

WiU

Web interface & Usability



Lec 2 Review

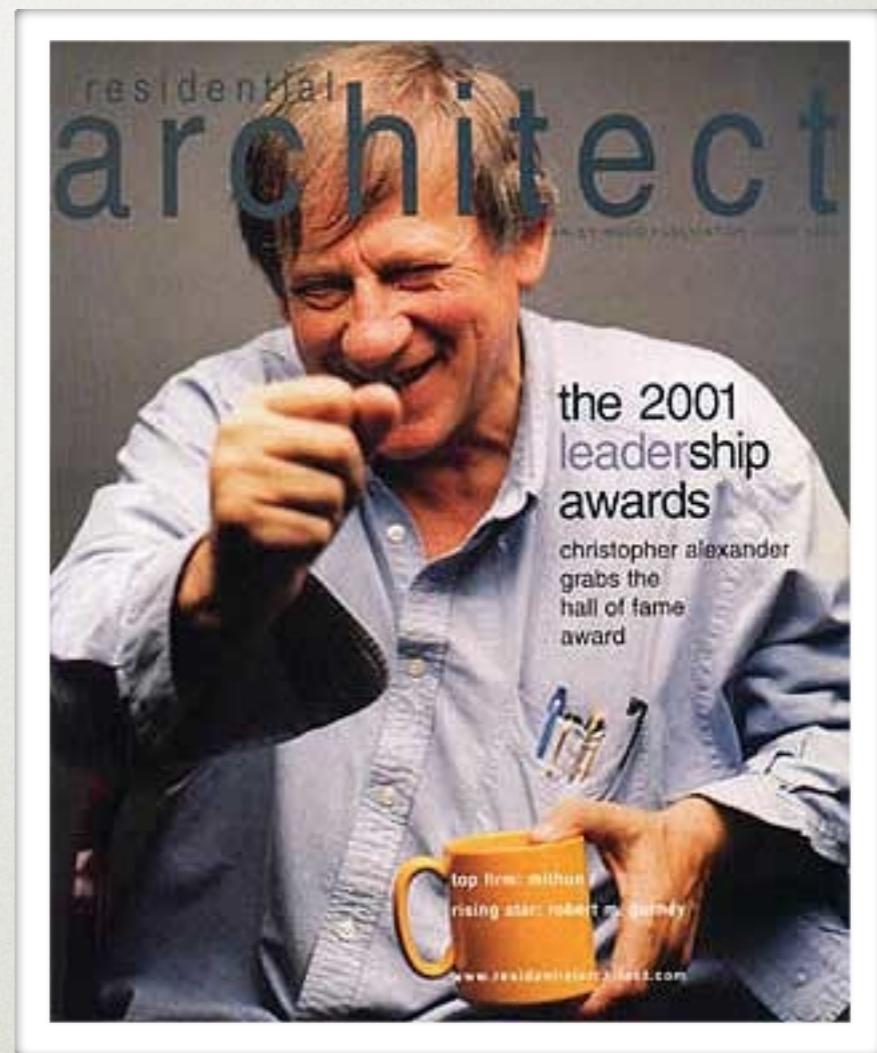
Design Patterns
User Behavior Patterns



DESIGN PATTERNS

Who is Christopher Alexander?

- › is an architect noted for his philosophy of incremental, organic, coherent design
- › he wrote the book “A Pattern Language” published in 1977
- › this book influenced the computer science field to adopt design patterns



DESIGN PATTERNS

What are they?

- structural & behavior features that
- improve habitability,
- provide a “best approach” method when designing interfaces
- and a solution for presenting site context within the interface

DESIGN PATTERNS

Learn & Apply

User Behavior

Interactivity

Info Architecture

Complex Data

Navigation

Forms

Page Layout

Tools & Editors

You will utilize these patterns next month with Gus

COURSE REVIEW

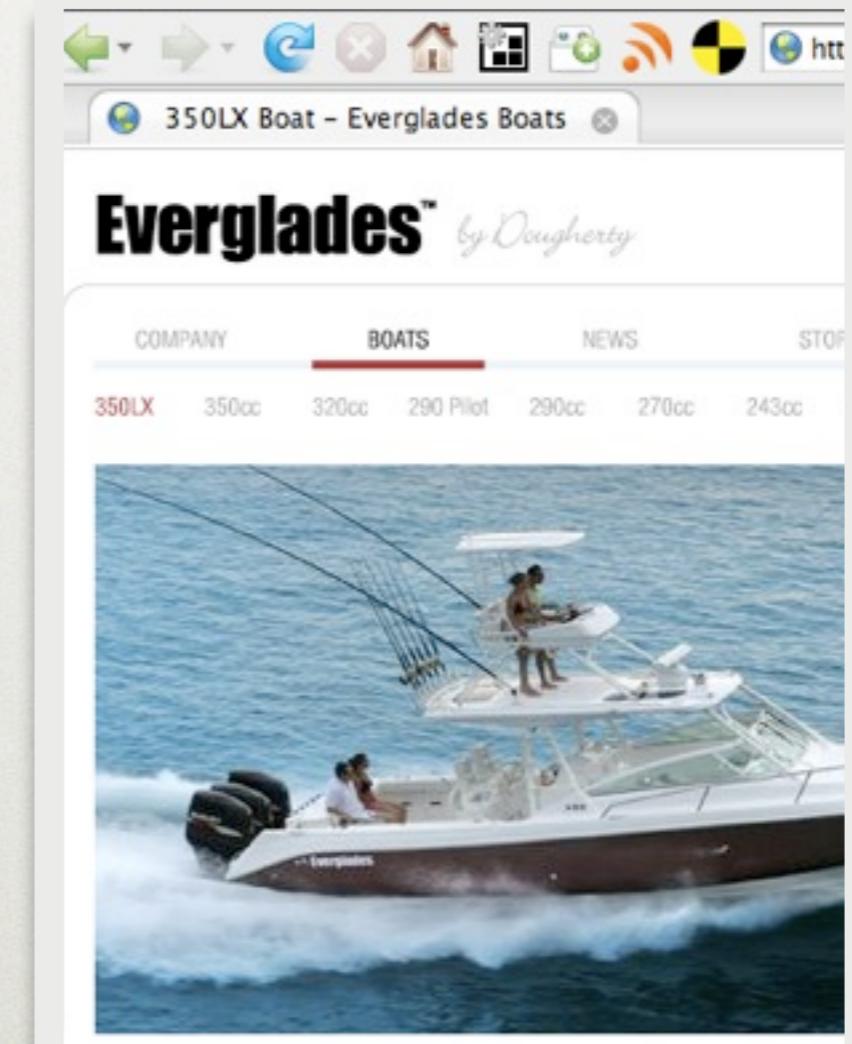
Design Patterns > User Behavior > Safe Exploration

back buttons

escape hatches

global navigation

modal panels for help



COURSE REVIEW

Design Patterns > User Behavior > Instant Gratification

predict users 1st action

point the way to start

let them try first guess

support their guess with safe
exploration design

The image shows a screenshot of the TurboTax software interface. It features two main options: 'Free Edition' on the left and 'Deluxe' on the right. Both sections include a 'Start Now' button. The 'Free Edition' section highlights '1040EZ & Simple Returns' and describes it as suitable for those who don't need much guidance for a simple return. It also mentions 'FREE Federal Free eFile Included State Additional'. The 'Deluxe' section highlights 'Maximize Your Deductions' and describes it as suitable for those who own a home, make donations, or have childcare or medical expenses. It also mentions '\$49.95 Federal Free eFile Included State Additional'. Both sections show a 5-star rating and the number of customer reviews: 9,739 for the Free Edition and 22,717 for the Deluxe edition. Each section also has a 'Learn more >' link.

Edition	Description	Price	Customer Reviews
Free Edition	1040EZ & Simple Returns FREE Federal Free eFile Included State Additional If you don't need much guidance for your simple return, choose TurboTax Free Edition.	FREE	(9,739 customer reviews)
Deluxe	Maximize Your Deductions \$49.95 Federal Free eFile Included State Additional If you own a home, made donations, or have childcare or medical expenses, choose TurboTax Deluxe.	\$49.95	(22,717 customer reviews)

COURSE REVIEW

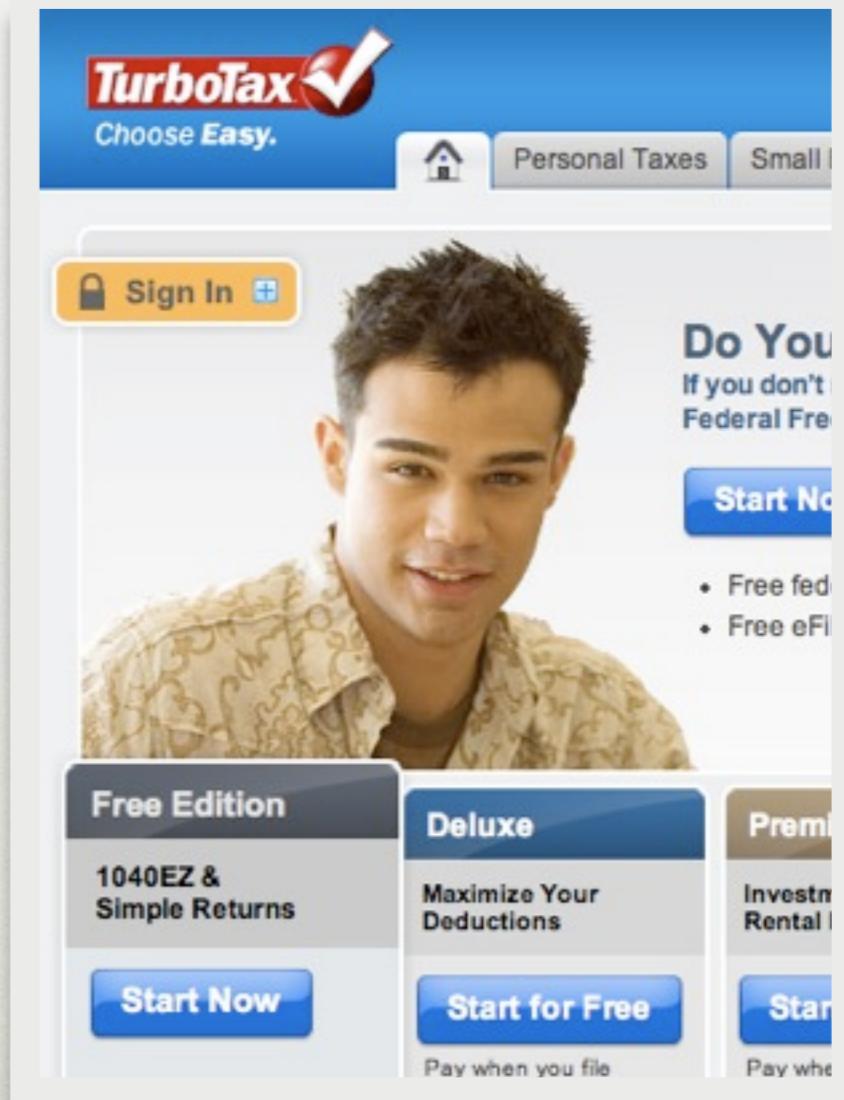
Design Patterns > User Behavior > Satisficing

steer users towards the preferred, shorter, way

make labels short

use layout and graphics to convey meaning

icons easier than text



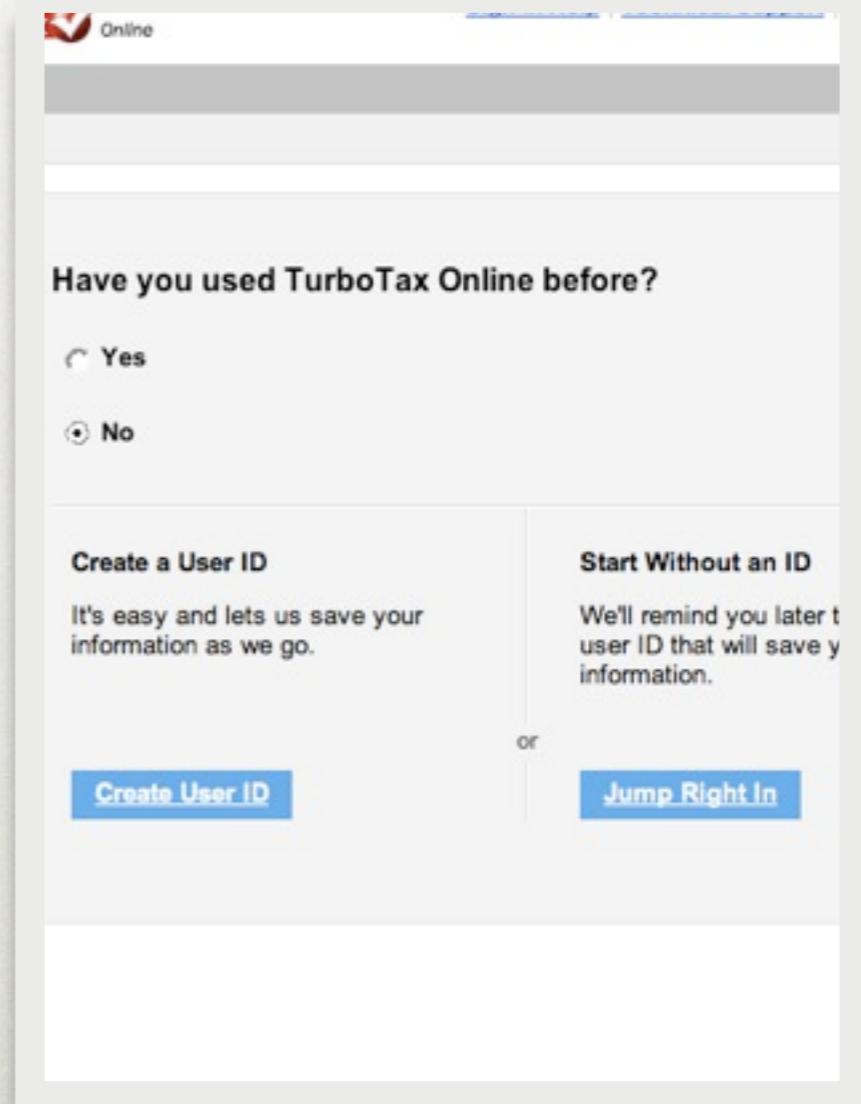
COURSE REVIEW

Design Patterns > User Behavior > Deferred Choices

reduce and identify required choices

show the necessary, hide the rest for later

draw them in, then ask questions later

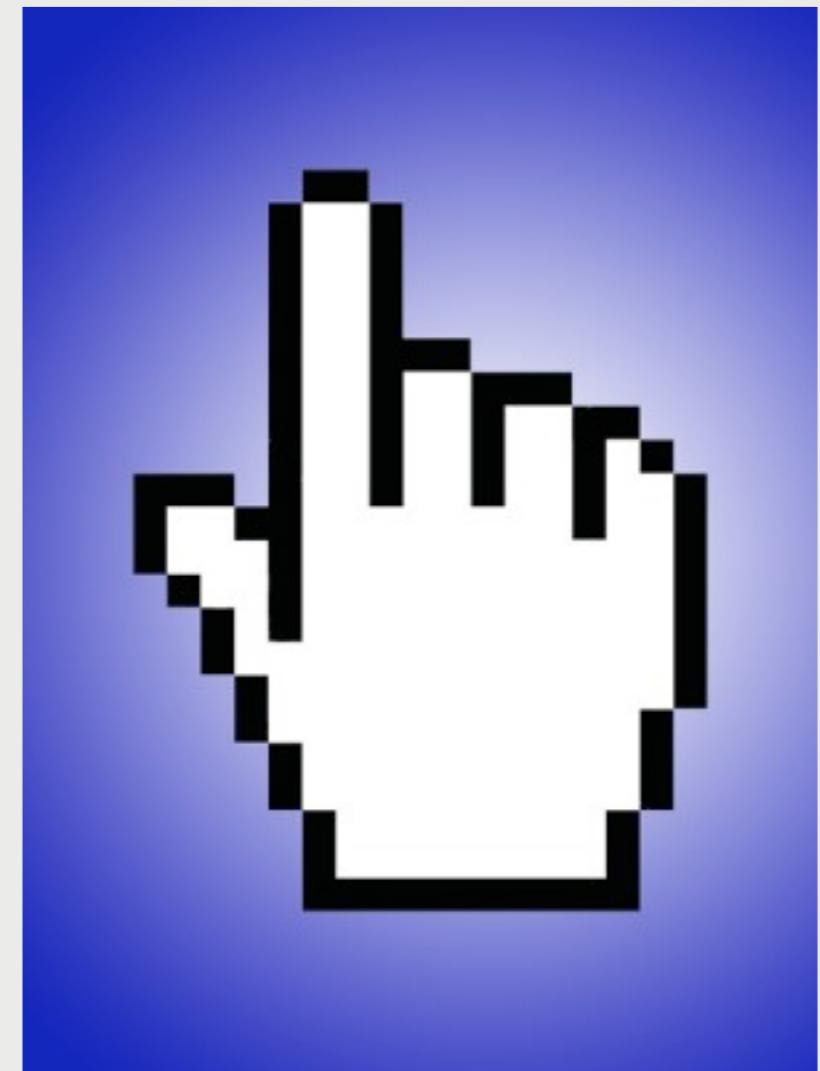


COURSE REVIEW

Design Patterns > User Behavior > Habituation

make gestures consistent
across applications

frequent modal boxes can
become overlooked and not
useful



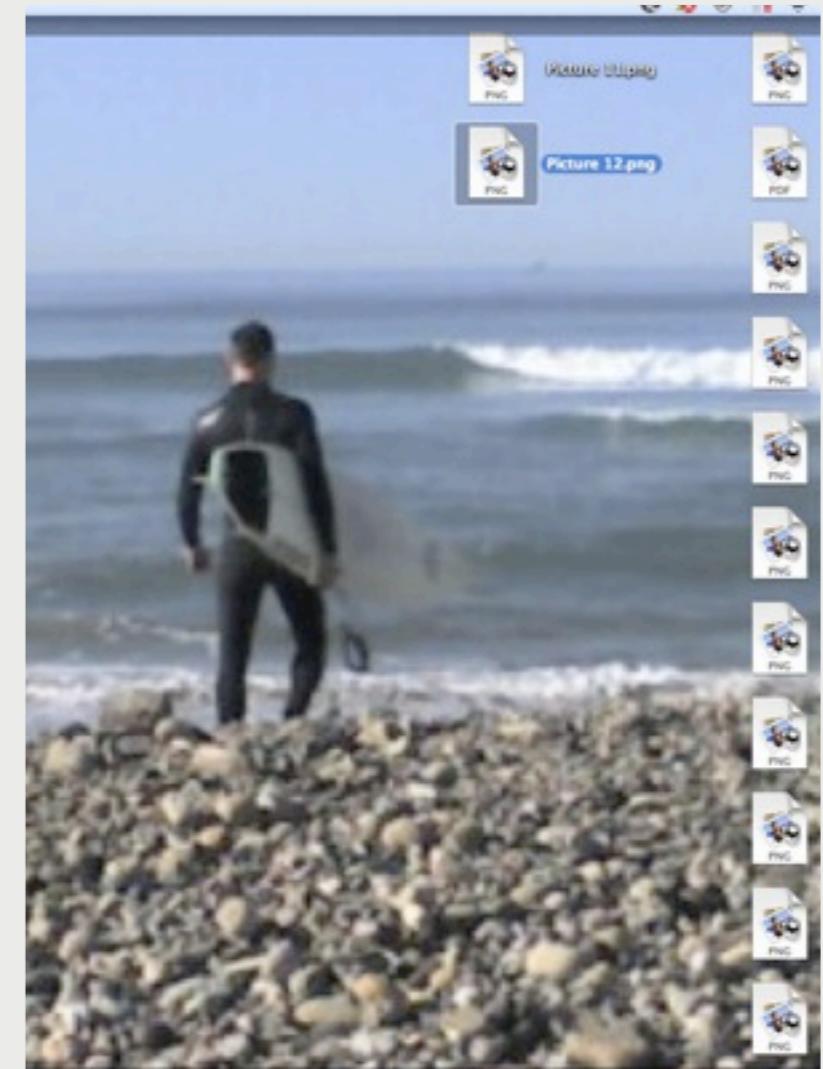
COURSE REVIEW

Design Patterns > User Behavior > Spatial Memory

users remember *where* something is, not *what* it said

put action buttons in predictable places

changed layout disrupts users mental model



Interface what is it?



Interface

what is it?

*“It’s the part
of a resource
or system
with which
the user
interacts”*

INTERFACE

TANGIBLE UI

Logo is the largest -
to draw the user in

Buttons are uniform -
to balance preference

Price & slot are small -
the negative aspect of the transaction



User Interface digital interfaces



User Interface

digital interfaces

- 3 TYPES -

PROMOTIONAL
TOOL/TECHNOLOGY
EDUCATIONAL

UI - PROMOTIONAL

to promote something

like goods or services

lots of graphics

lots of animation

minimal text



UI - TOOL/TECHNOLOGY

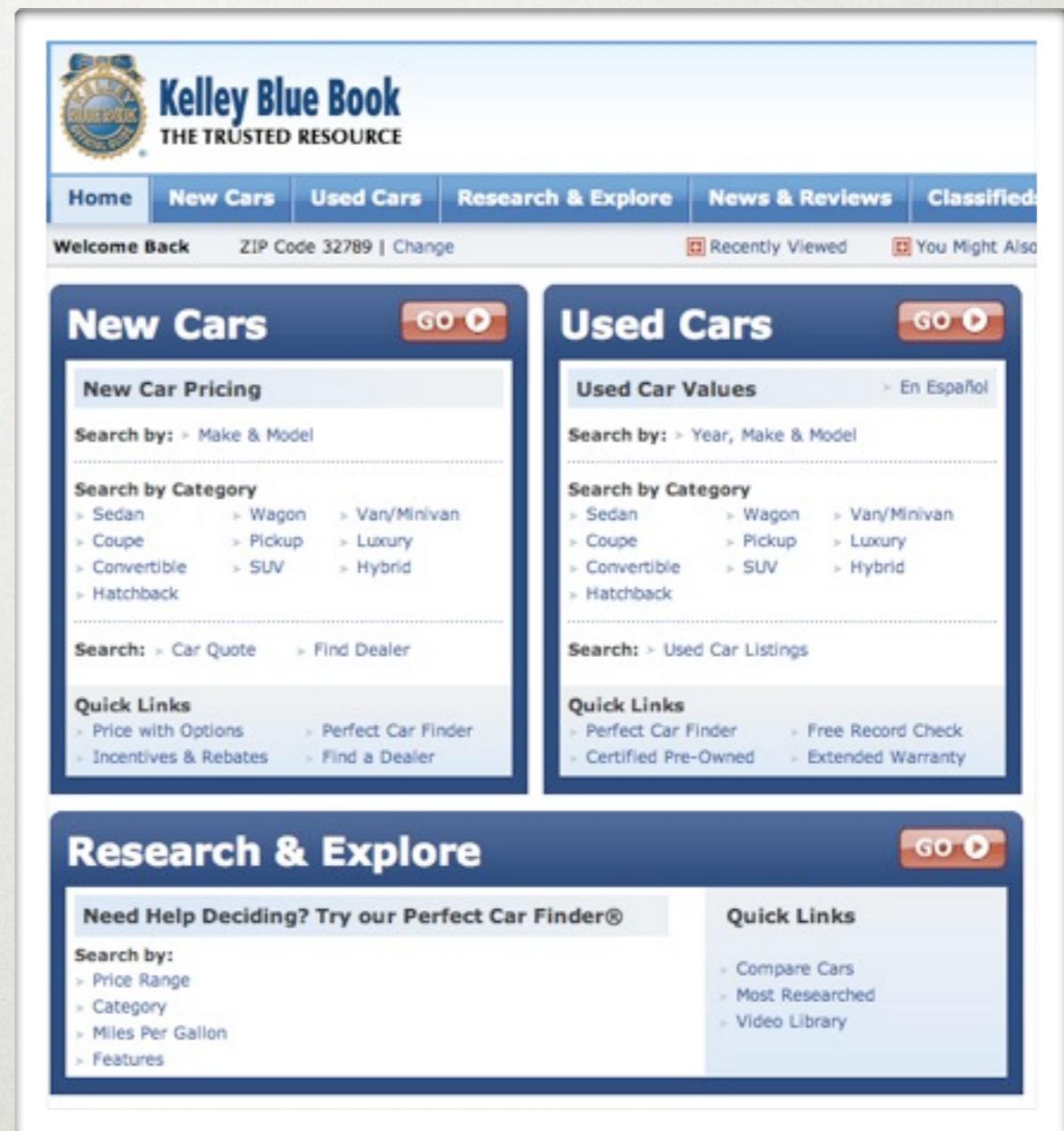
to accomplish a task

to find specific data

few images

lots of information / text

designed to deliver data
FAST!!!

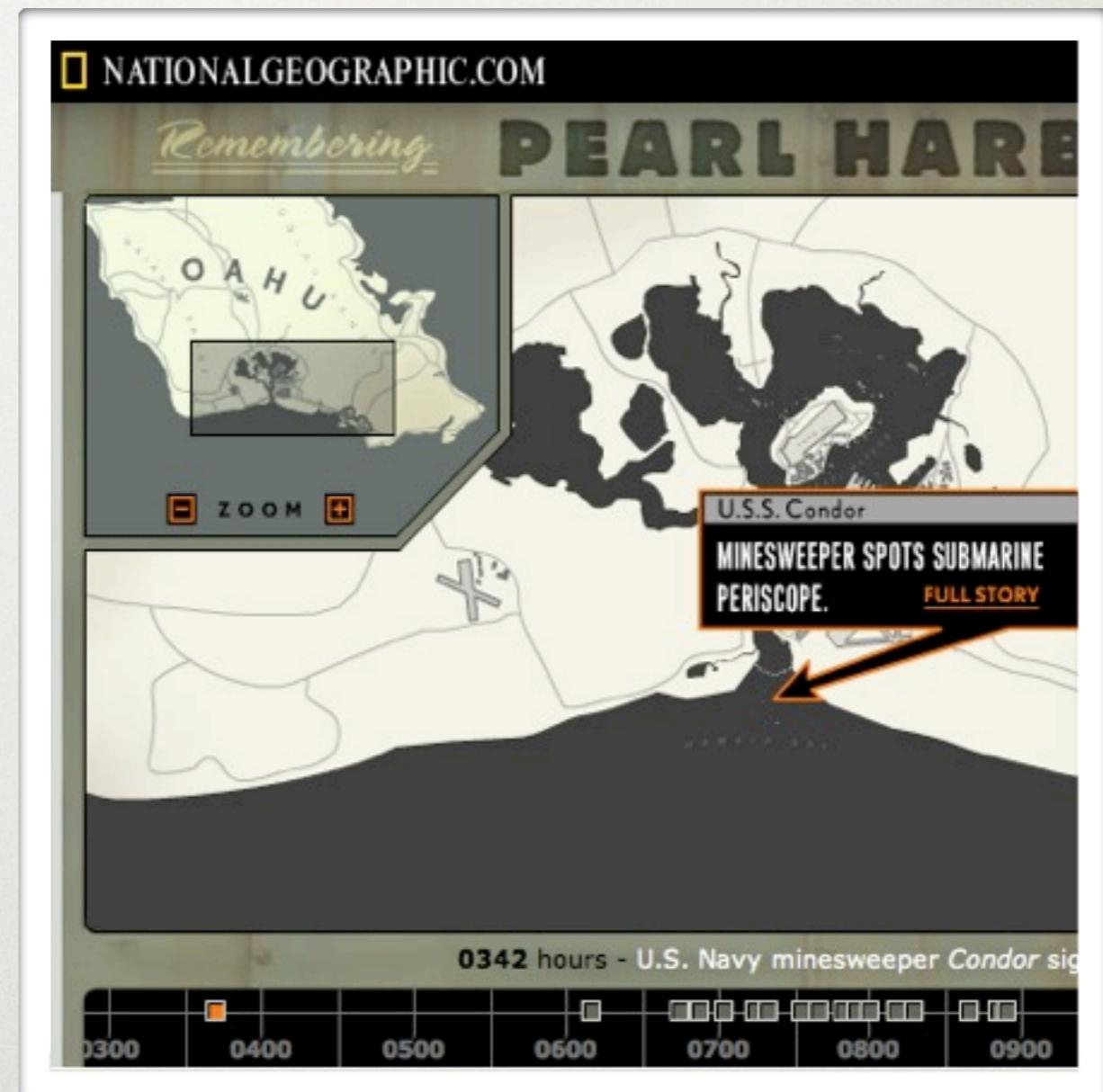


UI - EDUCATIONAL

to research and learn
- *an event or object*

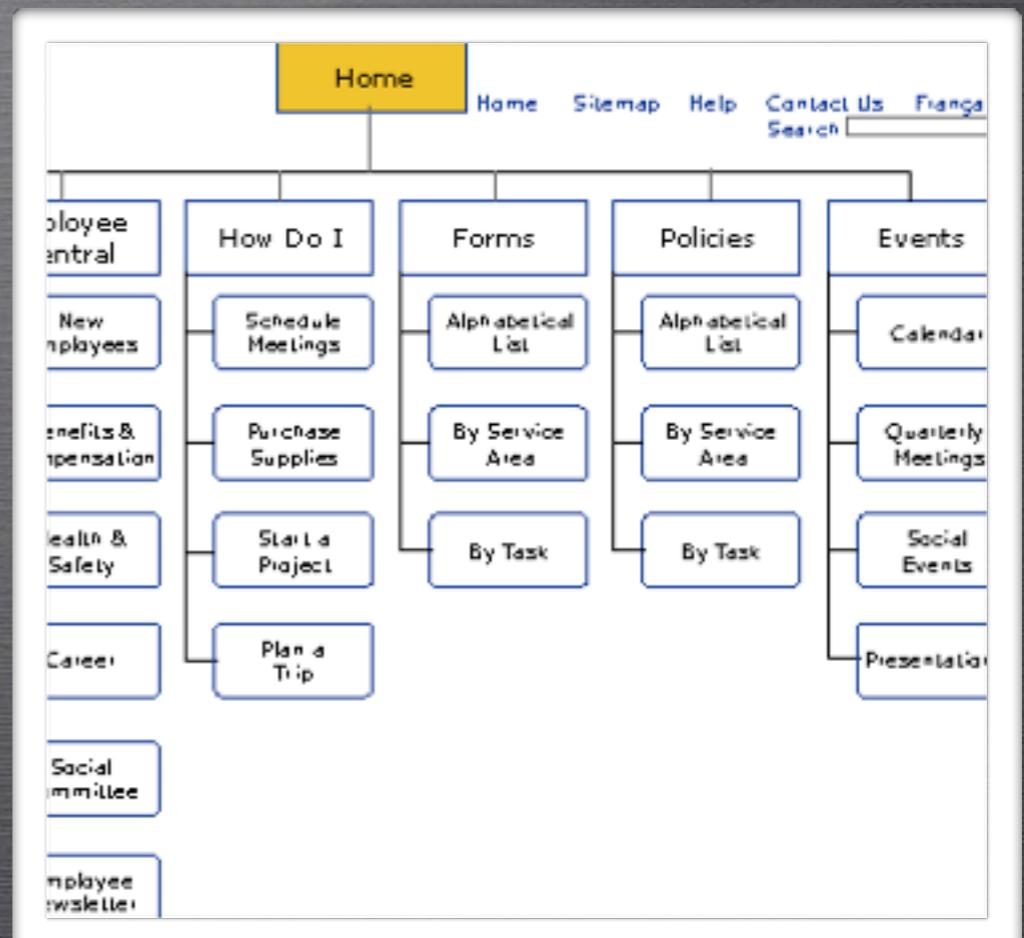
sequenced navigation
- *could be chronological*

user can explore in their
own order or sequence



IA

Information Architecture is the process of organizing and labeling content (in a non linear format) in order to guide a user through an interface by revealing parts of the content. We are organizing the information “space” where users will dwell and providing them with clear choices (doorways) from wherever they are.



INFORMATION ARCHITECTURE

Creating Non-Linear Storylines

users paths dictate the story line

design the UI to promote user choices that are consistent with the story line (wizards)

provide doorways (links) to relative content

make the first choice Obvious

INFORMATION ARCHITECTURE

Nouns vs. Verbs

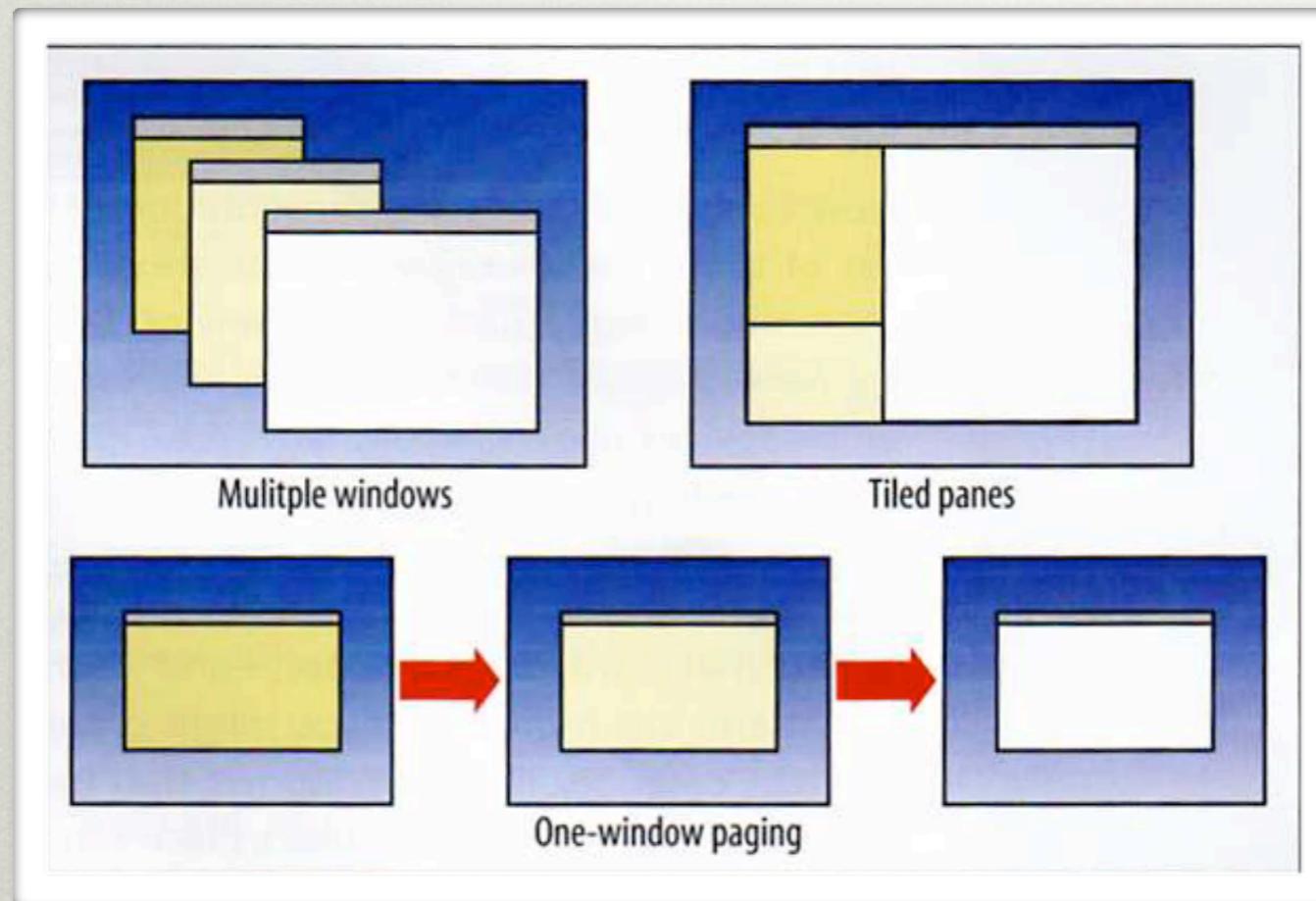
Websites organize “Nouns”-
books, magazines, cities, restaurant menu

Applications organize “Verbs”-
draw, drag, send, chat, reply

Structure the UI so users know where to find
similar actions or organization methods

INFORMATION ARCHITECTURE

Physical Structure - window management



Multiple Windows

Tiled Panes

One Window Paging

INFORMATION ARCHITECTURE

Organizing the Information “Space”

List of Objects
emails, images, songs

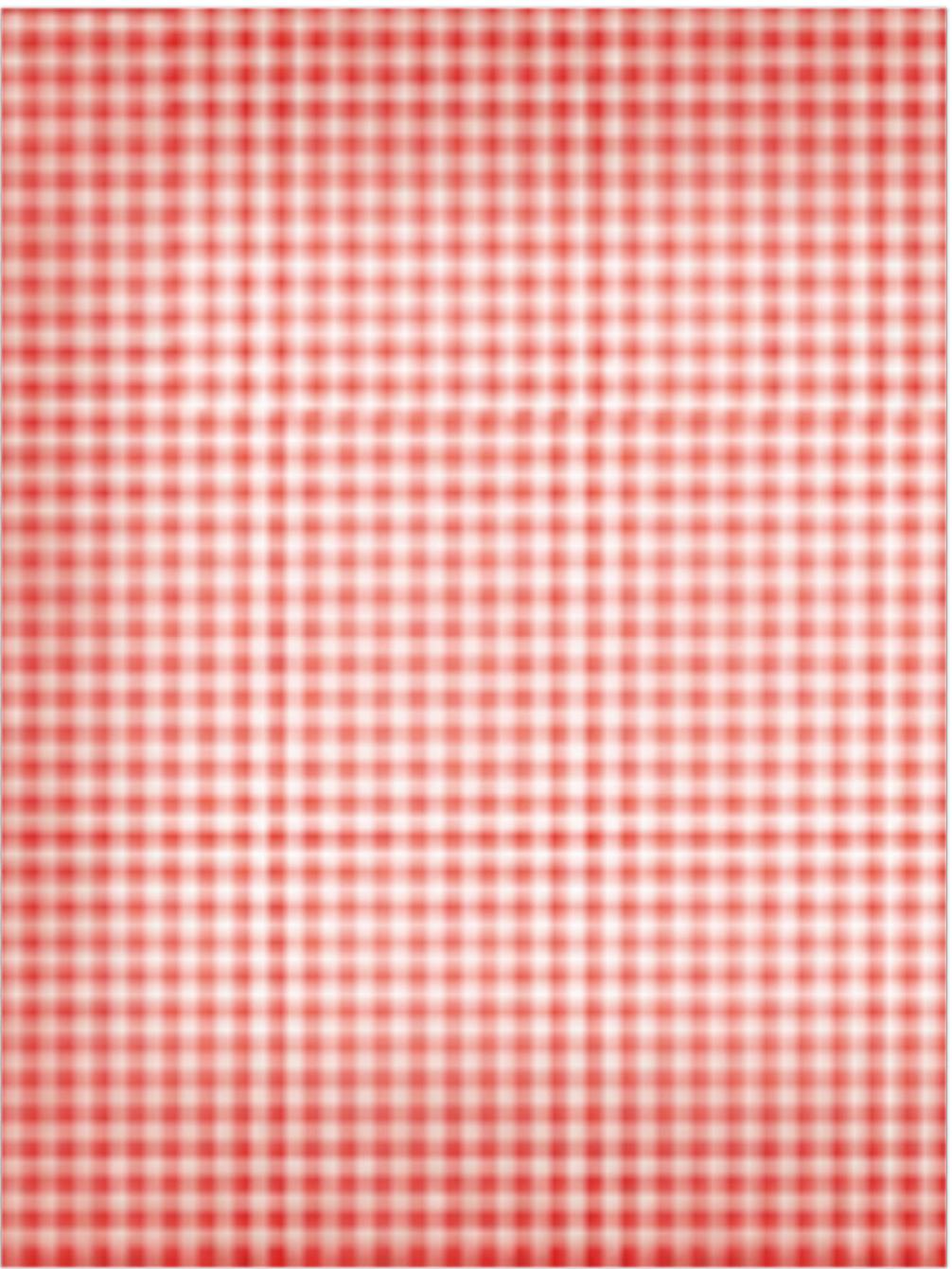
List of Actions
draw, drag, scale, fill

List of Subject Categories
health, science, technology

List of Tools
calendar, address book, sub applications

Patterns

Information Architecture



PATTERNS

- INFO ARCH (IA)

two panel selector

what -

2 panels side-by-side

one to select, the other to view its details

when to use -

present a list of objects, categories, actions

why -

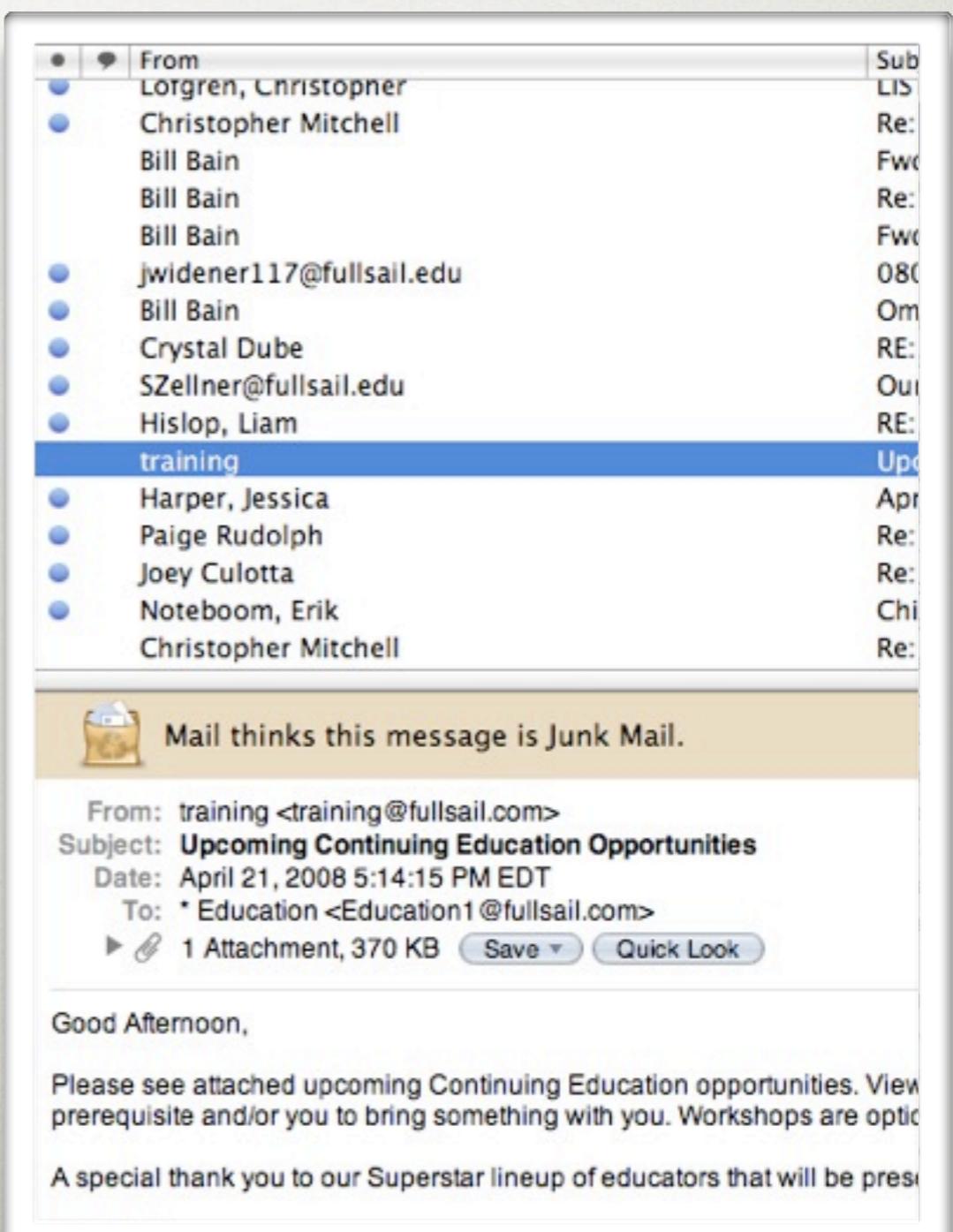
reduces physical effort & memory load

less change = less to remember

how -

selectable list - top or left (visual flow)

details panel - below or right



canvas plus palette

what -

action icons palette next to blank canvas

user clicks icons to create object on canvas

when to use -

creating any kind of graphical editor to
create/ arrange objects in a virtual space

why -

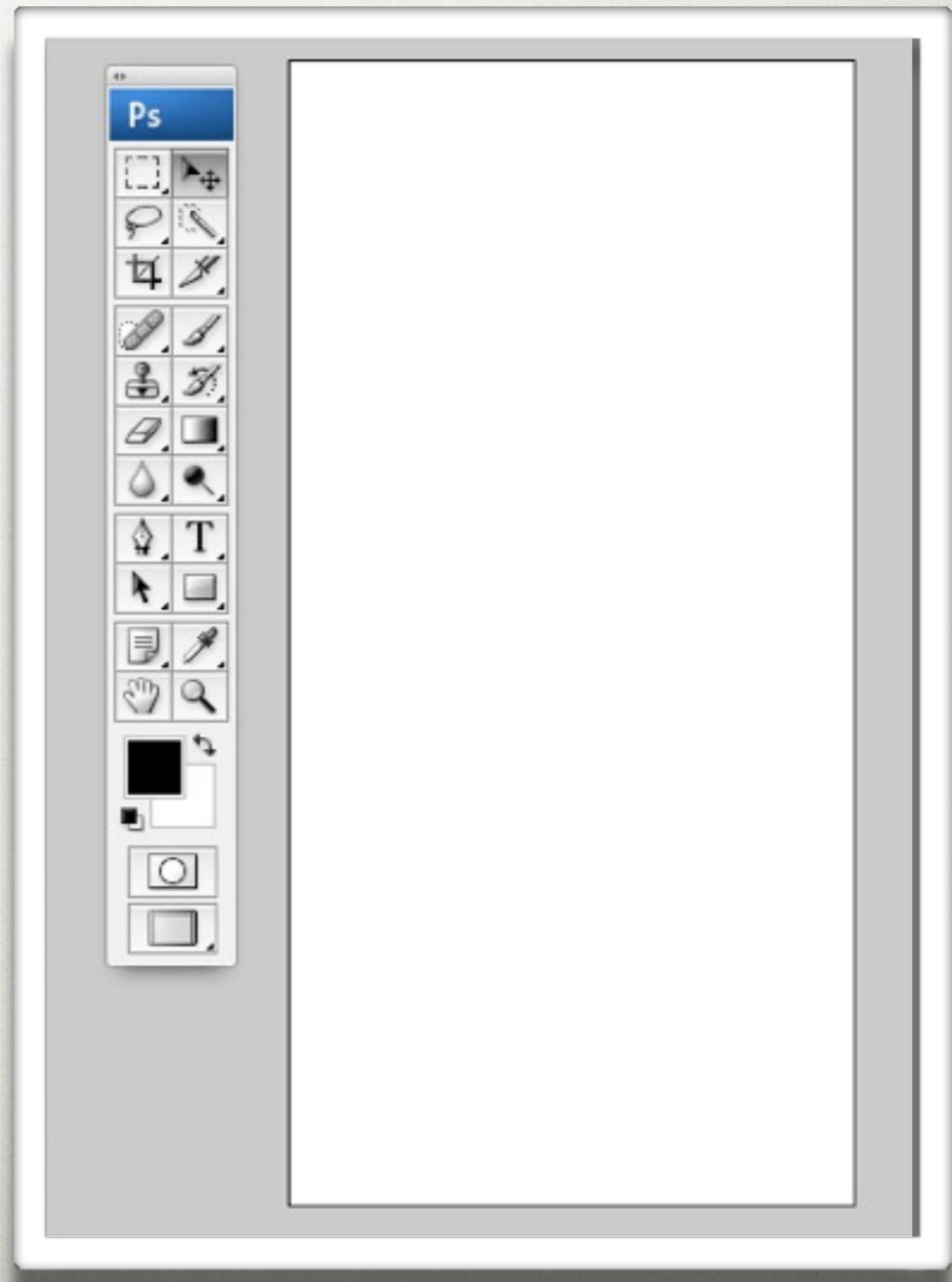
so common every user has seen it

familiar tools across apps with same result

how -

palette should be a grid of icon buttons

canvas should dominate the UI



one window drill-down

what -

show each page within a single window
drill-down thru options to details view
replace windows contents completely

when to use -

content can be arranged hierarchly
devices without mice - 2 panel hard to nav

why -

options on each page are clear - focus here
* most common pattern on websites
* commonly used with hub & spoke nav

how -

incorporate all content onto one page
breadcrumbs to represent where user is



PATTERNS - INFO ARCH (IA)

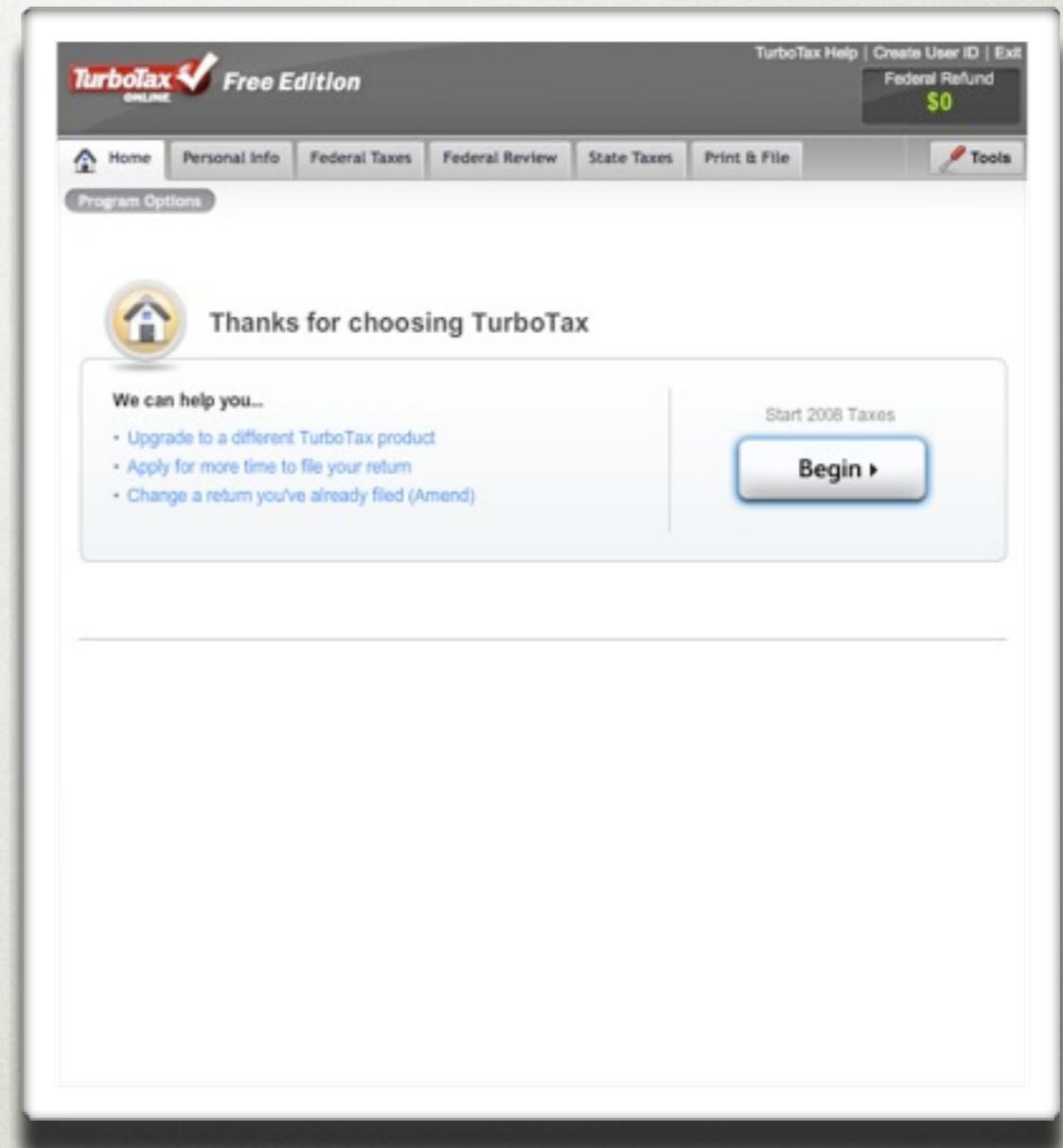
wizards

what -
lead the user step-by-step
reveal content in predetermined order

when to use -
UI has long complex task
series choices effect down stream choices
user willing to forfeit control

why -
to simplify a task

how -
split task into steps at decision points
determine physical structure
utilize “back” and “next” steps in each UI



Navigation

Navigation is designed to provide users with clear choices reaching certain predetermined parts of content.

Navigation can be represented in many forms and should be tailored towards how users typically navigate



NAVIGATION

How We Navigate

Scanning -

look for grouped content areas

look for some sort of visual hierarchy

look for textual clues

look for action labels (graphics/icons)

NAVIGATION

How We Navigate

Sign Posts -

represent where you are within a UI's virtual space

- active states in navigation cues
- color coded grouped sections

NAVIGATION

How We Navigate

Way Finding -

good signage & verbiage provides guidance to POI

- environmental clues like signs in an airport

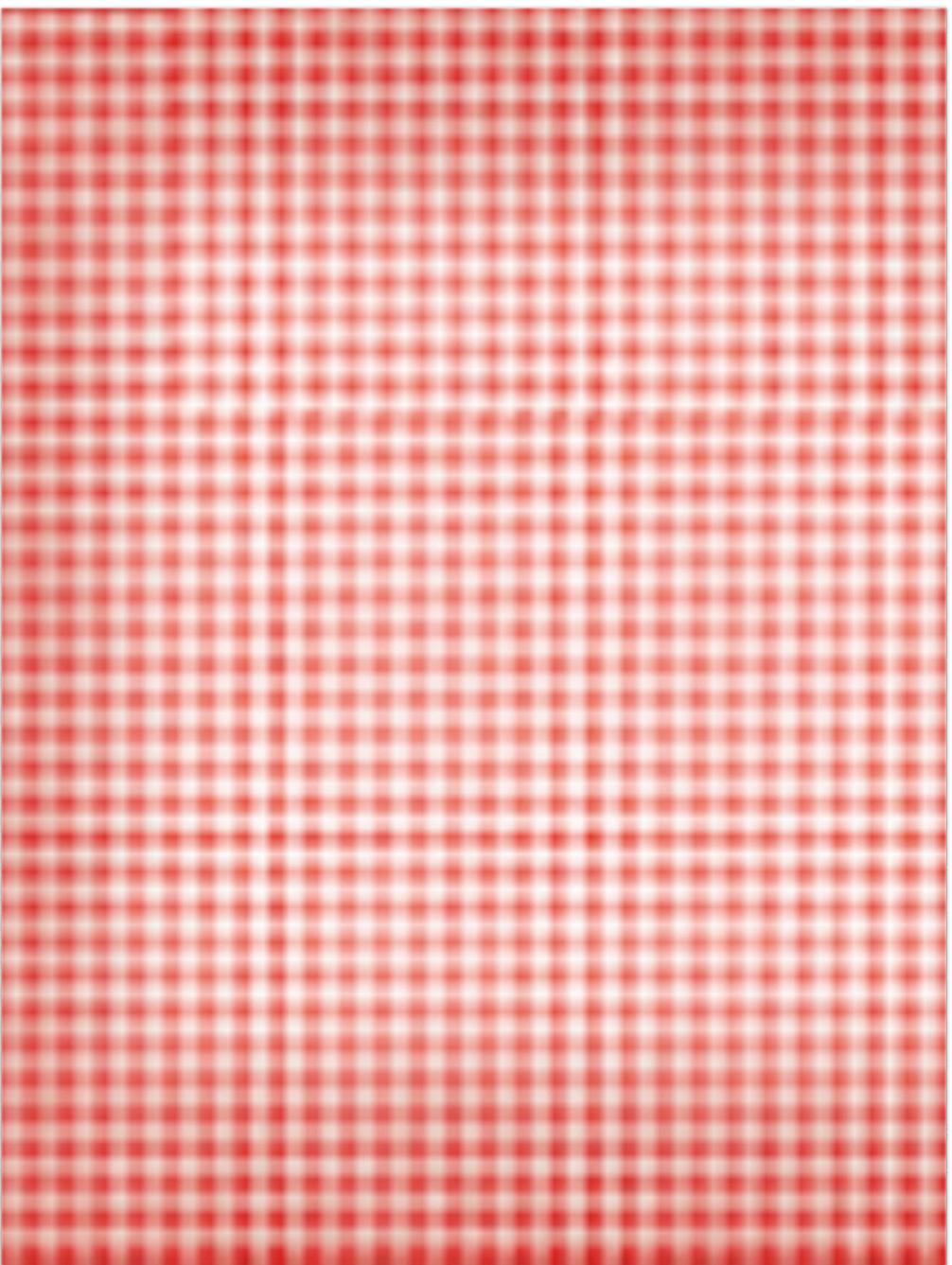
maps can provide an overview of the entire physical space

NAVIGATION

The Usability Factors

Patterns

Navigation



PATTERNS - NAVIGATION

clear entry points

what -

provide only a few entry points in UI
make them task oriented

when to use -

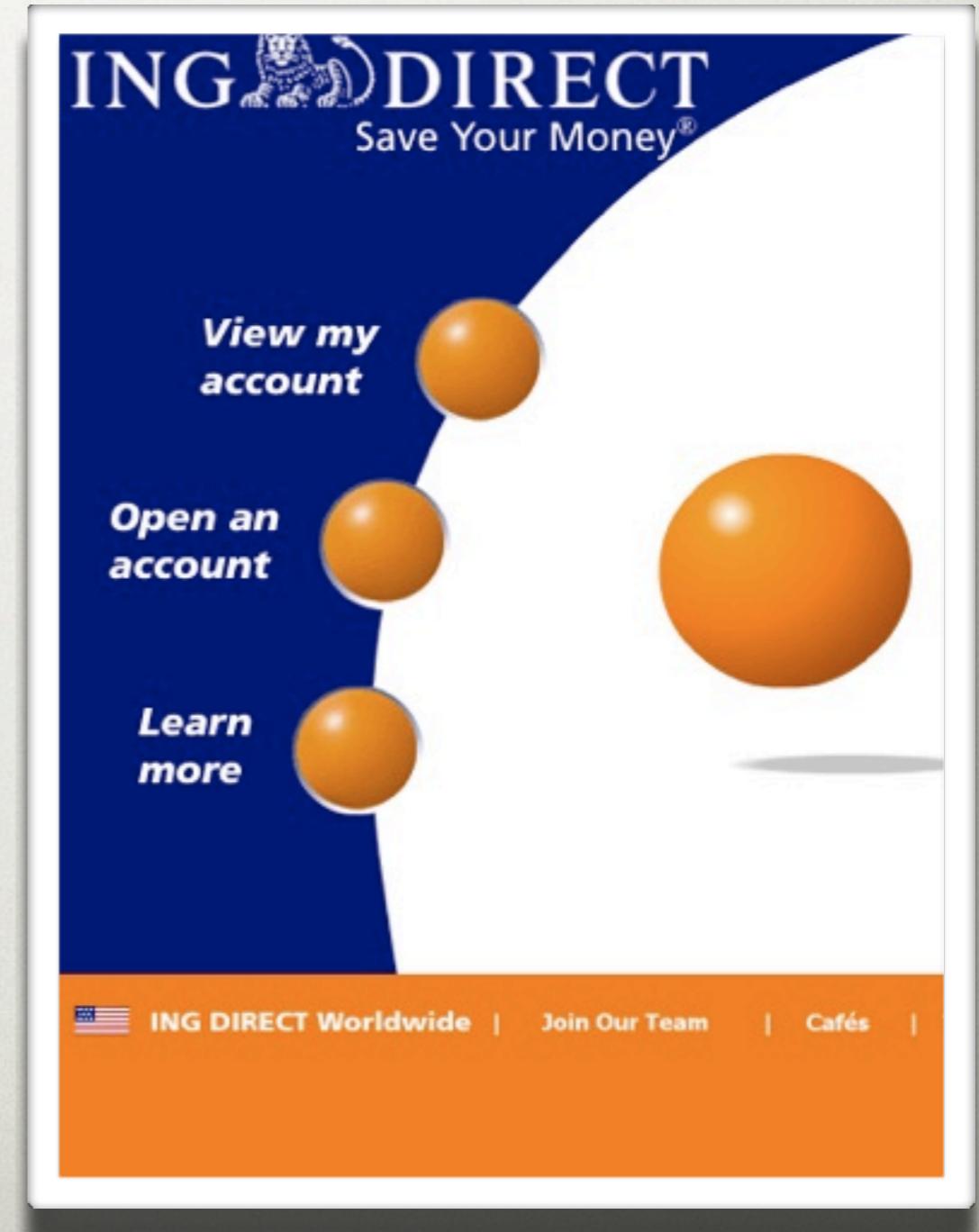
designing a task based application
users are first time users

why -

to make the UI's purpose self explanatory
provides a way to get started

how -

show entry points proportional to
importance



PATTERNS - NAVIGATION

global

what -

small section of the UI with consistent links to key sections of content

when to use -

designing a large site or application
facilitate quickly moving across pages

why -

most recognized form of navigation
facilitates safe exploration

how -

make elements highly visible and simple
use one or few words to convey meaning



PATTERNS - NAVIGATION

hub & spoke

what -

isolate sections into mini-applications
each with one-way-in & one-way-out

when to use -

UI contains several tasks or tools
reinforces separation - less visual clutter

why -

allows users to focus on one task at a time
to prevent errors

how -

arrange hub icons as links to sub apps
spoke contains actions & link back to hub



PATTERNS - NAVIGATION

pyramid

what -

link sequence pages with back/next links
main page has links to all sequence pages

when to use -

UI has pages that are viewed in order
often found on web pages - drill-downs

why -

reduces number of clicks to get around
chaining reduces clicks back to main page

how -

back, next, up links on each page
place these links in same spot per page

The screenshot shows the TurboTax Free Edition software interface. At the top, there's a navigation bar with tabs for Home, Personal Info, Federal Taxes, and Federal Review. Below the tabs, there are sub-navigation links: Wages & Income, Deductions & Credits (which is currently selected), and Other Tax Situation. The main content area is titled "Let's Start Your Deductions and Credits". It contains text explaining that the section helps users get every write-off, tax deduction, and credit that works. There are three bullet points: "You Estimate" (we'll ask how much you had for five common deductions), "We Make a Recommendation" (using estimates, we'll recommend either the standard deduction or itemized deduction), and "You Save Time and Money" (we'll ask customized questions so you save time and don't have to do it yourself). A blue link "Tell Me More About This Section" is present. At the bottom, there's a "Select Continue and we'll get started." button and a "Back" button.

PATTERNS - NAVIGATION

breadcrumbs

what -

show parent pages proceeding current

when to use -

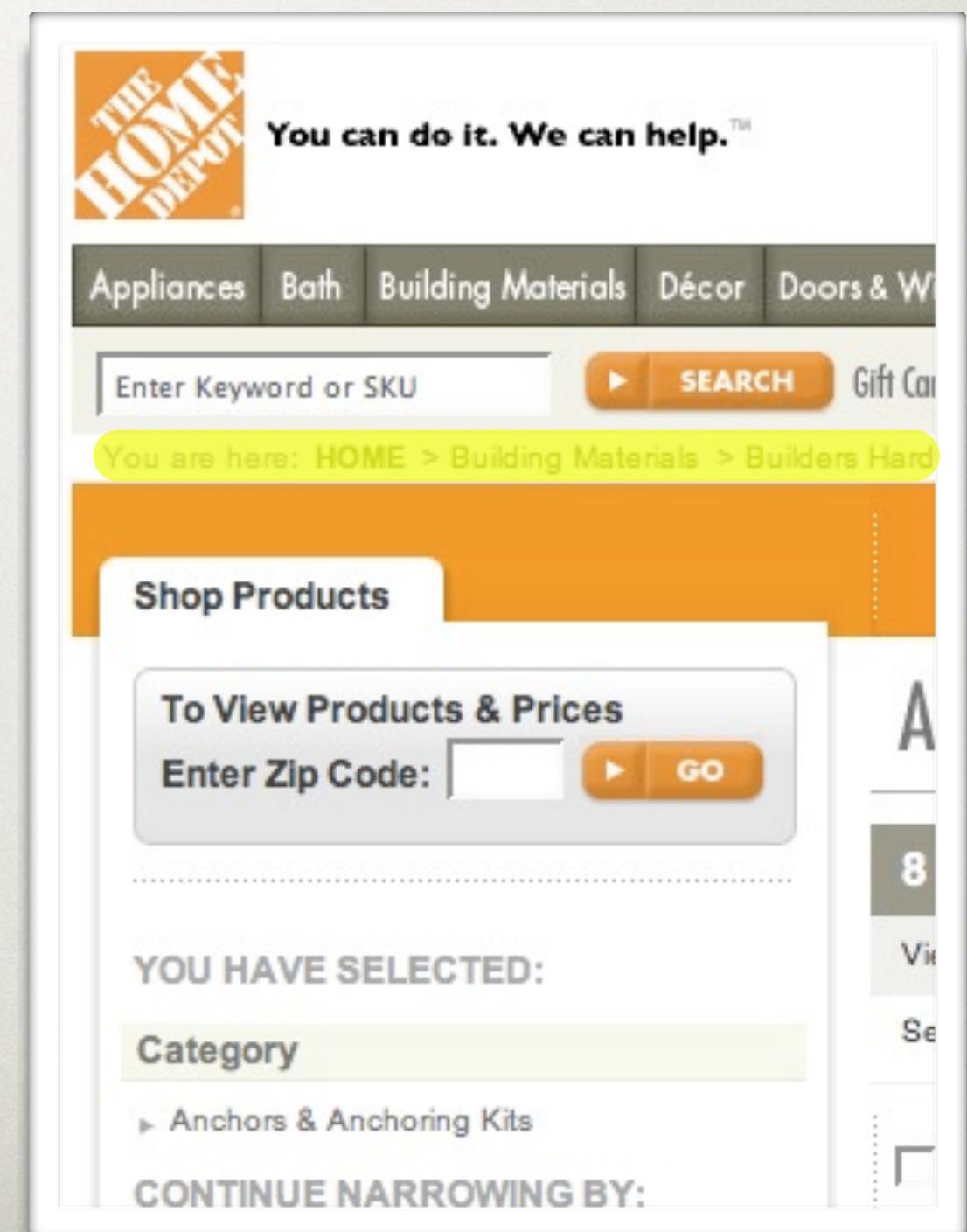
site has a tree structure - drill-downs

why -

show hierarchy levels from top down
help users understand where they are

how -

near top of page place inline links to levels
start with top level then deeper levels
separate each link visually - right arrows



PATTERNS - NAVIGATION

color coded sections

what -

use color to identify site sections

when to use -

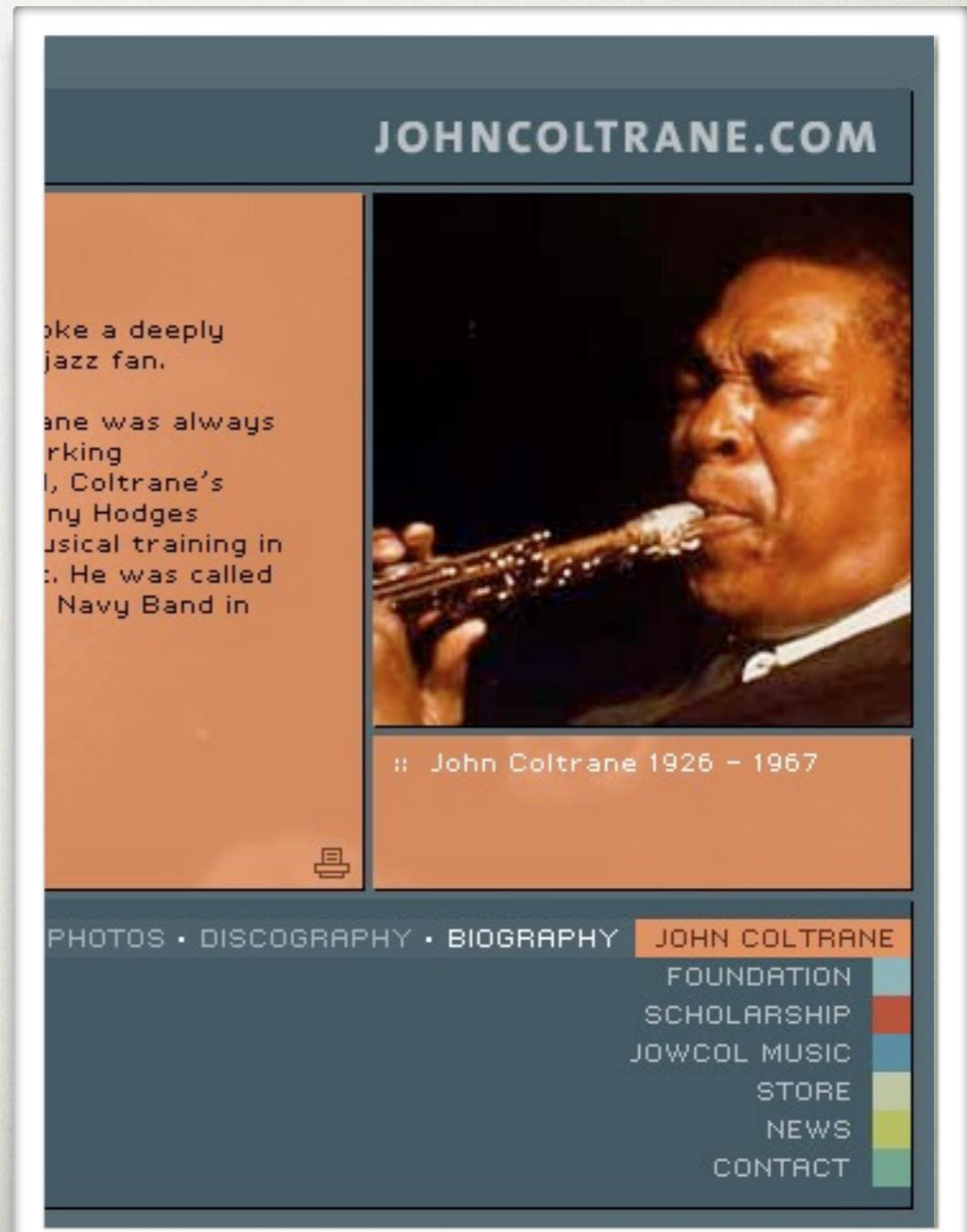
UI is a large with many pages in sections
use “visual framework” to represent them

why -

its an example of subtle sign-posts
to distinguish site sections - visual appeal

how -

pick one UI color & change it per section



PATTERNS - NAVIGATION

animated transitions

what -

animations that make transitions natural

when to use -

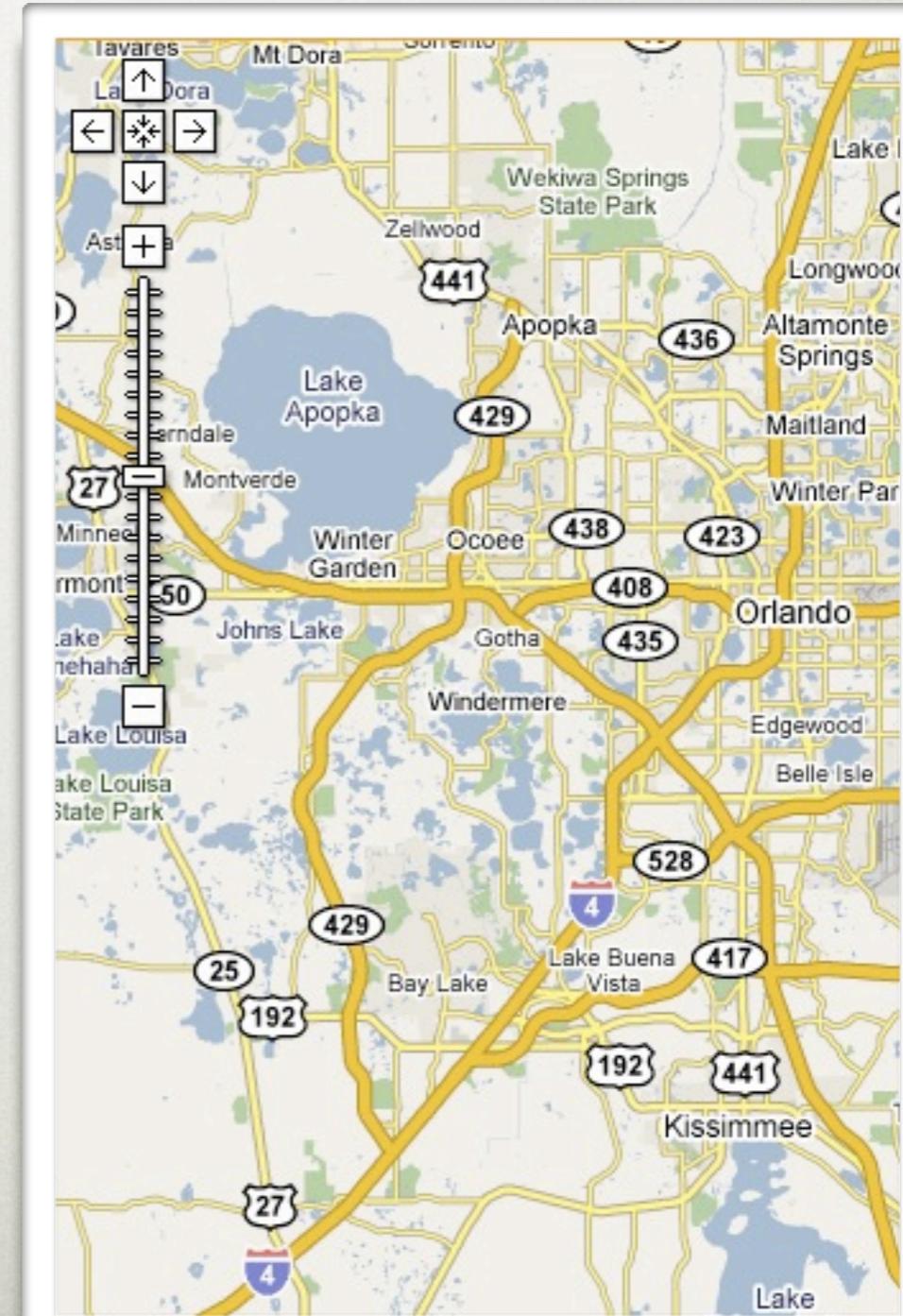
users can move through virtual spaces by
drilling down or zooming

why -

to support users spatial memory

how -

build a short animation from A to B
animation should be quick
to avoid confusion as to where you are
provides spatial relationships of UI



PATTERNS - NAVIGATION

escape hatches

what -

link back to known place - usually home

when to use -

user is locked into limited navigation

*not needed with breadcrumbs

why -

to avoid a user from feeling trapped
encourages safe exploration

how -

create a link from company logo to home
create a link to hub page from any spoke



[pull]

the end

