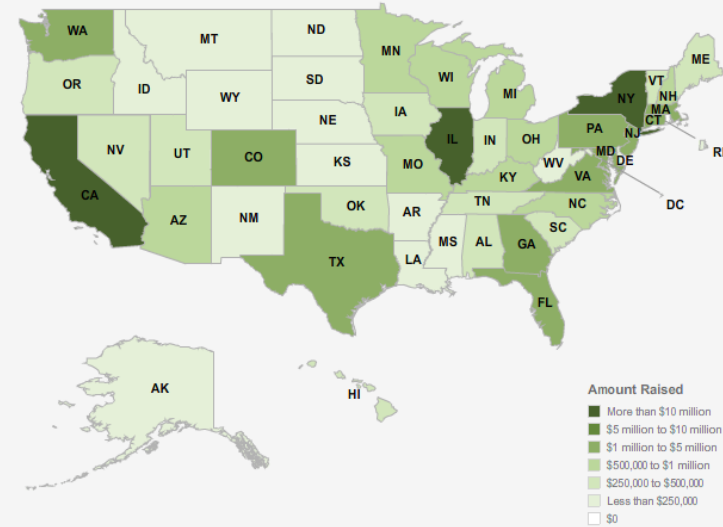


National Fundraising Total: \$138,231,595  
Based on data available from the FEC on Feb. 20, 2008

All 2008 Candidates



Select a State...



\$23,044,411

**Mike Huckabee**  
\$12,950,937

OUT

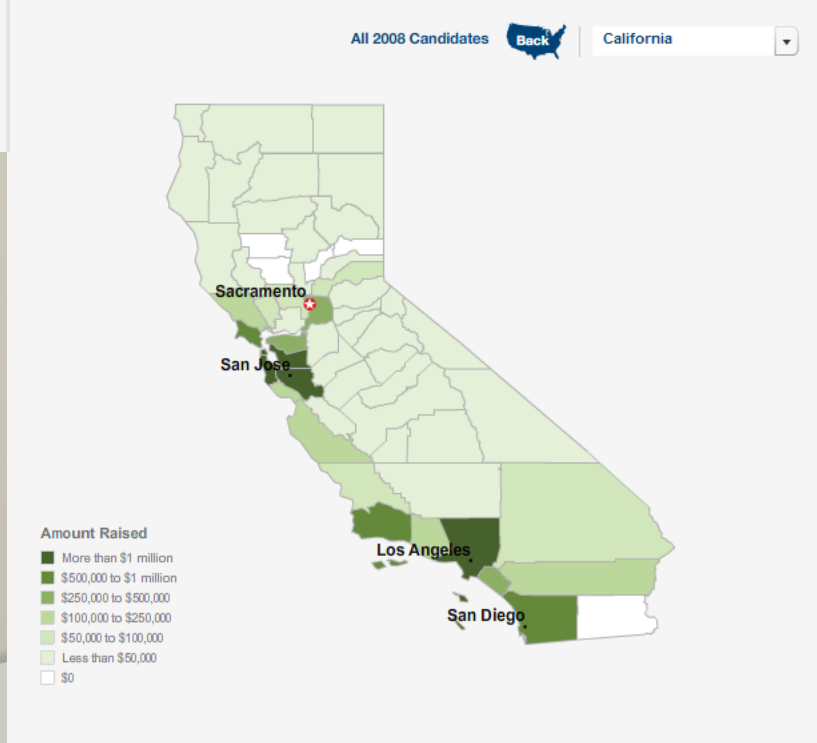
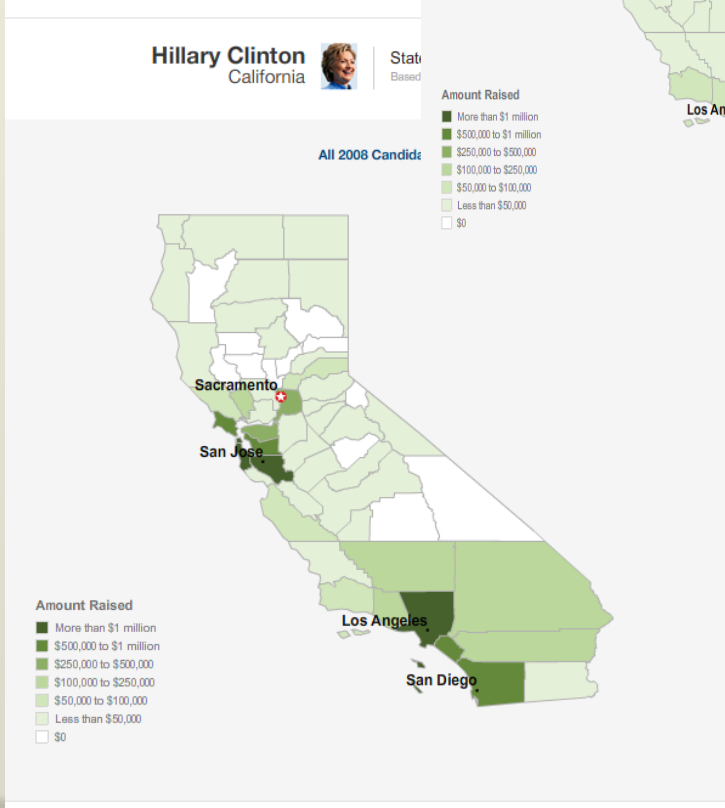
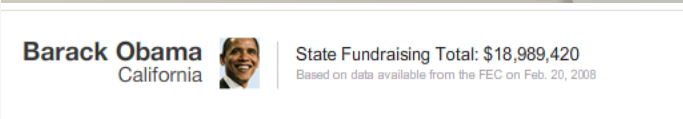
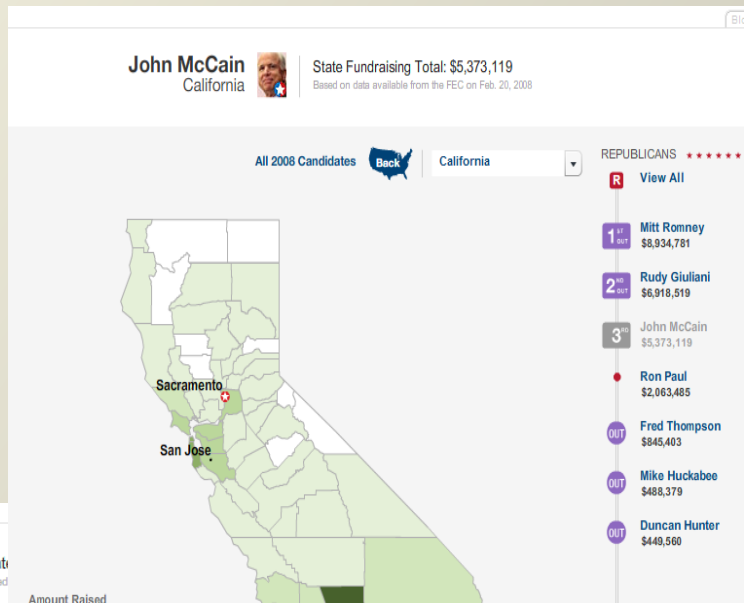
**Duncan Hunter**  
\$2,466,058

OUT

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From cnn.com  
on 3/8/08

# Now at the county level...



**GIS @ UC San Diego**



*Helping students, faculty & staff explore our world.*

**<http://govinfo.ucsd.edu/gis>**

# Who uses GIS at UCSD & Why

- ◎ Over 50 departments
- ◎ Mix of undergraduates, staff, graduates & faculty
  - Make work efficient
  - Answer questions
  - Visualize information

# Interested in more?

- ⦿ Available to all current UCSD community members
  - Geisel GIS Lab
  - GIS events
  - GIS listserv
  - Data
  - Actual people to help you

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<http://govinfo.ucsd.edu/gis>