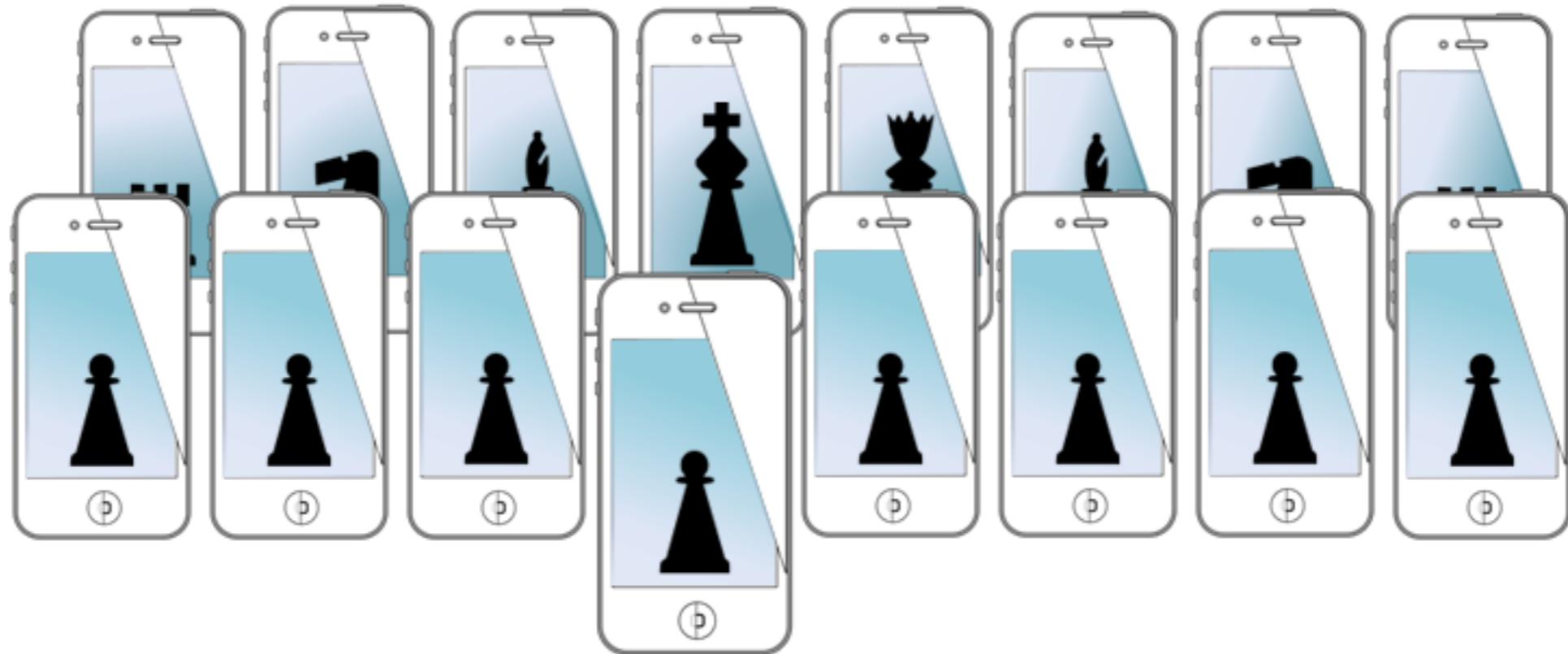


# MOBILE SENSING LEARNING



**CSE5323 & 7323**  
Mobile Sensing and Learning

week 12: mobile design and interaction

Eric C. Larson, Lyle School of Engineering,  
Computer Science and Engineering, Southern Methodist University

# course logistics

- grades are coming, but not this week
- A6 extension to Monday?
- next week is the last week of lecture, so use remaining time to work on the final project
  - proposals due tomorrow, so send me written constraints and something I can place on canvas so that everyone else can see what you are doing

# course logistics

- I won't be nagging you to work on final project
  - that means time management is up to you
  - spend time on the app, of course
  - but also work on presentation and video

## Grading

Students will be evaluated based upon their biweekly lab assignments, their final project demonstration, and their final project report, as follows:

Biweekly lab assignments:	50% of grade (5 labs @ 9% each, 1 lab @ 5%)
In Class Assignments:	25% of grade (5 at 5% each)
Final Project iOS Application:	15% of grade
Final Project Presentation:	5% of grade
Final Project Video:	5% of grade

# agenda

- mobile HCI
  - design, navigation, and interaction
    - many elements courtesy of apple
    - and some from others

## **another great resource:**

Apple's Human Interface Guidelines

227 pages of bliss, text, pictures, and video

## **iOS Human Interface Guidelines**

# what makes great UI

- you tell me
- no matter what I tell you, nothing is a hard and fast rule except:
  - keep it simple, clear
  - kill the clutter, display only what is needed
  - use motion to guide

# a better slide

deference

never compete  
with content

text legible  
**clarity**  
abstraction subtle

layers are visual  
motion cues

depth

# planning

## step one

look at core function

## step two

add design sparsely

## step three

examine assumptions  
question every element

# planning the app

- **list** potential features of the app
- a recipe app

creating lists

getting recipes

comparing prices

locating stores

annotating recipes

getting and using coupons

viewing cooking demos

exploring different cuisines

finding ingredient  
substitutions

# planning the app

usually cook at home or prefer ready-made meals

are committed coupon-users or think that coupons aren't worth the effort

enjoy hunting for speciality ingredients or seldom venture beyond the basics

follow recipes strictly or use recipes as inspiration

buy small amounts frequently or buy in bulk infrequently

what do these users want?

who is your target audience?

- **determine** users, list it out

want to keep several in-progress lists for different purposes or just want to remember a few things to buy on the way home

insist on specific brands or make do with the most convenient alternatives

tend to buy a similar set of items on each shopping trip or buy items listed in a recipe

**audience:** love to experiment with recipes, are often in a hurry, and are thrifty if it doesn't take too much effort

# planning the app

- **filter** potential features through your audience

**audience:** love to experiment with recipes, are often in a hurry, and are thrifty if it doesn't take too much effort

creating lists

getting recipes

comparing prices

Locating stores

annotating recipes

getting and using coupons

viewing cooking demos

exploring different cuisines

finding ingredient substitutions

# principles of great design

# make it obvious



# make it obvious



# text entry suuuuuuucks

- avoid text input at all costs
- example: enter your state

## solution text

Enter State

## solution picker

Select State

GA

HI

ID

IL

IN

IW

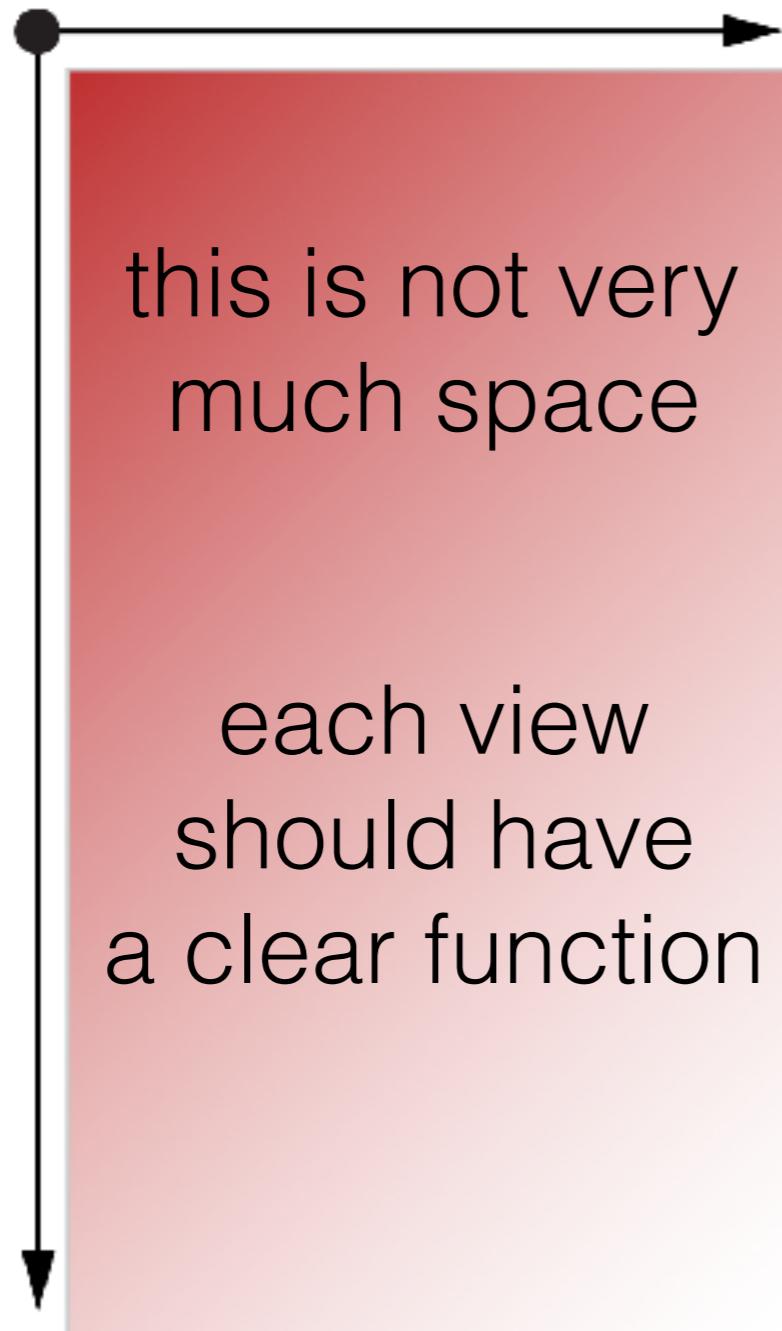
KA

## solution get from contacts

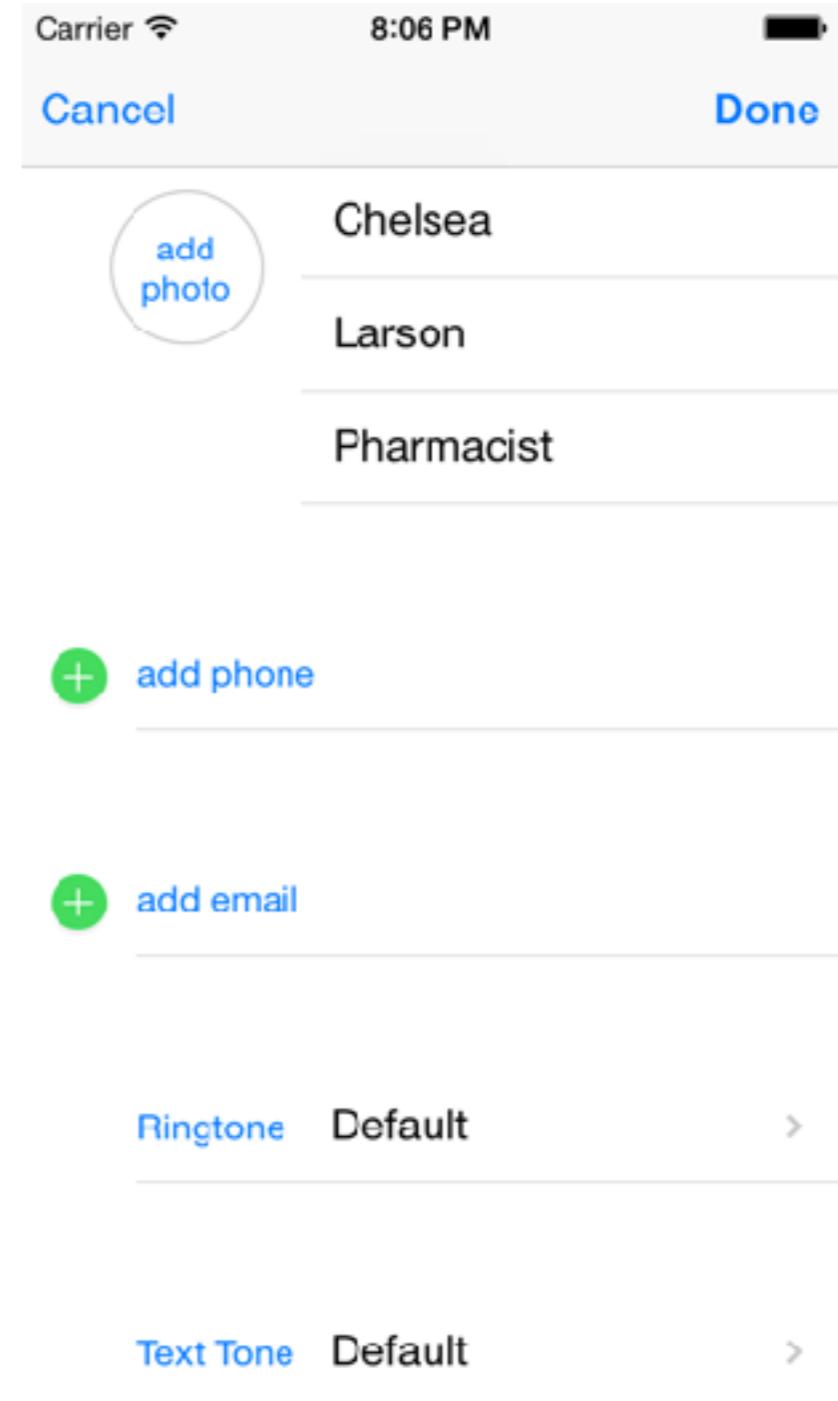
Autofill

# layout with care

important



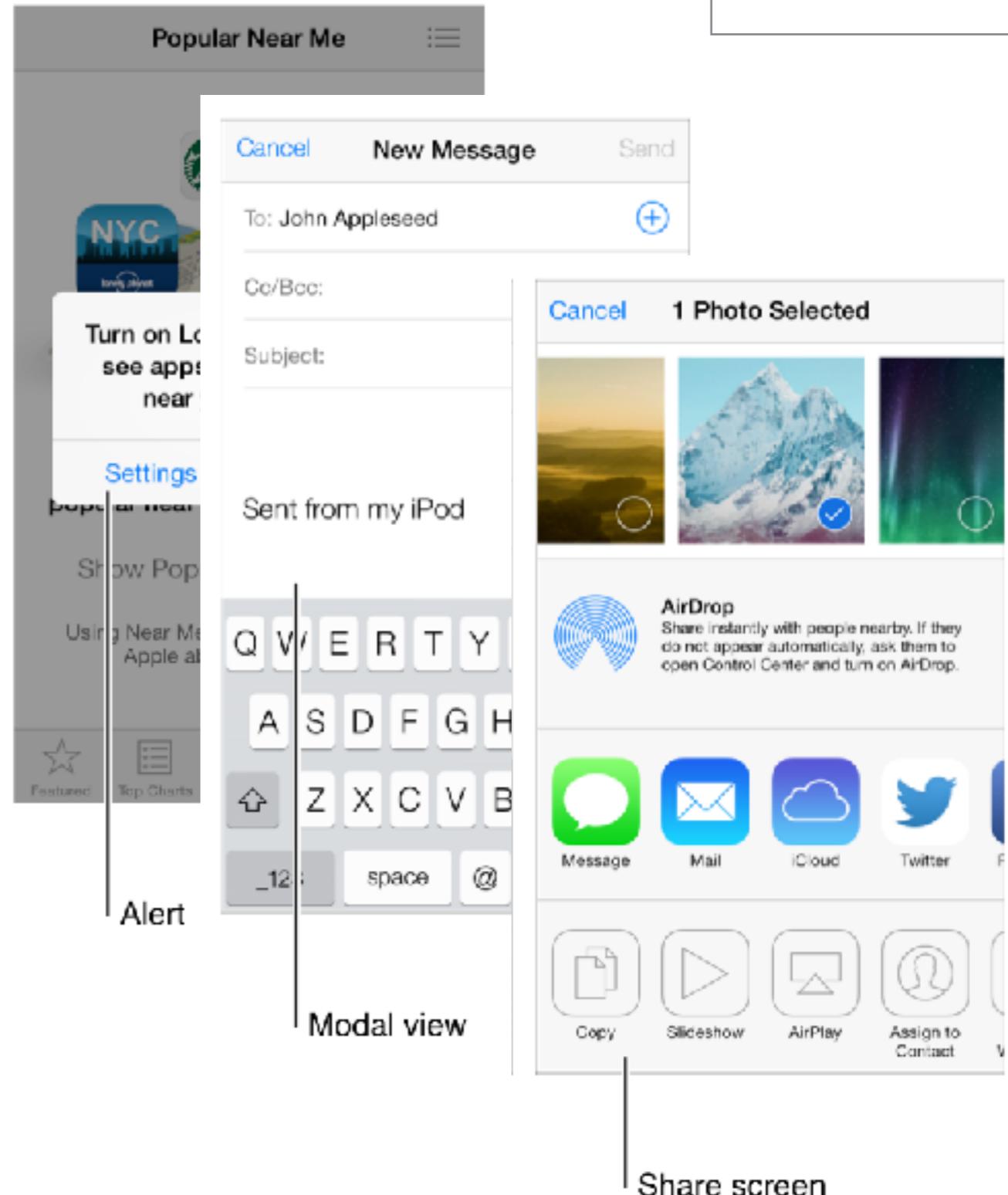
not so important



# use modal sparingly

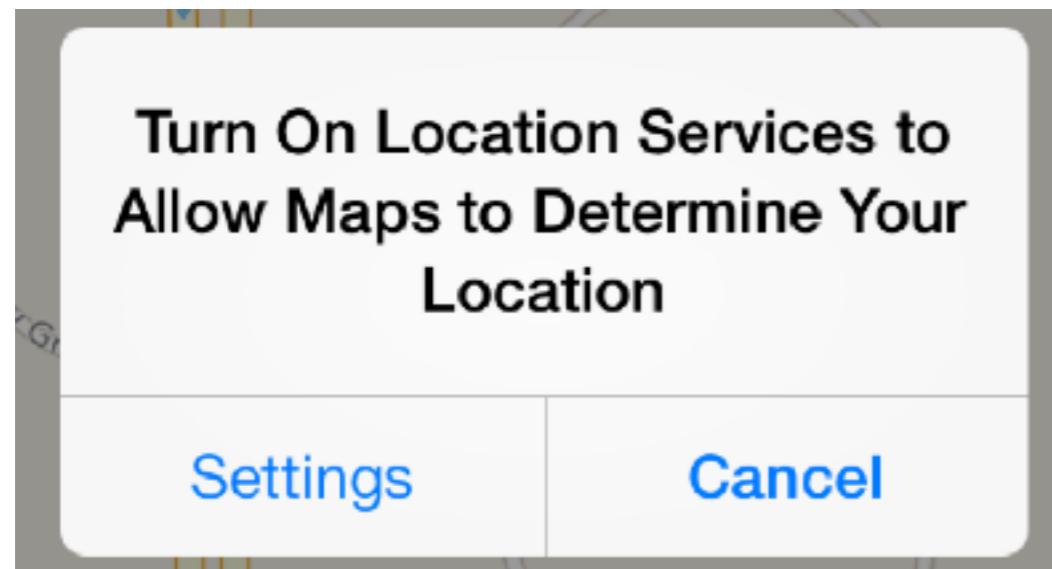
## takes over the screen

- prevents other interaction
- use when:
  - critical to capture attention
  - self contained action
    - like sending email
- keep simple, not tied to nav
- provide easy, safe exit



# keep alerts succinct

- change wording to be clear and concise
- avoid jargon



## Problem Connecting

There might be a problem with the server. Do you want to notify our staff about the issue?

[Send Notification](#)

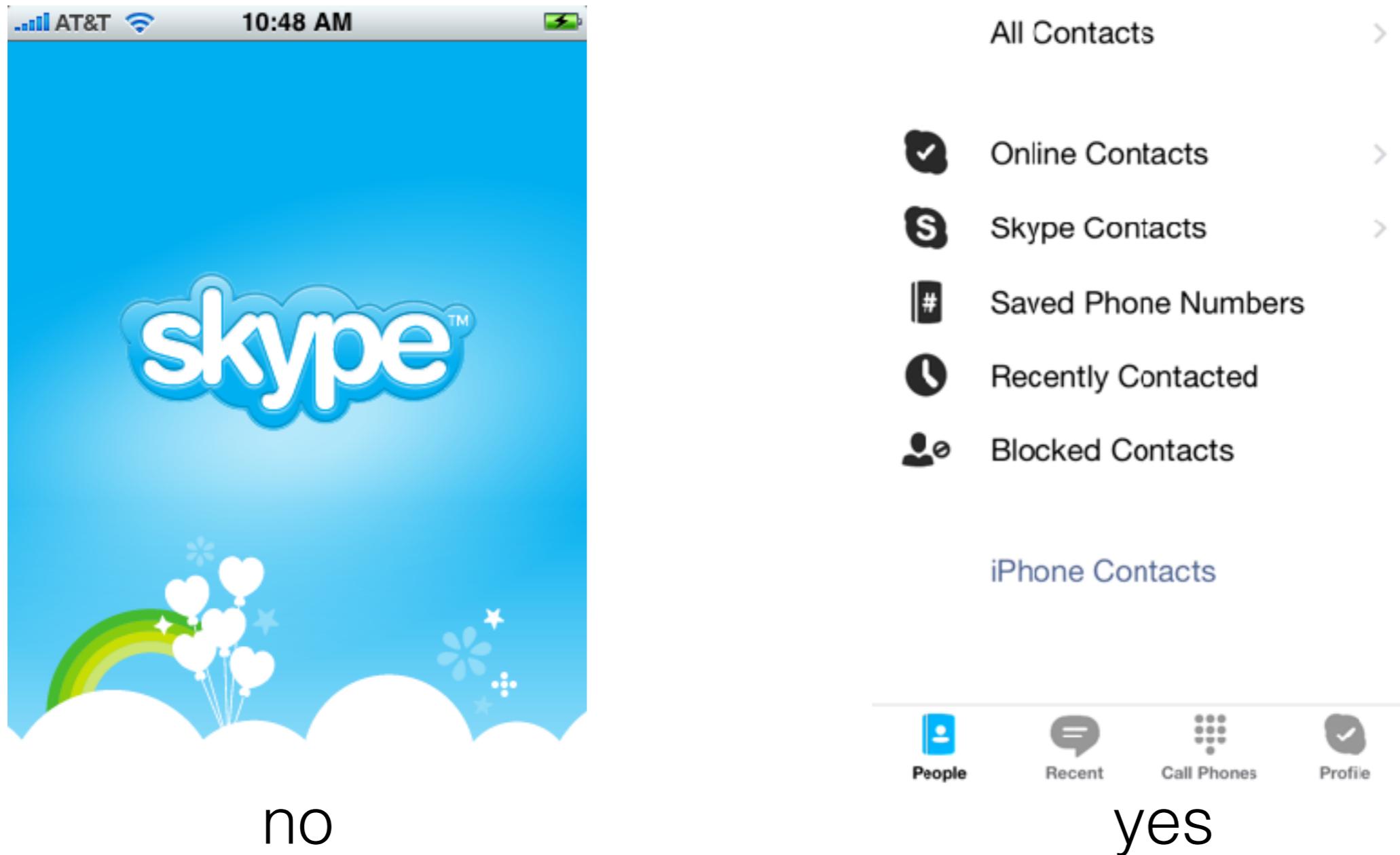
[Go Back](#)



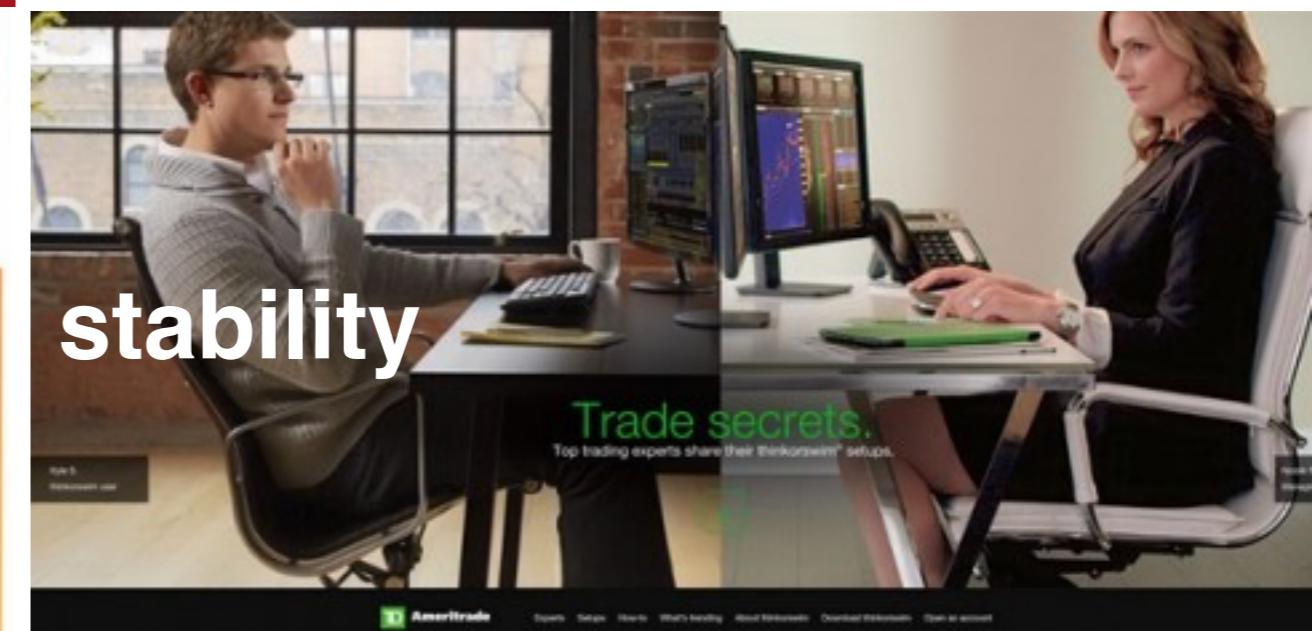
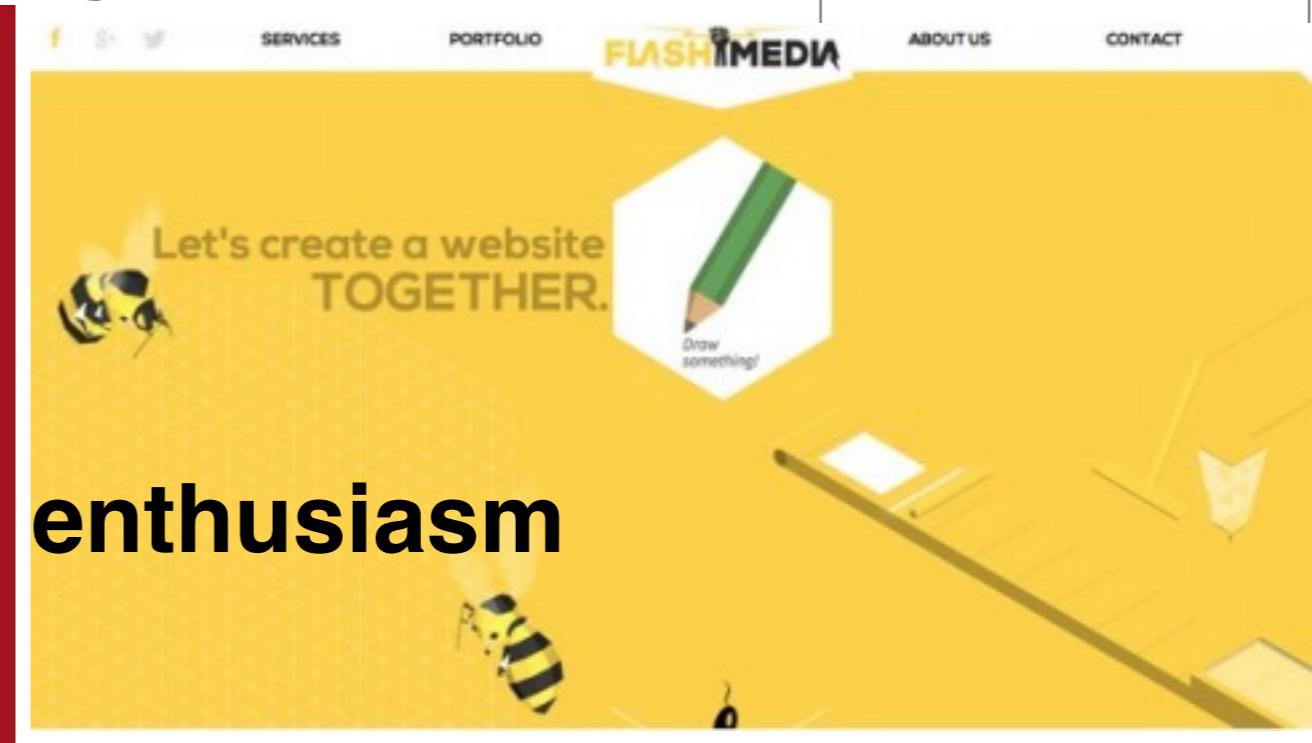
- use verbs for buttons
- title is meaningful
- two choices, safe choice bolded
- full sentences used in explanation
- try to only have a title
- try not to say “we” and “our”

# consider no splash

- use the splash screen to give impression of quickness

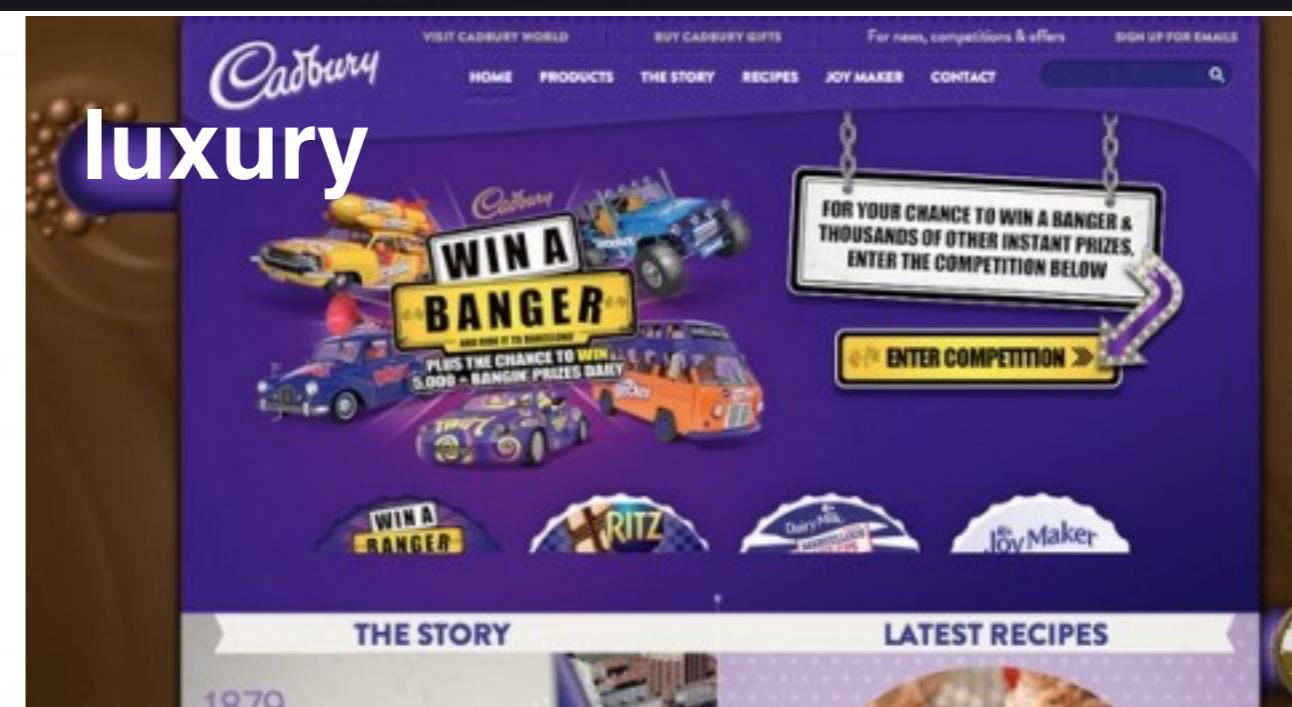


# use color theory



<http://thenextweb.com/dd/2015/04/07/how-to-create-the-right-emotions-with-color-in-web-design/>

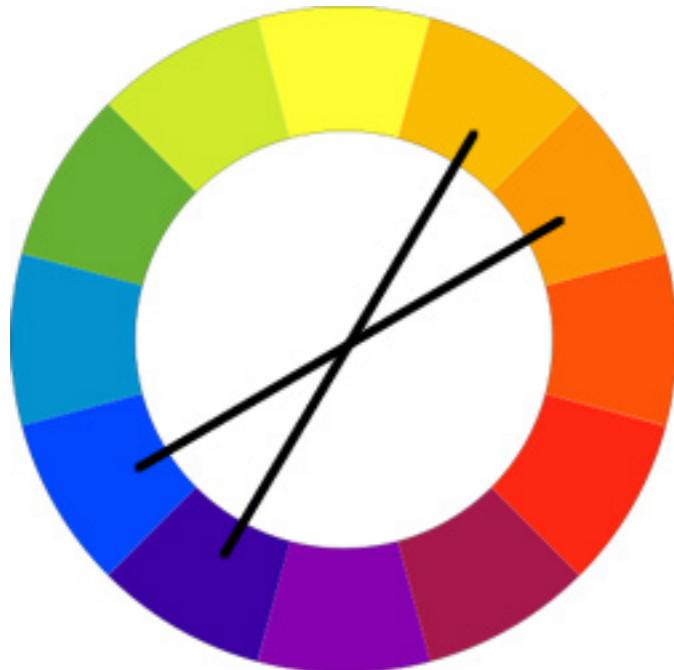
# use color theory



<http://thenextweb.com/dd/2015/04/07/how-to-create-the-right-emotions-with-color-in-web-design/>



# use color



The Only eCommerce Platform for Custom Online Stores

Easily customize anything, front-end or back  
Generate income by selling your custom modules  
Support directly from our software engineers

Try It For Free

LemonStand Adapts to **Your** Needs. Not the other way around.

Unlimited Customization

Enjoy complete creative freedom over the design and functionality of your store.

Community

Join the thriving developer community and LemonStand Marketplace.

Customer Support

Receive support directly from LemonStand developers. We're there for you.

Leave a message

APARTMENTS

WE LIVE HERE

In communities across the country, apartments work – helping people live in a home that's right for them. And demand continues to grow. Learn how apartments create communities and contribute to the economy.

Start

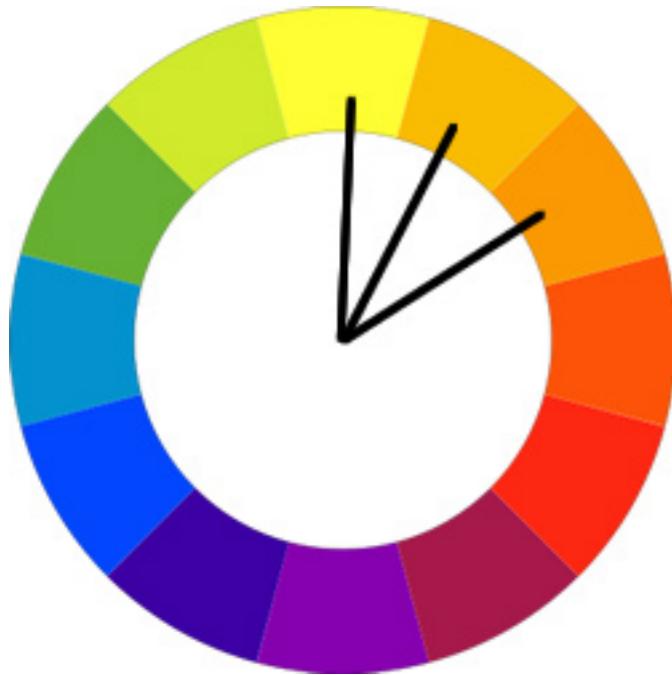
My Build Here My Work Here My Spend Here Start Over

Economic Calculator Apartment Search by State About Share

NMHC National Multi Housing Council NAA National Apartment Association

<http://thenextweb.com/dd/2015/03/23/color-psychology-explains-why-color-is-so-powerful/>

# use color theory



## Analogous

mono-themed, but elegant

easy to select one other contrast color or highlights without deviating

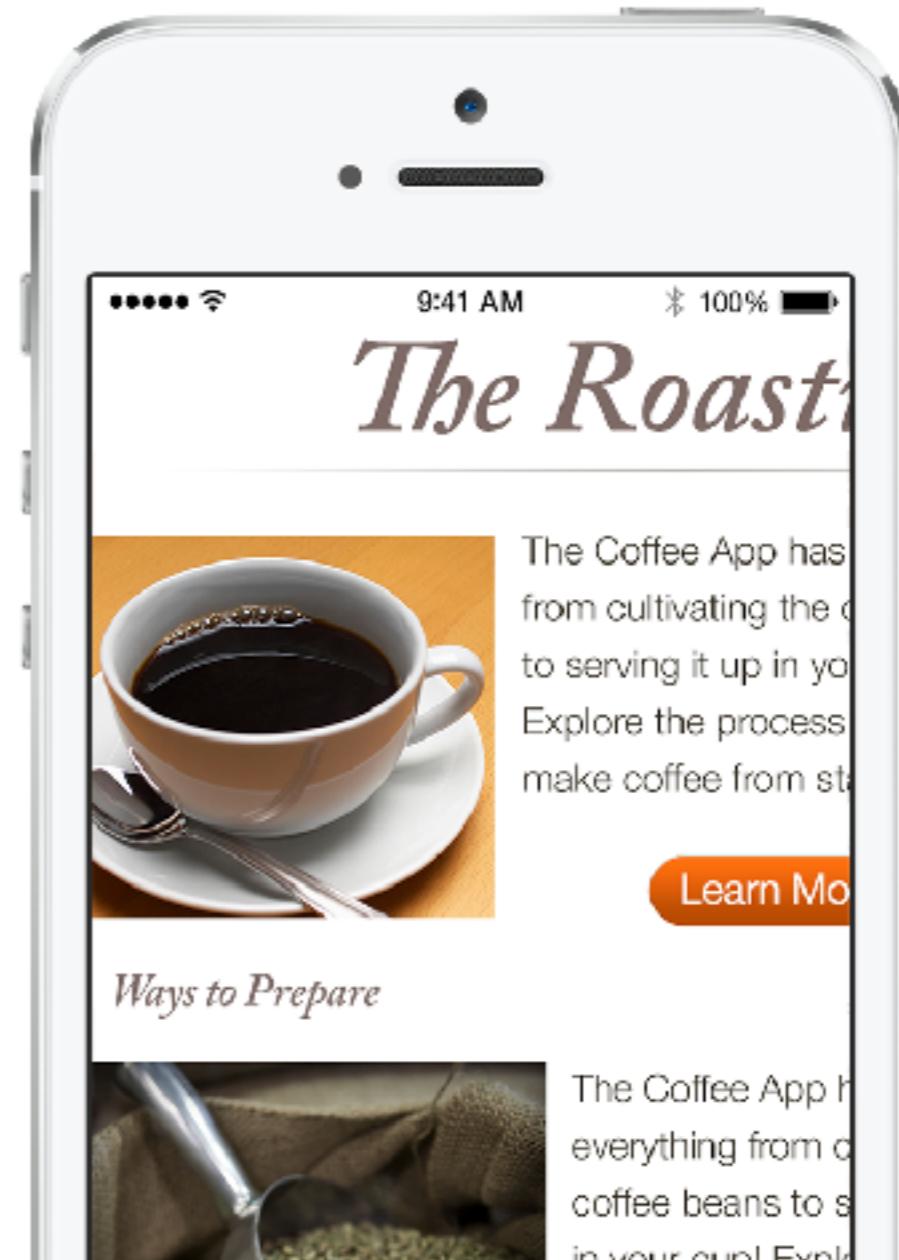
The screenshot shows the homepage of the Silverback 2.0 software. The background is a vibrant green color. At the top, there is a quote from Garrett Dimon: "I can't remember the last time I was this excited about the potential for software to really help make a difference... the result will be better web sites and software for everyone." Below the quote is a testimonial from Garrett Dimon, a web designer, with a link to "Next Testimonial". In the center, there is a cartoon illustration of a purple gorilla wearing a white lab coat, holding a book titled "Silverback 2.0". To the right of the gorilla, the product name "Silverback 2.0" is displayed in large, bold, dark letters. Below it, the tagline "Guerrilla usability testing software for designers and developers" is written. A list of features includes: Capture screen activity, Add chapter markers on-the-fly, Video the tester's face, Control recording with the remote, Record the tester's voice, and Export to Quicktime. A "NEW FEATURES" badge is present. On the left, there is a section titled "Features in 2.0 include" with sub-sections for Preview, Batch Export, Tasks &amp; Highlights, and Performance. At the bottom, there are two buttons: "Download" with a "FREE FOR 30 DAYS" offer and "Buy NOW" for \$69.95. A "What does Silverback do?" section shows a screenshot of the software interface.

<http://thenextweb.com/dd/2015/04/07/how-to-create-the-right-emotions-with-color-in-web-design/>



Apple says...

# formatting



# design for touch



Date	October 11, 2013		4:00 PM
Tue Oct 8	1	57	
Wed Oct 9	2	58	
Thu Oct 10	3	59	AM
<b>Fri Oct 11</b>	<b>4</b>	<b>00</b>	<b>PM</b>
Sat Oct 12	5	01	
Sun Oct 13	6	02	
Mon Oct 14	7	03	

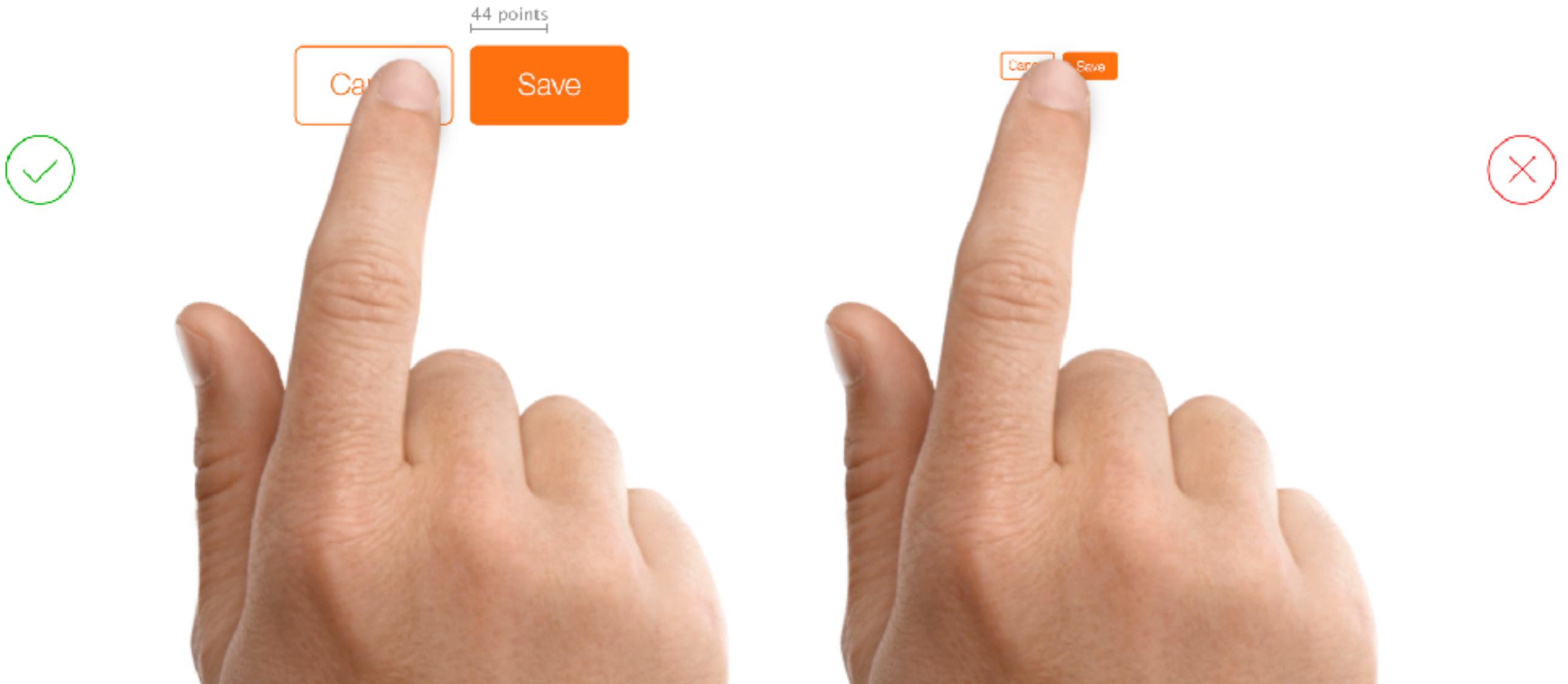
Time:  :  AM

Date:

October						
S	M	T	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	<b>11</b>	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4



# design for taps



# legible text



## Heading

### Sub-Headline

Adipiscing elit. Sed neque nisl, blandit vel ipsum eu, imperdiet blandit lectus. Morbi tristique urna ut volutpat ornare. Curabitur semper vitae urna ac tempus. Duis vehicula elit nulla, eleifend egestas nisl vehicula nec. Nullam varius est dui, nec accumsan lectus posuere ut. Nullam viverra purus laoreet euismod tempor.

Adipiscing elit. Sed neque nisl, blandit vel ipsum eu, imperdiet blandit lectus. Morbi tristique urna ut volutpat ornare. Curabitur semper vitae urna ac tempus. Duis vehicula elit nulla, eleifend egestas nisl vehicula nec. Nullam varius est dui, nec accumsan lectus posuere ut. Nullam viverra purus laoreet euismod tempor.

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Adipiscing elit. Sed neque nisl, blandit vel ipsum eu, imperdiet blandit lectus. Morbi tristique urna ut volutpat ornare. Curabitur semper vitae urna ac tempus. Duis vehicula elit nulla, eleifend egestas nisl vehicula nec. Nullam varius est dui, nec accumsan lectus posuere ut. Nullam viverra purus laoreet euismod tempor.



# high contrast



## Heading

### Sub-Headline

Adipiscing elit. Sed neque nisl, blandit vel ipsum eu, imperdiet blandit lectus. Morbi tristique urna ut volutpat ornare. Curabitur semper vitae urna ac tempus. Duis vehicula elit nulla, eleifend egestas nisl vehicula nec. Nullam varius est dui, nec accumsan lectus posuere ut. Nullam viverra purus laoreet euismod tempor.

Adipiscing elit. Sed neque nisl, blandit vel ipsum eu, imperdiet blandit lectus. Morbi tristique urna ut volutpat ornare. Curabitur semper vitae urna ac tempus. Duis vehicula elit nulla, eleifend.

## Heading

### Sub-Headline

Adipiscing elit. Sed neque nisl, blandit vel ipsum eu, imperdiet blandit lectus. Morbi tristique urna ut volutpat ornare. Curabitur semper vitae urna ac tempus. Duis vehicula elit nulla, eleifend egestas nisl vehicula nec. Nullam varius est dui, nec accumsan lectus posuere ut. Nullam viverra purus laoreet euismod tempor.

Adipiscing elit. Sed neque nisl, blandit vel ipsum eu, imperdiet blandit lectus. Morbi tristique urna ut volutpat ornare. Curabitur semper vitae urna ac tempus. Duis vehicula elit nulla, eleifend.



# negative space

## Heading

### Sub-Headline

Adipiscing elit. Sed neque nisl, blandit vel ipsum eu, imperdiet blandit lectus. Morbi tristique urna ut volutpat ornare. Curabitur semper vitae urna ac tempus. Duis vehicula elit nulla, eleifend egestas nisl vehicula nec. Nullam varius est dui, nec accumsan lectus posuere ut. Nullam viverra purus laoreet euismod tempor.

Adipiscing elit. Sed neque nisl, blandit vel ipsum eu, imperdiet blandit lectus. Morbi tristique urna ut volutpat ornare. Curabitur semper vitae urna ac tempus. Duis vehicula elit nulla, eleifend.



## Heading

### Sub-Headline

Adipiscing elit. Sed neque nisl, blandit vel ipsum eu, imperdiet blandit lectus. Morbi tristique urna ut volutpat ornare. Curabitur semper vitae urna ac tempus. Duis vehicula elit nulla, eleifend egestas nisl vehicula nec. Nullam varius est dui, nec accumsan lectus posuere ut. Nullam viverra purus laoreet euismod tempor.

Adipiscing elit. Sed neque nisl, blandit vel ipsum eu, imperdiet blandit lectus. Morbi tristique urna ut volutpat ornare. Curabitur semper vitae urna ac tempus. Duis vehicula elit nulla, eleifend.



# design for retina



# organize



Edit	
Coffee	28 g >
Grain Size	~113.3 µm >
Water	1241 ml >
Temperature	103°C >
Time	223 s >
Serving	310.25 ml >
Metric	English



coffee: 28 g. Edit grain size:  
~113.1 µm Edit water: 1241  
ml Edit temp: 103° Edit  
time: 223 s. Edit serving:  
310.25 ml Edit

Metric English  
Celsius Fahrenheit

# alignment



Adipiscing elit. Sed neque nisl, blandit vel ipsum eu, imperdiet blandit lectus. Morbi tristique urna ut volutpat ornare\*  
Curabitur semper vitae urna ac adipiscing elit. Sed neque nisl, blandit vel ipsum eu, imperdiet blandit lectus. Morbi tristique urna ut volutpat ornare. Curabitur semper vitae urna ac tempus.



*\*Ornare imperdiet blandit lectus. Morbi tristique*

**Continue**

Adipiscing elit. Sed neque nisl, blandit vel ipsum eu, imperdiet blandit lectus. Morbi tristique urna ut volutpat ornare\* Curabitur semper vitae urna ac tempus.



*\*ornare imperdiet blandit lectus.  
Morbi tristique*

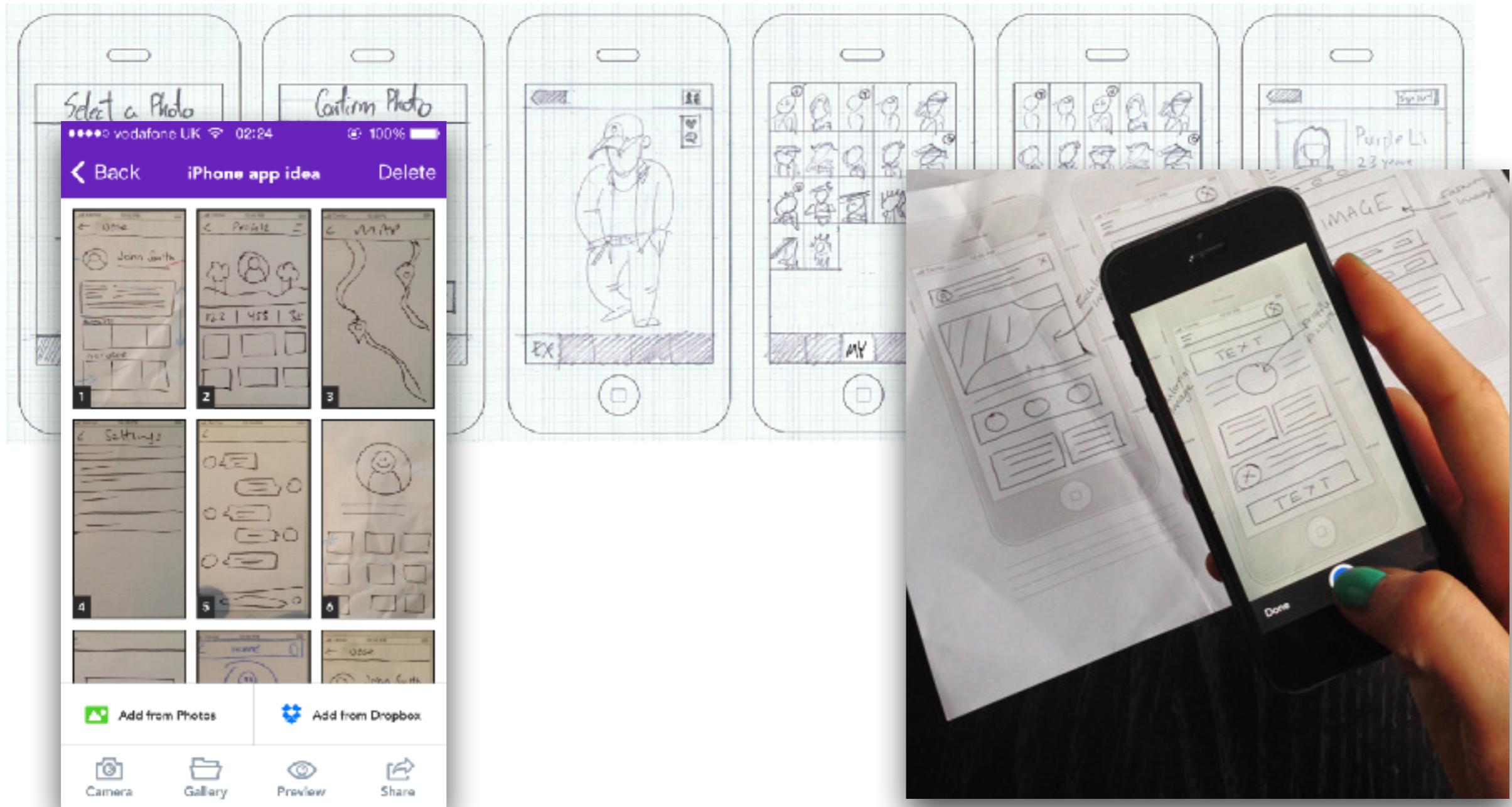
**Continue**



Adipiscing elit. Sed neque nisl, blandit vel ipsum eu, imperdiet blandit lectus.  
Morbi tristique urna ut volutpat ornare. Curabitur semper vitae urna ac tempus.

# get feedback early

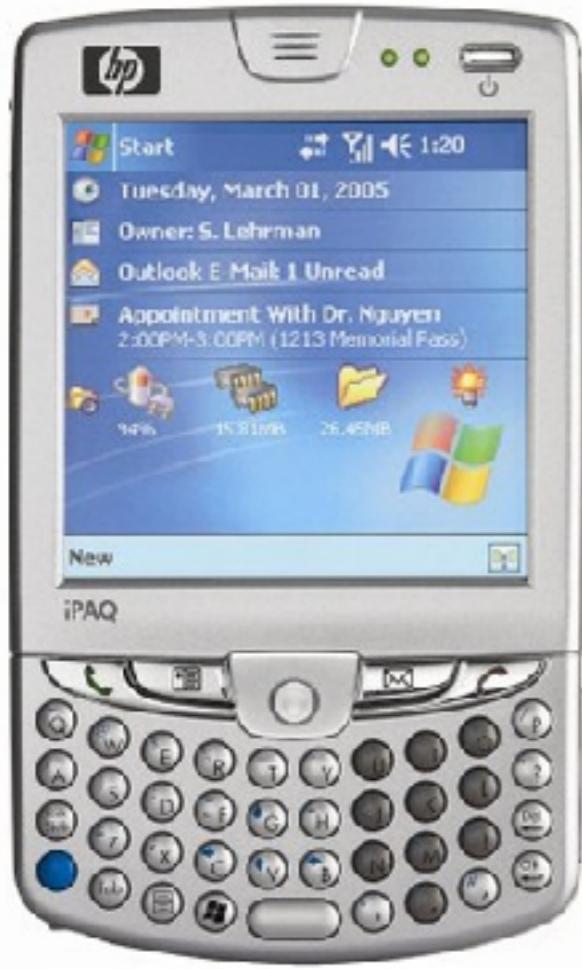
## paper prototypes



<https://marvelapp.com/apps/>

# flat design

- HCI was built on the concept of metaphor since its inception
- called skeuomorphism
- mobile HCI breaks all these metaphors



# flat design

- no need for visual metaphor in elements
- make minimal and efficient
- color is king



# flat design

- main principles started in advertising
- the swiss style and minimalist style



# pure flat design

- minimal typography
  - Helvetica (Neue) or San Francisco
  - text size gives importance
- colors are vibrant
  - set against light/dark
- no drop shadows
- no gradients
- depth is for orienting only, never the UI elements



# pure flat design?

eric c. larson

HOME

PUBLICATIONS

TALKS

TEACHING

CV



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Computer Science and Engineering  
Bobby B. Lyle School of Engineering  
Southern Methodist University

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Lyle School of Engineering  
Caruth Hall  
3145 Dyer Street, Suite 445  
Dallas, TX 75205

SMU UbiComp Lab:  
TRD



SMU

BOBBY B. LYLE  
SCHOOL OF ENGINEERING

## ABOUT ME

I am an Assistant Professor in Computer Science and Engineering in the [Bobby B. Lyle School of Engineering](#), Southern Methodist University.

I received my Doctorate from the University of Washington where I was a Intel Science and Technology fellow. My dissertation entitled [Semi-Supervised Training for Infrastructure Mediated Sensing: Disaggregated Hot and Cold Water Sensing With Minimal Calibration](#) has garnered significant impact in the sustainability community and is the basis of the new product [Belkin WeMo Water](#), which won the "Best of CES 2015" award for most forward thinking iOS related product. At UW, I was co-advised by [Shwetak Patel](#) and [Les Atlas](#). I also have an MS in Image Processing from Oklahoma State University, where I was advised by [Damon Chandler](#). During my graduate studies, I was fortunate to intern at a number of great labs including [Intel Research](#) in Seattle and [Garmin Fitness](#).

My work has been published in numerous conferences and journals disseminated through many different cross-disciplinary venues: ICIP, UbiComp, CHI, DEV, WCCI, PerCom, PETRA, SPIE, and Pervasive, garnering numerous best paper nominations. Please see my [publication page](#) and/or [Google Scholar page](#) for more details.



## PROSPECTIVE STUDENTS

I am looking for [UNDERGRADUATE](#) and [GRADUATE STUDENTS](#) passionate about investigating the role of technology in solving impactful problems. If this interests you, please [contact me](#) so that we can setup a time to chat about mutual interests and potential research projects.

## TRAVEL

Aug 27 - 29, 2014  
Belkin Echo Water Consulting  
Los Angeles, CA

Sep 13 - 17, 2014  
UbiComp 2014  
Seattle, WA

Feb 2 - 7, 2015  
Masters in Data Science Filming  
Baltimore, MD

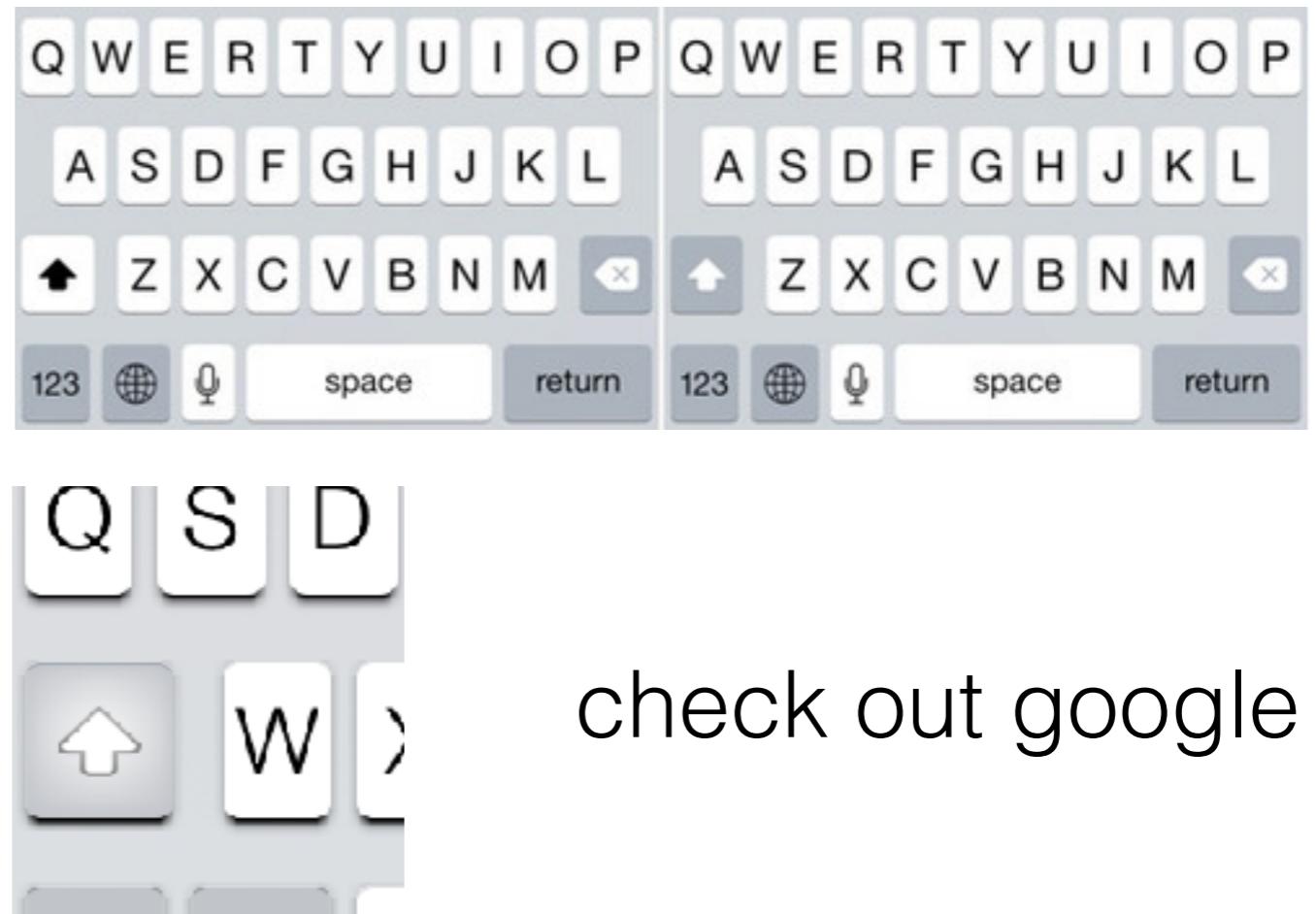
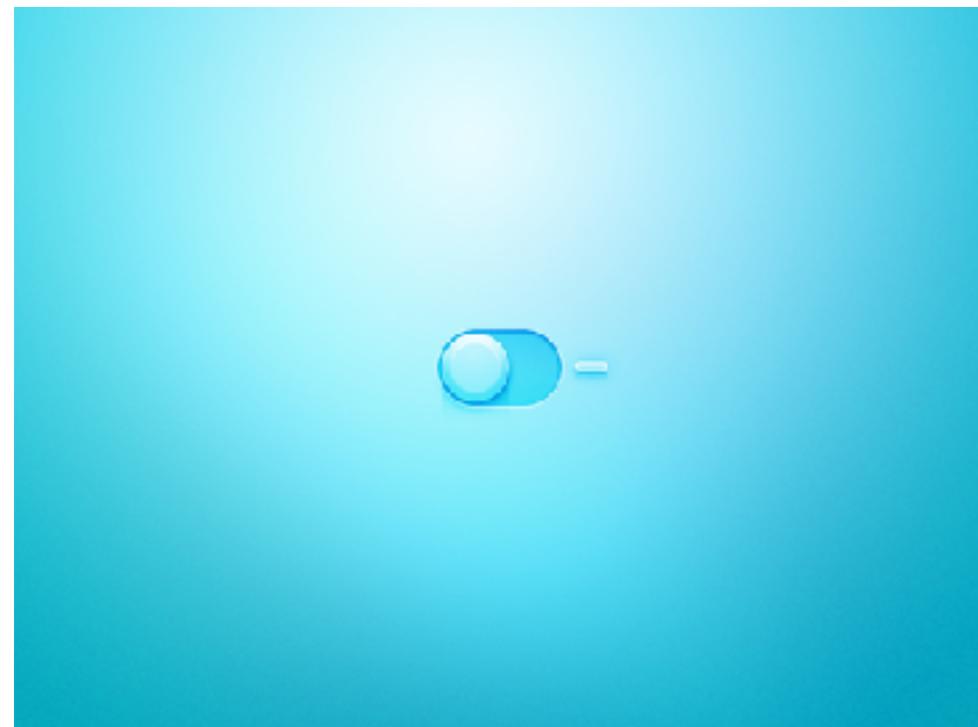
May 15 - 18, 2015  
UbiComp 2015 PC Meeting  
New York City

## NEWS

**2.28 - DISSERTATION WORK WINS BEST OF CES**  
Congratulations WeMo! WeMo® Water lands on the prestigious list of most forward-thinking, creative, and useful iOS-related products coming to market.

# pure flat design?

- can be the enemy of intuition
- metaphor and depth are powerful visual cues
- **post flat design:** how to keep metaphor while using minimalism?





Upgrade to Google+

## Get more out of Google by using Google+

Whether you're using Gmail, Search, YouTube, Maps, or Blogger, Google+ gives you new ways to share the right things with the right people.

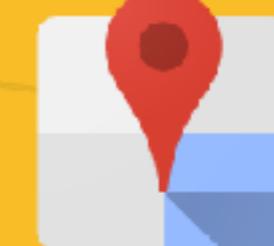


...  
.



Gmail »

Video Chat with up to nine people at once, find emails from the people you care about, share photos effortlessly and more.



Maps »

Send directions and share the places you love with just the right people, right from Google Maps.



News »

Get the latest from your favorite authors, and see the articles your friends are sharing right in Google News.



Search »

Search everything on the web, plus your photos, posts from your circles, and the things your friends have shared with you.



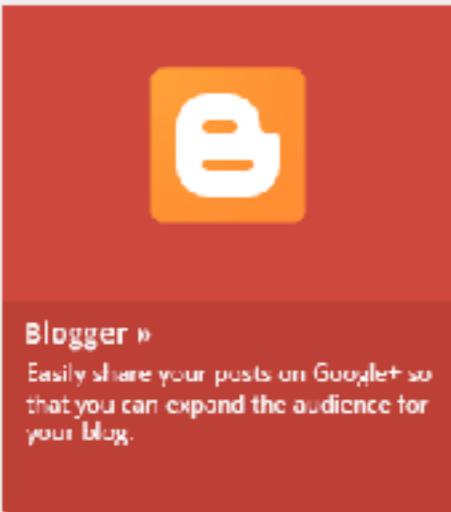
Earth »

Share images of the places you visit in Google Earth to just the right people using Google+.



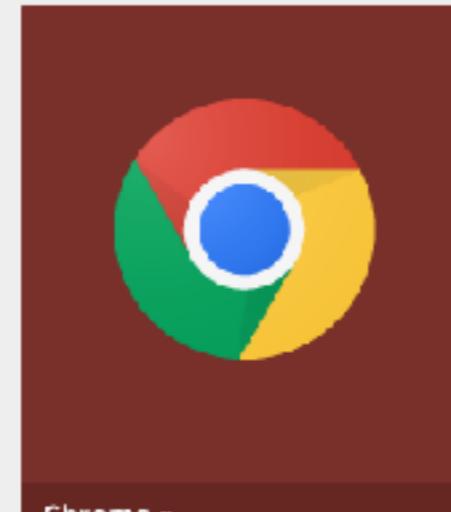
Youtube »

See which videos your friends are sharing and watch any video with up to nine friends at once.



Blogger »

Easily share your posts on Google+ so that you can expand the audience for your blog.



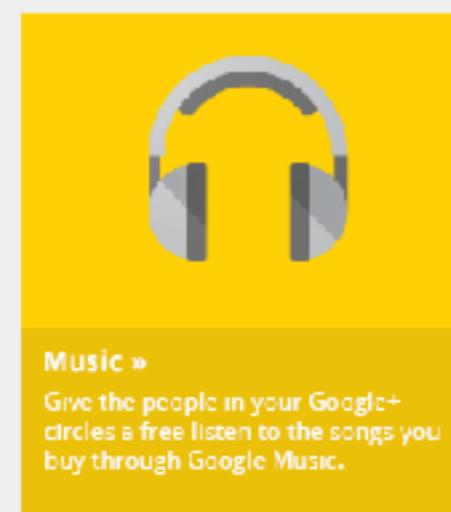
Chrome »

Recommend sites, share pages, and always stay up-to-date with the people in your Google+ circles.



Android »

Get photos that upload as you take them, group chats instead of multiple texts, and video chats with friends.



Music »

Give the people in your Google+ circles a free listen to the songs you buy through Google Music.



# defining your style

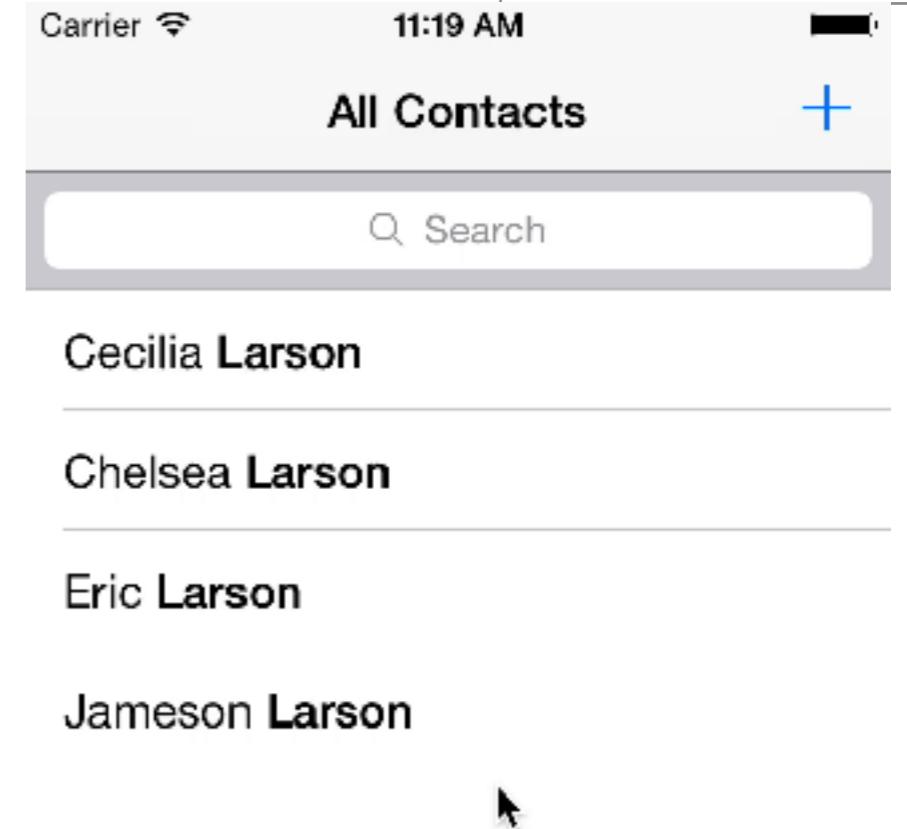
# know your app

## style basics

design is flat

- color exposes purpose
- negative space
- subtle bordering when needed

- no shadows or bordering
- text filled minimally and descriptive
- **color** conveys interaction possible
- borders when ambiguous

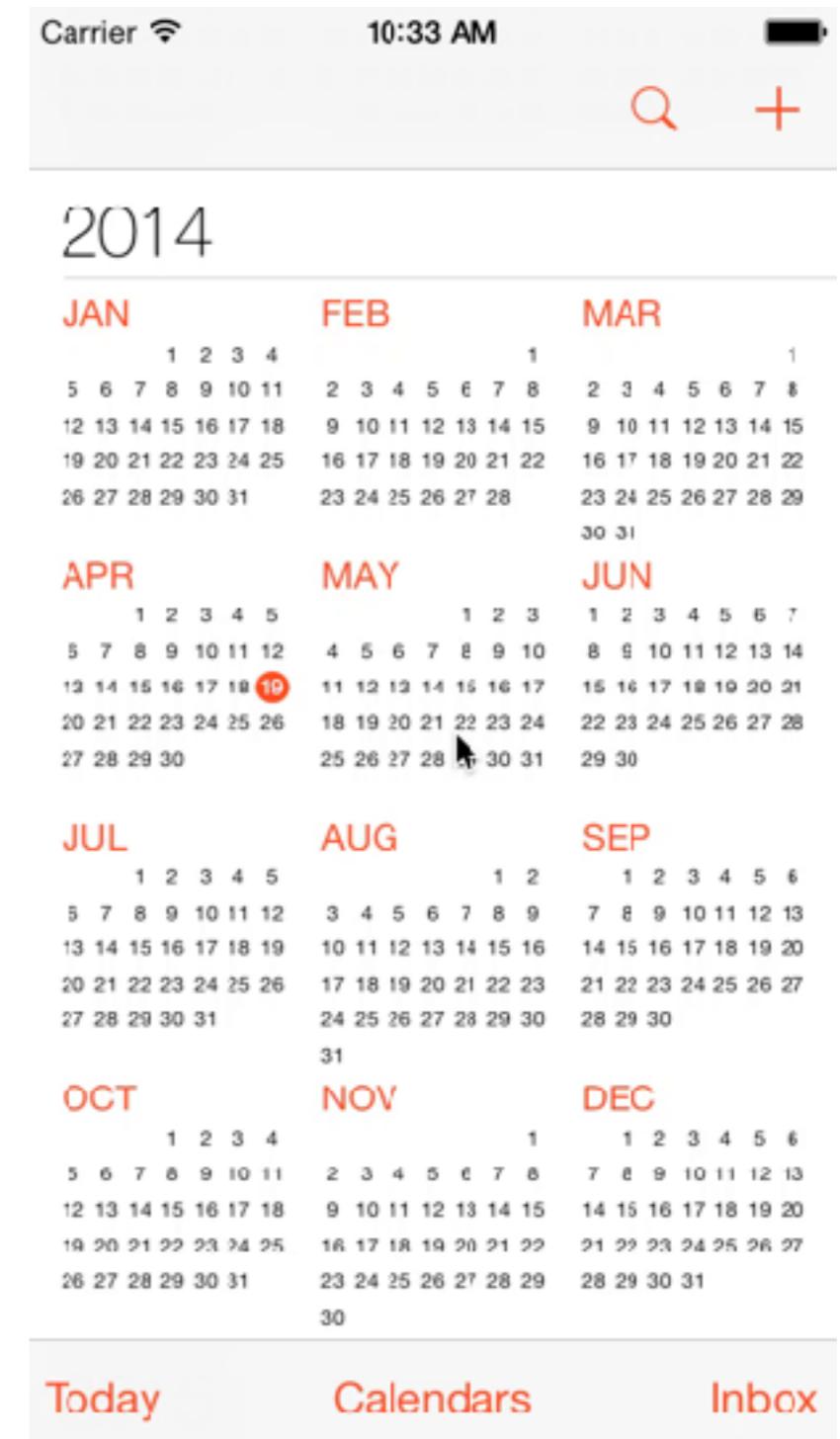


# know your app

## productivity apps

enables detailed manipulation

- organizing
  - adding and subtracting
  - drill down for detail
- 
- depth conveys hierarchy
  - transition motion orients user
  - detail view takes over the screen
  - manipulation tabs change with depth



# know your app

## utility

simple task, minimal input

- highly visual
  - enhanced display of info
  - no hierarchy
  - glance-able
- 
- entire screen is used
  - navigation is flat
  - input is exploratory
  - no elements are in competition

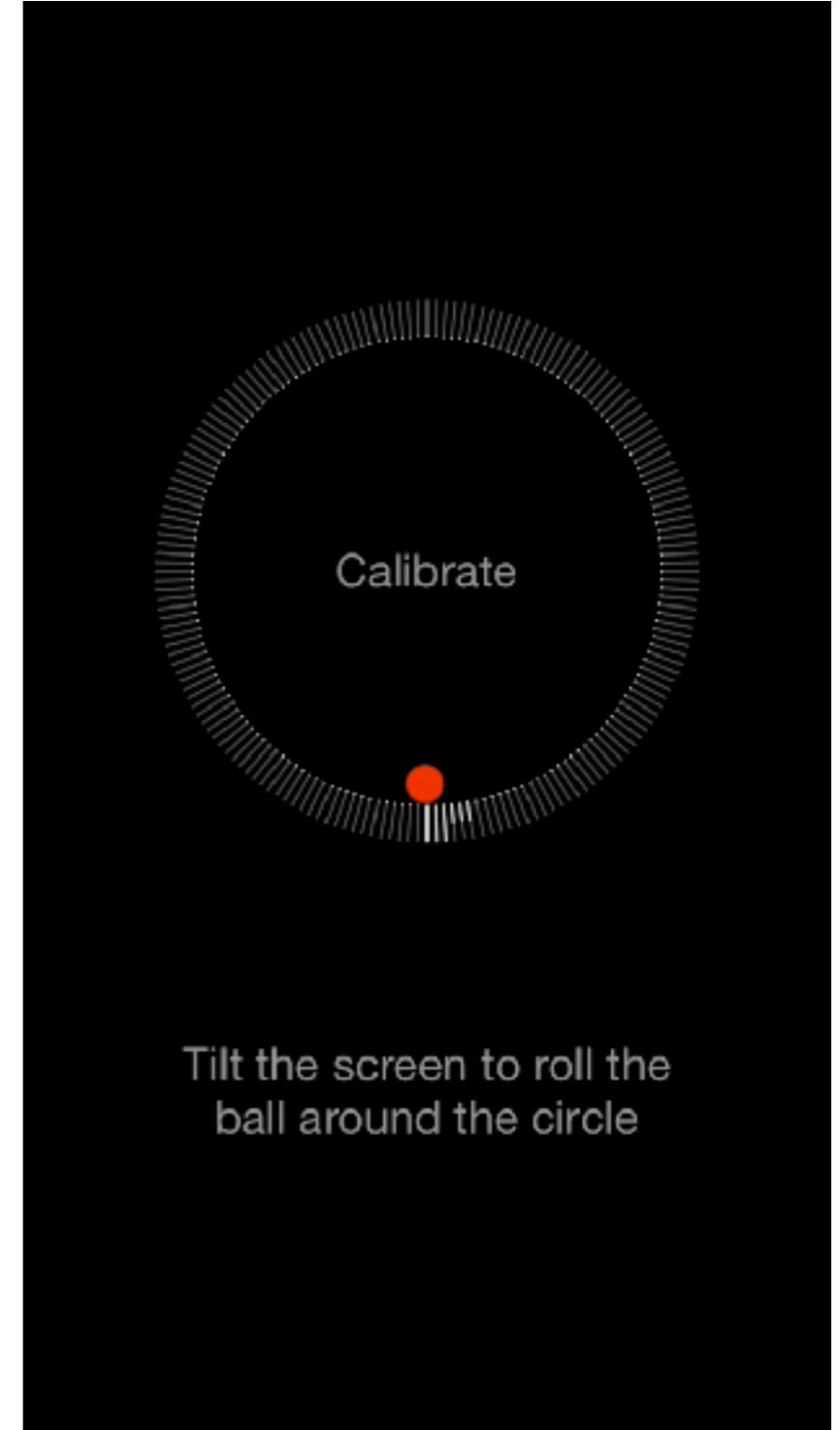


# know your app

## immersive

high interaction, visual experience

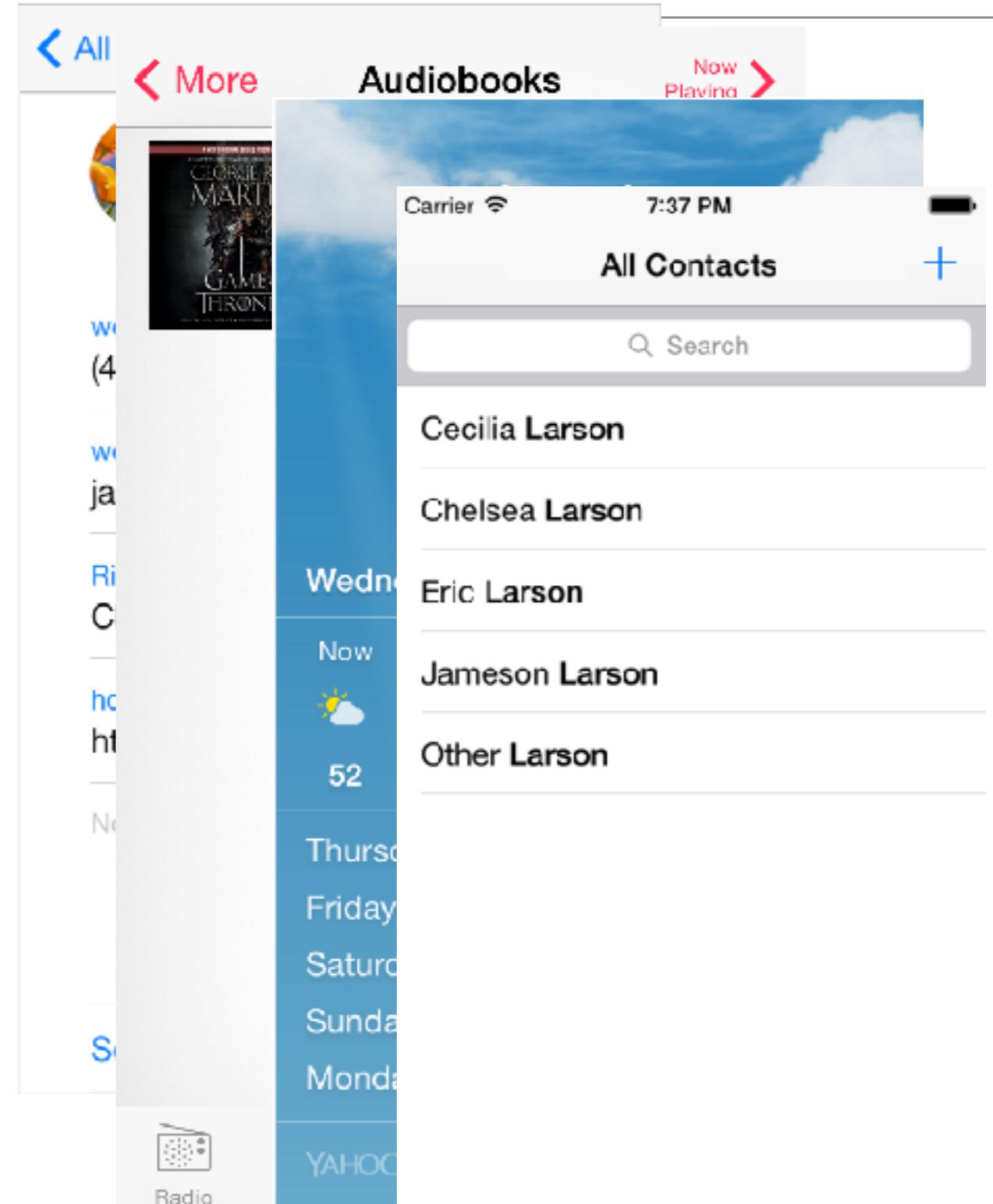
- hide UI elements
- nonstandard controls
- information centered on story, gameplay, experience



Tilt the screen to roll the ball around the circle

# navigation is orientation

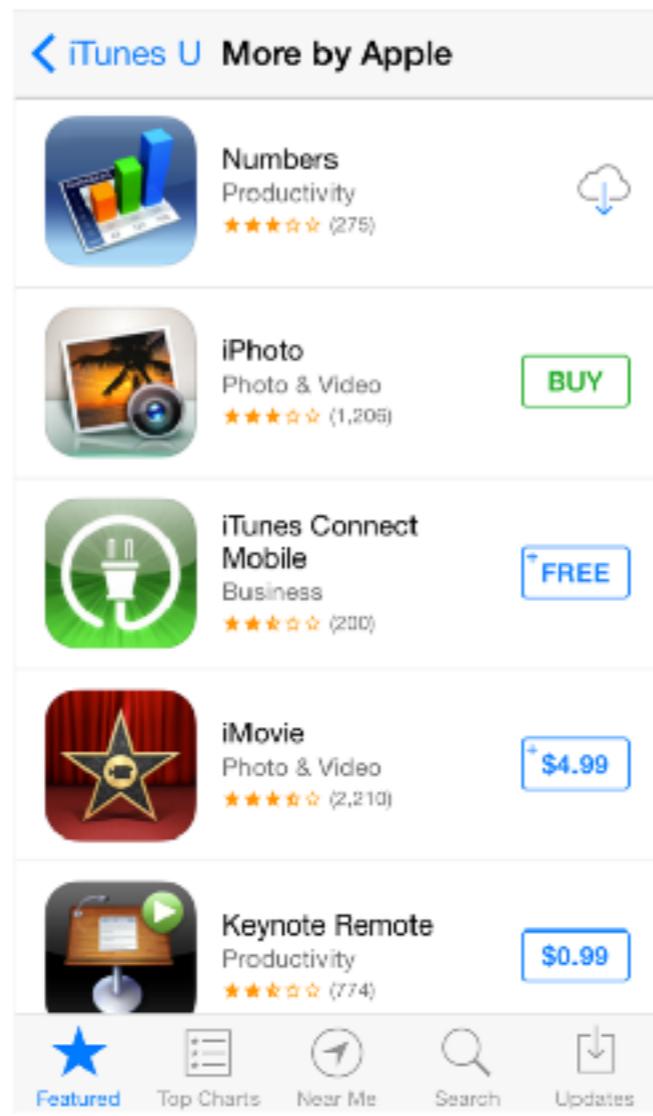
- the user must always know **where they are** in the app
- the **navigation bar** is the most understandable form of hierarchy, even when using animated hierarchy
- **tab bar** is for parallel content (peers)
  - each peer is different in function
- **page control** is for identical views, with new content
- **table view** is for master/detail
- only have **one way** of navigating to a view



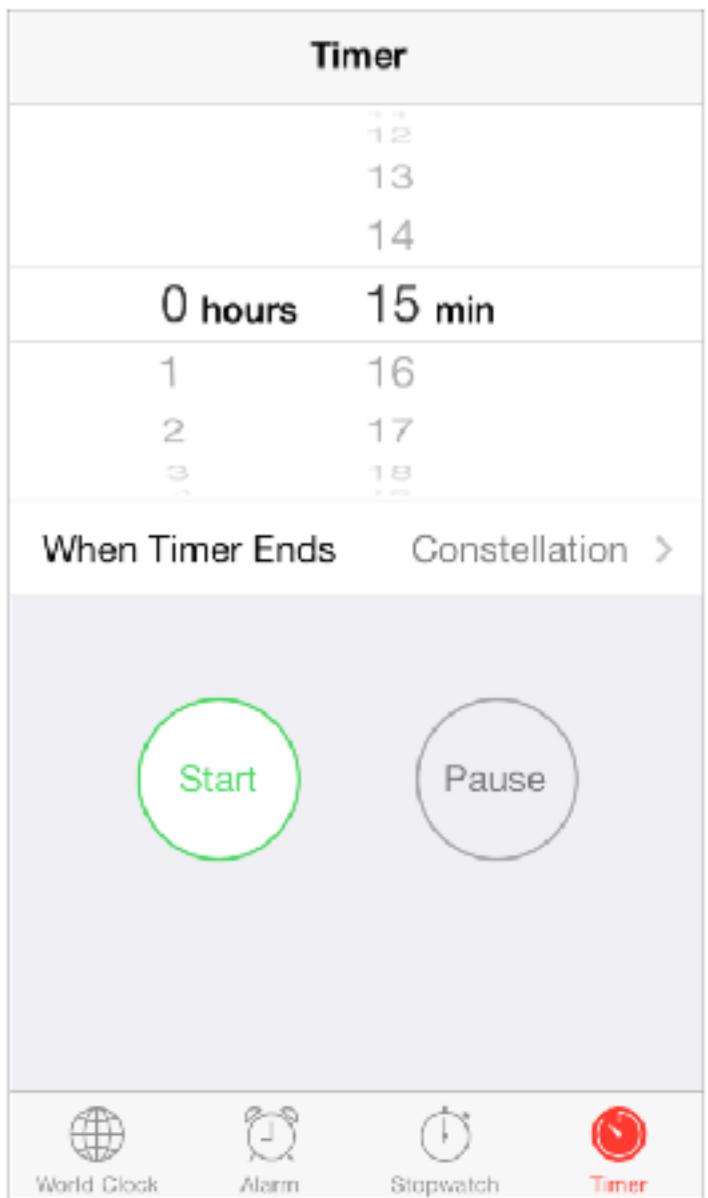
# button design

- embrace the borderless
- until you need a border

distinguish  
“tap button”  
from “tap row”



most  
important  
interaction



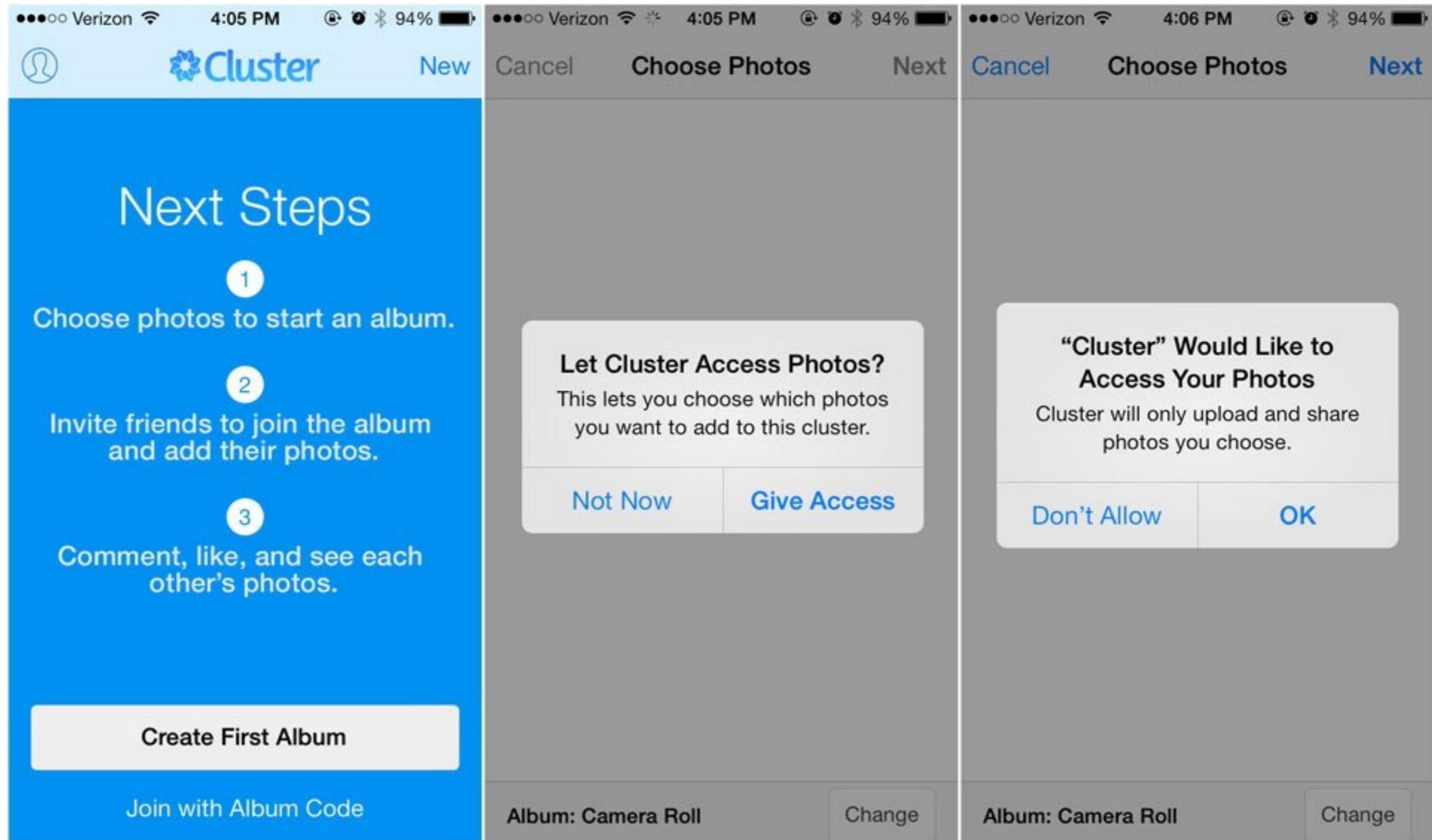
# principles

- stay consistent
- use design elements that don't distract
  - for a game, engagement is king
  - for productivity, keep animation subtle and quick
- visible feedback and direct manipulation
- use metaphor to promote intuitive interaction
  - flick / tap / pinch
- give the user the control
  - the user always has control of their information

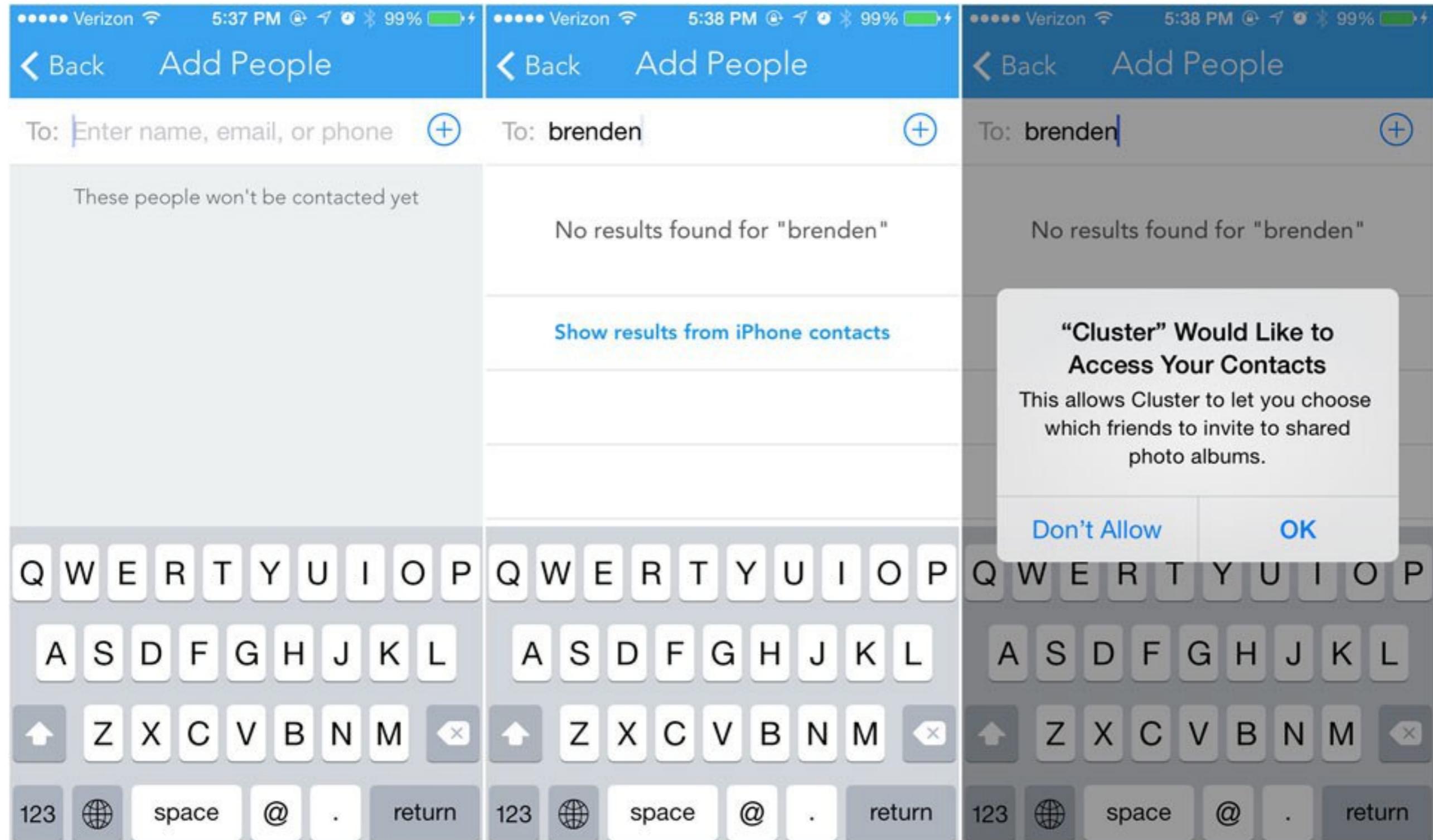
# user control

- don't ask until you need it
- make sure the user knows the tradeoff
- use “benefit->explanation”
  - ask twice, showing the benefit in your own words

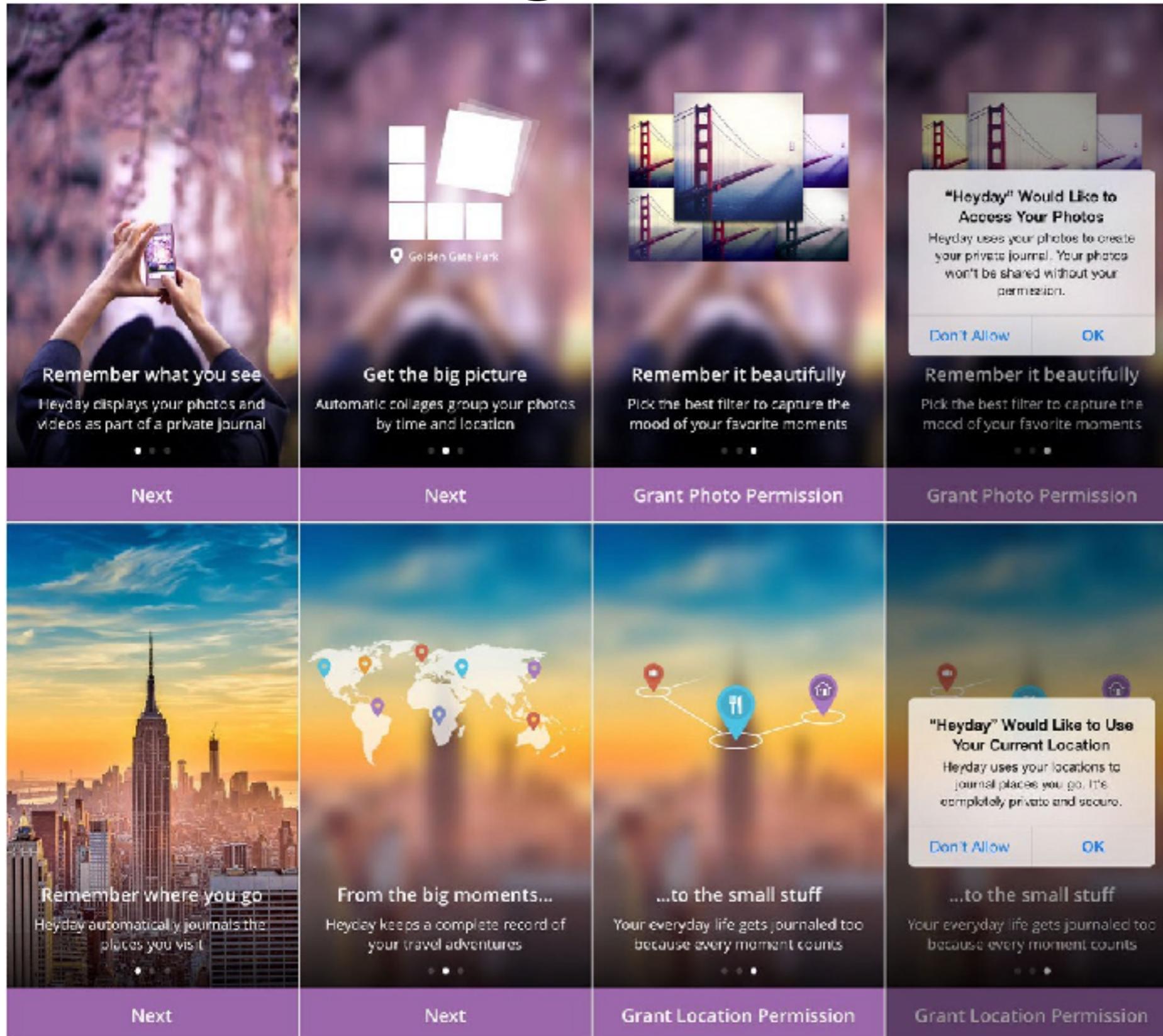
# when asking for access



# when asking for access



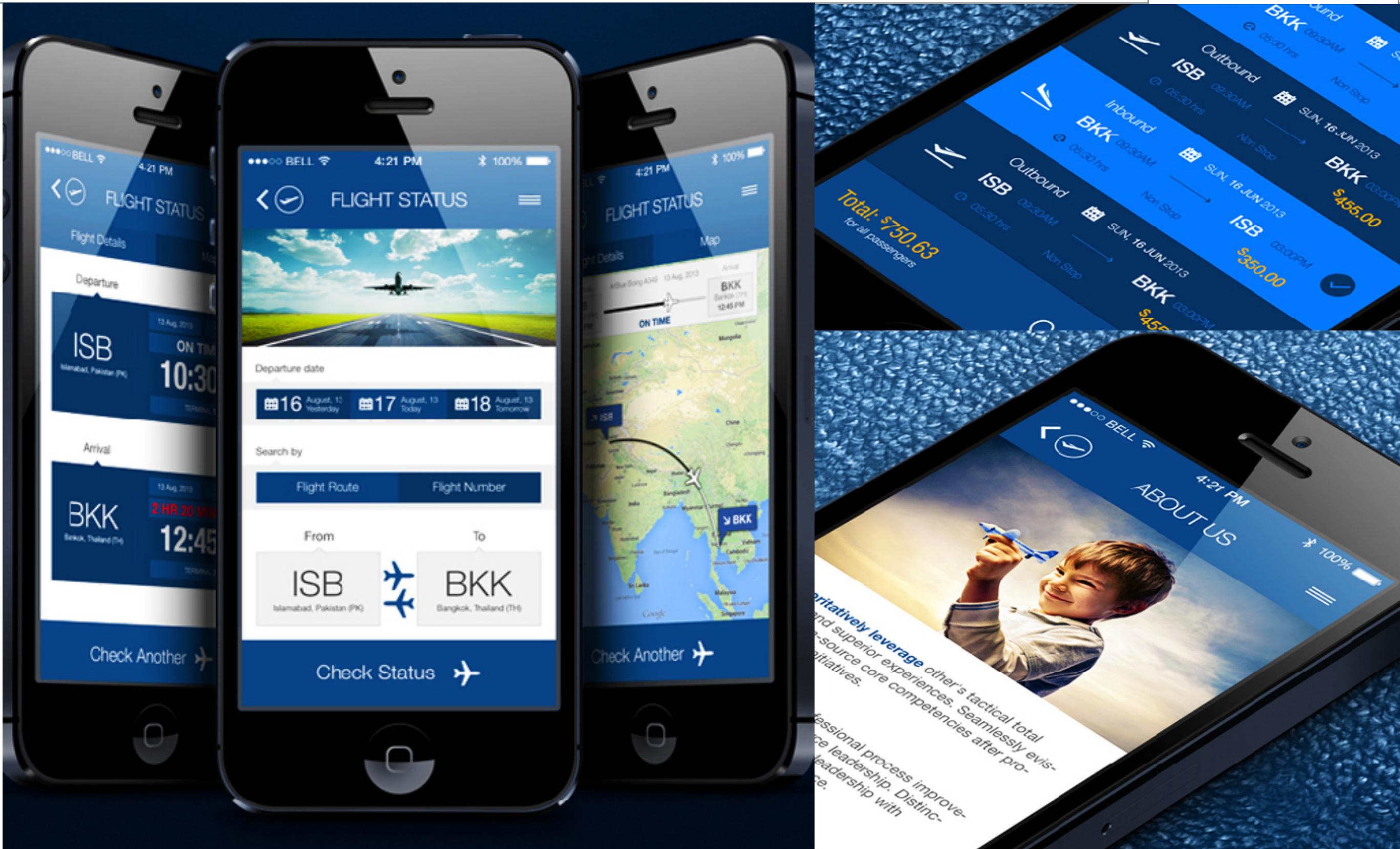
# is this right?



what is good?

what is bad?

# some great examples



Strategically leverage other's tactical total and superior experiences. Seamlessly evince core competencies after pro-

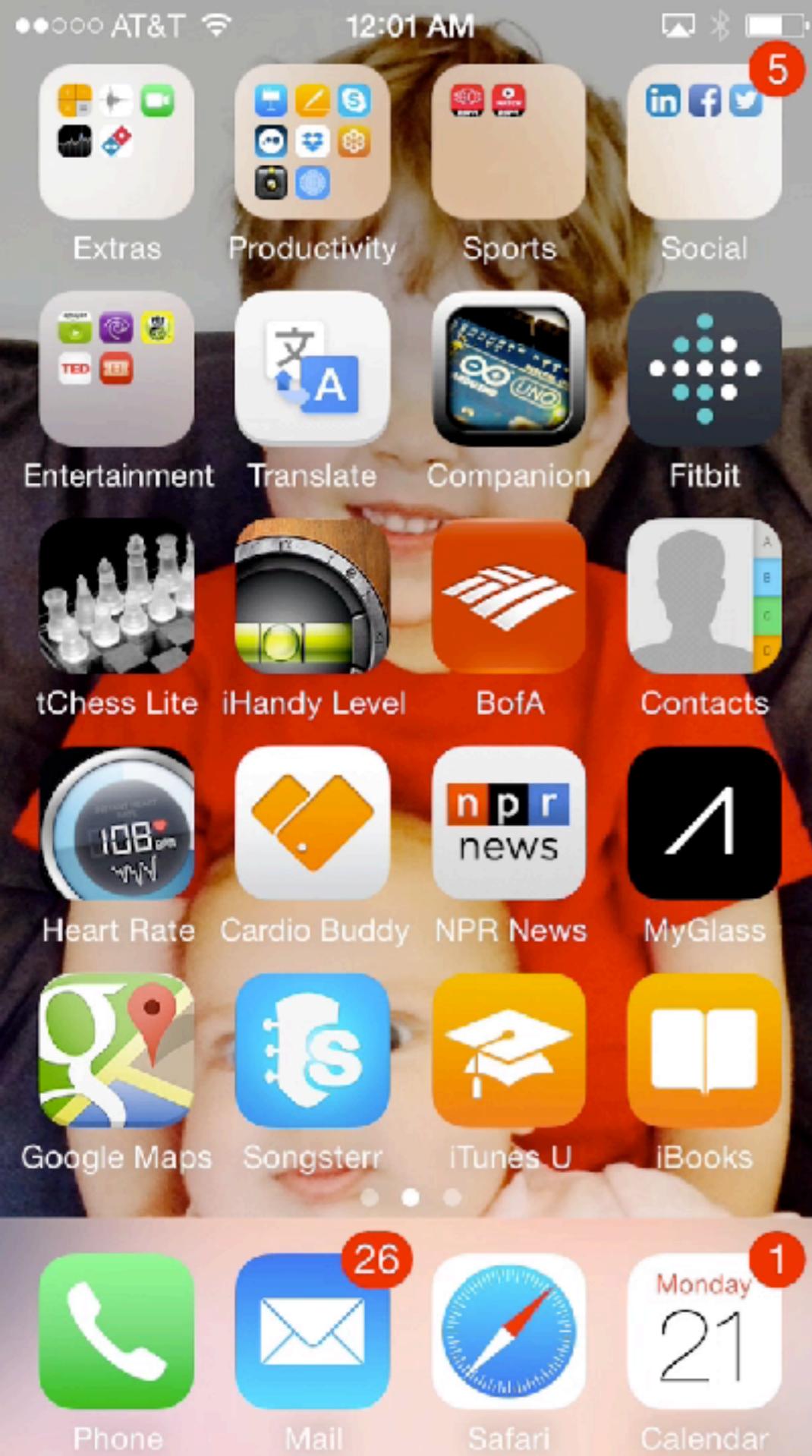
fessional process improvements and leadership. Distinctive leadership with

# some great examples





a good example

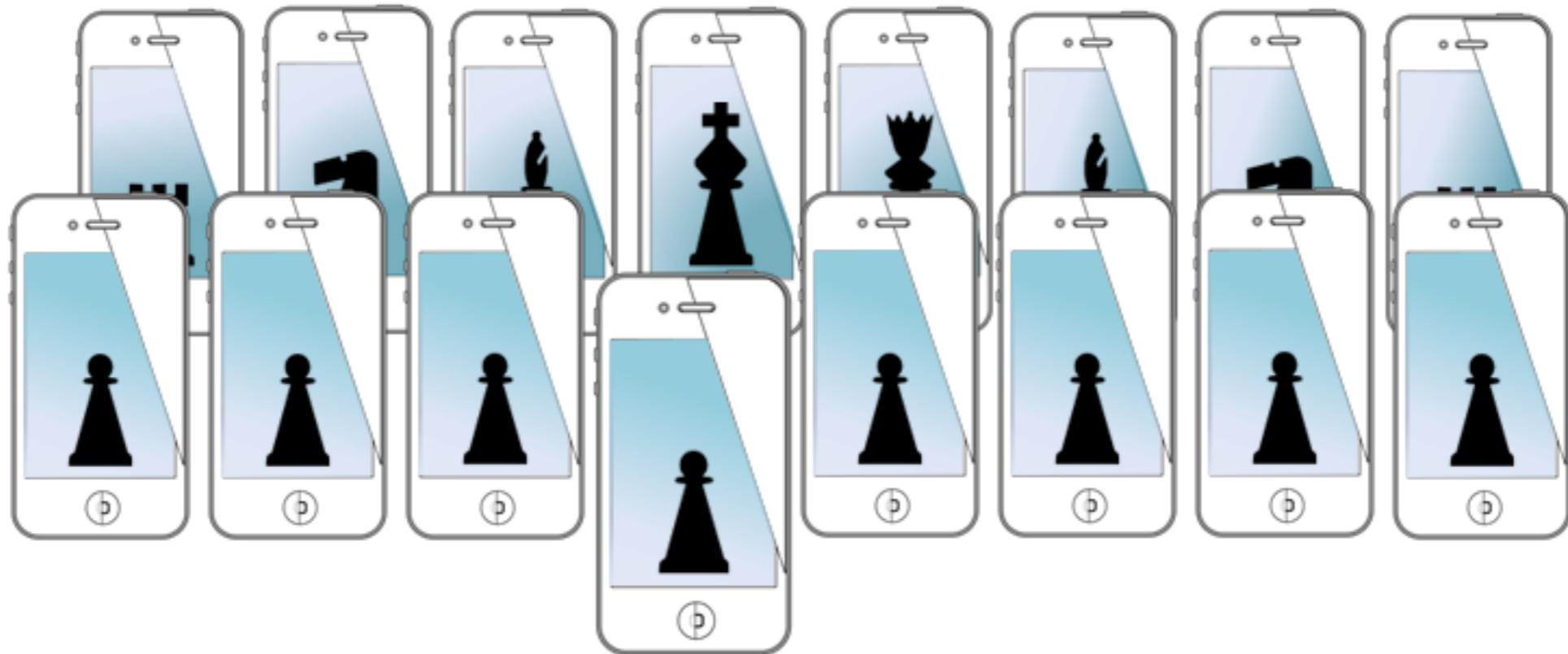


a **really excellent**  
example

# for next time...

- next Thursday!
- pitching and presenting
- last lecture before giving you time off to complete final projects

# MOBILE SENSING LEARNING

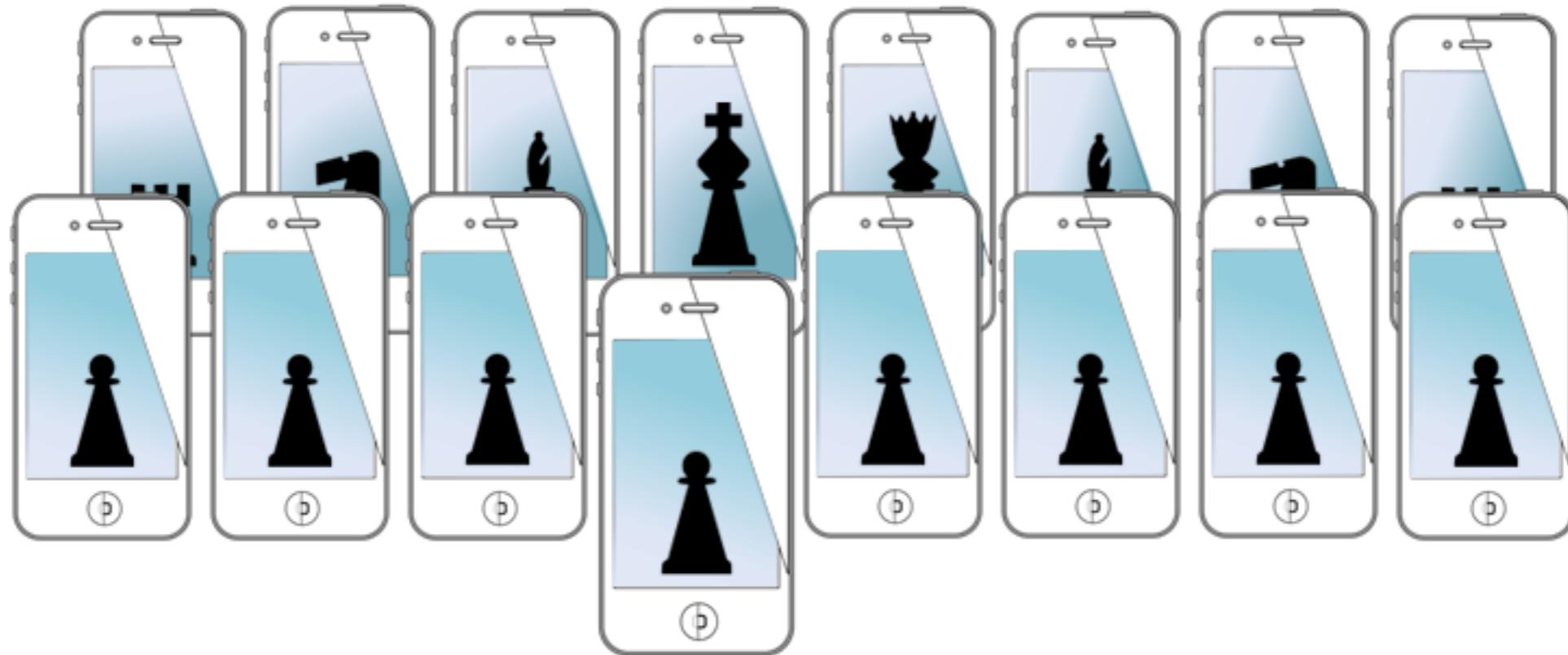


**CSE5323 & 7323**  
Mobile Sensing and Learning

week 12: mobile design and interaction

Eric C. Larson, Lyle School of Engineering,  
Computer Science and Engineering, Southern Methodist University

# MOBILE SENSING LEARNING



**CSE5323 & 7323**  
Mobile Sensing and Learning

the final lecture: the pitch

Eric C. Larson, Lyle School of Engineering,  
Computer Science and Engineering, Southern Methodist University

# course logistics

- final project demos are during finals time!
  - Wednesday December 14th
  - 11:30AM-2:30PM
- video summaries due by midnight same day

# final project

## Demonstration and Presentation

During final exam time, teams will demonstrate the finished application and give a brief, polished presentation of the application. The presentation should include:

- a brief introduction of the app (~two minutes)
  - motivate why the application is useful
  - make the intro memorable using techniques we talked about in class
- an overview of the methods used (~three minutes)
  - highlight the difficult problems that you solved and how
  - present yourself as a professional and expert (and your own personality)
- time for demonstration and questions (~five minutes)
  - You will answer questions as posed by the instructor and the class

The presentation should be geared toward individuals familiar with the material from this course--it does not need to be ostensible to a general audience. The presentation is worth 5% of the grade for this class.

# final project

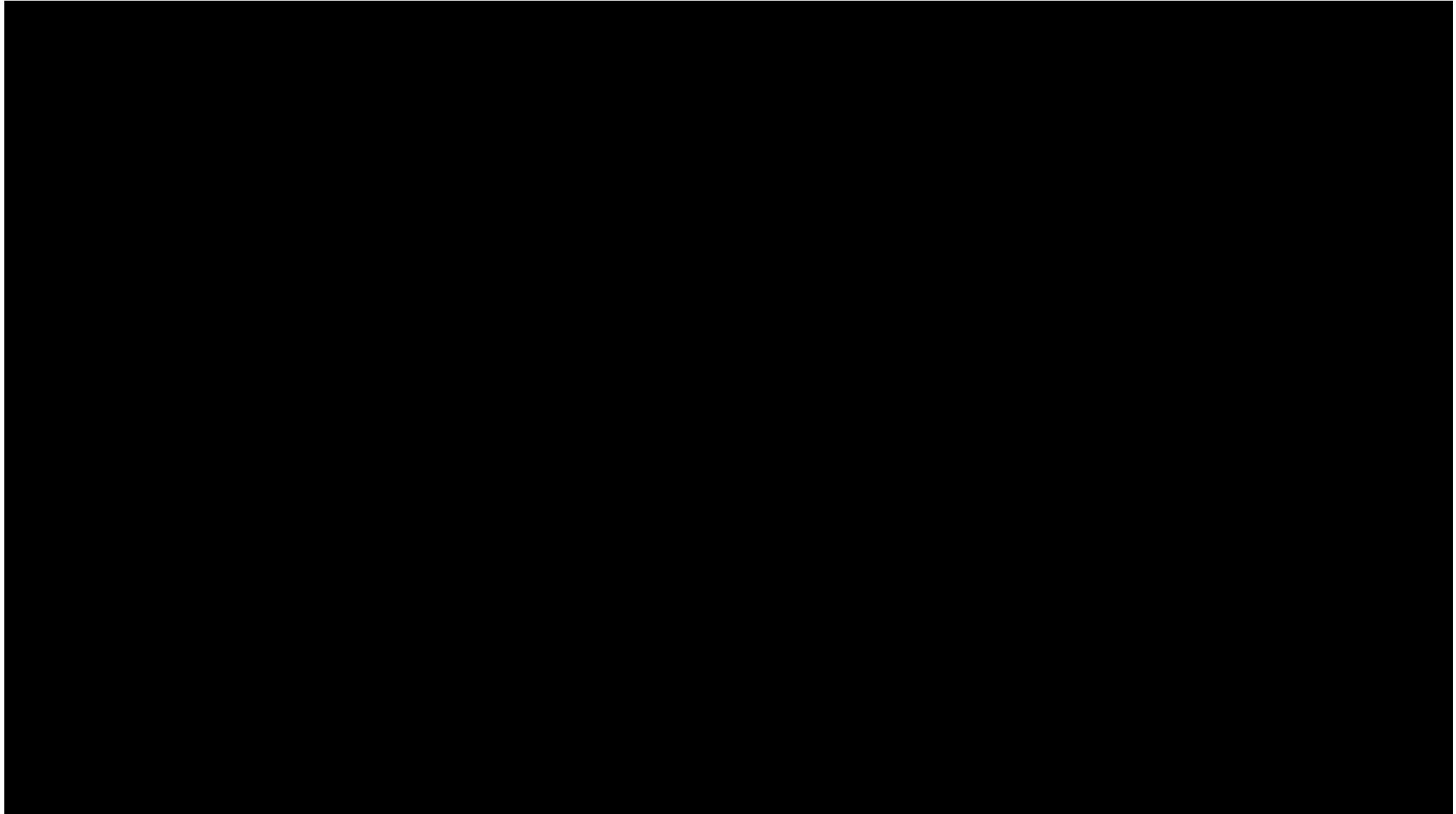
## **KickStarter / IndieGoGo Video**

You will submit a video write-up similar to videos one might see on kickstarter. You can think of this as a video pitch would give potential customers and investors (this should be approachable by a wider audience). It should be appealing and fun to watch, but yet informative enough to showcase your expertise in mobile programming. You should concisely explain what your product is, what value it has to offer, features, specification, and maybe even a tagline.

Note that you are NOT being asked to host the project on kickstarter—only to develop a marketing style summary. You are not required to host the video publicly, although you are encouraged. Please submit the video via download link, youtube link (unlisted or public) or directly to blackboard. Also submit all source code for the project via blackboard.

# kickstarter

- an app, funded at 285%



# for movies

- iMovie is “pretty good” for this kind of thing
- look at quicktime’s screen/camera recording feature
- does not need to be *extremely* polished
- but should be well thought out
- **be technical**
  - but in a way that makes you look like a magician
  - then reveal the trick

# agenda

- talking in front of people
- pitching in front of people

# how many people know this?

- tell people what you are going to tell them
  - tell them
  - tell them what you told them
- 
- tell people something **worth** telling
  - tell them **once** in a way that they remember it
  - leave them feeling they **learned** one thing

# speaking

- what makes a great talk?
  - confidence? (even if nervousness is obvious)
  - have something worth talking about?
  - emotion?
  - storytelling?
  - practice?
  - not having bullet points of text?

# pitching

- be brief
  - for our demos: **five** minutes
- let Q&A have the most time
- be compelling within 20 seconds
- have a crisp, well-structured story
- memorize the first two minutes
- if showing data, show conclusions not just a number
  - analysts like numbers, as long as they have a takeaway

# elements of the pitch

- problem
- solution
- magic that gives you an edge in market
- status and **team credibility**
- accomplishments, funding, rewards
- consult a business professional for:
  - market/financials/sales/competition/timeline/use of funds
  - see me pitching a mobile smartphone solution
  - <http://www.youtube.com/watch?v=XNDWuohJog8>

*caveat:  
it's not all that good*



# your voice

- its okay to be nervous
- audience participation (conversational)
- alternate loudness
  - practice this—its hard to know you are droning
- alternate speed for effect
- have emotion
  - look approachable
  - people are intrigued by vulnerability

# an example

# Jaundice

- newborn jaundice is a yellowing of the skin
  - many newborns develop jaundice, 3.1 million per year in US
  - a rare condition known as kernicterus can develop
    - auditory problems
    - mobility issues
    - brain damage
- every newborn born in the US must be screened for jaundice using
  - blood draw
  - expensive, specialized meter

# BiliCam

- smartphone app: images taken of newborn in standard manner using smartphone camera
  - includes “flash” and ambient lighting images
  - color calibration card placed on newborn’s skin
  - app “view finder” used to standardize distance
- estimate the level of jaundice from picture



# critique

# another example



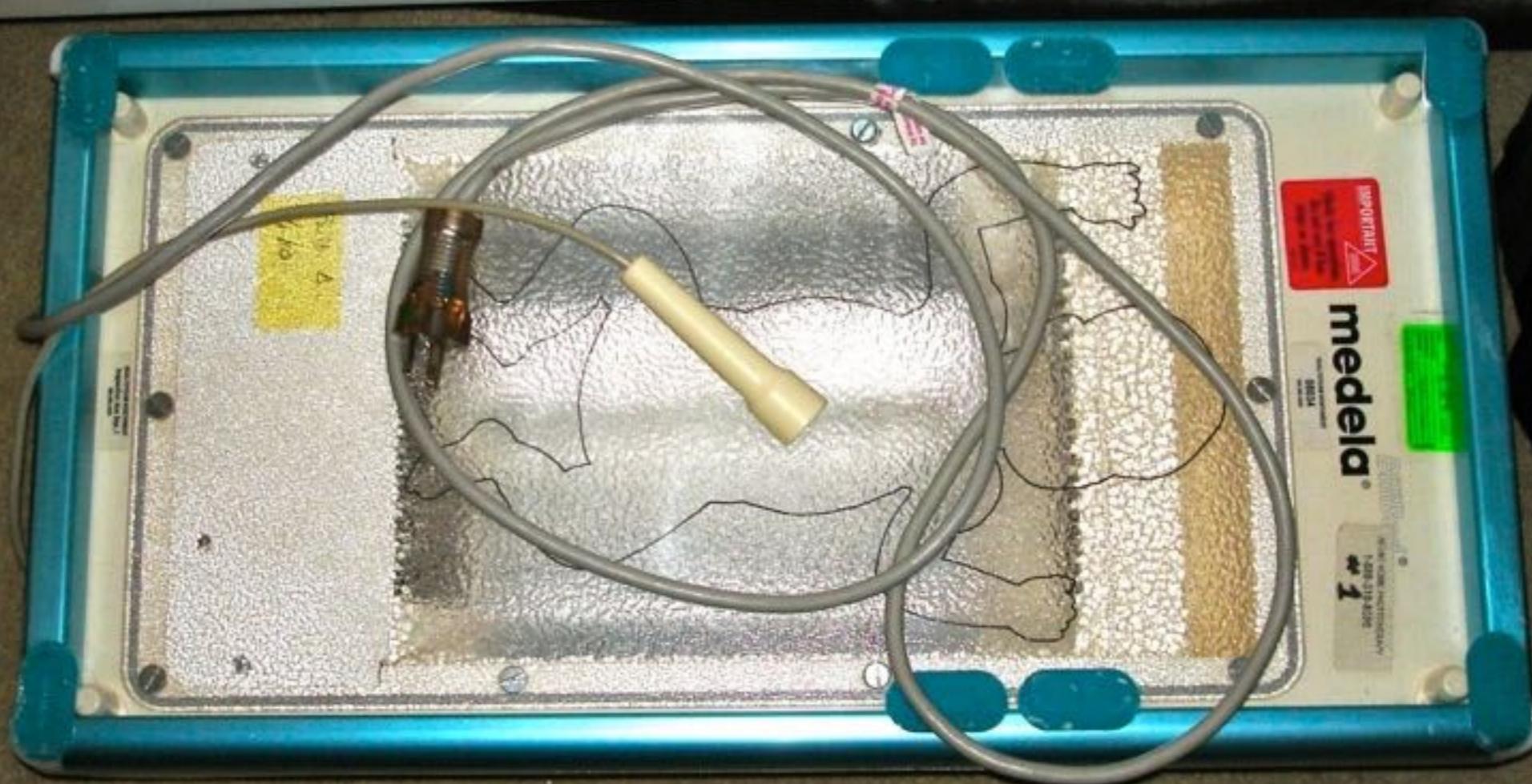














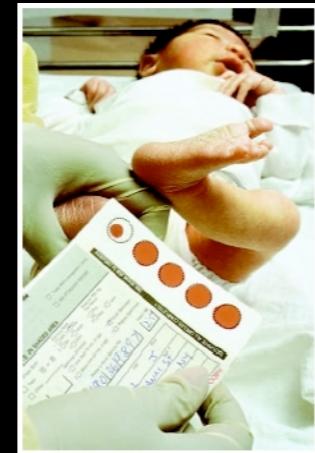
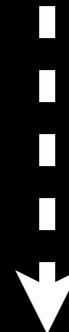


**1 in 14** newborns go through **phototherapy**

40,000 will develop severe, **life altering jaundice**  
in the US alone

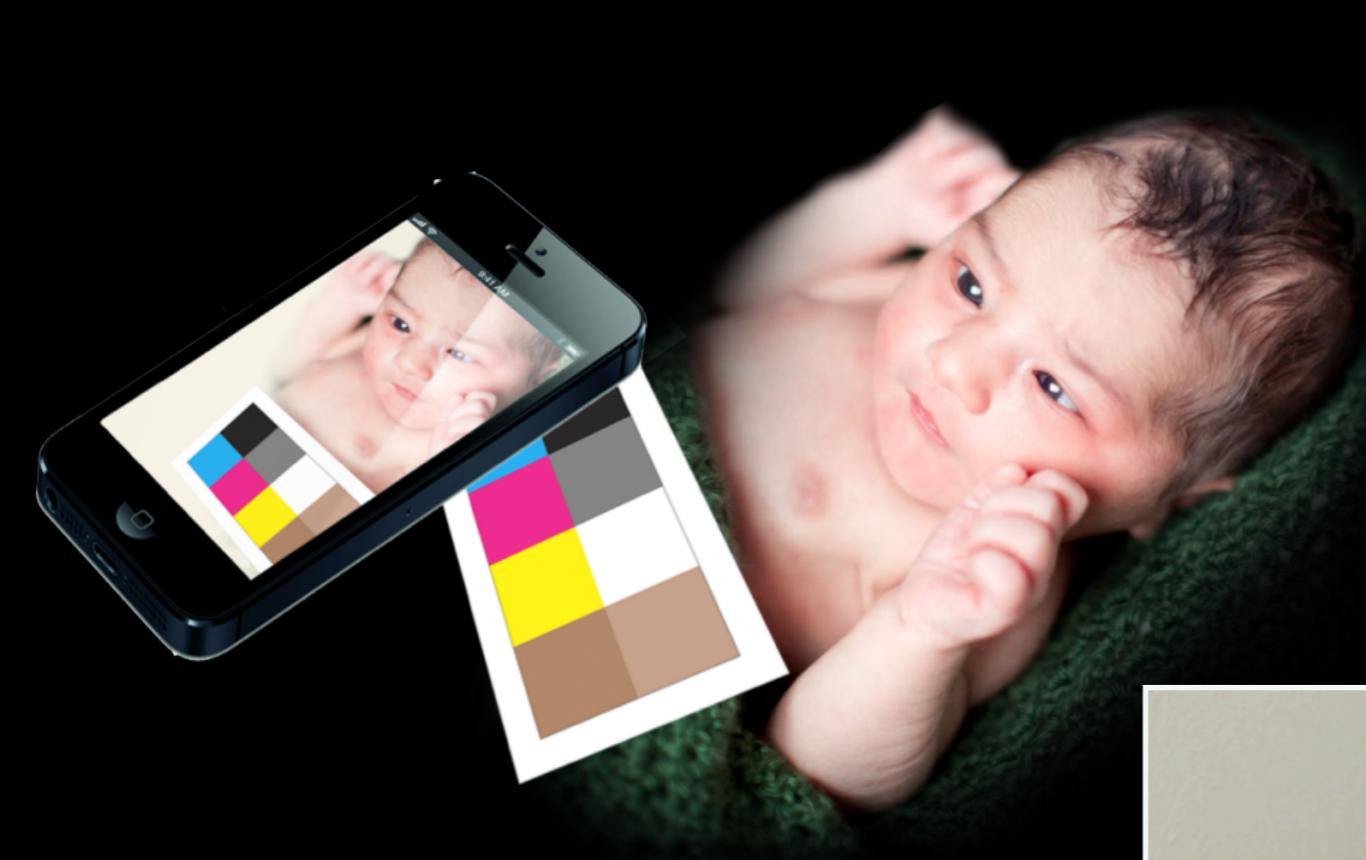


bilirubin  
level in blood → blood draw → estimated jaundice level



yellowness → camera → processing





# bilicam



# critique

# getting better

- no one is a born public speaker
- that is what Tony Robins says...
- business students often get these experiences
  - because they place themselves out in front of people
  - ...and risk doing a bad job
- record yourself
  - seriously, its amazing what you do not realize you do when you are nervous

# elements of a great talk

...as described by TED coach, Chris Anderson

# frame the story

- stories have been told since the beginning of time
- take people on a journey
- why do **you** care about this problem?
  - others will come along with you
  - pick one or two implications, then move on (do not over explain the subject)
- only cover what is essential and explainable
- maybe have a detective story (AHA!)
- do not tell how great you are in a pitch
  - show competency by example, stories and anecdotes

# delivery

- try not to read the talk
- better: bulleted points **on card** and **an idea** of what to say
- best: memorize it word for word
  - try to stay away from the valley of awkwardness:
    - half memorized (recitation),
    - focus is on words, not delivery
- be yourself
- be humble



# stage presence

- its okay to be nervous, actually its expected
  - it makes you sharper, more energetic
- but try not to sway your body, shift weight
  - this happens if you don't focus on it
- pick three or four people to make eye contact with
  - try to pick those you can tell are interested
- take a few deep breathes before

# multimedia

- the focus is the story—try for a format that enhances story
- powerpoint is *okay*
  - stay simple, do not read the slides (like me...)
- photos as slides are even better
- the focus is the story, not the slide transitions
  - map style (like prezi) is interesting, but can be distracting
- talking over video can be amazing
  - but keep videos short, don't show yourself talking
- letting images and video speak for themselves

# putting it together

- rehearse. rehearse. rehearse.
- ...in front of people
  - and take feedback with a grain of salt
  - conflicting feedback happens all the time
- you can coach out bad parts of a talk
- but rarely can you coach in the missing elements
- the best talks use new, fresh ways of presenting
  - so I cannot tell you what they are, keep looking at good talks online
- if you want to pitch to me, just ask

# other resources

- (almost) every talk I have ever seen on TED
- stay away from most academia
  - well, not really
- watch VC pitches (final rounds)

# examples



**carl sagan**, on pitching



**ken robinson**, the highest rated TED talk of all time

# examples

One of 1,000+  
**TED Talks**

New ideas every weekday

[TED.com](http://TED.com)

**jill bolte taylor**, my favorite example

# examples



**jill bolte taylor**, story interspersed

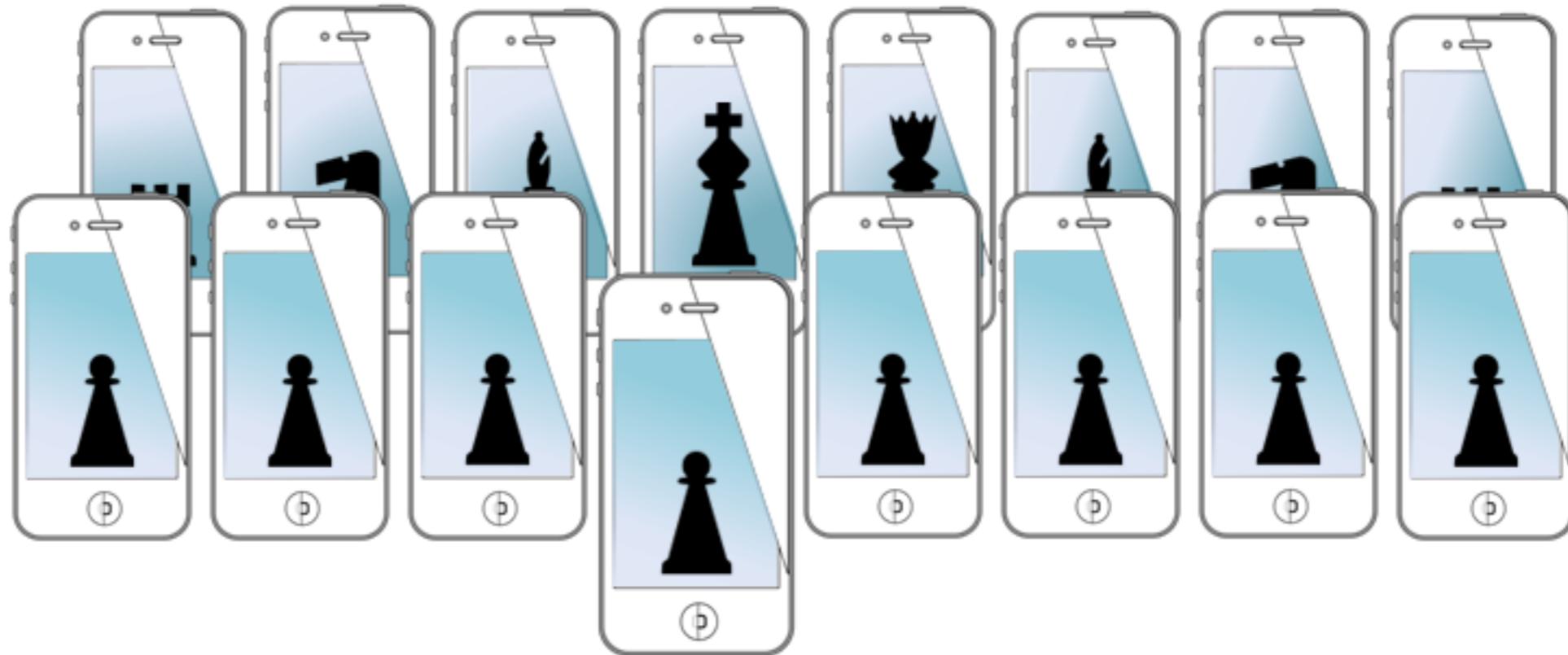
# go watch that talk

- is a poster child for relating a message with a story
- some great examples:
  - <http://blog.ted.com/2013/12/16/the-most-popular-20-ted-talks-2013/>

# for next time...

- there is no next time!
- send me feedback on the class, **please!**

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