



THE COMPOSABLE ARCHITECTURE

A BLUEPRINT FOR BUILDING BETTER iOS APPS



About Me



From
Senegal



iOS Engineer
at Xapo Bank



@bionik6
on Twitter



Youtube channel
@iosmasterydev

🙏 Acknowledgments

Agenda

- TCA: The what
- TCA main components
- TCA Pros & Cons
- Practical example
- Conclusion
- Q&A



TCA: The What

- TCA is a library for building iOS apps that emphasises a functional and reactive programming style.
- TCA was inspired by Elm & Redux (a popular state management library for web apps.)
- TCA was created by Brandon Williams & Stephen Celis, who publish weekly FRP content at pointfree.co

TCA Main Components

- The State
- The Actions
- The Reducers

TCA Main Components

The STATE

It is a value type representing the current state of your app's UI and business logic.

TCA Main Components

The **ACTIONS**

Actions are a way to represent user input or other events that trigger updates to state.

TCA Main Components

The REDUCERS

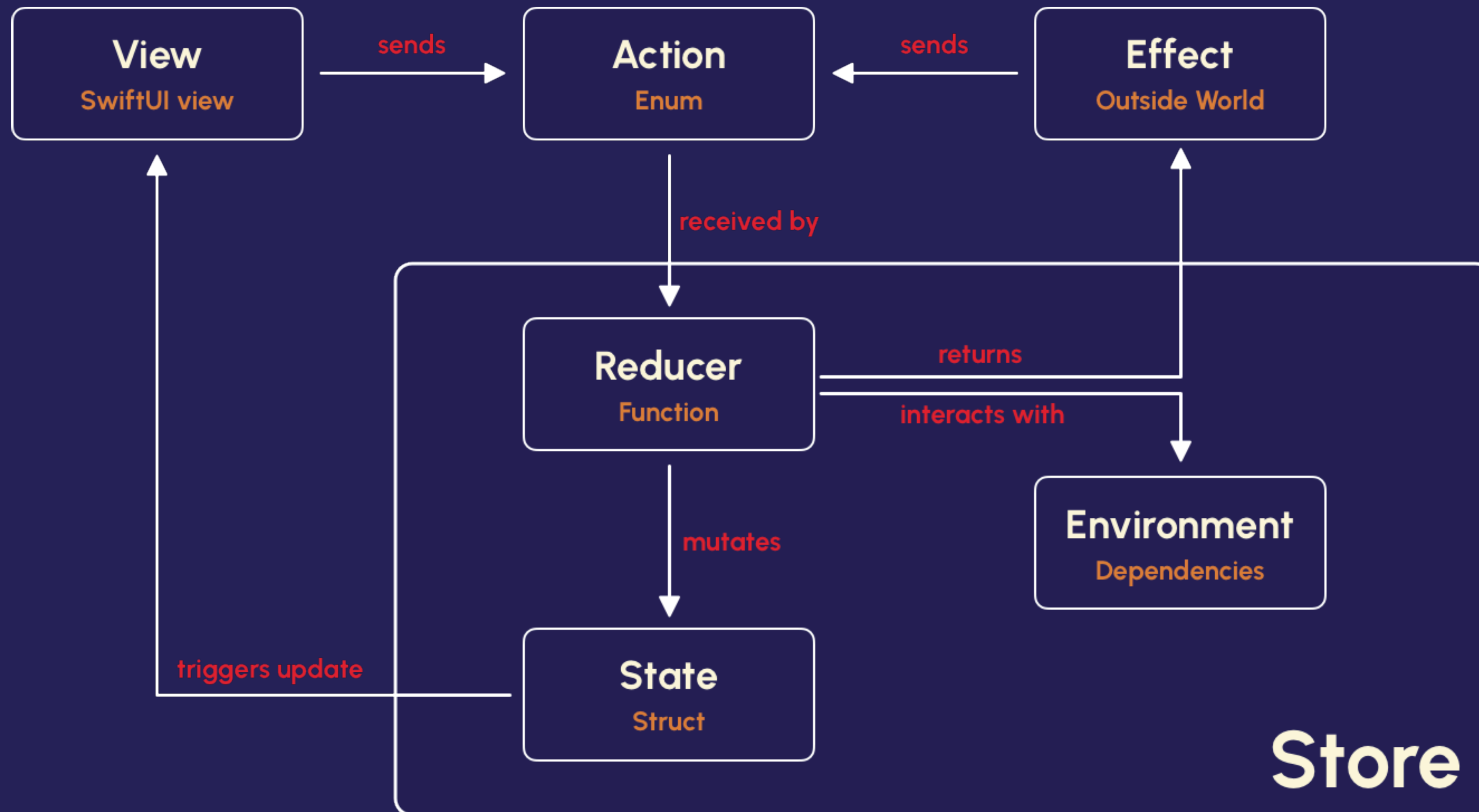
Reducers are pure functions that take in an action and the current state of the app, and return a new state.

TCA Tools & Utilities

- Effects
- ViewStore
- Dependencies management
- Debugging tools



TCA Main Components: The Big Picture



Credits: Pedro Rojas from Swift & Tips

TCA Pros

- Predictable state management
- Modular and composable architecture
- Testability
- Expressiveness
- Debugging

😞 TCA Cons

- Steep learning curve
- Some boilerplate code to set up
- Overkill for simple apps

Live-coding

<https://github.com/Bionik6/appdevcon-tca>

✓ What we've learned today

- What is TCA and the problems it solves
- The main components of the library
- How to use it and compose views
- How to execute side-effects
- Its main dependency management tool

 Should you use TCA?

It depends 

Ressources

Pointtree: pointfree.co

TCA Github: github.com/pointfreeco/swift-composable-architecture

Awesome TCA: <https://github.com/antranapp/awesome-tca>



Contacts

Follow me on twitter.com/bionik6

Linkedin: linkedin.com/in/bionik6

Youtube: youtube.com/@iosmasterydev

🙏 Thank you

Questions