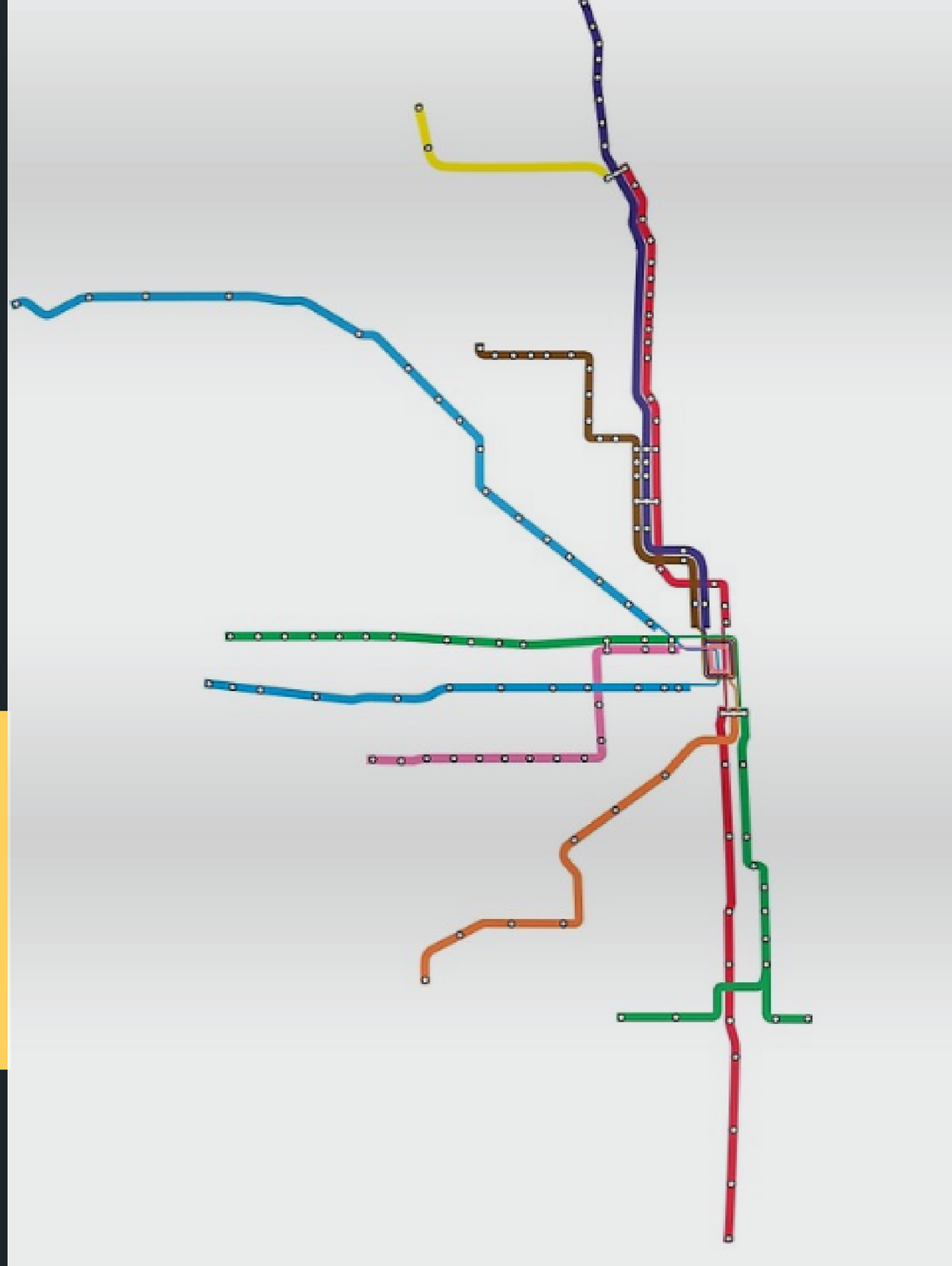
Code Your Dreams
Lesson 15

MAPPING

By Sarah Buchhorn



TODAY'S OUTLINE

What is Mapmaking?
Components of Maps and Mapping Applications
Spatial Data Terms and Concepts
Mapmaking Best Practices

WHAT IS MAPMAKING?

Do you use maps? Why?

Do you make maps? Why?

Is mapmaking simple or complex? Why?

QUICK DRAW

Take 2 minutes to draw a map of Chicago right now

SHARE YOUR MAP WITH YOUR NEIGHBOR.

WHAT IS THE SAME?
WHAT IS DIFFERENT?
WHICH ONE IS CORRECT?

Mapmaking / Cartography

DECISIONS

SET THE MAP'S AGENDA

Select traits of the object to be mapped

GENERALIZATION

Reduce complexity, noise

REPRESENT TERRAIN

Map projections

DESIGN

Convey the message to the audience

Map Components

T O S S L A D

TITLE
ORIGIN
SOURCE
SCALE
LEGEND
AUTHOR
DATE

LET'S LOOK AT SOME SAMPLES

What is the map's agenda?

Do you see the TOSSLAD components?

What other components do you see?

DESIGN

Which maps catch your eye? Why?

Does the map achieve its agenda?

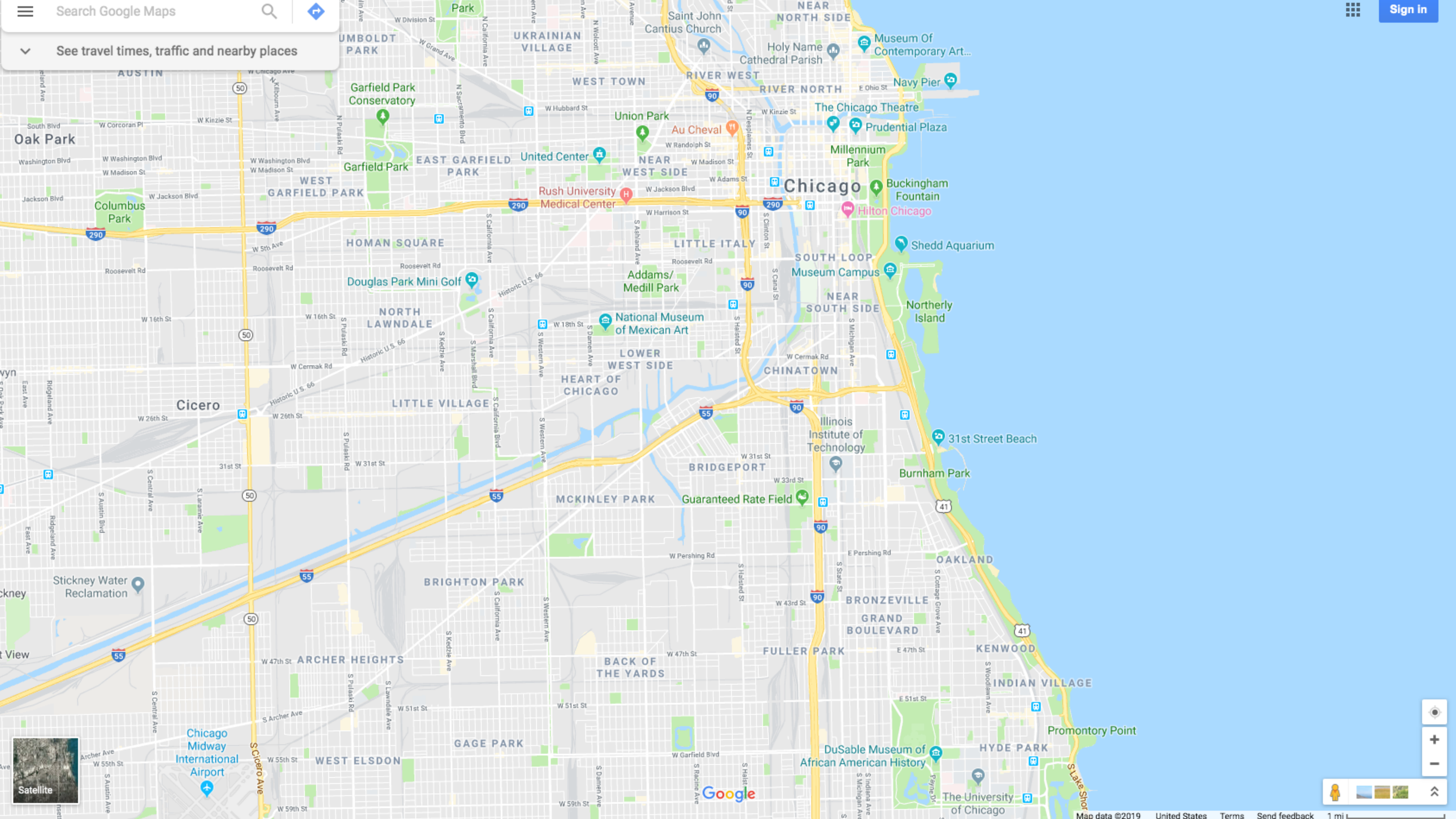
Maps in Applications

These maps have been static. What possibilities does an interactive map open up?

Maps in Applications

These maps have been static. What possibilities does an interactive map open up?

- Layer Control
- Pan
- Zoom
- Animation
- Sliders
- Dropdown menus
- Annotations
- Links
- And more!


Search Google Maps
See travel times, traffic and nearby places
Sign in
Chicago
Oak Park
Cicero
AUSTIN
UKRAINIAN VILLAGE
WEST TOWN
NEAR NORTH SIDE
RIVER WEST
RIVER NORTH
EAST GARFIELD PARK
WEST GARFIELD PARK
NEAR WEST SIDE
HOMAN SQUARE
LITTLE ITALY
SOUTH LOOP
NEAR SOUTH SIDE
NORTH LAWNDALE
LOWER WEST SIDE
HEART OF CHICAGO
LITTLE VILLAGE
CHINATOWN
BRIDGEPORT
MCKINLEY PARK
BRIGHTON PARK
ARCHER HEIGHTS
BACK OF THE YARDS
FULLER PARK
GRAND BOULEVARD
BRONZEVILLE
OAKLAND
KENWOOD
INDIAN VILLAGE
HYDE PARK
GAGE PARK
WEST ELSDON
Garfield Park Conservatory
Garfield Park
Union Park
Au Cheval
United Center
Rush University Medical Center
Columbus Park
Douglas Park Mini Golf
Addams/ Medill Park
National Museum of Mexican Art
Saint John Cantius Church
Holy Name Cathedral Parish
Museum Of Contemporary Art...
Navy Pier
The Chicago Theatre
Prudential Plaza
Millennium Park
Buckingham Fountain
Hilton Chicago
Shedd Aquarium
Northerly Island
Illinois Institute of Technology
31st Street Beach
Burnham Park
Guaranteed Rate Field
Stickney Water Reclamation
Chicago Midway International Airport
DuSable Museum of African American History
Promontory Point
The University of Chicago
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SPATIAL DATA

HOW IS IT GATHERED?

satellites (GPS)
cell towers
devices with known locations

WHAT DOES IT LOOK LIKE?

values in a geographic coordinate system (example: 41.878765, -87.635905)

HOW DO WE USE IT?

we can plot the points (lines, or polygons) to create a map

Place Name	Latitude	Longitude
Redwood City, CA, USA	37.487846	-122.236115
Gastonia, NC, the USA	35.255280	-81.180275
New Braunfels, TX, the USA	29.700001	-98.116669
Palm Beach Gardens, FL, USA	26.838619	-80.129967
Forestville, CA, USA	38.473625	-122.889992
Houston, TX, USA	29.749907	-95.358421
Muncie, IN, USA	40.191891	-85.401695
Palm Springs, CA, USA	33.830517	-116.545601
Hot Springs, AR, USA	34.496212	-93.057220
Richmond, VA, USA	37.541290	-77.434769
Fayetteville, AR, USA	36.082157	-94.171852
Yuma, AZ, USA	32.698437	-114.650398
Peoria, AZ, USA	33.580944	-112.237068
Tempe, AZ, USA	33.427204	-111.939896
Diamond Bar, CA, USA	34.028622	-117.810333
Auburn, AL, USA	32.609856	-85.480782

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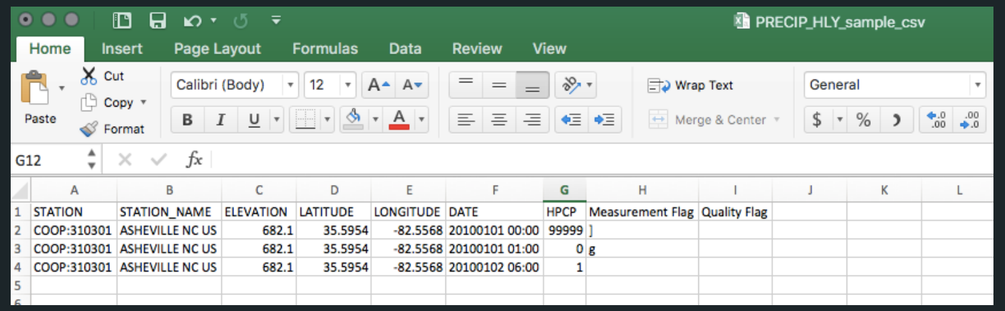

	A	B	C	D	E	F	G	H	I	J	K	L
1	STATION	STATION_NAME	ELEVATION	LATITUDE	LONGITUDE	DATE	HPCP	Measurement Flag	Quality Flag			
2	COOP:310301	ASHEVILLE NC US	682.1	35.5954	-82.5568	20100101 00:00	99999	]				
3	COOP:310301	ASHEVILLE NC US	682.1	35.5954	-82.5568	20100101 01:00	0	g				
4	COOP:310301	ASHEVILLE NC US	682.1	35.5954	-82.5568	20100102 06:00	1					
5												

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}];
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BEFORE NEXT TIME

LOOK AT YOUR APP DESIGN PLAN.

1. Define your map's agenda. Does it accomplish this?
2. Identify the components of your map. For interactive components, what does each component do? Will the user understand?
3. Is anything missing? Can you improve your map design?
4. Write out the data sources you need, and where you will find them. (Be specific! You may have to change your plan if the data is not available unless you can collect it yourself)

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