Designing with Animation

Session 803

Julian Missig
Joe Malia
Marek Bereza
Please notice that a new item has been added. New items will be added to the top of the list.
Related items will be here if they exist. Tap here to find out.
Who Are We?
Who Are We?

Team of inventors, designers, prototypers
Who Are We?

Team of inventors, designers, prototypers

Explore new interfaces across all of Apple’s products
Who Are We?

Team of inventors, designers, prototypers
Explore new interfaces across all of Apple’s products
We make animated and interactive prototypes
The Plan
The Plan

Ease in to the what, why, and how of animation
The Plan

Ease in to the what, why, and how of animation
Communicate an idea by animating it
The Plan

Ease in to the what, why, and how of animation
Communicate an idea by animating it
Learn how animation and interaction are intertwined
What Is Animation?
What Is Animation?

Change over time
What Is Animation?

Change over time

Not a replacement for screen layout and hierarchy
What Is Animation?

Change over time
Not a replacement for screen layout and hierarchy
Practical—how all the bits of your app fit together
What Is Animation?

Change over time
Not a replacement for screen layout and hierarchy
Practical—how all the bits of your app fit together
Artful—how your app feels
Why Animate?
Direct attention
Direct Attention
Direct Attention
Direct Attention
Direct Attention
Direct Attention
Direct Attention
Direct attention
Direct attention

Keep oriented
Julian Missig  
Restaurant recommendation  
Betsy, I remember you mentioning a great place to get some artisanal toast in Pittsburgh...

jeffrey traer bernstein  
Math homework  
Hi Betsy, Can you help me with my math homework? I don’t understand how to solve that...

Matthaeus Krenn  
Pants  
Hey Betsy, Remember the pants you told me about? I was at the store yesterday but couldn't...

Joe Malia  
Vacation  
Hi Betsy, Just got back from a lovely vacation to Texas. I saw lots of huge things, as you mig...

Marek Bereza  
Check out this new app!  
It's called porridge pro. Download it here: http://www.porridgeapp.com/.
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Popular in your network
Keep Oriented
Keep Oriented

Toast
Keep Oriented
Direct attention

Keep oriented
Direct attention

Keep oriented
Direct attention

Keep oriented
Direct attention

Keep oriented

Connect behavior
Connect behavior
Connect Behavior
Connect Behavior

Start
Connect Behavior

Start
Change
Connect Behavior

Start
Change
Complete
Connect Behavior
Direct attention

Keep oriented

Connect behavior
Direct attention
Keep oriented
Connect behavior
How Do We Try Animation?
How Do We Try Animation?

Screenshots show too little
How Do We Try Animation?

Screenshots show too little
Apps show too much
How Do We Try Animation?
How Do We Try Animation?

Make animated experiments
How Do We Try Animation?

Make animated experiments

Compare built-in iOS animations to custom animations
How Do We Try Animation?

Make animated experiments
Compare built-in iOS animations to custom animations
Make prototypes, show people, learn from their feedback
What’s New in Toast Modern?
What’s New in Toast Modern?

See local toast
What’s New in Toast Modern?

See local toast
Share toast
What’s New in Toast Modern?

See local toast
Share toast
Comment on toast
What’s New in Toast Modern?

See local toast
Share toast
Comment on toast
Connected to Toastal Service
What’s New in Toast Modern?

See local toast
Share toast
Comment on toast
Connected to Toastal Service
See my toast
What’s New in Toast Modern?

See local toast
Share toast
Comment on toast
Connected to Toastal Service
See my toast
See my friend’s toast
What’s New in Toast Modern?

See local toast
Share toast
Comment on toast
Connected to Toastal Service
See my toast
See my friend’s toast
Get overwhelmed by toast
Goal
Goal

Slice through all the toast to find our favorites
Favorites
Toast Modern

Blue Barrel
Goat Butter

Four Glass
Nutella Sea Salt

Slanted Toast
Fois Gras

Atelier Bread
Creme Fraiche

The Barn
Cacao, Trout
<table>
<thead>
<tr>
<th>Toast Modern</th>
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</thead>
<tbody>
<tr>
<td><strong>Blue Barrel</strong></td>
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Hi Joe,

After some deep meditation in my yurt, some revolutionary new ideas for our app came into focus for me:

1. People need to know the new favorite button is there.
2. People should be able to find the toast they’ve favorited.
3. Using the favorite button should be simple and elegant – people should be able to use it from the first touch.

No rush, just send me something to try out in the next
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No rush, just send me something to try out in the next 20 minutes.
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Namaste
Prototyping Animation
Prototyping Animation

AfterEffects, Quartz Composer
Prototyping Animation

AfterEffects, Quartz Composer
Swift, HTML/CSS
Prototyping Animation

AfterEffects, Quartz Composer
Swift, HTML/CSS
Keynote
Direct attention
People need to know the new favorite button is there

Keep oriented
People should be able to find the toast they’ve favorited

Connect behavior
People should be able to use the favorite button from the first touch
Direct attention

People need to know the new favorite button is there

Keep oriented

People should be able to find the toast they’ve favorited

Connect behavior

People should be able to use the favorite button from the first touch
Grab Attention
Communicate Instructions
Make connections between two screens
Grab Attention
Communicate Instructions
Make connections between two screens
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Slanted Toast
Fois Gras
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  Creme Fraiche

- The Barn
  Cacao, Trout
Toast Modern

- Blue Barrel: Goat Butter
- Four Glass: Nutella Sea Salt
- Slanted Toast: Fois Gras
- Atelier Bread: Creme Fraiche
- The Barn: Cacao, Trout
Grab attention

Don’t Allow  OK
Toast Modern

**Blue Barrel**
Goat Butter

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Nutella Sea Salt

**Slanted Toast**
Fois Gras

**Atelier Bread**
Creme Fraiche

**The Barn**
Cacao, Trout
Toast Modern
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The Barn
Cacao, Trout
Direct attention
People need to know the new favorite button is there

Keep oriented
People should be able to find the toast they’ve favorited

Connect behavior
People should be able to use the favorite button from the first touch
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**Favorites**

- **Four Glass**
  - Nutella Sea Salt
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Favorites

Four Glass
Nutella Sea Salt

Favorites

Toast Modern

Favorites

Four Glass
Nutella Sea Salt
Four Glass
Nutella Sea Salt

Favorites
<table>
<thead>
<tr>
<th>Bread Name</th>
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<tr>
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<td>★</td>
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Direct attention
People need to know the new favorite button is there

Keep oriented
People should be able to find the toast they’ve favorited

Connect behavior
People should be able to use the favorite button from the first touch
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</tbody>
</table>
QuickTime Player

File

New Movie Recording
New Audio Recording
New Screen Recording

Open File...
Open Location...
Open Recent

Close
Save...
Duplicate
Rename...
Move To...
Export
Revert To

Share
Top Toast

- Blue Barrel
  - Goat Butter
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Subject: Re: Restaurant recommendation
Re: Restaurant recommendation
Toast Modern

1. Blue Barrel
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2. Four Glass
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3. Slanted Toast
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**Toast Modern**

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Toast Modern

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Atelier Bread
Creme Fraiche

The Barn
Cacao, Trout
Direct attention
People need to know the new favorite button is there

Keep oriented
People should be able to find the toast they’ve favorited

Connect behavior
People should be able to use the favorite button from the first touch
Toast Modern
Blue Barrel
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Four Glass
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Four Glass
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Slanted Toast
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The Barn
Cacao, Trout
Top Toast

Blue Barrel
Goat Butter

Four Glass
Nutella Sea Salt

Slanted Toast
Foie Gras

Atelier Bread
Interact
Control time

Marek Bereza
Blue Barrel
Goat Butter

Four Glass
Nutella Sea Salt

Slanted Toast
Fois Gras

Atelier Bread
Creme Fraiche

The Barn
Cacao, Trout
Interactive Prototypes
Interactive Prototypes

Get a feel for it
Interactive Prototypes

Get a feel for it

Does it work?
Interactive Prototypes

Get a feel for it

Does it work?

What doesn’t work?
Interactive Prototypes

Get a feel for it

Does it work?
What doesn’t work?
Why doesn’t it work?
Interactive Prototypes

Get a feel for it
Interactive Prototypes

Get a feel for it
Let others try it
Interactive Prototypes

Get a feel for it
Let others try it
Interactive Prototypes

Get a feel for it
Let others try it
Interactive Prototypes

Get a feel for it
Let others try it
Easily make changes
Interactive Prototype
Interactive Prototype = Illusion
Interactive Prototype = Illusion
The Image Files

Top Toast

- Blue Barrel
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  Foie Gras

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  Creme Fraiche

- The Barn
  Cacao, Trout

toastRow.png

Four Glass
Nutella Sea Salt

favoritedRow.png
```swift
class ViewController: UIViewController {

    let appImage = Layer(image: "app.png")
    let toastRow = Layer(image: "toastRow.png")
    let favoritedRow = Layer(image: "favoritedRow.png")

    override func viewDidLoad() {
        super.viewDidLoad()
        view.addSubview(appImage)
        view.addSubview(favoritedRow)
        view.addSubview(toastRow)
        toastRow.y = 176
        favoritedRow.y = 176
    }

    override func touchesEnded(touches: NSSet, withEvent: UIEvent) {
        favoritedRow.scale = 0.8
        UIView.animateWithDuration(0.4) {
            toastRow.x = screenWidth
            favoritedRow.scale = 1
        }
    }
}
```
class ViewController: UIViewController {

    let appImage = Layer(image: "app.png")
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        }
    }
}
Animate on Touch

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- Blue Barrel
  - Goat Butter

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  - Nutella Sea Salt

- Slanted Toast
  - Foie Gras

- Atelier Bread
  - Creme Fraiche

- The Barn
  - Cacao, Trout
What’s wrong?
Break down the interaction
Start
Start → Change
Start → Change → Complete
Each stage is an opportunity
Stages of Touch
Start → Change → Complete
Start → Change → Complete

Touch Down
Start → Change → Complete

Touch Down → Touch Moved → Touch Up

touchesBegan()
Touch Up

Start → Change → Complete

Touch Down

touchesBegan()

Touch Moved

touchesMoved()

Complete

Touch Up
Start

Touch Down
touchesBegan()}

Touch Moved
touchesMoved()}

Complete

Touch Up
touchesEnded()
Four Glass
Nutella Sea Salt
Four Glass
Nutella Sea Salt
Four Glass
Nutella Sea Salt
Four Glass
Nutella Sea Salt
Four Glass
Nutella Sea Salt
The Code

class
class

    
    
    
   
    
        
        
        
        
    
        
        
    } 
    
    
        
        
            
            
        } 
    } 
}

The Code

Hack it together
The Code

Hack it together

Use images for everything
The Code

Hack it together

Use images for everything

Animate with UIView.animateWithDuration
Top Toast

- Blue Barrel
  Goat Butter

- Four Glass
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- Slanted Toast
  Foie Gras

- Atelier Bread
  Creme Fraiche

- The Bakers
  Cacao
Let others try it
“I really liked how it felt, but surely, shouldn’t it be a swipe?”

- Neighbor
Swipe Gesture
Swipe Gesture

Start → Change → Complete
Four Glass
Nutella Sea Salt
Four Glass
Nutella Sea Salt
Four Glass
Nutella Sea Salt
Four Glass
Nutella Sea Salt
Top Toast

1. Blue Barrel
   Goat Butter
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   Creme Fraiche
5. The Barn
   Cacao, Tobacco

Rating: 3 stars
Favorite

Four Glass
Nutella Sea Salt
Four Glass
Nutella Sea Salt
Top Toast

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  Creme Fraiche
- The Barn
  Cacao, Trout
Hi Boss

Here's the favorites button in action. Let us know what you think!

-Marek

toast.app

8.4 MB
Hi Marek

30 seconds ago I decided to turn my life around and switch to a gluten-free paleo diet. I feel better already. The future is drinkable meal replacements. Now I don’t even need to leave my standing desk to eat.

I need a prototype in 45 minutes.

Have a great weekend!

Jeffery Traer Barnstein III
CEO
Toast Modern
Mid-Market, San Francisco
Interactive Prototypes
Recap

Toast mortem

Julian Missig
What Is Animation?

Change over time
Not a replacement for screen layout and hierarchy
Practical—how all the bits of your app fit together
Artful—how your app feels
Direct attention
Direct attention

Keep oriented
Direct attention

Keep oriented
Direct attention

Keep oriented
<table>
<thead>
<tr>
<th>Session</th>
<th>Location</th>
<th>Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designing for Future Hardware</td>
<td>Presidio</td>
<td>Wednesday 2:30 PM</td>
</tr>
<tr>
<td>Designing for Apple Watch</td>
<td>Presidio</td>
<td>Wednesday 4:30 PM</td>
</tr>
<tr>
<td>Apple Watch Design Tips and Tricks</td>
<td>Presidio</td>
<td>Friday 3:30 PM</td>
</tr>
<tr>
<td>Prototyping: Fake It ’Til You Make It</td>
<td></td>
<td>WWDC 2014</td>
</tr>
<tr>
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<td>WWDC 2014</td>
</tr>
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</table>
Animate
Animate
Animate thoughtfully.
More Information

Keynote Animations Shown Today

Designing Great Apps
http://developer.apple.com/design

Rachel Roth
User Interface Evangelist
rroth@apple.com