App Architecture by Manual DI

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Who am I ?

- Yoshikuni Kato（加藤由訓）
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- iOS Engineer（2.5 years）
- Yahoo! Japan -> OHAKO
- Radi-Hey →

Presentation at iOSDC 2017 [1]

[1] https://speakerdeck.com/yoching/guan-shu-woyin-shu-tositedu-sushu-kifang-falsepointo

Self Introduction - Interests

- Software Design
  - App Architecture Patterns
  - Test
  - Functional Reactive Programming (ReactiveSwift)
  - Functional Approach
- UI Implementation
  - AutoLayout (priority / ...)
  - UIStackView
  - UIViewPropertyAnimator
  - Custom Transition

Self Introduction - Few experiences

- Older OS
- Objective-C
- Maintenance / Operation
- DB Management
- CoreAnimation / CoreGraphics

App Architecture by Manual DI

Sample Code

- yoching/iOSAppArchitectureSample [2]

[2] https://github.com/yoching/iOSAppArchitectureSample

Past Architecture

- MVVM-C
  - 画面遷移の管理とMVVM [3]
  - Coordinatorパターンの実践 [4]

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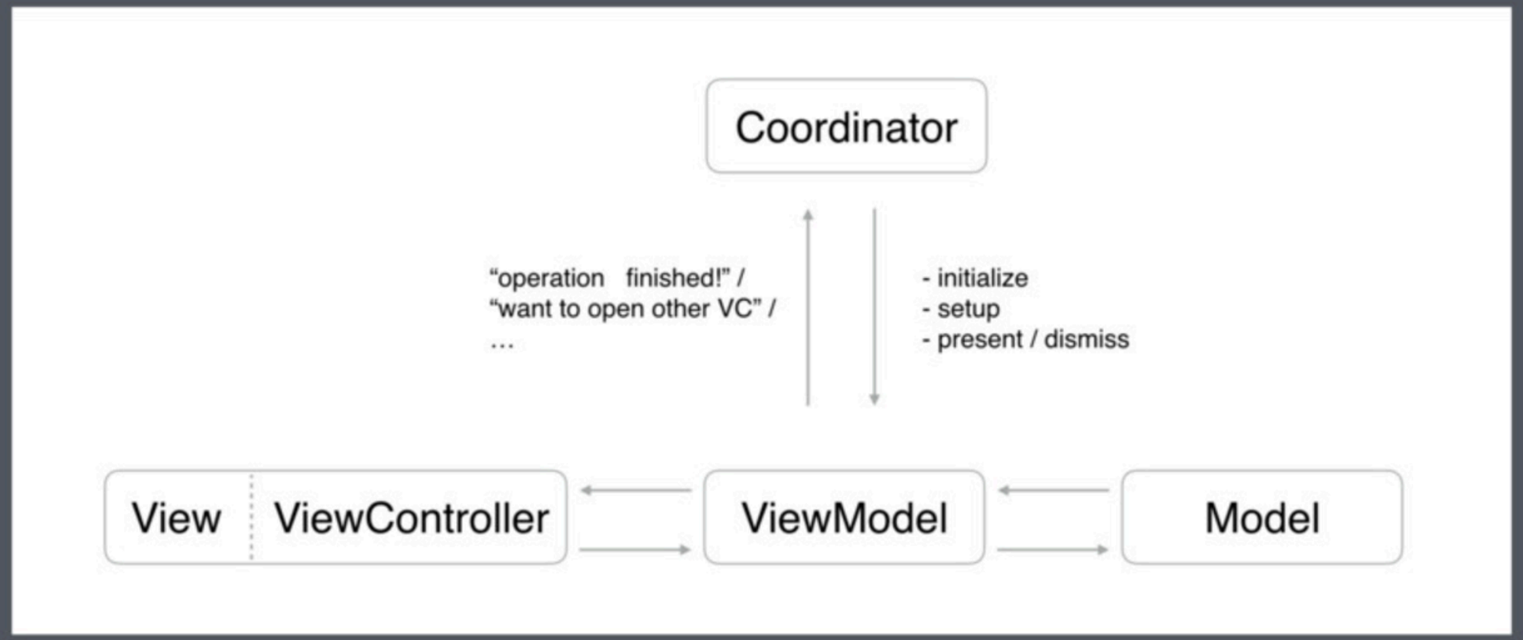
[3] https://speakerdeck.com/yoching/hua-mian-qian-yi-falseguan-li-tomvvm

[4] https://speakerdeck.com/yoching/coordinatorpatanfalseshi-jian

CoordinatorはVMに連結するのがよい



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https://speakerdeck.com/yoching/hua-mian-qian-yi-falseguan-li-tomvvm

Past Architecture Problems

- 2 tasks in Coordinator
  - View Transition
  - Dependency Injection
- hard to test
- cannot replace with stub objects

Inspirations

- Minimizing Decision Fatigue to Improve Team Productivity @ try! swift 2017 [5]
  - **Application / UI / Components** (Project Organization)
- 依存性の注入（Dependency Injection) @ wikipedia [6]
  - **手動でのDI** / 自動的なDI
- Deep Linking at Kickstarter @ SwiftTalk [7]
  - *Routing* logics

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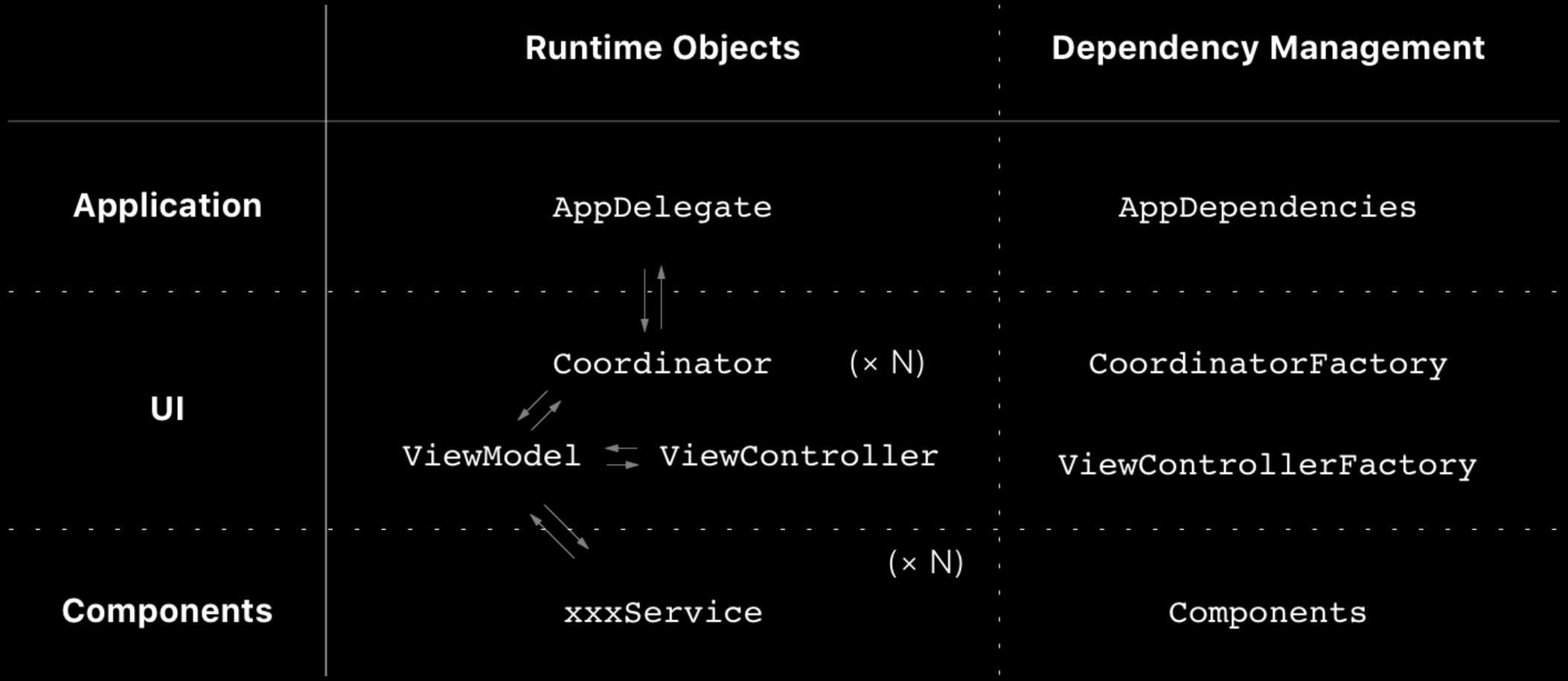
[5] https://www.slideshare.net/DerekLee/minimizing-decision-fatigue-to-improve-team-productivity

[6] https://ja.wikipedia.org/wiki/%E4%BE%9D%E5%AD%98%E6%80%A7%E3%81%AE%E6%B3%A8%E5%85%A5

[7] https://talk.objc.io/episodes/S01E49-deep-linking-at-kickstarter

Architecture



2 Types of Objects

- Runtime Objects
  - several objects for app runtime
  - testable (all dependencies are injected)
- Dependency Management
  - doing Dependency Injection
  - no need to test (like setting file)

Sample Code

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[2] https://github.com/yoching/iOSAppArchitectureSample

Development Workflow

situation	workflow
make service	make service -> update `components`
make view	make VC & VM -> make function at `ViewFactory`
make transition	update `coordinator`

Result

- Coordinator: only view transition
- Factory & Components: Dependency Injection
- No Singleton😄
- *App / Components / UI* is good for object organizing (not only folder structures)

Thank you!