

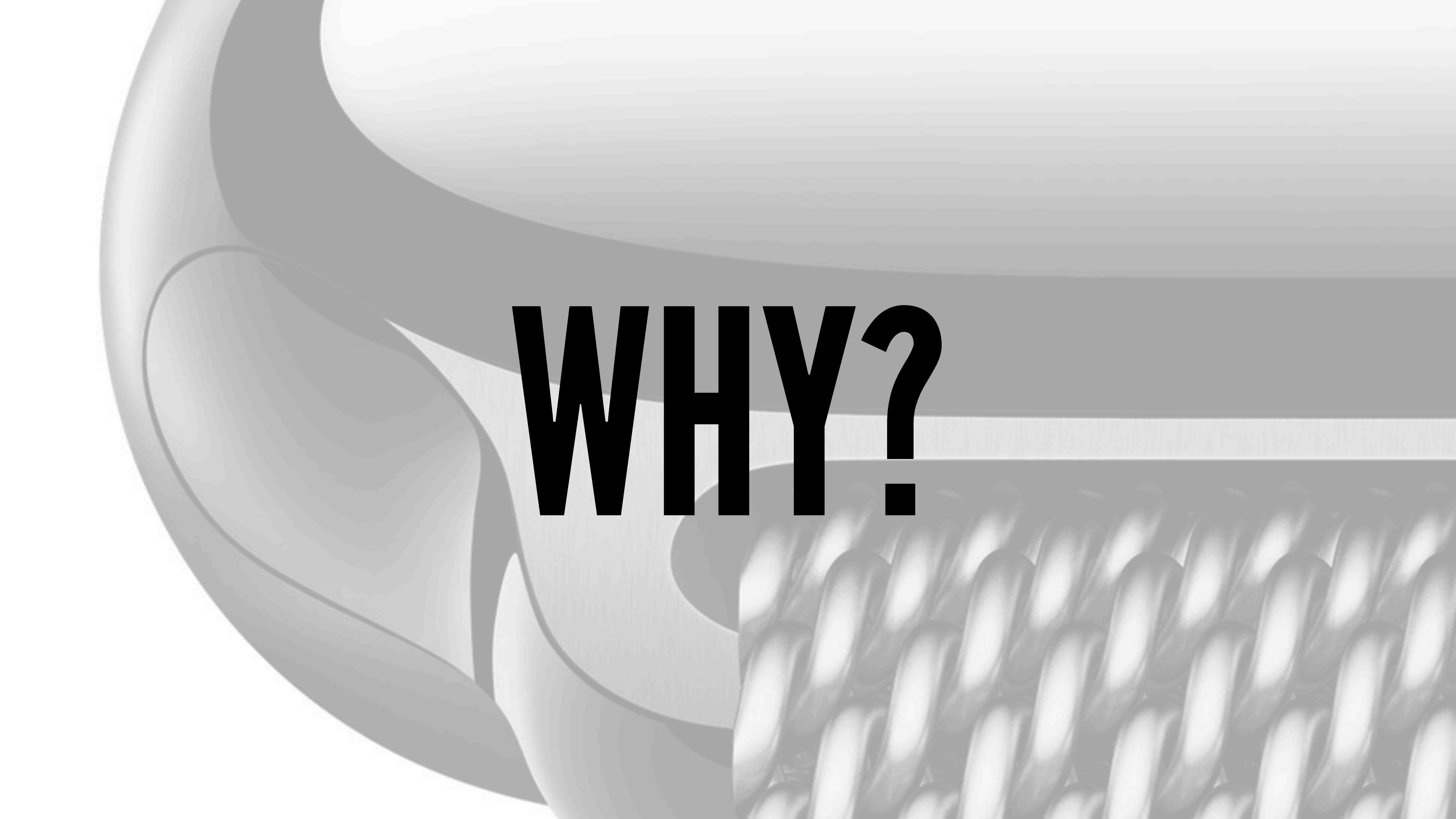
SO YOU WANT TO MAKE AN APPLE WATCH APP?

BY

NEIL KIMMETT







WHY?

“Apps on Apple Watch are designed for quick, lightweight interactions...”

– Apple Watch Design Guidelines

“If you measure interactions with your iOS app in minutes, you can expect interactions with your WatchKit app to be measured in seconds.”

– Apple Watch Design Guidelines

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– Apple Watch Design Guidelines



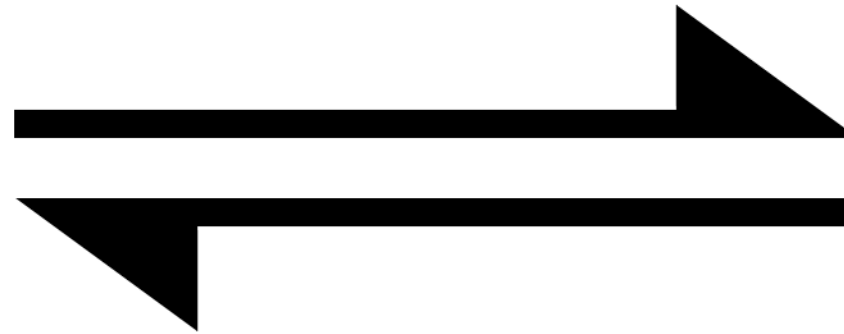
WHAT YOU NEED, WHEN YOU NEED IT.

“For all of the changes that have been wrought by technology, a huge amount of our daily existence really hasn’t changed in a very long time.”

– Ben Thompson

HOW?



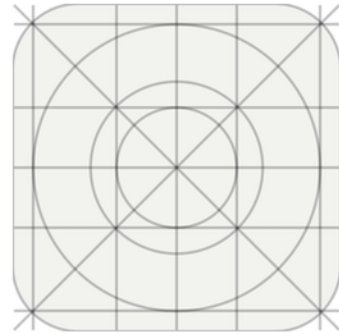


Bluetooth

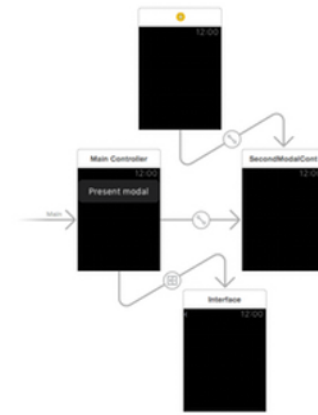




App



Extension

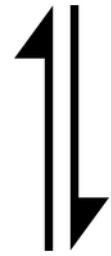
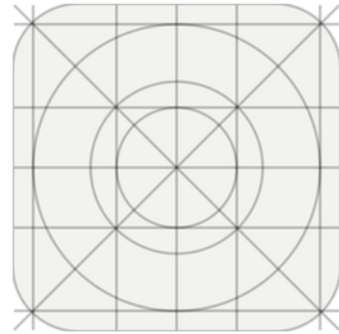


Storyboard

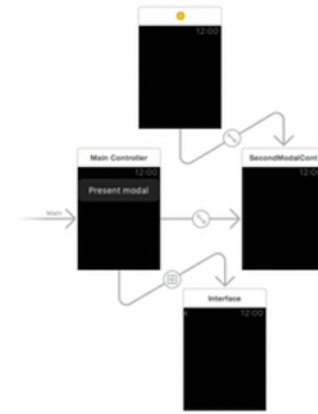




App



Extension

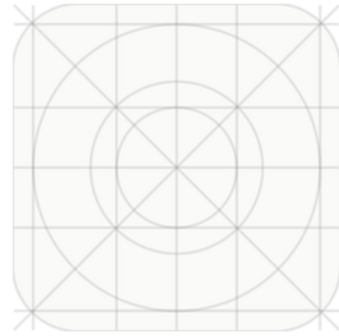


Storyboard

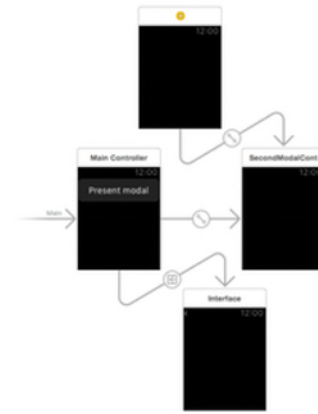




App



Extension



Storyboard



WKInterfaceButton

I'm a button


```
class WKInterfaceButton : WKInterfaceObject {  
  
    func setTitle(title: String?)  
    func setAttributedTitle(attributedTitle: NSAttributedString?)  
  
    func setBackgroundColor(color: UIColor?)  
    func setBackgroundImage(image: UIImage?)  
    func setBackgroundImageData(imageData: NSData?)  
    func setBackgroundImageNamed(imageName: String?)  
  
    func setEnabled(enabled: Bool)  
}
```

```

enum UIButtonType : Int {
    case Custom
    case System
    case DetailDisclosure
    case InfoLight
    case InfoDark
    case ContactAdd
}

class UIButton : UIControl, NSCoding {

    class func buttonWithType(buttonType: UIButtonType) -> AnyObject

    var contentEdgeInsets: UIEdgeInsets
    var titleEdgeInsets: UIEdgeInsets
    var reversesTitleShadowWhenHighlighted: Bool
    var imageEdgeInsets: UIEdgeInsets
    var adjustsImageWhenHighlighted: Bool
    var adjustsImageWhenDisabled: Bool
    var showsTouchWhenHighlighted: Bool
    var tint?: UIColor?
    var buttonType: UIButtonType { get }

    func setTitle(title: String?, forState state: UIControlState)
    func setTitleColor(color: UIColor?, forState state: UIControlState)
    func setTitleShadowColor(color: UIColor?, forState state: UIControlState)
    func setImage(image: UIImage?, forState state: UIControlState)
    func setBackgroundImage(image: UIImage?, forState state: UIControlState)
    func setAttributedTitle(title: NSAttributedString!, forState state: UIControlState)

    func titleForState(state: UIControlState) -> String?
    func titleColorForState(state: UIControlState) -> UIColor?
    func titleShadowColorForState(state: UIControlState) -> UIColor?
    func imageForState(state: UIControlState) -> UIImage?
    func backgroundImageForState(state: UIControlState) -> UIImage?
    func attributedTitleForState(state: UIControlState) -> NSAttributedString?

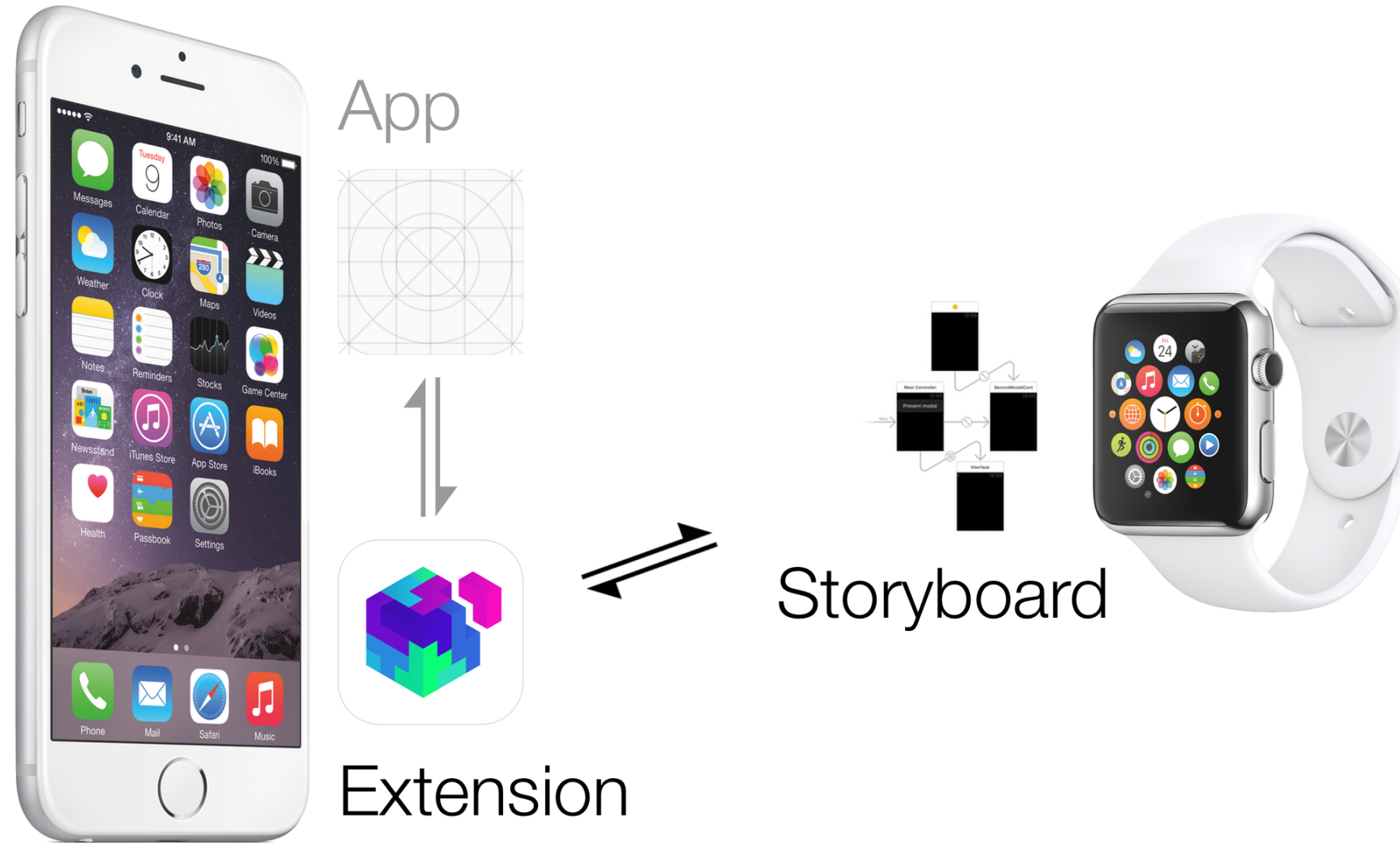
    var currentTitle: String? { get }
    var currentTitleColor: UIColor! { get }
    var currentTitleShadowColor: UIColor? { get }
    var currentImage: UIImage? { get }
    var currentBackgroundImage: UIImage? { get }
    var currentAttributedTitle: NSAttributedString? { get }

    var titleLabel: UILabel? { get }
    var imageView: UIImageView? { get }

    func backgroundRectForBounds(bounds: CGRect) -> CGRect
    func contentRectForBounds(bounds: CGRect) -> CGRect
    func titleRectForContentRect(contentRect: CGRect) -> CGRect
    func imageRectForContentRect(contentRect: CGRect) -> CGRect
}

```

```
class WKInterfaceButton : WKInterfaceObject {  
  
    func setTitle(title: String?)  
    func setAttributedTitle(attributedTitle: NSAttributedString?)  
  
    func setBackgroundColor(color: UIColor?)  
    func setBackgroundImage(image: UIImage?)  
    func setBackgroundImageData(imageData: NSData?)  
    func setBackgroundImageNamed(imageName: String?)  
  
    func setEnabled(enabled: Bool)  
}
```



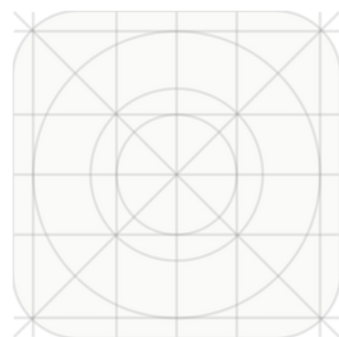
```
button.setText("I'm a button")
```


LIVE DEMO

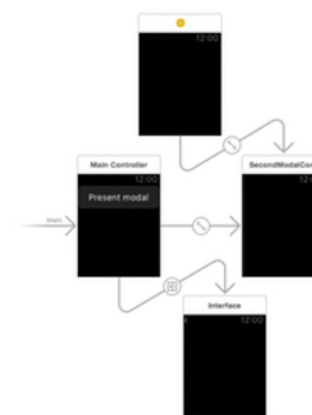




App



Extension

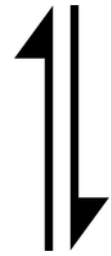
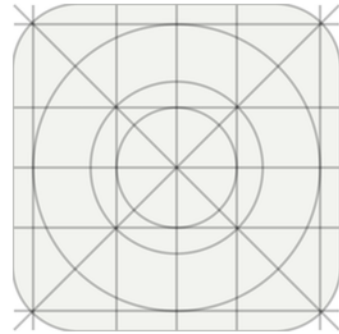


Storyboard

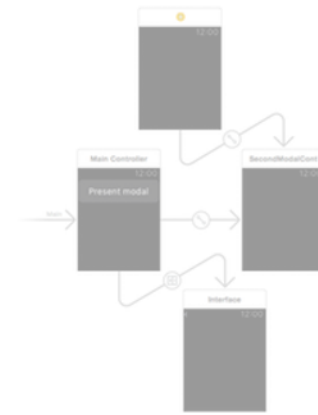




App



Extension

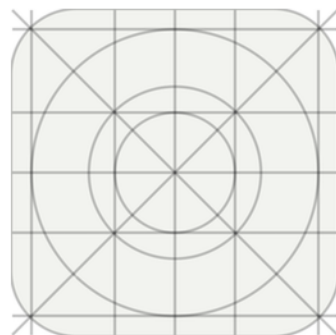


Storyboard





App



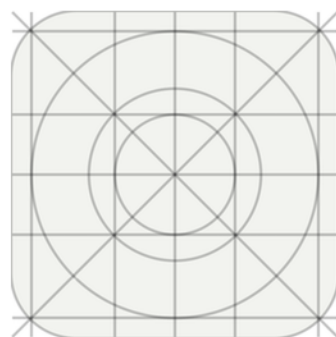
Extension



?



App



Extension



Shared App
Group



SHARED APP GROUP

Register App Groups

ID

Registering an App Group

Registering your App Group allows access to group containers that are shared among multiple related apps, and allows certain additional interprocess communication between the apps.

App Groups Description

Description:

Push The Button App Group

You cannot use special characters such as @, &, *, *, "

Identifier

Enter a unique identifier for your App Group, starting with the string 'group'.

ID:

group.me.kimmott.pushthebutton

We recommend using a reverse-domain name style string (i.e., com.domainname.appname).

Cancel

Continue

NSUSERDEFAULTS

NSUserDefaults

```
let defaults = UserDefaults.standardUserDefaults()  
  
defaults.setInteger(42, forKey: "IMPORTANT_NUMBER")  
  
defaults.integerForKey("IMPORTANT_NUMBER") // 42
```

NSUserDefaults

```
let group = "group.me.kimmett.pushthebutton"
```

```
let defaults = UserDefaults(suiteName: group)
```

```
defaults.setInteger(42, forKey: "IMPORTANT_NUMBER")
```

```
defaults.integerForKey("IMPORTANT_NUMBER") // 42
```

NSFILEMANAGER

```
let group = "group.me.kimmett.pushthebutton"

let manager = NSFileManager.defaultManager()

let directory = manager.containerURLForSecurityApplicationGroupIdentifier(group)!

let fileURL = directory.URLByAppendingPathComponent("stuff.txt")

let fileContents = "OMG super secret spy text"

fileContents.writeToFile(fileURL.path!,
    atomically: true,
    encoding: NSUTF8StringEncoding,
    error: nil)
```

MORE LIVE DEMO



REAL TIME SYNC

- ▶ **MMWormhole**

<https://github.com/mutualmobile/MMWormhole>

- ▶ **WFNotificationCenter**

<https://github.com/DeskConnect/WFNotificationCenter>

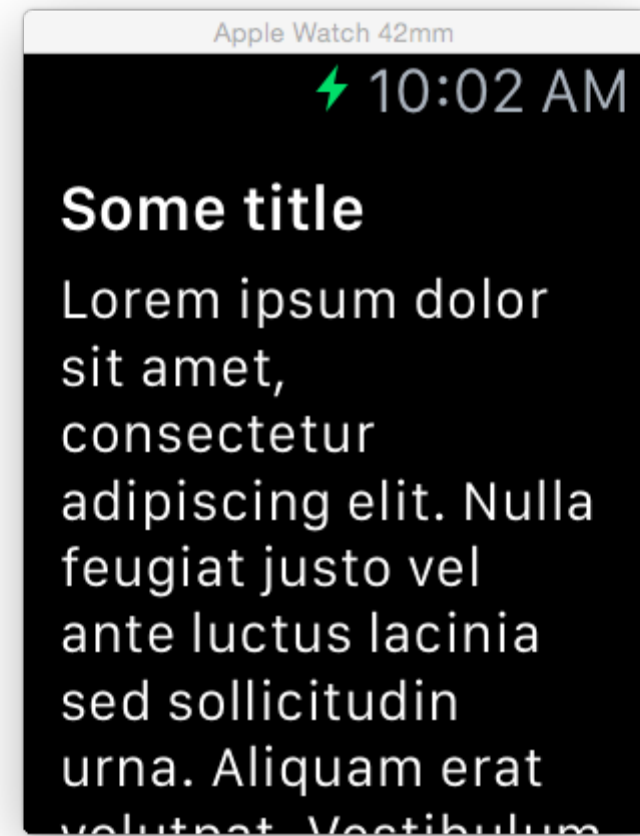


TIPS

REDUCE "TAP DISTANCE"

REDUCE PADDING

REDUCE PADDING



REDUCE PADDING

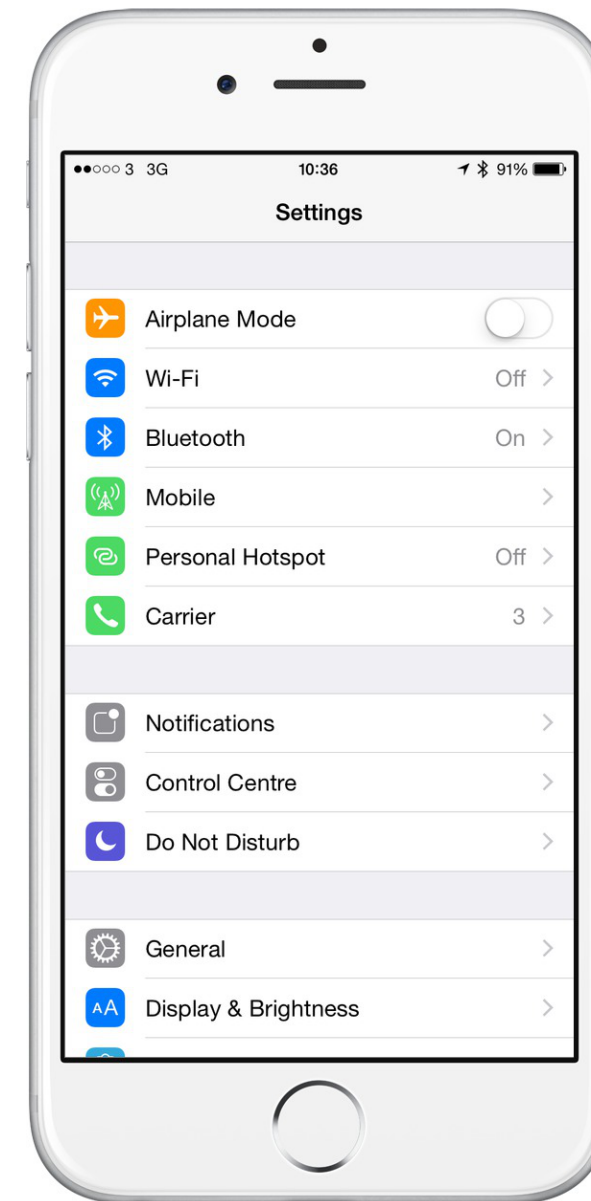
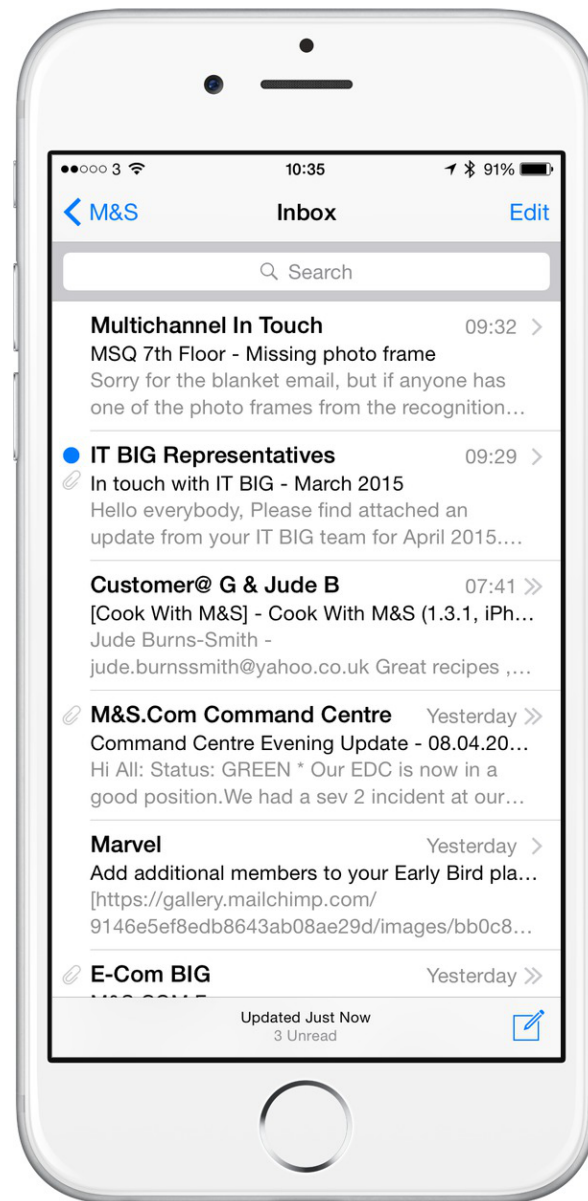


REDUCE PADDING



BLACK IS THE NEW WHITE

BLACK IS THE NEW WHITE



BLACK IS THE NEW WHITE



Sports! ⚡ 11:56 AM



Liverpool relief
but Rodgers
knows his side will
have to do better

Paul Wilson



Chelsea target
Southampton's
Morgan
Schneiderlin and...

Barry Glendenning



Sports! ⚡ 11:57 AM



Liverpool relief
but Rodgers
knows his side will
have to do better

Paul Wilson



Chelsea target
Southampton's
Morgan
Schneiderlin and...

Barry Glendenning





REFERENCES

- ▶ Apple Watch Human Interface Guidelines

<https://developer.apple.com/library/prerelease/ios/documentation/UserExperience/Conceptual/WatchHumanInterfaceGuidelines/>

- ▶ Citymapper on Apple Watch

<https://medium.com/ios-os-x-development/citymapper-on-apple-watch-843c3e757f58>

REFERENCES

- ▶ **“How Apple Will Make The Wearable Market” by Ben Thompson**
<http://stratechery.com/2015/apple-make-wearable-market/>
- ▶ **“Tap Distance” by David Smith**
<http://david-smith.org/blog/2015/02/03/ailw-tap-distance/>

Questions?