

iOS Accessibility 101

Make your app accessible

whoami

Education

Universidade Federal de Pernambuco, Computer Science

Experience

BEPiD, In Loco Media, Grupo Novo Brasil

Volunteer Experience

awesome-iOS, gitwatch, homebrew

“Accessibility is really about making sure all users, regardless of abilities, have full access to all features you put in your apps.”

“15 percent (1 billion) of the world's population (7 billions) live with some kind of impairment”

–2011 WHO World Report on Disability

Accessible apps are rare,
this is an opportunity.

Agenda

Accessibility features on iOS

Accessibility audit

Implement accessibility

iOS Accessibility Features

	Mild	Severe
Visual	Larger Text Astigmatism	VoiceOver Blindness
Hearing	Mono Audio Partial Deafness	Captions Deafness
Physical and Motor Skills	Assistive Touch RSI	Switch Control Tetraplegia
Learning and Literacy	Speak Screen Dyslexia	Guided Access Autism

VoiceOver

Interact without seeing the screen

“Announce elements”

Built-in

Doesn't support 3D games, drawing apps

demo

UIAccessibility is about asking
questions of elements in your
app.

Accessibility Semantics

Describe your app

Purpose Am I relevant for Accessibility?

Name How do I identify myself?

Personality What are my characteristics?

Value Do I change with user interaction or time?

Interaction How exactly do I work?

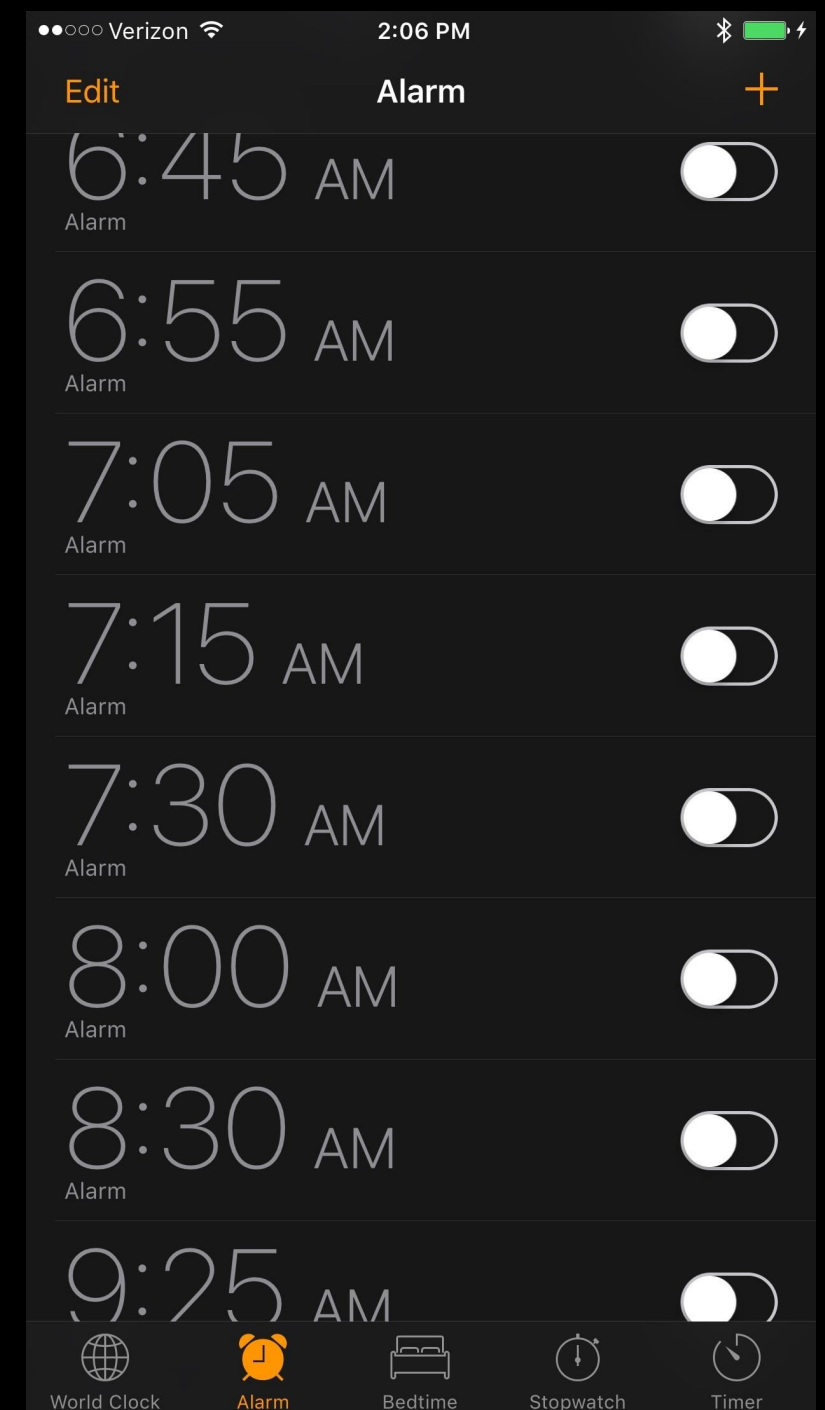
Location Where am I?

Accessibility Semantics

Describe your app: **purpose**

```
var isAccessibilityElement: Bool
```

```
self.isAccessibilityElement = true
```

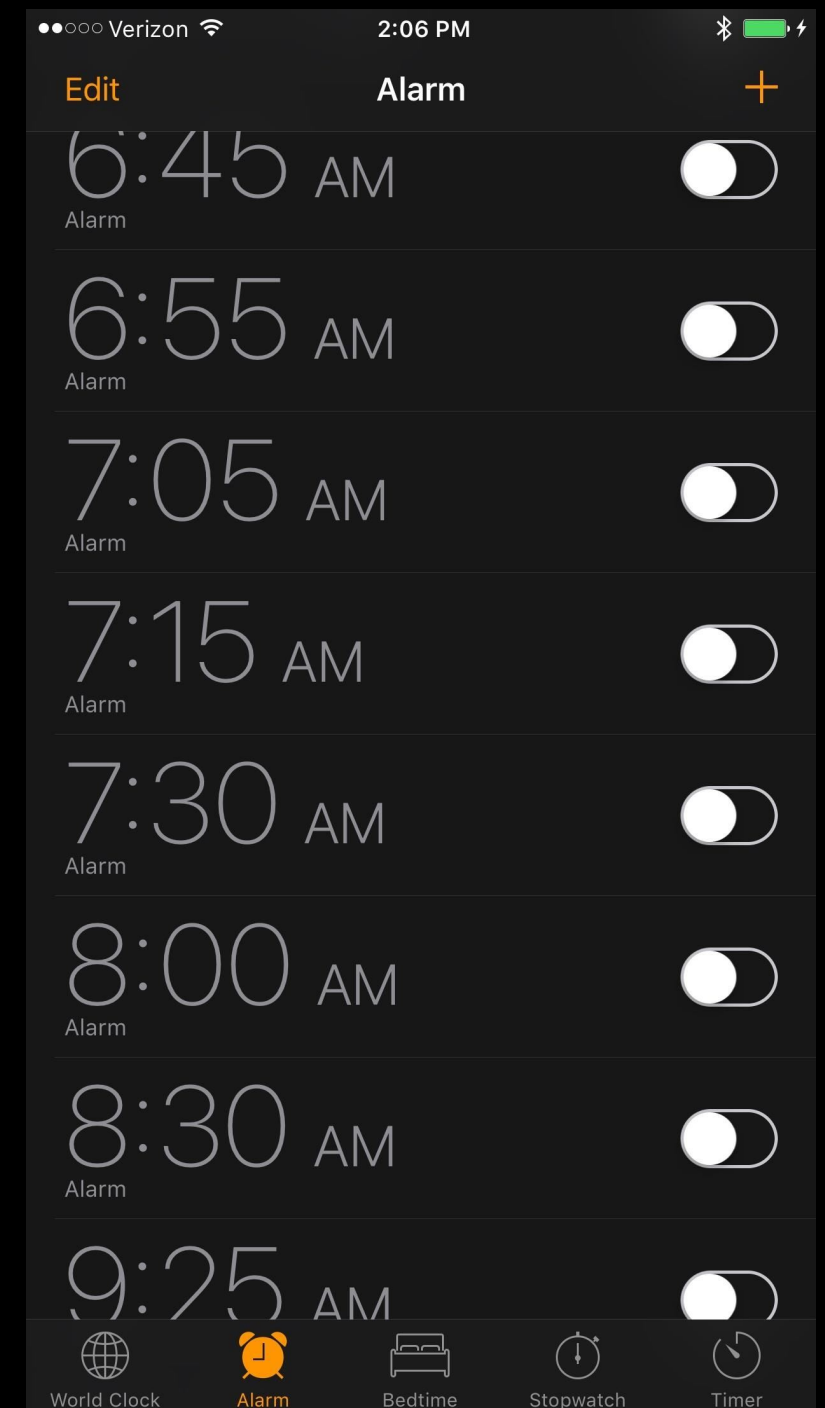


Accessibility Semantics

Describe your app: `name`

```
var accessibilityLabel: String?
```

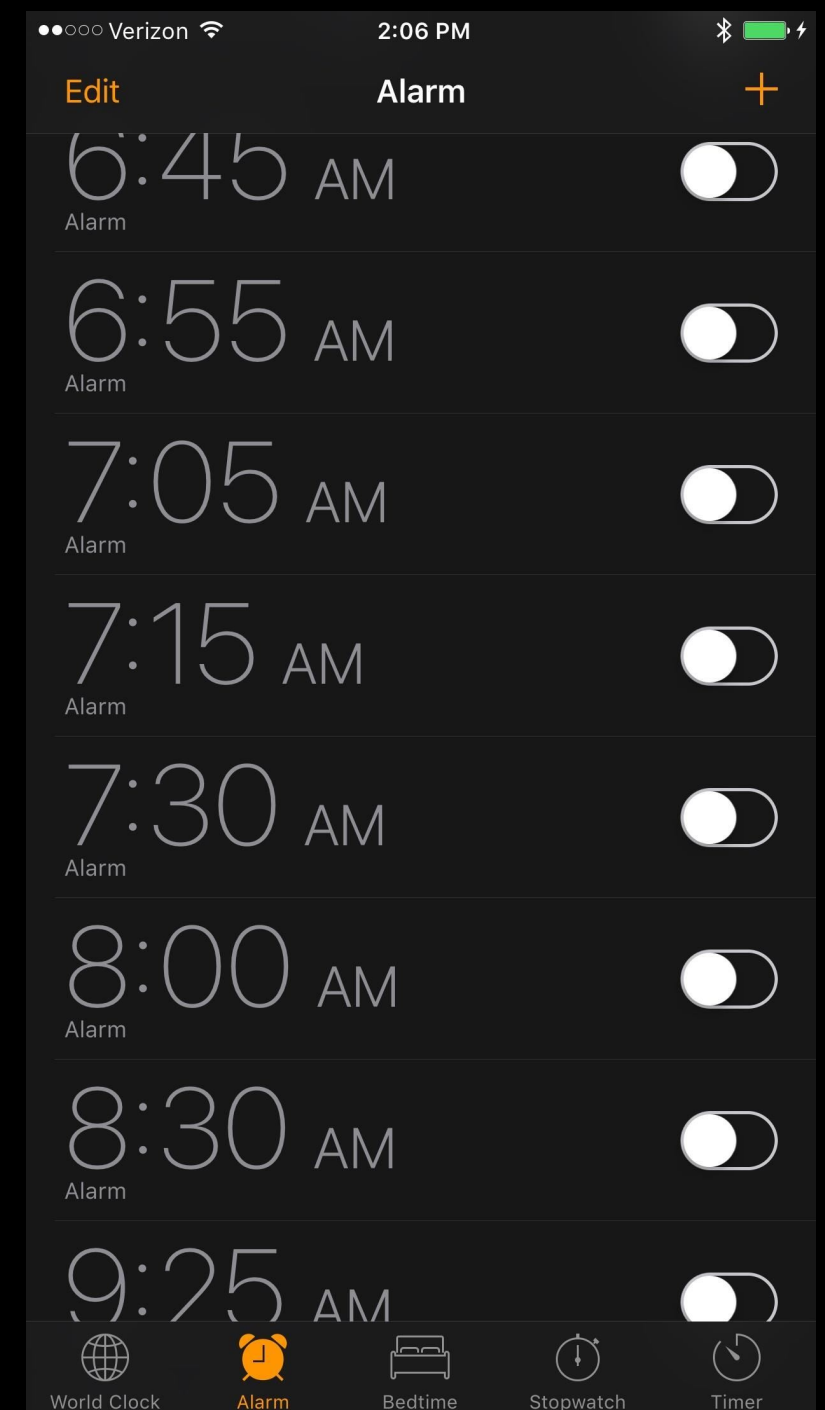
```
self.accessibilityLabel = "Add"
```



Accessibility Semantics

Describe your app: **personality**

```
var accessibilityTraits: UIAccessibilityTraits  
  
self.accessibilityTraits = UIAccessibilityTraitButton
```

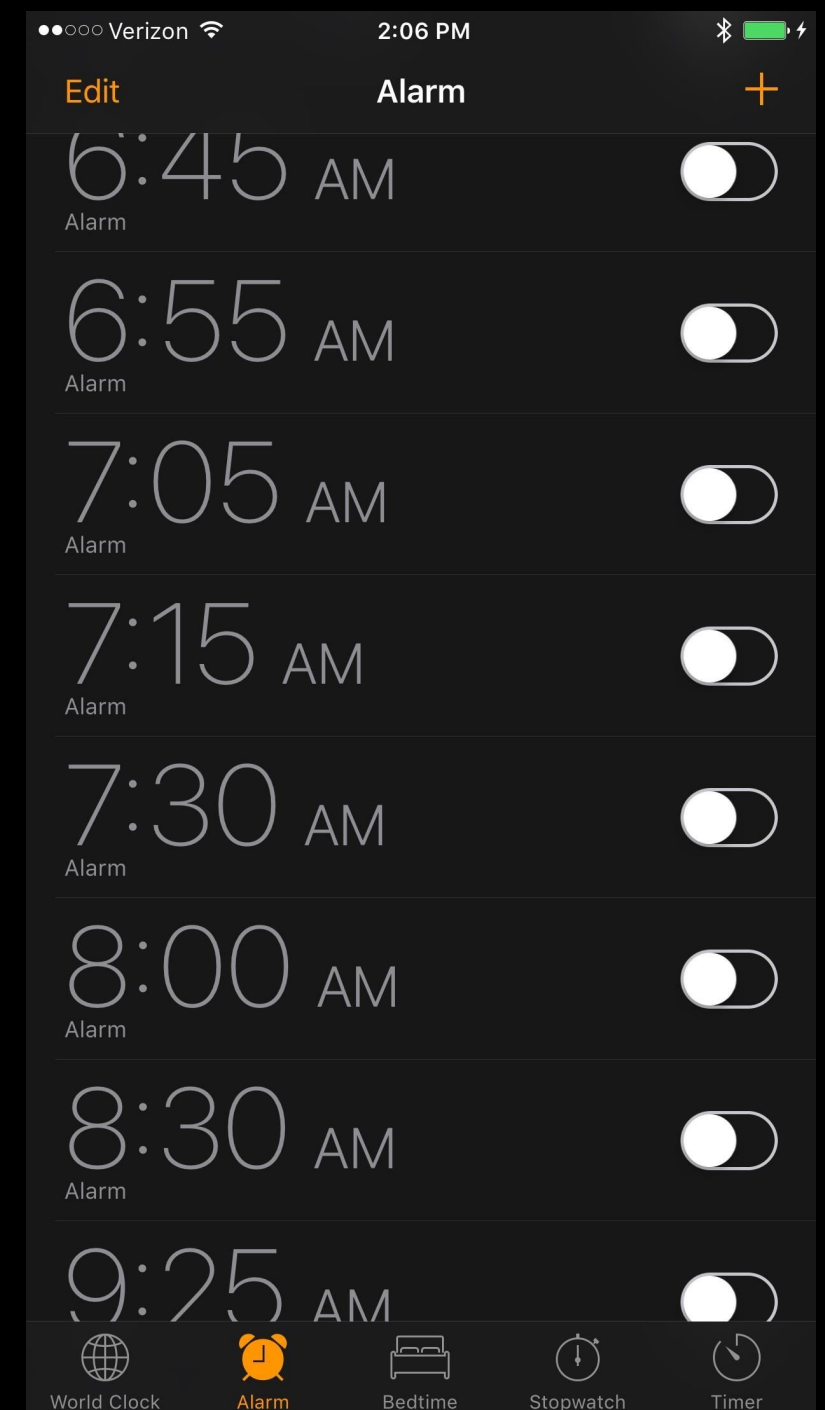


Accessibility Semantics

Describe your app: `value`

```
var accessibilityValue: String?
```

```
self.accessibilityValue = "Two ten PM"
```

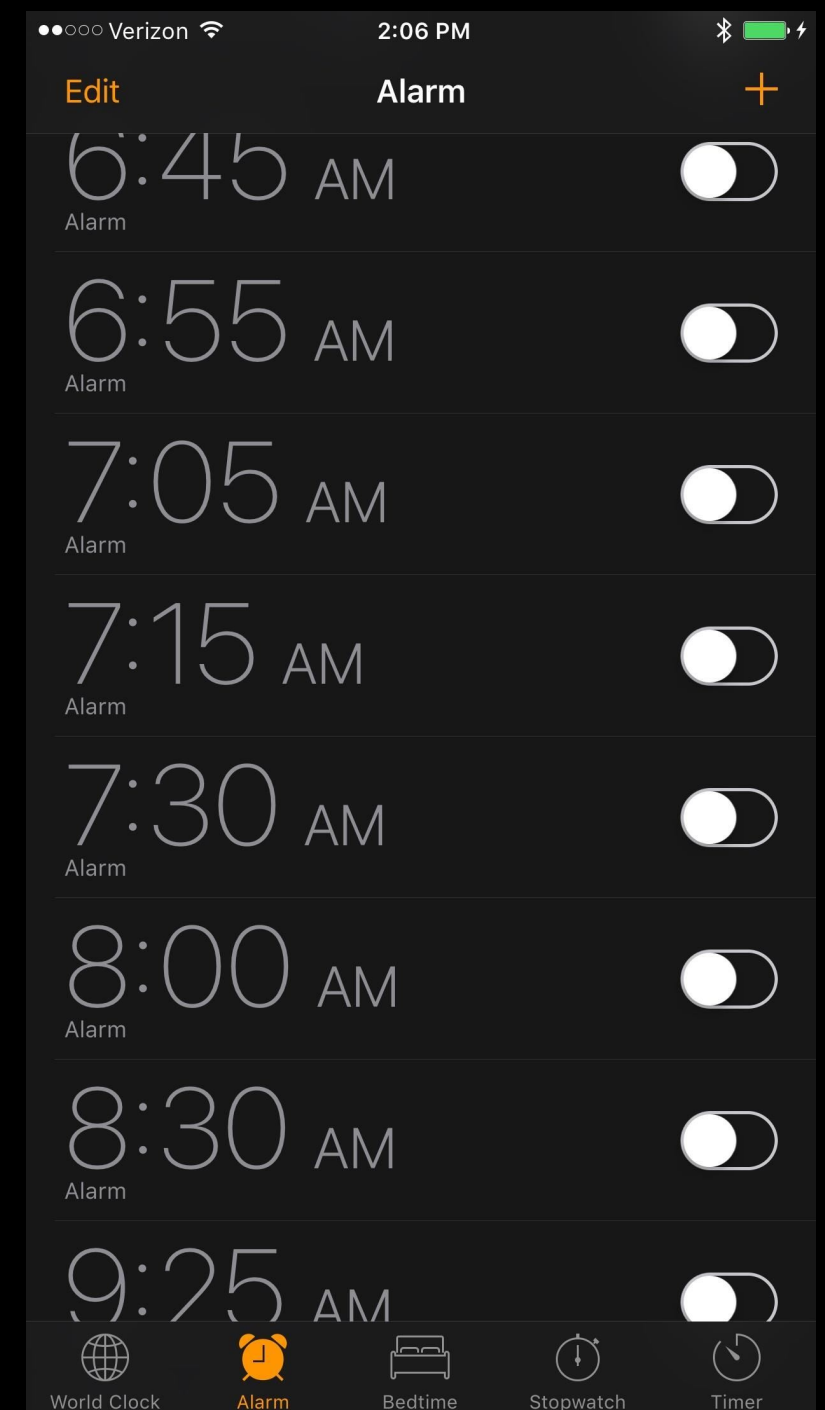


Accessibility Semantics

Describe your app: **interaction**

```
var accessibilityHint: String?
```

```
self.accessibilityHint = "Drag up or  
down to change the order"
```

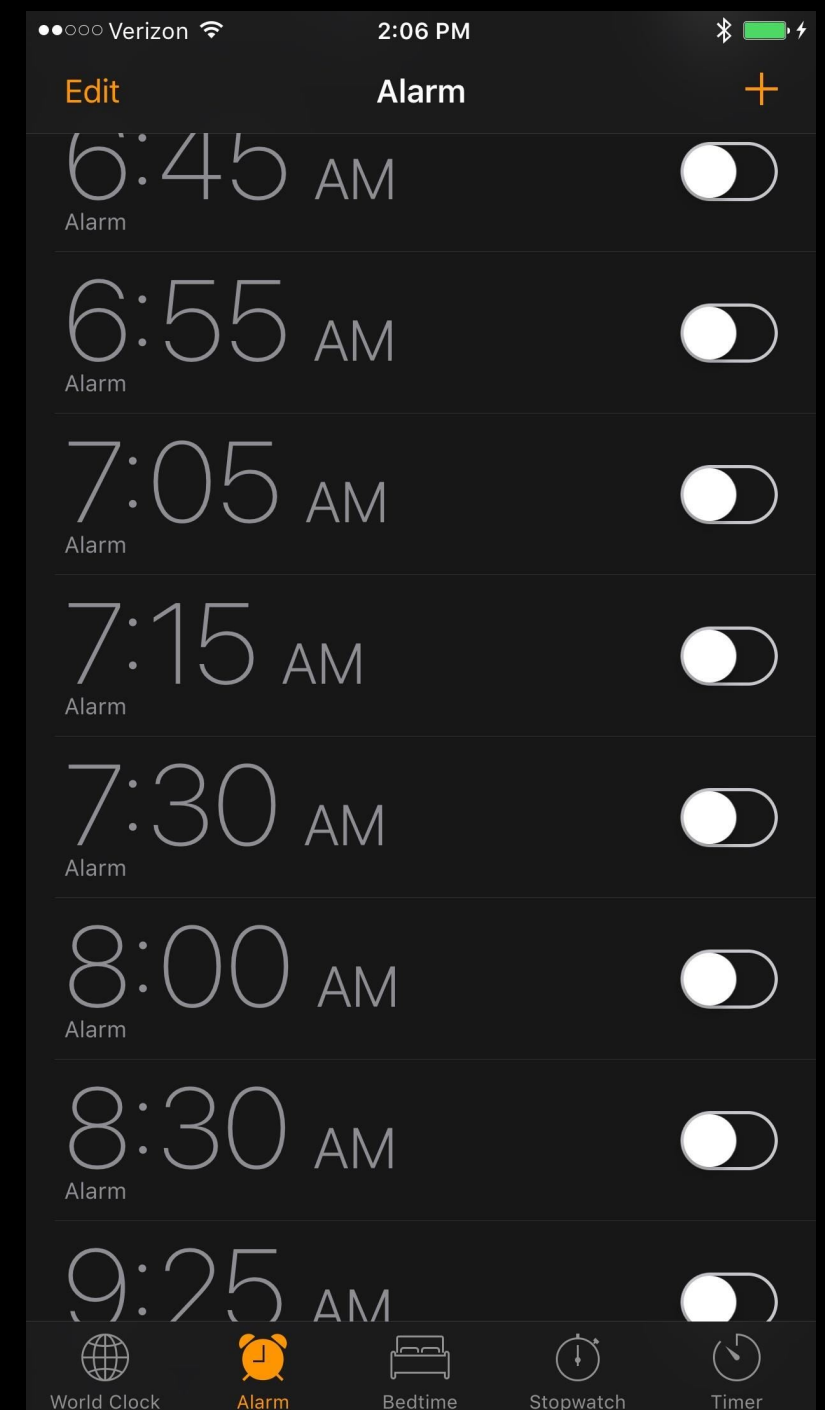


Accessibility Semantics

Describe your app: **location** is everything

```
var accessibilityFrame: CGRect
```

```
func UIAccessibilityConvertFrameToScreenCoordinates(CGRect,  
UIView) -> CGRect
```



UIAccessibility

Basic API

```
extension NSObject {  
    var isAccessibilityElement: Bool  
    var accessibilityLabel: String?  
    var accessibilityHint: String?  
    var accessibilityValue: String?  
    var accessibilityTraits: UIAccessibilityTraits  
    var accessibilityFrame: CGRect  
}
```

Building accessible apps

Accessibility Audit

Accessibility API

Demo

Accessibility Audit

Demo

Accessibility API

Summary

Accessibility is about users

Really easy to make accessible

Apple embraces accessibility

Low Effort, High Reward

Widen your audience

Get the code at

github.com/miguelarauj10/ios-accessibility-101

master branch for original code without accessibility support
accessibility branch for accessible code

More Information

WWDC Sessions

2015, 201

Documentation

Accessibility Programming Guide for iOS

Debug Accessibility in iOS Simulator with the Accessibility Inspector

Presentations

@Swift 2017: From Zero to Hero by Sommer Panage at [SpeakerDeck](#)

iOS Accessibility by Luis Abreu at [Slideshare](#)

Any questions?

Thanks!