

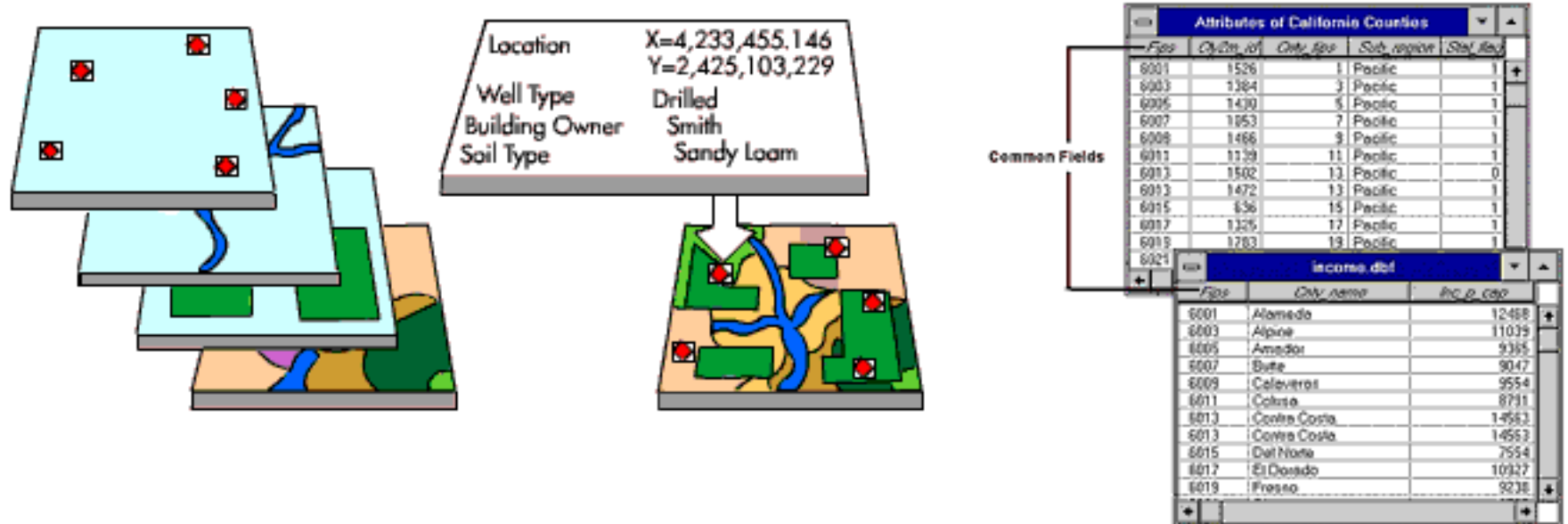
IDES GIS Workshop

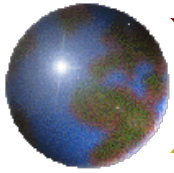
Professor Dawn Wright
Grad Assistant Lalo Guerrero



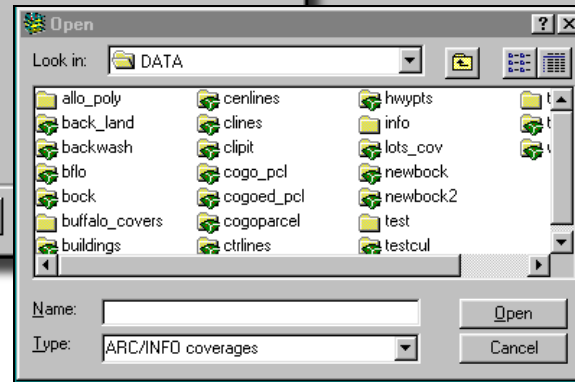
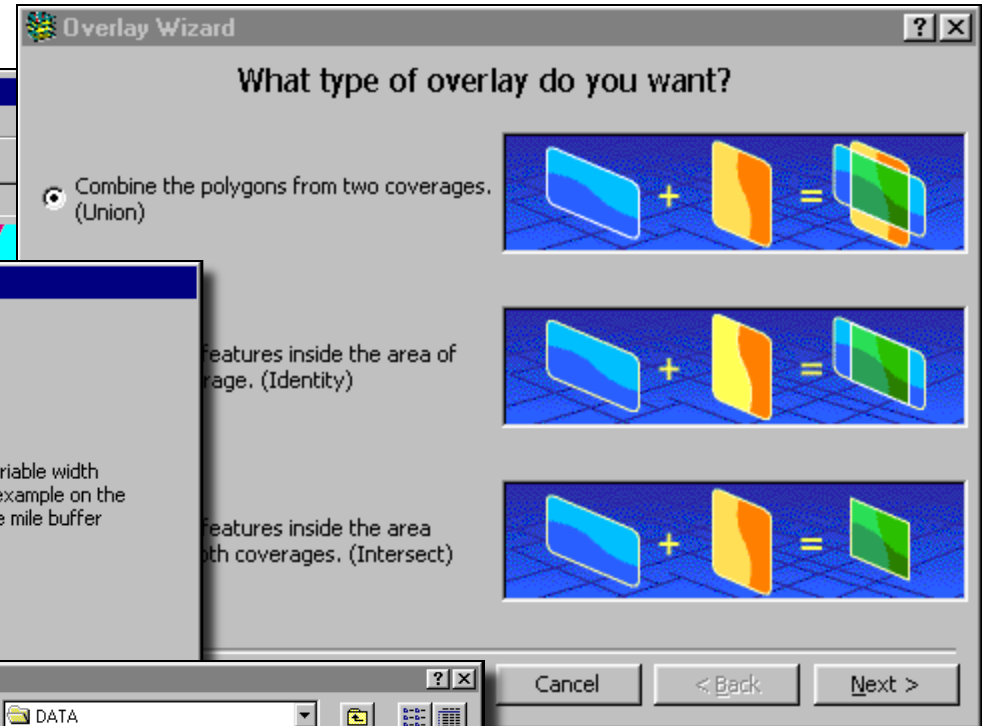
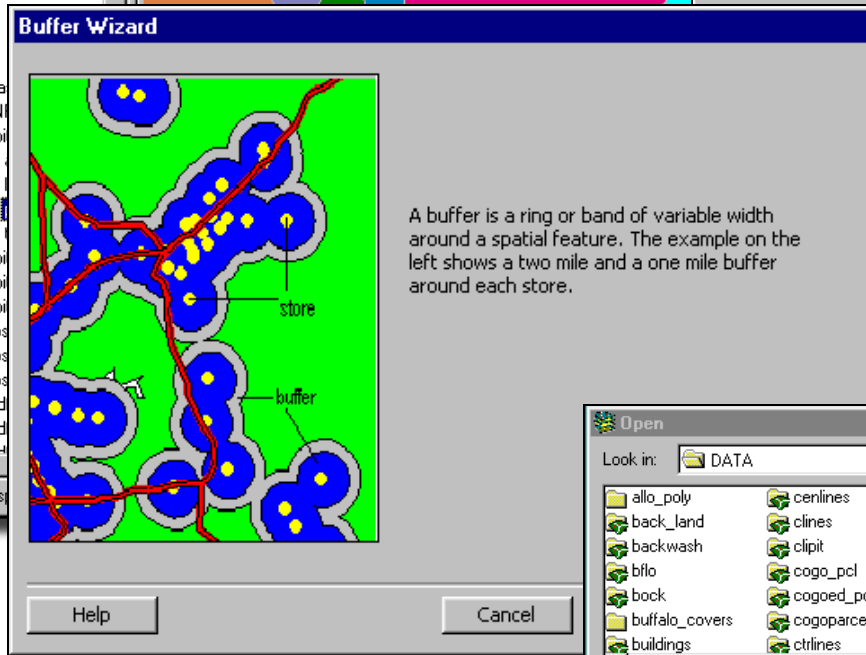
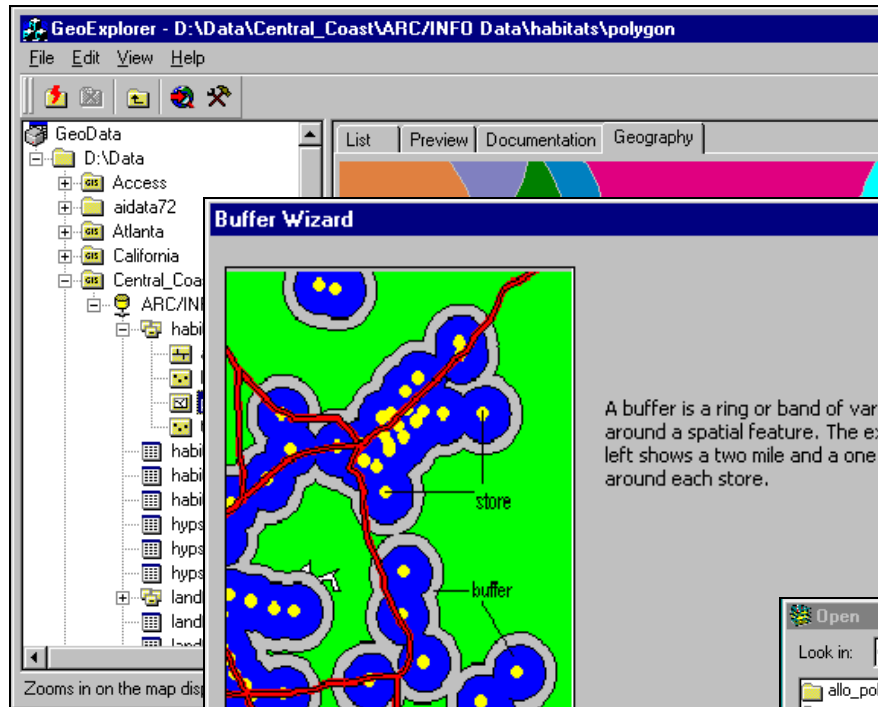
Three Unique Characteristics of a GIS

1. provides links between points, lines, polygons, images and their **ATTRIBUTES** in a database





2. provides algorithms for ANALYSIS of spatial data



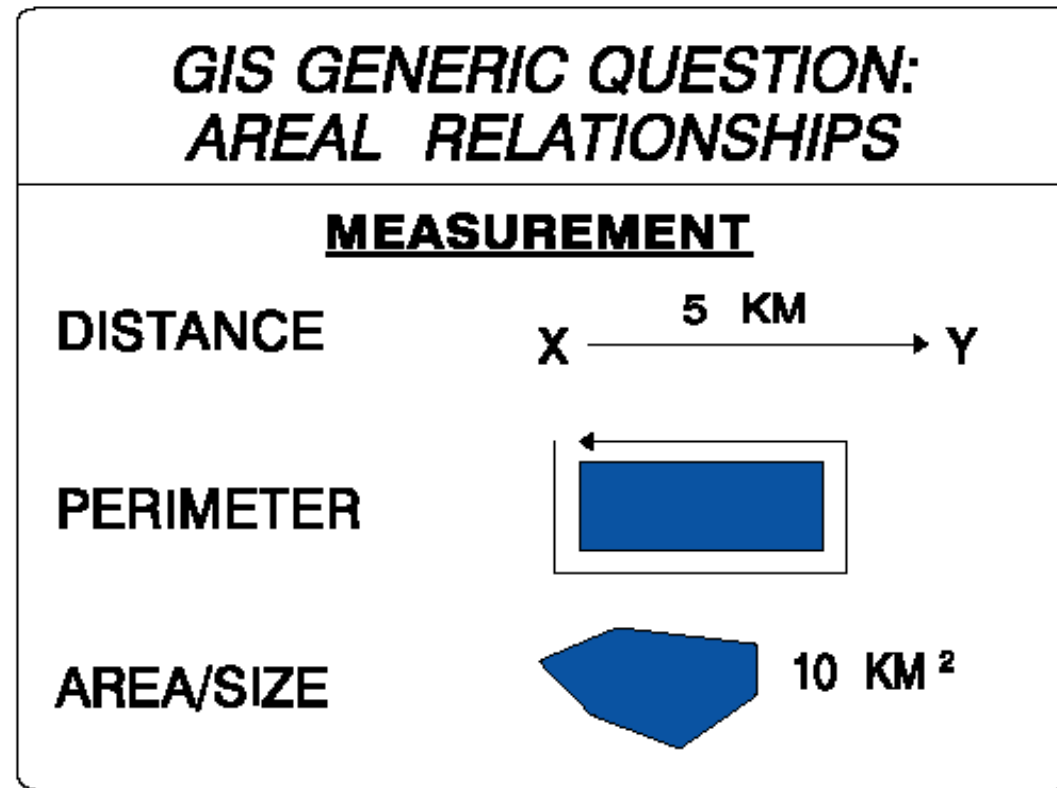


An Analysis Tool...

- ⊕ for every piece of data it specifies:
 - ⊞ what it is
 - ⊞ where it is
 - ⊞ how it relates to other pieces of data
- ⊕ things in common
- ⊕ see spatial relationships or create NEW relationships



3. “spatially intelligent” - “thinks” points, lines, areas, grids are actual spots on Earth’s surface - e.g., switching projections, computing distances





GIS “Layers,” “Themes,” “Overlays”

The screenshot shows the GeoExplorer application window with the following components:

- Title Bar:** GeoExplorer - D:\Data\Layers
- Menu Bar:** File Edit View Help
- Toolbar:** Includes icons for file operations and map navigation.
- Layer List (Left Panel):**
 - California
 - Central_Coast
 - ARC/INFO Data
 - ESRIDATA
 - Graphics
 - Layers** (selected)
 - Buildings
 - CA_tracts
 - Highways
 - Lots
 - Parcels polygons
 - Streets
 - Sub-Division
 - Tracts
 - Maps
 - Mexico
 - NewEng
 - Realtor
 - Redlands
 - SanDiego Data
 - Santa_Barbara
 - SF
 - Shapefiles
 - trails
 - USA
 - Various_Access_database
 - Various_ARC_INFO

- Preview Windows (Right Panel):**
- Parcels polygons:** Shows a map of a region with orange-shaded polygonal parcels.
- Streets:** Shows a map of a region with a green line network representing streets.
- Sub-Division:** Shows a map of a region with a blue background and white lines representing sub-division boundaries.
- Tracts:** Shows a map of a region with a multi-colored polygonal pattern representing tracts.
- Status Bar:** Displays an overview of the selected object.



Explore Maps/Data to Find Patterns

- ✦ Where do they occur (or not occur)?
- ✦ Why here and not elsewhere?
- ✦ What **process** is behind this pattern?
- ✦ What else is spatially associated with this pattern?
- ✦ Has this pattern changed spatially through time?



Major Questions/Tips for YOU...

- ✚ What ARE my questions?
- ✚ How much **data** do I need and of what quality?
- ✚ How can I combine my data to answer my questions?
- ✚ Take your time, read carefully, focus



Schedule and Approach

http://ides.science.oregonstate.edu/ides_GIS2011

“Geobrowser”
(e.g., Google Earth)



Web-GIS:

No software
except web
browser; all
tools and data
online



Desktop
GIS:

Local software
with local data
on
local
computer

