



# MacRuby

You need to Have Xcode, MacRuby and  
BridgeSupport.

<http://www.macruby.org/downloads.html>

[http://www.macruby.org/files/  
BridgeSupport%20Preview%203.zip](http://www.macruby.org/files/BridgeSupport%20Preview%203.zip)



Mac + Ruby = MacRuby



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# MacRuby

- Mac + Ruby = MacRuby
- macruby
- macirb
- macgem

# Objective-C Primer

- Many Classes prefixed with NS.
- Apps work from inside a Runloop.
- Callbacks and Delegation.
- Cocoa API: Foundation, AppKit, CoreData.
- Xcode + Interface Builder.

# Objective-C Primer

- Objects “pass messages” and look like:  
`[object method:argument];`
- Always call alloc and init (avoid new)  
`[[MyClass alloc] init];`
- Supports garbage collection (not iOS),  
blocks, dynamic typing...
- [http://cocoadevcentral.com/d/learn\\_objectivec/](http://cocoadevcentral.com/d/learn_objectivec/)



# MacRuby

# What is MacRuby?

**MacRuby** is an implementation of Ruby 1.9 directly on top of Mac OS X core technologies such as the Objective-C runtime and garbage collector, the LLVM compiler infrastructure and the Foundation and ICU frameworks. It is the goal of MacRuby to enable the creation of full-fledged Mac OS X applications which do not sacrifice performance in order to enjoy the benefits of using Ruby.

# Let me summarize...

- You need a Mac.
- You need to use Ruby.  
(I mean seriously, who doesn't...)
- Build applications for OS X 10.6+
  - LLVM, Objective-C Runtime + GC
  - Core Foundation Frameworks

# Enough Talky, Talky...

Let's build something!

# Okay. But first.

- Install Xcode.
- Install MacRuby.
- PSA: HotCocoa is dead. Don't use it.
- If using RVM don't change default...  
`'rvm --default use system'`

# More on the RVM Issue

- RVM is awesome.
- create and `.rvmrc` to set project specific ruby versions that are not system.
- Your `.rvmrc` file should look like this  
`rvm ruby-1.9.2-p180@your_project`

# Enough Talky, Talky...

Let's build something.  
For real this time!

# DEMO

## Hello RubyConf!

A quick example to get us started.

# DEMO

## Balloon

A tool that sends files  
into the clouds.

[github.com/castlerock/balloon](https://github.com/castlerock/balloon)



# Things to note

- If you want use a Framework  
framework 'Growl'
- If you want use a GEM  
require 'rubygems'  
require 'cloudfiles'

# Things to note

- If you want to provide KVC  
`attr_accessor :imageView`
- Message passing with to Objective-C  
`doSomethingWithAColor(color,  
andShape:shape) OR  
doSomethingWithAColor(color,  
:andShape => shape)`

# Advanced MacRuby

Albeit painfully slowly, it was in fact possible to do some of the previous in RubyCocoa. I was promised MacRuby hotness at this session. What gives?!?

# Advanced MacRuby

- Bridge Support & Scripting Bridge
- Grand Central Dispatch
  - NSOperationQueue
  - Dispatch Groups/Queues
- Sandboxing
- Building for the App Store

# Bridge Support

- BridgeSupport Preview adds support for:
  - Clang/LLVM & Blocks
  - ALL SYSTEM FRAMEWORKS
- Provides a tool to generate bridge support for YOUR own API.
- `gen_bridge_metadata`

# Scripting Bridge

- Provides access from MacRuby to AppleEvent infrastructure (AppleScript).
- Uses bridgesupport XML files access the scriptable interface.

# Grand Central Dispatch

- Tasks
- Queues
  - Main - serial, you're main thread.
  - Private - serial, instances run in parallel.
- Groups

# NSOperationQueue

- Subclass NSOperation with your own logic 'main' method.
- Create NSOperationQueue or use the Main Queue
- Create NSOperation (with Block).
- Add NSOperation.

# DEMO

## Balloon

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# From Hemant's Kitchen

Today's Feature Menu

~

Dispatch::Queue (queue.sync)

Dispatch::Queue (queue.async)

Dispatch::Group

~

Dispatch::Queue.concurrent.async

~

Futures



# Sandboxing

- Sandbox to restrict access to network, internet, and filesystem.

```
begin
  File.new("/tmp/you-bet.txt", "w").close
  Sandbox.no_writes.apply!
  File.new("/tmp/no-way.txt", "w").close
rescue SystemCallError => ex
  puts ex.class
  puts ex.message
end
```

# Building for the App Store

- Embed the MacRuby runtime inside an application bundle.
- Also embed gems and BridgeSupport files.

```
macruby_deploy --embed --bs --gem googl --gem  
rackspace Balloon.app
```

# MacRuby Takeaway

[github.com/castlerock/macruby\\_rci2011](https://github.com/castlerock/macruby_rci2011)  
[github.com/castlerock/balloon](https://github.com/castlerock/balloon)

If you are smarter than me fork, fix and submit a pull request.