

Frameworks Are Bad, OK?



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Who am I?

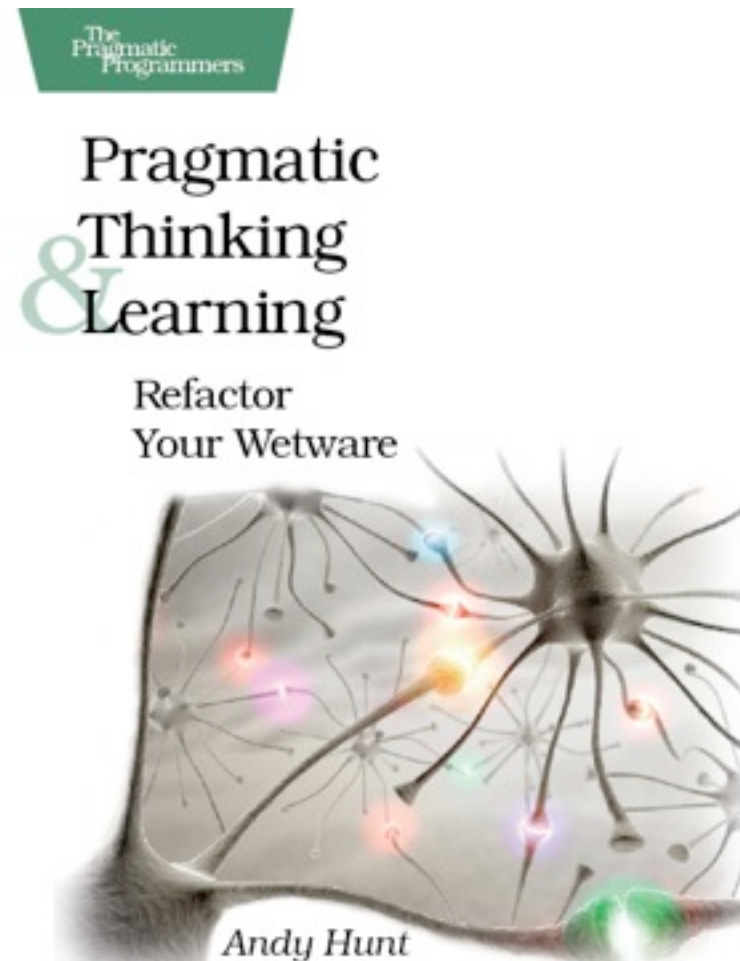
- Director of Class Software for almost 15 years
- Developing and creating web applications for 15 years
- Programming for 25 years
- Adobe certified developer and trainer in Flex and ColdFusion
- Adobe Community Champion
- Based in Sydney Australia



What I'm Talking About

- Not about specific frameworks
- “best” or “worst” framework to use
- What an expert?
- How your brain works
- General issues with frameworks
- How to write MVC without a framework
- How to get the best out of your framework





Pragmatic Thinking & Learning



Experience with Frameworks

- MVC frameworks for about 20 years
- Used Cairngorm, Mate, Swiz, PureMVC, Parsley frameworks in commercial projects.
- Flex Framework.



Frameworks are Bad

- Hard to understand and use
- Hard to debug when things go wrong
- Used for the wrong reasons
- Used incorrectly
- Too abstract and generic
- Like to do things their own way
- Hinder learning and skill progression



What does it take to be an Expert?



Dreyfus Model

- Novices
- Advanced Beginner
- Competent
- Proficient
- Expert



Novice

- Just want to get it done
- Confused when things don't work
- Need rules or recipes
- No real understanding of context



Advanced Beginners

- Break away from rules a little
- Understand limited context
- Difficulty trouble shooting



Competent

- Conceptual models
- Can troubleshoot
- Can solve new problems
- Seek out and use advice
- May not know what to focus on when troubleshooting



Proficient

- Can reflect and change
- Learn from others experience
- Know when rules apply and don't apply
- Experience teaches what to expect



Expert

- Source of knowledge
- Look for better ways and methods
- Large body of experience to draw upon
- Work from intuition not reason
- Can focus on what details are important and knows what can be ignored
- Frameworks will hinder



Unskilled and Unaware of it

- Most people think they are more skilled
- Second order incompetence



The Bad News

- It takes 10000 hours to become a expert
- No shortcuts it's hard work
- Constant learning and practise
- Applies to a single skill



The Good News

- Less time to become an expert in something similar
- You can learn new things



Experts are Bad

- Most are not experts at teaching
- Can't explain why they do things



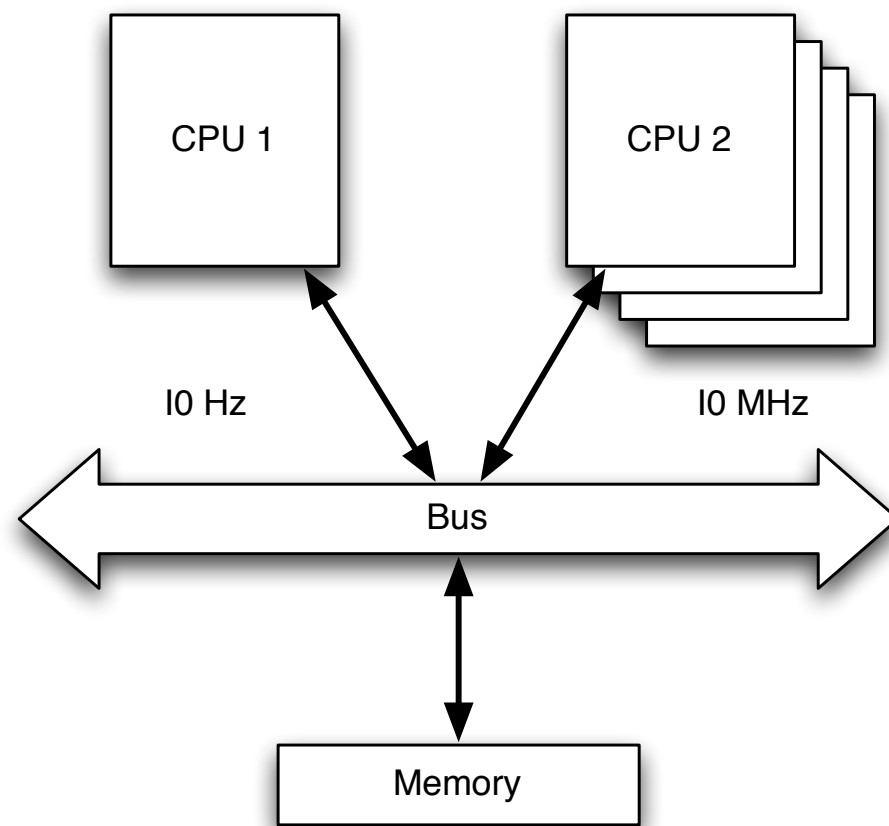
How Your Brain Works



Your Brain as a Computer

- Dual CPU
- 1st CPU linear and slow
- 2nd CPU muticore, asynchronous, fast
- Shared Bus
- DRAM memory





Your Brain



L Mode Thinking

- Processes language
- Linear and logical
- Step by step
- Slow
- Keeps track of time



R Mode Thinking

- Pattern matching searches
- Can run in the background
- Used for intuition, problem solving and creativity
- Stores everything (but not indexed)
- Non rational



Bus and Memory

- Shared bus only one CPU can use at a time
- Memory must be refreshed
- Reads is also a write



Why R Mode is Important

- Writing code is more art than science
- Fast
- Provides intuition
- Vital for problem solving
- If not using you only using half your brain power



The Trouble With Frameworks



What's Good

- Can development time on large projects
- Reduce dependancies between parts of code
- Written by smart people
- Solves know problems



Which Framework?

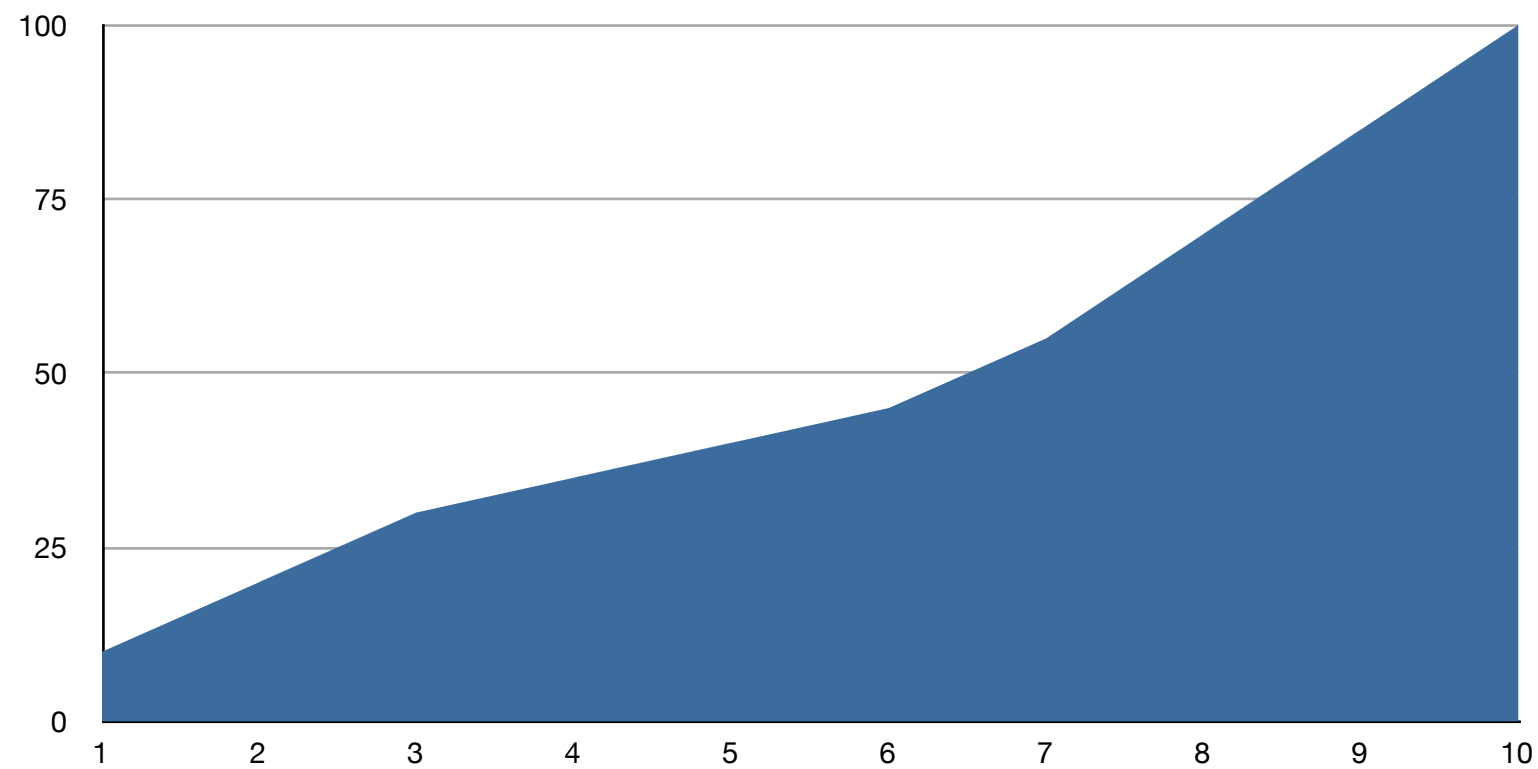
- Which one should you use?
- New ones all the time
- Frameworks have bugs!



Context is King

- “Best” framework to use:
 - Depends on you teams skill
 - Depends on the project





Knowledge vs Time



Framework Misuse

- Shallow design and no architecture
- Copy and paste coding



Framework Use

- Hard to understand
- Can be inflexible
- Hard to debug



Flex and Frameworks

- Do things their own way and ignore Flex
- Some frameworks are trying to solve other language issues
- May not support all needed Flex features



Model View Controller

- Most Flex framework are MVC
- Different MVC frameworks use view, model and controller slightly differently
- MVC is about 30 year old!
- Other styles of frameworks exist
- Most frameworks can be implemented via design patterns



Flex is a Framework



Simple MVC

- Structure
- Components
- Data binding
- Events



It's Coding Time (Finally)



Framework Recovery Program



One Size Does Not Fit All

- Depends on your team
- Depends on your project



There Can Only Be One

- Read up about different frameworks
- Learn more than one framework
- Consider Flex SDK and libraries



Still writing COBOL?

- Look into framework history and what problems it try to solve
- Does the framework suit Flex/AS?



Start Simple

- Consider using a simple framework
- You can go a long way with some structure components, data binding and events
- Later you can add libraries or convert to a “real” framework



Use Flex and AS!

- Use a framework that take advantage of Flex and AS features
- Do you really want to use a clone of a framework written for another language?



Use The Source

- Source code is a must!
- Easier to debug and understand what's going on
- Frameworks and be good example of design patterns



Bend the Rules

- Treat a framework as guidelines
- Don't fight the framework, if it's not working change it



Solve the Right Problem

- Solve business problems not framework problems
- Bend the framework to you will!
- Don't fight the framework



Architecture

- A framework is no substitute



Throw It Away

- Find a framework that can be removed or easily swapped



Not All Dependancy is Bad

- Reducing dependancy comes at a cost
- Complexity vs simplicity



Be Lazy

- Use code generation for
 - Data model
 - Common framework plumbing like messages or commands



The Future of Frameworks

- Frameworks other than MVC
- Less general frameworks
- Advice on what frameworks are good for what teams and projects
- Better debugging support



Questions?

Ask now, see me after the session,
follow me on twitter @justinmclean
or email me at justin@classsoftware.com.

Code and slides can be found at
<http://blog.classsoftware.com>

