

# Presentation Patterns

Hamlet D'Arcy  
@HamletDRC

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spring  I/O

# Hamlet D'Arcy

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<http://hamletdarcy.blogspot.com>

Groovy, CodeNarc, JConch Committer  
GPars, Griffon, Gradle, etc. Contributor  
GroovyMag, NFJS magazine author  
JetBrains Academy Member



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# Warning

Opinions Ahead  
(from Experience)

# Context

Applicable to any event-based GUI toolkit, e.g.

- Swing, JavaFX, AWT, SWT, etc
- Flex, Windows Presentation Foundation (?)
- GWT, Canoo RIA Suite

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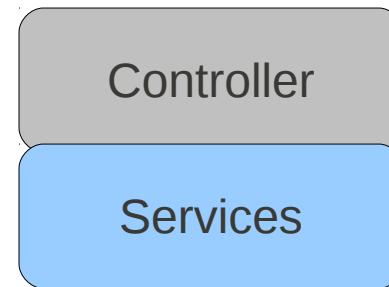
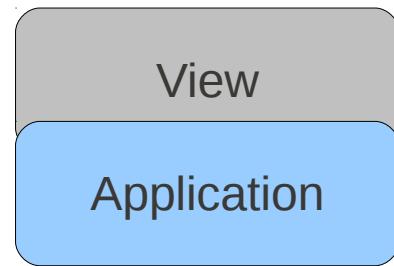
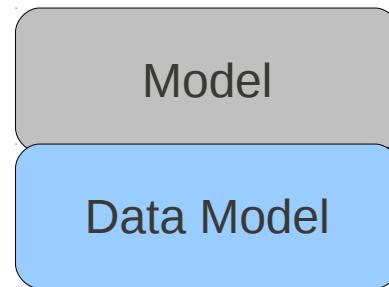
# The Problem

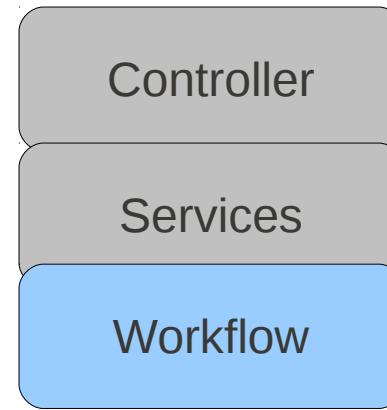
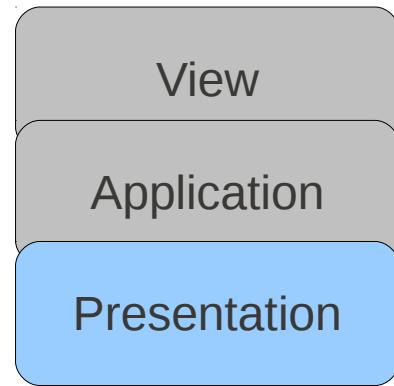
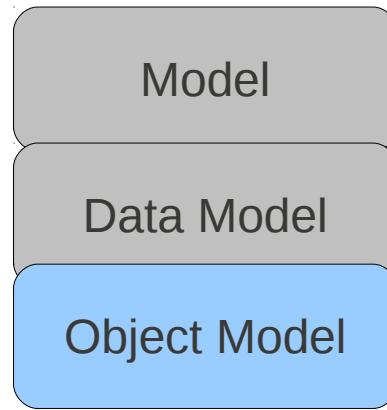
MVC is everywhere,  
but not without problems

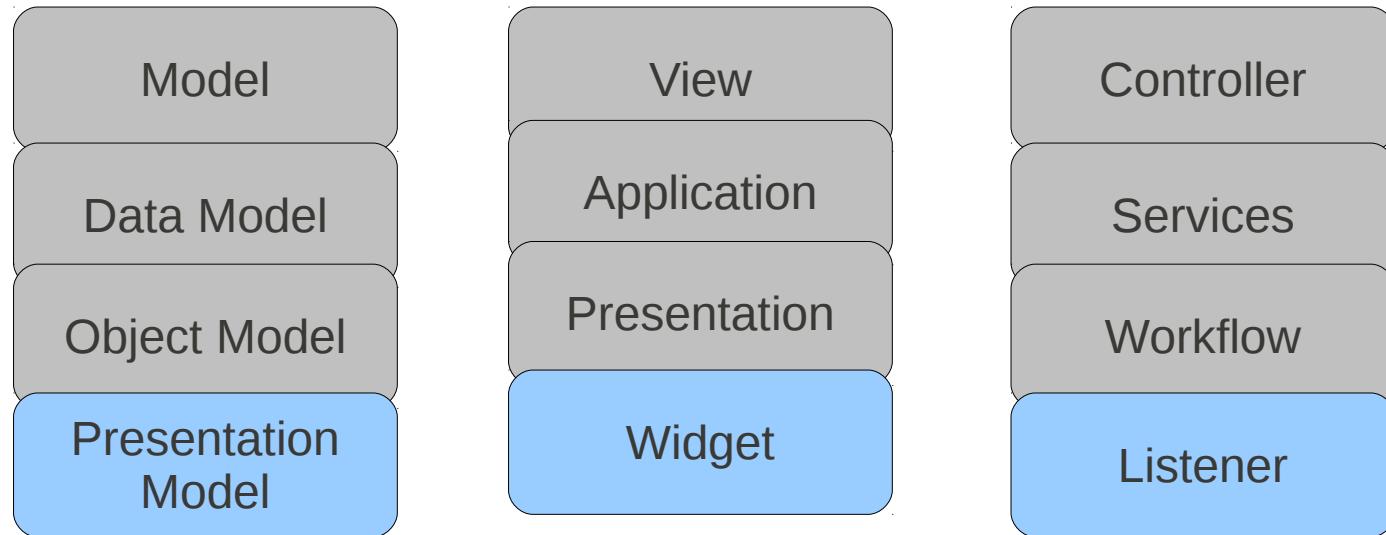
Model

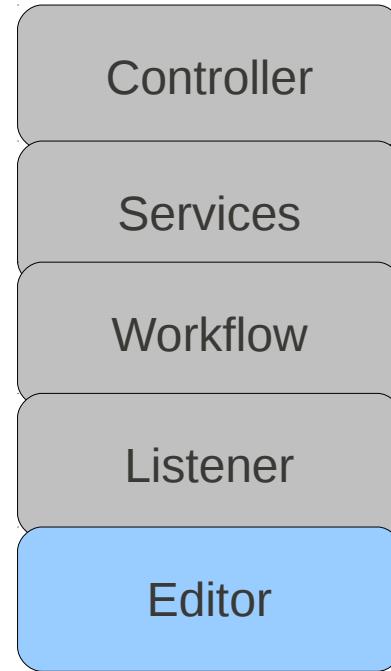
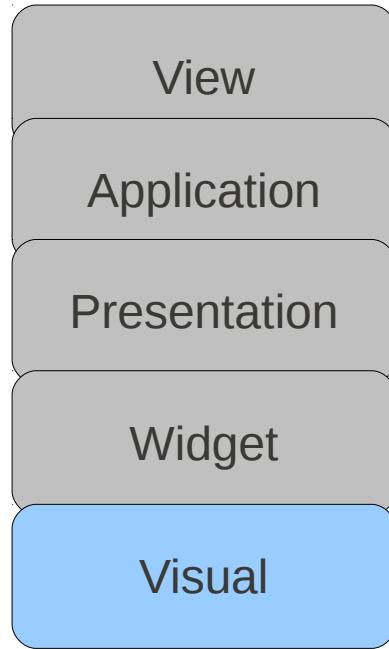
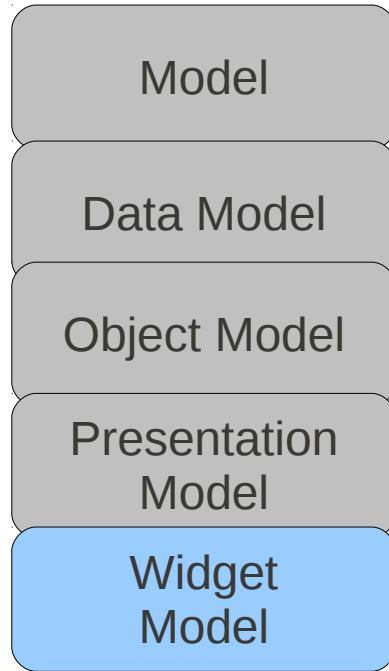
View

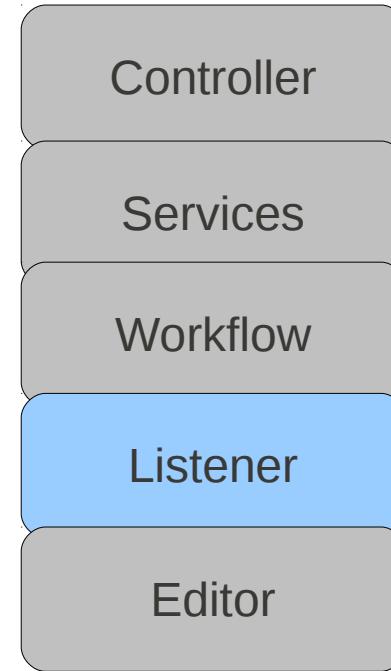
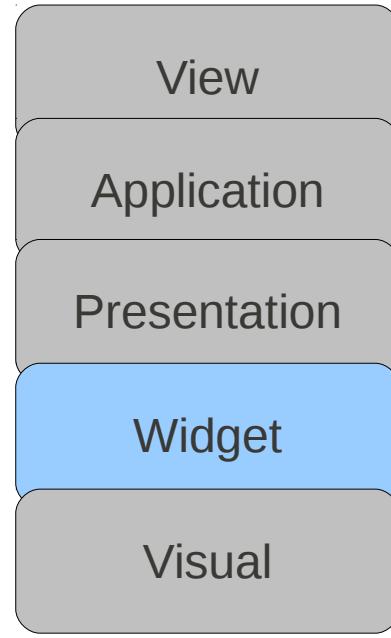
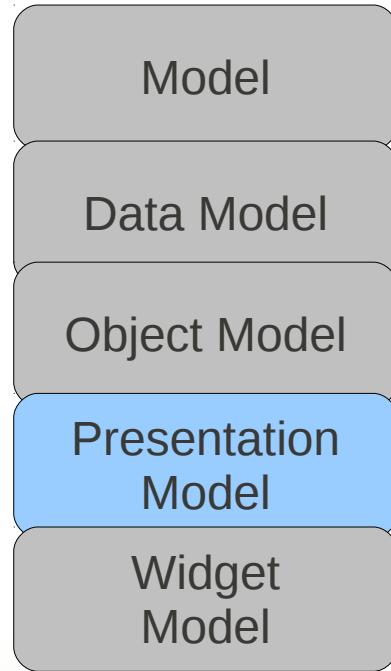
Controller

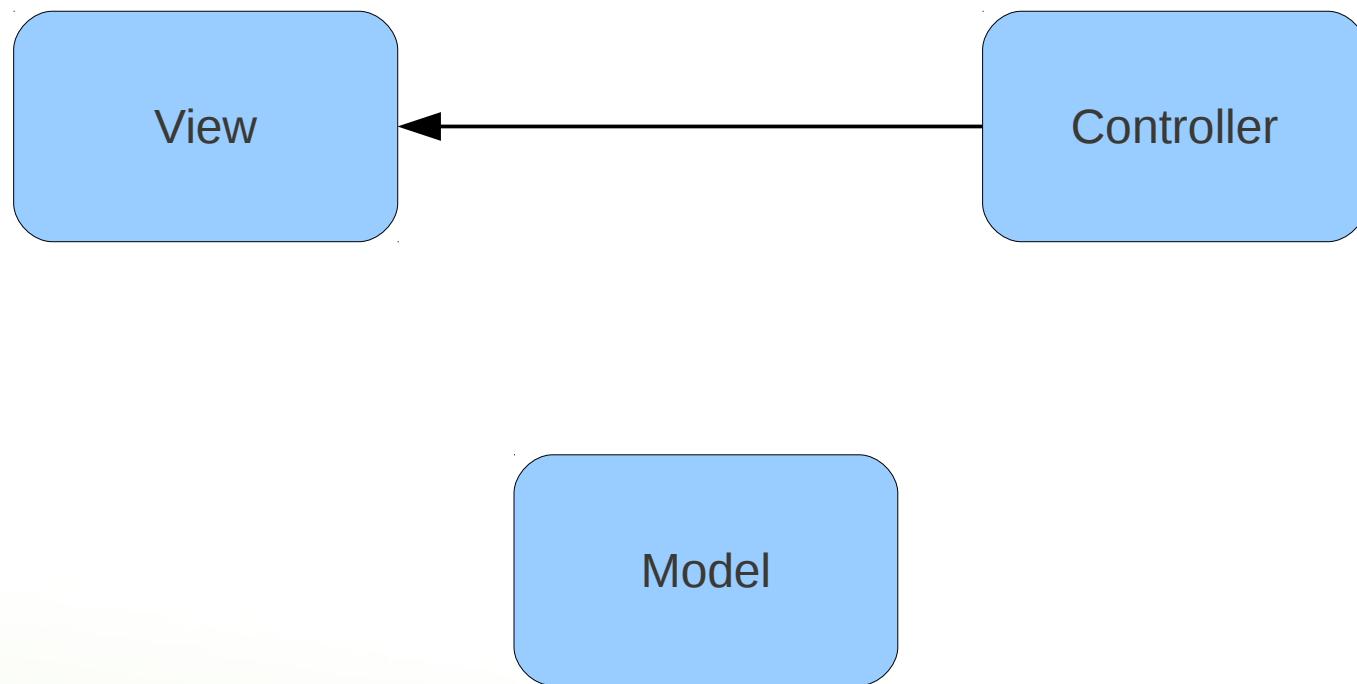


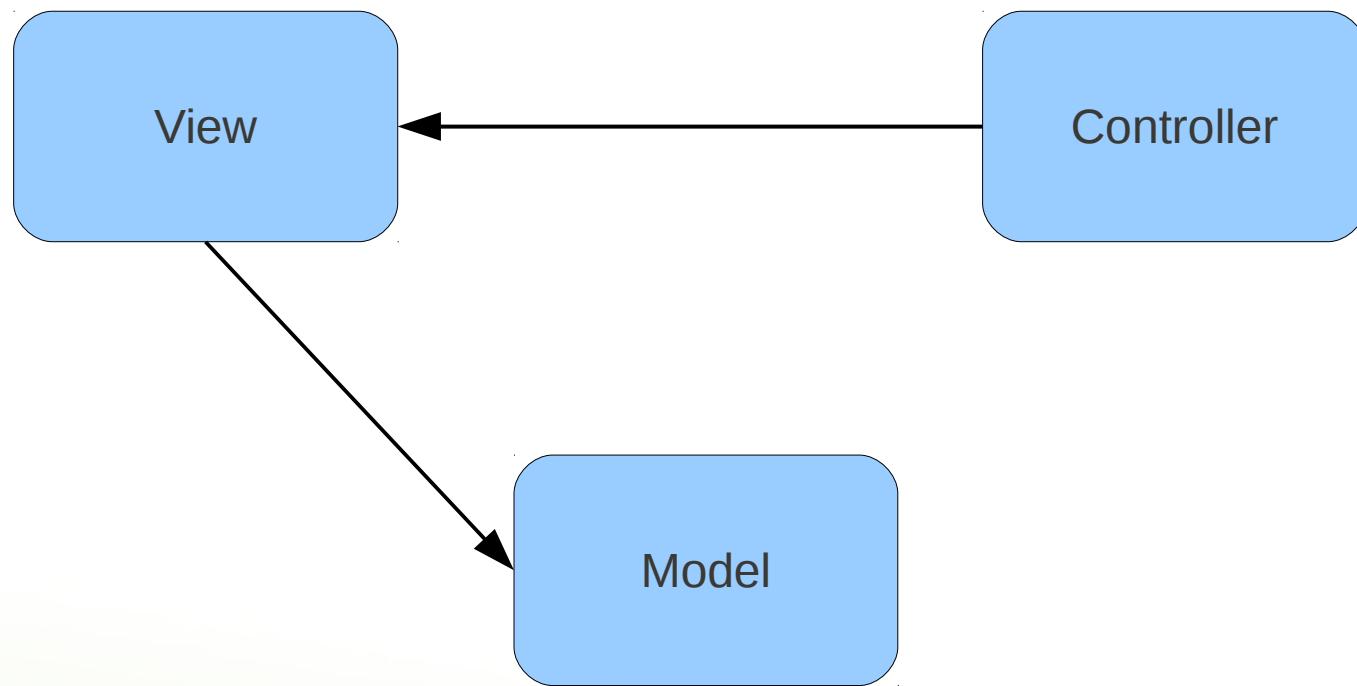


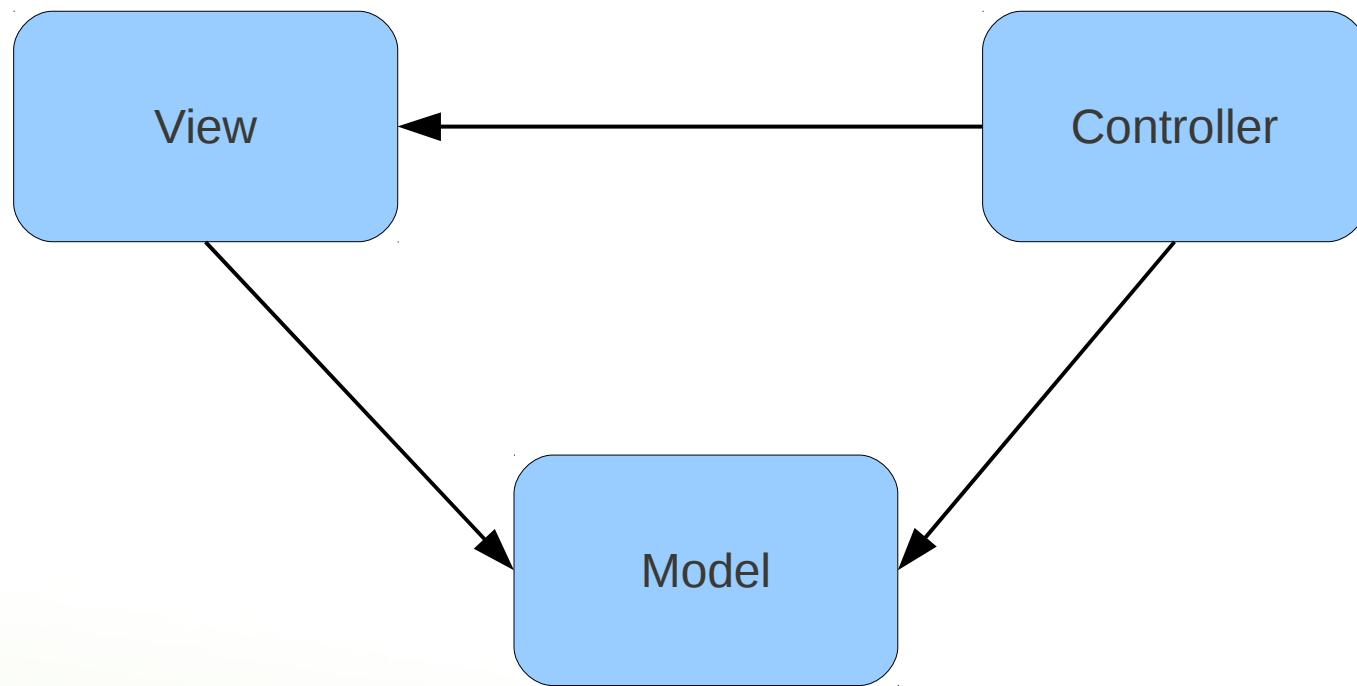


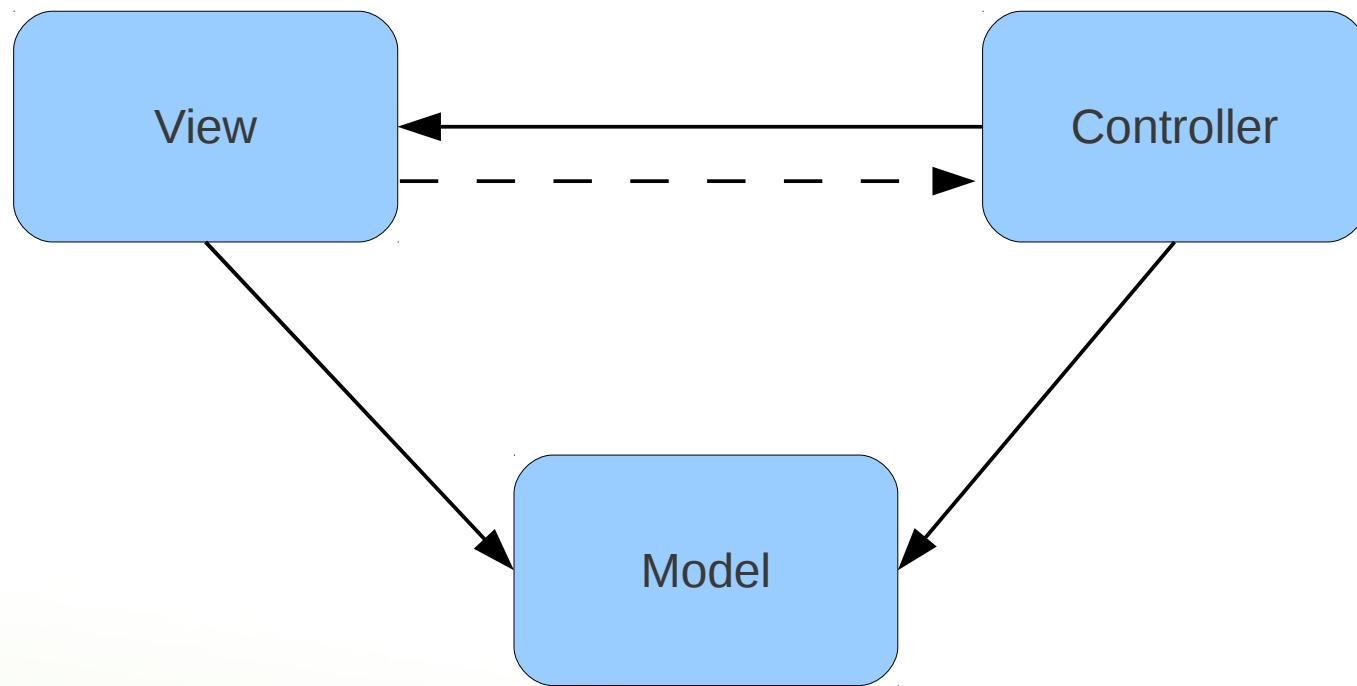


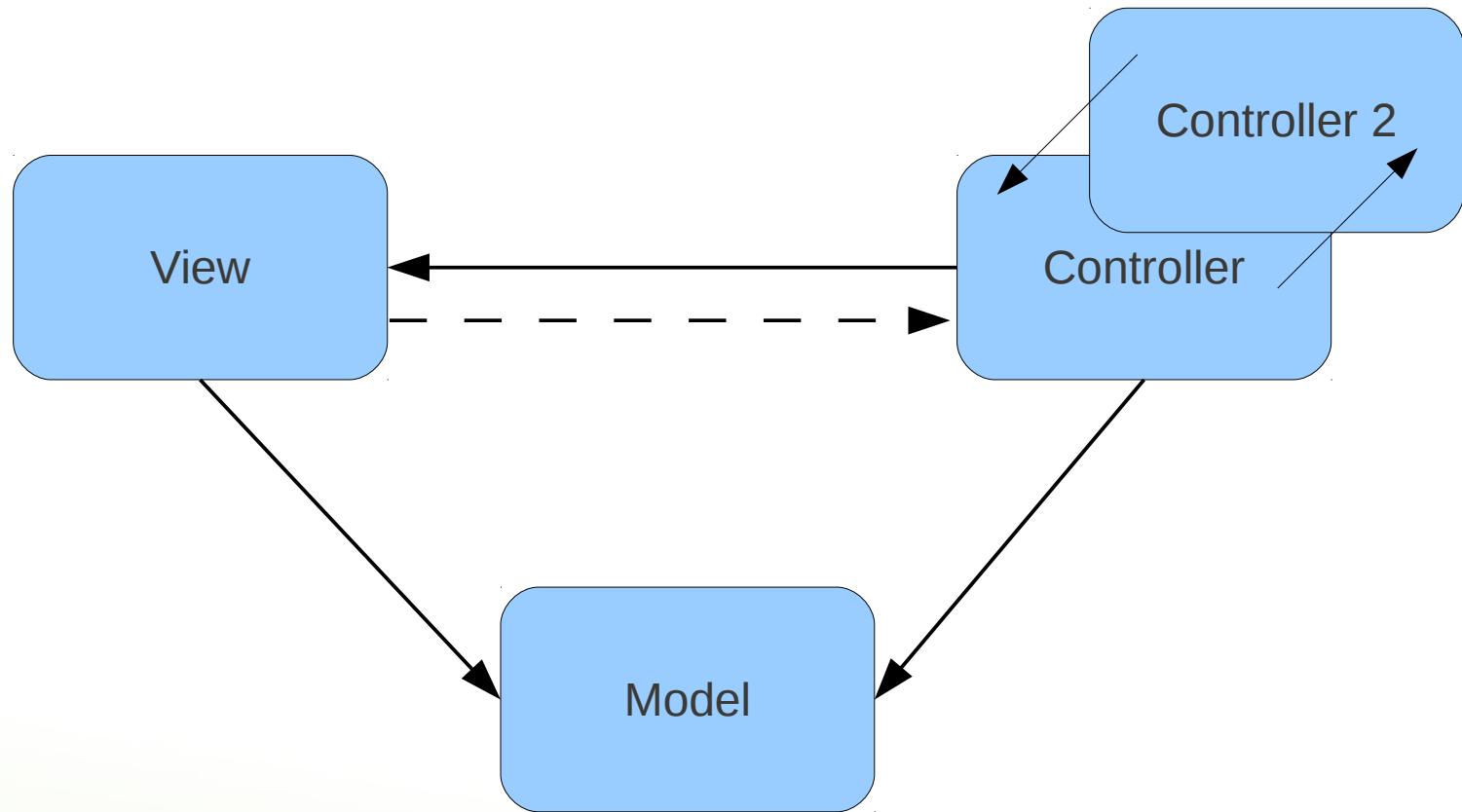


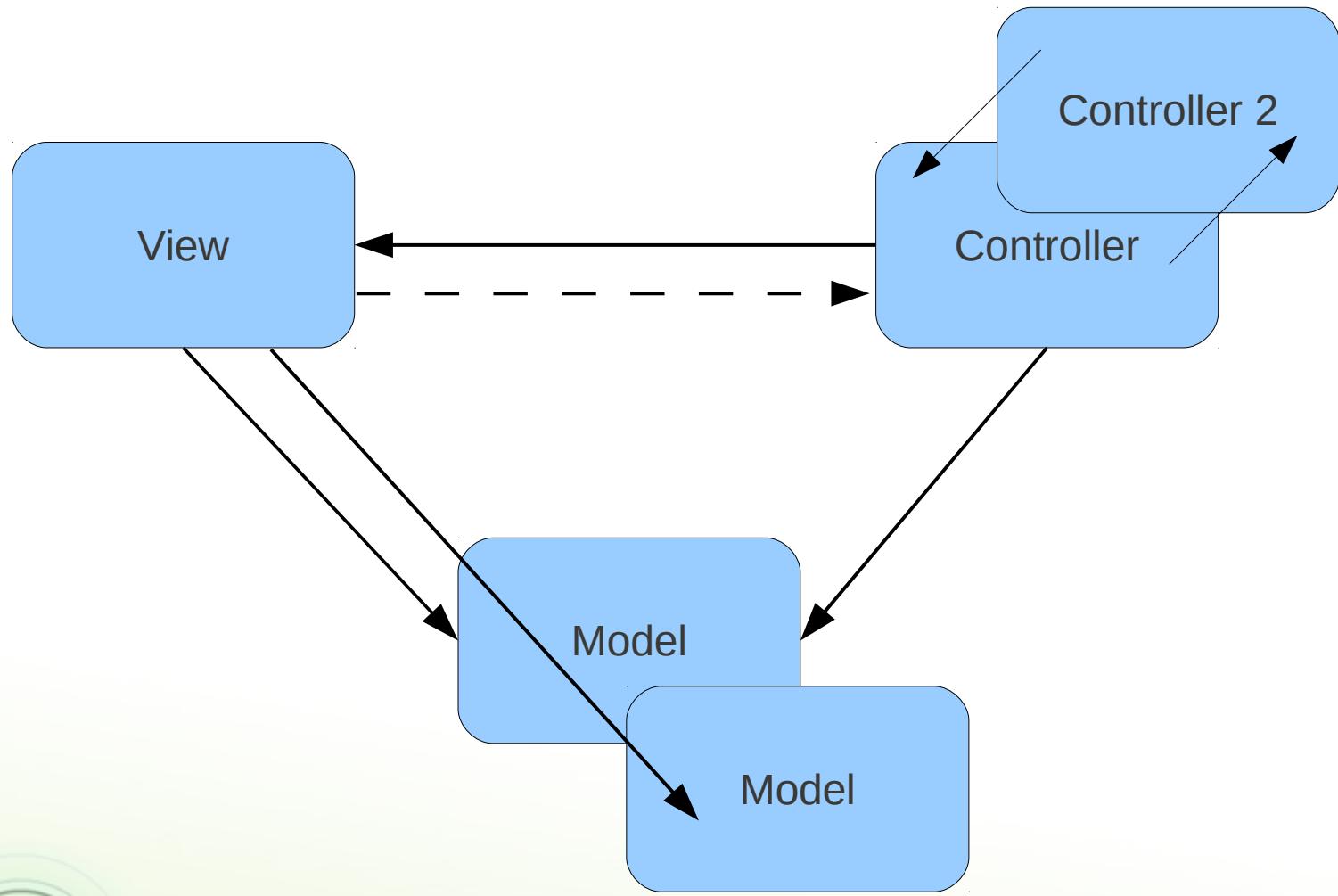


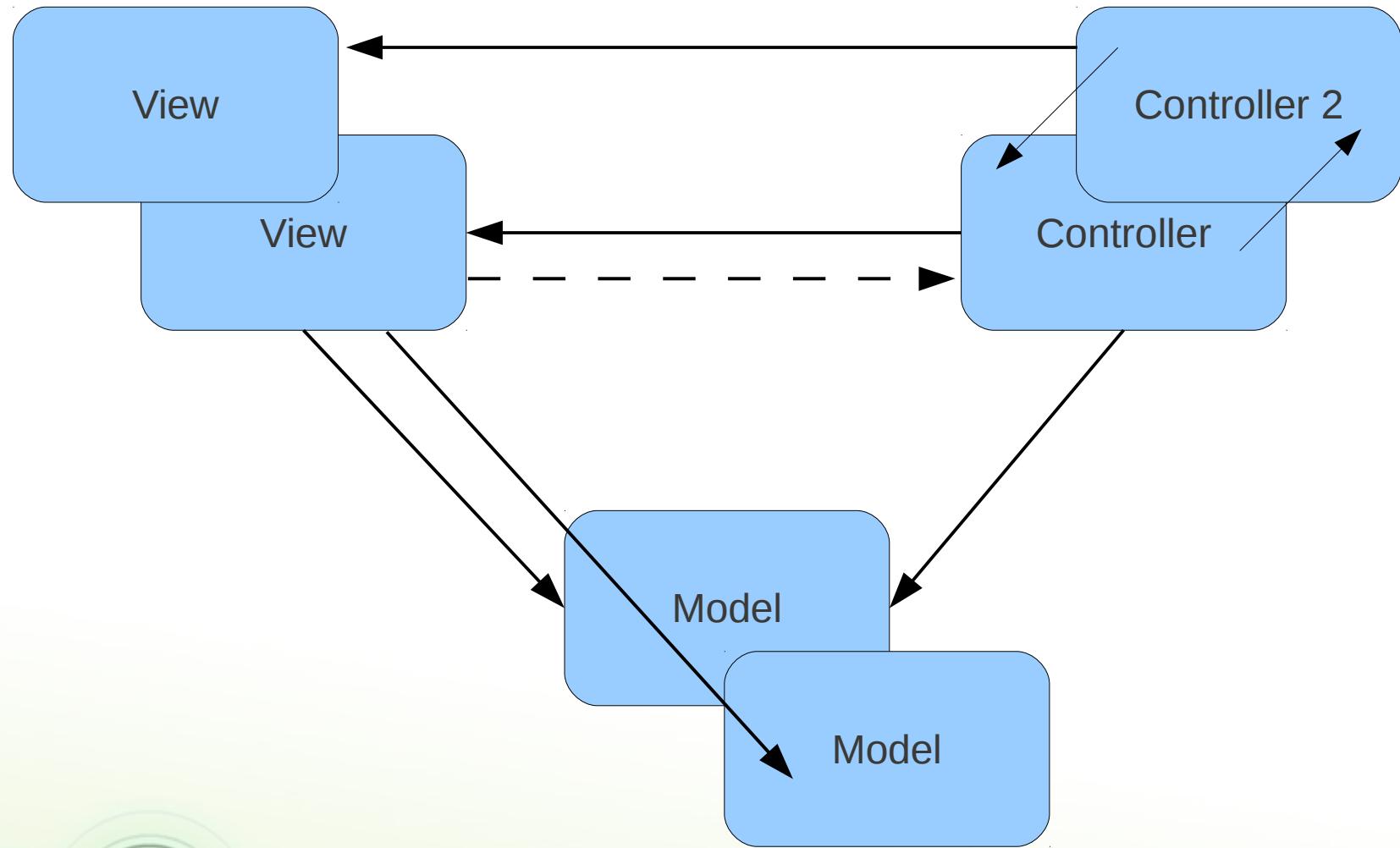


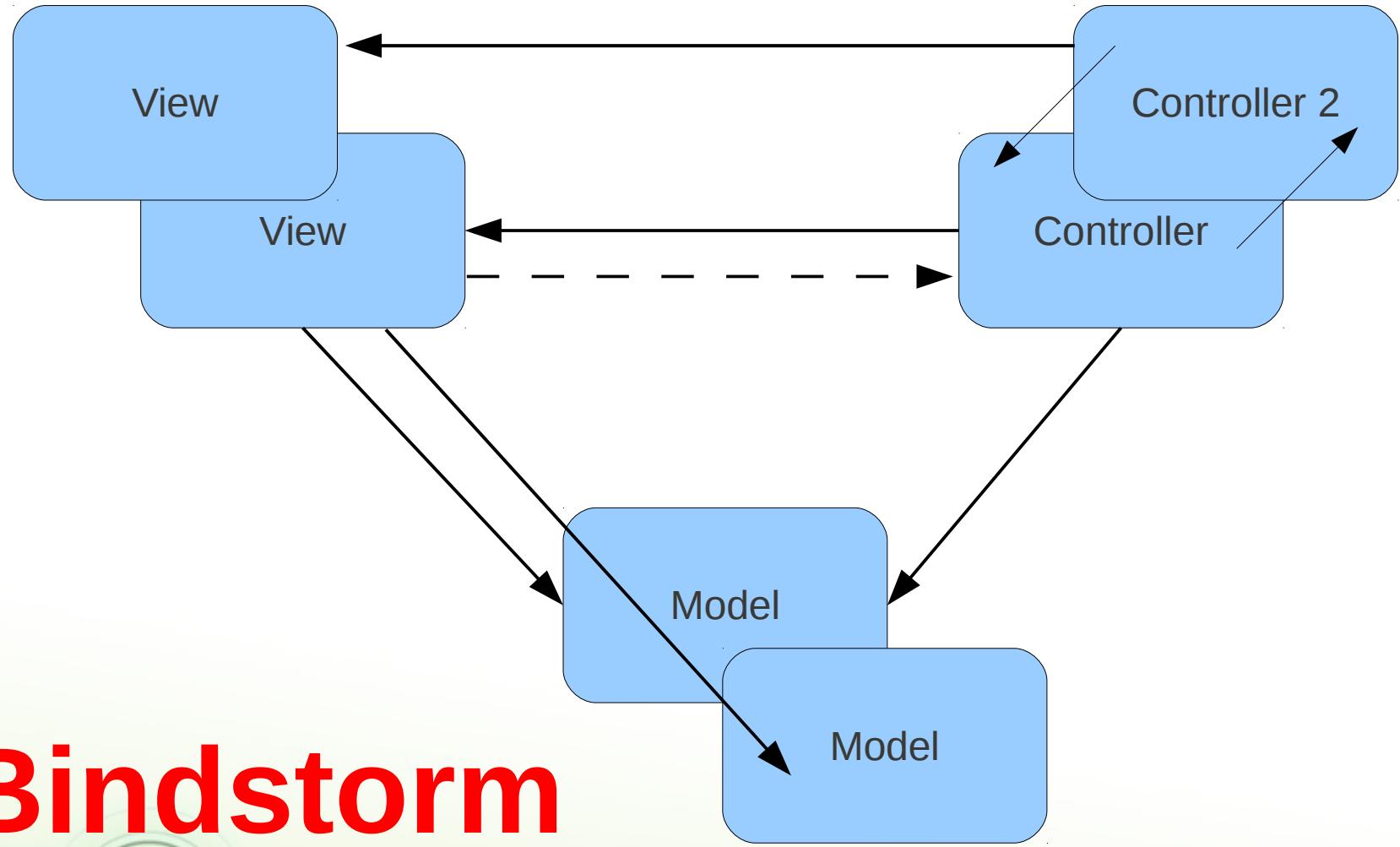




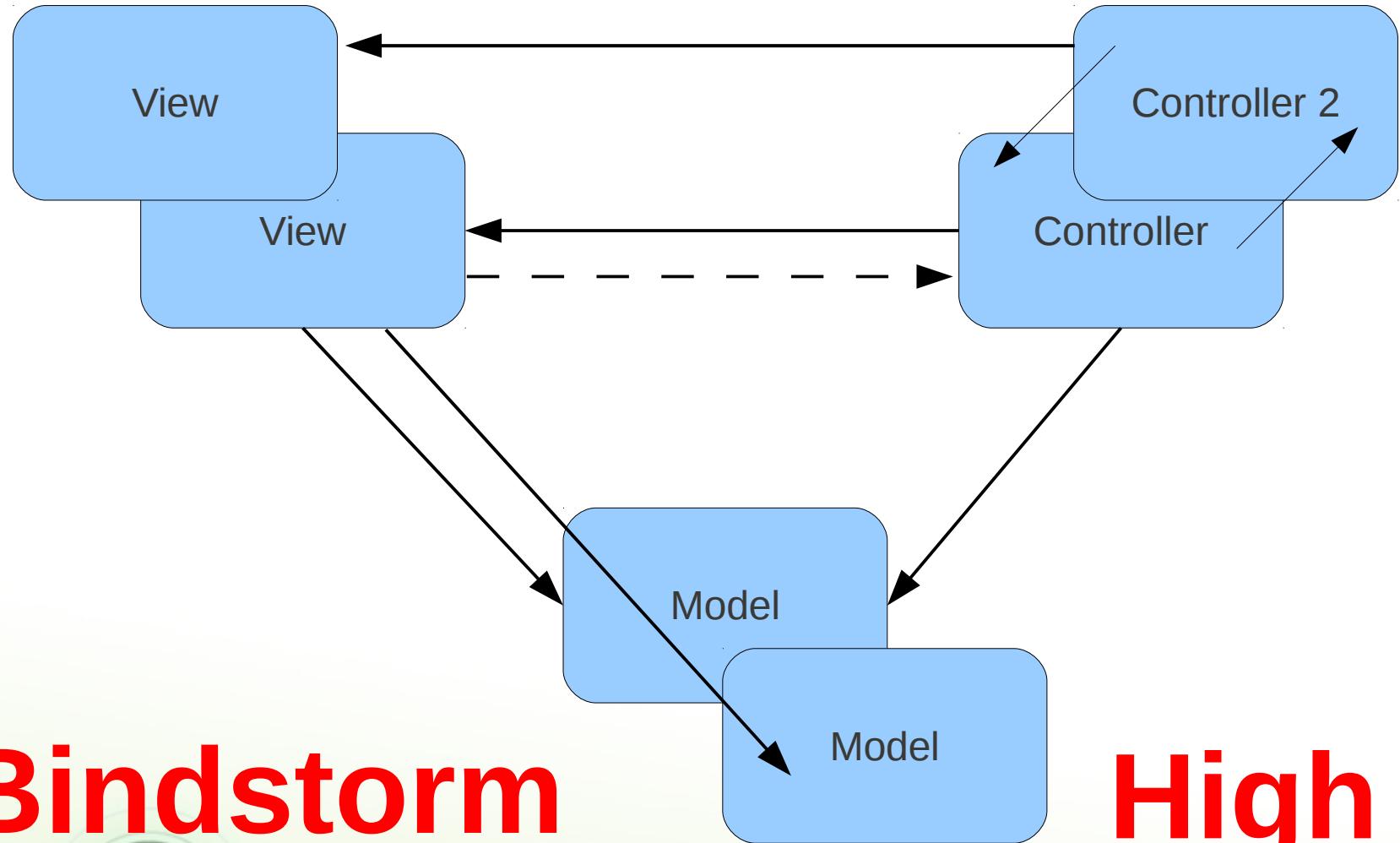








# Bindstorm

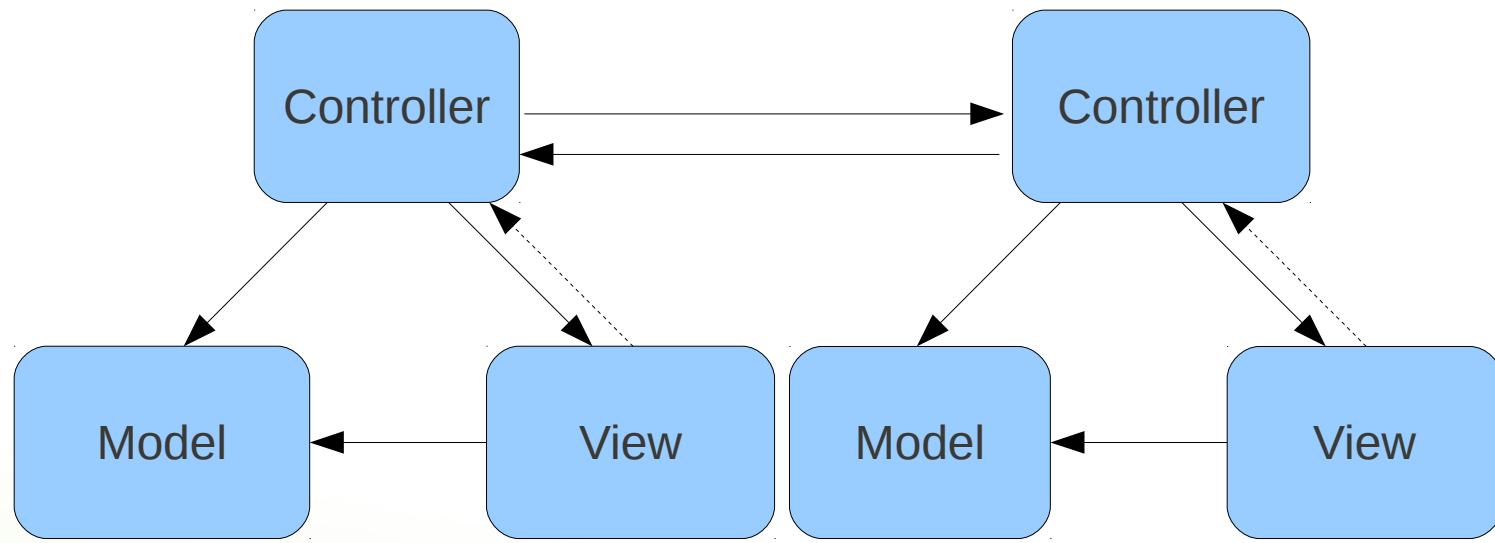


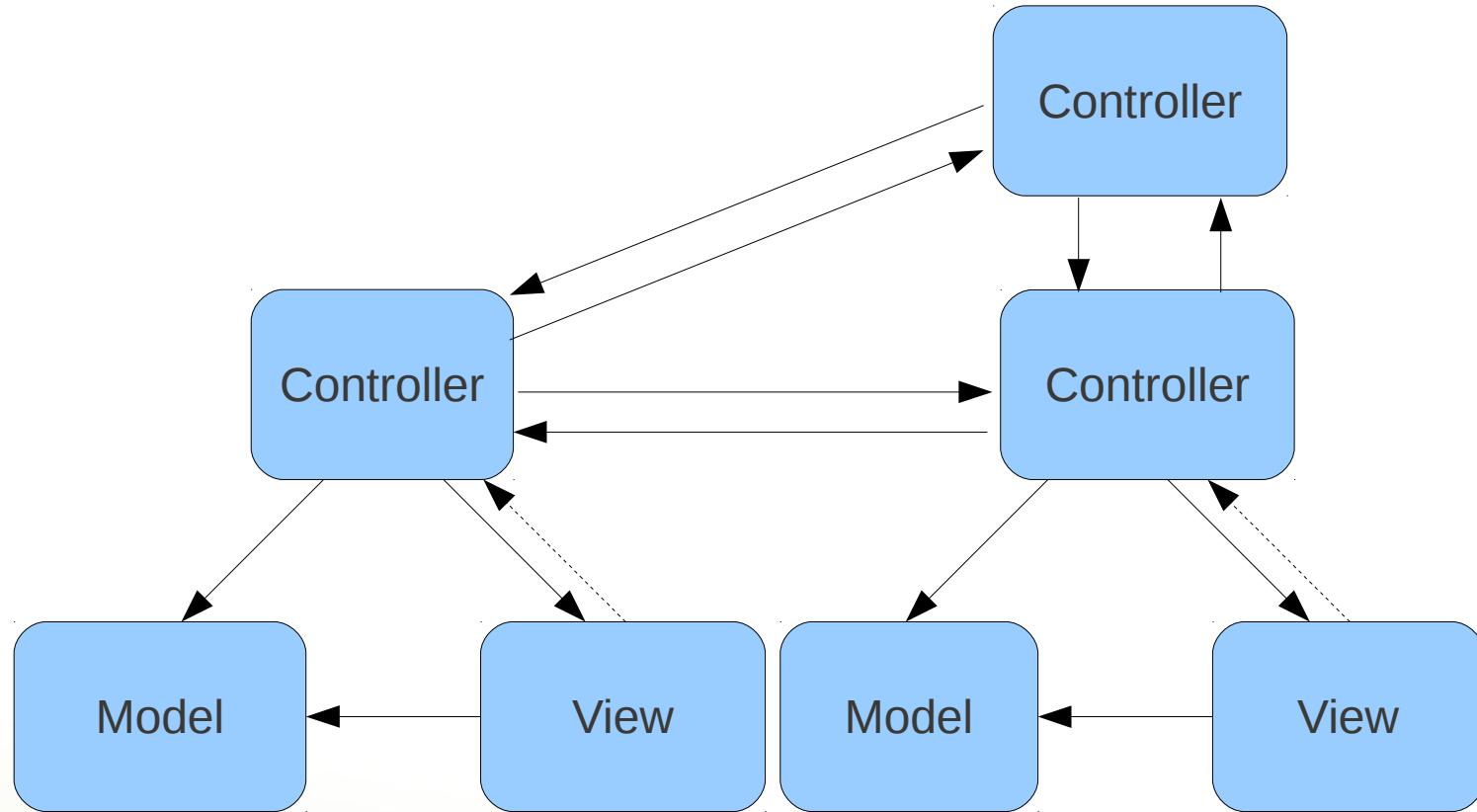
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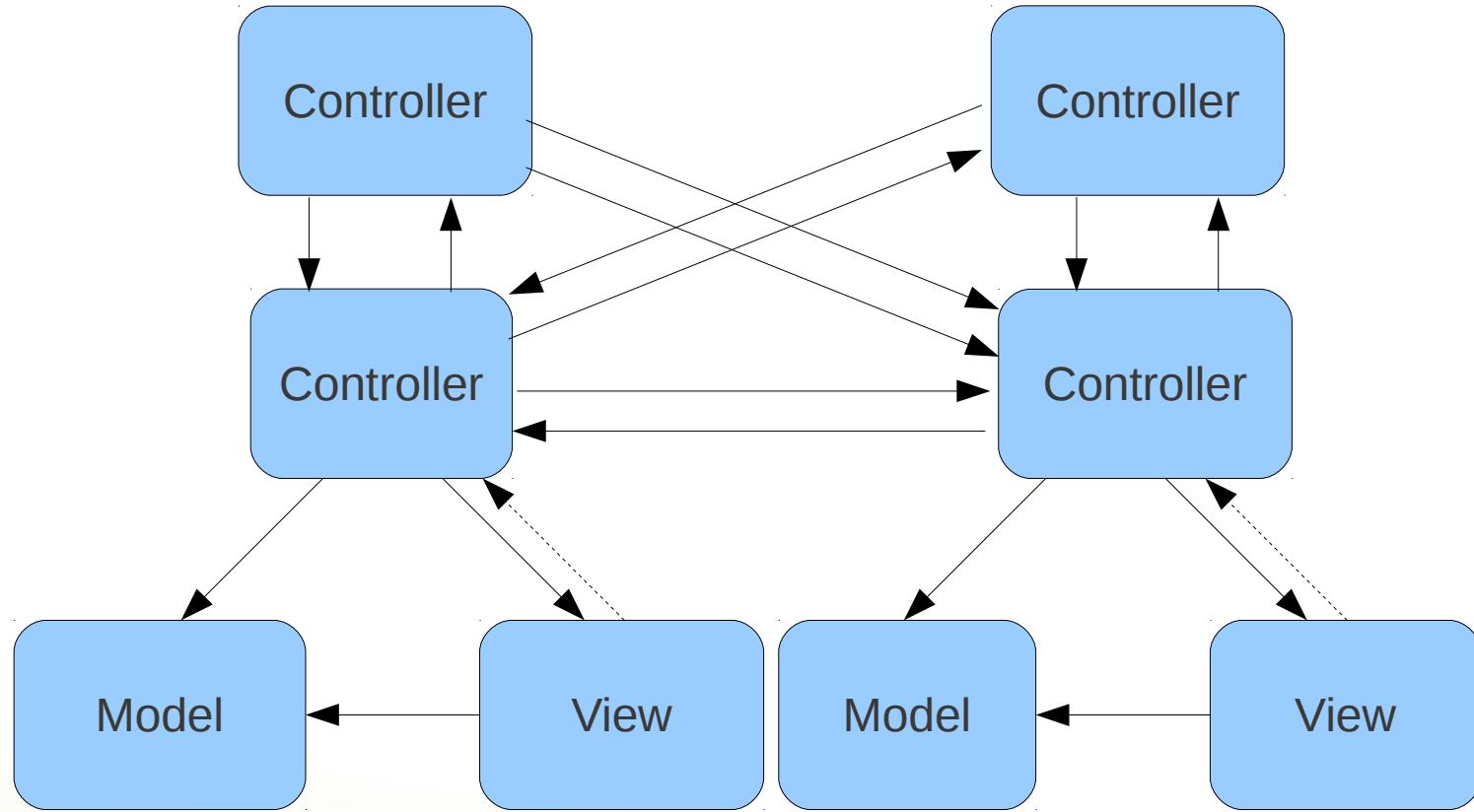
# High Coupling

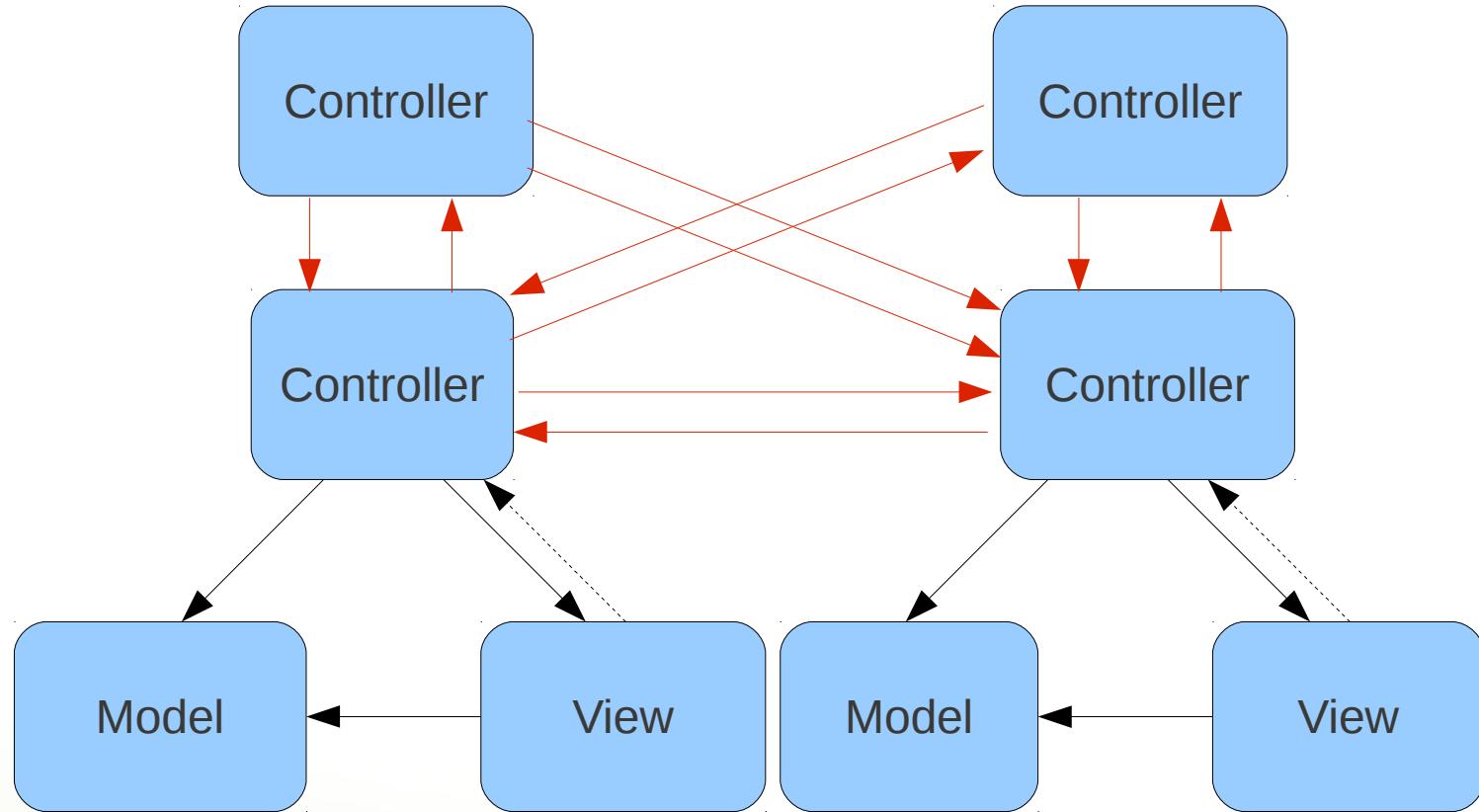
# Solution Ideas

## Event Bus Presentation Models





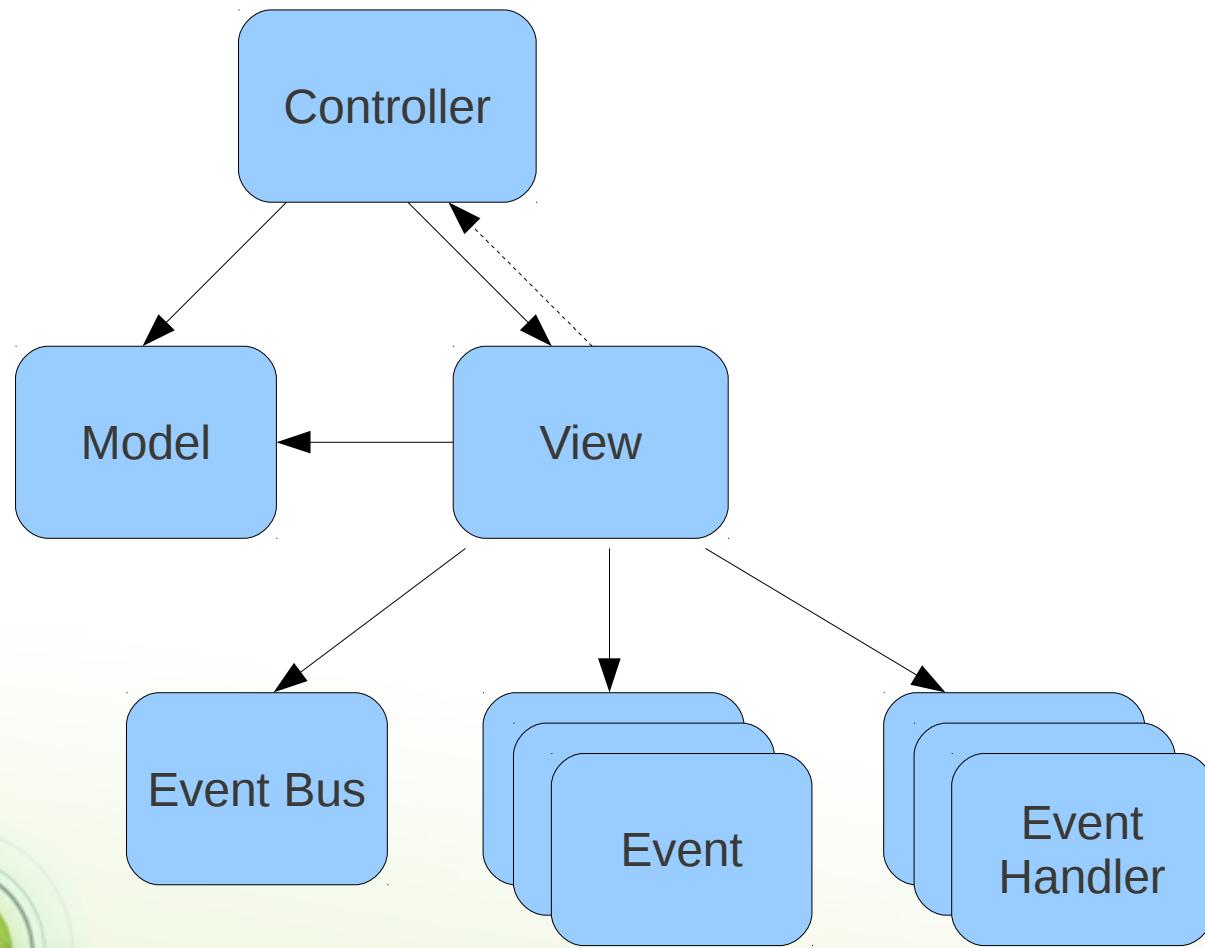




# High Coupling

# GWT EventBus

demo

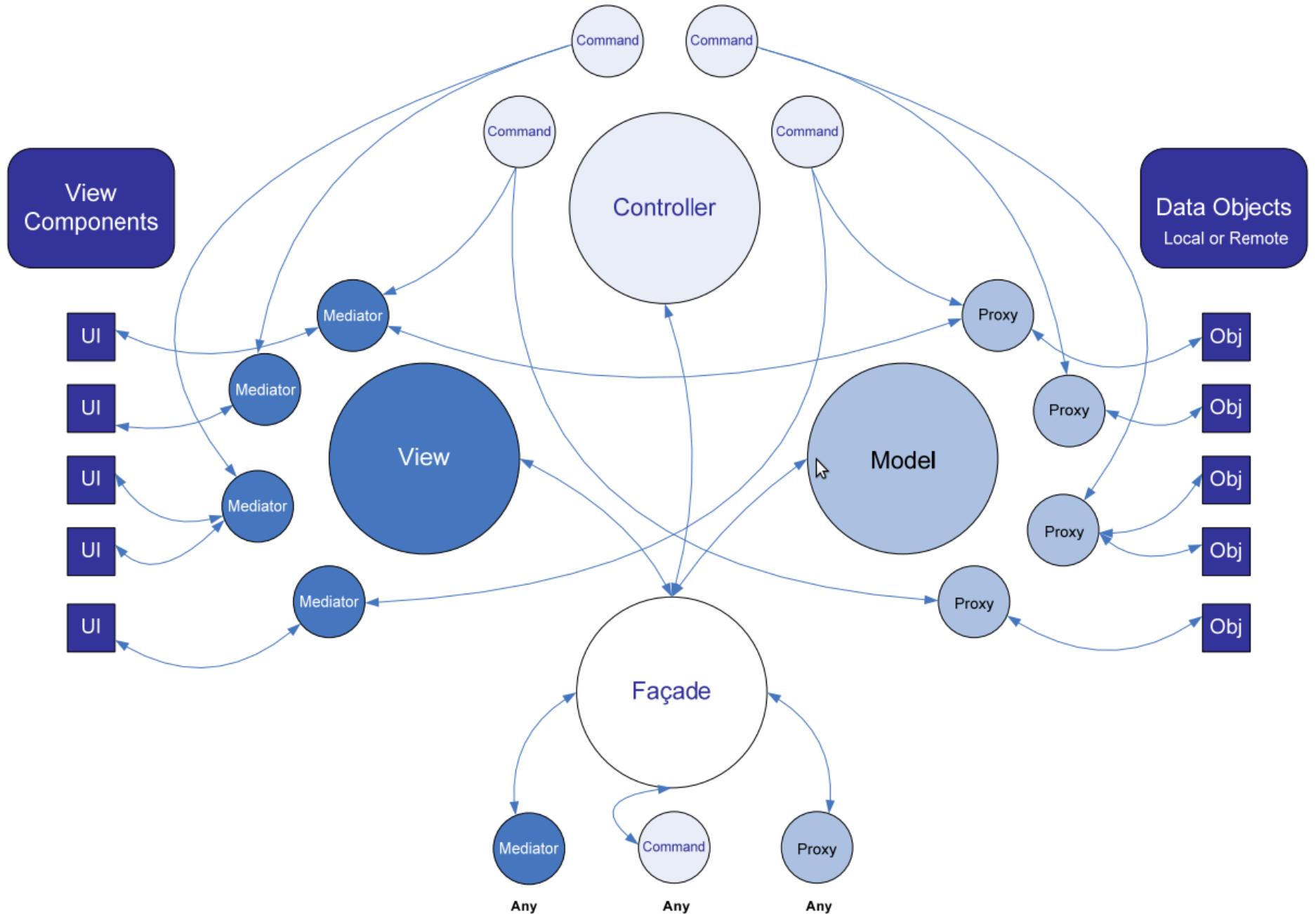


# GWT Event System

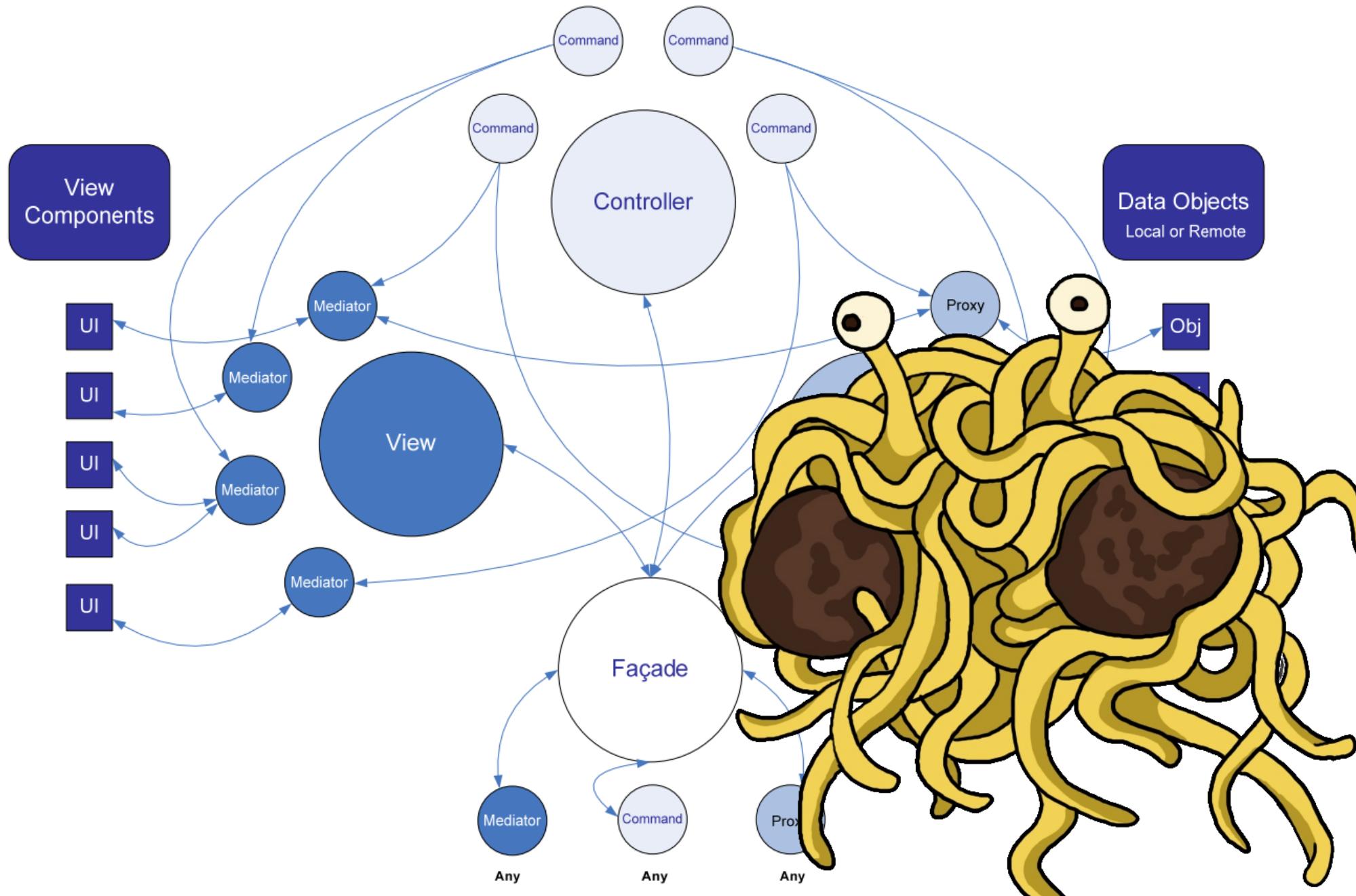
pros – it works, it's type safe

cons – complex?, lots to type,  
not easily shared?

# Flex Event Bus?



# Flex Event Bus?



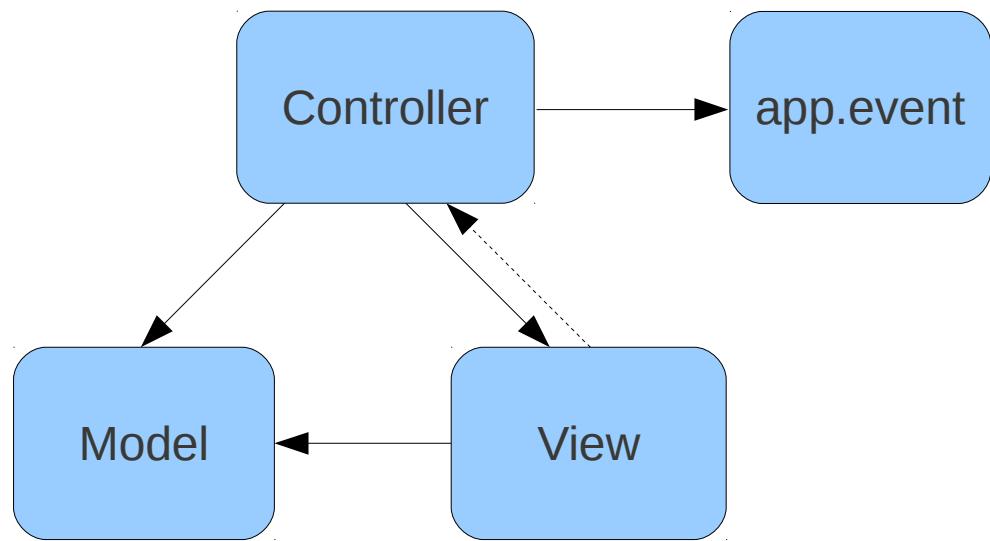
# PureMVC Event System

pros – it works and is not bad

cons – rest of PureMVC is  
complex

# Griffon Event System

demo



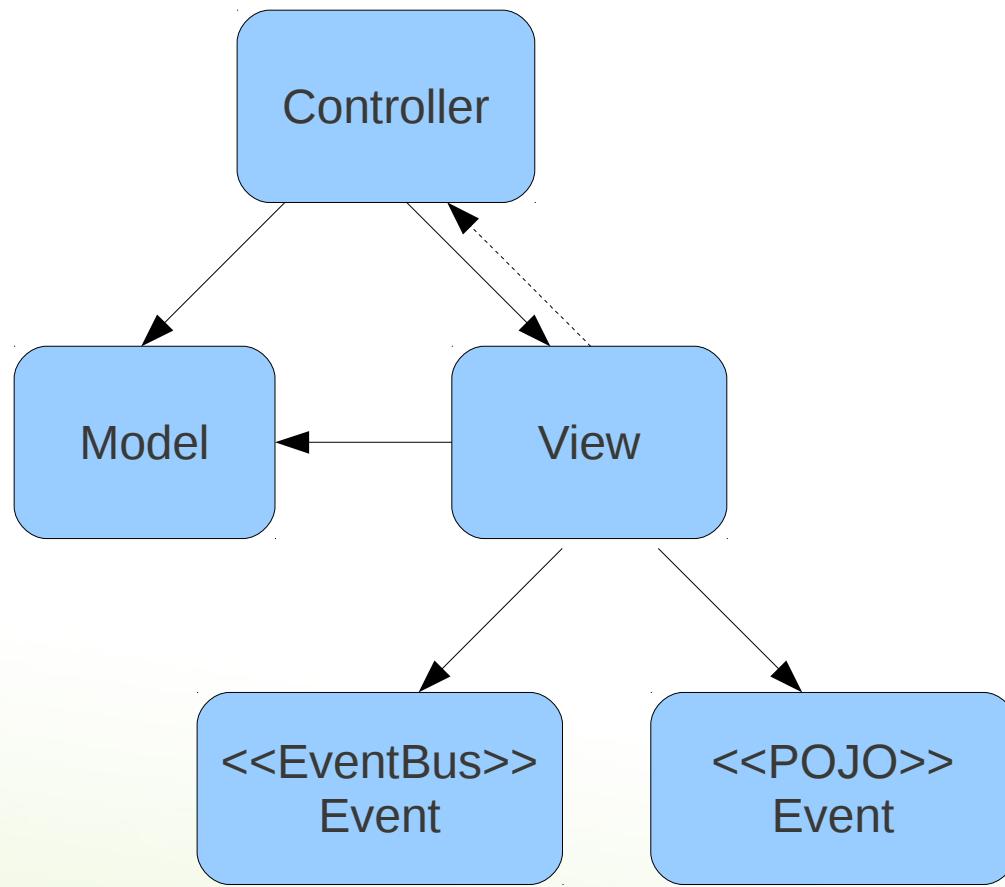
# Griffon Event System

pros – simple, always available,  
convention over configuration

cons – Groovy, Stringly Typed,  
No “Enterprise Flexibility”?

# JSR 299: Contexts and Dependency Injection for the JavaTM EE platform Event System

## demo



# CDI Event System

pros – Java Standard (EE & SE),  
simple, good IDEA support

cons – Not Spring,  
must run CDI Container

disclaimer – I have not used it in  
production

# Spring Event System

- \* ApplicationEvent
- \* ApplicationListener
- \* ApplicationContext
  - .publishEvent(ApplicationEvent)

# Spring Event System

pros – It's Spring!

cons – Not intended for this?

disclaimer – I have not used it in production

# Grasp Presentation Model Pattern

- \* Presentation Model Pattern in Groovy
- \* experimental, general, open-source
- \* result of 3 major Canoo RIA Suite projects
- \* <http://github.com/canoo/grasp>
- \* built with Gradle, tested with Spock

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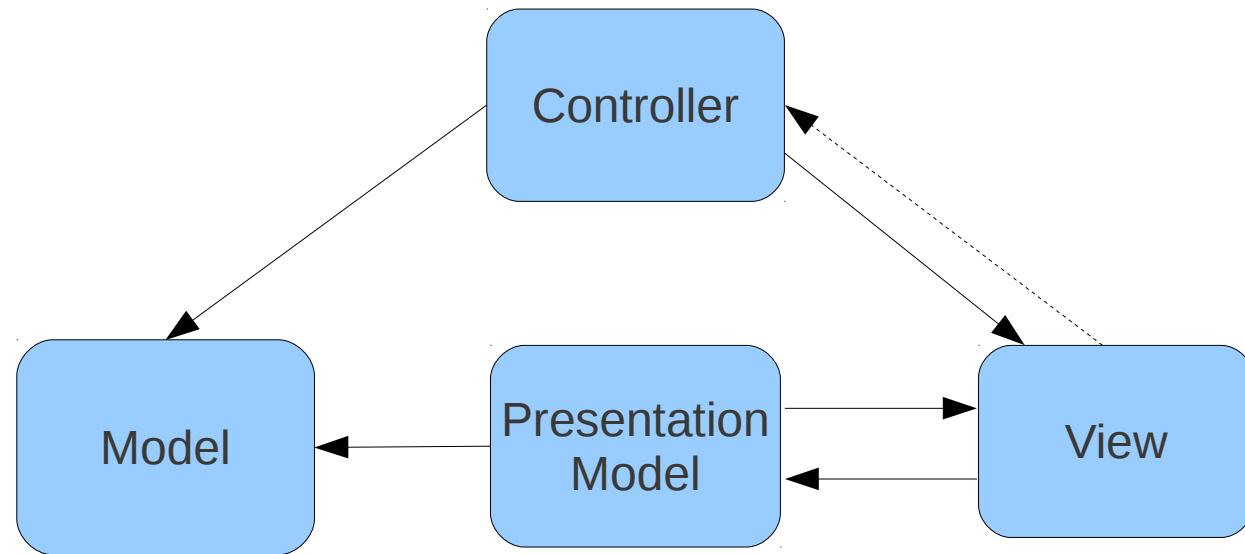


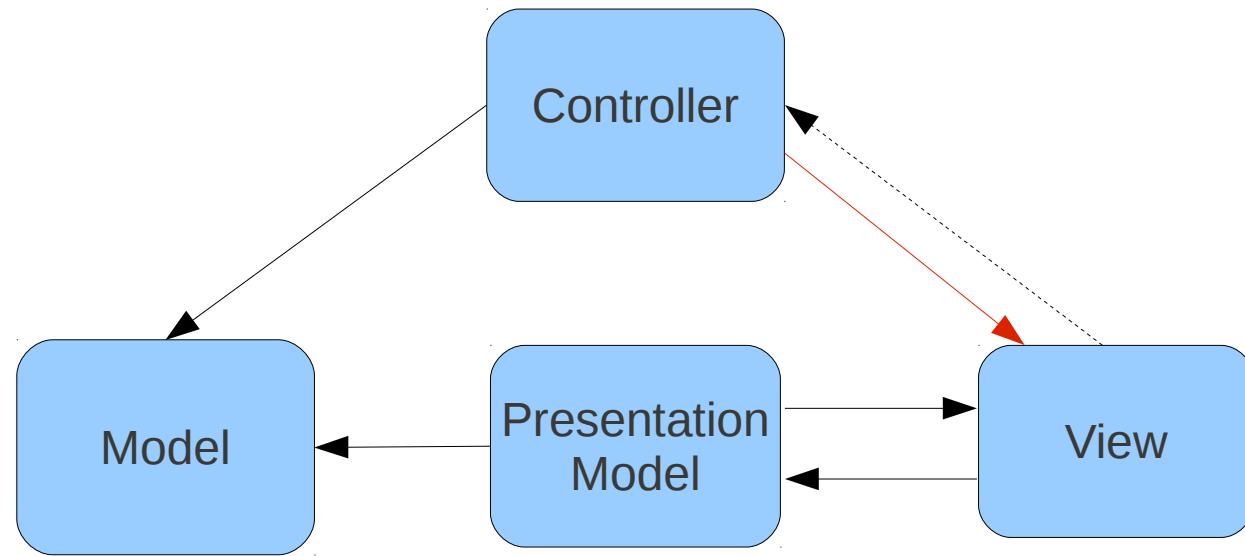
# Grasp Presentation Model Pattern

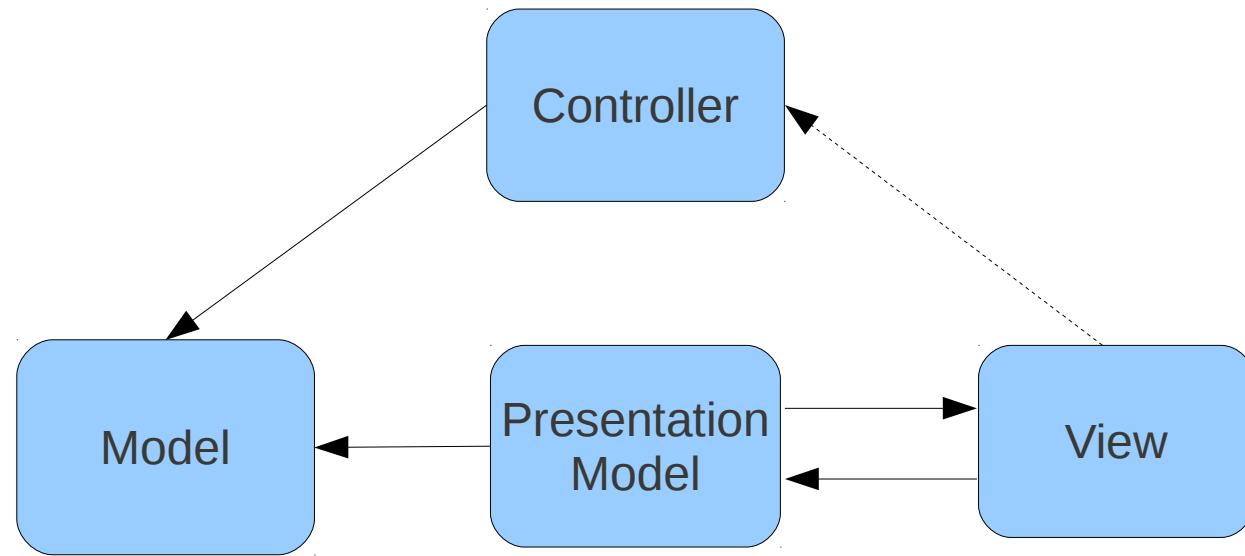
- \* No View Knows Any Other View
- \* Program To Presentation Model  
not the Domain Model
- \* PM to DM Binding is Magic

# Grasp Presentation Model Pattern

demo







# Grasp Presentation Model Pattern

- \* No view knows any other view
- \* Views can be mapped to models
- \* View 'plumbing' hidden in Preso Model

# Summary

- \* MVC benefits from more decoupling
- \* Event Buses decouple controllers
- \* Presentation Models decouple views

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Groovy, Grails, Griffon, and Java Consulting

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