

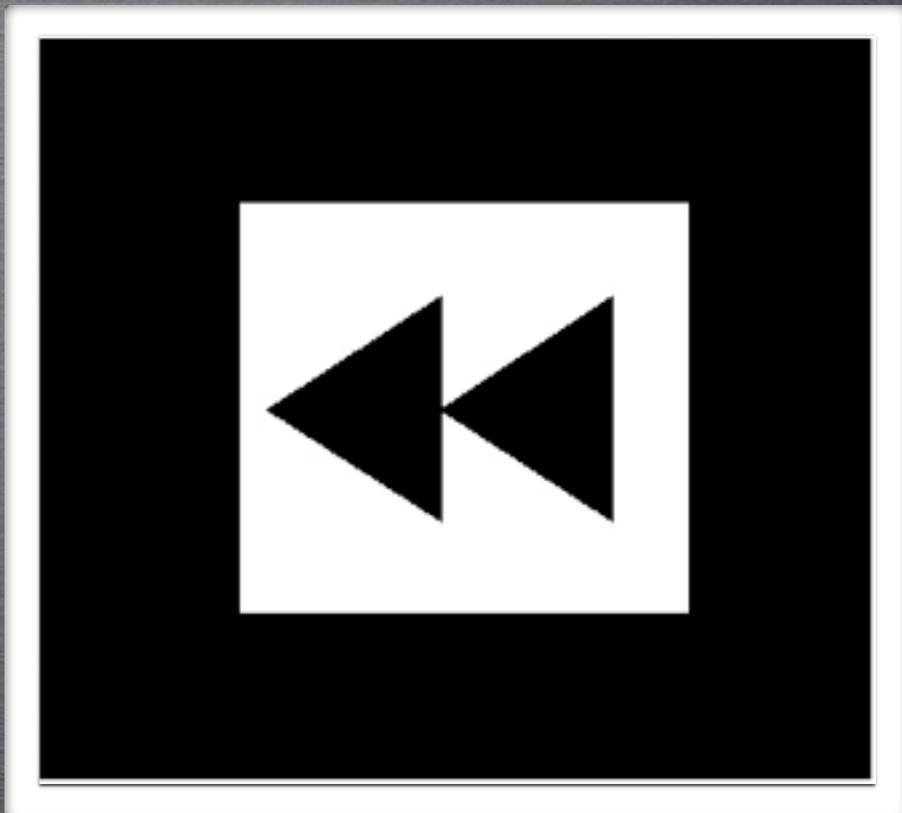
# WiU

Web interface & Usability



# Lec 4 Review

Page Layout  
Interactivity



# PAGE LAYOUT

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## Aesthetics

---

How appealing is the interface?

is it pleasing to look at and use?

does it supports users mental  
models of how it should work or  
behave?

# PAGE LAYOUT

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## Visual Hierarchy

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users should be able to understand the information based on its layout

larger fonts top left = most important content

“white space” creates visual separation of hierarchies

group like things together - lines, boxes, color bars

# PAGE LAYOUT

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## Visual Flow

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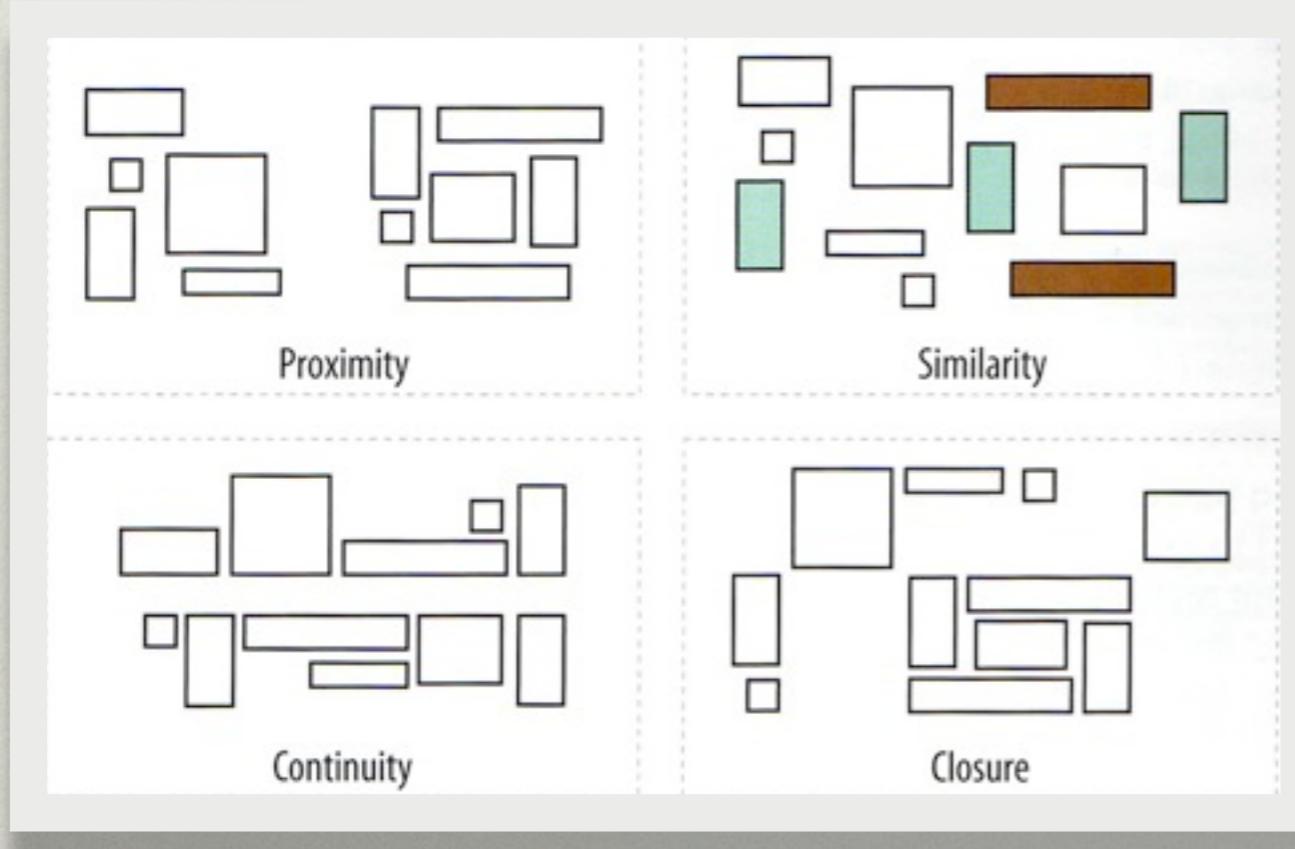
the track users eyes take when scanning

create focal points to steer the users eyes -  
*strongest to weakest importance*

place buttons & controls in visual line to finishing place -  
*save or submit*

# PAGE LAYOUT

## Grouping & Alignment - gestalt principles



**proximity**  
association of grouped things

**similarity**  
association of like things

**continuity**  
continuous line from smaller things

**closure**  
perceived closure of grouped things

# COURSE REVIEW

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## Design Patterns > Page Layout > Visual Framework

---

what -

page with the same basic layout & colors  
flexible for varying sized content

when to use -

pages need to look or “hang” the same

why -

to keep users and content oriented - easy

how -

each page should share same - sign posts,  
nav, titled sections, gutters, alignment

ARTICLES · TOPICS · ABOUT · CONTACT · CONTRIB

MAY 06, 2008

What does it take to build an online community like Flickr? And how can we tell if interface design conventions we take for granted actually help or hurt users?

**Community: From Little Things, Big Things Grow**

by GEORGE OATES

Q. What technology do you need to build the next Flickr?  
A. Trick question. What you need to build the next Flickr is people. George Oates, a key member of the core team that shaped the Flickr community, shares lessons that can help you grow yours.

**Zebra Striping: Does it Really Help?**

by JESSICA ENDERS

Just because a design convention exists doesn't mean it works. Our field runneth over with design patterns, but is low on evidence of their utility. Jessica Enders drops some science on the widespread belief that zebra stripes aid the reader by guiding the eye along a table row.

*A List Apart explores the design, development, and meaning of web content, with a special focus on web standards and*

AN EVENT APART  
*coming to a city near you*

T-SHIRTS  
*hide your shame*

A BOOK APART  
*coming soon*

EDITOR'S CHOICE  
*originally ran: March 05, 2004*

**Zebra Tables**

by DAVID F. MILLER

While misused tables are becoming increasingly rare, the table retains a legitimate role in data formatting. A little CSS and JavaScript magic can make tables better at what they do best: displaying tabular data.

# COURSE REVIEW

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## Design Patterns > Page Layout > Center Stage

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**what -**

most important part of UI is largest part

**when to use -**

to show one set of primary information  
sites, forms, graphic editors all use this

**why -**

guide the users eyes to a starting point  
center stage establishes purpose of UI

**how -**

center stage dominates size, color, context



# COURSE REVIEW

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## Design Patterns > Page Layout > Titled Sections

---

what -

separate content with visually strong titles

when to use -

to make large page content easy to scan

why -

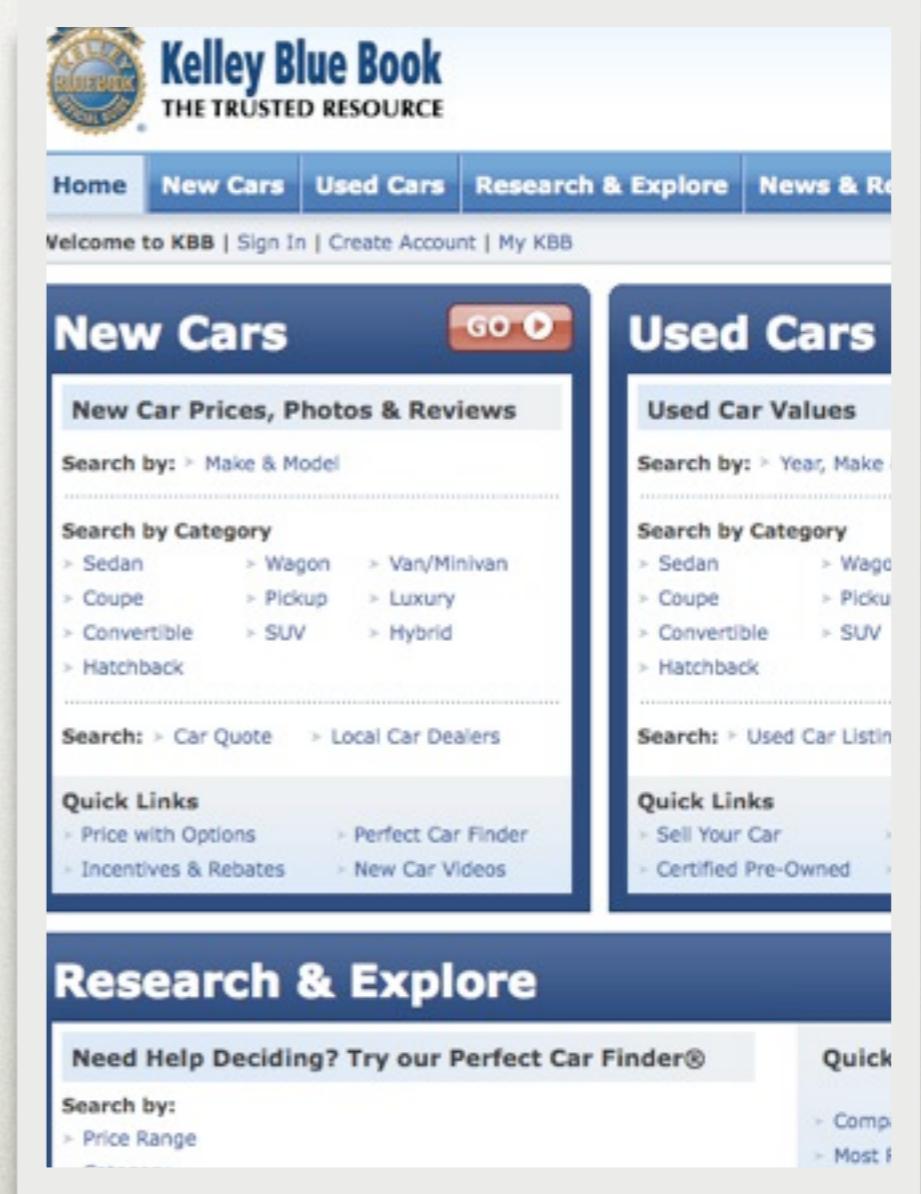
chunking and separation of hierarchy

how -

fonts that stand out - set on reverse color

WS to separate sections - box like content

*card stacks, two panel, extras-on-demand all help chunk*



# COURSE REVIEW

---

## Design Patterns > Page Layout > Card Stack

---

**what -**

section content on separate panels / cards

**when to use -**

too much content on one page - clutter  
users only need to see 1 section at a time

**why -**

labeled cards understandable at a glance

**how -**

short memorable titles  
tabs for less than six cards

SPECS	PERFORMANCE DATA	STANDARDS & OP
LOA: 35' 4" Beam: 10' 8" Draft: 24" Dry Weight Less Engines: 9,260 lbs Person Capacity: 14 Fuel Capacity: 356 gallons Bridge Clearance: 9' 6" Transom Height: 30/25 Transom Deadrise: 25 degrees Average Deadrise: 41 degrees Max HP: 1050 hp Engine Options: Triple Suzuki 300, Triple Yamaha 300, Triple Mercury 300, Twin Yamaha 350		

# COURSE REVIEW

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## Design Patterns > Page Layout > Right/Left Alignment

**what -**

good alignments for 2 column tables

**when to use -**

forms with text labels in front of them

**why -**

creates perceptual groupings - proximity  
*good usability - labels go above left of input*

**how -**

right align labels to left of inputs  
this works best for table based data

**New shipping address.**  
Click the "Save" button when finished, click the "Continue" button.

**Full Name:**

**Address Line1:**

Street address, P.O. box, company name

**Address Line2:**

Apartment, suite, unit, building, floor

**City:**

**Province/Region:**

**IP/Postal Code:**

**Country:**

United States

**Phone Number:**

**Is this address also your billing address (t**

# COURSE REVIEW

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## Design Patterns > Page Layout > Diagonal Balance

---

**what -**

top left of page balanced with bottom right

**when to use -**

dialog box or page with titles in upper left  
and controls in lower right - no scroll bars

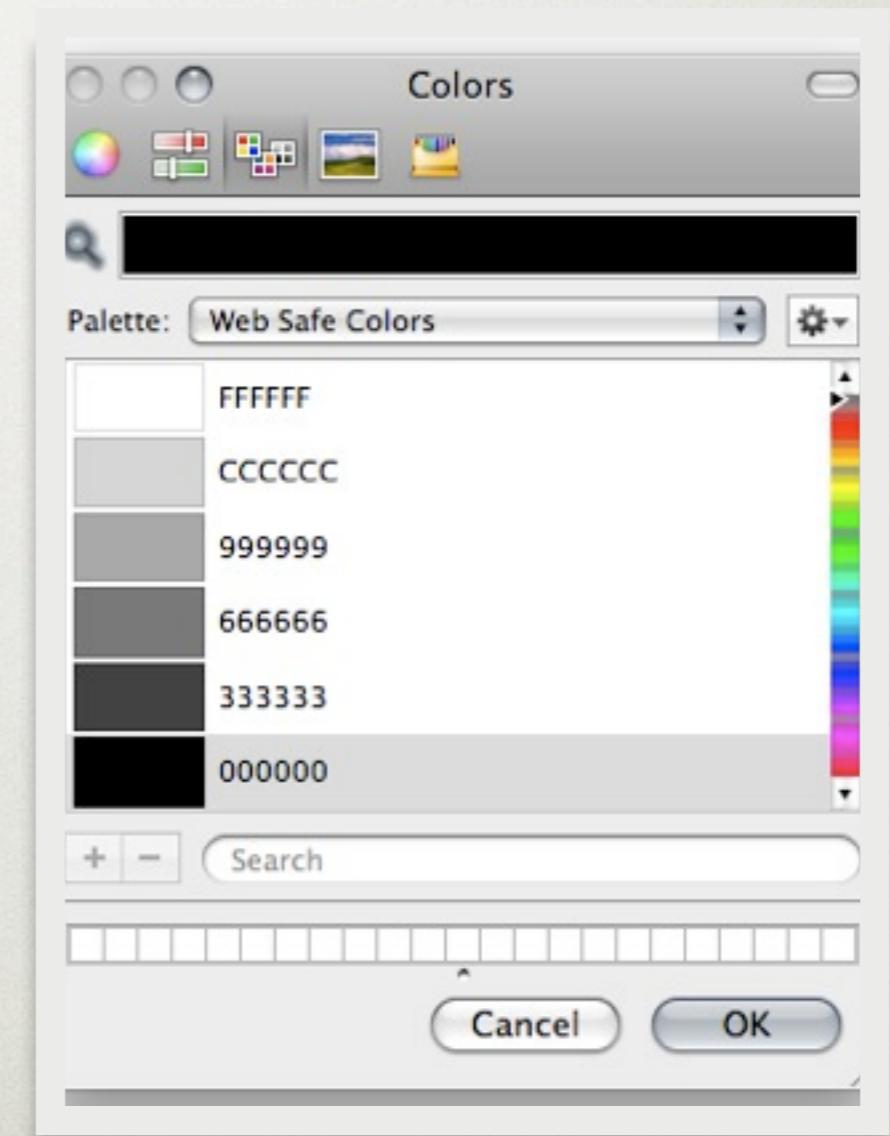
**why -**

balanced visually - steer eyes to finish

**how -**

upper left - place titles, tabs, etc.

lower right - place control/action buttons



# COURSE REVIEW

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## Showing Actions & Interactivity

Links -

Buttons -

Menu Bars -

Pop-Up Menus -

Drop Down Menus -

Invisible Actions -

Action Panels -

Toolbars -

# COURSE REVIEW

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## Design Patterns > Interactivity > Button Groups

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**what -**

present related actions as group of buttons

**when to use -**

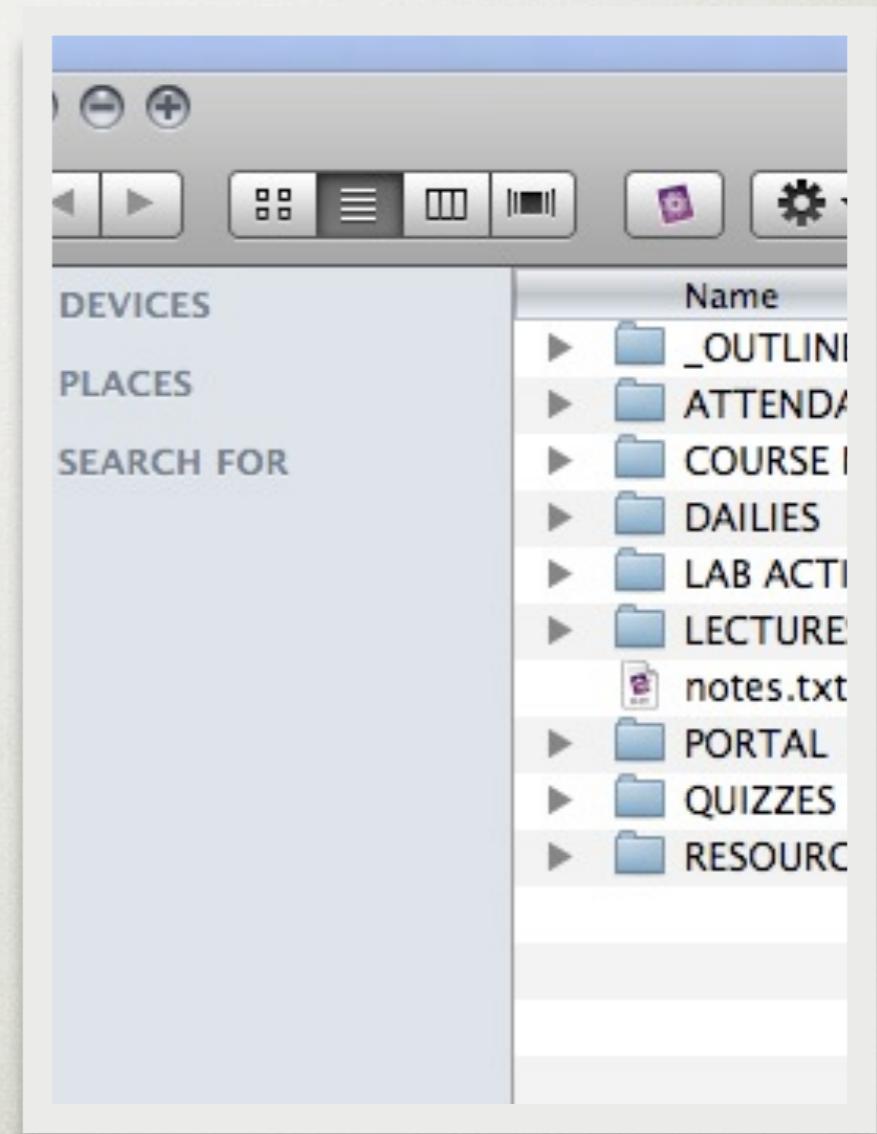
presenting a similar actions 2 - 5

**why -**

buttons make UI self describing  
instantly communicate available actions

**how -**

create obvious labels based on actions  
same height and width when possible



# COURSE REVIEW

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## Design Patterns > Interactivity > Action Panels

---

**what -**

actions / objects panel list always visible

**when to use -**

too many for button group or linear menu

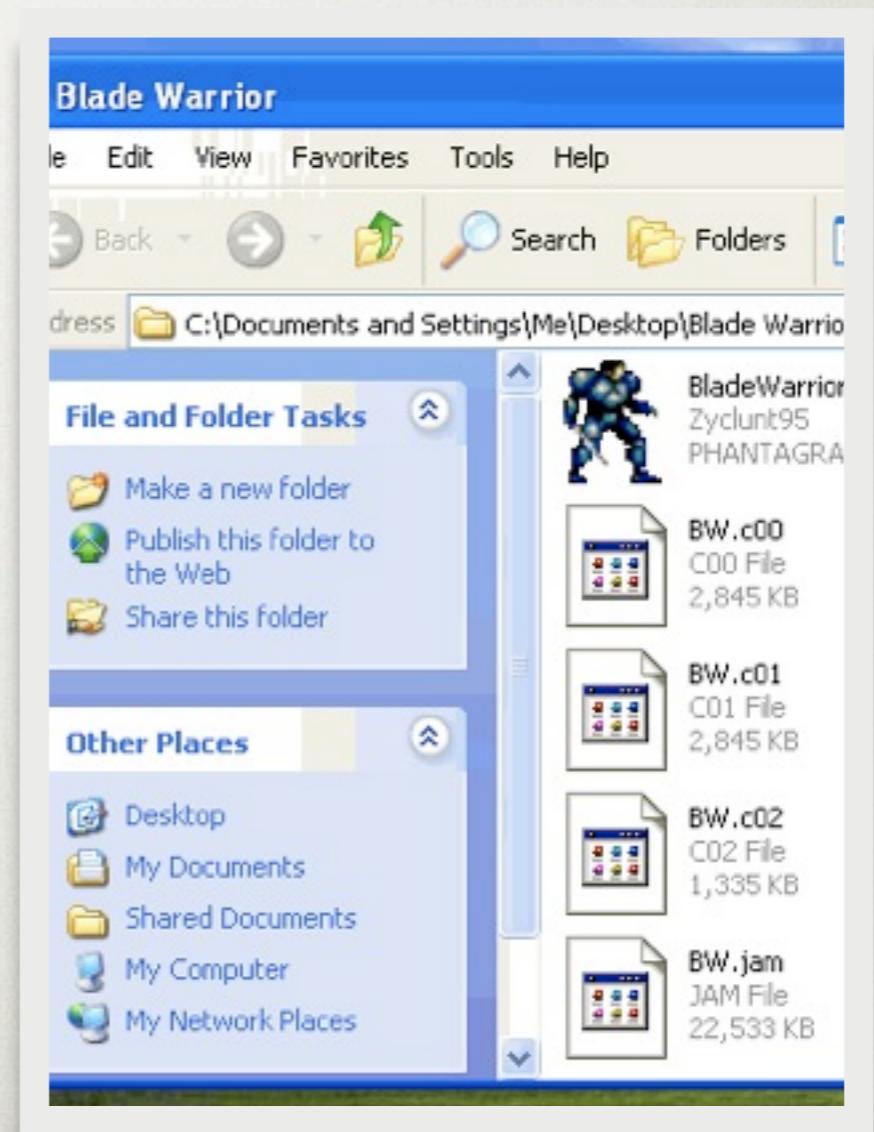
not good for small devices - too big

**why -**

quick access to common actions

**how -**

structure it to be easy to use and recognize  
label them to convey actions available



# COURSE REVIEW

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## Design Patterns > Interactivity > Done/Submit Buttons

**what -**

labeled button that finishes a transaction

**when to use -**

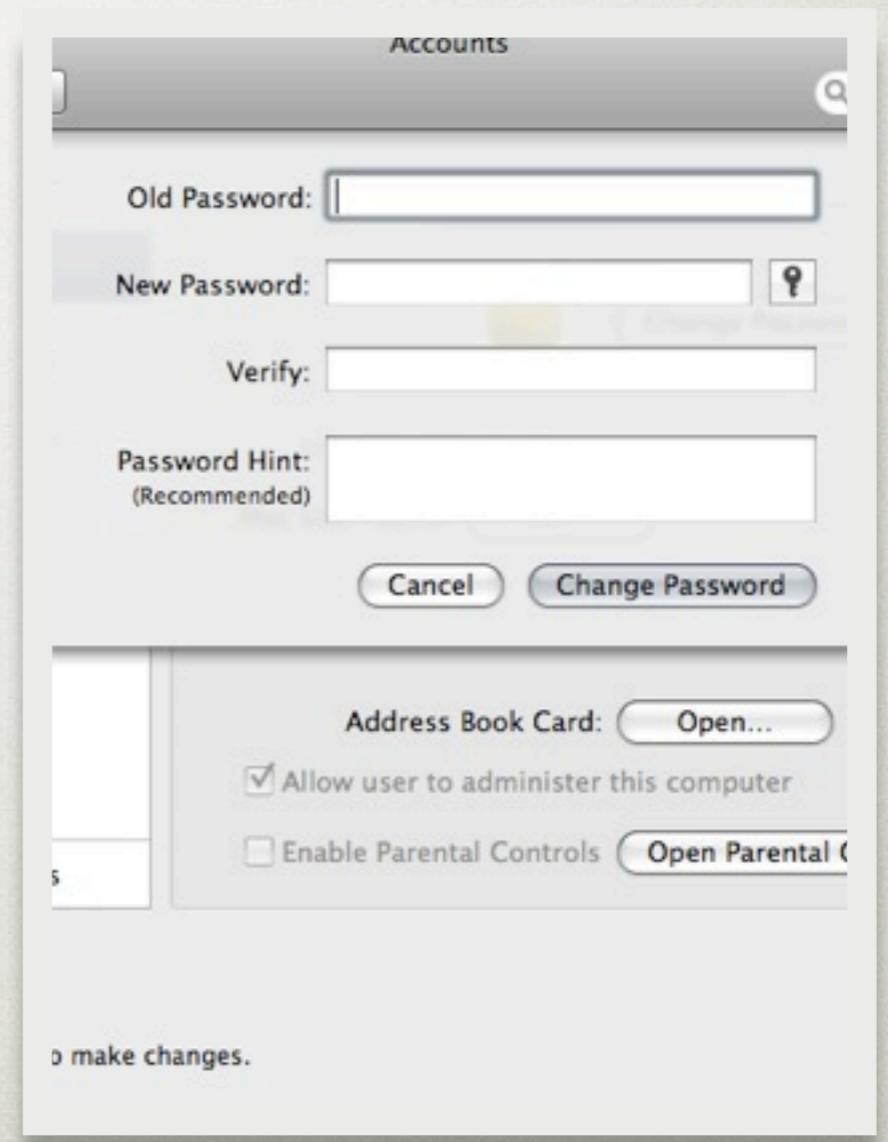
committing a group of settings - save  
final step of a transaction - check out

**why -**

well understood last step gives closure

**how -**

create a button that looks like a button  
placed at end of visual flow - bottom right



# COURSE REVIEW

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## Design Patterns > Interactivity > Progress Indicators

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**what -**

show the user how much progress is done

**when to use -**

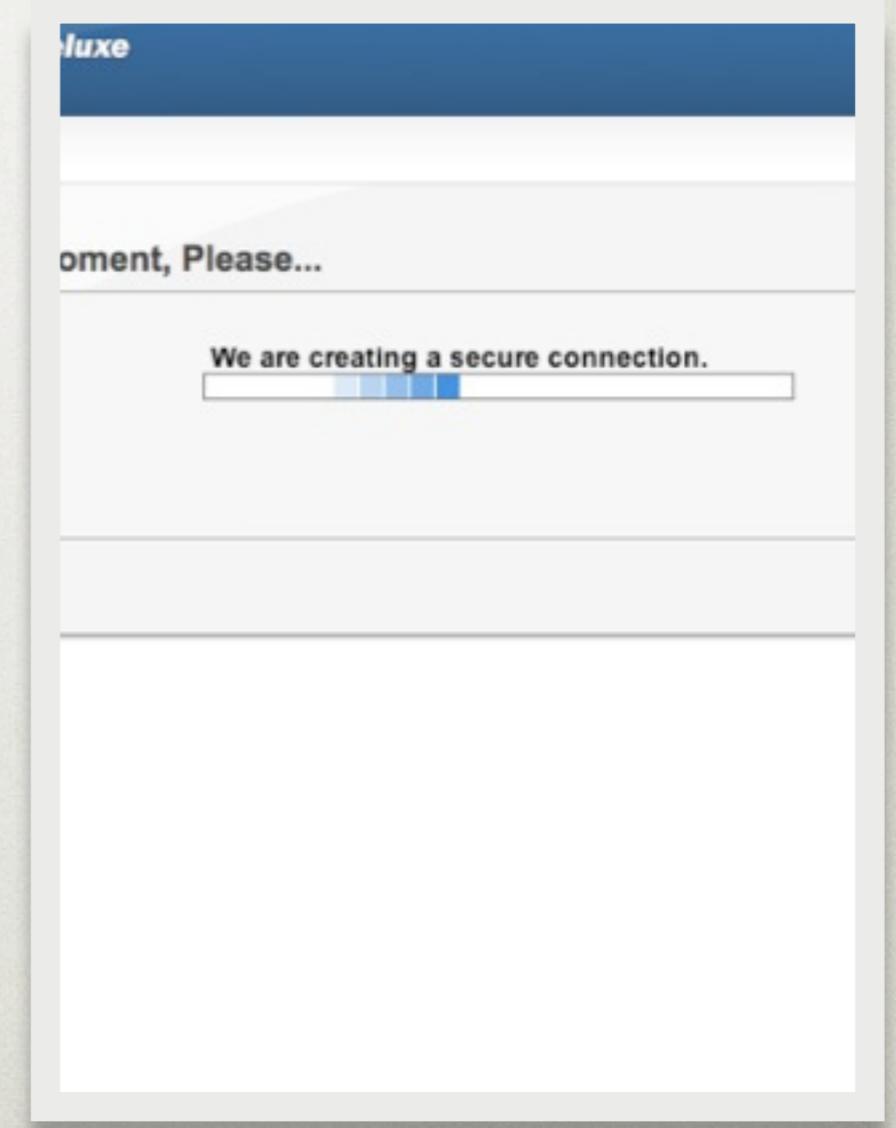
time consuming operation interrupts UI

**why -**

seeing something happening = patience  
eliminates user uncertainty with actions

**how -**

- how much is completed, is left
- how to stop or cancel



# COURSE REVIEW

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## Design Patterns > Interactivity > Responsive Enabling

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**what -**

start with mostly disabled UI - wizards  
guide users - enable more UI each step

**when to use -**

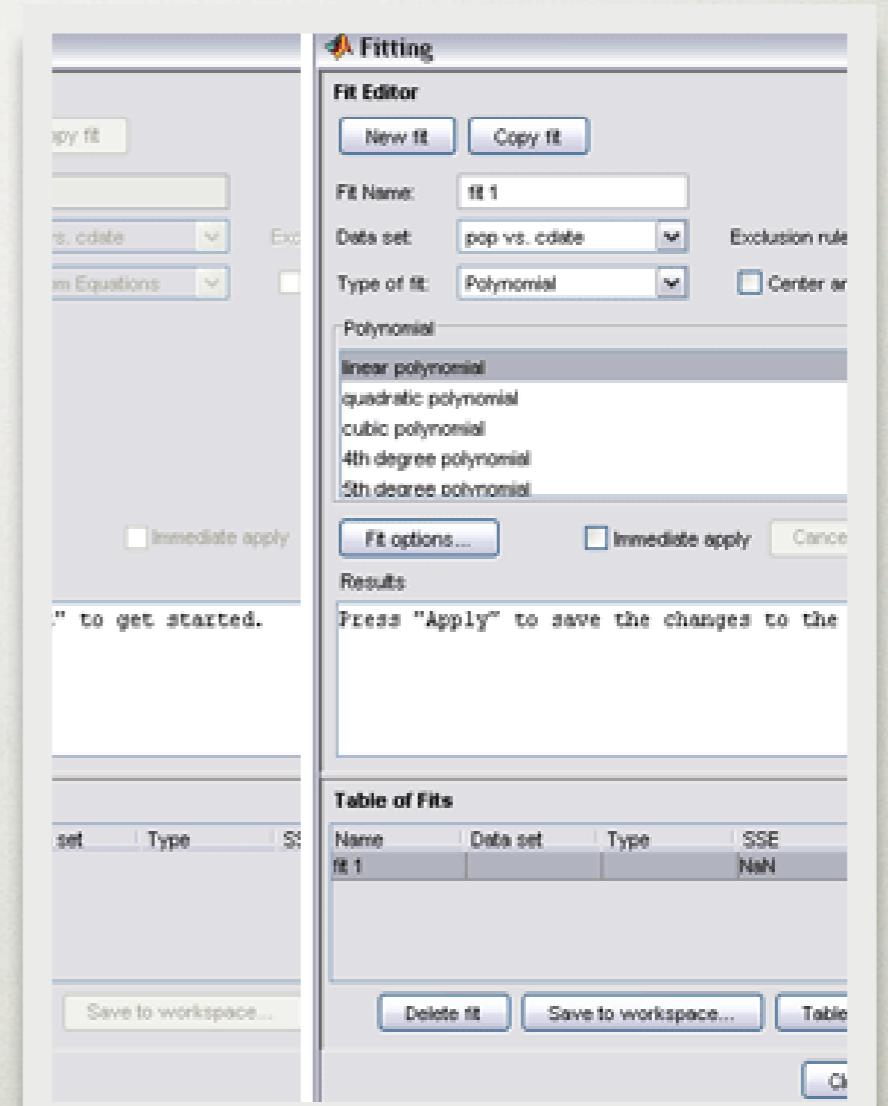
UI walks users thru a complex task

**why -**

users form mental models of cause/effect  
prevent a lot of error scripting - poka yoke

**how -**

enable next step after each choice



# COURSE REVIEW

---

## Design Patterns > Interactivity > Responsive Disclosure

**what -**

start UI with first choice visible - wizards  
guide users - display more UI each step

**when to use -**

UI walks users thru a complex task  
avoid form clutter on page - overwhelms

**why -**

keep users from backing out of form

**how -**

next elements invisible till choice is made

The screenshot shows a user interface for TurboTax Online. At the top, it asks 'Have you used TurboTax Online before?' with two radio button options: 'Yes' (unchecked) and 'No' (checked). Below this, there are two columns: 'Create a User ID' (described as easy and saving information) and 'Start With' (described as a reminder of user ID information). A large blue 'Create User ID' button is at the bottom left, and a blue 'Jump Right' button is at the bottom right.

# Complex Data

Information graphics like maps, tables and graphs communicate information visually rather than verbally. We can represent and associate large amounts of (complex) data by organizing it to be more visually understood.

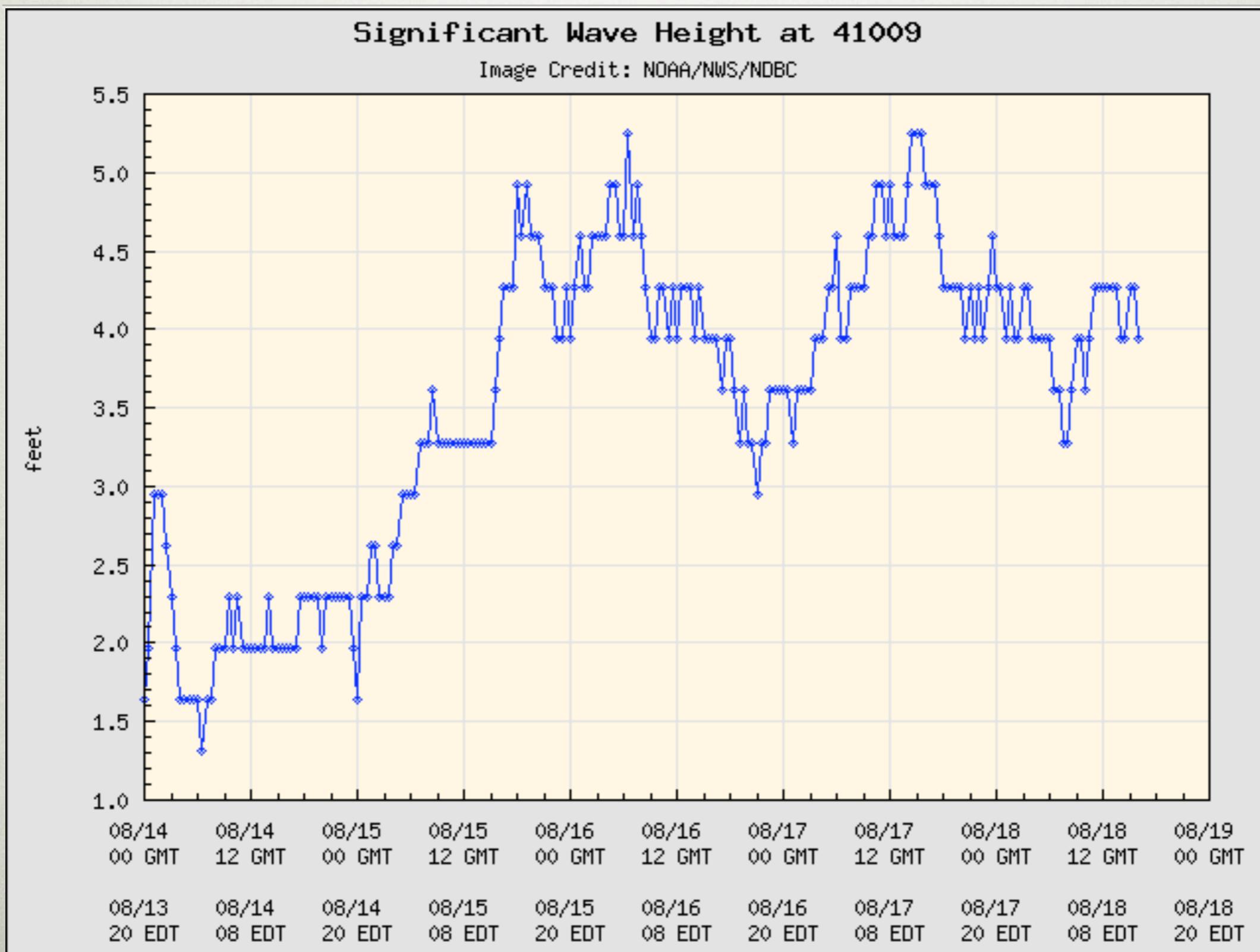
By incorporating interactivity into these graphics, our users are able to manipulate or discover representations of the data to extract further meaning from it. Ultimately the goal is to learn something.



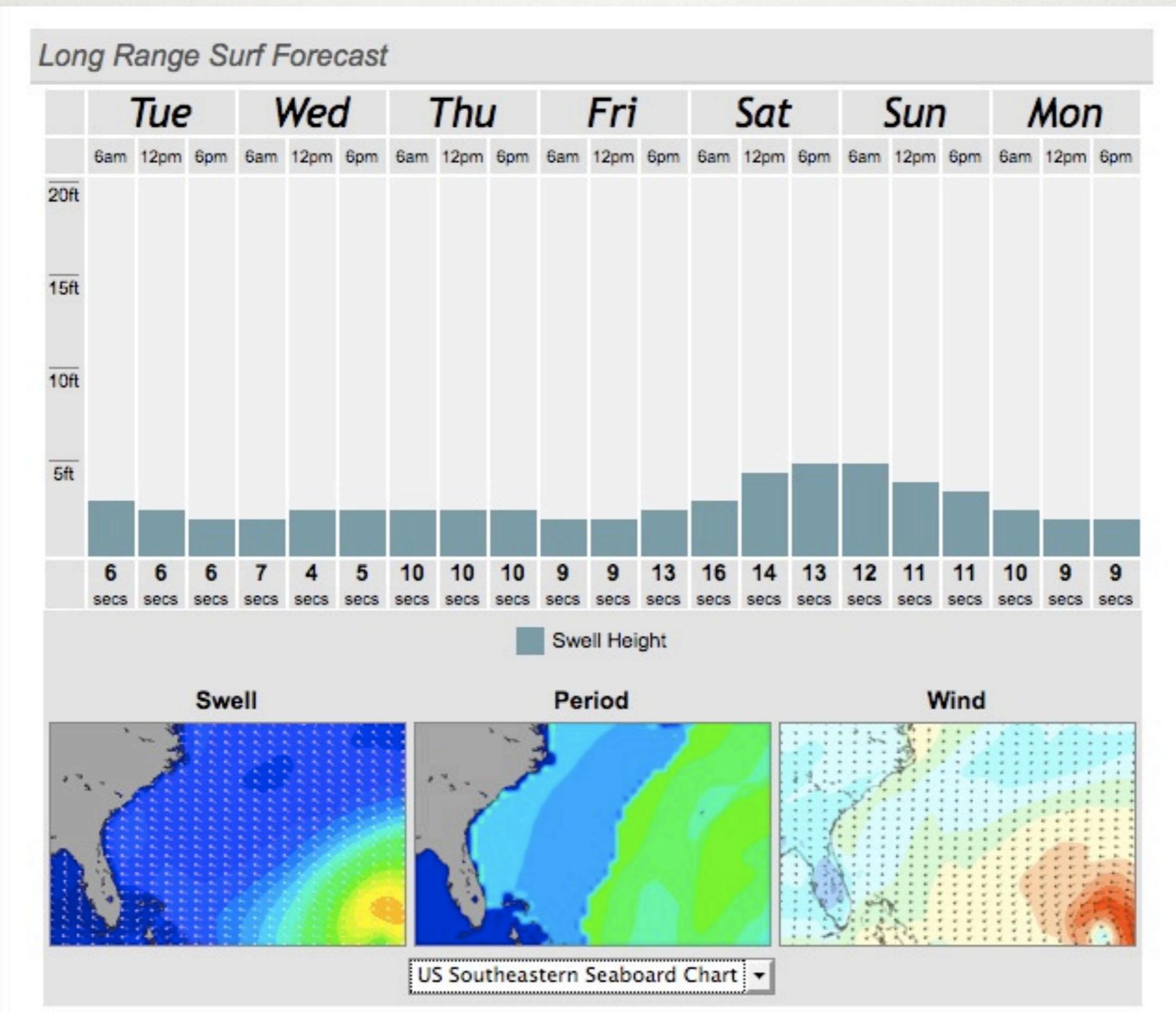
**HTTP://WWW.NDBC.NOAA.GOV/STATION PAGE.PHP?**  
**STATION=41009**

Previous observations																	
MM	DD	TIME (EDT)	WDIR	WSPD kts	GST kts	WVHT ft	DPD sec	APD sec	MWD	PRES in	PTDY	ATMP °F	WTMP °F	DEWP °F	SAL psu	VIS nmi	TIDE ft
08	18	10:50 am	E	11.7	13.6	4.3	5	4.5	-	30.13	+0.04	84.0	81.1	77.0	34.40	-	-
08	18	10:20 am	E	13.6	15.5	3.9	6	4.5	-	30.12	-	83.8	81.1	76.1	34.41	-	-
08	18	9:50 am	E	11.7	13.6	3.9	6	4.6	-	30.12	+0.04	84.0	81.1	76.6	34.41	-	-
08	18	9:20 am	E	9.7	11.7	4.3	6	4.6	-	30.11	-	83.7	81.3	76.8	34.42	-	-
08	18	8:50 am	E	11.7	13.6	4.3	7	4.7	-	30.10	+0.04	83.7	81.3	76.8	34.42	-	-
08	18	8:20 am	E	11.7	13.6	4.3	5	4.6	-	30.10	-	83.7	81.3	76.5	34.39	-	-
08	18	7:50 am	E	11.7	13.6	4.3	6	4.7	-	30.09	+0.02	83.5	81.5	76.6	34.39	-	-
08	18	7:20 am	E	11.7	13.6	4.3	6	4.4	-	30.09	-	83.3	81.5	76.6	34.39	-	-
08	18	6:50 am	E	11.7	13.6	4.3	6	4.6	-	30.08	+0.00	83.3	81.5	76.6	34.39	-	-
08	18	6:20 am	E	11.7	13.6	3.9	6	4.7	-	30.07	-	83.1	81.5	76.6	34.38	-	-
08	18	5:50 am	E	11.7	13.6	3.6	5	4.6	-	30.07	-0.02	83.3	81.5	76.5	34.38	-	-
08	18	5:20 am	E	11.7	13.6	3.9	5	4.6	-	30.07	-	83.1	81.5	76.5	34.39	-	-
08	18	4:50 am	E	11.7	13.6	3.9	6	4.5	-	30.08	-0.04	83.3	81.5	76.3	34.39	-	-
08	18	4:20 am	E	11.7	13.6	3.6	6	4.4	-	30.08	-	83.3	81.5	76.6	34.41	-	-
08	18	3:50 am	E	11.7	13.6	3.3	5	4.4	-	30.08	-0.06	83.1	81.7	76.6	34.41	-	-
08	18	3:20 am	E	13.6	15.5	3.3	6	4.5	-	30.08	-	83.3	81.7	76.5	34.41	-	-
08	18	2:50 am	E	11.7	13.6	3.6	6	4.5	-	30.09	-0.04	83.3	81.5	75.9	34.41	-	-
08	18	2:20 am	E	11.7	13.6	3.6	6	4.3	-	30.10	-	83.5	81.5	75.7	34.43	-	-
08	18	1:50 am	E	11.7	13.6	3.9	6	4.4	-	30.11	-0.03	83.3	81.5	76.3	34.43	-	-
08	18	1:20 am	E	11.7	13.6	3.9	5	4.5	-	30.13	-	83.3	81.7	76.3	34.42	-	-

**HTTP://WWW.NDBC.NOAA.GOV/STATION PAGE.PHP?**  
**STATION=41009**



# HTTP://MAGICSEAWeed.COM/MELBOURNE-BEACH-SURF-REPORT/351

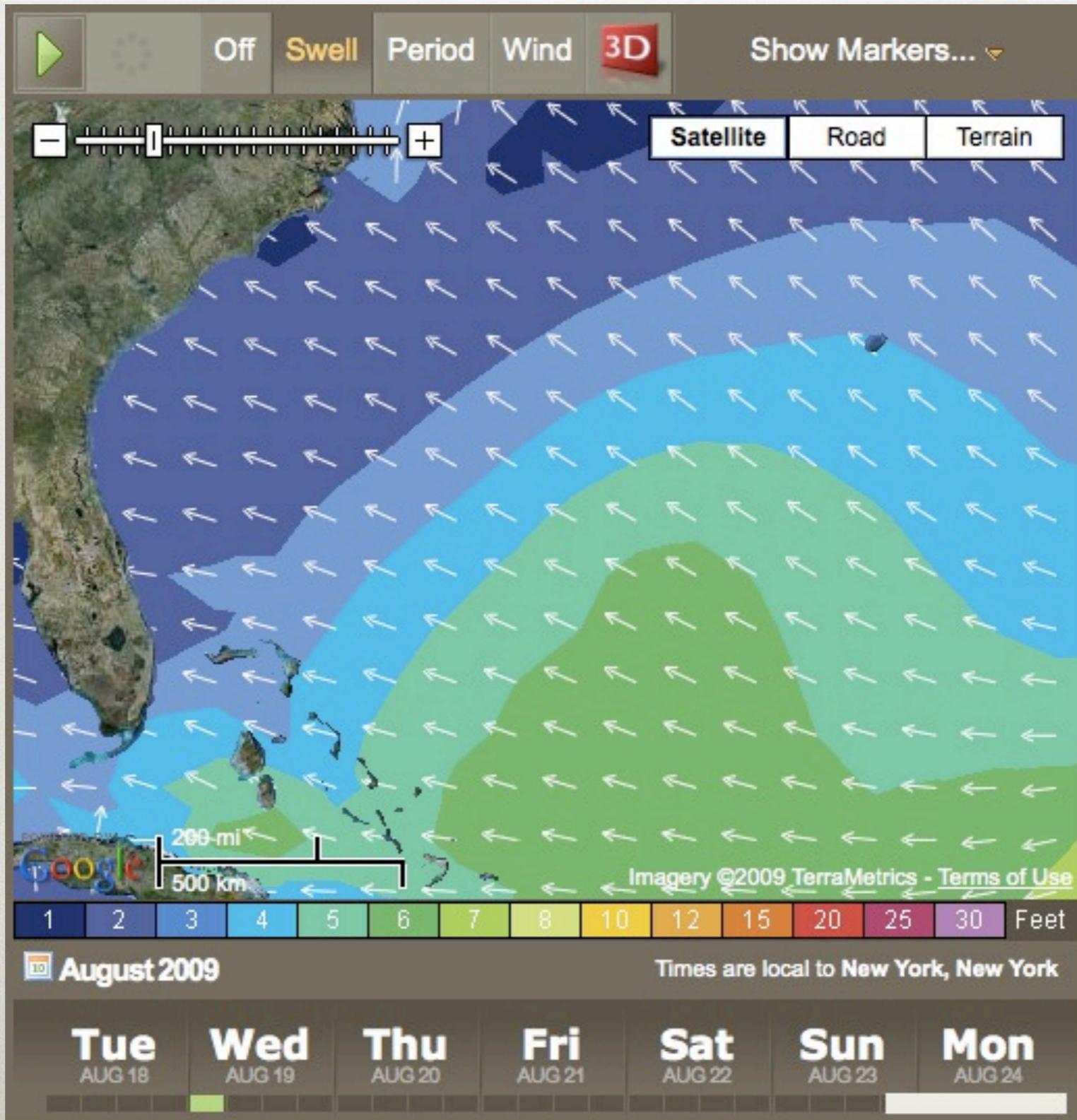


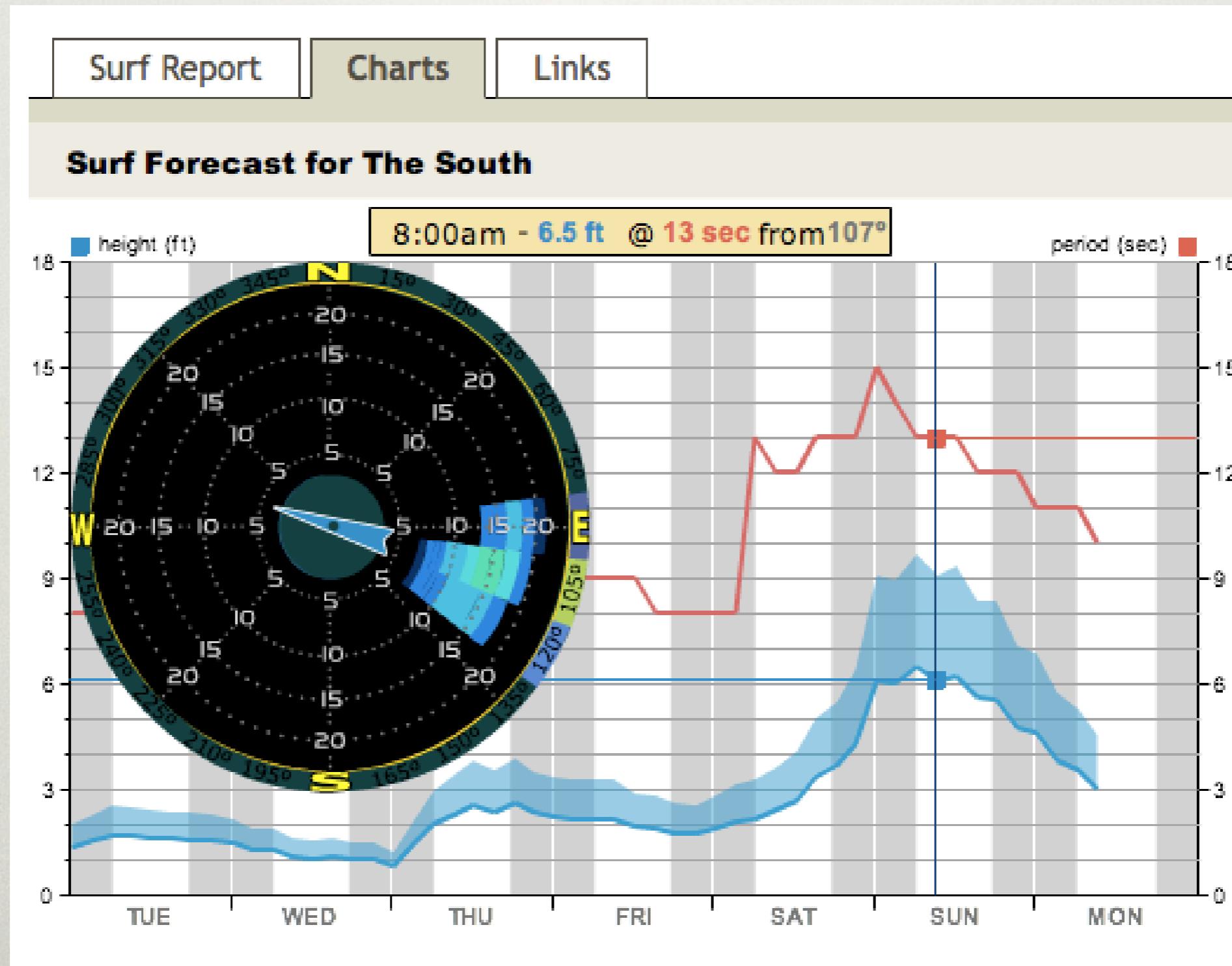
**HTTP://MAGICSEAWeed.COM/MELBOURNE-BEACH-**  
**SURF-REPORT/351**

	Swell Rating	Height	Period	Swell Dir	Wind	Weather	
<b>Tue</b> 08/18		2.5 ft	6 secs	↖	7 mph	↖	 84f
<b>Wed</b> 08/19		2.5 ft	4 secs	↖	14 mph	↖	 83f
<b>Thu</b> 08/20	★★	2.5 ft	10 secs	↖	7 mph	↖	 85f
<b>Fri</b> 08/21		2 ft	9 secs	↖	4 mph	↖	 85f
<b>Sat</b> 08/22	★★★★★	4.5 ft	14 secs	↖	5 mph	↖	 86f
<b>Sun</b> 08/23	★★★	4 ft	11 secs	↖	4 mph	↖	 86f
<b>Mon</b> 08/24	★★	2 ft	9 secs	↖	4 mph	↖	 86f

Last Model Run: 18th Aug 2009 2:00am  
Last Update: 18th Aug 2009 12:11pm  
All times local time (EST) unless otherwise stated.

[HTTP://SWELLWATCH.WETSAND.COM/](http://SWELLWATCH.WETSAND.COM/)





# COMPLEX DATA

---

## Presenting Data Visually

*The information graphic should answer these common user questions:*

1. How is the data organized?
2. What relates to what?
3. How can I explore the data?
4. Can I re-arrange it to see it differently?
5. Can I see only what I need to know?
6. What are the specific data values?

*the best way to present data is with effective organization*

# COMPLEX DATA

---

## Organizing Data Visually

### LINEAR

list-of-items or single variable plots

### TABULAR

spreadsheets, multi-column lists, multi-Y plot

### HIERARCHICAL

trees menus, cascading lists

### NETWORK (organic)

flowcharts

### SPATIAL

maps , graphics

*but what about representing how the data is related?*

# COMPLEX DATA

---

## Visual Relationships in Data

The organization of data helps users subconsciously relate data

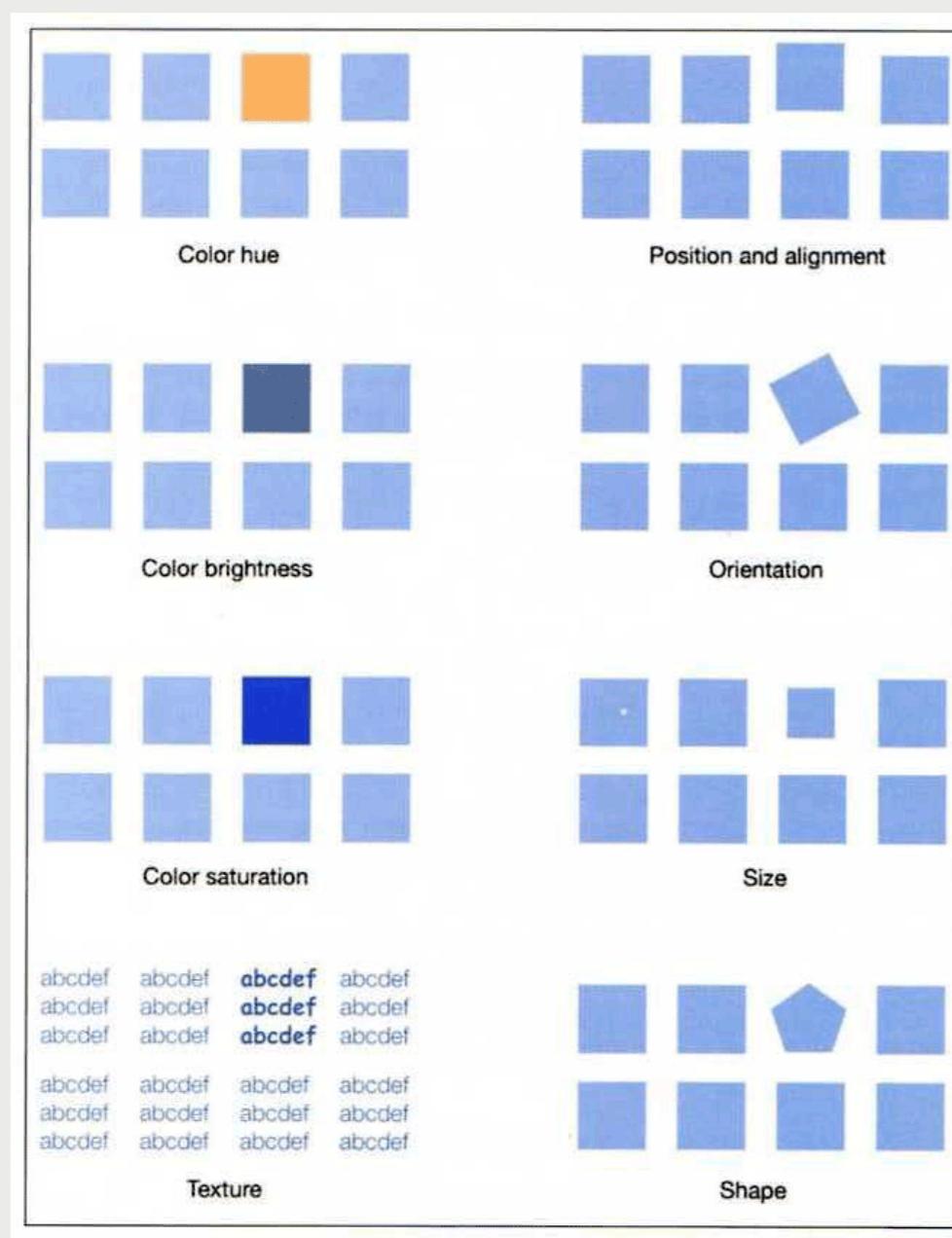
The look of individual elements does this as well

Things that look alike must be related - **Gestalt Principles**

*but what if we want some data to stand out from the rest?*

# COMPLEX DATA

## Pre-Attentive Variables

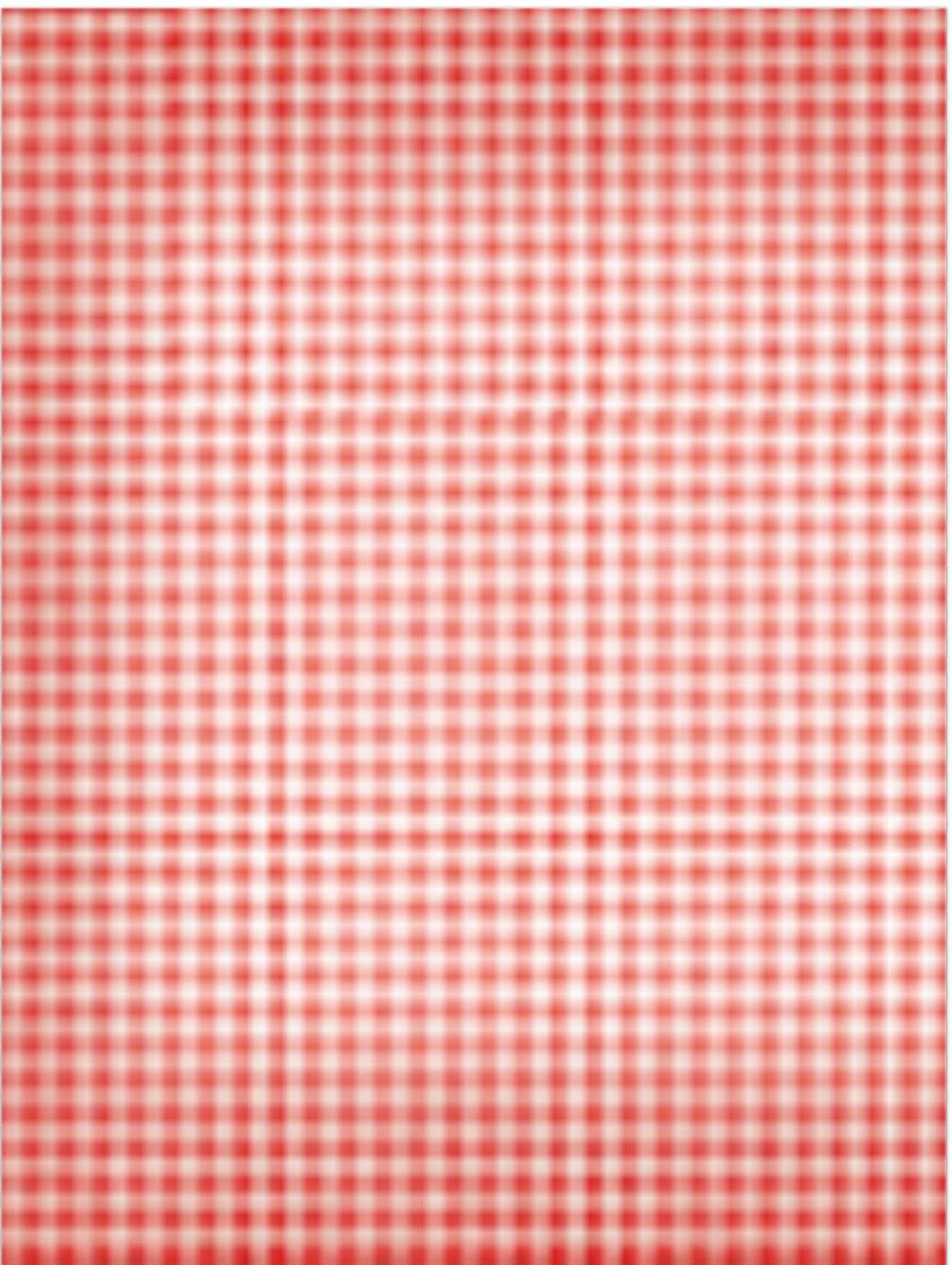


color hue  
position & alignment  
color brightness  
orientation  
color saturation  
size  
texture  
shape

\* convey information  
before the user pays conscious attention

# Patterns

## Complex Data



# PATTERNS

## - COMPLEX DATA

overview plus detail

what -

place an overview of a graphic next to a zoomed detail

when to use -

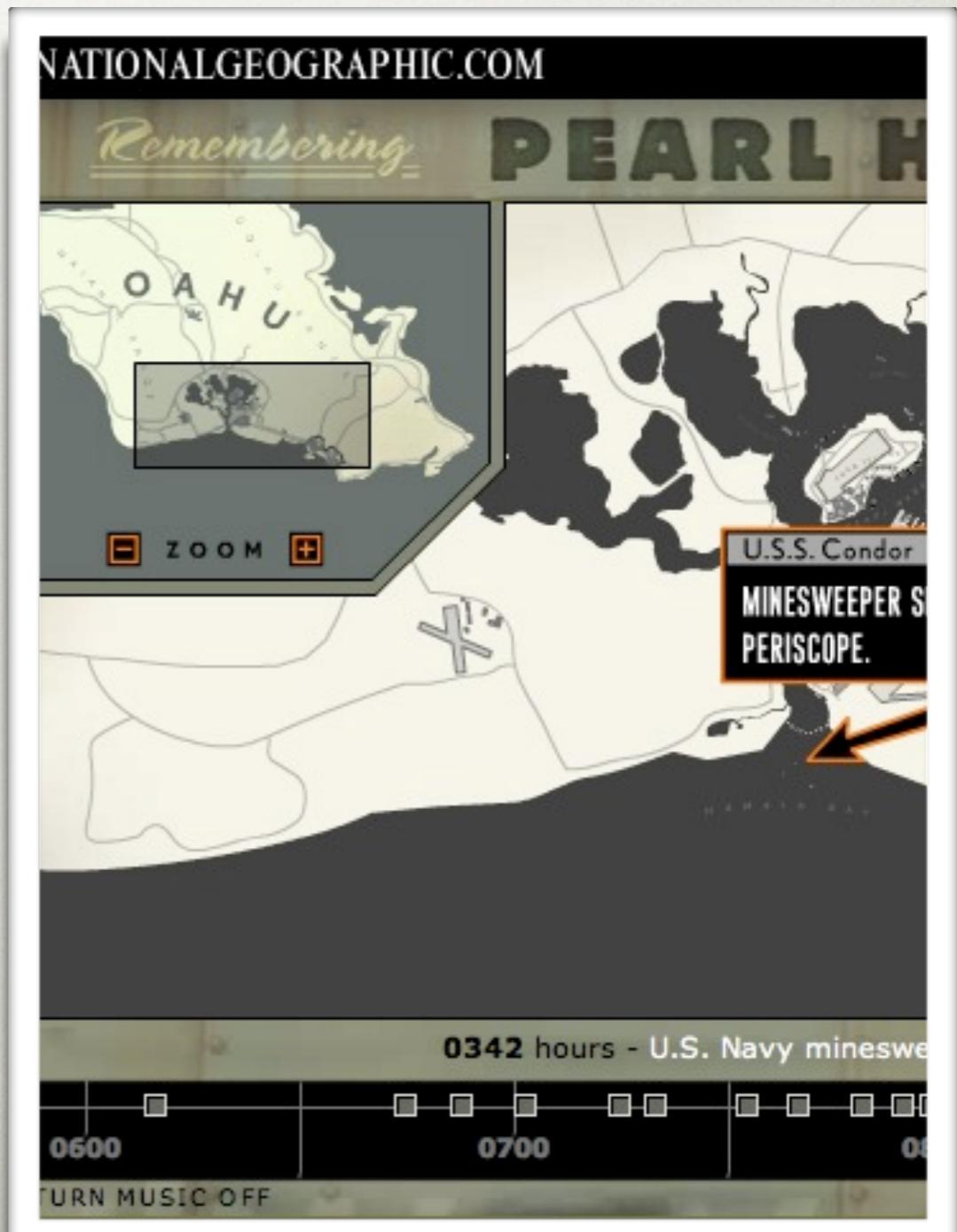
to orient users to the big picture  
zoom down to details

why -

present a high level view - you are here  
users zoom in / out of details - compare

how -

show overview at all times - red box  
detail view shows magnified projection



# PATTERNS

## - COMPLEX DATA

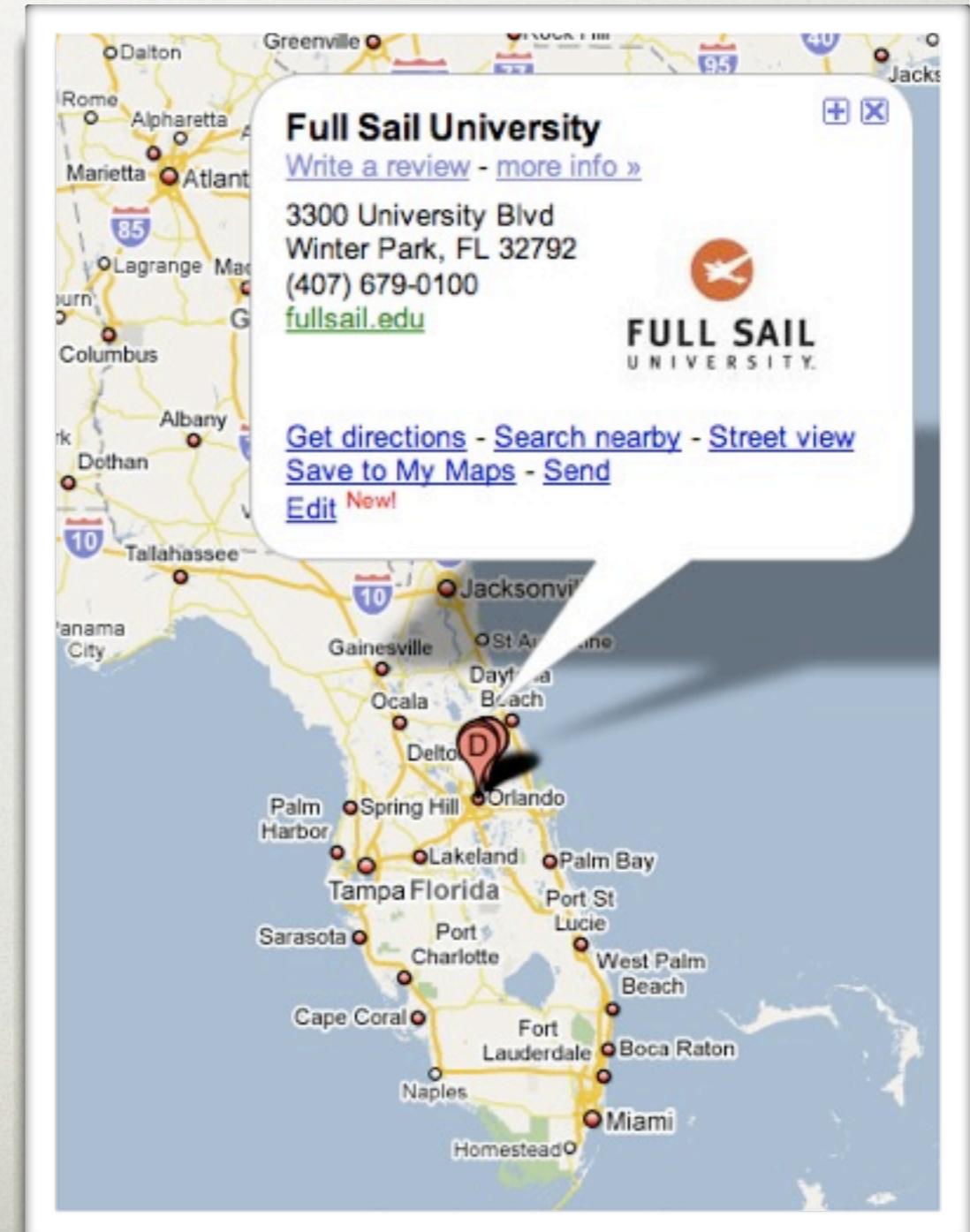
### data tips

**what -**  
tooltip representing data of chosen POI

**when to use -**  
more data is hidden behind POI - details  
the user can point at them with a mouse

**why -**  
looking at specific data values is common  
in data rich graphics  
puts the focus where the mouse is

**how -**  
use tooltip to associate data with POI



# PATTERNS

## - COMPLEX DATA

### dynamic queries

what -

a way to filter the data set immediately -  
interactively

when to use -

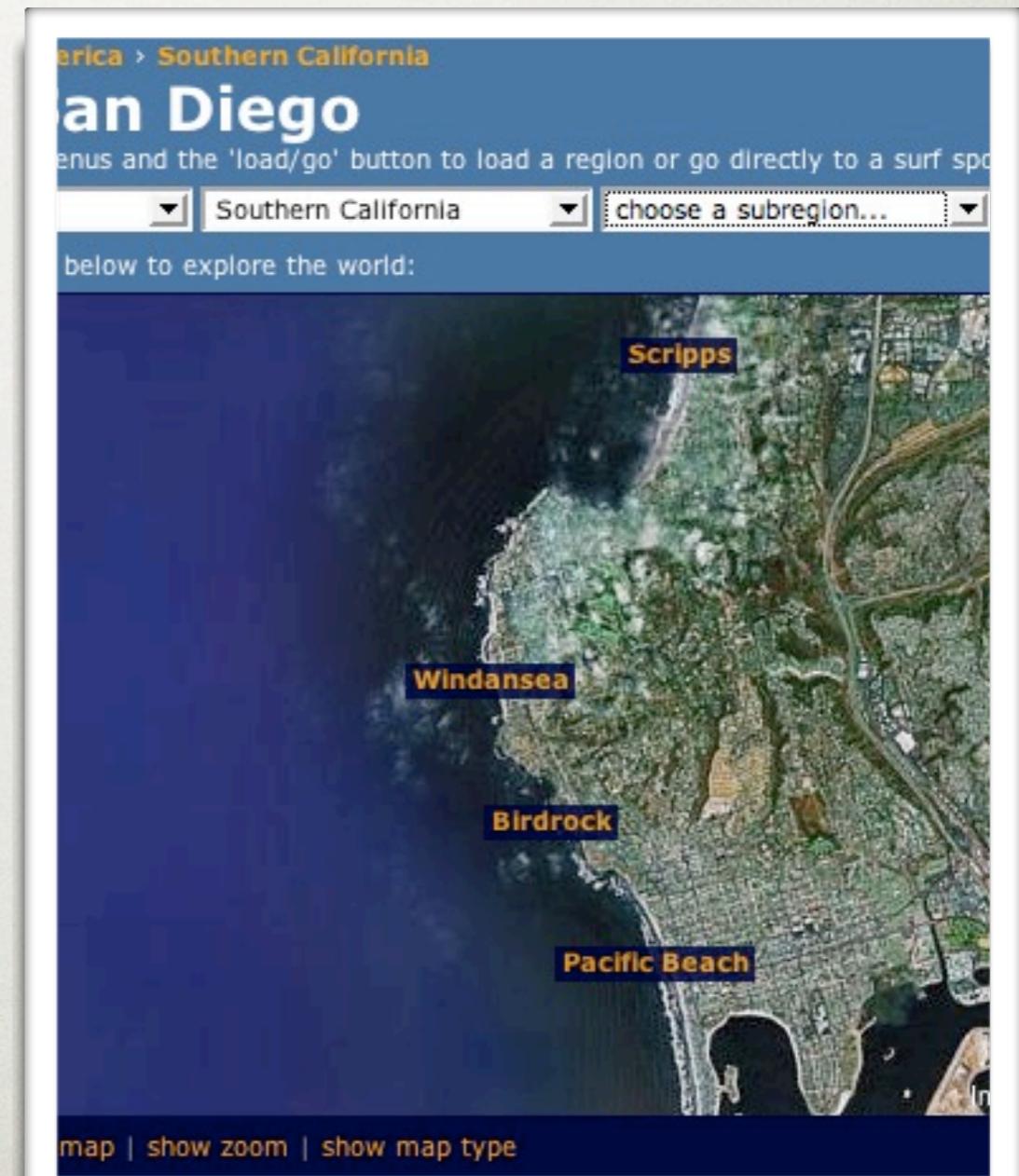
to get rid of irrelevant parts of data  
see data met criteria - relationships in data

why -

easy to learn - encourages exploring  
labels clarify how it queries

how -

depends on data sets to query - use  
sliders, radios, checkboxes, dropdowns



# PATTERNS

## - COMPLEX DATA

### row striping

what -

2 hues to alternately shade table row bg's

when to use -

rows are difficult to separate visually  
common to view multiple rows

why -

data can't be chunked visually with WS  
to follow rows from left to right easily

how -

pick two similar value colors to alternate  
between rows. AKA *zebra striping*



# PATTERNS

## - COMPLEX DATA

### sortable table

**what -**  
sortable table rows by column headers

**when to use -**  
let users explore, reorder, customize views

**why -**  
facilitates exploring & customization  
clickable headers common and expected

**how -**  
make column headers visually clickable  
down arrows , up arrows, drag-&-drop  
use a sortable algorithm - jquery



A screenshot of the iTunes application interface. At the top, there's a volume slider and the Apple logo. Below that is a table with two columns: "Name" and "Artist". The "Name" column has a blue header bar with a white triangle pointing up, indicating it's a sortable column. The table lists twelve songs:

Name	Artist
<input checked="" type="checkbox"/> afk	Pinback
<input checked="" type="checkbox"/> African Herbman	Bob Marley
<input checked="" type="checkbox"/> All Over	Big Sky
<input checked="" type="checkbox"/> all that love	korsakow
<input checked="" type="checkbox"/> All The Pretty Girl...	Spoon
<input checked="" type="checkbox"/> All The While	Big Sky
<input checked="" type="checkbox"/> america	Live
<input checked="" type="checkbox"/> Amsterdam	Coldplay
<input type="checkbox"/> Any Colour You Like	Pink Floyd
<input checked="" type="checkbox"/> Around The World	Red Hot Chili Pepper
<input checked="" type="checkbox"/> Art Is Hard	Cursive
<input checked="" type="checkbox"/> Ascension To Virg...	Oceans 12

# PATTERNS

## - COMPLEX DATA

### cascading lists

**what -**

show a hierarchy within the data using  
selectable lists

**when to use -**

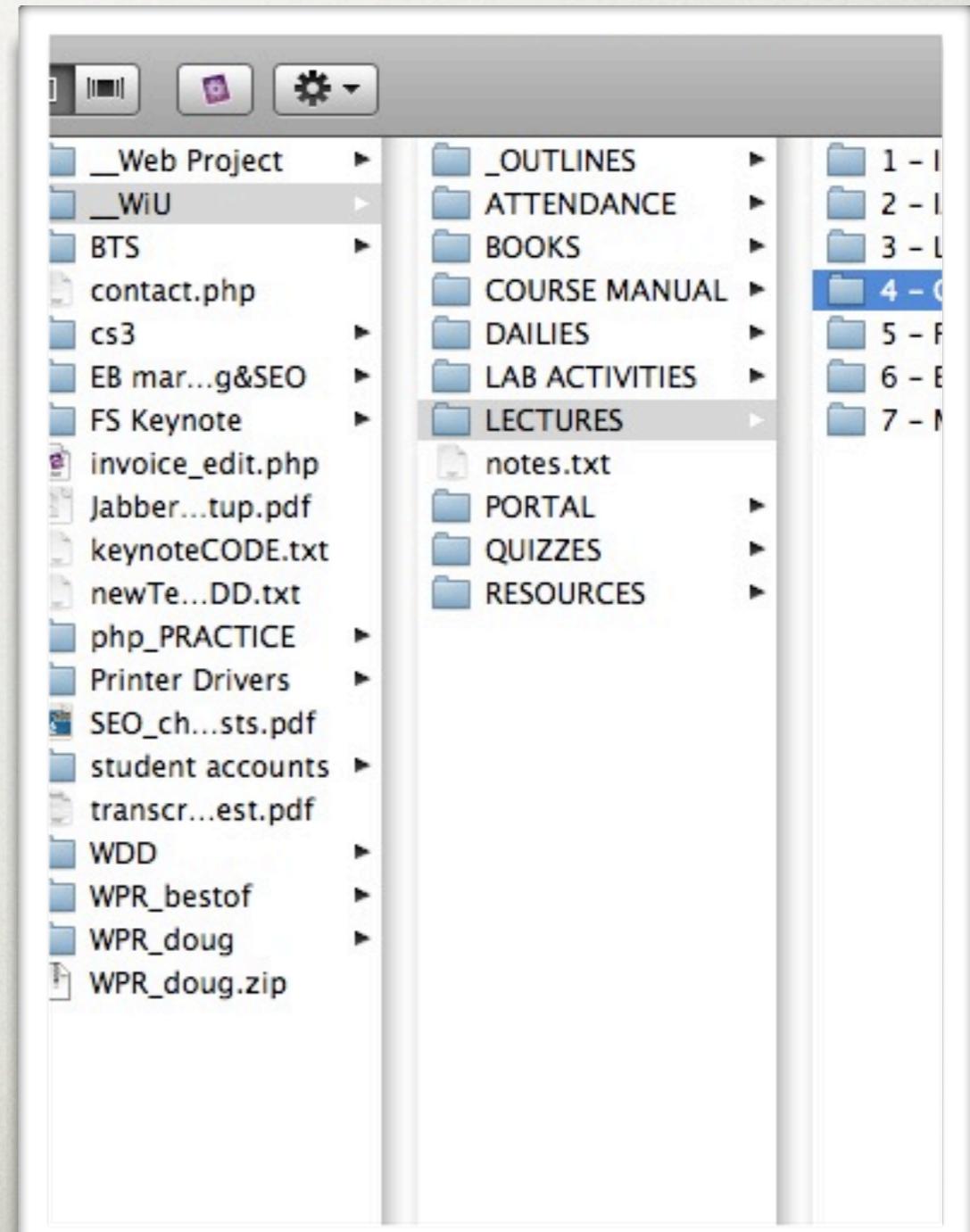
the data can be tree shaped  
to navigate/choose item within categories

**why -**

to show more data at once  
list views are easier to understand

**how -**

first level of hierarchy in left-most list  
show items children in next list via click



# PATTERNS

## - COMPLEX DATA

### multi-Y graphs

what -

stack multiple graph lines in one panel  
have them share same X-axis

when to use -

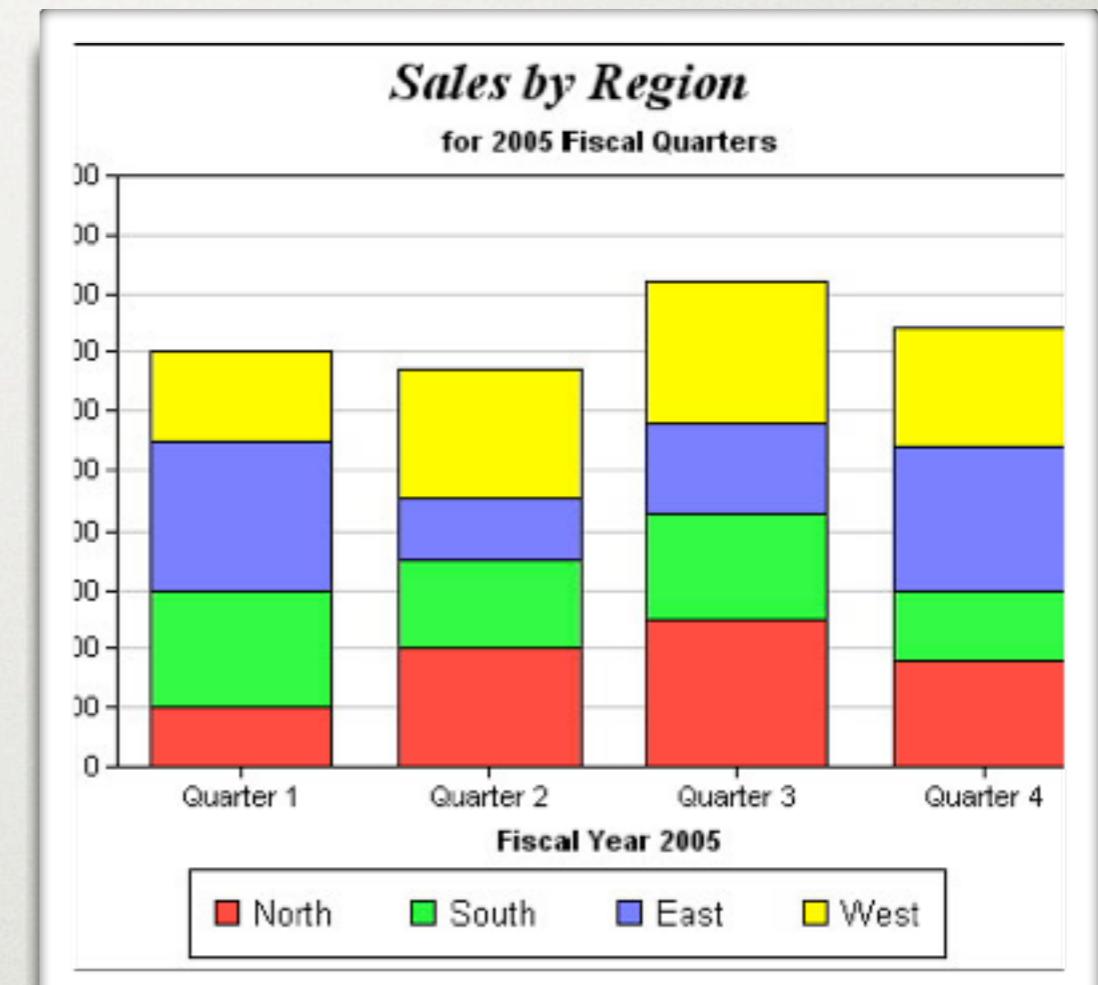
to present two or more graphs together  
to find vertical relationships in the data

why -

to show separate data sets as related items  
to compare without visual interference

how -

stack graphs - share X-axis - label each  
use vertical/horizontal grids to compare



[ pull ]

the end

