

# **SO YOU WANT TO MAKE AN APPLE WATCH APP?**

**BY**

**NEIL KIMMETT**



M&S



**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.”*

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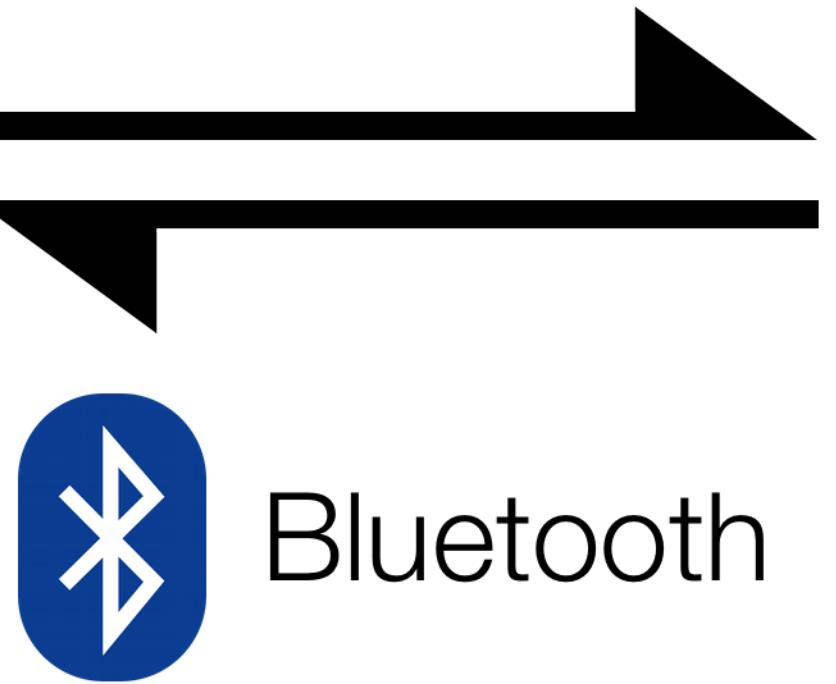
**WHAT YOU NEED, WHEN YOU NEED IT.**

*“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?



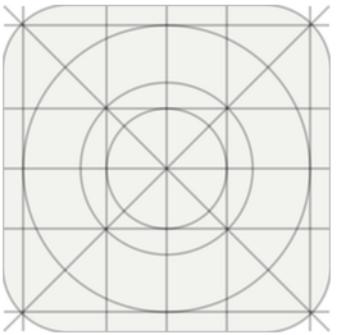


Bluetooth

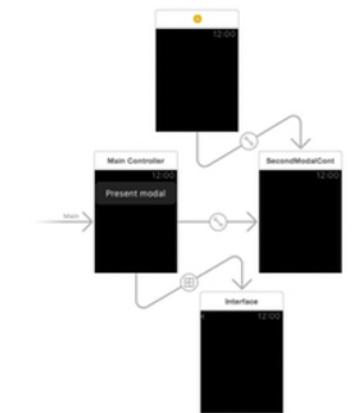




App



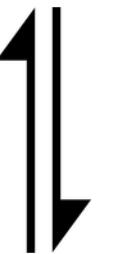
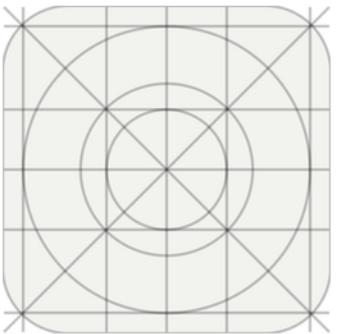
Extension



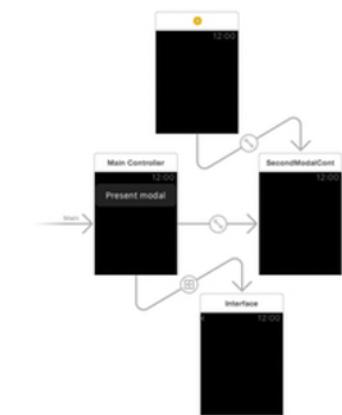
Storyboard



App



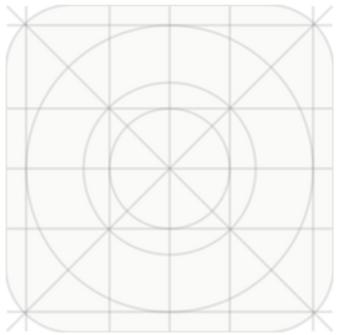
Extension



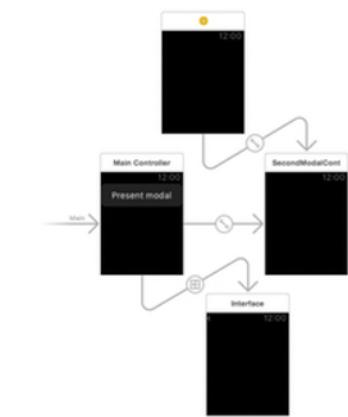
Storyboard



App

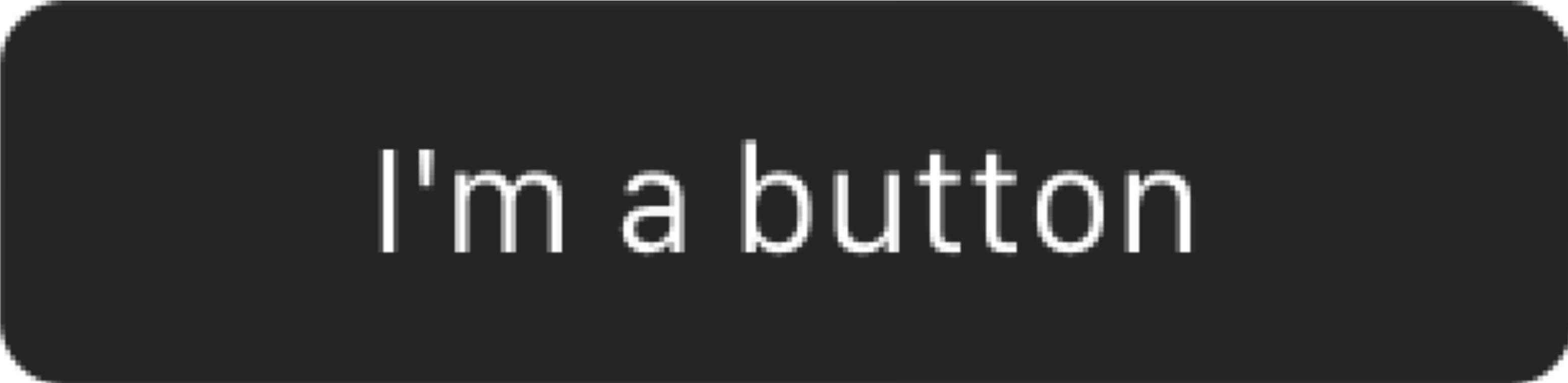


Extension



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?)  
  
    funcsetEnabled(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 tintColor: 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)

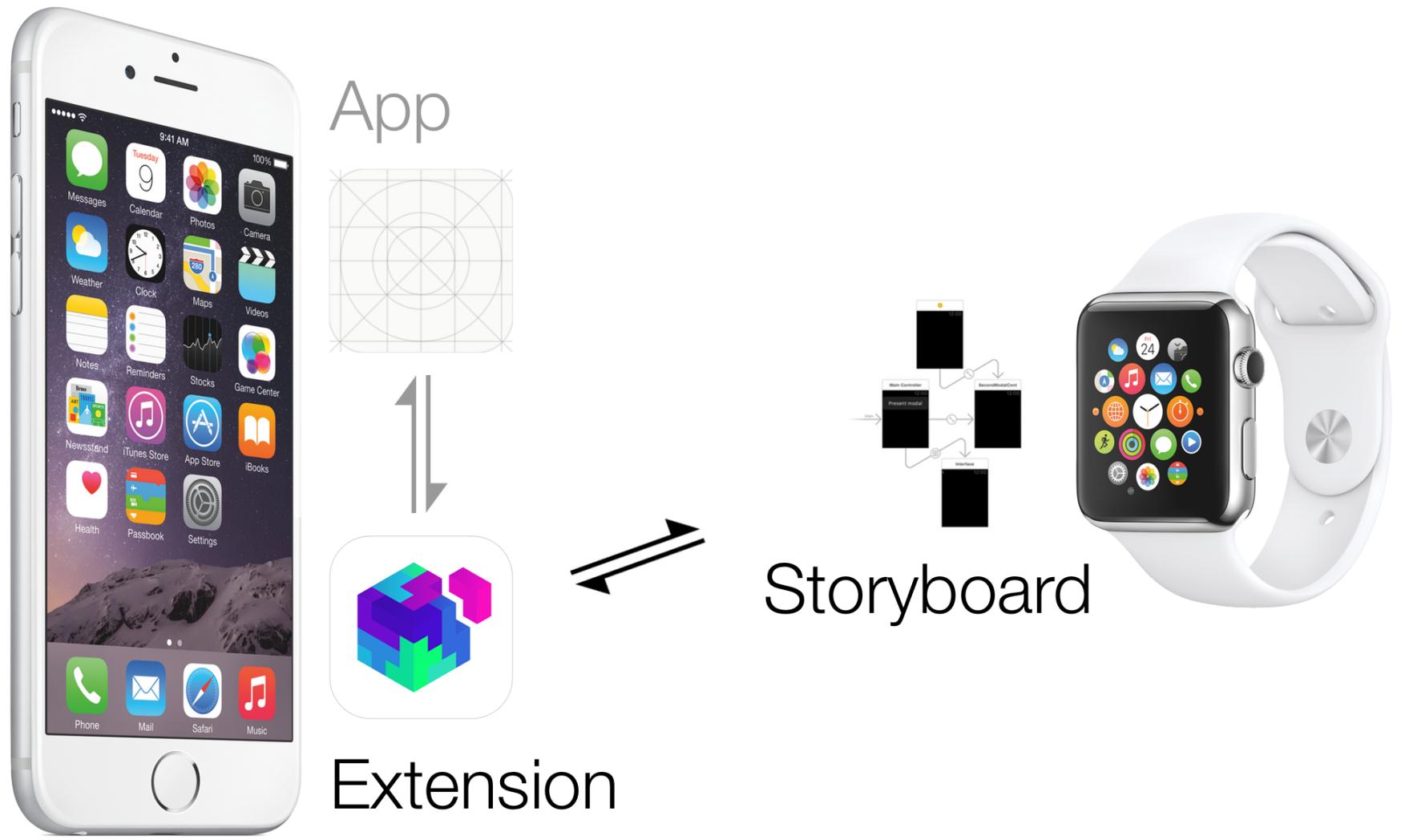
    func titleForState(state: UIControlState) -> String?
    func titleColorForState(state: UIControlState) -> UIColor?
    func titleShadowColorForState(state: UIControlState) -> UIColor?
    func imageForState(state: UIControlState) -> UIImage?
    func backgroundImageForState(state: UIControlState) -> 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?)  
  
    funcsetEnabled(enabled: Bool)  
}
```



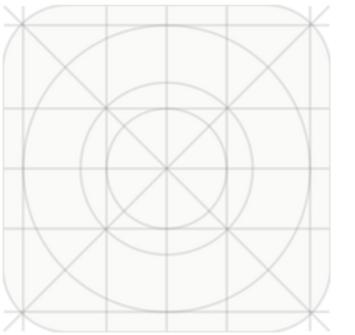
```
button.setText("I'm a button")
```

# LIVE DEMO

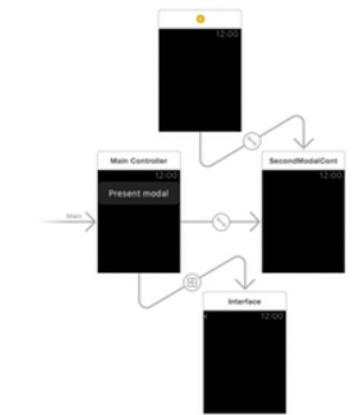




App



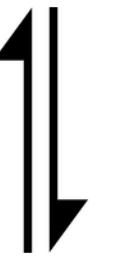
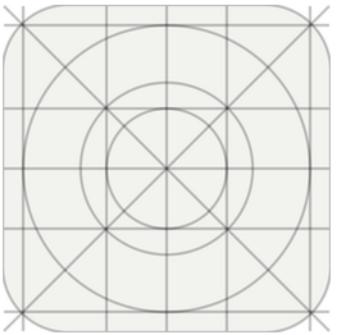
Extension



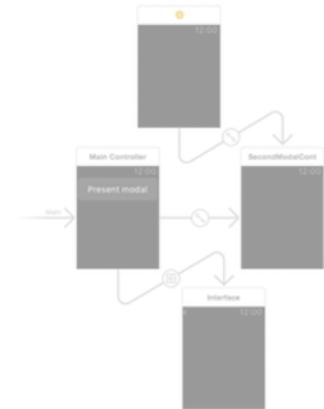
Storyboard



App



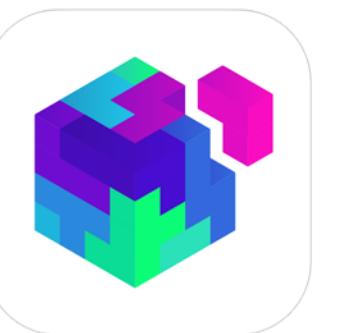
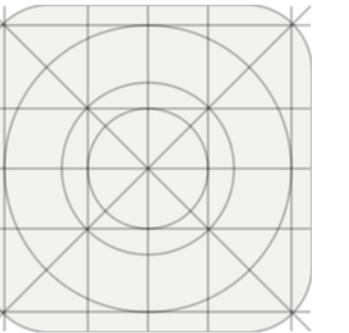
Extension



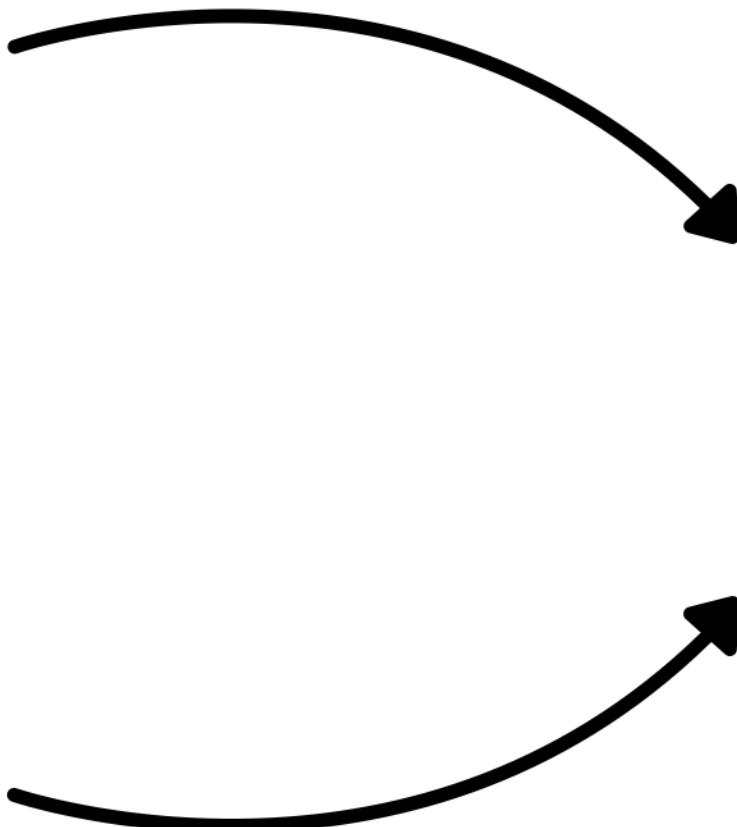
Storyboard



App

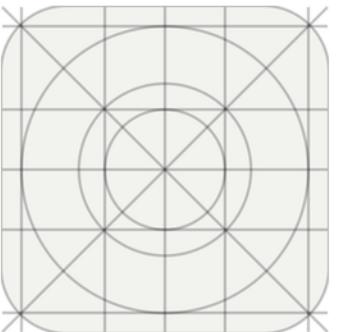


Extension

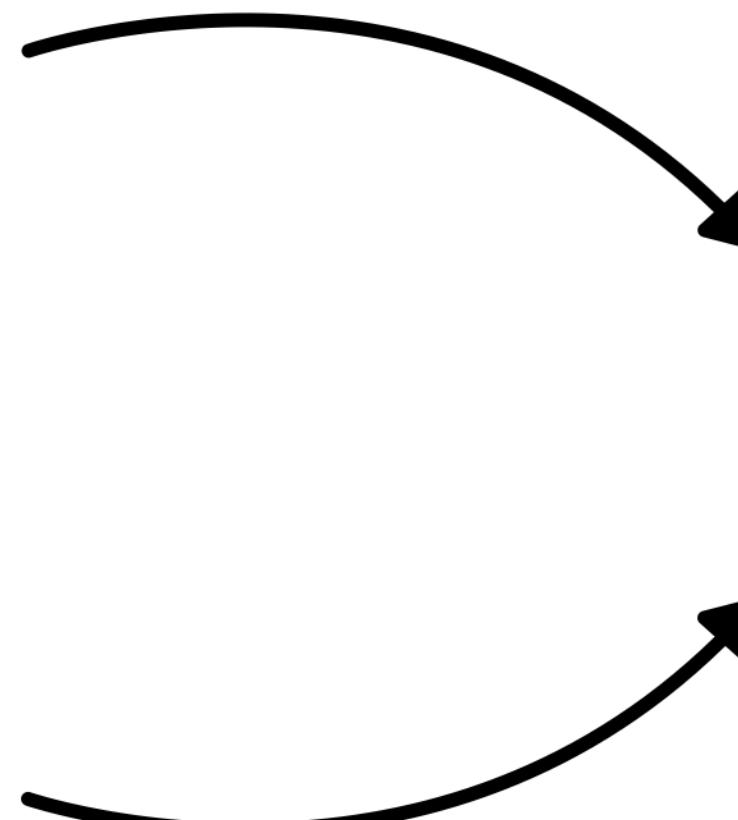




App



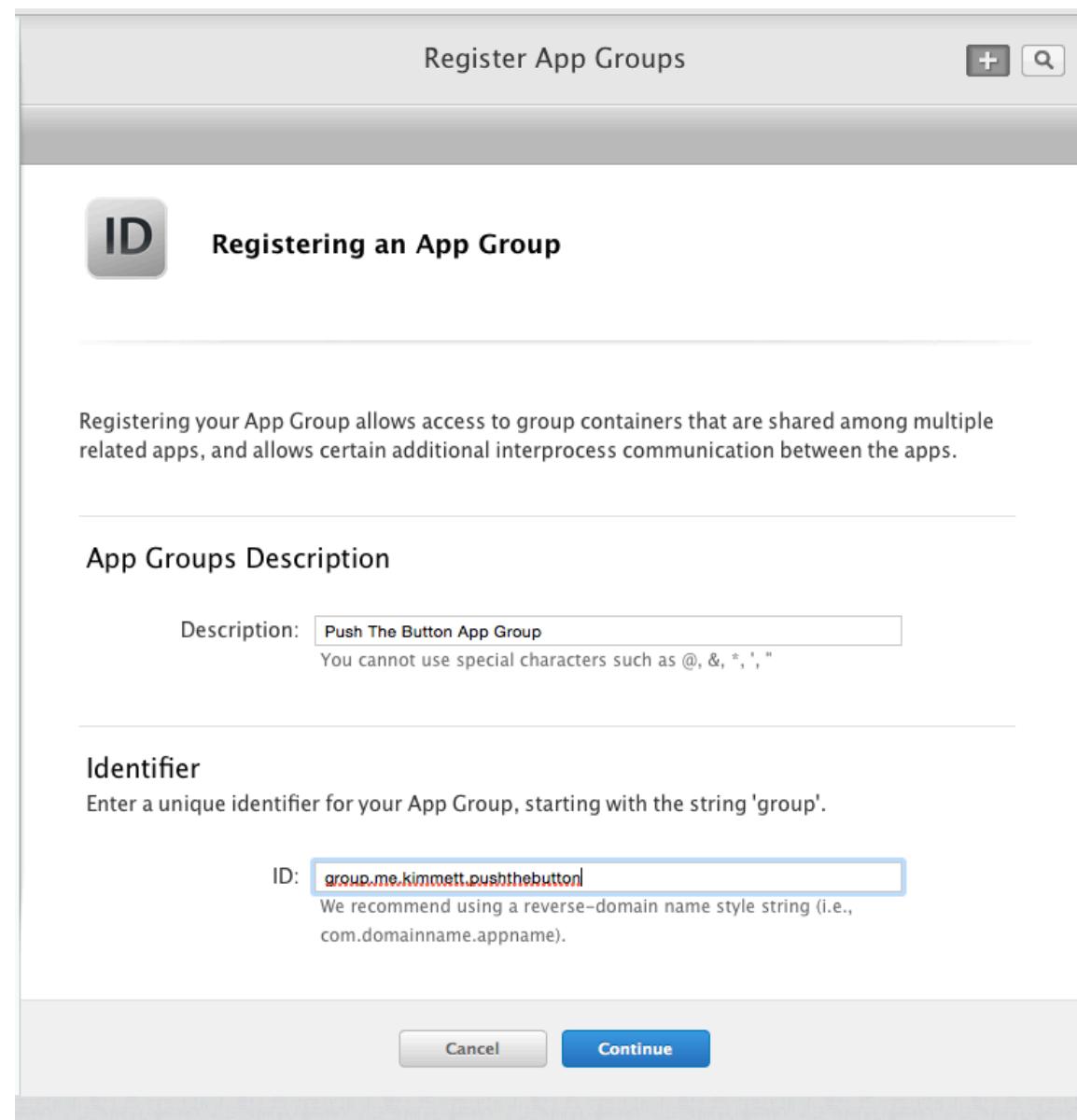
Extension



Shared App  
Group



# SHARED APP GROUP



# NSUSERDEFAULTS

# NSUSERDEFAULTS

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

# NSUSERDEFAULTS

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

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

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

```
defaults.integer(forKey: "IMPORTANT_NUMBER") // 42
```

**NSFILEMANAGER**

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

let manager = FileManager.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>

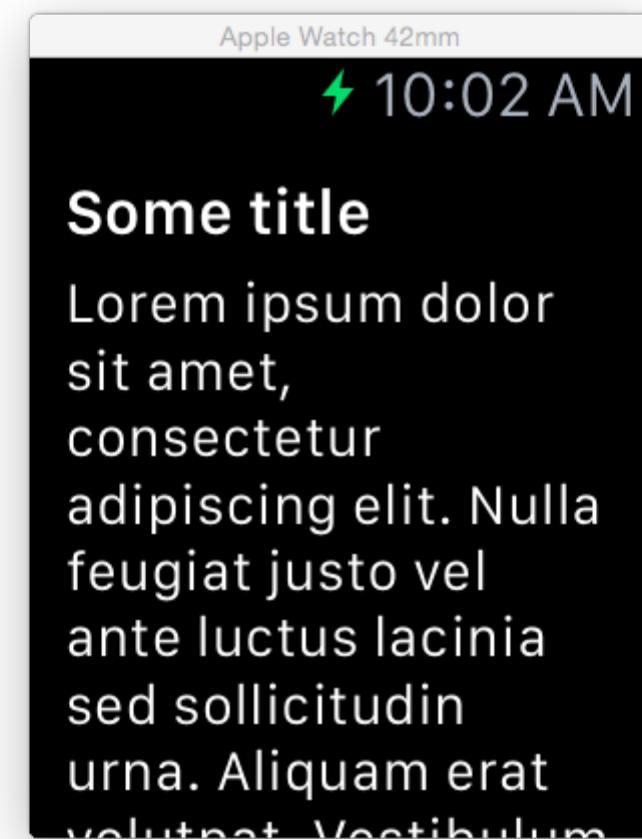


# TIPS

**REDUCE "TAP DISTANCE"**

# **REDUCE PADDING**

# REDUCE PADDING



# REDUCE PADDING

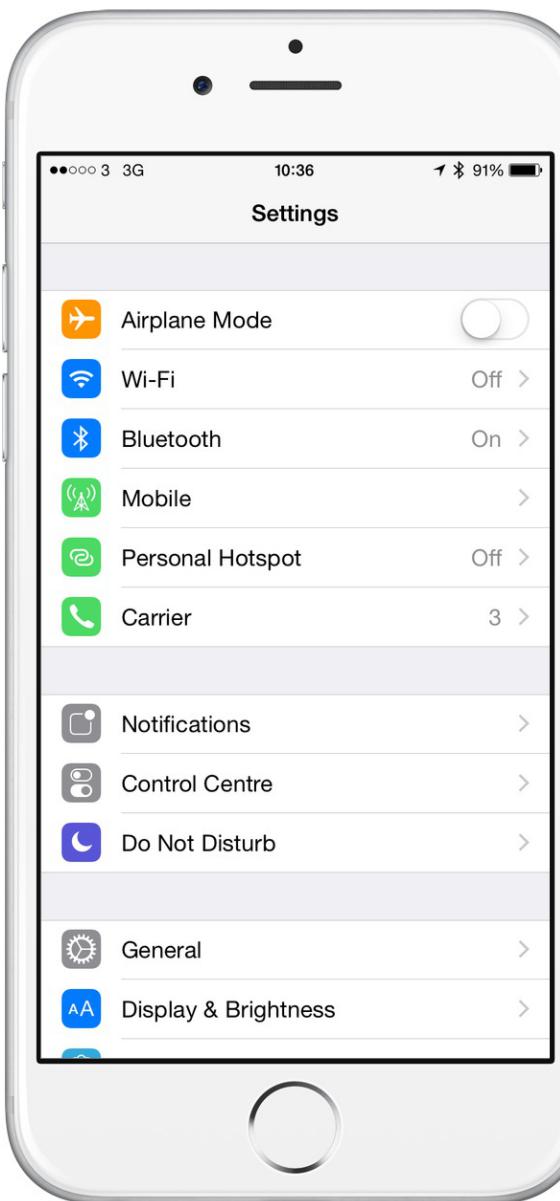
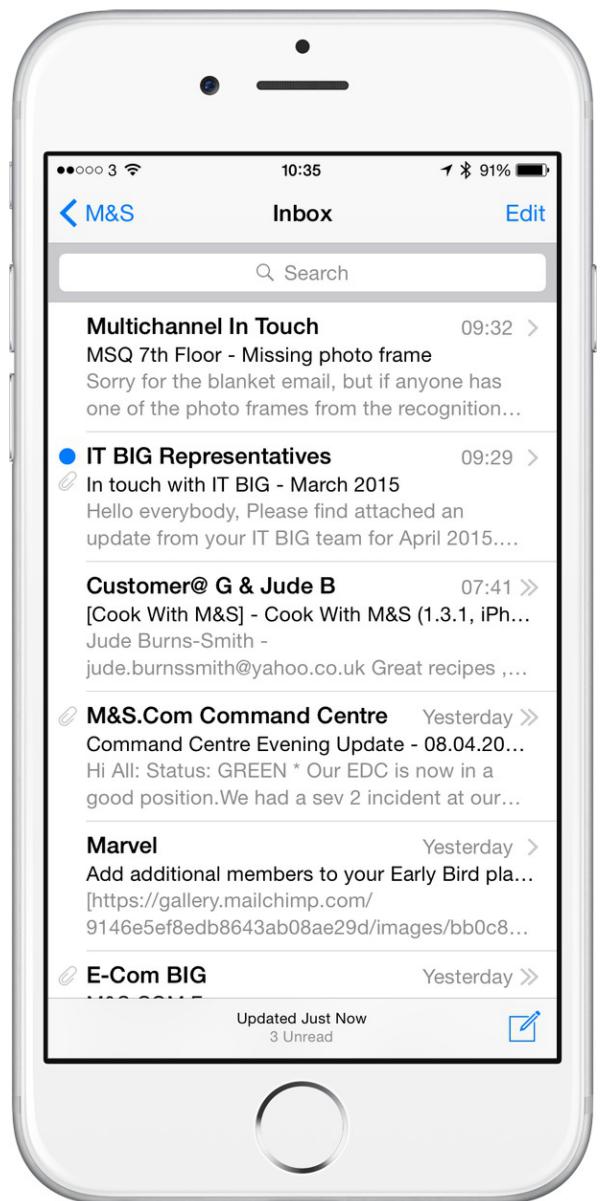


# REDUCE PADDING



**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





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# 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

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<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?**