

Apple TV development in practice

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Agenda

- The Living Room Experience
- Focus-Driven Interface
- Top Shelf
- On-Demand Resources
- Developer tools

The Living Room Experience

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Trending Now



Netflix



Remote Controllers



Focus-Driven Interface

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Focus-Driven Interface

- Focus Model

View Controllers

UIAlertController

AlertsViewController

UICollectionViewController

CollectionViewController

UIPageViewController

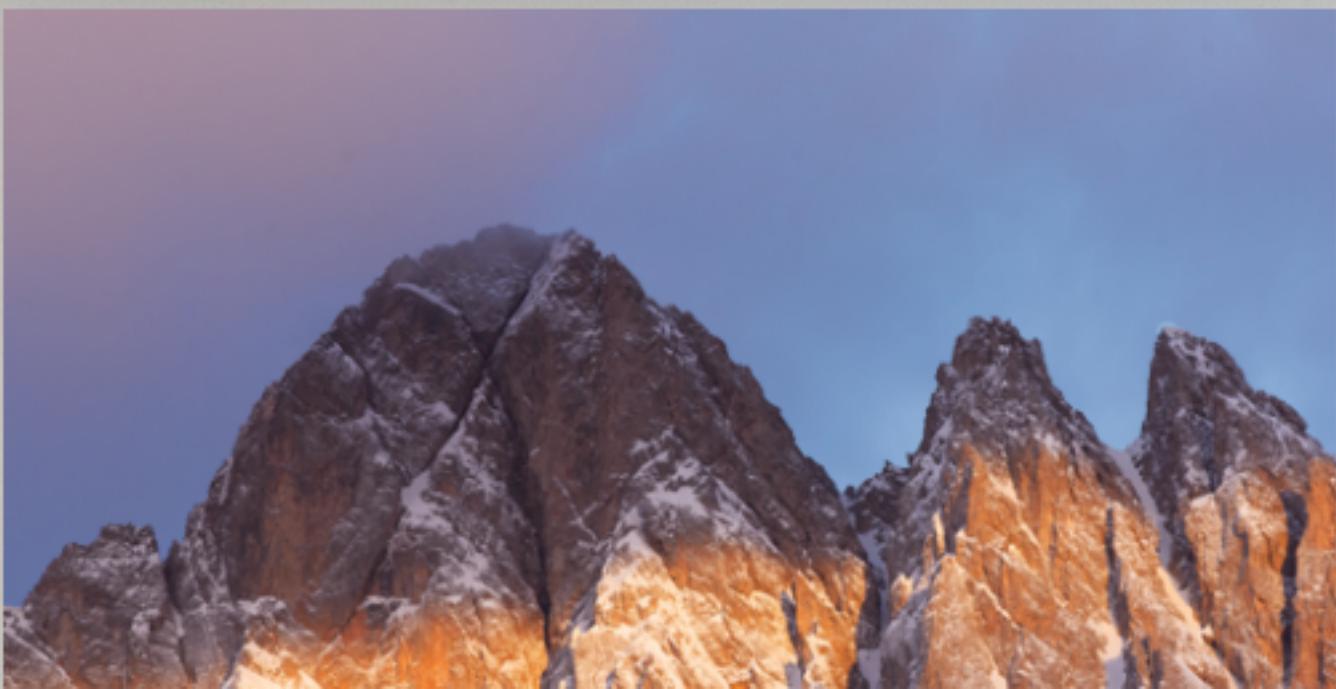
PageViewController

AVPlayerViewController

VideoPlayerViewController



Scenery 1



Focus-Driven Interface

- Focus Model
- Focus Engine

View Controllers

UIAlertController

AlertsViewController

UICollectionViewController

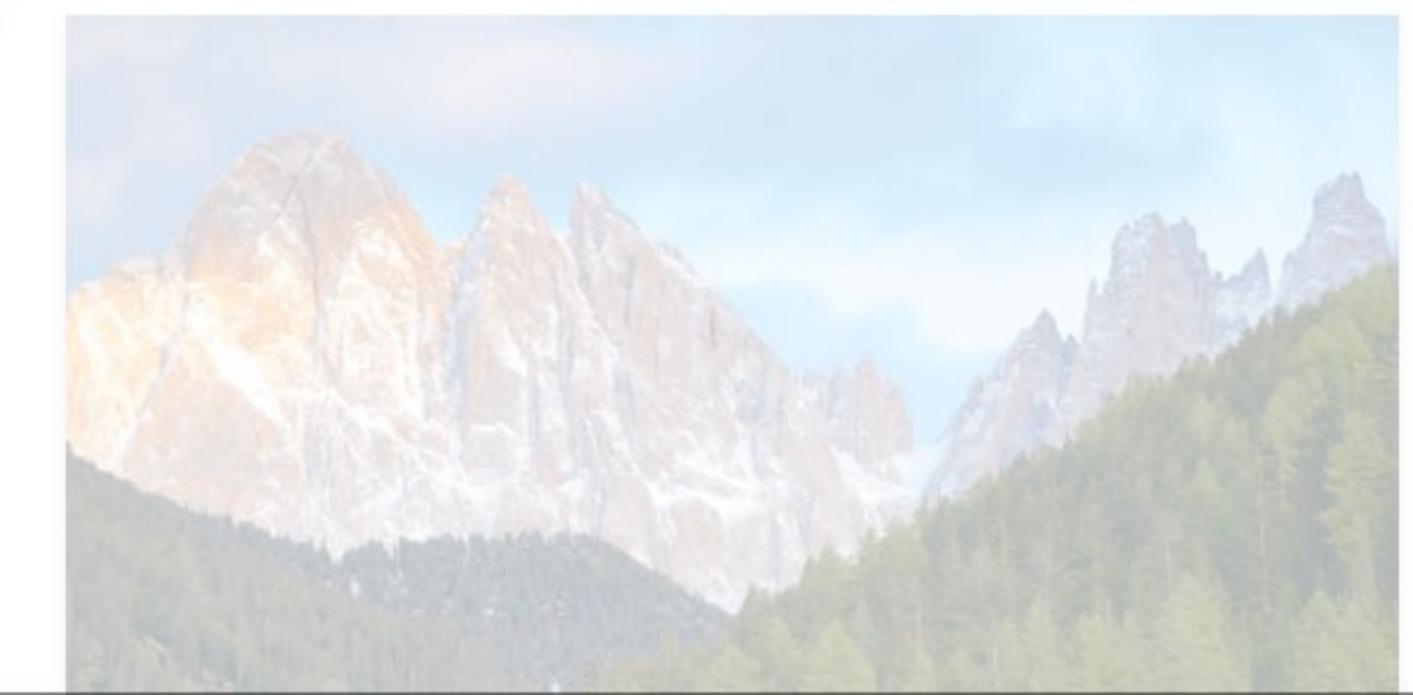
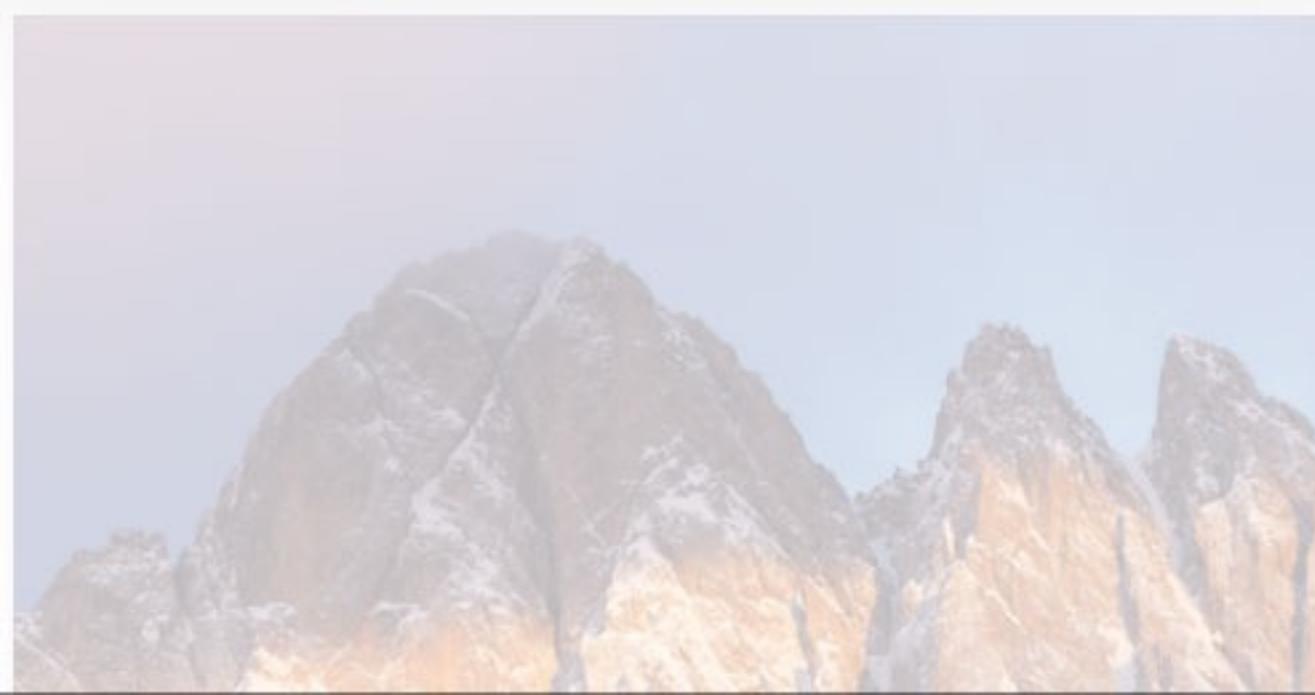
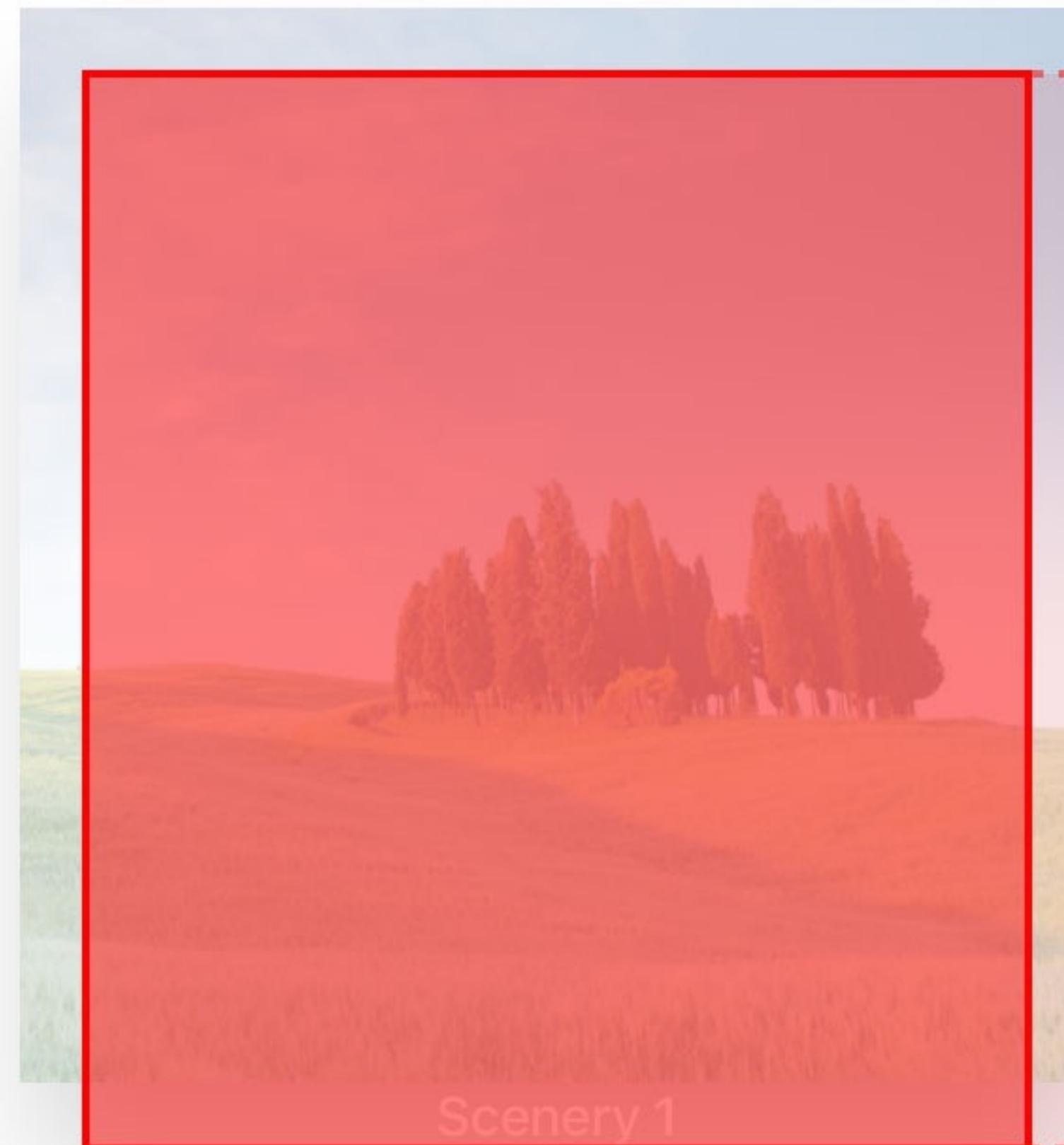
CollectionViewController

UIPageViewController

PageViewController

AVPlayerViewController

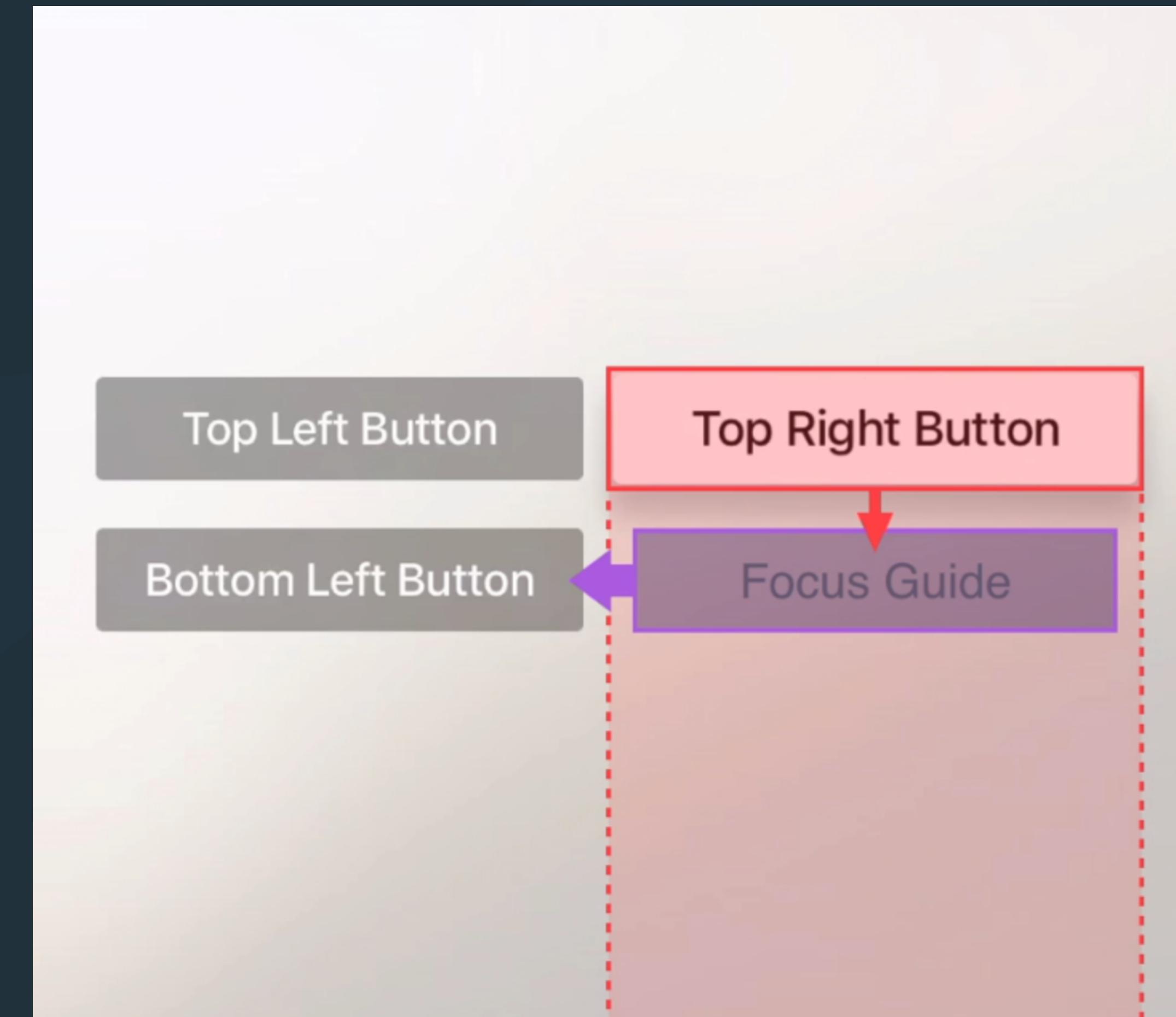
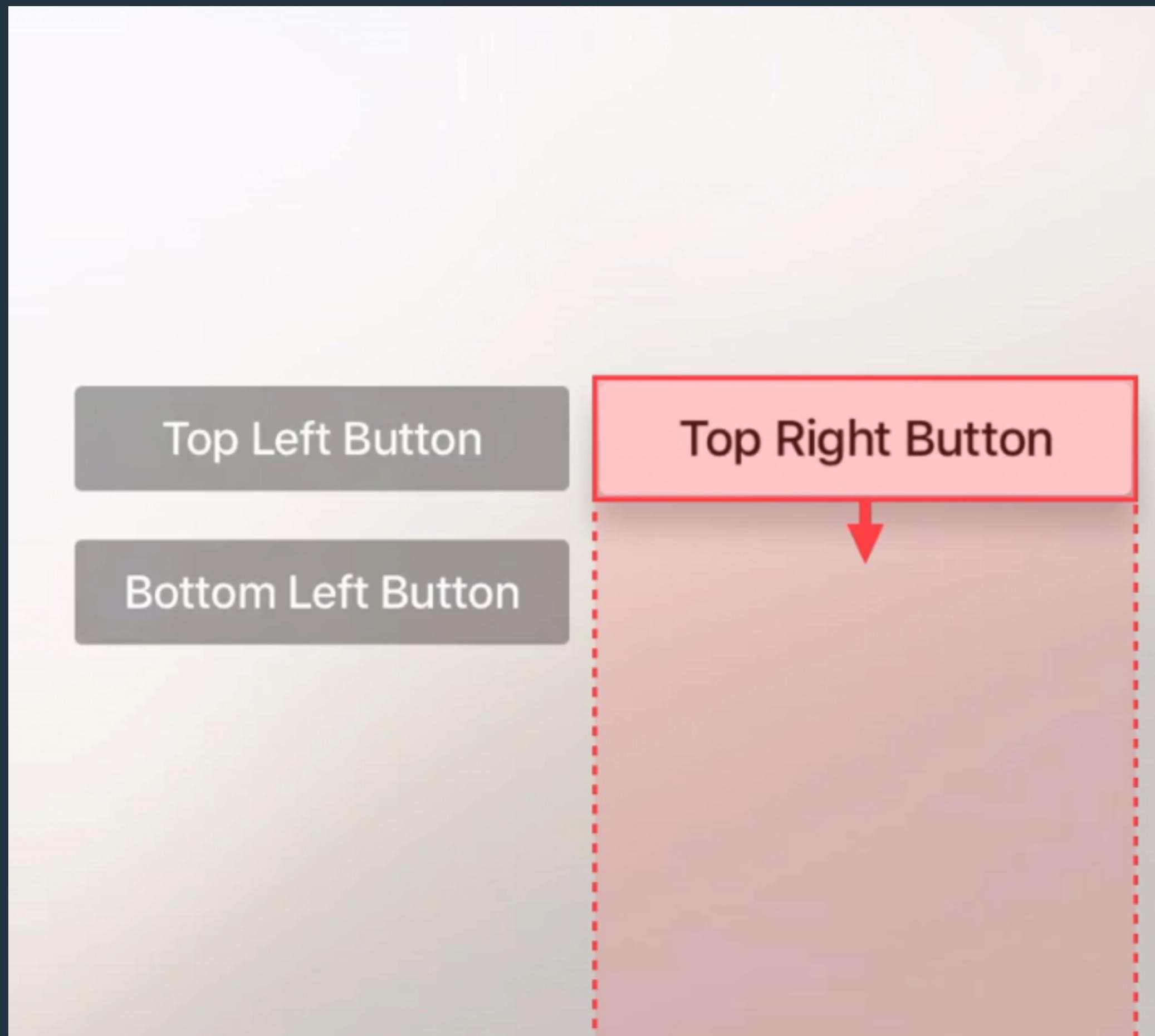
VideoPlayerViewController



Focus-Driven Interface

- Focus Model
- Focus Engine
- Focus API
 - UIFocusGuide

UIFocusGuide



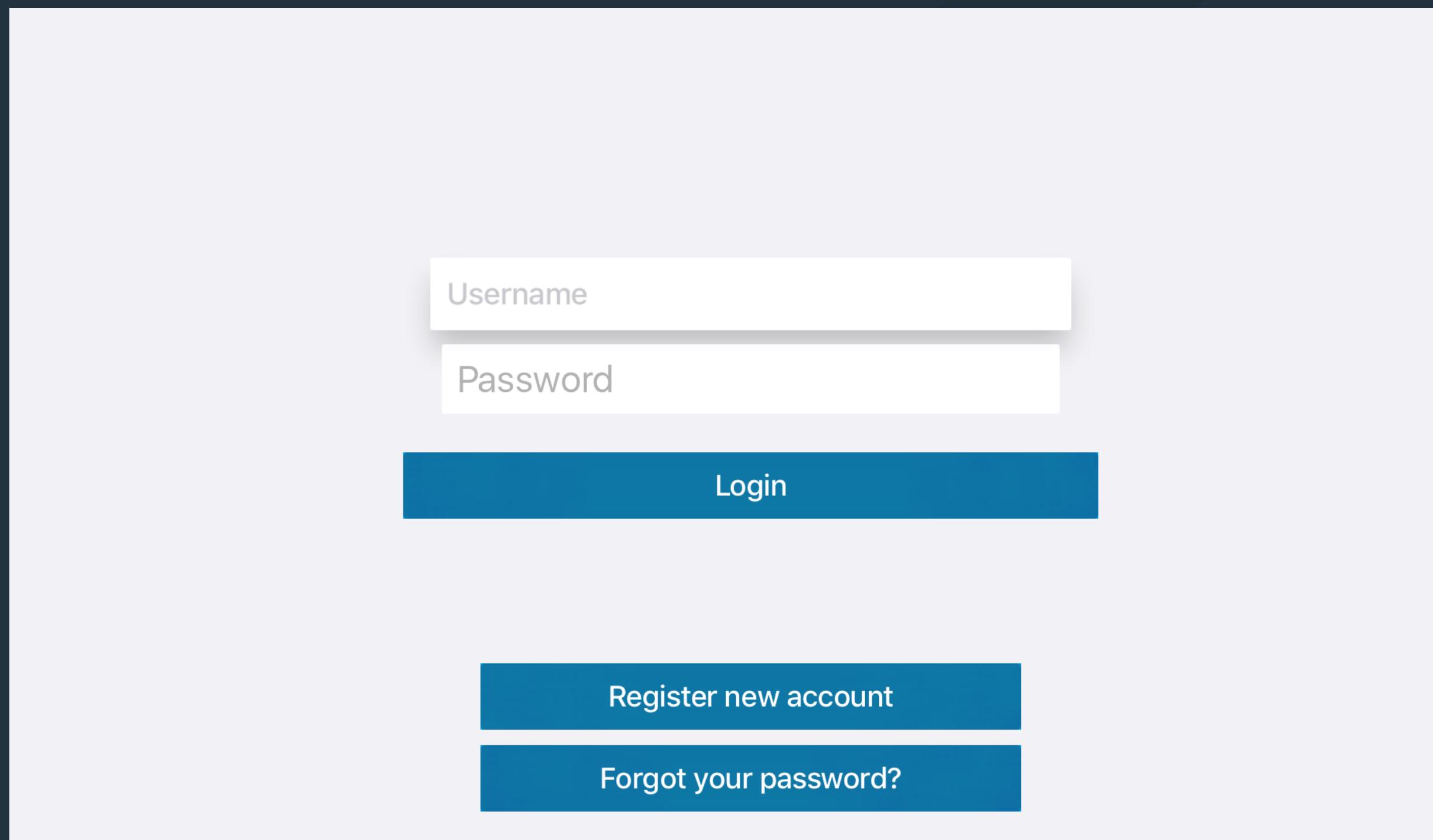
Focus-Driven Interface

- Focus Model
- Focus Engine
- Focus API
 - UIFocusGuide
 - UIFocusEnvironment protocol

Let's debug a real example!

The image shows a login screen with the following elements:

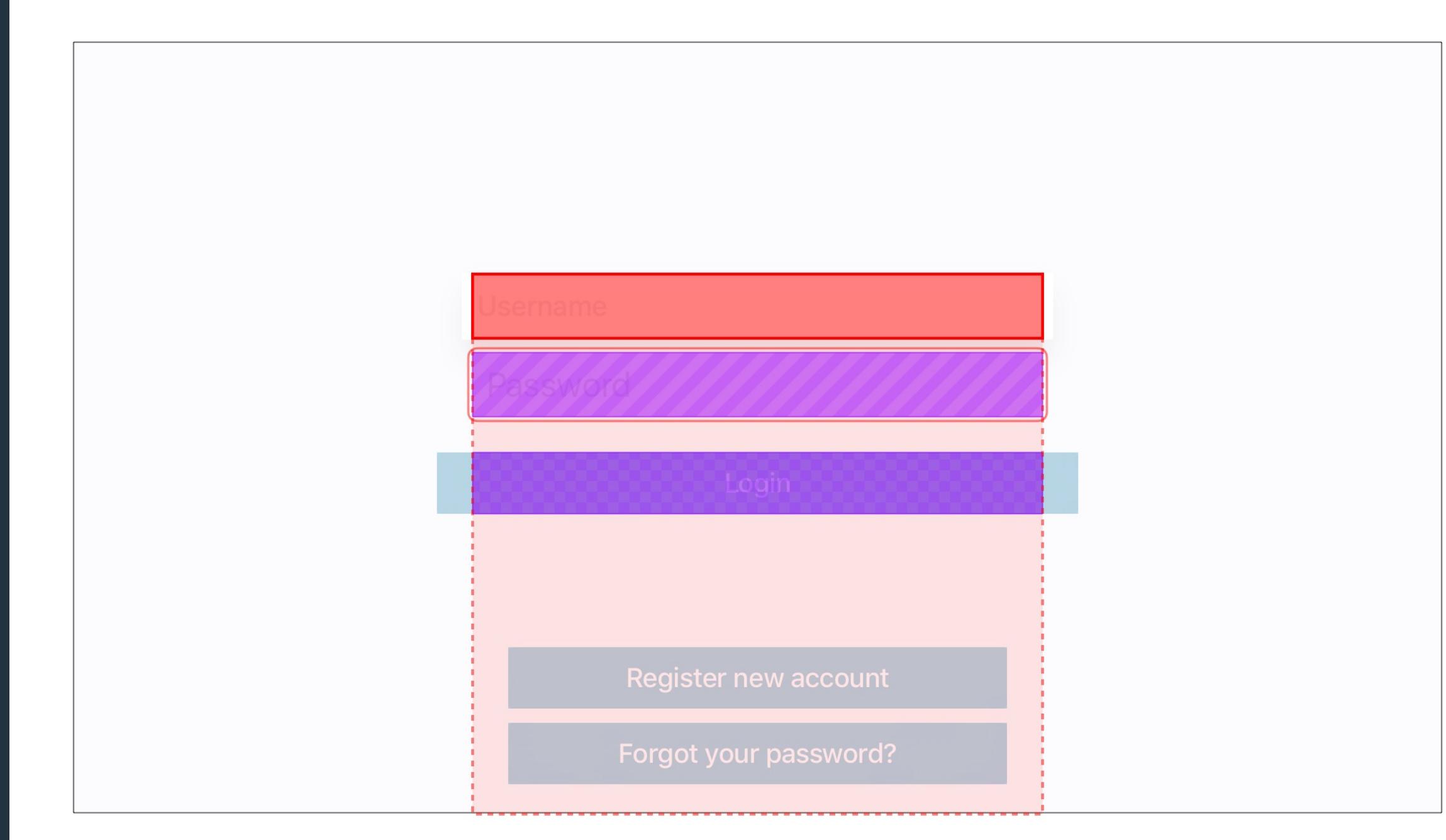
- A "Username" input field.
- A "Password" input field.
- A large blue "Login" button.
- A blue link labeled "Register new account".
- A blue link labeled "Forgot your password?".



```
35
36 - (void)didUpdateFocusInContext:(UIFocusUpdateContext *)context
37     withAnimationCoordinator:(UIFocusAnimationCoordinator *)coordinator {
38
39 }
40
41 @end
42
```

✉ ⏪ ⏴ ⏵ ⏶ ⏷ | ⏸ ⏹ ⏺

```
▶ A self = (TTTVLoginViewController *) 0x7fb335702ff0
▶ A _cmd = (SEL) "didUpdateFocusInContext:withAnimationCoordinator:"
▶ A context = (UIFocusUpdateContext *) 0x6000000c71c0
▶ A coordinator = (UIFocusAnimationCoordinator *) 0x600000070d40
```



(lldb) po [self.registerNewAccountButton _whyIsThisViewNotFocusable]
ISSUE: This view may not be focusable because other views or focus guides are occluding it.

(lldb) po [self.forgotPasswordButton _whyIsThisViewNotFocusable]
ISSUE: This view has userInteractionEnabled set to NO. Views must allow user interaction to be focusable.

(lldb)

Why Is This View Not Focusable?

- The view's **canBecomeFocused** method returns **NO**.
- The view's hidden property has a value of **YES**.
- The view's alpha property has a value of 0.
- The view's user interaction is disabled.
- The view is obscured by another view on top of it.

Top Shelf

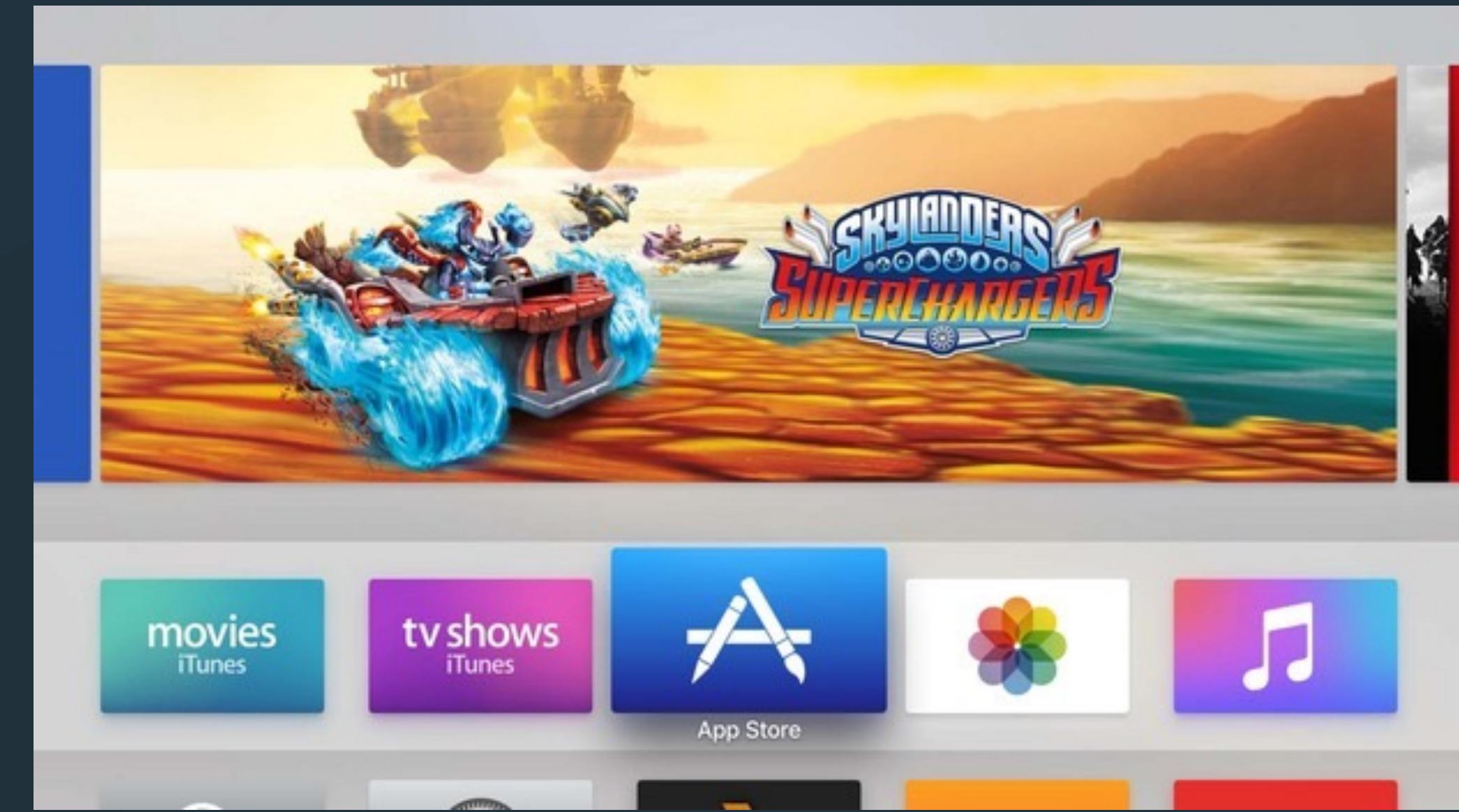
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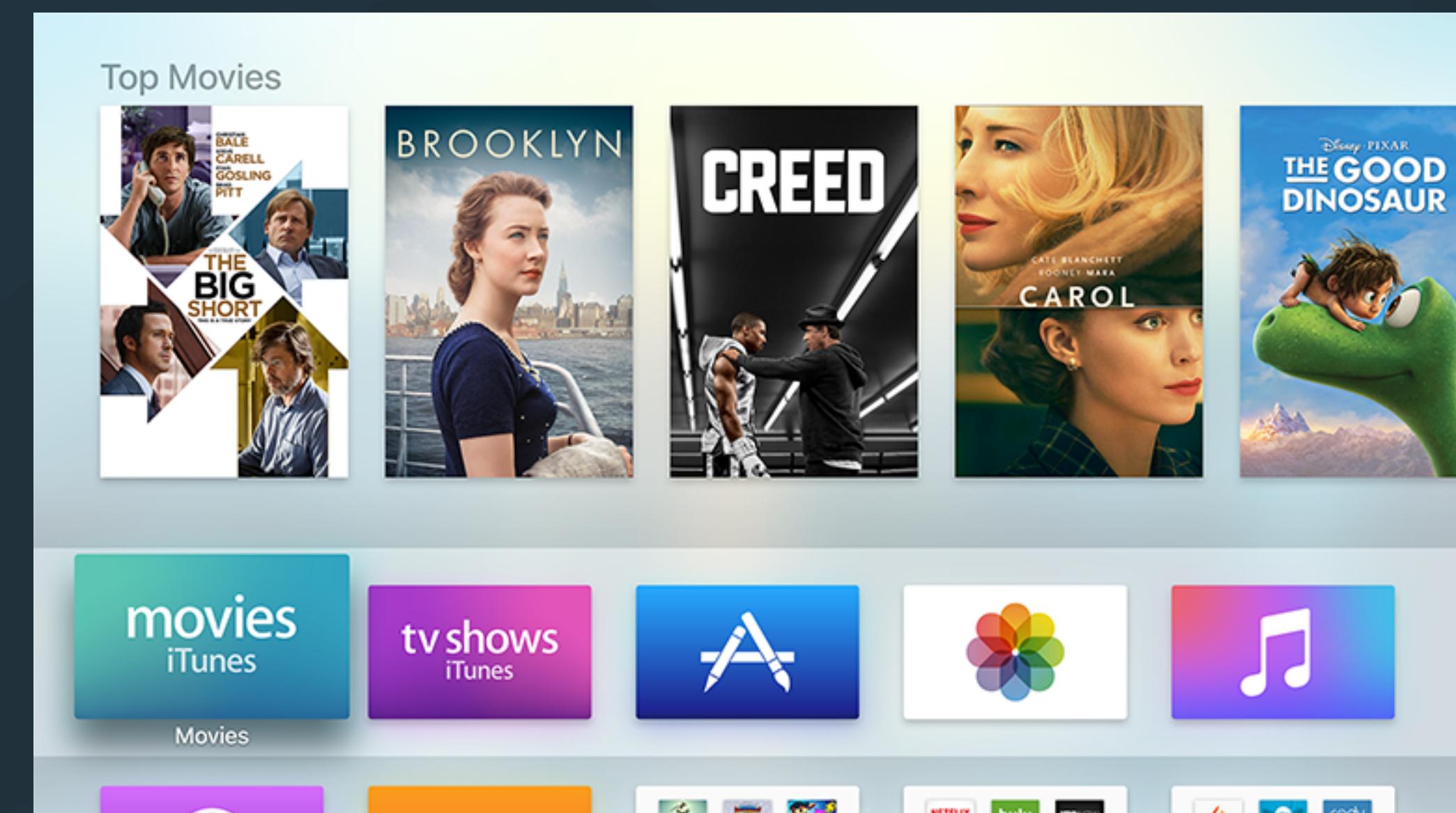




- Static Content

TVTopShelfProvider

- Dynamic Content
 - Inset Banners
 - Section Content Row



On-Demand Resources

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On-Demand Resources

- Limitations in application size
- Limited **NSUserDefaults** storage
- Tag your resources!
- Special tags
 - Initial Install tag
 - Prefetch tag

Development and Resources

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Development

- Xcode
 - tvOS simulator + virtual Siri Remote
 - not recommended 😞
 - CocoaPods
 - Framework Oriented Programming by Pedro Piñera ([NSBudapest June](#))

Useful Resources

- Apple TV Human Interface Guideline [\(link\)](#)
- App Programming Guide for tvOS [\(link\)](#)
- UIKit Catalog tvOS demo app [\(link\)](#)
- Apple TV Tech Talks Videos [\(link\)](#)

Thanks for your attention!

Questions?



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