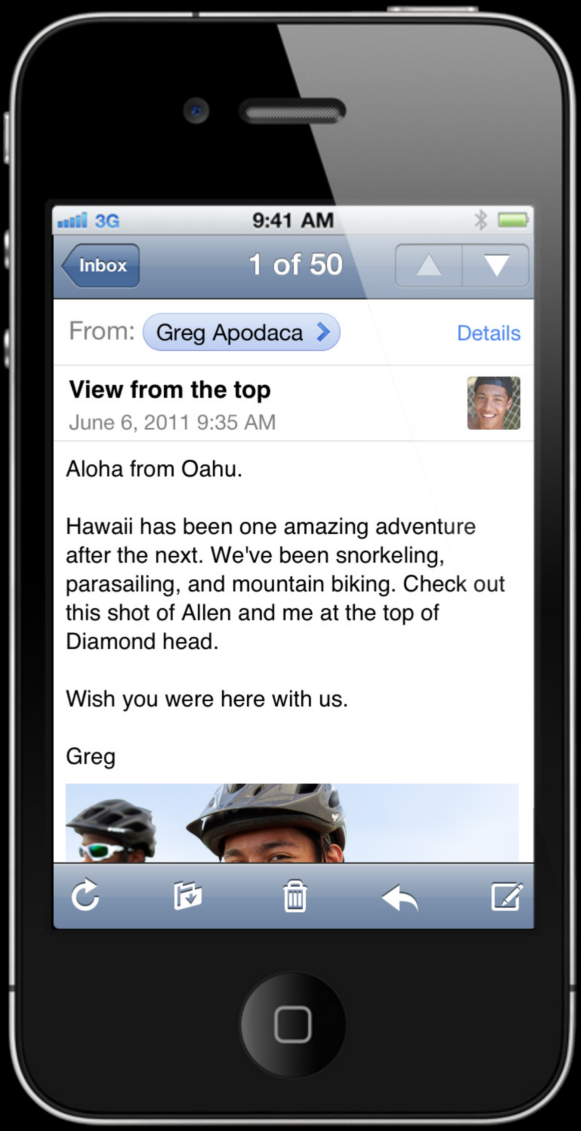
Customizing the Appearance of UIKit Controls

Session 114

Chris Parker
iOS Frameworks Engineer



From: Greg Apodaca

Details

View from the top

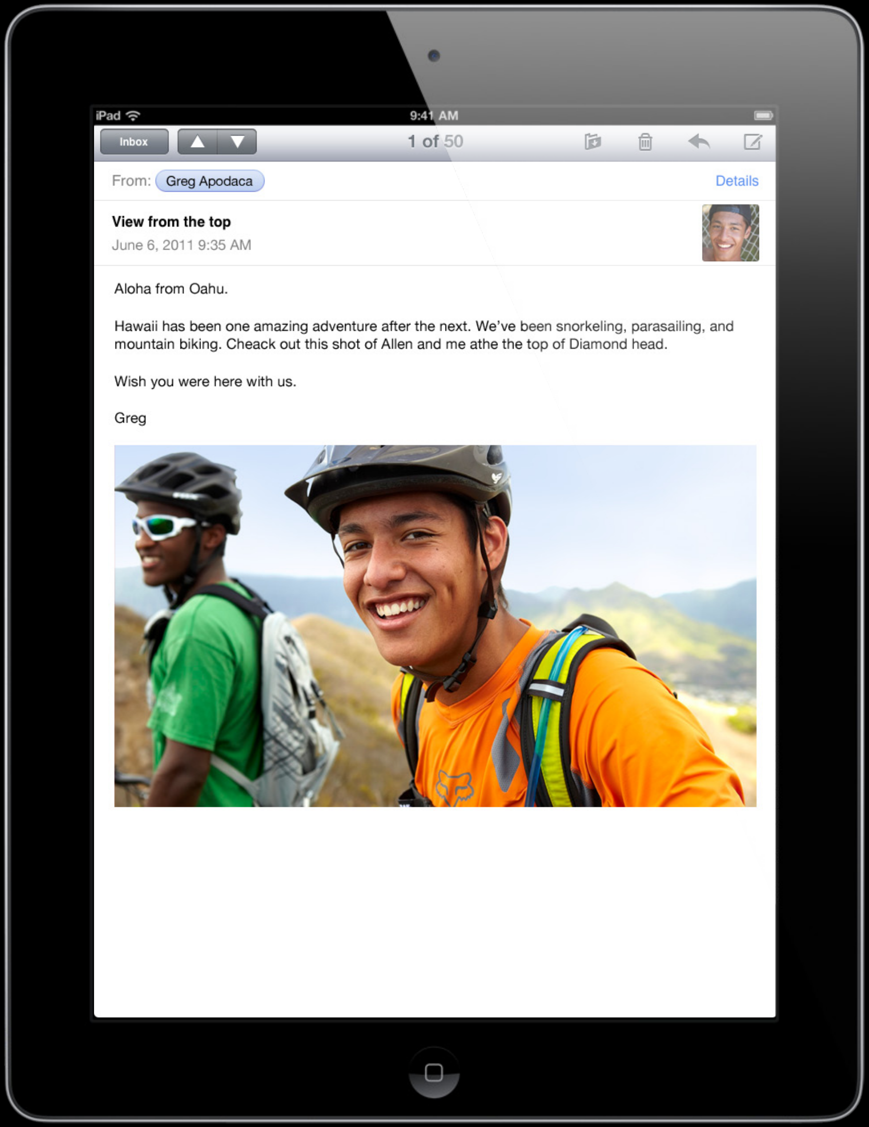
June 6, 2011 9:35 AM

Aloha from Oahu.

Hawaii has been one amazing adventure after the next. We've been snorkeling, parasailing, and mountain biking. Check out this shot of Allen and me at the top of Diamond head.

Wish you were here with us.

Greg



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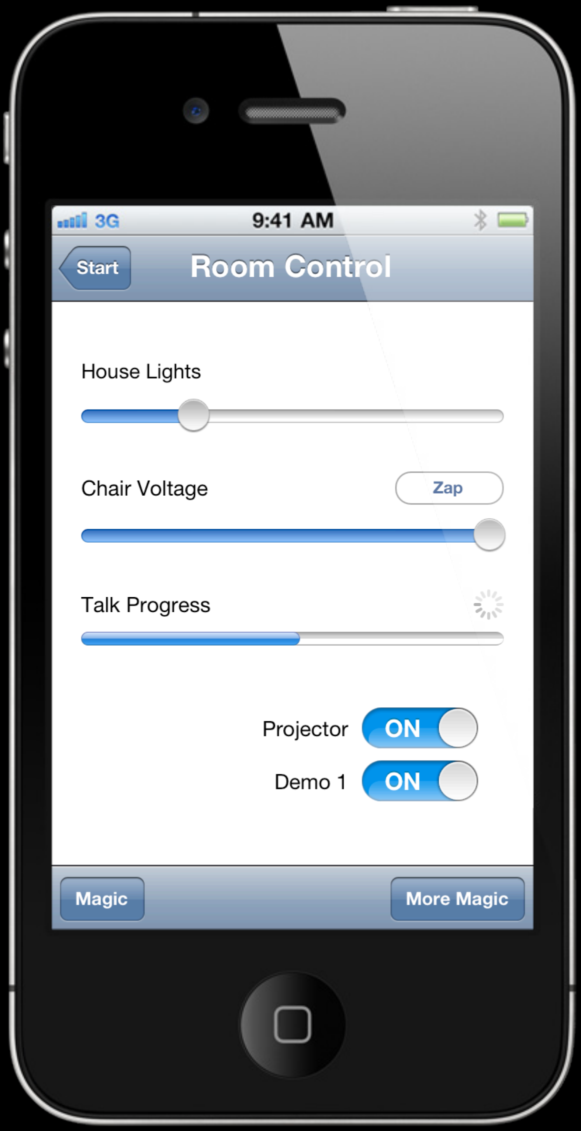


Room Control

House Lights

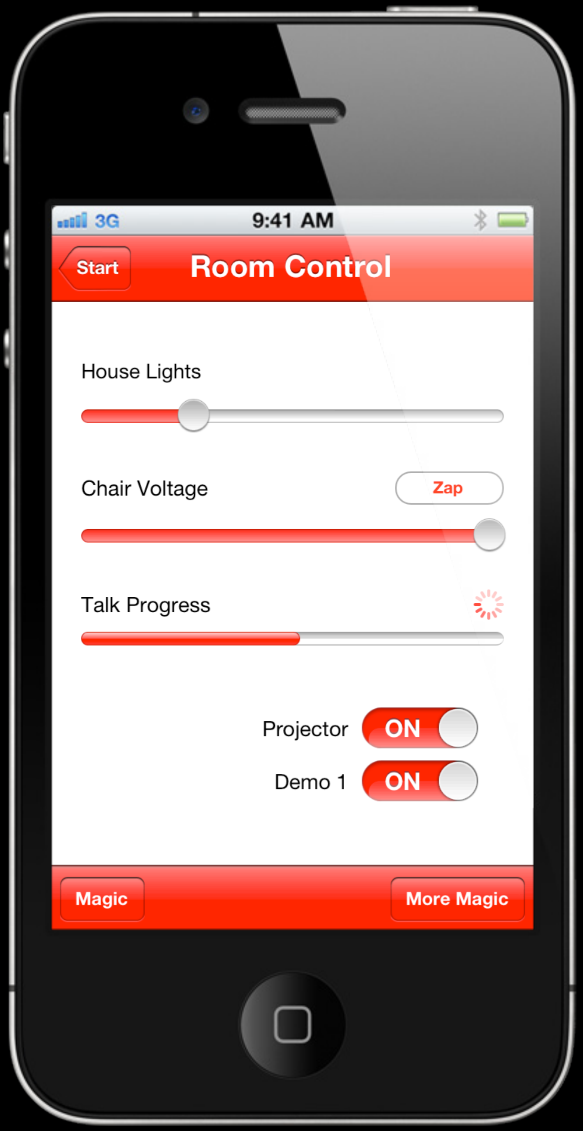
Chair Voltage

Talk Progress

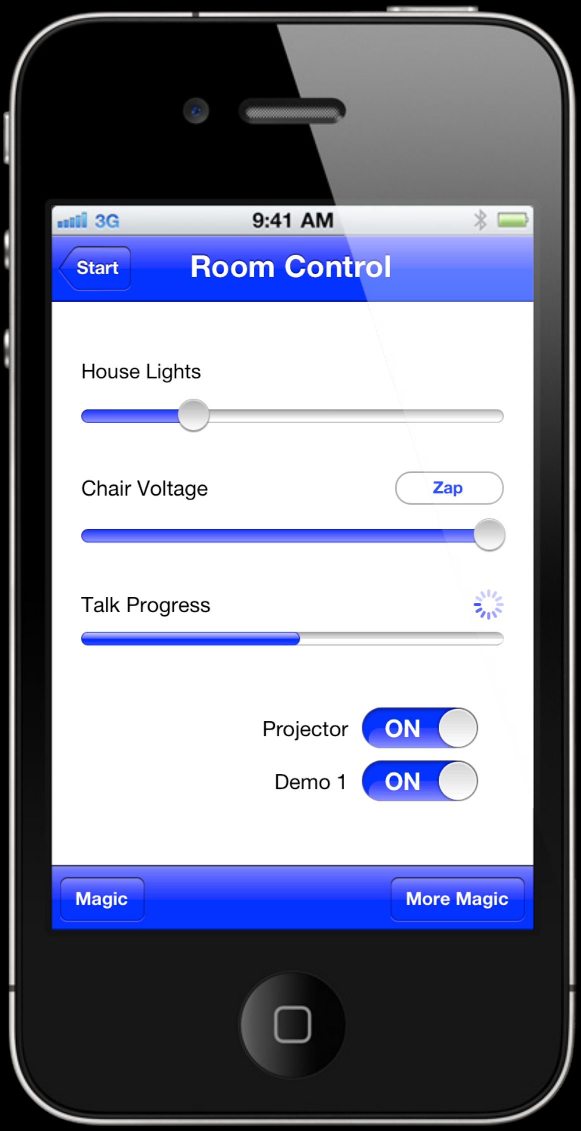
Projector ON

Demo 1 ON

Tint color


3G
9:41 AM
Start
Room Control
House Lights
Chair Voltage
Zap
Talk Progress
Projector
ON
Demo 1
ON
Magic
More Magic

Tint color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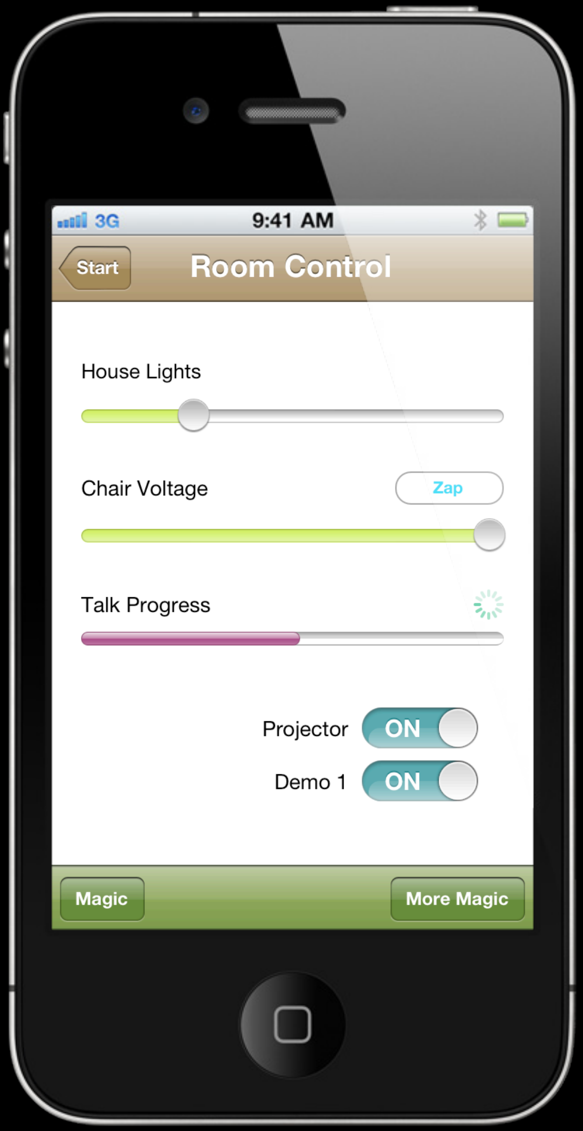

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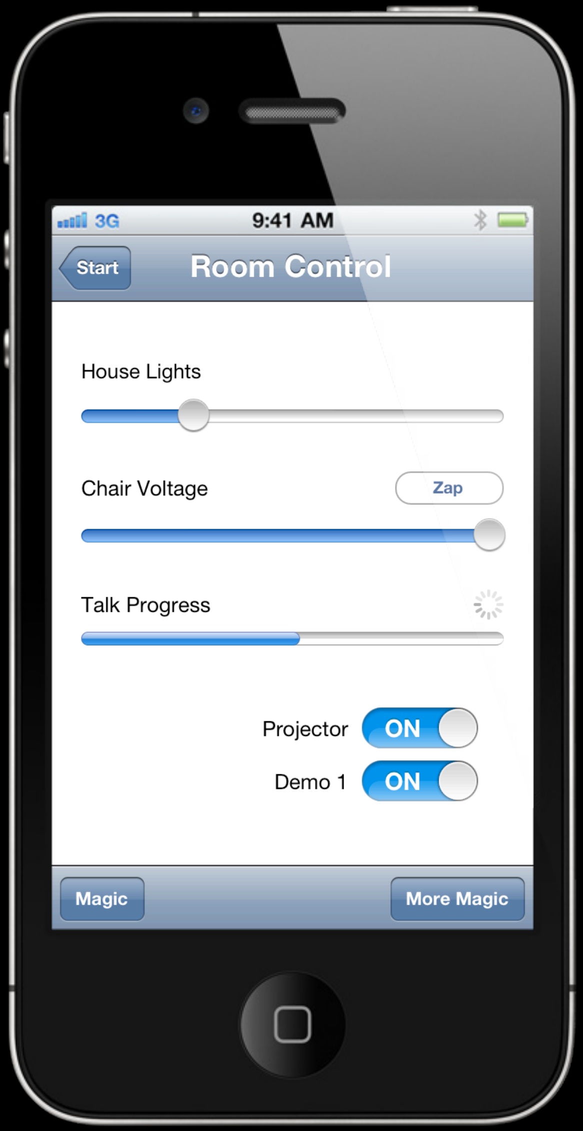

Room Control

House Lights

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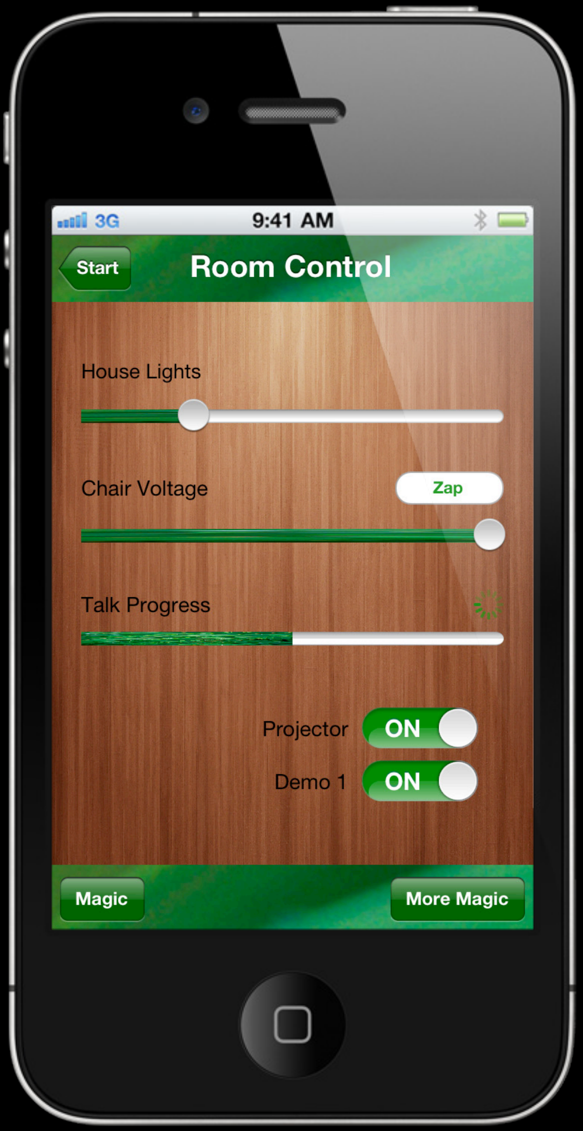
Talk Progress

Projector ON

Demo 1 ON

Images

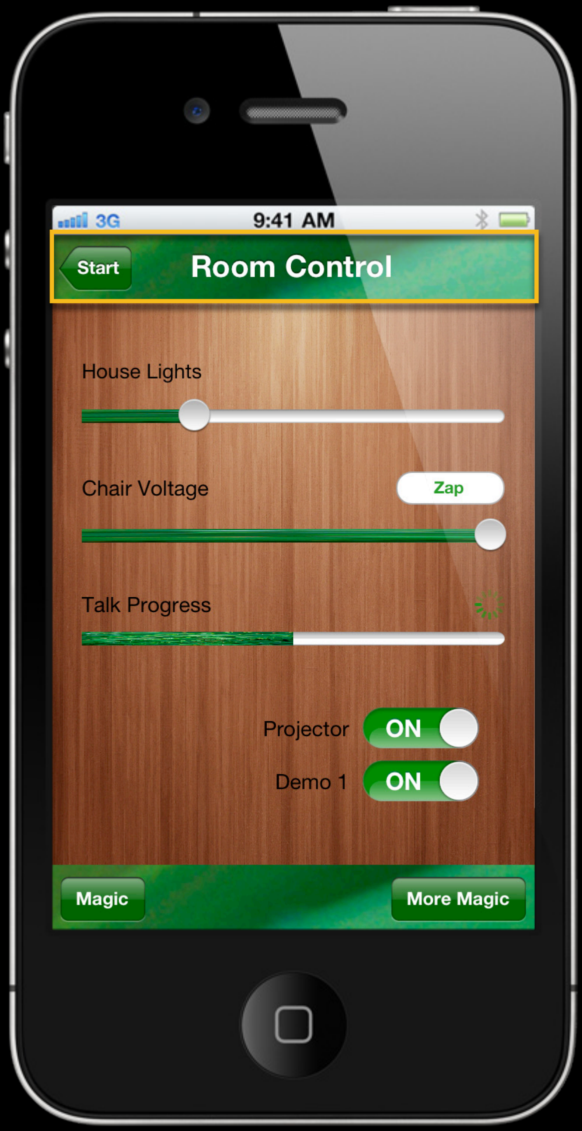


Projector ON

Demo 1 ON

```
setBackgroundImage:
forBarMetrics:

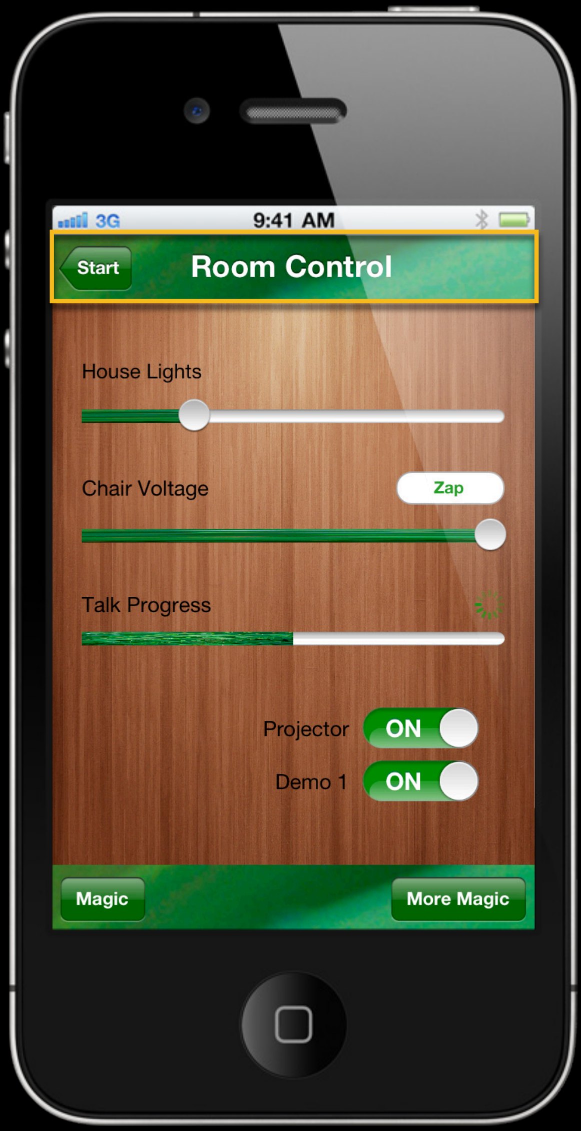
typedef enum {
    UIBarMetricsDefault,
    UIBarMetricsLandscapePhone,
} UIBarMetrics;
```



```
titleTextAttributes:

leftBarButtonItems:
rightBarButtonItems:

leftItemsSupplementBackButton
```



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titleTextAttributes:

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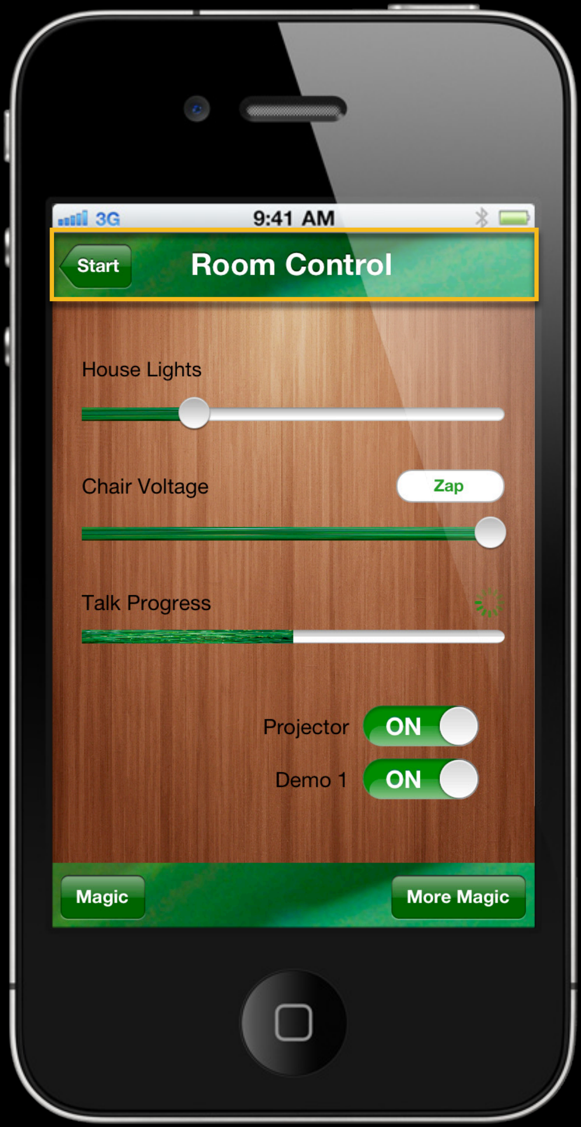

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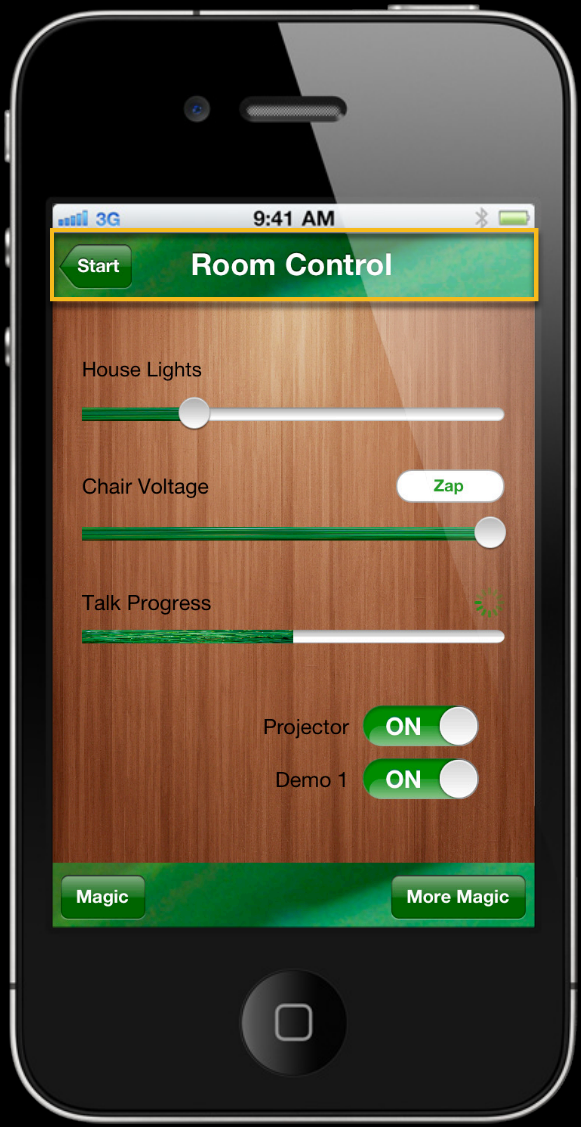
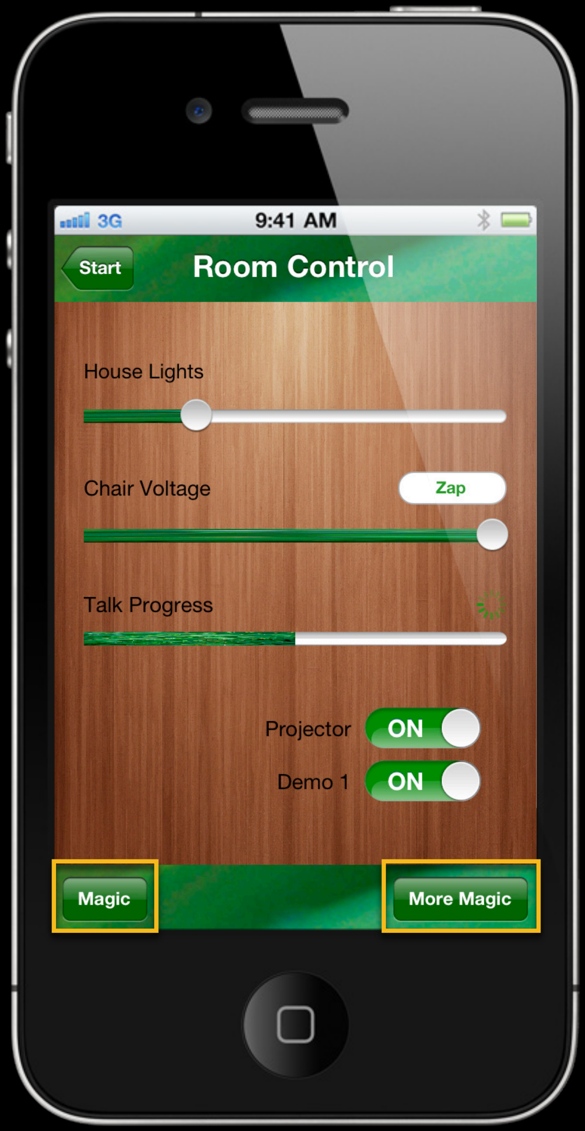
```



```
setBackgroundImage:
forState:
barMetrics:

setBackButtonBackgroundImage:
forState:
barMetrics:
```



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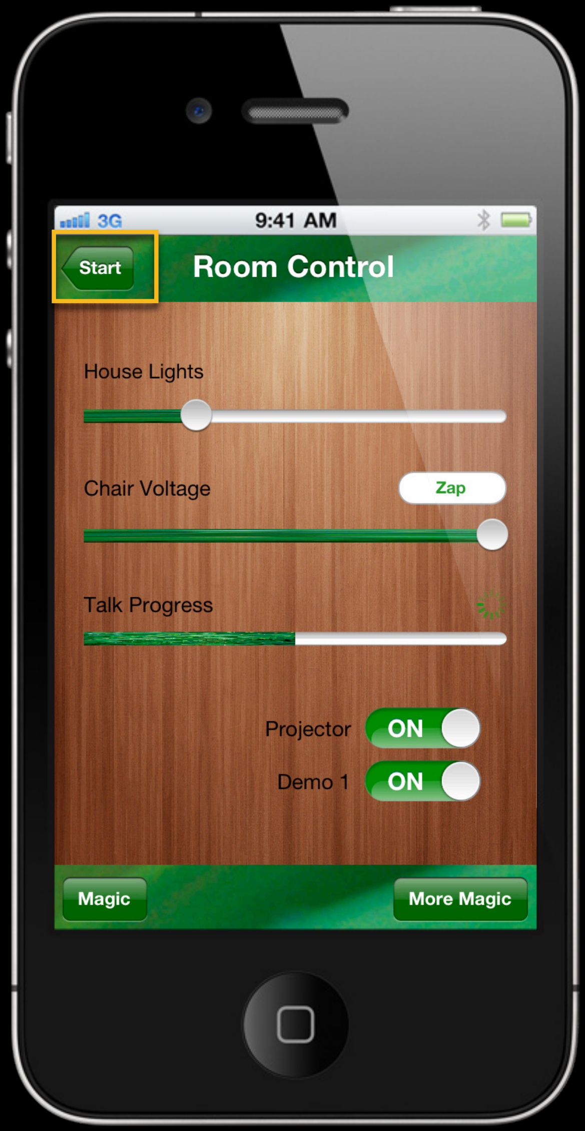
barMetrics:
```



Demo

Customizing instances

Marian Goldeen
iOS Frameworks Mountain Biker

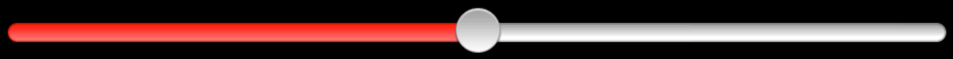
Writing customization API is difficult

Using customization API is difficult

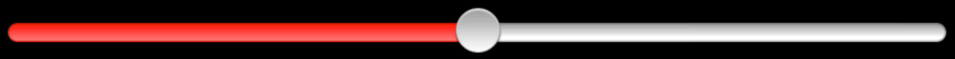
Easy

Consistent look

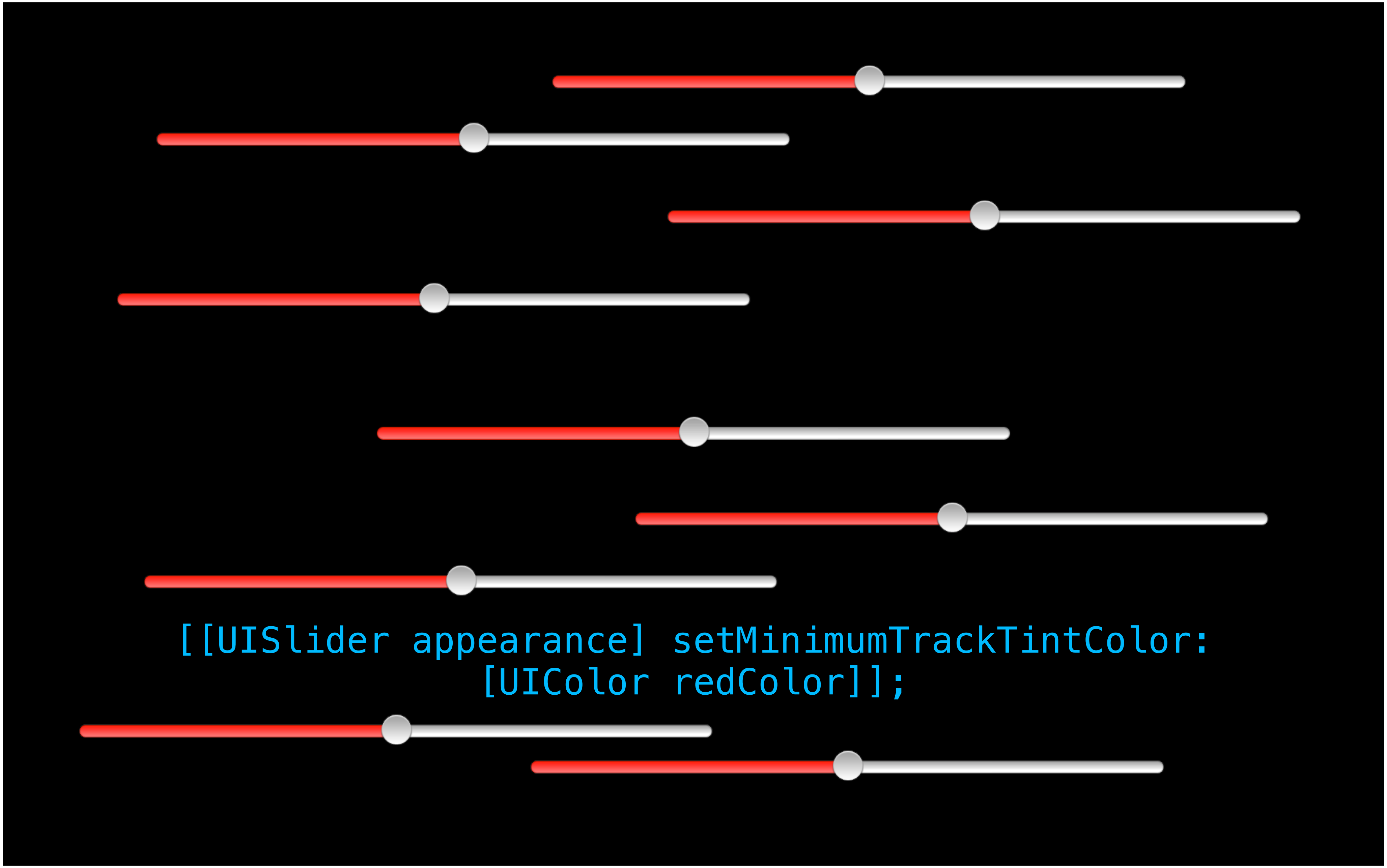
Support application features



```
[aSlider setMinimumTrackTintColor:[UIColor redColor]];
```



```
[[UISlider appearance] setMinimumTrackTintColor:
              [UIColor redColor]];
```



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[[UISlider appearance] setMinimumTrackTintColor:
[UIColor redColor]];
```

```
[[UISlider appearance] setMinimumTrackTintColor:
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Appearance Proxy

UIAppearance.h

```
@protocol UIAppearance <NSObject>

+ (id)appearance;
...

@end
```

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@protocol UIAppearance <NSObject>

+ (id)appearance;
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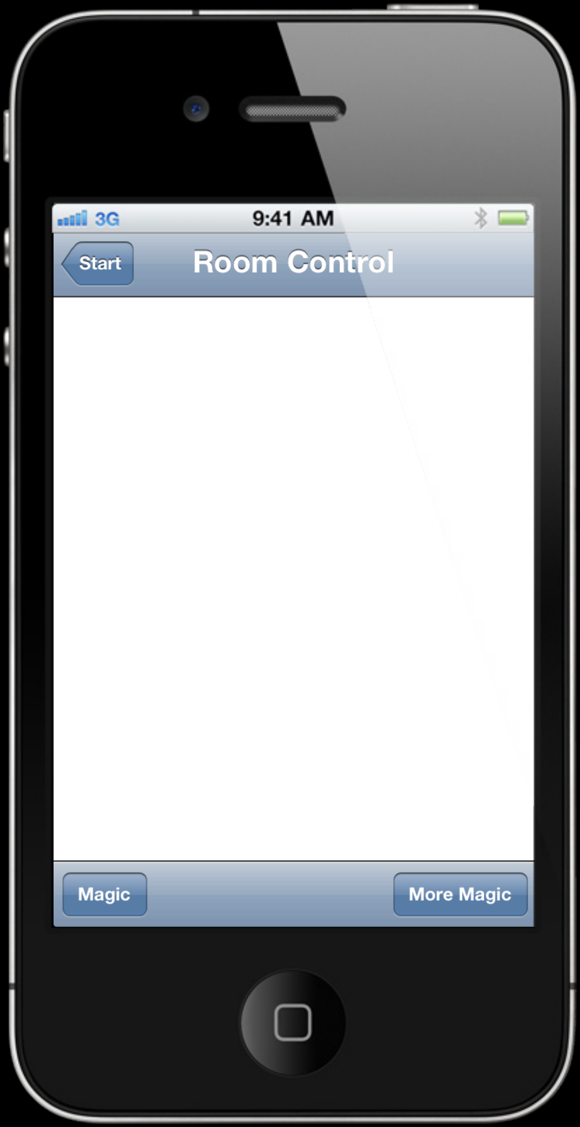
@end

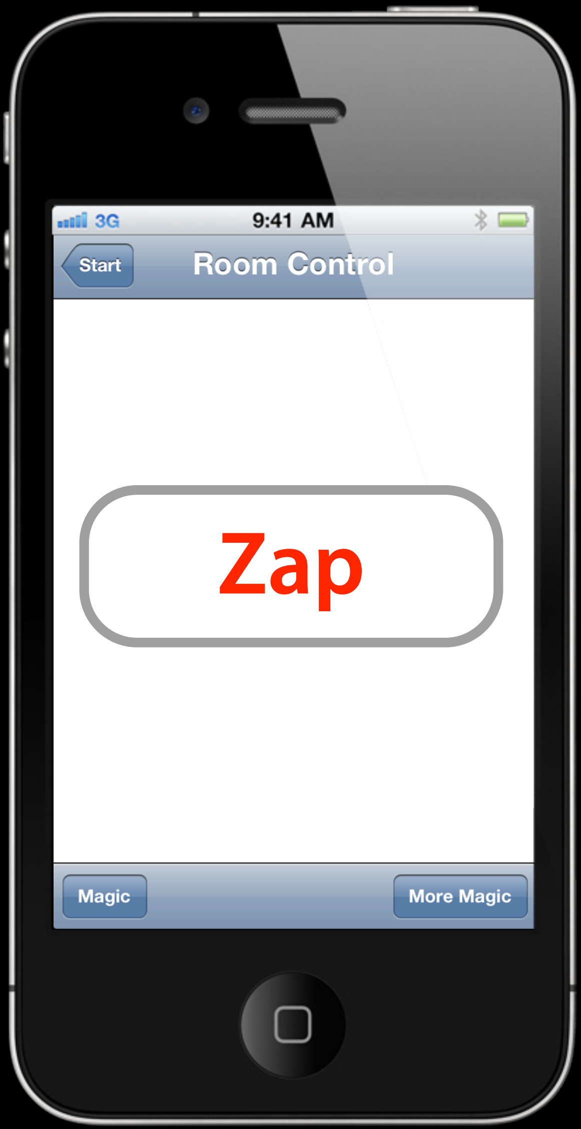
#define UI_APPEARANCE_SELECTOR
```

Demo

Appearance proxy basics

Zap

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Appearance Proxy

UIAppearance.h

```
@protocol UIAppearance <NSObject>

+ (id)appearance;
+ (id)appearanceWhenContainedIn:(Class
<UIAppearanceContainer>)containerClass, ...;

@end
```

Appearance Proxy

UIAppearance.h

```
@protocol UIAppearance <NSObject>

+ (id)appearance;
+ (id)appearanceWhenContainedIn:(Class
<UIAppearanceContainer>)containerClass, ...;

@end
```

Containment

```
[[UIButton appearanceWhenContainedIn:
 [UINavigationController class], nil]
 setTitleColor:[UIColor redColor]
 forControlState:UIControlStateNormal];
```

Containment

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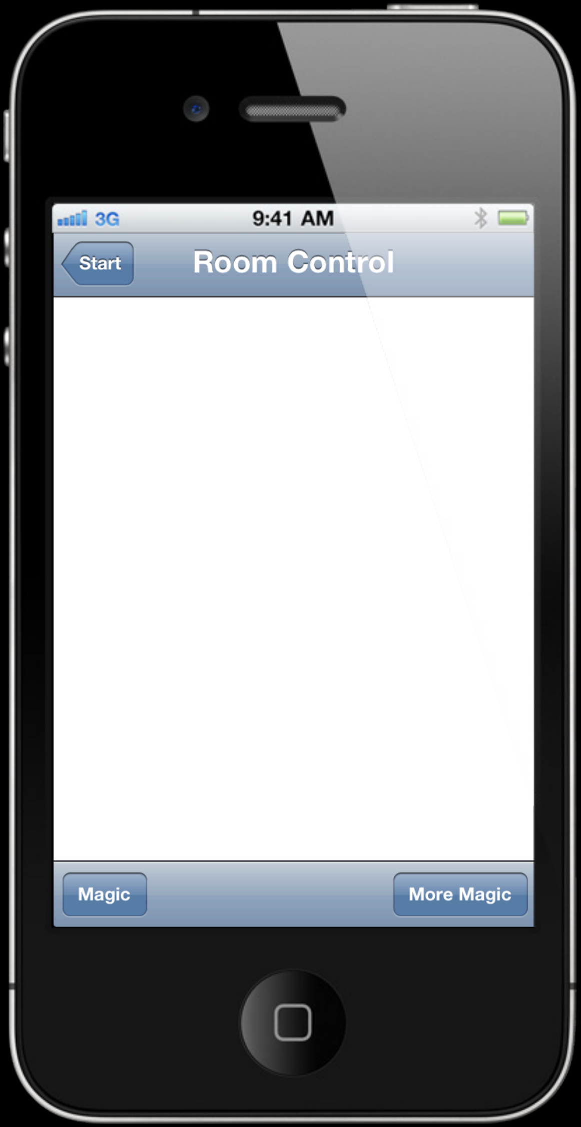
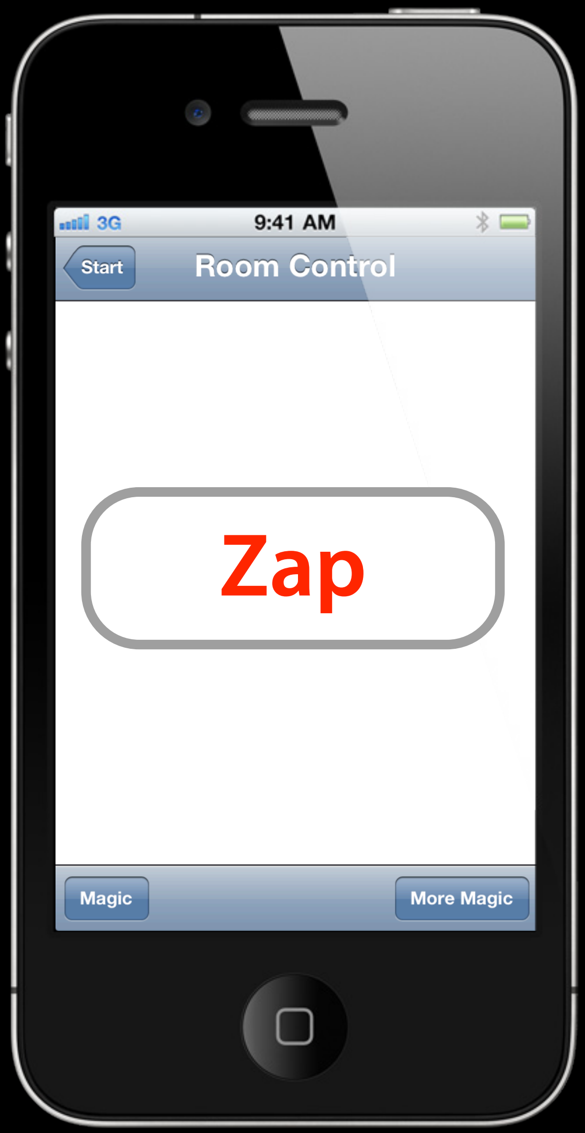
Zap





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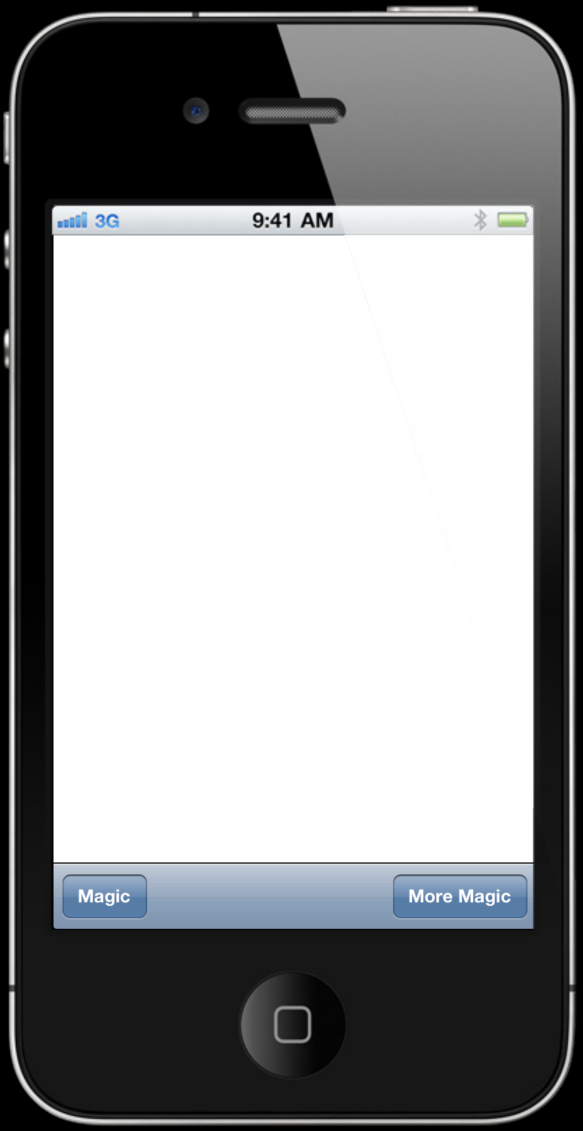
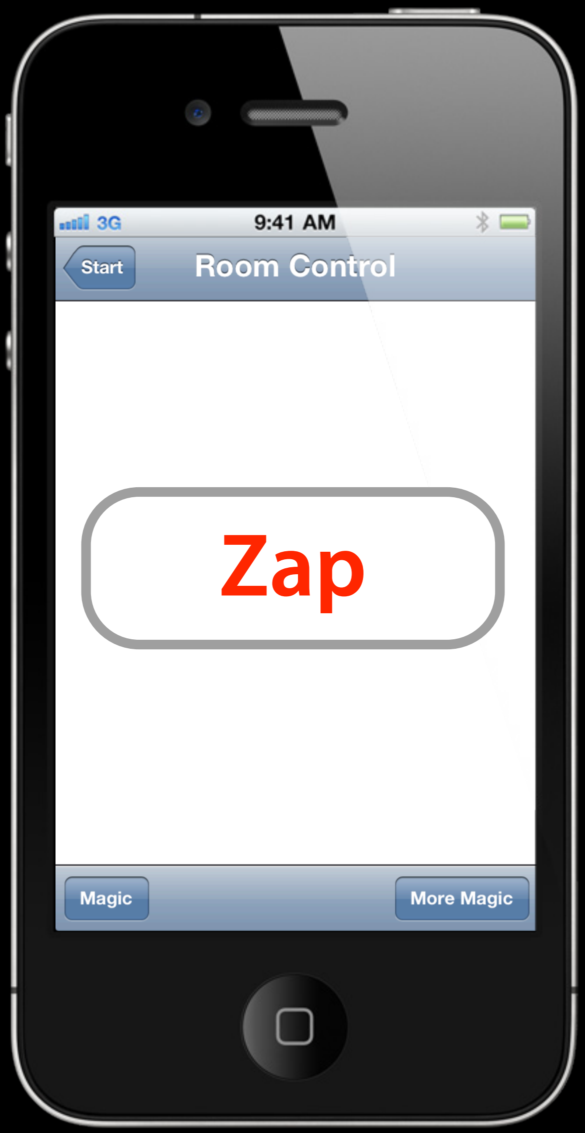
Containment

```
[[UIButton appearanceWhenContainedIn:
 [CustomViewController class],
 [UINavigationController class], nil]
 setTitleColor:[UIColor redColor]
 forControlState:UIControlStateNormal];
```

Zap

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Containment

Composition rules

```
[[UIButton appearanceWhenContainedIn:
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 [UINavigationController class], nil]
 setTitleColor:[UIColor redColor]
 forControlState:UIControlStateNormal];
```

The button’s appearance…
…when contained in a CustomViewController
…when contained in a UINavigationController

Demo

Containment

What is Happening?

Rule application

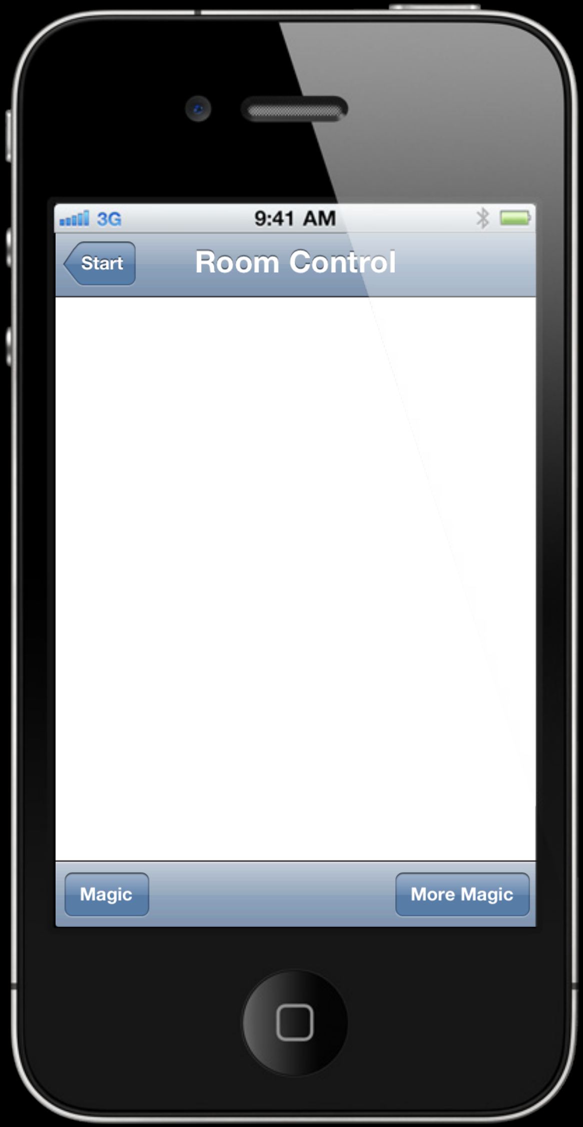
- Just before `–[UIView layoutSubviews]` is called…
  - Rules are evaluated
  - Customizations are applied
- Updates are applied at the time the hierarchy is changed
  - At the hierarchy change point
  - Does not update in real time

Zap

```
[            setTitleColor:
              [UIColor greenColor]
             forControlState:
           UIControlStateNormal];
```

Zap

Zap



```
[[UISlider appearance] setMinimumTrackTintColor:
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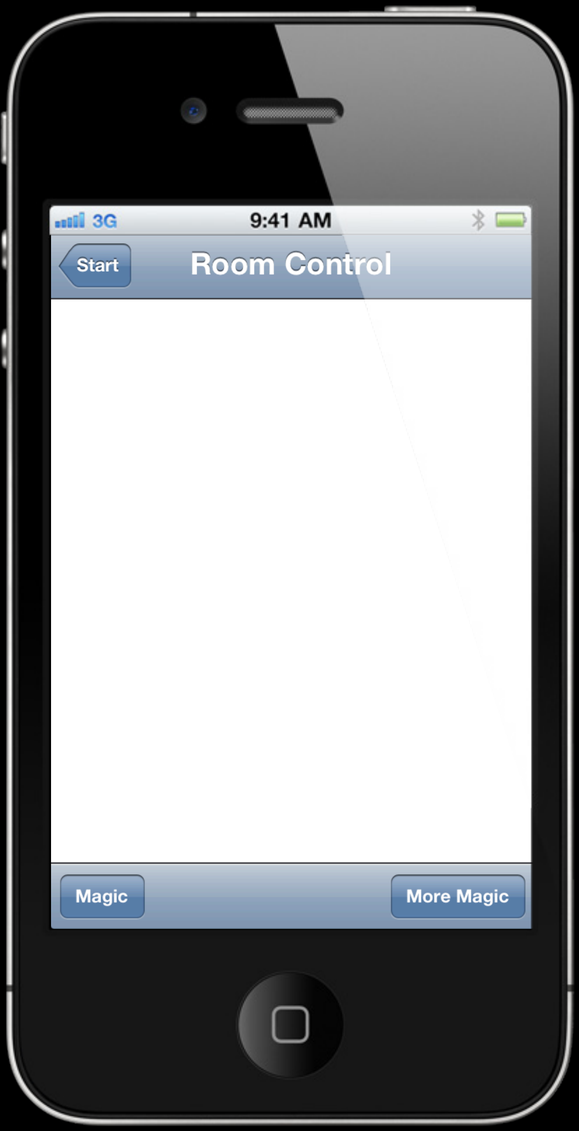
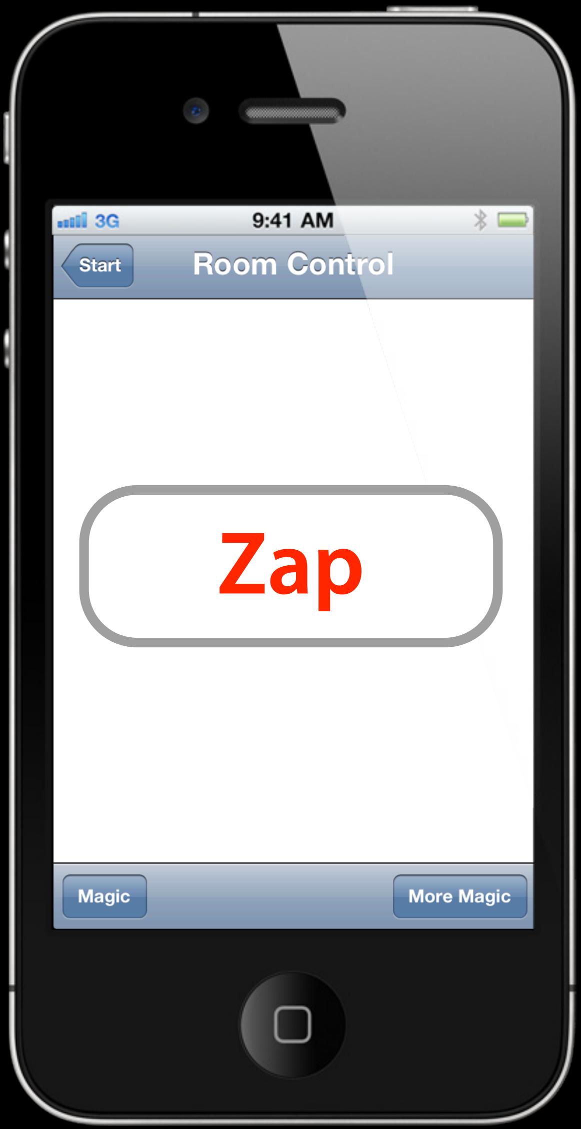
```

Zap

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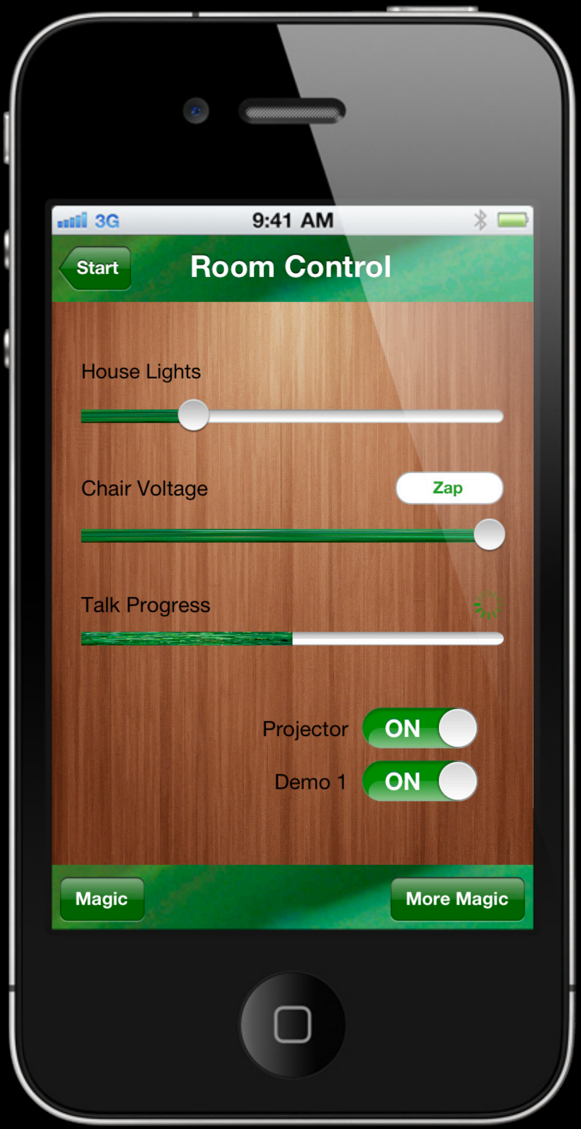

Projector ON

Demo 1 ON

More Information

Bill Dudney
Application Frameworks Evangelist
dudney@apple.com

Documentation
iOS Dev Center
http://developer.apple.com/devcenter/ios/

Apple Developer Forums
http://devforums.apple.com

WWDC2011