Cocoapods

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How can we manage dependencies in Cocoa?

Copy & Paste

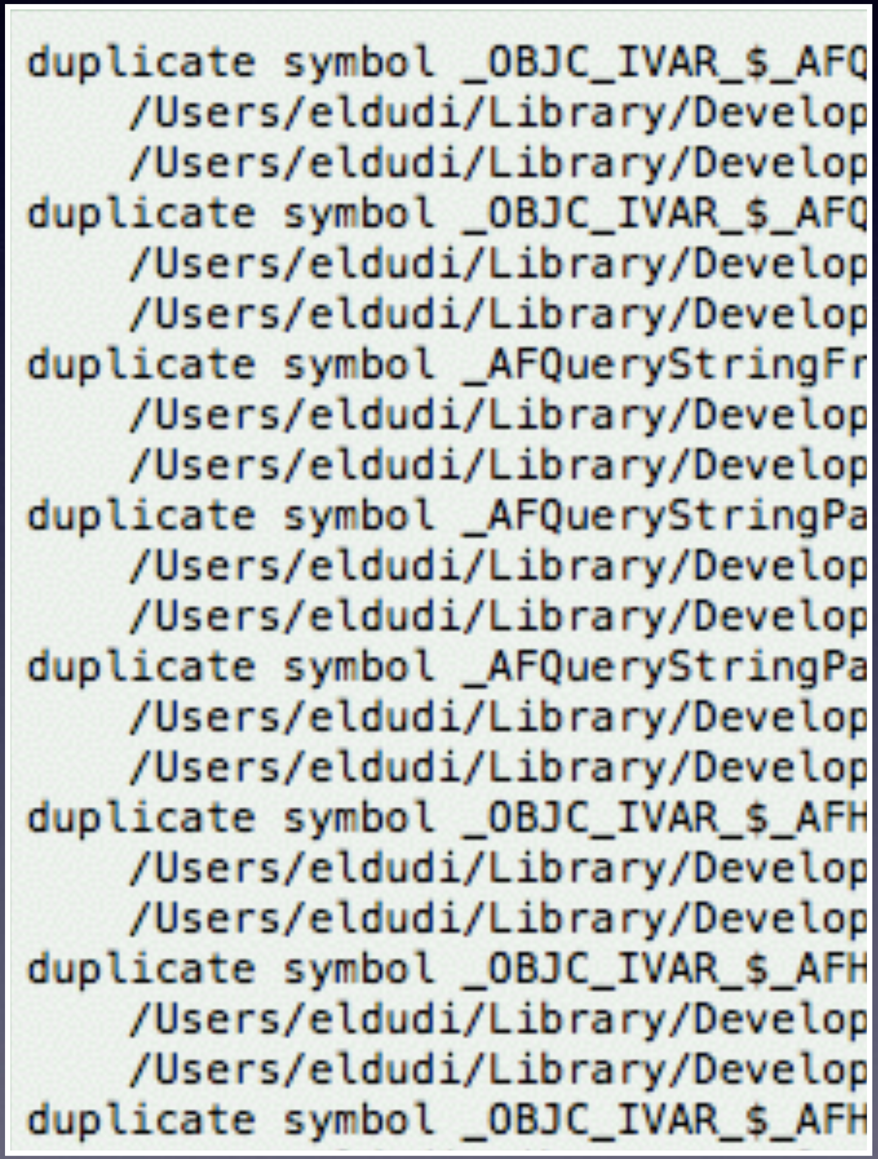
Submodules

Copy & Paste

1. Copy & Paste files
2. Add other linker flags
3. Add ARC flags
4. Add frameworks
5. Add any other missing build settings
6. Add resources
7. Finally, use the component

Copy & Paste Issues

- Issues with duplicate symbols
- **Really** hard to manage versions
- Missing other linker flags and build settings
- Missing resources



```
duplicate symbol _OBJC_IVAR_$_AFQ
    /Users/eldudi/Library/Develop
    /Users/eldudi/Library/Develop
duplicate symbol _OBJC_IVAR_$_AFQ
    /Users/eldudi/Library/Develop
    /Users/eldudi/Library/Develop
duplicate symbol _AFQueryStringFr
    /Users/eldudi/Library/Develop
    /Users/eldudi/Library/Develop
duplicate symbol _AFQueryStringPa
    /Users/eldudi/Library/Develop
    /Users/eldudi/Library/Develop
duplicate symbol _AFQueryStringPa
    /Users/eldudi/Library/Develop
    /Users/eldudi/Library/Develop
duplicate symbol _OBJC_IVAR_$_AFH
    /Users/eldudi/Library/Develop
    /Users/eldudi/Library/Develop
duplicate symbol _OBJC_IVAR_$_AFH
    /Users/eldudi/Library/Develop
    /Users/eldudi/Library/Develop
duplicate symbol _OBJC_IVAR_$_AFH
```

Submodules

- Issues with duplicate symbols
- Somewhat easier to manage versions (if they're properly tagged)
- Other linker flags
- And other build settings
- Resources

Submodules

1. Add submodule (and check it out)
2. Add source to project
3. Add ARC flags
4. Add frameworks
5. Add other linker flags
6. Add any other missing build settings
7. Fix duplicate symbols
8. Add resources
9. Finally, use the component

This is all wrong.

We are to build things.

We are to deliver things.

This is all just wasting our time.

Nanos gigantum humeris insidentes.

Bernard of Chartres

Stand on the shoulders of giants.

Bernard of Chartres

Enter Cocoapods

Cocoapods goals

- Make working with dependencies simple
- Improve library discoverability and engagement by providing an ecosystem that facilitates this

Cocoapods advantages

- Automatically handle source code
- Automatically handle ARC
- Automatically handle frameworks
- Automatically handle builds settings
- Automatically handle resources
- Automatically handle dependencies

Cocoapods advantages

The responsibility for configuration requirements lie with the creator of component, not you.

How can I install them?

```
gem install cocoapods
```

Basics

How do Cocoapods work?

Pod

Single definition of a component

Pod

```
pod 'PBWebViewController'
```

Podfile

List of dependencies

Podfile

- Defines platform
- Defines project (optional)
- Defines dependencies
  - Defines specific version (will use latest if none provided)
- Multiple targets

Podfile

```
platform :ios, '7.0'
xcodeproj 'TwitterUserTimeline'

pod 'STTwitter'
pod 'Mantle', '1.2'

target :cedar do
  link_with 'TwitterUserTimelineSpecs'
  pod 'Cedar'
end
```

Podfile

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$\leftarrow$ iOS Version

Podfile

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target :cedar do
  link_with 'TwitterUserTimelineSpecs'
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```

Project

Podfile

```
platform :ios, '7.0'
xcodeproj 'TwitterUserTimeline'

pod 'STTwitter'
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← Dependencies

Podfile

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```

Exclusive target

Podfile

```
platform :ios, '7.0'
xcodeproj 'TwitterUserTimeline'

pod 'STTwitter'
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target :cedar do
  link_with 'TwitterUserTimelineSpecs'
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end
```

Exclusive target name

Podfile

```
platform :ios, '7.0'
xcodeproj 'TwitterUserTimeline'

pod 'STTwitter'
pod 'Mantle', '1.2'

target :cedar do
  link_with 'TwitterUserTimelineSpecs'
  pod 'Cedar' ← Exclusive pod
end
```

Semantic versioning

Dependencies use semantic versioning

Semantic versioning

`<major>.<minor>.<patch>`

`1.3.3`

Resolving and installing dependencies

Dependencies are located at a git repo

Installing pods

```
pod install
```

What happens when I install pods?

- Resolve dependencies from Podfile
- Take an .xcodeproj as a start
- Generate .xcconfing files and attaches them to your project
- Generate another .xcoproject with static library from defined dependencies

What happens when I install pods?

- Generate an .xcworkspace with your project and generated .xcodeproject
- Add a dependency on the generated project results to your targets
- Lock used versions in Podfile.lock

What is Podfile.lock?

Next time pod install is called Podfile.lock defines which versions should be used

Updating pods

```
pod update
```

pod update

- Ignores Podfile.lock
- Will work as ‘pod install’ without a Podfile.lock

Tips

Cleaning up

By wiping whole Cocoapods caches

```
rm -rf Pods/
rm -rf ~/Library/Caches/
CocoaPods/Git/
rm -rf ~/Library/Caches/
CocoaPods/GitHub/
rm -rf ~/.cocoapods/
```

Moving patch version

Will automatically update to new available patch version

```
pod 'Mantle', '~> 1.2.0'
```

Ignoring warnings from pods

```
inhibit_all_warnings!
```

Acknowledgements

Acknowledgements

Automatically generated by Cocoapods

Fun stuff

Your own pod

What you’ll need

- Cocoapods installed
- Something you can share
- .podspec
- And you’re all set!

Your own Cocoapods Pod spec

Example

Linting a pod

```
pod spec lint
```

Deploying a pod

```
pod trunk push
```

And you're done!

Your pod is available to everyone in the world!

Using Cocoapods for in-house components

What you’ll need

- Cocoapods installed
- Designated git repo for specs definitions
- And you’re all set!

Things you'll have to do first

- Add your own specs repo to local cocoapods repo list
- Push the podspec to your repository

Adding custom specs repo

```
pod repo add <repo_name> <repo_address>
```

Pushing to Cocoapods specs repo

```
pod repo push <repo_name>
```

Demo

Resources & Contact

Code Examples

github.com/paweldudek

Contact

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pawel@dudek.mobi