I REALLY LIKE

REACTIVECOCOA

[KYLE OBA [PAS DE CHOCOLAT [@MUDPHONE]]]

HELLO

OBJECTIVE-C
REACTIVECOCOA 2.X
MVVM

SWIFT
REACTIVECOCOA 3.0

When learning something,

sometimes learning something more difficult

helps us learn the thing we were learning before.

TEXT FIELD SIGNAL DEMO

"ReactiveCocoa (RAC) is an Objective-C framework inspired by Functional Reactive Programming. It provides APIs for **composing and transforming streams of values**."

\- ReactiveCocoa README

https://github.com/ReactiveCocoa/ReactiveCocoa

"ReactiveCocoa is an implementation of functional reactive programming that is built on top of the Cocoa and CocoaTouch libraries that you're already familiar with."

- Ash Furrow

http://reactivecocoa.io/philosophy.html

"At the very core of ReactiveCocoa are signals, represented by the RACSignal class. Signals emit a stream of events, which are all one of three types: next, completed and error.”

- Colin Eberhardt

http://www.raywenderlich.com/74106/mvvm-tutorial-with-reactivecocoa-part-1

“Compositional Events Framework”

- John Sterling

Modularity à la Taliban - GitHub ReactiveCocoa Developer Conference

https://www.youtube.com/watch?v=kuZ5eR2JcSo&list=PL0lo9MOBetEEXnrrP5pwZxSkGvaDBGdOC&index=1

OKAY, SO WHAT'S FUNCTIONAL REACTIVE PROGRAMMING?

FRP

“Functional Reactive Programming (FRP) integrates time flow and compositional events into functional programming. This provides an elegant way to express computation”

- Haskell Wiki

http://www.haskell.org/haskellwiki/Functional_Reactive_Programming

“Functional Reactive Programming (FRP) provides control flow structures for events. It gives you a high-level way to describe interactions with a mouse, keyboard, server, etc.

Signals are the key concept in FRP. A signal is a value that changes over time.”

- Elm Wiki

What is Functional Reactive Programming?

http://elm-lang.org/learn/What-is-FRP.elm

"Functional reactive programming (FRP) is a programming paradigm for reactive programming using the building blocks of functional programming. FRP has been used for programming graphical user interfaces (GUIs), robotics, and music, aiming to simplify these problems by **explicitly modeling time**."

- The Wikipedia

Functional reactive programming

http://en.wikipedia.org/wiki/Functional_reactive_programming (highlighting mine)

FRP

Elm - http://elm-lang.org/

Bacon.js - http://baconjs.github.io/

Flapjax - http://www.flapjax-lang.org/

Giant list of ClojureScript libraries:

C2, cljs-binding, Javelin, Pedestal, Reflex, Shafty, widje, acute (Angular), rx-cljs (RxJS), Yolk (Bacon.js), Clang (Angular), &… Hoplon, Om, core.async

Abstracting time

Declarative instead of imperative

What should happen when data changes or events occur

Defining reactions

Streams, Signals

WHY USE THIS?

Gradual migration to RAC style
MVVM requires an event-driven UI and **data binding**

MVVM == Model, View, View-Model

BINDING DEMO

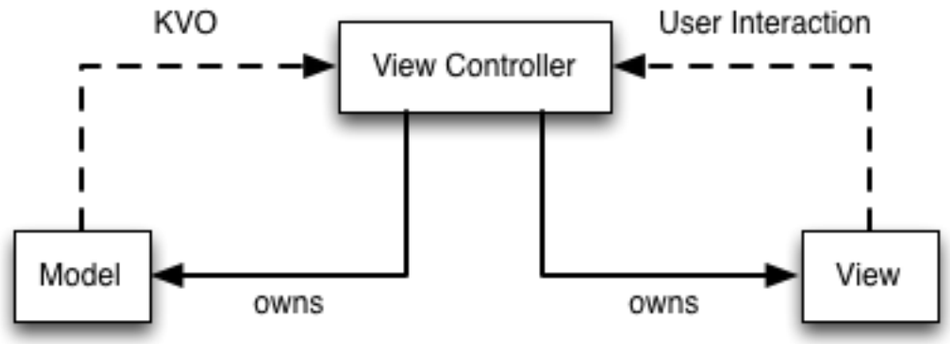
MVVM

MVVM == Model, View, View-Model

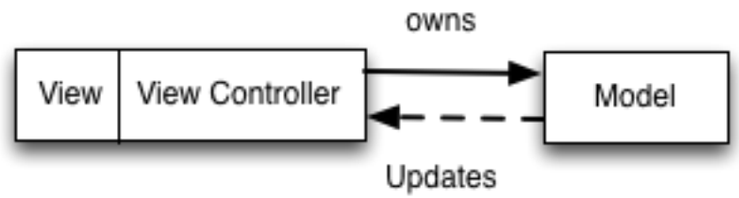
Kittens!

http://placekitten.com/

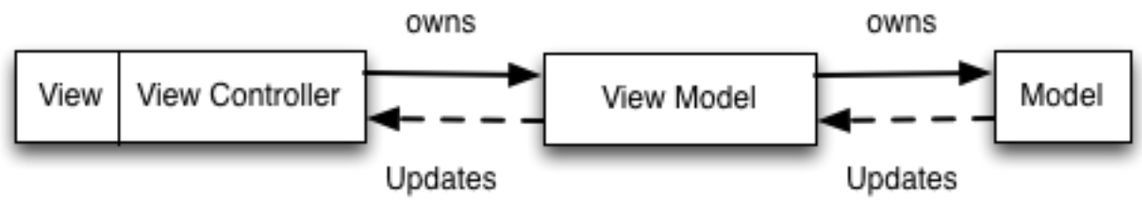
MVC



"Reality"



MVVM



http://www.objc.io/issue-13/mvvm.html

MVVM

"... on iOS... it reduces the complexity of one's view controllers and makes one's presentation logic easier to test."

- Ash Furrow

Introduction to MVMM

http://www.objc.io/issue-13/mvvm.html

- “MVVM is compatible with your existing MVC architecture.”
- “MVVM makes your apps more testable.”
- “MVVM works best with a binding mechanism.”

- Ash Furrow

Introduction to MVMM

http://www.objc.io/issue-13/mvvm.html

MVMM TABLE VIEW DEMO

MAP LOCATION DEMO

TESTS DEMO

(I GUESS)

MVVM CRITICISMS

“overkill for simple UI operations”

“for larger applications, generalizing the View layer becomes more difficult.”

“data binding in very large applications can result in considerable memory consumption.”

- The Wikipedia

Model View ViewModel , attributed to John Grossman (creator of MVMM)

http://en.wikipedia.org/wiki/Model_View_ViewModel#Criticism

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THANK YOU