Introduction to iOS Software Development

Adrian Kosmaczewski - akosma software
QCon 2011 - London

Adrian Kosmaczewski

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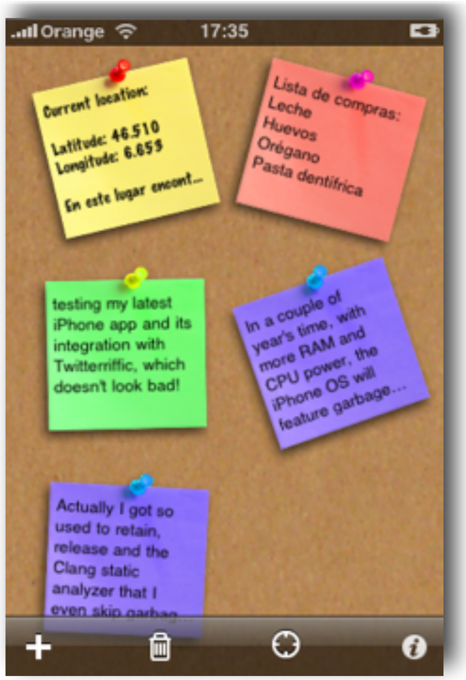

Orange 17:35

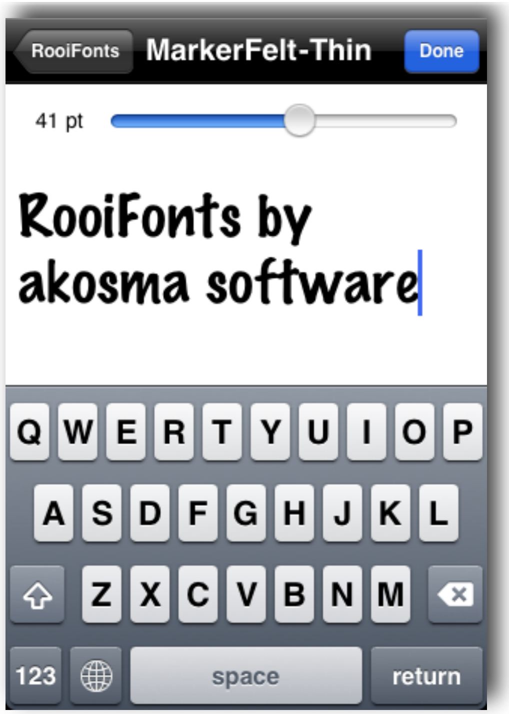
Current location:
Latitude: 46.510
Longitude: 6.655
En este lugar encont...

Lista de compras:
Leche
Huevos
Orégano
Pasta dentifrica

testing my latest iPhone app and its integration with Twitterriffic, which doesn't look bad!

In a couple of year's time, with more RAM and CPU power, the iPhone OS will feature garbage...

Actually I got so used to retain, release and the Clang static analyzer that I even skip garbag...



RooiFonts by akosma software

bluewoki by akosma

connected with Hermes

DeviceDNA

2C1641DC-FFA5-5055-A... Unique Device Identifier	✓
iPhone Simulator Device Name	✓
iPhone OS 3.0 iPhone OS Version	✓
iPhone Simulator Device Model	✓

Select the values to send
and press the message button

DeviceDNA © Copyright 2009 akosma
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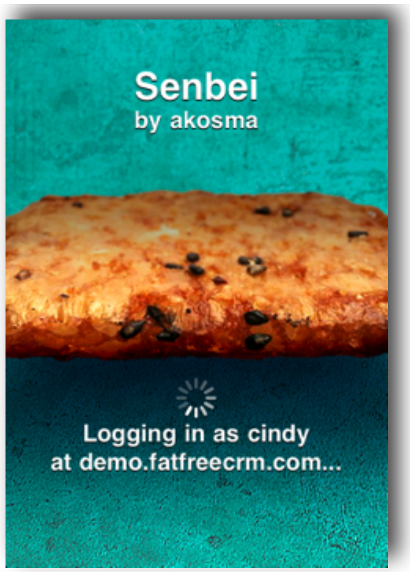
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by akosma

Logging in as cindy
at demo.fatfreecrm.com...

JAOO
conference

QCon

The essence of modern software engineering
OOP 2011
Software meets Business

SDC2011

iOS

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Some questions

Veteran NeXT or
Mac OS X developers
in the room?

iOS devices
in the room?

Program

History

Objective-C & Cocoa

Tools

Web vs. Native Apps

The App Store

Design

Books

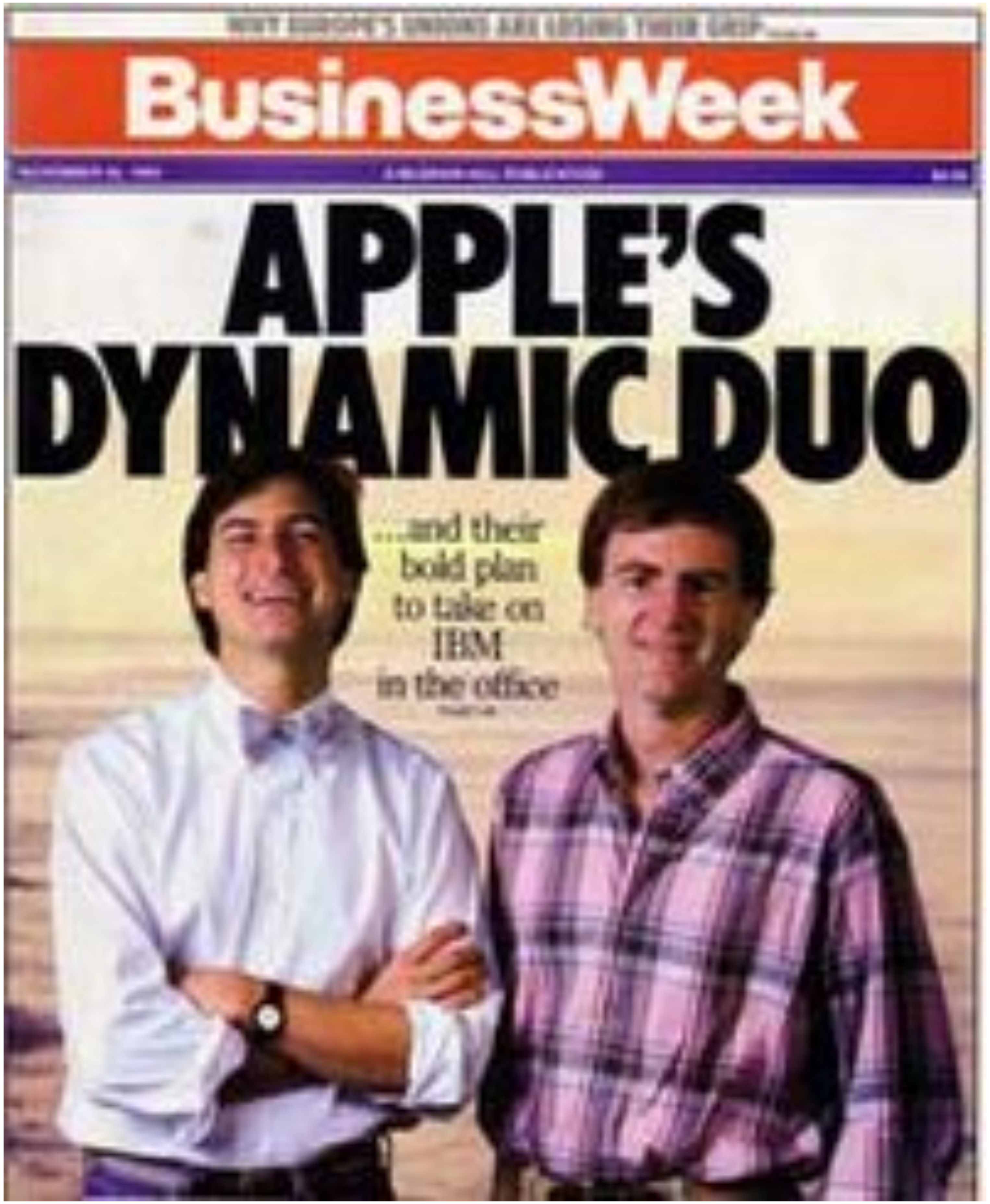
Q&A

History

“Good design survives”

Erich Gamma
OOP 2011 Keynote

born in the 80s



WHY EUROPE'S UNIONS ARE LOSING THEIR GRIP [illegible]

BusinessWeek

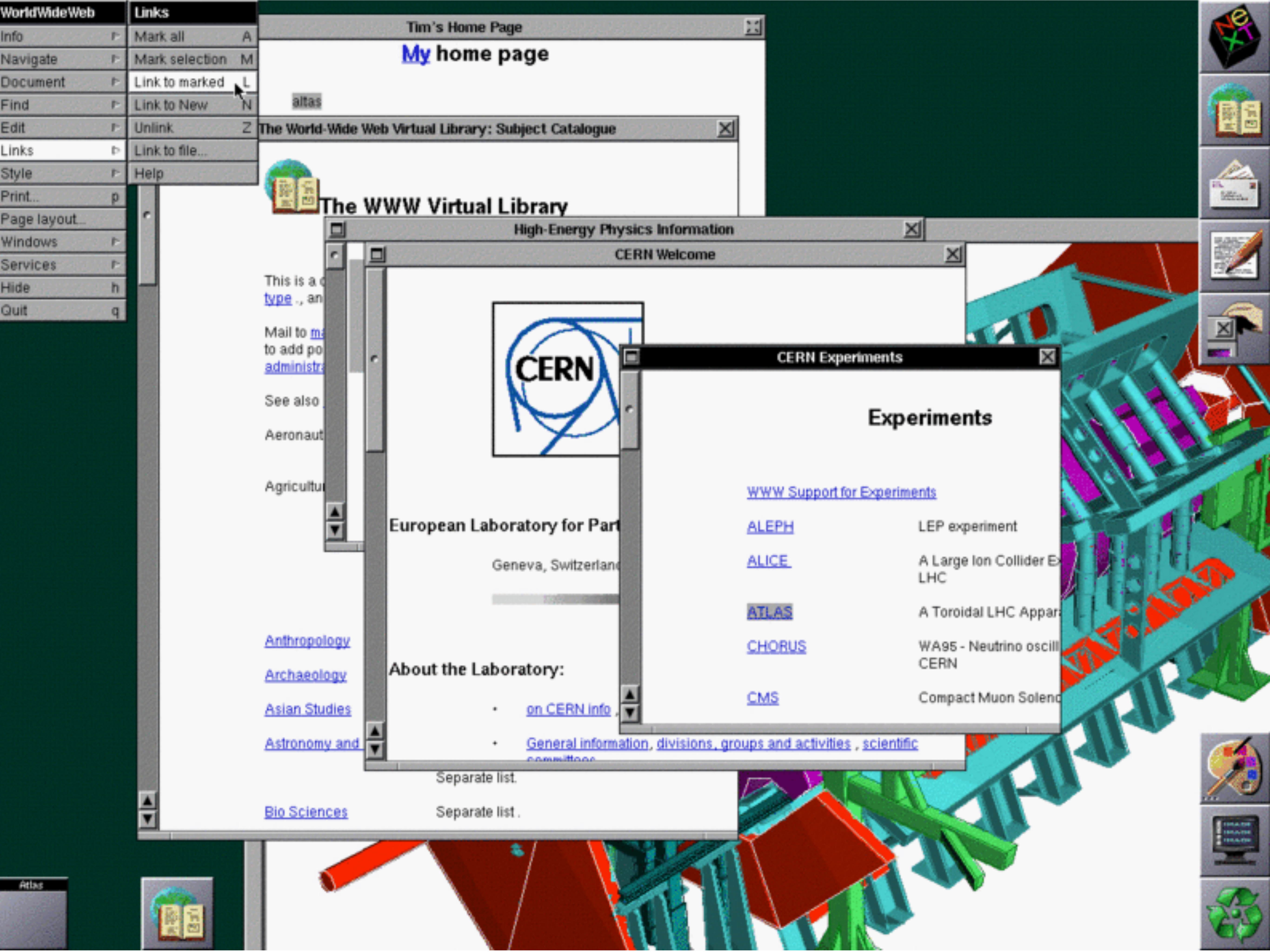
[illegible] [illegible] [illegible]

APPLE'S DYNAMIC DUO

...and their bold plan to take on IBM in the office

[illegible]

NeXT
NeXT



Tim's Home Page

My home page

altas

The World-Wide Web Virtual Library: Subject Catalogue

The WWW Virtual Library

This is a c
type ., an

Mail to ma
to add po
administra

See also

Aeronaut

Agricultu

Anthropology

Archaeology

Asian Studies

Astronomy and

Separate list.

Bio Sciences Separate list .

High-Energy Physics Information

CERN Welcome

CERN

European Laboratory for Part

Geneva, Switzerland

About the Laboratory:

- on CERN info ,
- General information, divisions , groups and activities , scientific committees

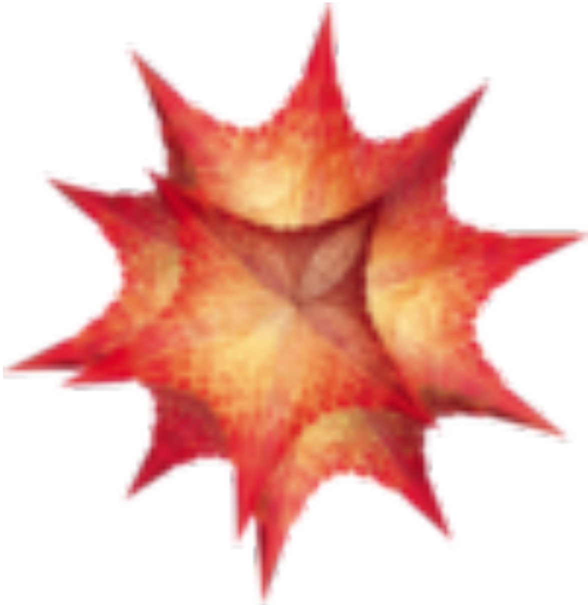
CERN Experiments

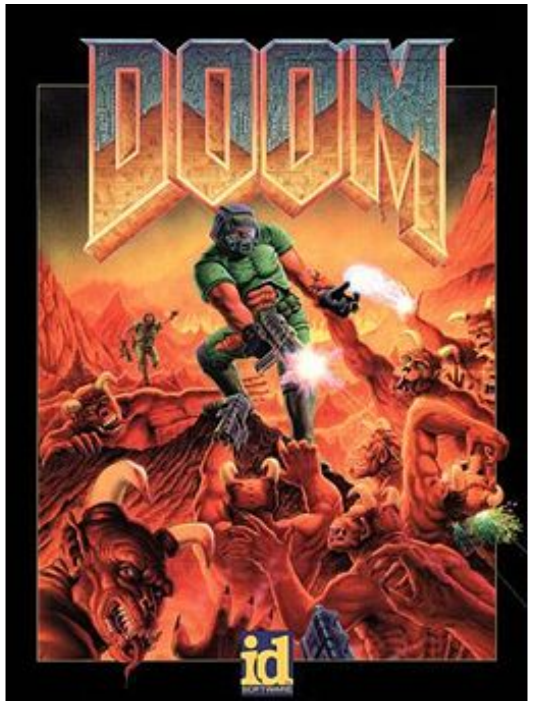
Experiments

WWW Support for Experiments

ALEPH	LEP experiment
ALICE	A Large Ion Collider E LHC
ATLAS	A Toroidal LHC Appar
CHORUS	WA95 - Neutrino oscill CERN
CMS	Compact Muon Solen

Lotus




DOOM
id
SOFTWARE

Objective-C

The “real” inspiration for Java:

http://cs.gmu.edu/~sean/stuff/java-objc.html

"Thin layer around C"

Message-dispatch runtime built in C:

```
 obj_msgSend()
```

Static **and** dynamic (a piacere)

Single inheritance + interfaces (“@protocols”)

Fields protected by default

All methods are public, virtual and overridable

Methods can be added to existing classes

- "categories"

Full introspection / reflection

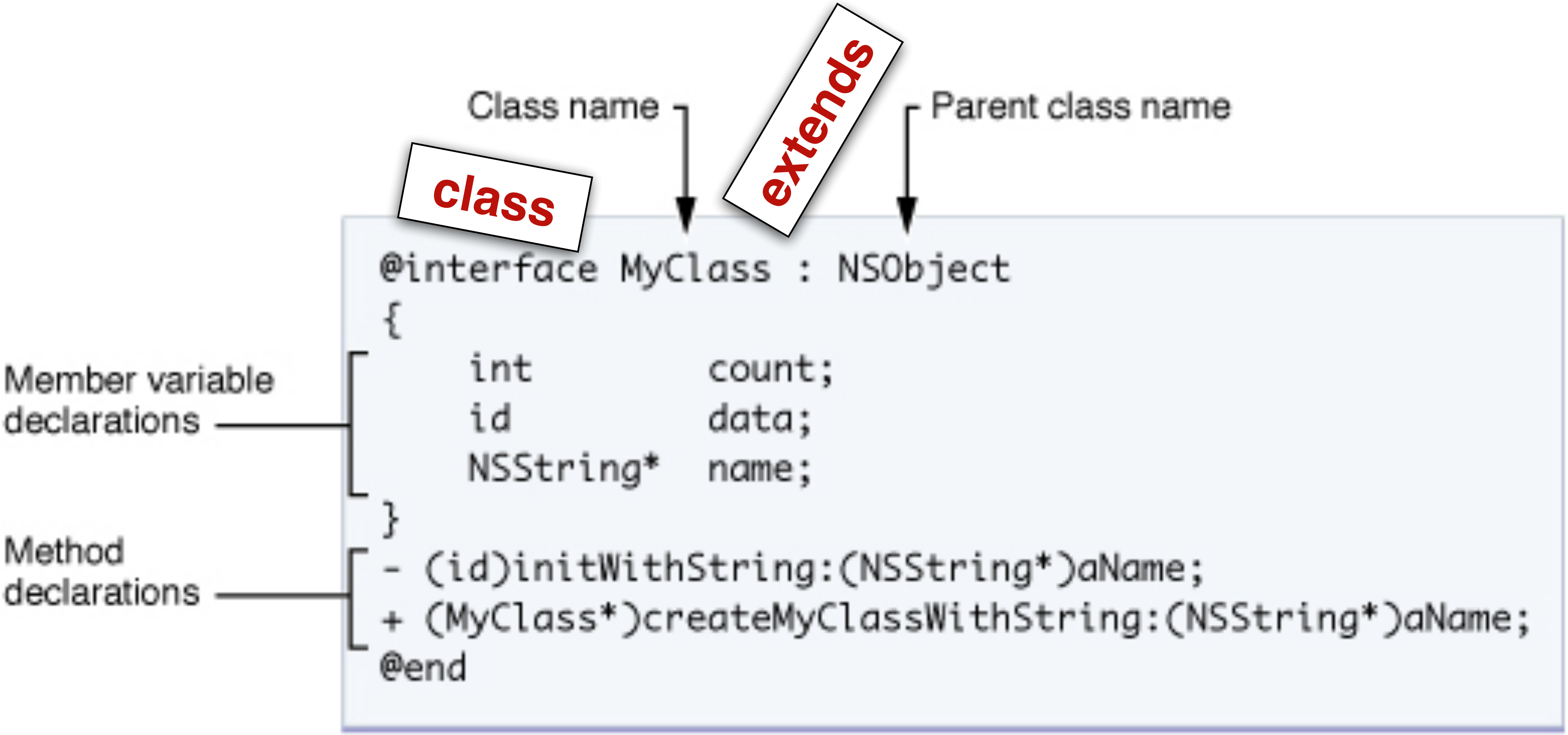
Messages can be intercepted and forwarded

- "à la AOP"

Objective-C	**Java / C#**
@interface (.h) & @implementation (.m)	class (1 file)
@protocol	interface
#import // files!	import // classes!
categories	n/a (C#, “class extensions”)
id	n/a (generics?) "void*"

Objective-C	Java / C#
@selector	n/a (C# delegates)
NSObject / NSProxy / …	Object
@public / @protected / @private	public / protected / private
@try / @catch / @finally NSException	try / catch / finally Exception
n/a	package / namespace

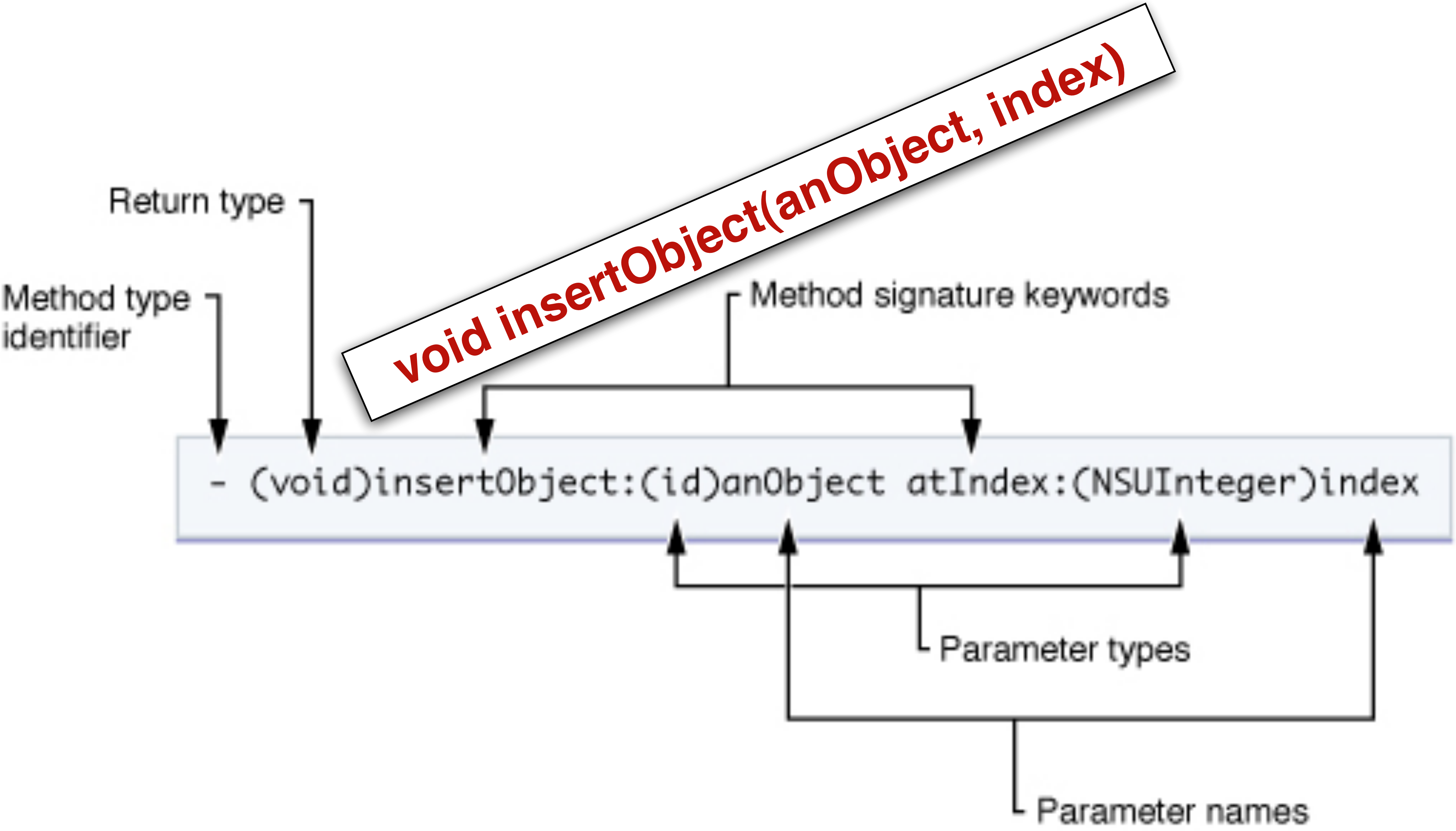
Classes



```
@interface MyClass : NSObject
{
    int         count;
    id          data;
    NSString*   name;
}
- (id)initWithString:(NSString*)aName;
+ (MyClass*)createMyClassWithString:(NSString*)aName;
@end
```

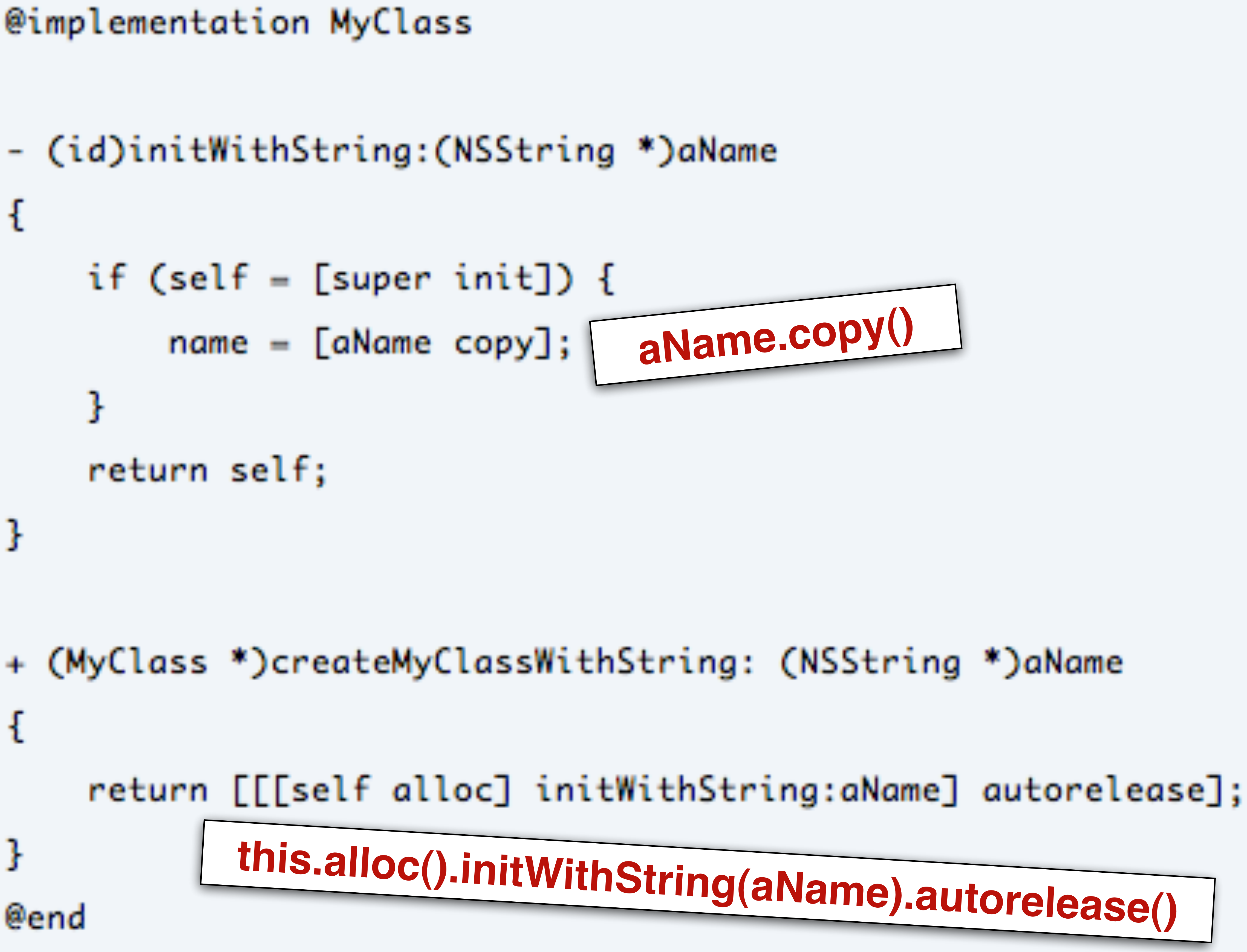
Methods

Syntax inspired from Smalltalk



```
- (void)insertObject:(id)anObject atIndex:(NSUInteger)index
```

void insertObject(anObject, index)



```
@implementation MyClass

- (id)initWithString:(NSString *)aName
{
    if (self = [super init]) {
        name = [aName copy];
    }
    return self;
}

+ (MyClass *)createMyClassWithString: (NSString *)aName
{
    return [[[self alloc] initWithString:aName] autorelease];
}
@end
```

aName.copy()

this.alloc().initWithString(aName).autorelease()

Memory Management

iPhone 3G: 128 MB RAM

iPhone 3GS, iPad: 256 MB RAM

iPhone 4: 512 MB RAM

iPad 2: ???

±70 MB for the OS!

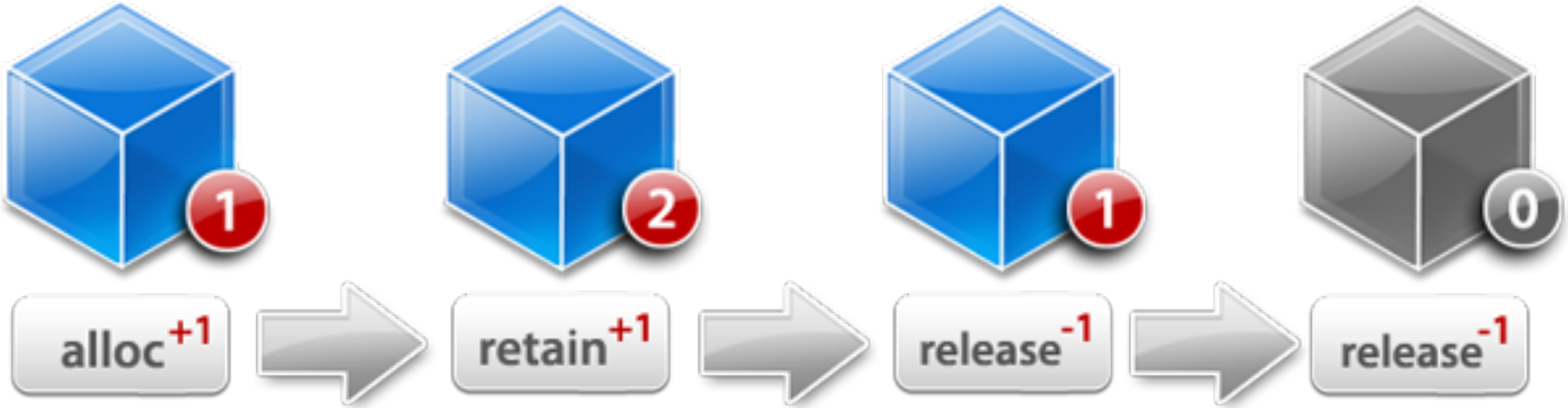
no swap file

no virtual memory

http://www.flickr.com/photos/cheek/6994407283/

no “classic” garbage collection

objects have a
“retain count”



http://cocoadevcentral.com/d/learn_objectivec/

basic rule:

for every
[alloc], [retain], [copy]

there must be a
[release]

beware:

Objective-C only allows objects on the heap

http://linguiniontheceiling.blogspot.com/2008/10/thats-madame-trash-heap-to-you.html

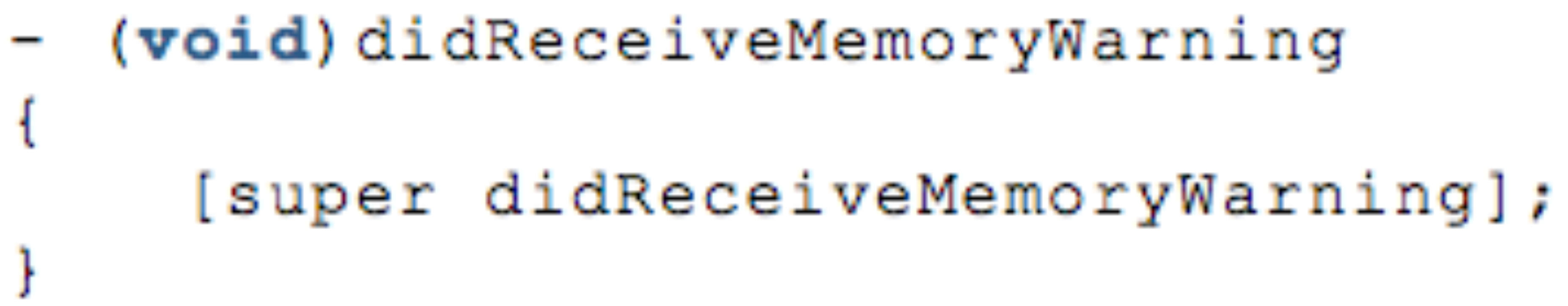
No automatic objects on the stack (C++)

http://www.futuregov.net/photologue/photo/2008/aug/30/stack-papers/

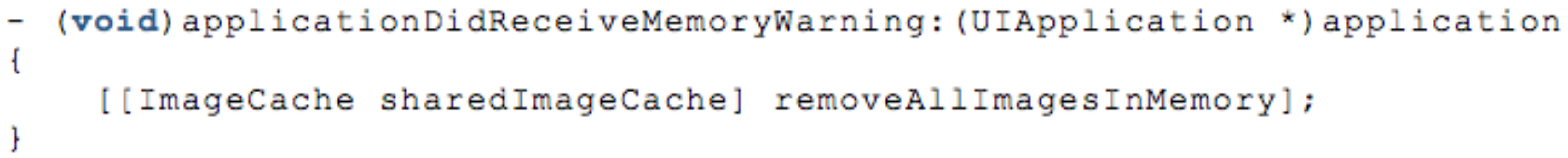
```
// C++
// Memory freed when out of scope
std::string name(“Adrian”);

std::string *name = NULL;
name = new std::string(“Adrian”);
delete name;
```

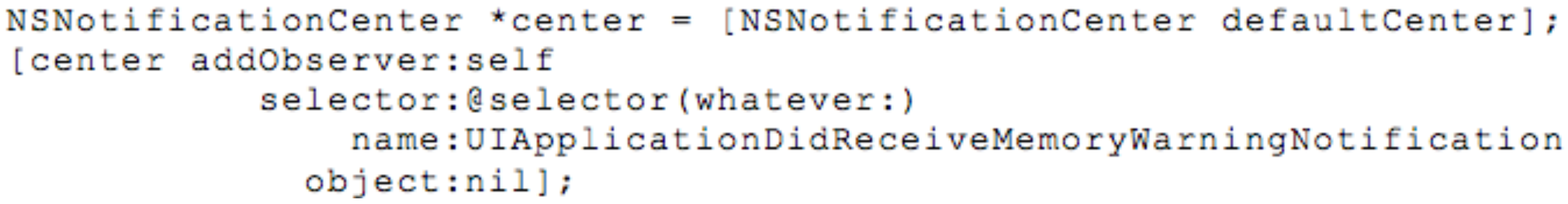
iOS memory warnings



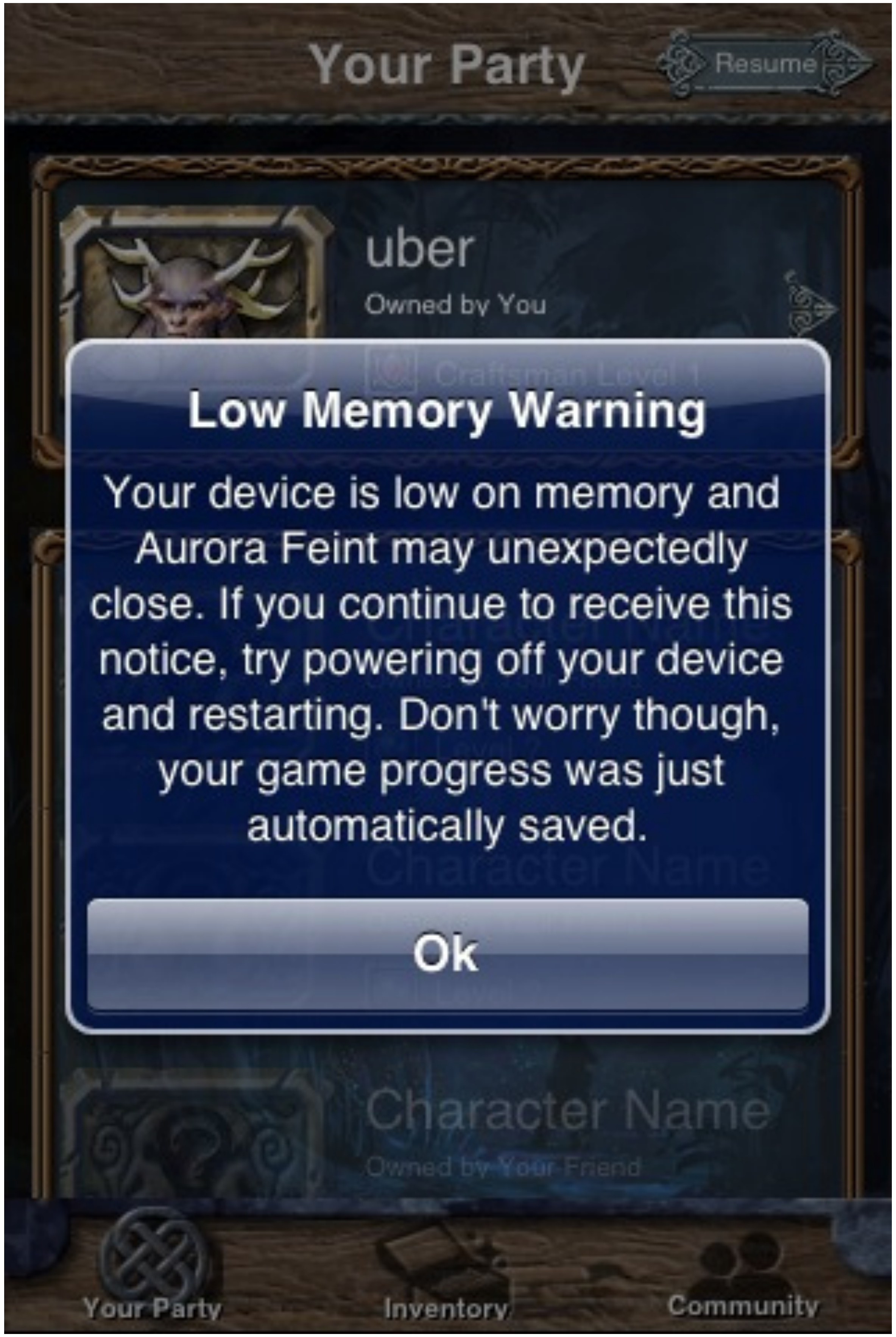
```
- (void)didReceiveMemoryWarning
{
    [super didReceiveMemoryWarning];
}
```



```
- (void)applicationDidReceiveMemoryWarning:(UIApplication *)application
{
    [[ImageCache sharedImageCache] removeAllImagesInMemory];
}
```



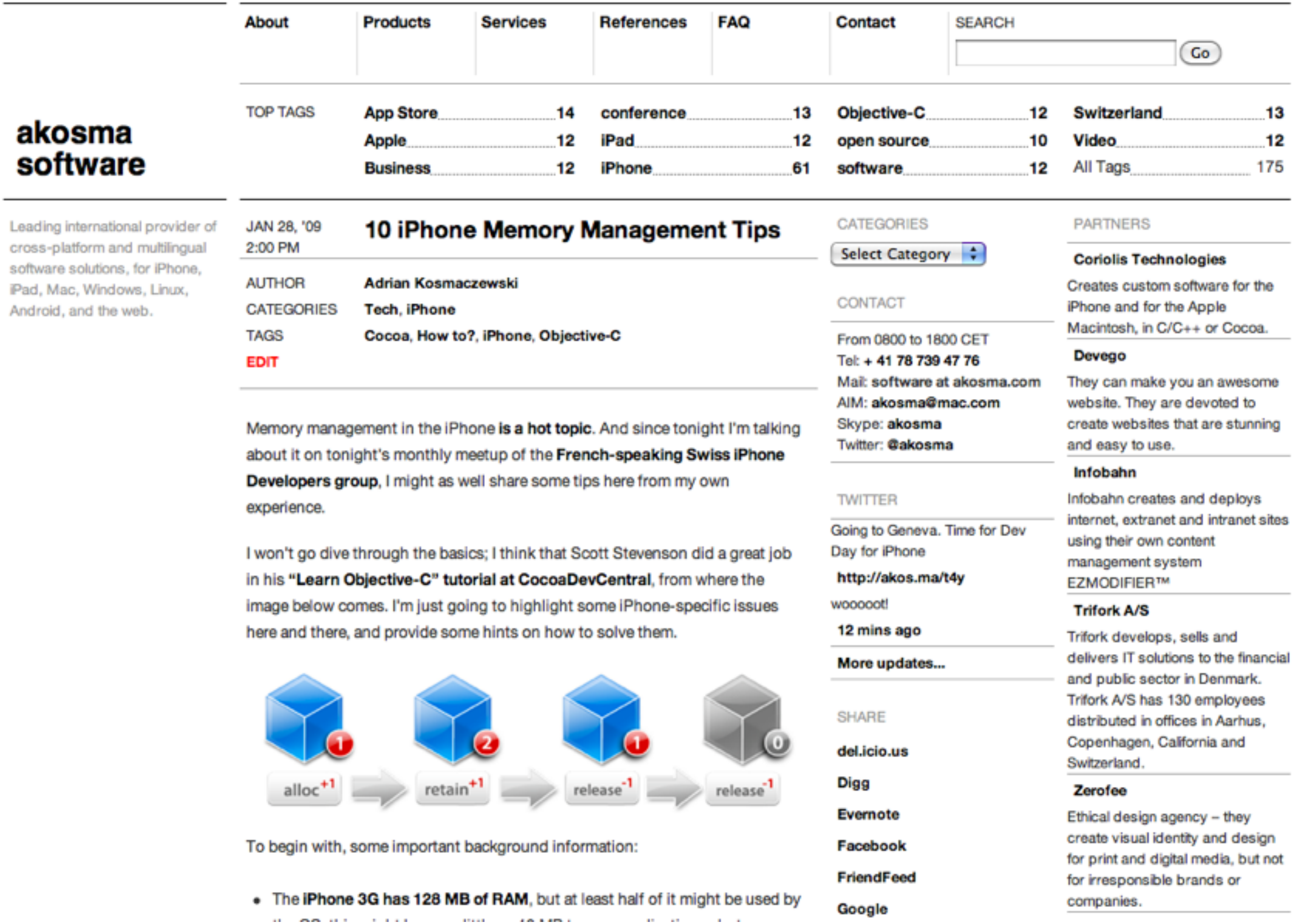
```
NSNotificationCenter *center = [NSNotificationCenter defaultCenter];
[center addObserver:self
           selector:@selector(whatever:)
               name:UIApplicationDidReceiveMemoryWarningNotification
             object:nil];
```



Low Memory Warning

Your device is low on memory and Aurora Feint may unexpectedly close. If you continue to receive this notice, try powering off your device and restarting. Don't worry though, your game progress was just automatically saved.

http://www.flickr.com/photos/tbuser/2763035540/



TOP TAGS

App Store	14	conference	13	Objective-C	12	Switzerland	13
Apple	12	iPad	12	open source	10	Video	12
Business	12	iPhone	61	software	12	All Tags	175

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JAN 28, '09
2:00 PM

10 iPhone Memory Management Tips

AUTHOR **Adrian Kosmaczewski**
CATEGORIES **Tech**, **iPhone**
TAGS **Cocoa**, **How to?**, **iPhone**, **Objective-C**
EDIT

Memory management in the iPhone **is a hot topic**. And since tonight I'm talking about it on tonight's monthly meetup of the **French-speaking Swiss iPhone Developers group**, I might as well share some tips here from my own experience.

I won't go dive through the basics; I think that Scott Stevenson did a great job in his **"Learn Objective-C" tutorial at CocoaDevCentral**, from where the image below comes. I'm just going to highlight some iPhone-specific issues here and there, and provide some hints on how to solve them.

To begin with, some important background information:

- The **iPhone 3G has 128 MB of RAM**, but at least half of it might be used by

CATEGORIES
Select Category

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From 0800 to 1800 CET
Tel: **+ 41 78 739 47 76**
Mail: **software at akosma.com**
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Going to Geneva. Time for Dev Day for iPhone **http://akos.ma/t4y** wooooot!
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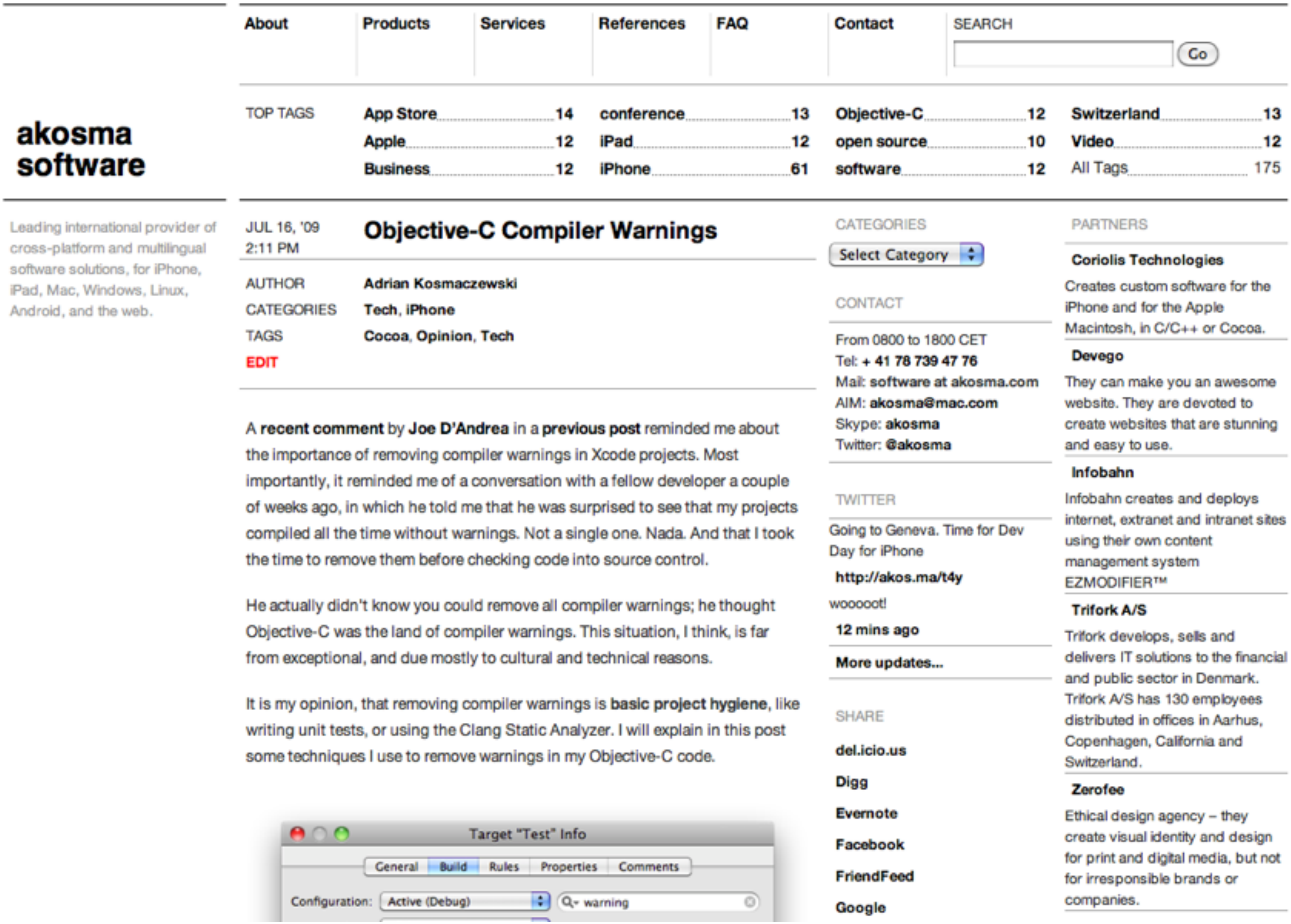
http://akosma.com/2009/01/28/10-iphone-memory-management-tips/



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JUL 16, '09
2:11 PM

Objective-C Compiler Warnings

AUTHOR **Adrian Kosmaczewski**
CATEGORIES **Tech, iPhone**
TAGS **Cocoa, Opinion, Tech**
EDIT

A **recent comment** by **Joe D'Andrea** in a **previous post** reminded me about the importance of removing compiler warnings in Xcode projects. Most importantly, it reminded me of a conversation with a fellow developer a couple of weeks ago, in which he told me that he was surprised to see that my projects compiled all the time without warnings. Not a single one. Nada. And that I took the time to remove them before checking code into source control.

He actually didn't know you could remove all compiler warnings; he thought Objective-C was the land of compiler warnings. This situation, I think, is far from exceptional, and due mostly to cultural and technical reasons.

It is my opinion, that removing compiler warnings is **basic project hygiene**, like writing unit tests, or using the Clang Static Analyzer. I will explain in this post some techniques I use to remove warnings in my Objective-C code.

Target "Test" Info

General | Build | Rules | Properties | Comments

Configuration: Active (Debug) warning

CATEGORIES

Select Category

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Mail: **software at akosma.com**
AIM: **akosma@mac.com**
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TWITTER

Going to Geneva. Time for Dev Day for iPhone **http://akos.ma/t4y** wooooot!
12 mins ago

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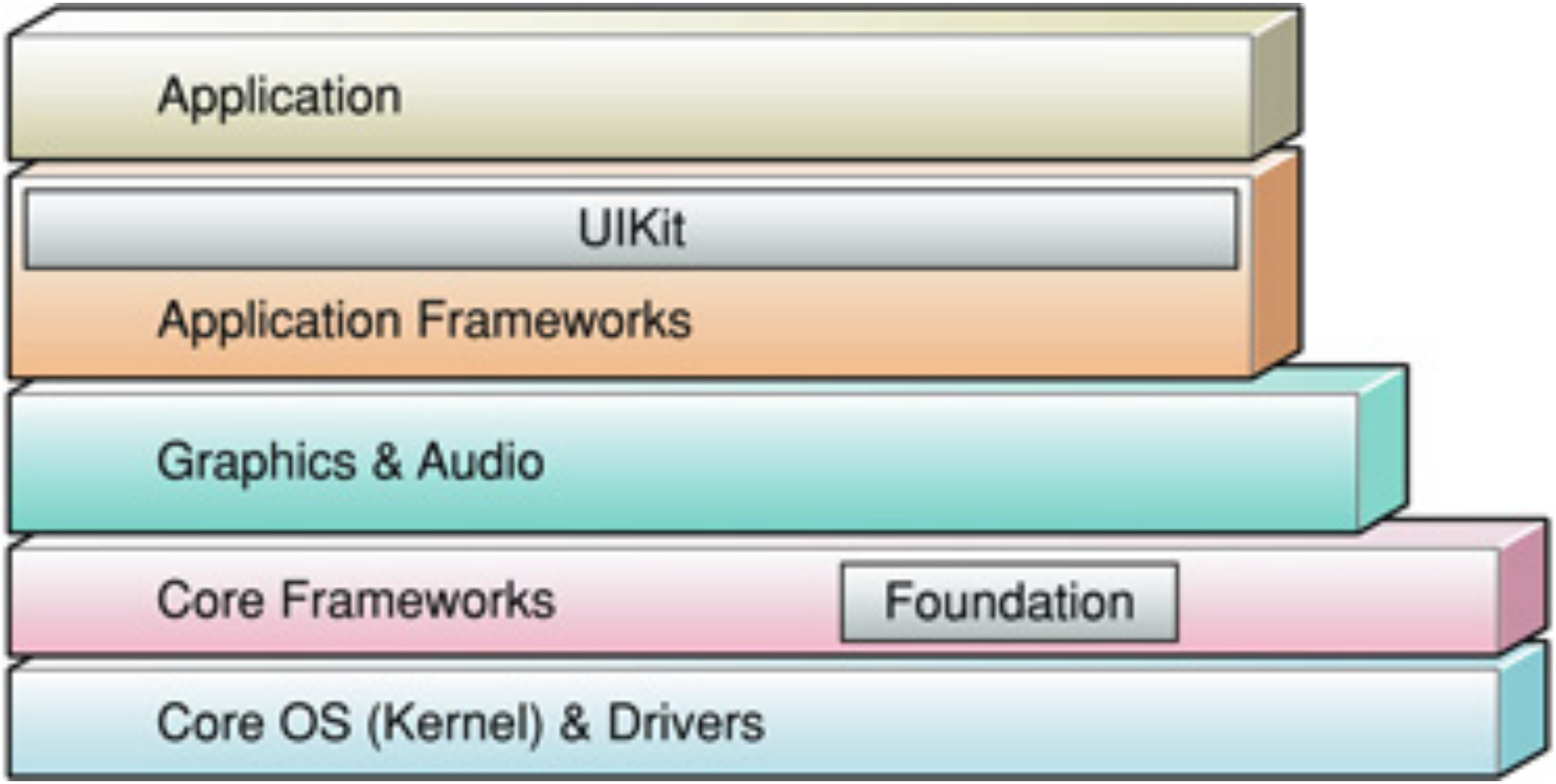
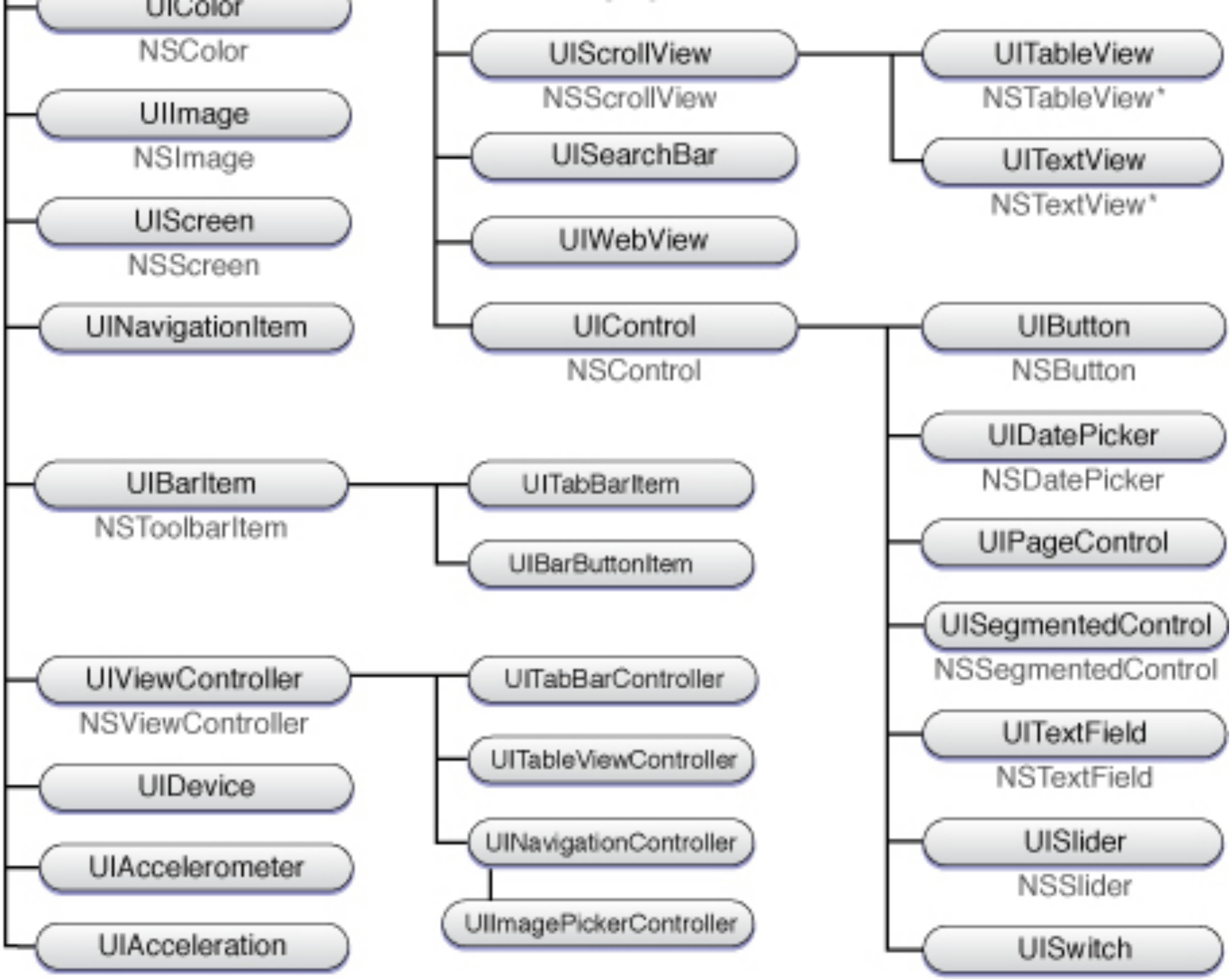
http://akosma.com/2009/07/16/objective-c-compiler-warnings/

Cocoa


Application
UIKit
Application Frameworks
Graphics & Audio
Core Frameworks
Foundation
Core OS (Kernel) & Drivers

UIKit



* Corresponding Application Kit class has a different place in the hierarchy.

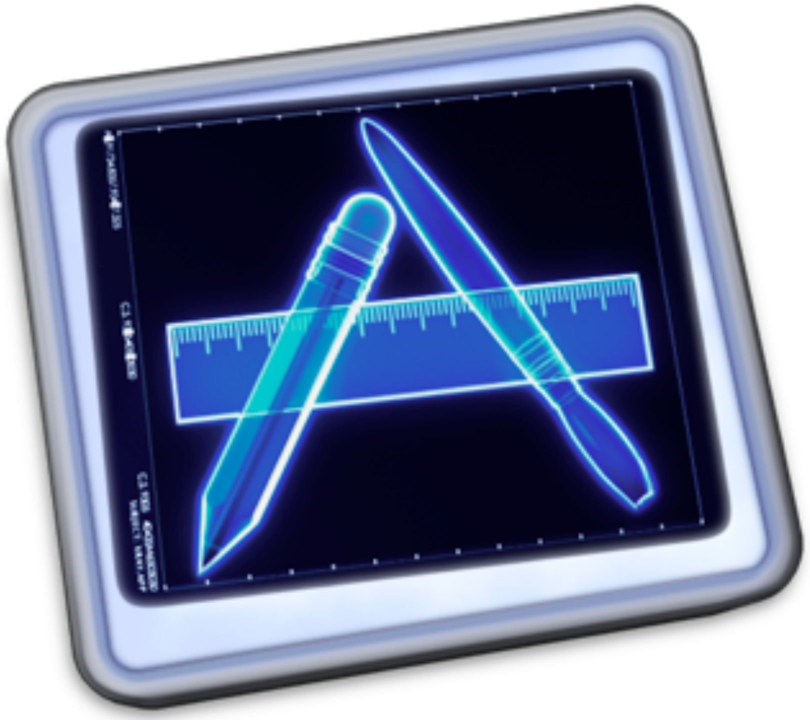
Tools

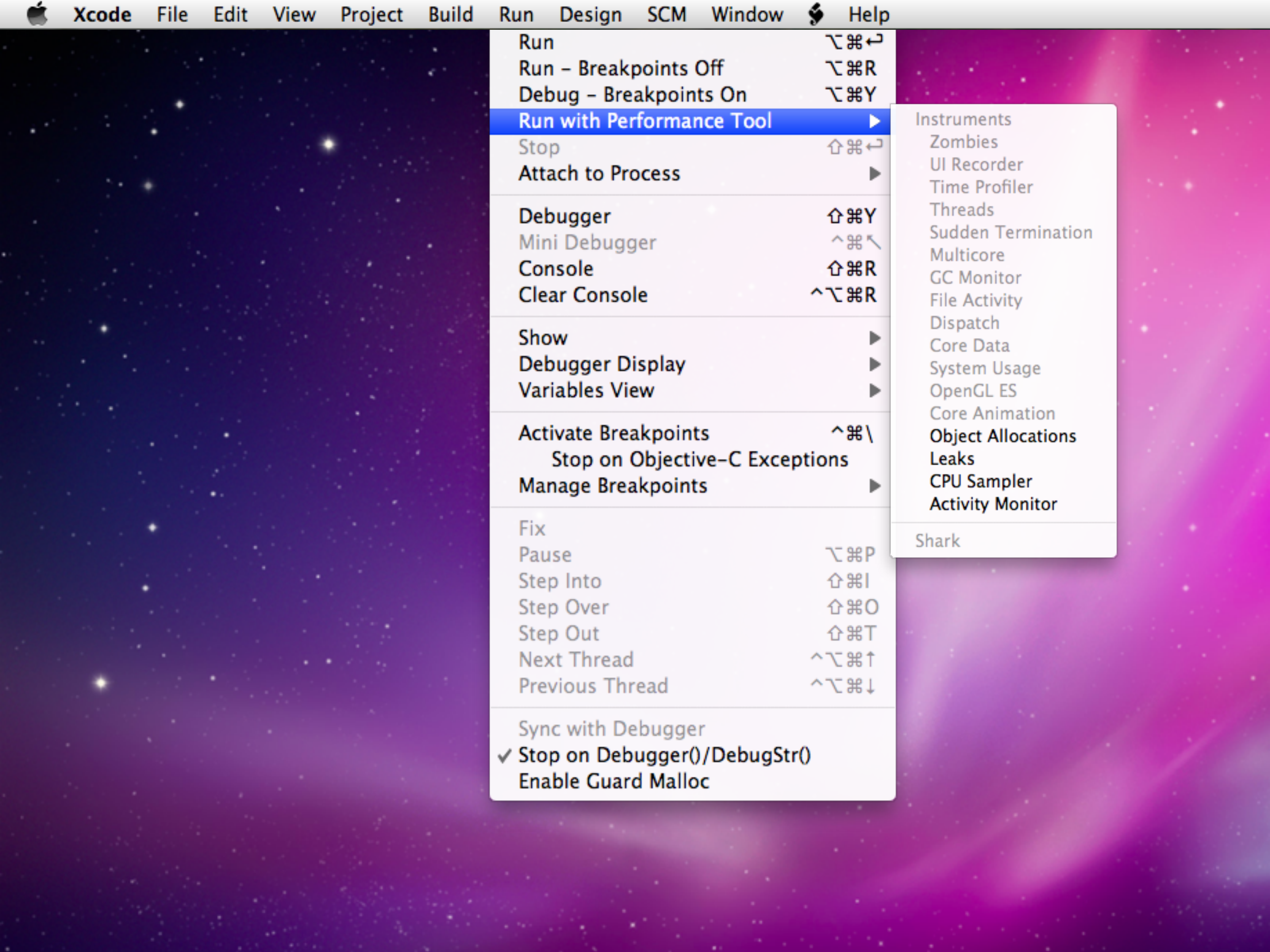
Xcode
Interface Builder

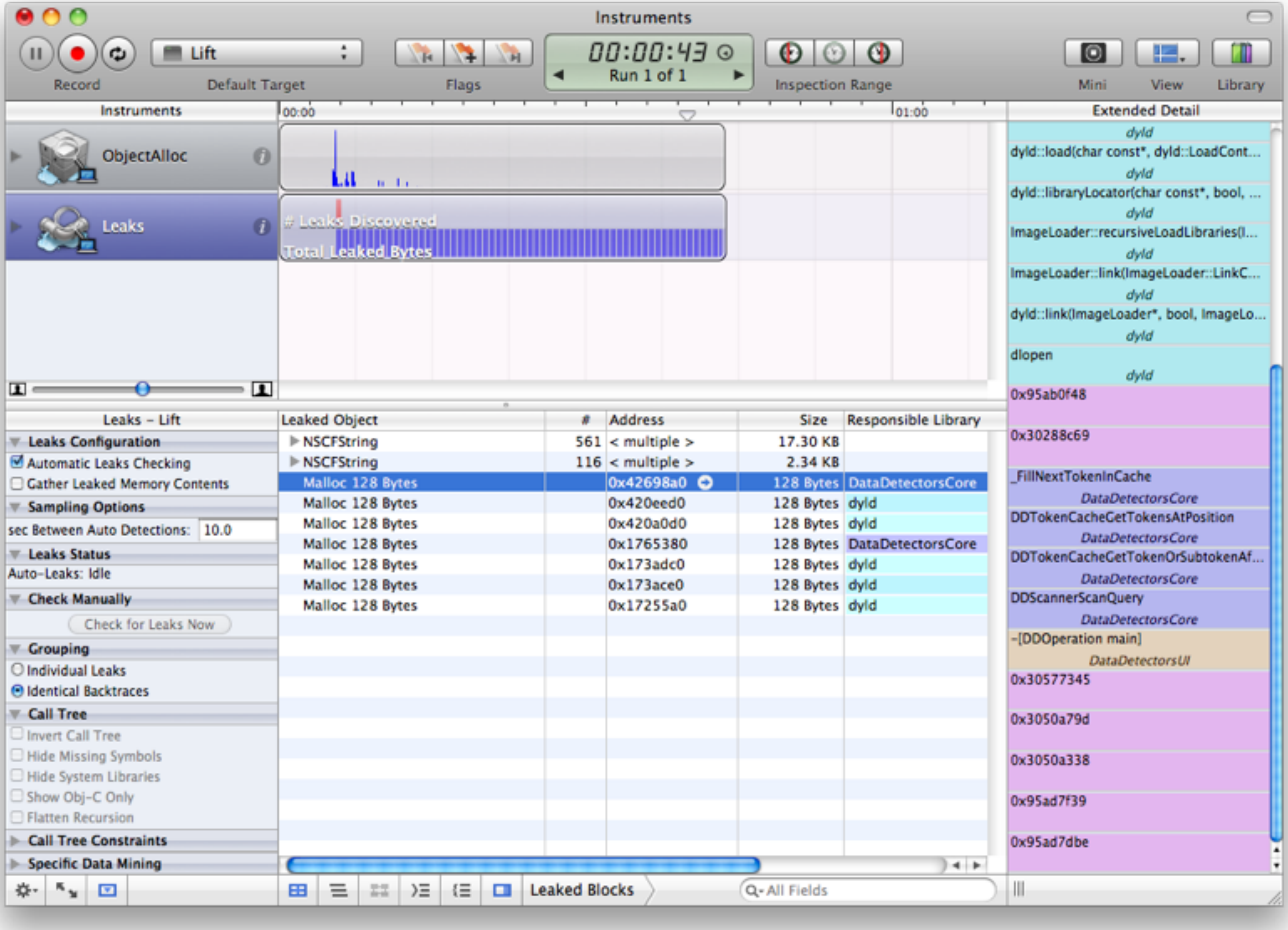
Color palette
ARCHITECT: XCODE
PROJECT: APPLICATION.AP

no. 2 graphite pencil with eraser
brush
ruler

Instruments




Xcode File Edit View Project Build Run Design SCM Window Help
Run ⌥⌘↩
Run – Breakpoints Off ⌥⌘R
Debug – Breakpoints On ⌥⌘Y
Run with Performance Tool ▶
Stop ⇧⌘↩
Attach to Process ▶
Debugger ⇧⌘Y
Mini Debugger ^⌘↖
Console ⇧⌘R
Clear Console ^⌥⌘R
Show ▶
Debugger Display ▶
Variables View ▶
Activate Breakpoints ^⌘\
Stop on Objective-C Exceptions
Manage Breakpoints ▶
Fix
Pause ⌥⌘P
Step Into ⇧⌘I
Step Over ⇧⌘O
Step Out ⇧⌘T
Next Thread ^⌥⌘↑
Previous Thread ^⌥⌘↓
Sync with Debugger
✓ Stop on Debugger()/DebugStr()
Enable Guard Malloc
Instruments
Zombies
UI Recorder
Time Profiler
Threads
Sudden Termination
Multicore
GC Monitor
File Activity
Dispatch
Core Data
System Usage
OpenGL ES
Core Animation
Object Allocations
Leaks
CPU Sampler
Activity Monitor
Shark



Leaks – Lift

Leaks Configuration

☑ Automatic Leaks Checking

□ Gather Leaked Memory Contents

Sampling Options

sec Between Auto Detections: 10.0

Leaks Status

Auto-Leaks: Idle

Check Manually

Check for Leaks Now

Grouping

○ Individual Leaks

● Identical Backtraces

Call Tree

□ Invert Call Tree

□ Hide Missing Symbols

□ Hide System Libraries

□ Show Obj-C Only

□ Flatten Recursion

Call Tree Constraints

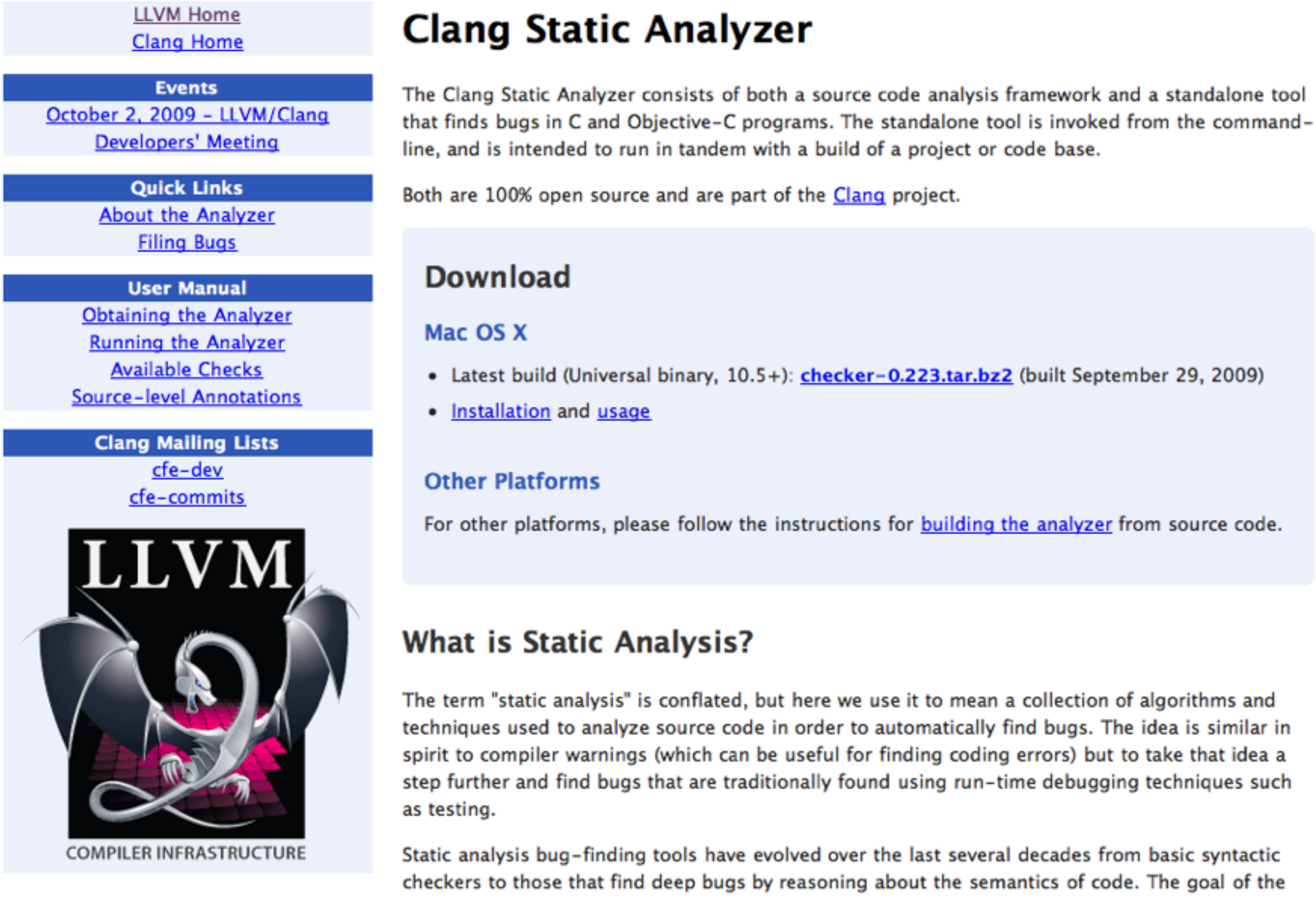
Specific Data Mining

Leaked Object	#	Address	Size	Responsible Library
▶ NSCFString	561	< multiple >	17.30 KB	
▶ NSCFString	116	< multiple >	2.34 KB	
Malloc 128 Bytes		0x42698a0	128 Bytes	DataDetectorsCore
Malloc 128 Bytes		0x420eed0	128 Bytes	dyld
Malloc 128 Bytes		0x420a0d0	128 Bytes	dyld
Malloc 128 Bytes		0x1765380	128 Bytes	DataDetectorsCore
Malloc 128 Bytes		0x173adc0	128 Bytes	dyld
Malloc 128 Bytes		0x173ace0	128 Bytes	dyld
Malloc 128 Bytes		0x17255a0	128 Bytes	dyld

Extended Detail

```
dyld
dyld::load(char const*, dyld::LoadCont...
dyld
dyld::libraryLocator(char const*, bool, ...
dyld
ImageLoader::recursiveLoadLibraries(I...
dyld
ImageLoader::link(ImageLoader::LinkC...
dyld
dyld::link(ImageLoader*, bool, ImageLo...
dyld
dlopen
dyld
0x95ab0f48
0x30288c69
_FillNextTokenInCache
DataDetectorsCore
DDTokenCacheGetTokensAtPosition
DataDetectorsCore
DDTokenCacheGetTokenOrSubtokenAf...
DataDetectorsCore
DDScannerScanQuery
DataDetectorsCore
-[DDOperation main]
DataDetectorsUI
0x30577345
0x3050a79d
0x3050a338
0x95ad7f39
0x95ad7dbe
```

Clang Static Analyzer



LLVM Home
Clang Home

Events
October 2, 2009 - LLVM/Clang Developers' Meeting

Quick Links
About the Analyzer
Filing Bugs

User Manual
Obtaining the Analyzer
Running the Analyzer
Available Checks
Source-level Annotations

Clang Mailing Lists
cfe-dev
cfe-commits

Clang Static Analyzer

The Clang Static Analyzer consists of both a source code analysis framework and a standalone tool that finds bugs in C and Objective-C programs. The standalone tool is invoked from the command-line, and is intended to run in tandem with a build of a project or code base.

Both are 100% open source and are part of the Clang project.

Download

Mac OS X

- Latest build (Universal binary, 10.5+): **checker-0.223.tar.bz2** (built September 29, 2009)
- Installation and usage

Other Platforms

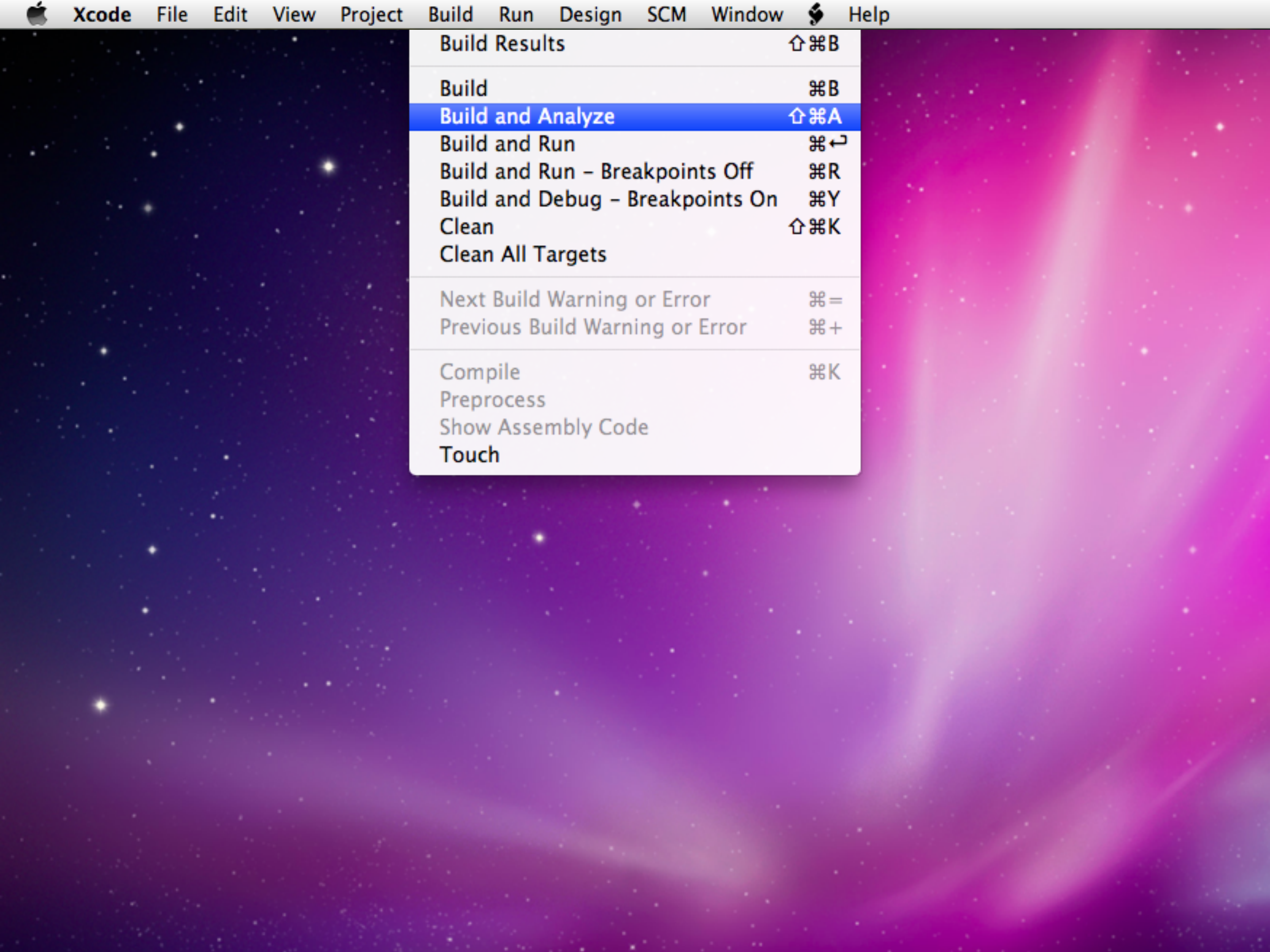
For other platforms, please follow the instructions for building the analyzer from source code.

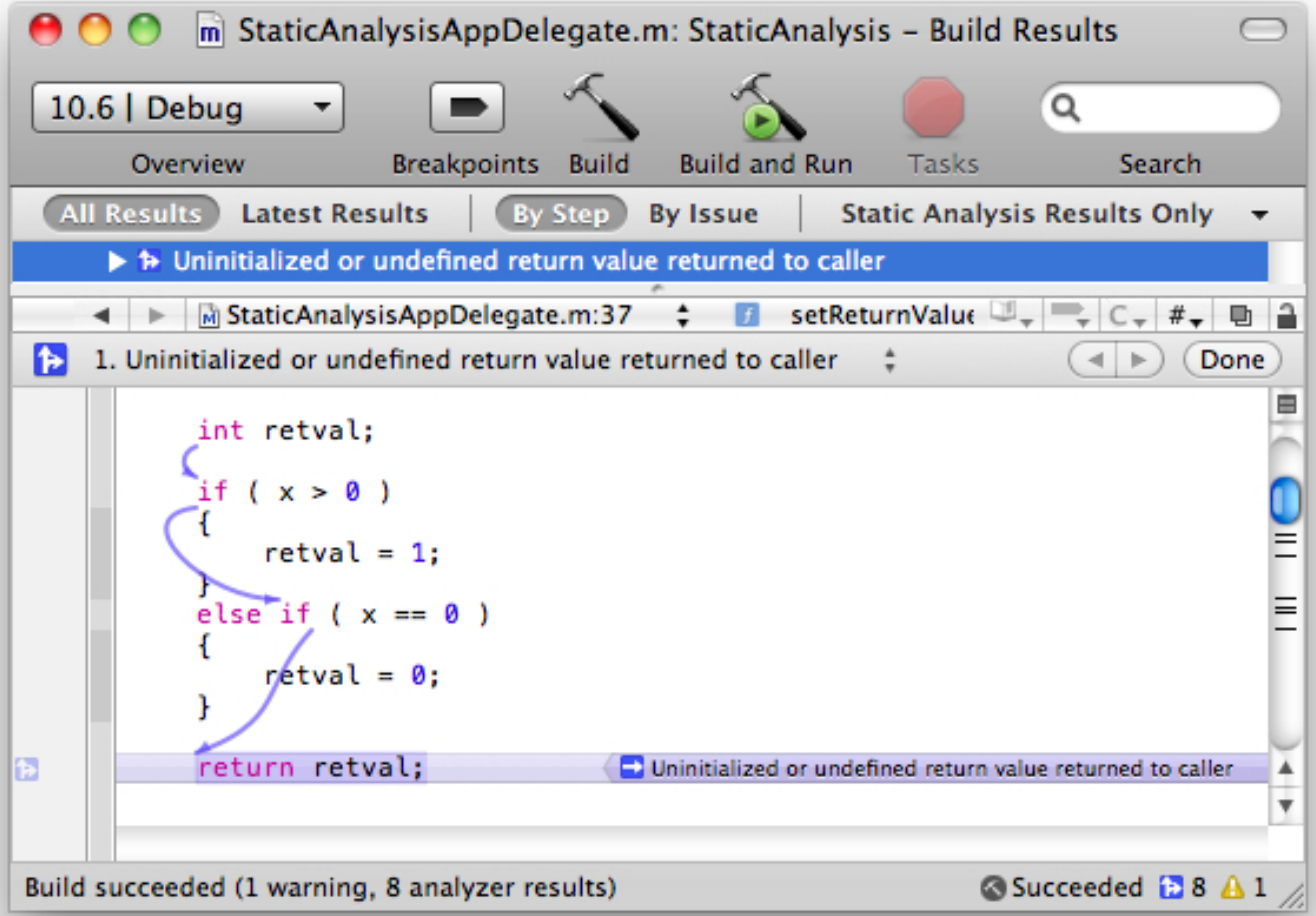
What is Static Analysis?

The term "static analysis" is conflated, but here we use it to mean a collection of algorithms and techniques used to analyze source code in order to automatically find bugs. The idea is similar in spirit to compiler warnings (which can be useful for finding coding errors) but to take that idea a step further and find bugs that are traditionally found using run-time debugging techniques such as testing.

Static analysis bug-finding tools have evolved over the last several decades from basic syntactic checkers to those that find deep bugs by reasoning about the semantics of code. The goal of the

http://clang-analyzer.llvm.org/


Xcode
File
Edit
View
Project
Build
Run
Design
SCM
Window
Help
Build Results ⇧⌘B
Build ⌘B
Build and Analyze ⇧⌘A
Build and Run ⌘↩
Build and Run – Breakpoints Off ⌘R
Build and Debug – Breakpoints On ⌘Y
Clean ⇧⌘K
Clean All Targets
Next Build Warning or Error ⌘=
Previous Build Warning or Error ⌘+
Compile ⌘K
Preprocess
Show Assembly Code
Touch



Uninitialized or undefined return value returned to caller

1. Uninitialized or undefined return value returned to caller

```
    int retval;

    if ( x > 0 )
    {
        retval = 1;
    }
    else if ( x == 0 )
    {
        retval = 0;
    }

    return retval;
```

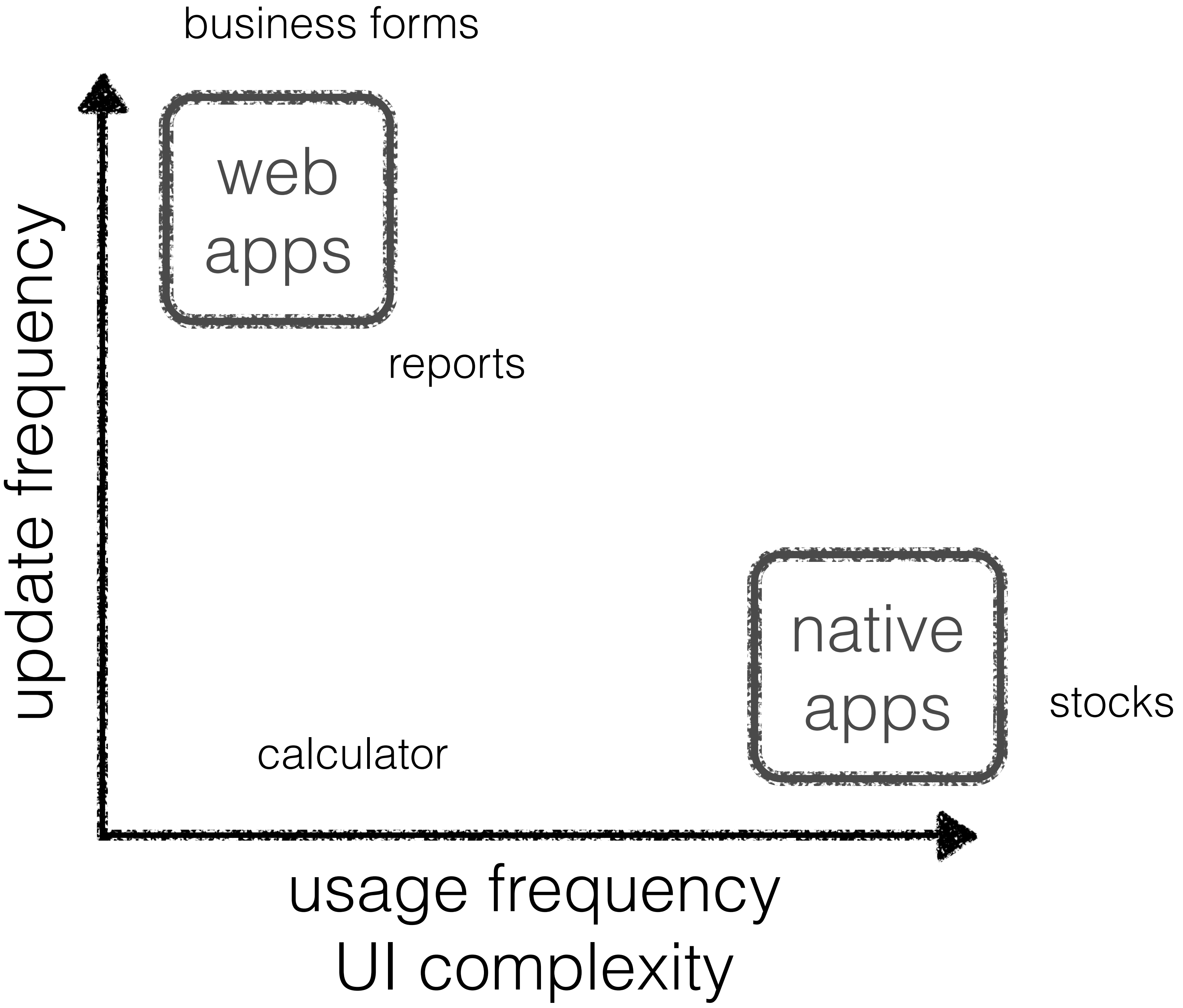
Uninitialized or undefined return value returned to caller

Build succeeded (1 warning, 8 analyzer results)

Succeeded 8 ⚠ 1

Source: Apple Documentation

Web or native apps?


business forms
web apps
reports
update frequency
native apps
stocks
calculator
usage frequency
UI complexity

	Web Application	**Native Application**

Pros	Simpler deployment and updates;
	known technologies,
	cheaper to maintain;
	access to GPS information;
	basic offline support;
	cross-platform
		Faster execution;
		access to address book, accelerometer, audio and camera; App Store;
		3D games and animations;
		push notifications;
		Bonjour networking support.

Cons	Slower to execute;
	more difficult to debug on the client side; limited access to hardware; no official app store; harder to monetize
		App Store review process;
		longer update times;
		relative complexity and higher cost of dev process

HTML + CSS + JavaScript

Sencha Touch

jQTouch

iUI

SproutCore

Cappuccino

WebApp.net

XUI

Rhodes

LiquidGear

PhoneGap

Safire

jPint

Magic Framework

Also remember

Not all WebKits
are made equal

WebKit Compatibility Table

http://www.quirksmode.org/webkit.html

Native apps advantages

1

offline

web catching up!

2
location services

web catching up!

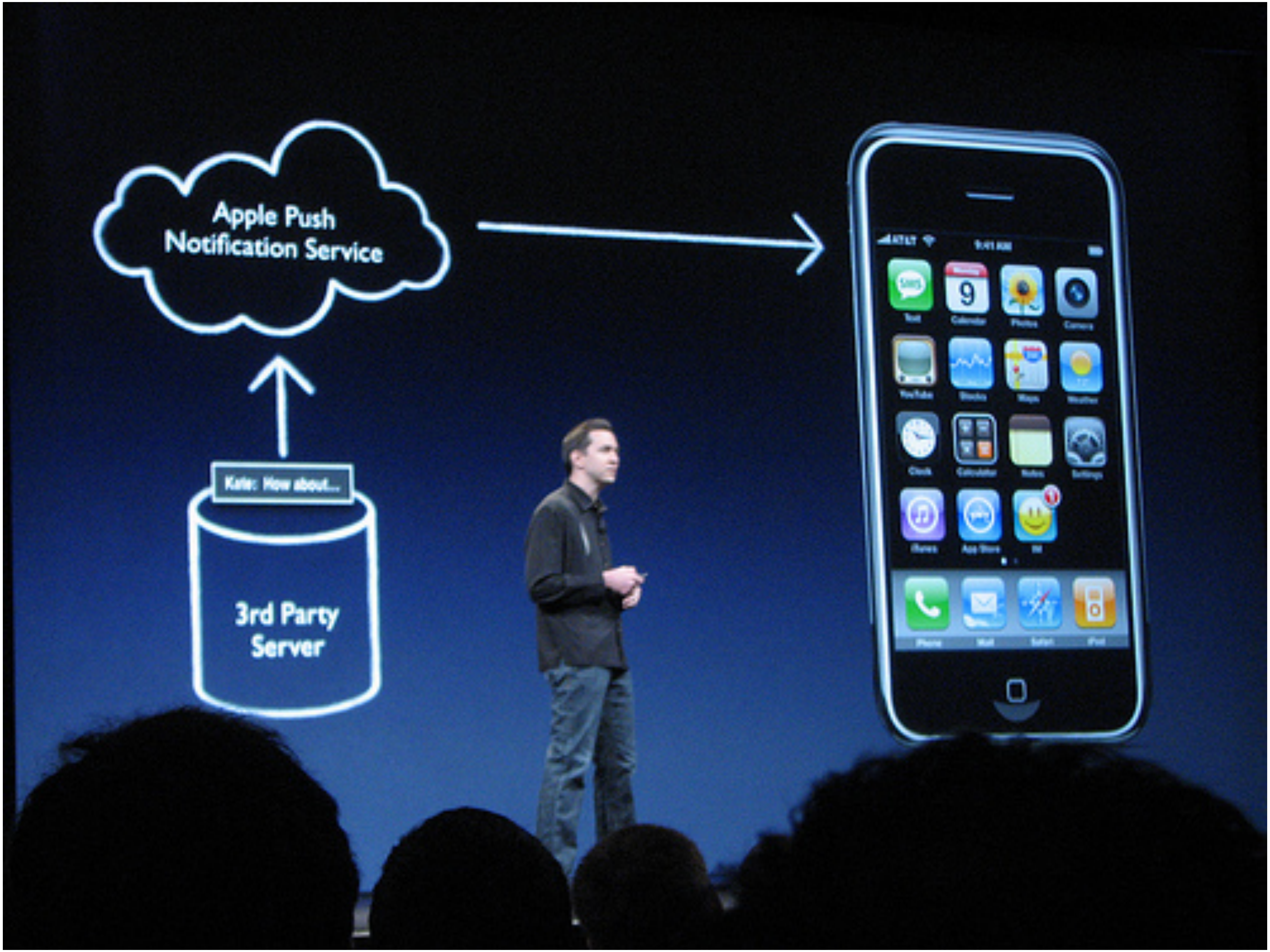
3
camera

4
audio & 3D

5
accelerometer & gyroscope

web catching up!

6
notifications



http://www.flickr.com/photos/epitti/2565572445/

7
monetization!

Native components

Address Book

Accelerometer

Video

Location services

2D and 3D graphics and animation

Camera

Photo library

Audio

XML

WebKit

And More

SQLite / Core Data

Networking

Bonjour

Bluetooth / GameKit

AirPrint

EventKit

AirPlay

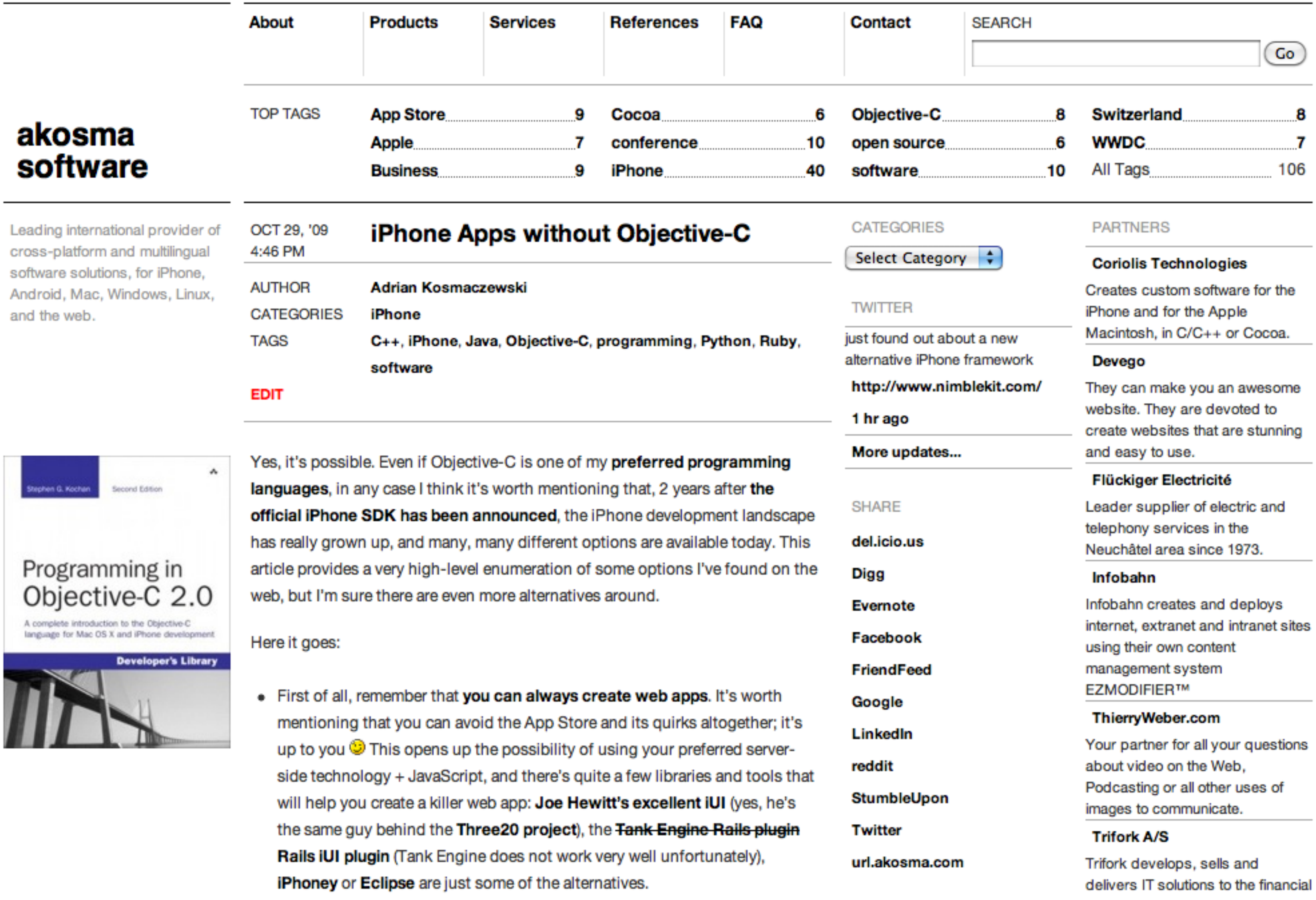
Compass

Gyroscope

Gestures

Core Text

Other languages?
Cross-platform?



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	App Store 9	Cocoa 6	Objective-C 8	Switzerland 8
	Apple 7	conference 10	open source 6	WWDC 7
	Business 9	iPhone 40	software 10	All Tags 106

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Programming in Objective-C 2.0
A complete introduction to the Objective-C language for Mac OS X and iPhone development
Developer's Library

OCT 29, '09
4:46 PM

iPhone Apps without Objective-C

AUTHOR **Adrian Kosmaczewski**
CATEGORIES **iPhone**
TAGS **C++, iPhone, Java, Objective-C, programming, Python, Ruby, software**

EDIT

Yes, it's possible. Even if Objective-C is one of my **preferred programming languages**, in any case I think it's worth mentioning that, 2 years after **the official iPhone SDK has been announced**, the iPhone development landscape has really grown up, and many, many different options are available today. This article provides a very high-level enumeration of some options I've found on the web, but I'm sure there are even more alternatives around.

Here it goes:

- First of all, remember that **you can always create web apps**. It's worth mentioning that you can avoid the App Store and its quirks altogether; it's up to you 🙂 This opens up the possibility of using your preferred server-side technology + JavaScript, and there's quite a few libraries and tools that will help you create a killer web app: **Joe Hewitt's excellent iUI** (yes, he's the same guy behind the **Three20 project**), the **~~Tank Engine Rails plugin~~ Rails iUI plugin** (Tank Engine does not work very well unfortunately), **iPhoney** or **Eclipse** are just some of the alternatives.

CATEGORIES

Select Category

TWITTER

just found out about a new alternative iPhone framework **http://www.nimblekit.com/**

1 hr ago

More updates...

SHARE

del.icio.us
Digg
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Google
LinkedIn
reddit
StumbleUpon
Twitter
url.akosma.com

PARTNERS

Coriolis Technologies
Creates custom software for the iPhone and for the Apple Macintosh, in C/C++ or Cocoa.

Devego
They can make you an awesome website. They are devoted to create websites that are stunning and easy to use.

Flückiger Electricité
Leader supplier of electric and telephony services in the Neuchâtel area since 1973.

Infobahn
Infobahn creates and deploys internet, extranet and intranet sites using their own content management system EZMODIFIER™

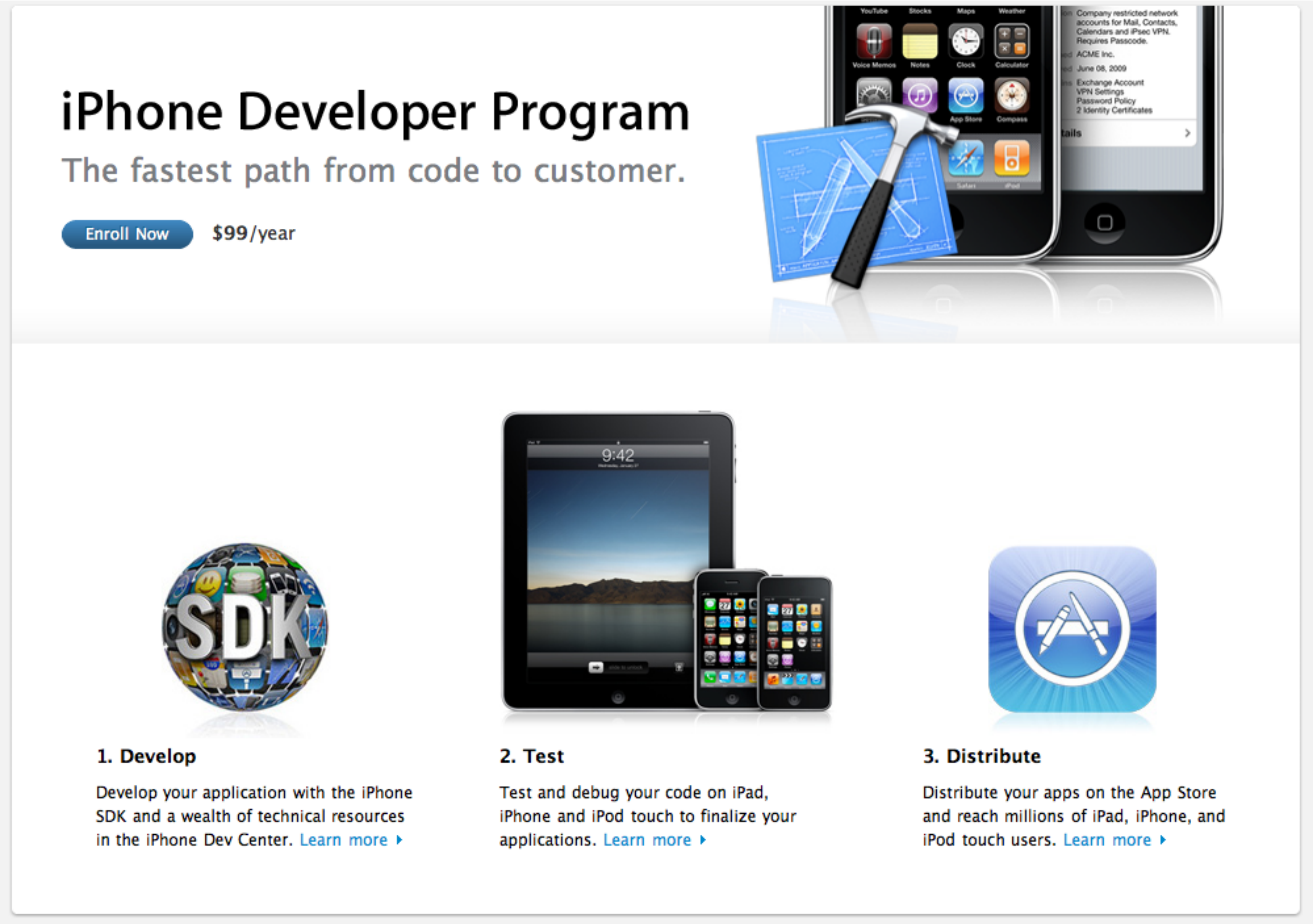
ThierryWeber.com
Your partner for all your questions about video on the Web, Podcasting or all other uses of images to communicate.

Trifork A/S
Trifork develops, sells and delivers IT solutions to the financial

http://akosma.com/2009/10/29/iphone-apps-without-objective-c/

The App Store
in 5 steps

1. Register



iPhone Developer Program

The fastest path from code to customer.

Enroll Now $99/year

1. Develop

Develop your application with the iPhone SDK and a wealth of technical resources in the iPhone Dev Center. Learn more ▸

2. Test

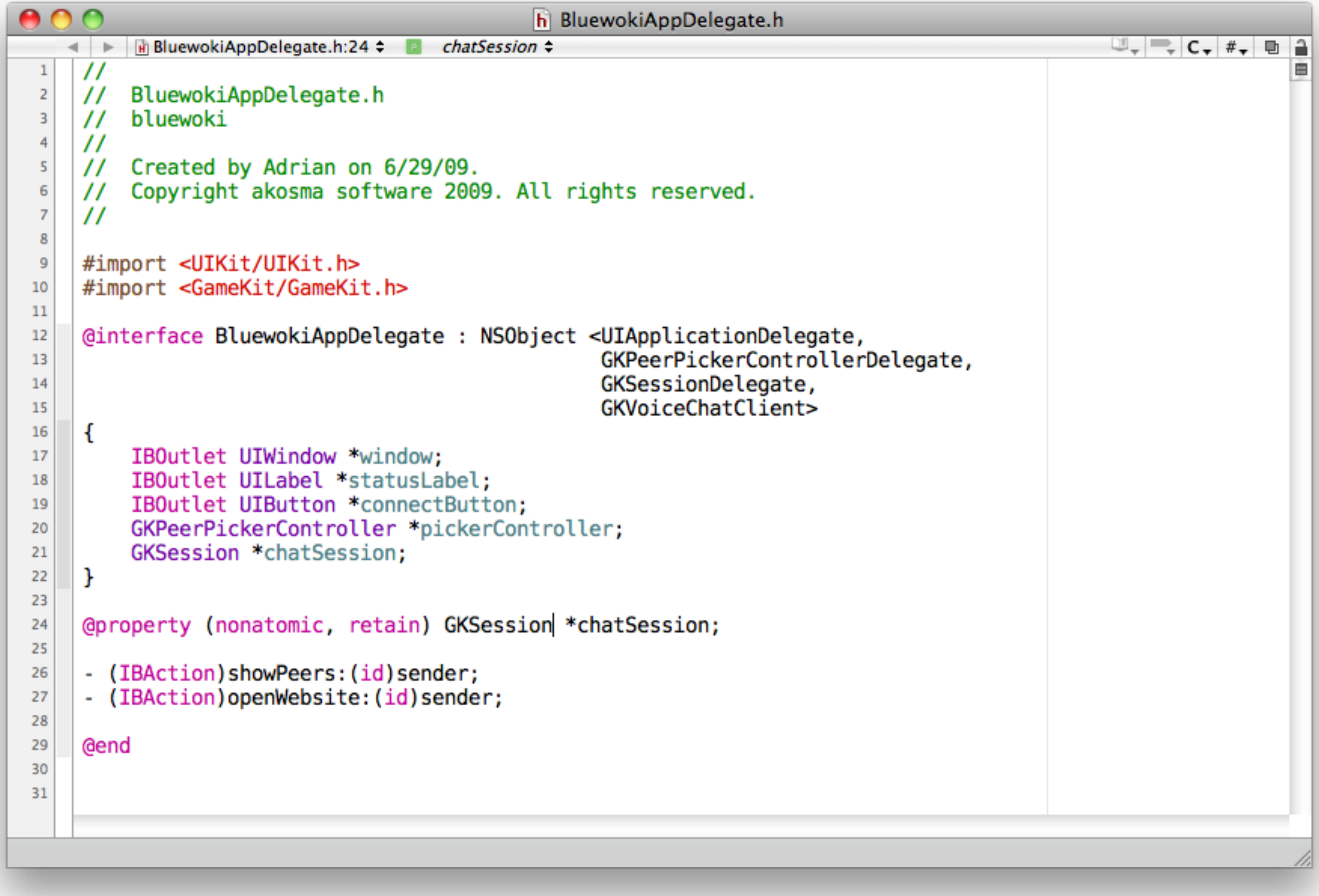
Test and debug your code on iPad, iPhone and iPod touch to finalize your applications. Learn more ▸

3. Distribute

Distribute your apps on the App Store and reach millions of iPad, iPhone, and iPod touch users. Learn more ▸

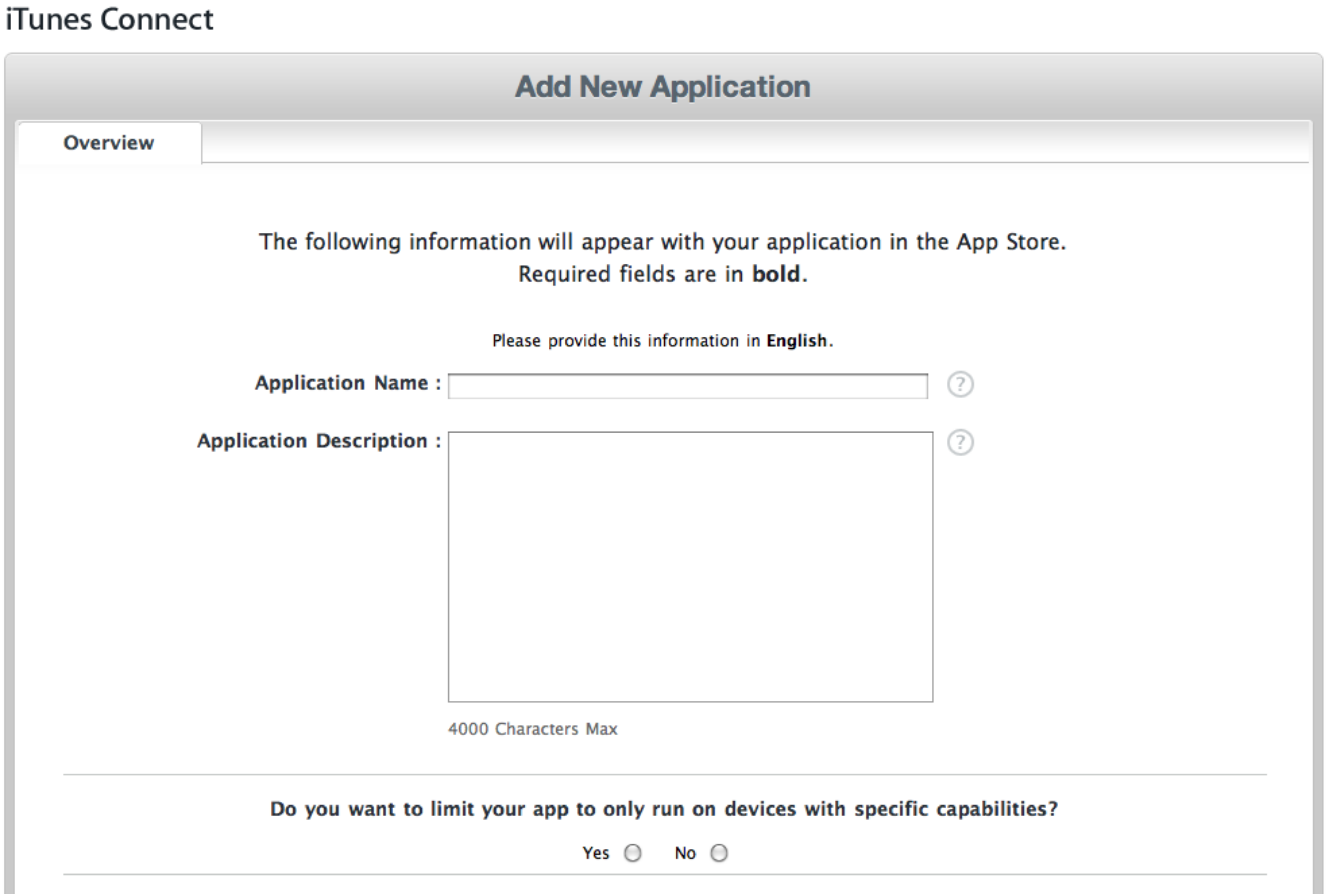
http://developer.apple.com/programs/iphone/

2. Develop



```
//
//  BluewokiAppDelegate.h
//  bluewoki
//
//  Created by Adrian on 6/29/09.
//  Copyright akosma software 2009. All rights reserved.
//

#import <UIKit/UIKit.h>
#import <GameKit/GameKit.h>

@interface BluewokiAppDelegate : NSObject <UIApplicationDelegate,
                                           GKPeerPickerControllerDelegate,
                                           GKSessionDelegate,
                                           GKVoiceChatClient>
{
    IBOutlet UIWindow *window;
    IBOutlet UILabel *statusLabel;
    IBOutlet UIButton *connectButton;
    GKPeerPickerController *pickerController;
    GKSession *chatSession;
}

@property (nonatomic, retain) GKSession *chatSession;

- (IBAction)showPeers:(id)sender;
- (IBAction)openWebsite:(id)sender;

@end
```

3. Publish



iTunes Connect

Add New Application

Overview

The following information will appear with your application in the App Store.
Required fields are in **bold**.

Please provide this information in **English**.

Application Name :

Application Description :

4000 Characters Max

Do you want to limit your app to only run on devices with specific capabilities?

Yes ○ No ○

Requirements

Free apps:

iOS dev account

(USD 99 / year)

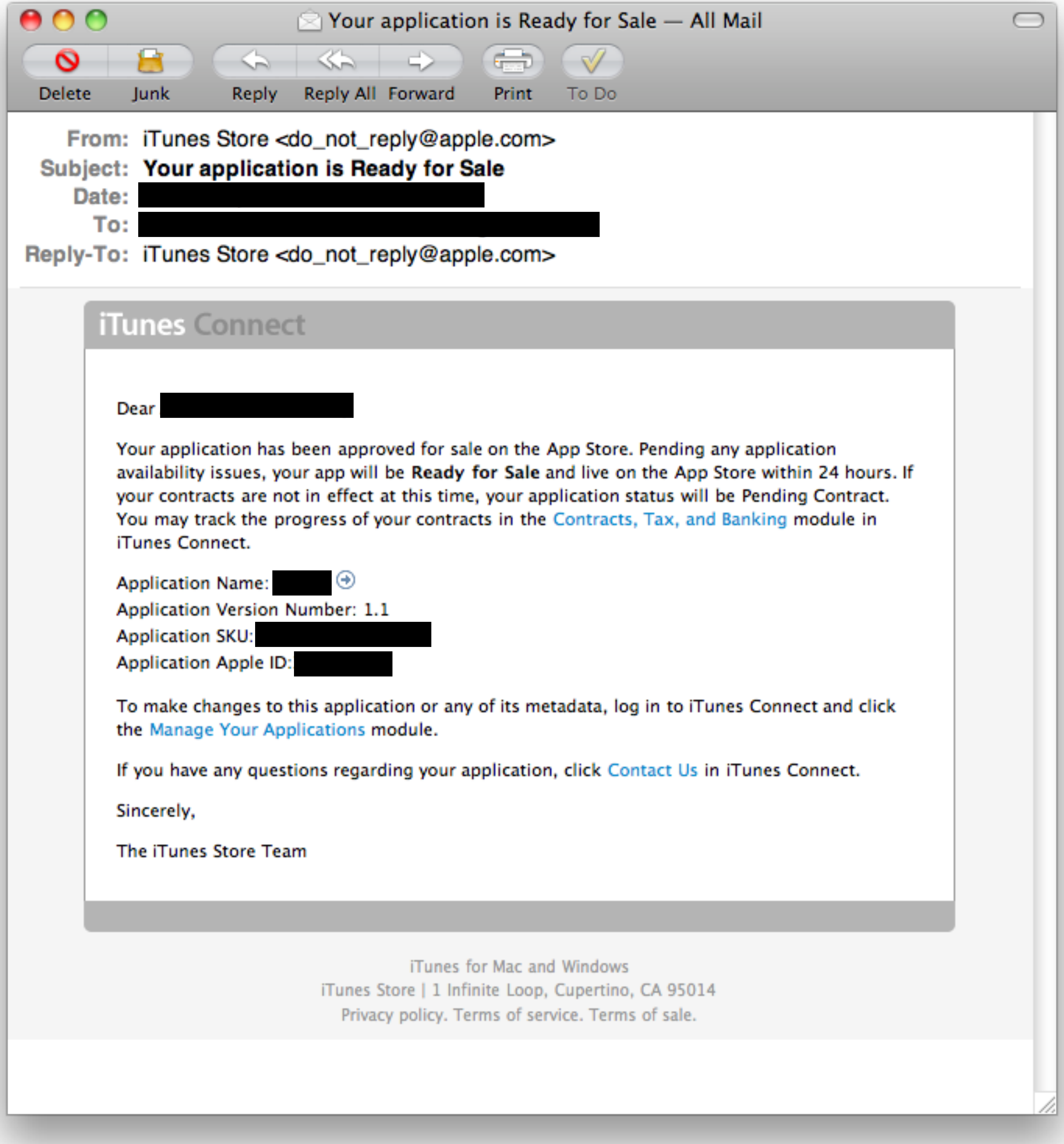
Paying apps:

iOS dev account

EIN Number, via IRS

Bank account

4. Approval



From: iTunes Store <do_not_reply@apple.com>
Subject: **Your application is Ready for Sale**
Date: [redacted]
To: [redacted]
Reply-To: iTunes Store <do_not_reply@apple.com>

iTunes Connect

Dear [redacted]

Your application has been approved for sale on the App Store. Pending any application availability issues, your app will be **Ready for Sale** and live on the App Store within 24 hours. If your contracts are not in effect at this time, your application status will be Pending Contract. You may track the progress of your contracts in the Contracts, Tax, and Banking module in iTunes Connect.

Application Name: [redacted]
Application Version Number: 1.1
Application SKU: [redacted]
Application Apple ID: [redacted]

To make changes to this application or any of its metadata, log in to iTunes Connect and click the Manage Your Applications module.

If you have any questions regarding your application, click Contact Us in iTunes Connect.

Sincerely,

The iTunes Store Team

iTunes for Mac and Windows
iTunes Store | 1 Infinite Loop, Cupertino, CA 95014
Privacy policy. Terms of service. Terms of sale.

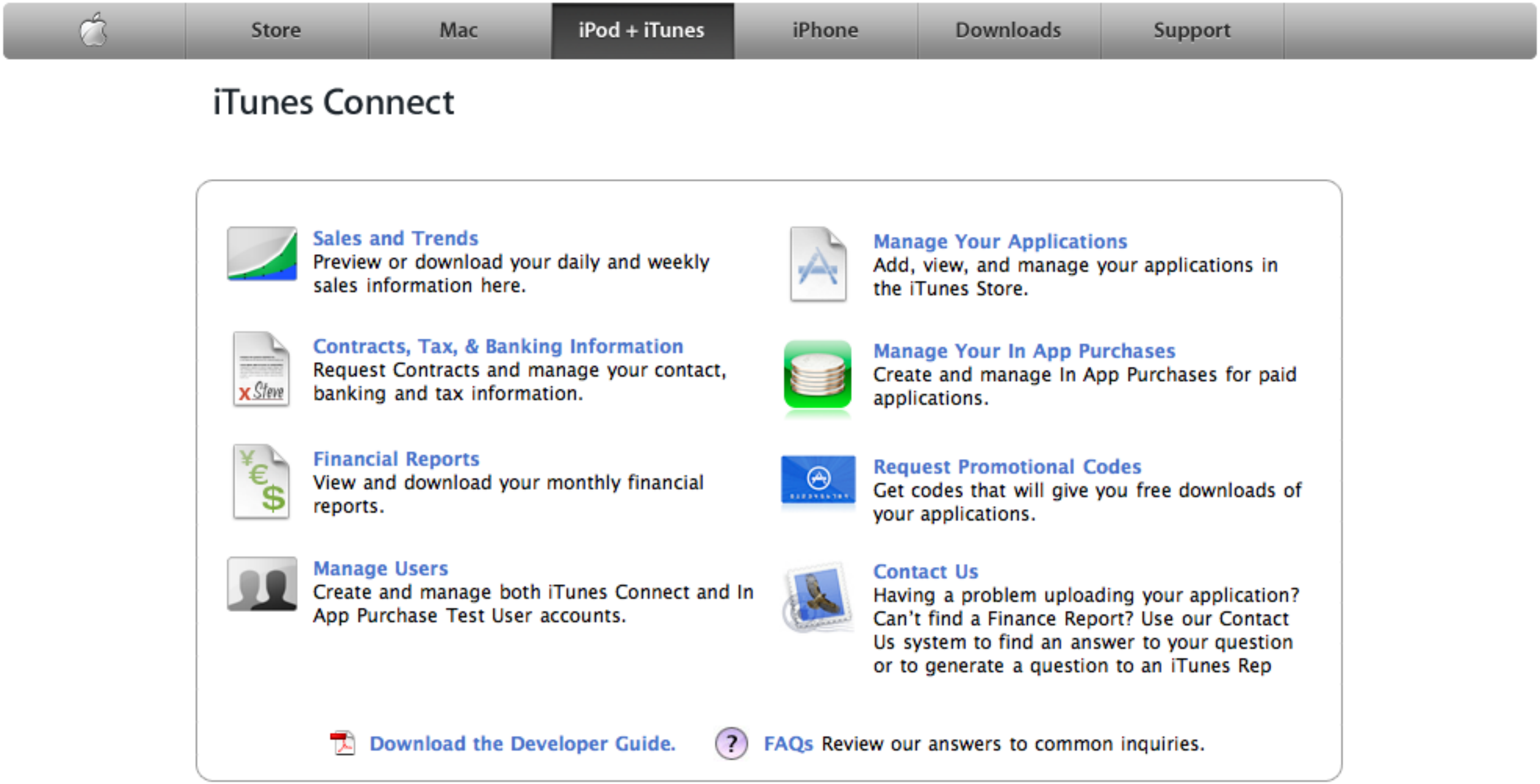
4.1 Rejection

“Your application cannot be posted to the App Store at this time because it does not adhere to the iPhone Human Interface Guidelines as outlined in iPhone SDK Agreement section x.x.x.

When the device is in this or that condition, the application does not do this or that. This behavior might lead to user confusion. It would be appropriate to display either a notification or an alert stating that such or such condition is required.

In order for your application to be reconsidered for the App Store, please resolve this issue and upload your new binary to iTunes Connect.”

5. Sales



iTunes Connect

Sales and Trends
Preview or download your daily and weekly sales information here.

Contracts, Tax, & Banking Information
Request Contracts and manage your contact, banking and tax information.

Financial Reports
View and download your monthly financial reports.

Manage Users
Create and manage both iTunes Connect and In App Purchase Test User accounts.

Manage Your Applications
Add, view, and manage your applications in the iTunes Store.

Manage Your In App Purchases
Create and manage In App Purchases for paid applications.

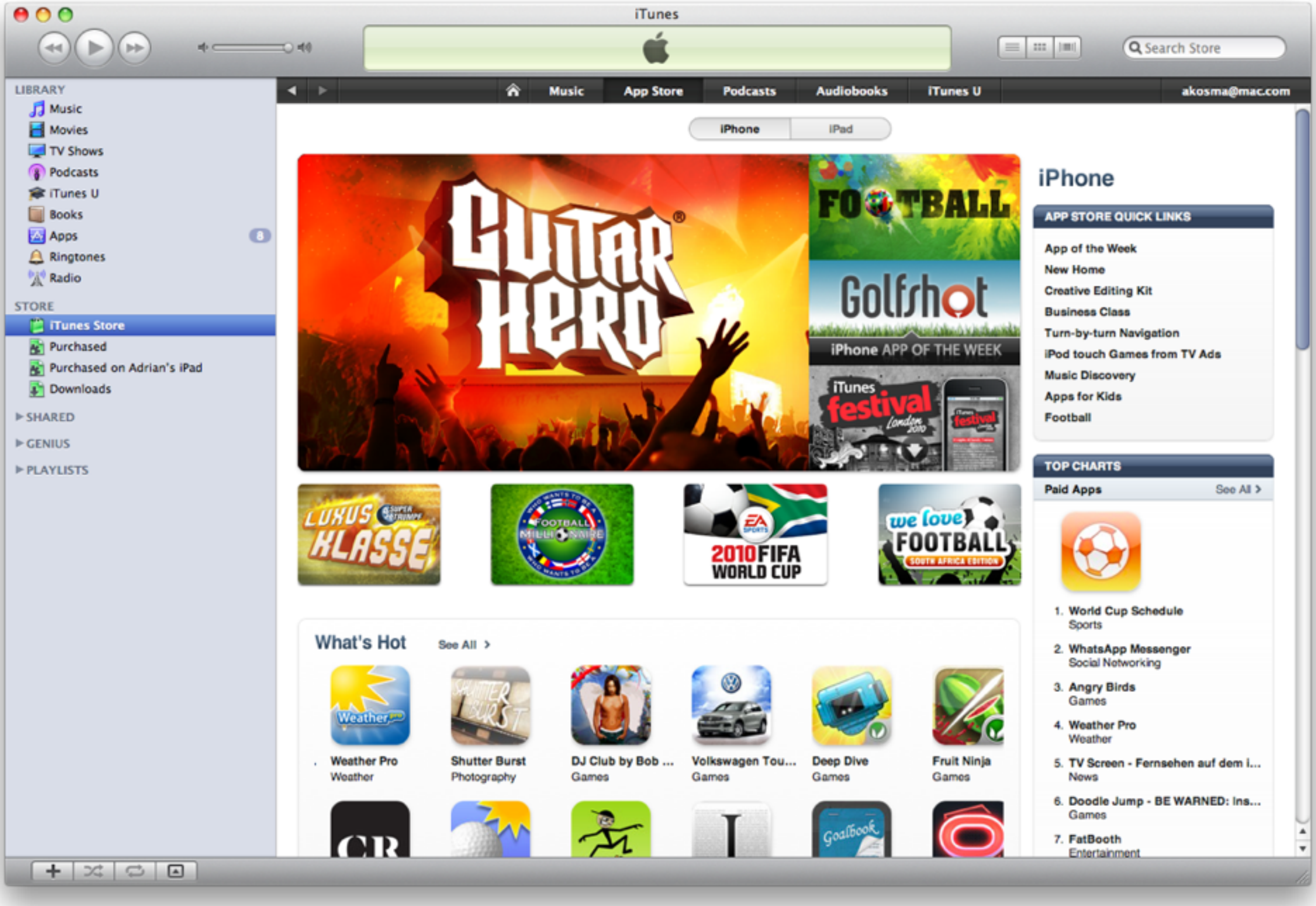
Request Promotional Codes
Get codes that will give you free downloads of your applications.

Contact Us
Having a problem uploading your application? Can't find a Finance Report? Use our Contact Us system to find an answer to your question or to generate a question to an iTunes Rep

Download the Developer Guide.

FAQs Review our answers to common inquiries.

https://itunesconnect.apple.com/


iTunes
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Movies
TV Shows
Podcasts
iTunes U
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Apps
8
Ringtones
Radio
STORE
iTunes Store
Purchased
Purchased on Adrian's iPad
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PLAYLISTS
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App Store
Podcasts
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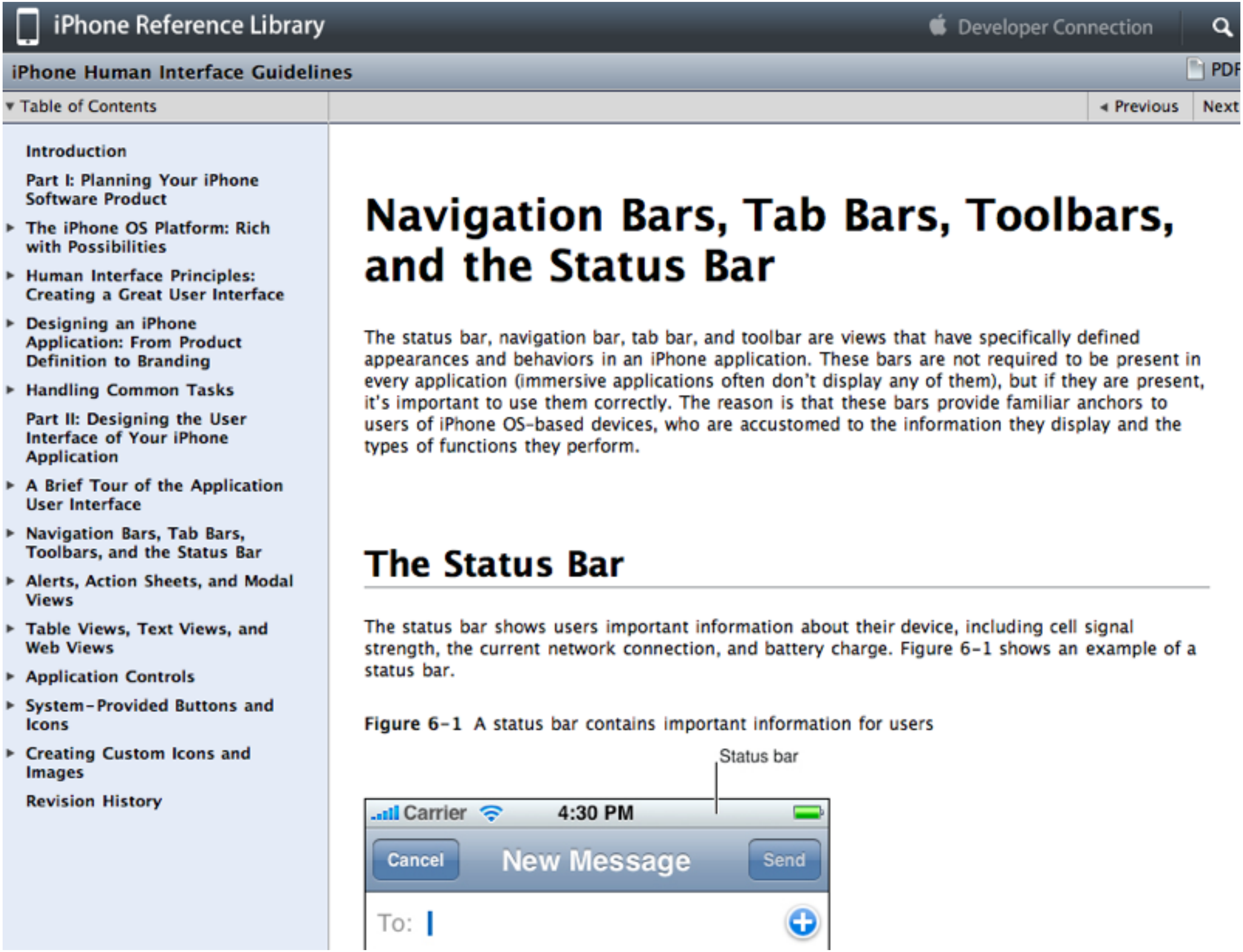
akosma@mac.com
iPhone
iPad
GUITAR HERO
FOOTBALL
Golfshot
iPhone APP OF THE WEEK
iTunes festival london 2010
LUXUS KLASSE
FOOTBALL MILLIONAIRE
2010 FIFA WORLD CUP
we love FOOTBALL
iPhone
APP STORE QUICK LINKS
App of the Week
New Home
Creative Editing Kit
Business Class
Turn-by-turn Navigation
iPod touch Games from TV Ads
Music Discovery
Apps for Kids
Football
TOP CHARTS
Paid Apps
See All >
1. World Cup Schedule
Sports
2. WhatsApp Messenger
Social Networking
3. Angry Birds
Games
4. Weather Pro
Weather
5. TV Screen - Fernsehen auf dem i...
News
6. Doodle Jump - BE WARNED: Ins...
Games
7. FatBooth
Entertainment
What's Hot
See All >
Weather Pro
Weather
Shutter Burst
Photography
DJ Club by Bob ...
Games
Volkswagen Tou...
Games
Deep Dive
Games
Fruit Ninja
Games

Honor the Mobile Human Interface Guidelines

http://developer.apple.com/iphone/library/documentation/
userexperience/conceptual/mobilehig/



Navigation Bars, Tab Bars, Toolbars, and the Status Bar

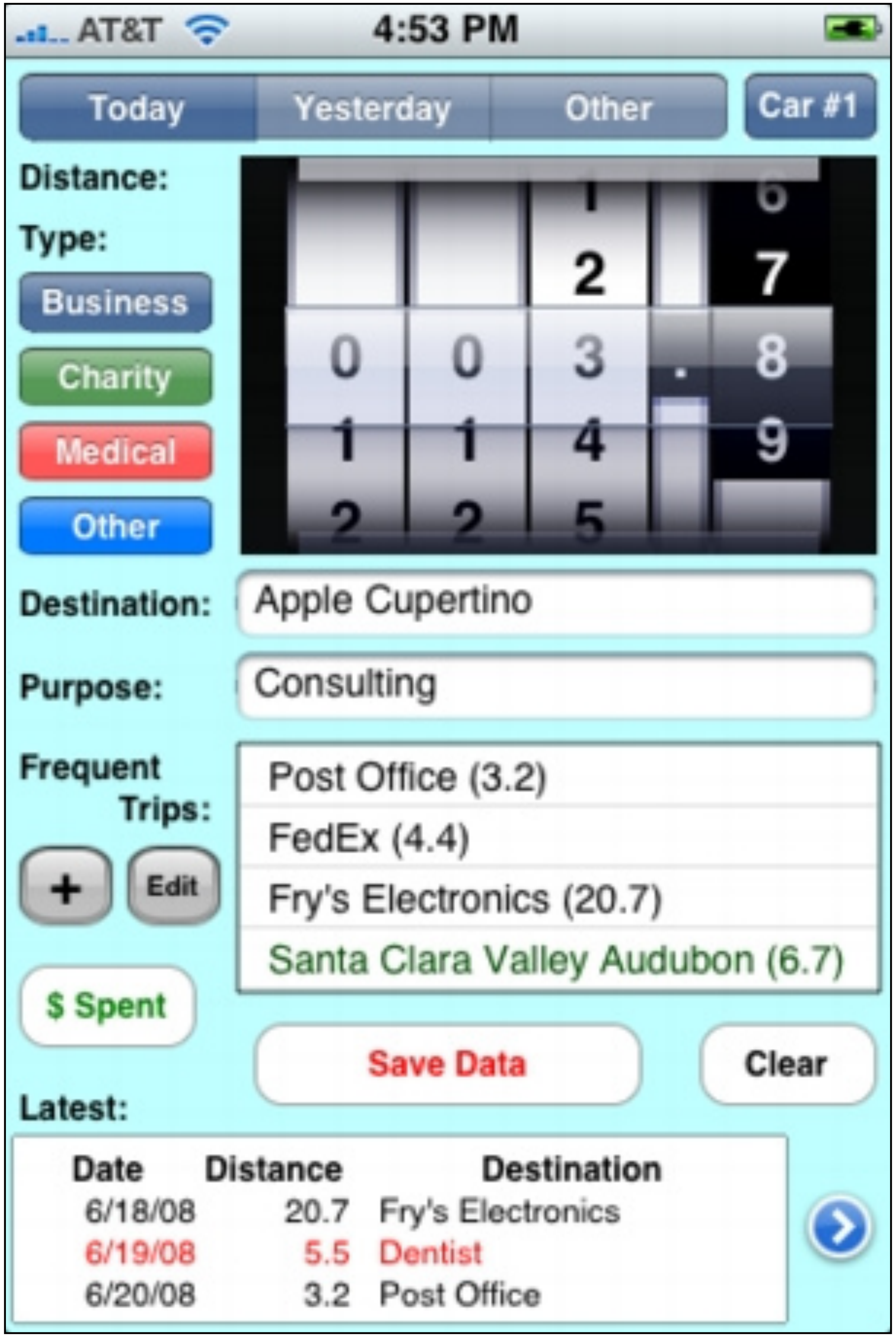
The status bar, navigation bar, tab bar, and toolbar are views that have specifically defined appearances and behaviors in an iPhone application. These bars are not required to be present in every application (immersive applications often don't display any of them), but if they are present, it's important to use them correctly. The reason is that these bars provide familiar anchors to users of iPhone OS-based devices, who are accustomed to the information they display and the types of functions they perform.

The Status Bar

The status bar shows users important information about their device, including cell signal strength, the current network connection, and battery charge. Figure 6-1 shows an example of a status bar.

Figure 6-1 A status bar contains important information for users

avoid this



Distance: 0 0 3 . 8

Type:

Destination: Apple Cupertino

Purpose: Consulting

Frequent Trips:

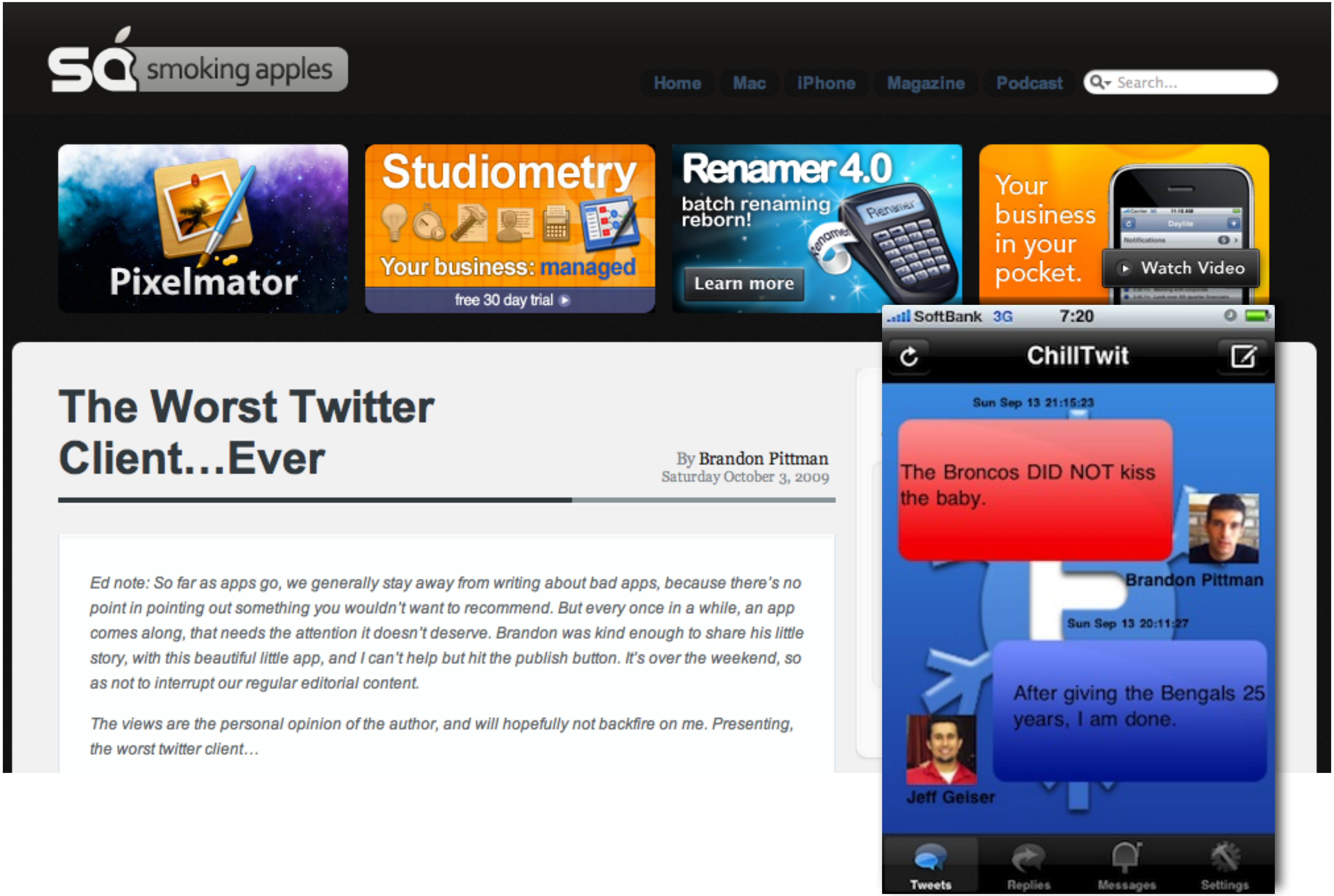
- Post Office (3.2)
- FedEx (4.4)
- Fry's Electronics (20.7)
- Santa Clara Valley Audubon (6.7)

Latest:

Date	Distance	Destination
6/18/08	20.7	Fry's Electronics
6/19/08	5.5	Dentist
6/20/08	3.2	Post Office

http://www.flickr.com/photos/gruber/2635257578/

and this



The Worst Twitter Client…Ever

By Brandon Pittman
Saturday October 3, 2009

Ed note: So far as apps go, we generally stay away from writing about bad apps, because there's no point in pointing out something you wouldn't want to recommend. But every once in a while, an app comes along, that needs the attention it doesn't deserve. Brandon was kind enough to share his little story, with this beautiful little app, and I can't help but hit the publish button. It's over the weekend, so as not to interrupt our regular editorial content.

The views are the personal opinion of the author, and will hopefully not backfire on me. Presenting, the worst twitter client…

Sun Sep 13 21:15:23

The Broncos DID NOT kiss the baby.

Brandon Pittman

Sun Sep 13 20:11:27

After giving the Bengals 25 years, I am done.

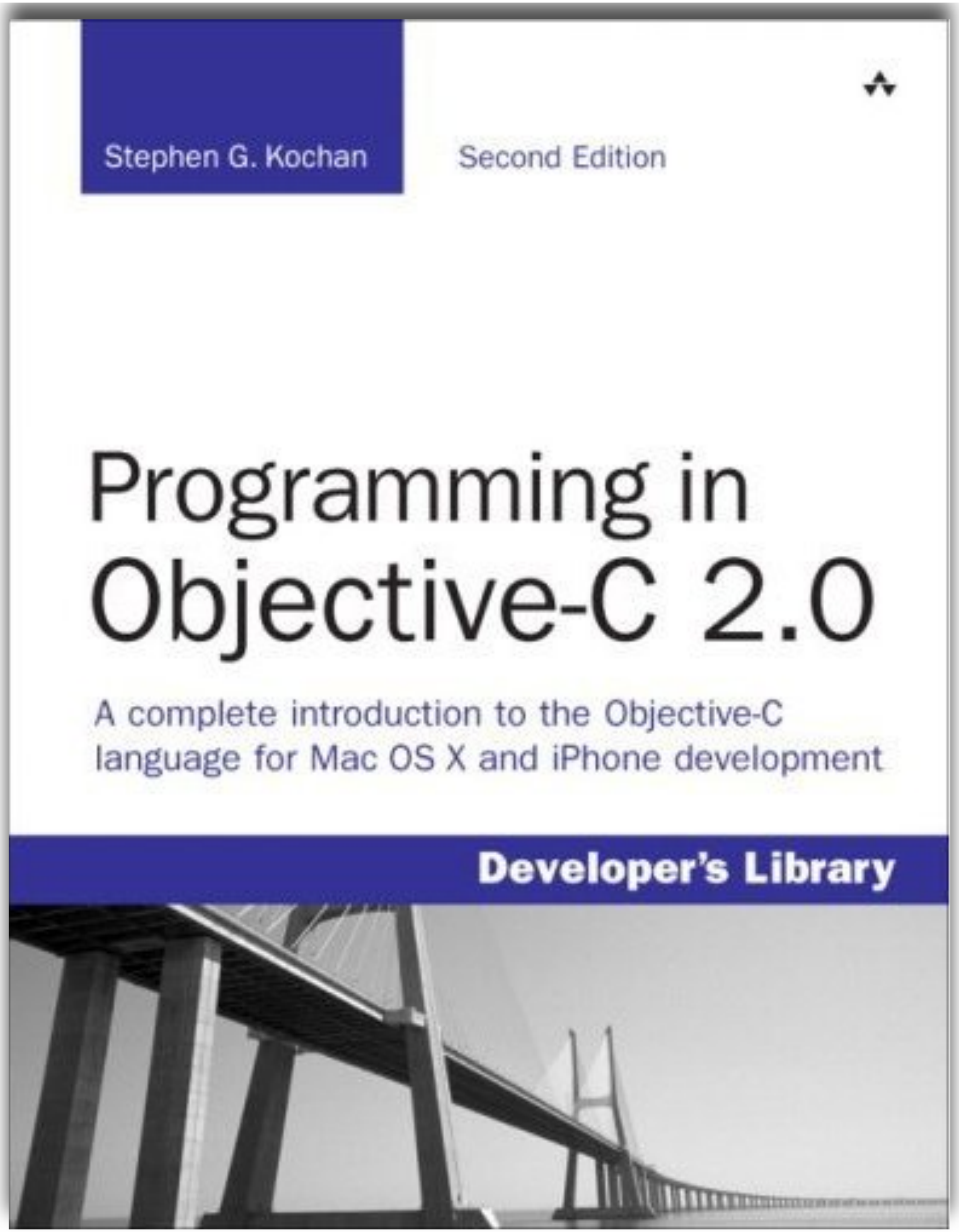
Jeff Geiser

http://smokingapples.com/iphone/app-store-iphone/the-worst-twitter-client-ever/

I can’t find one redeeming quality about this app. It’s slow to start [on a 3GS], doesn’t respond to taps while it’s trying to load other things, and **crashes if you try to change modes a lot**. It’s limited to only timeline, replies, and messages. It has no other functionality. Oh wait… I forgot its killer feature, you can have custom backgrounds and choose the color of your tweets. That **totally makes up for its lack of useful features and sluggish performance**. I’m not sure why someone would bother building such an inferior app other than that they wanted to find some suckers and score a quick buck. It seems even more insane to me that they’d be actively seeking out reviewers to cover this. I was given a promo code for ChillTwit, and **even for free I didn’t want it on my phone**. I was sad just from looking at screenshots. Actually seeing it running confirmed all of my fears. If it was a free app, I might forgive the developer, but **the fact that he’s trying to get $0.99 out of people pisses me off to no end**. Go buy Tweetie.

If you somehow weren’t scared away by all my bitching and whinning, you can see ChillTwit on the app store here. But seriously, **if you buy this, we’re not friends anymore**.

Books



Stephen G. Kochan

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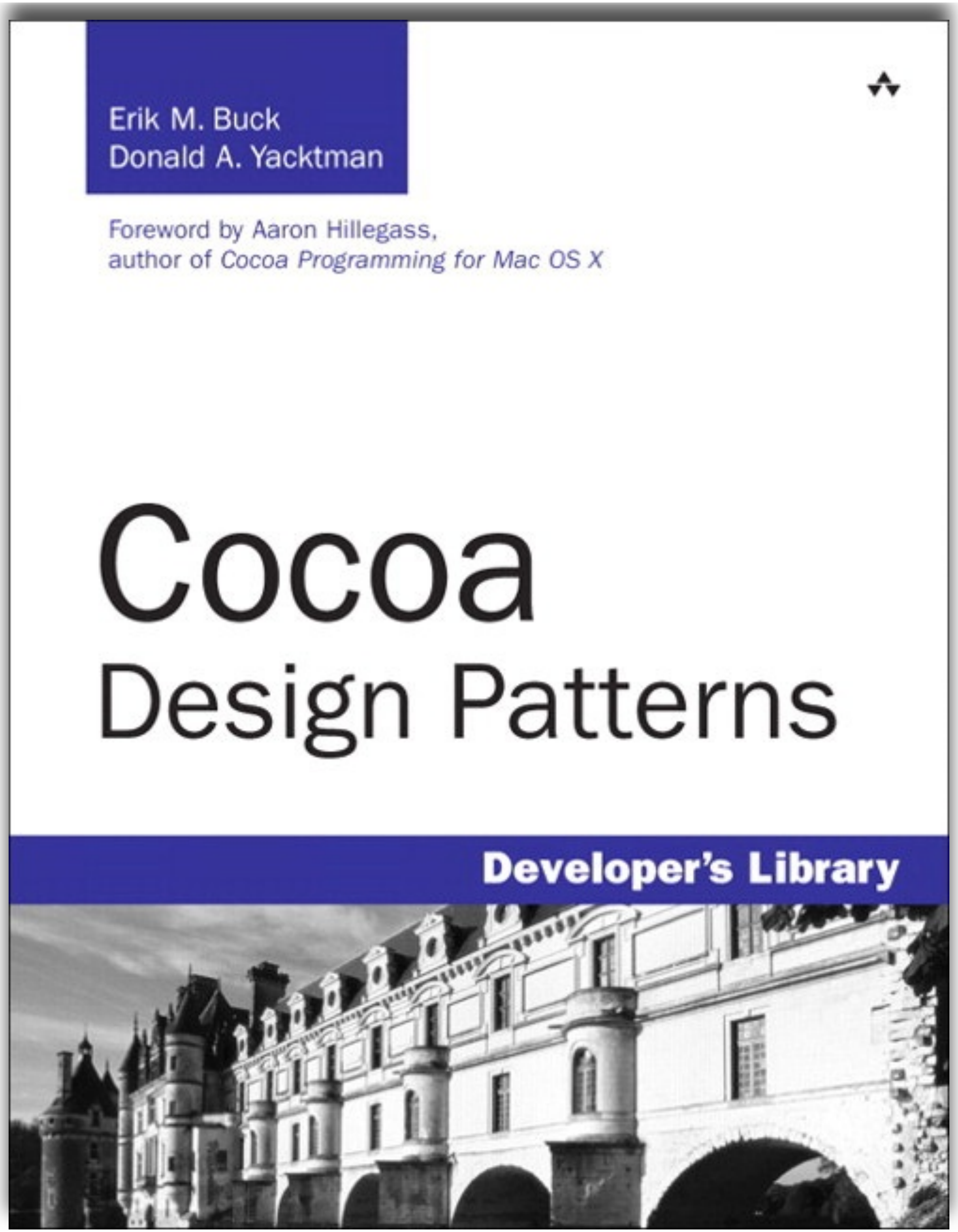
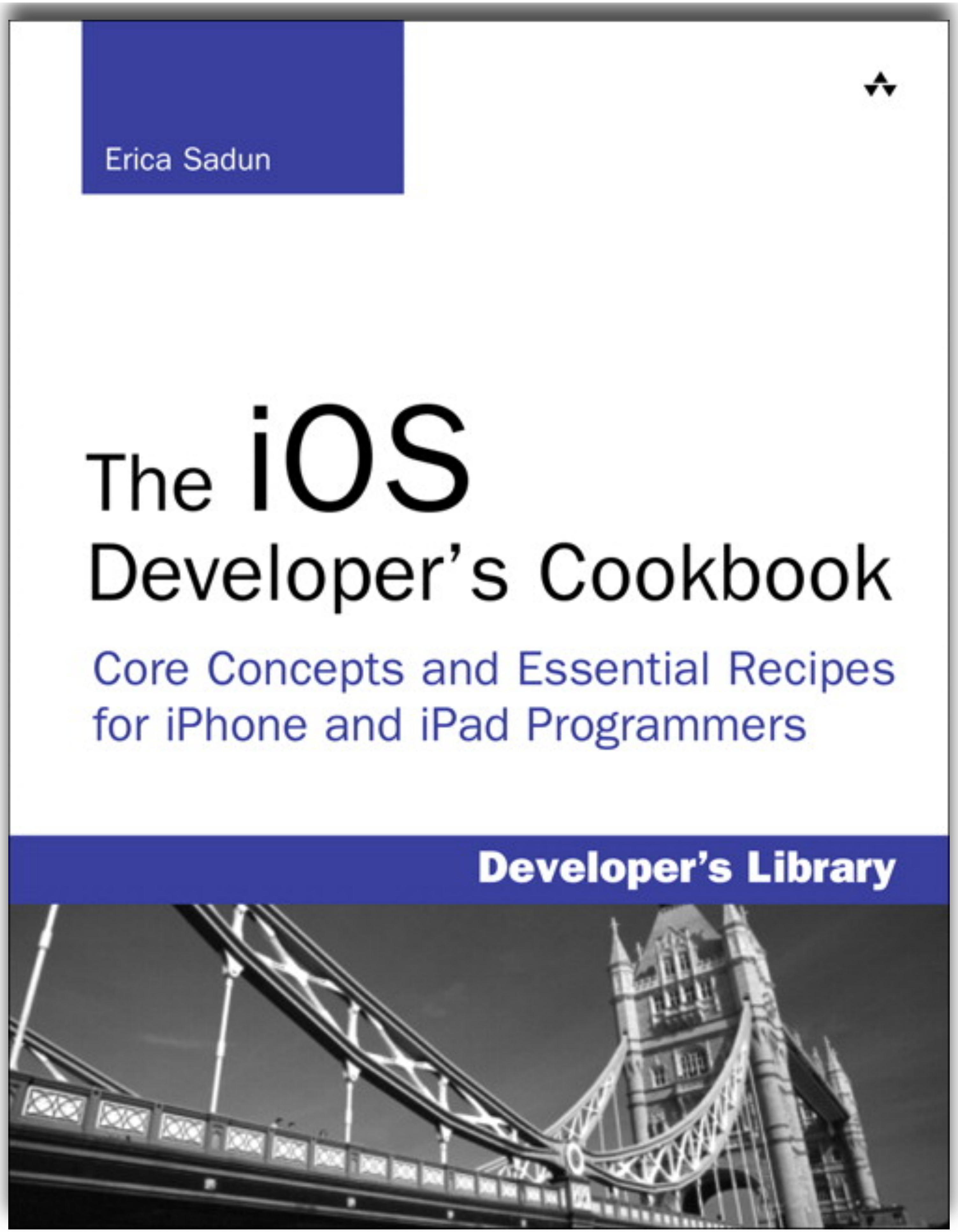


Erik M. Buck
Donald A. Yacktman

Foreword by Aaron Hillegass,
author of *Cocoa Programming for Mac OS X*

Cocoa
Design Patterns

Developer's Library



Erica Sadun

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Core Concepts and Essential Recipes for iPhone and iPad Programmers

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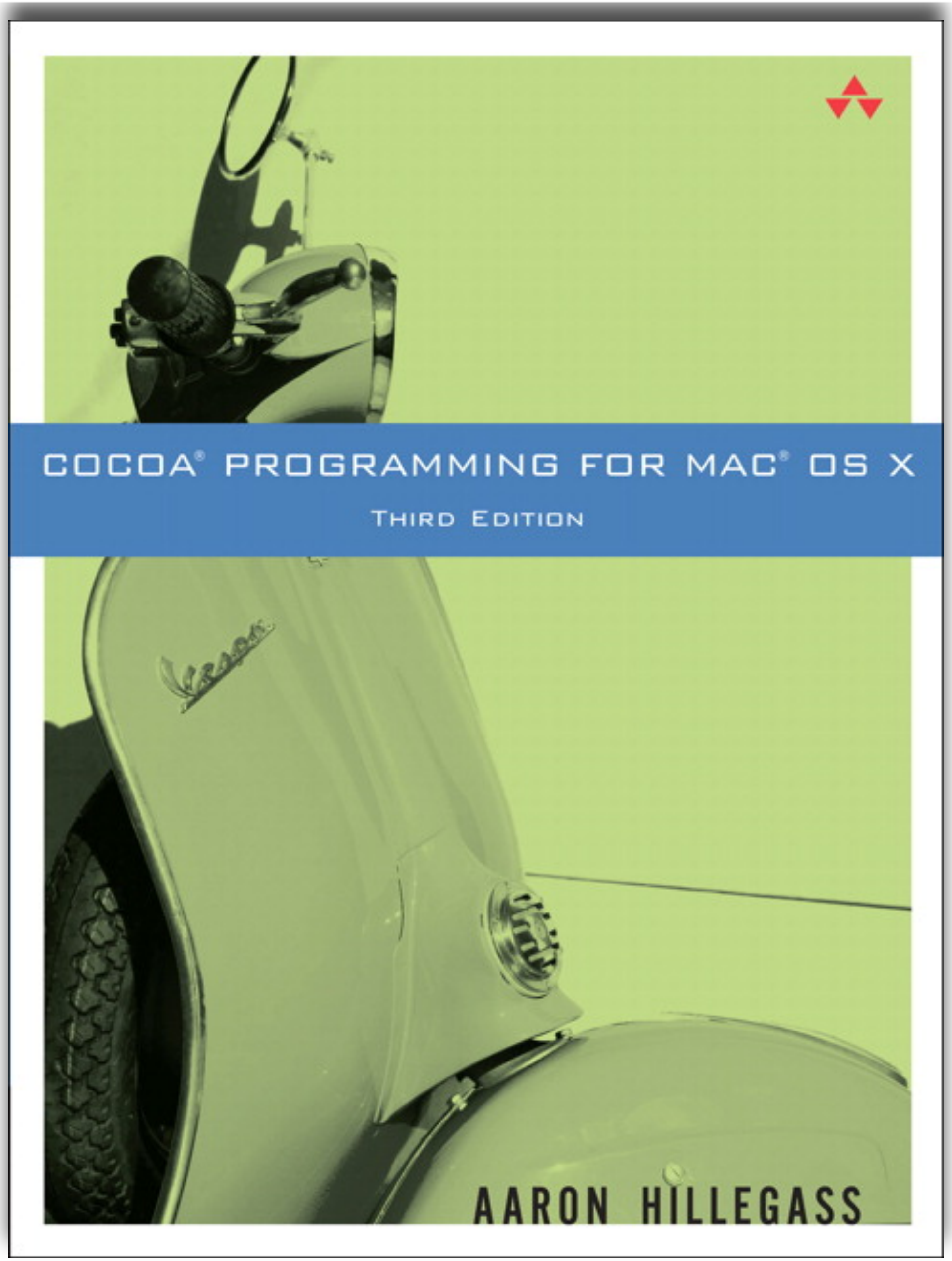

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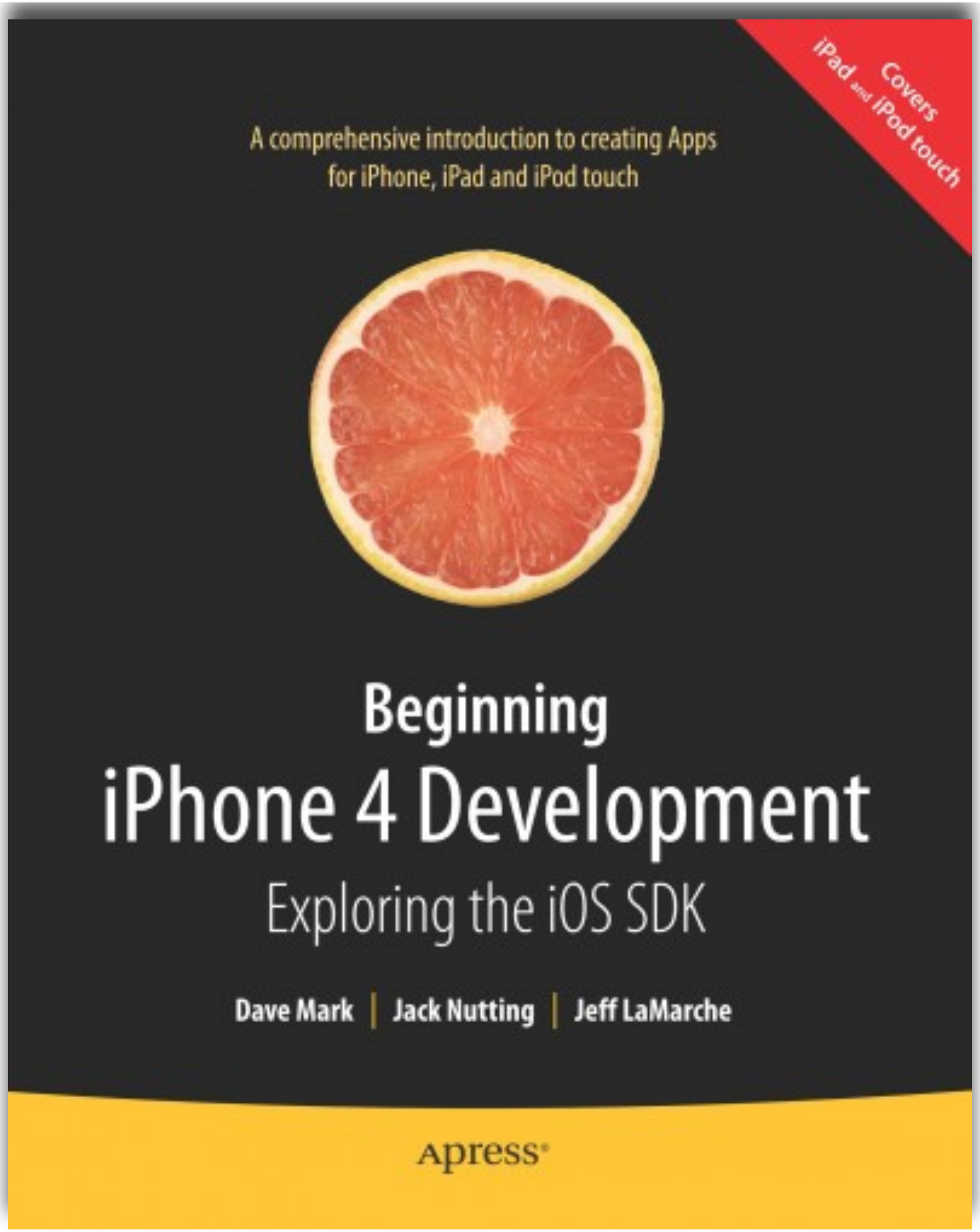
AARON HILLEGASS



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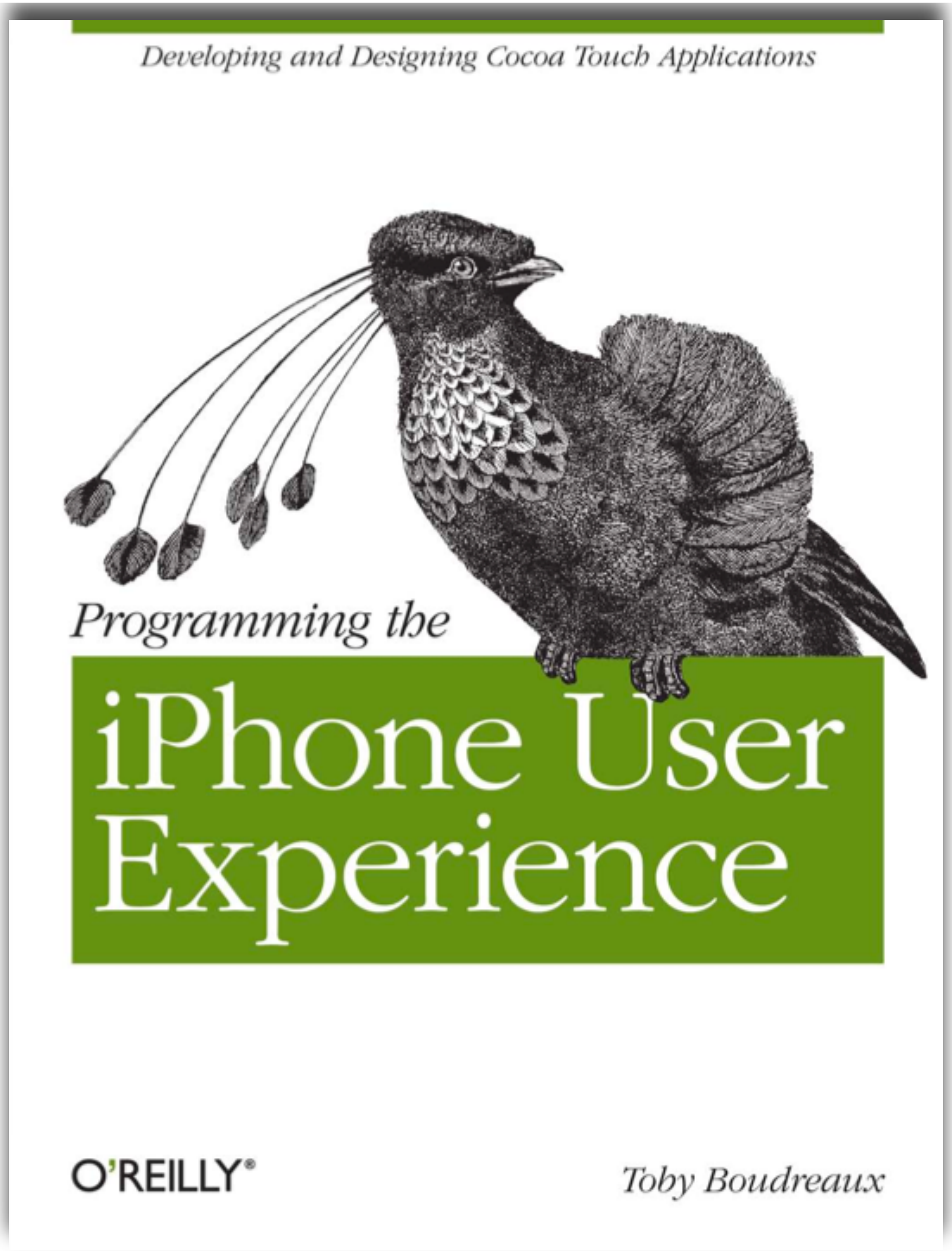

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Programming the

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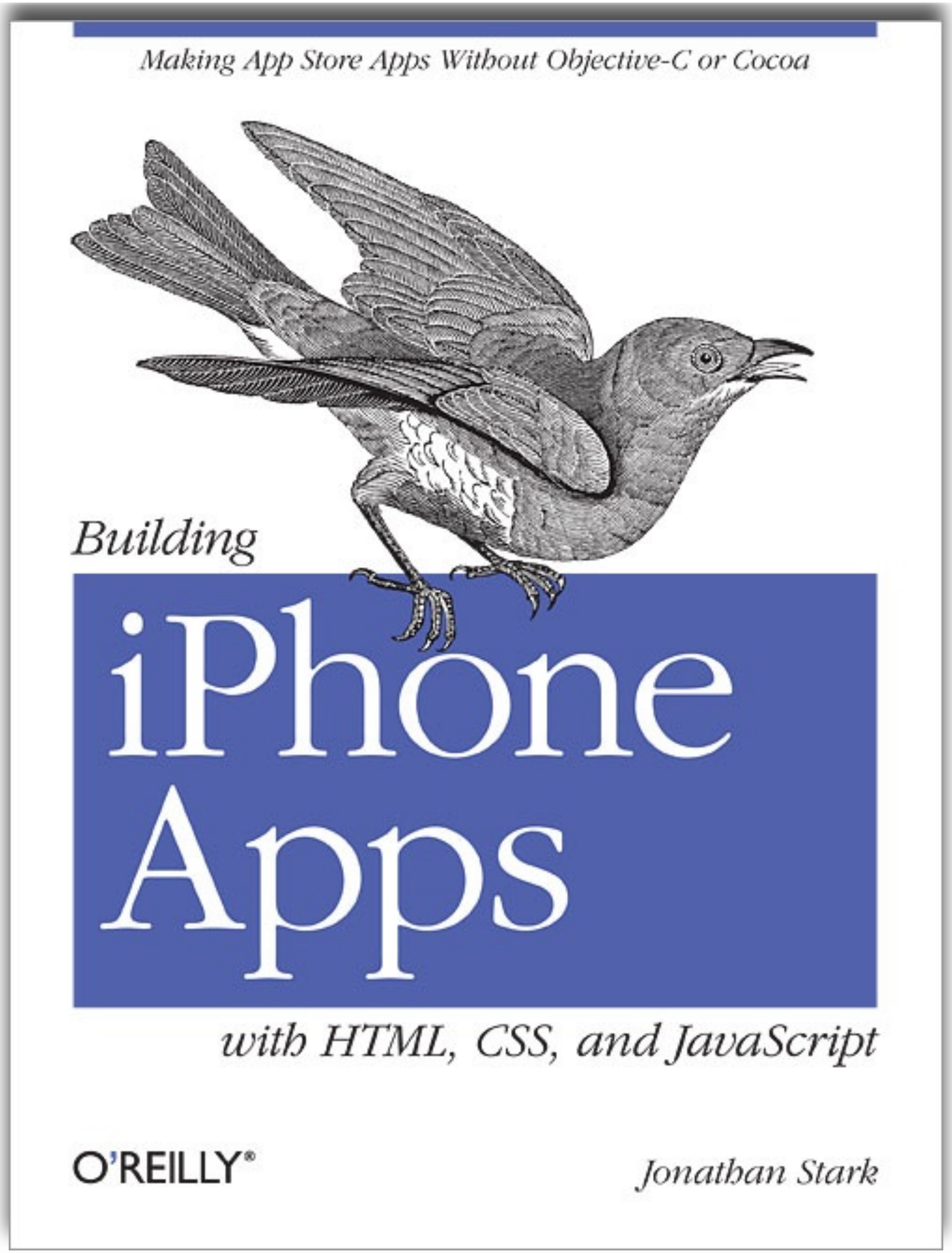

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Building iPhone Apps *with HTML, CSS, and JavaScript*

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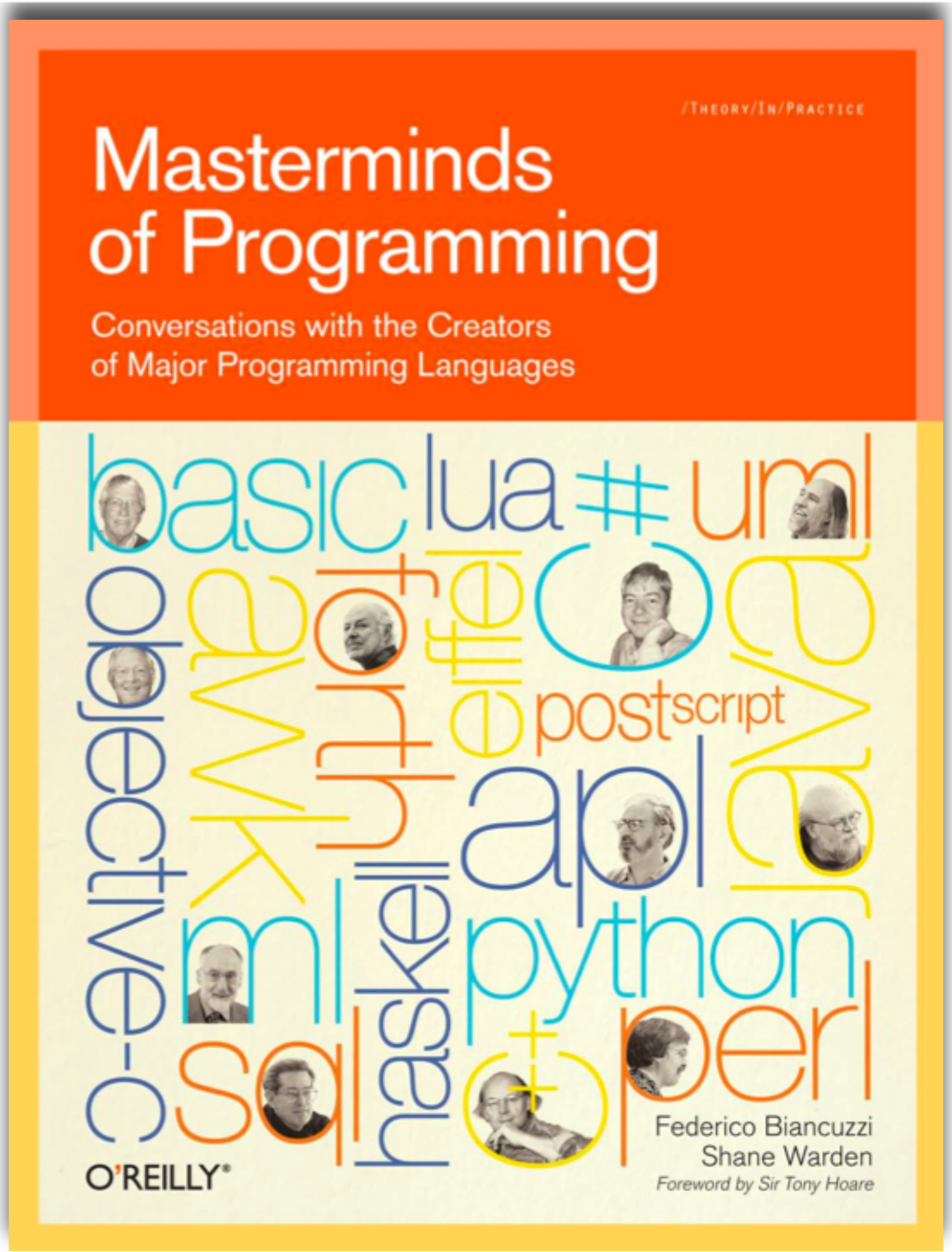
Jonathan Stark



/Theory/In/Practice

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Shane Warden
Foreword by Sir Tony Hoare

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Best iPhone Apps

The Guide for Discriminating Downloaders

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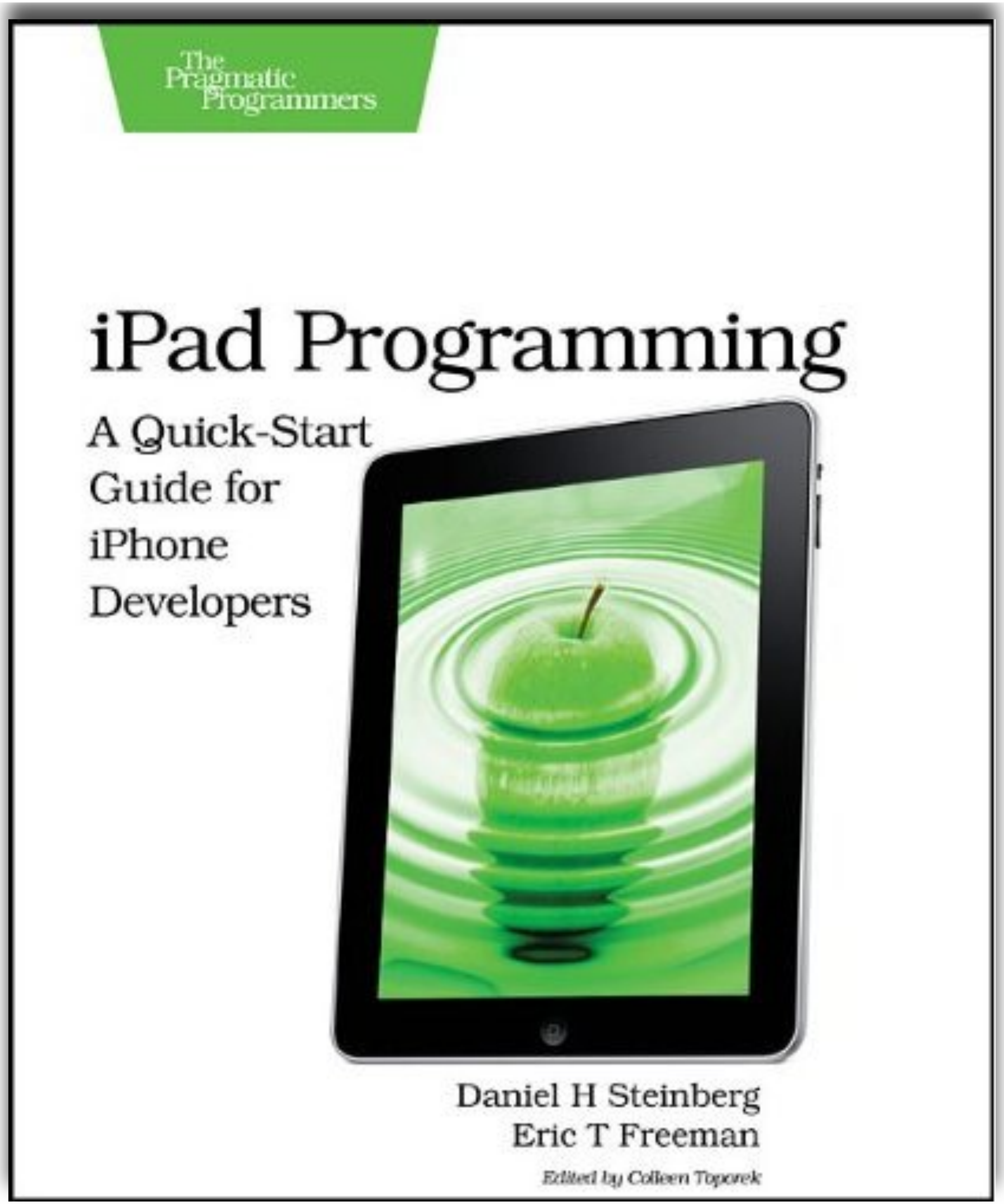
Josh Clark



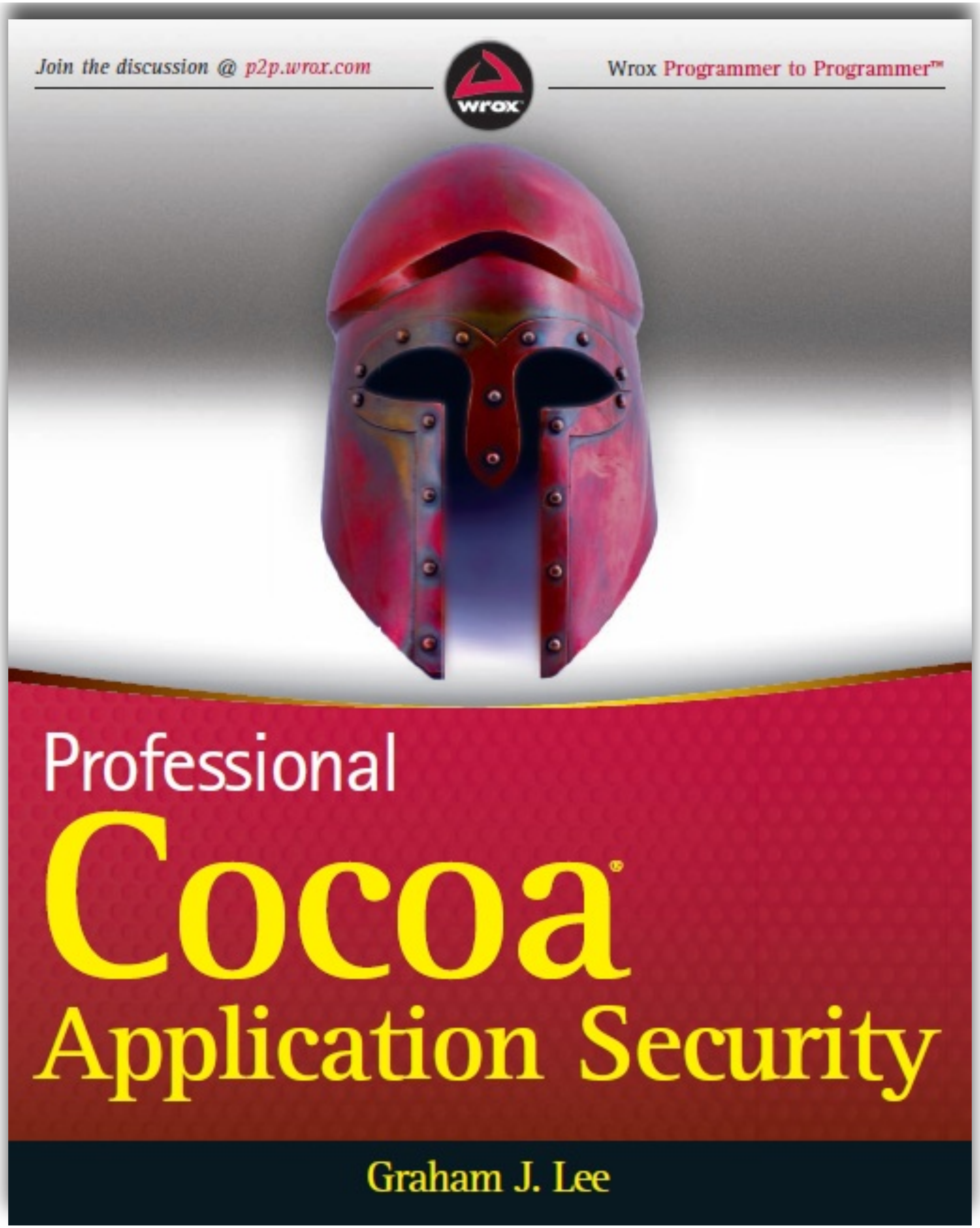
The Pragmatic Programmers

iPad Programming

A Quick-Start Guide for iPhone Developers

Daniel H Steinberg
Eric T Freeman

Edited by Colleen Toporek



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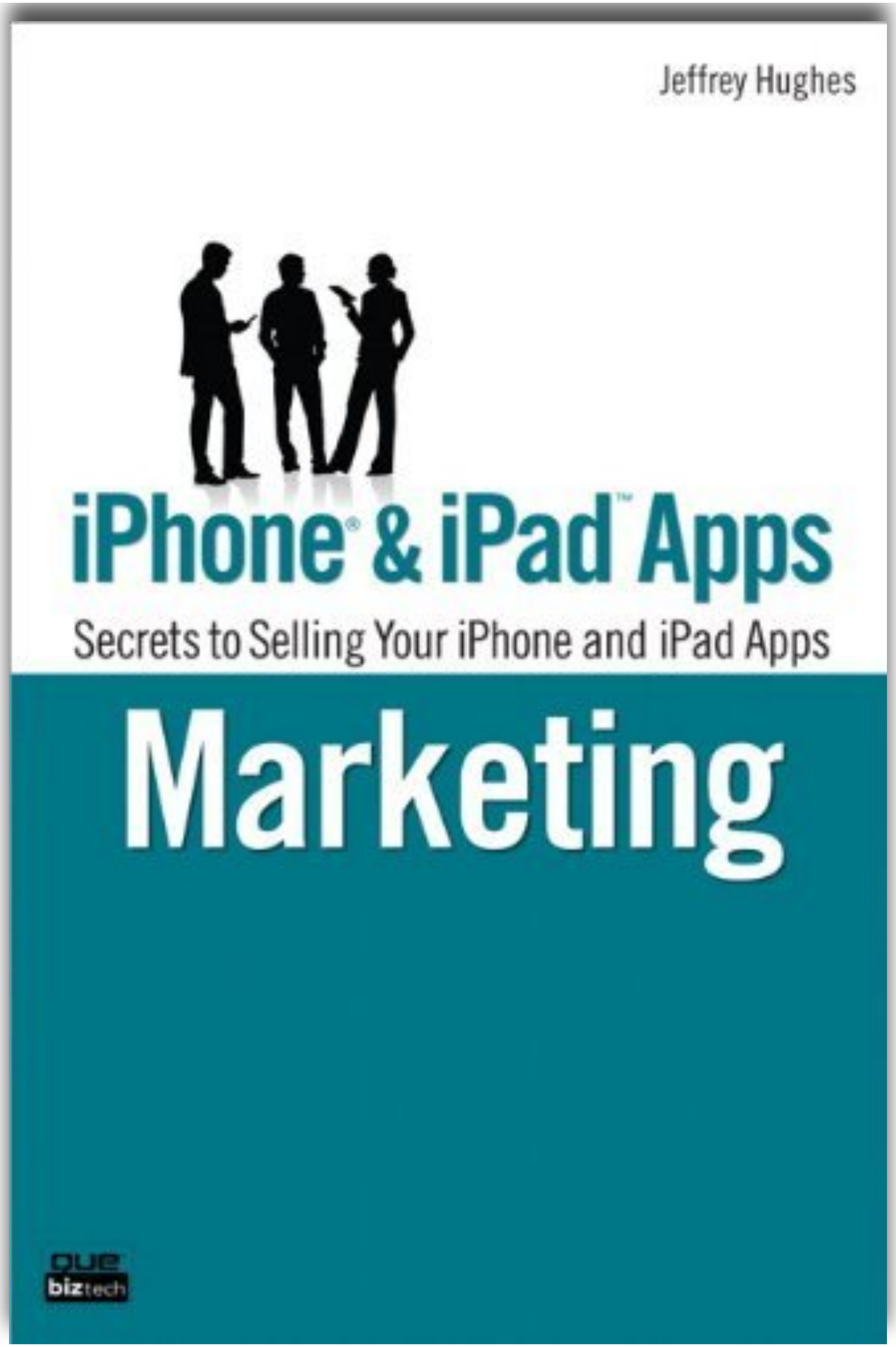

Jeffrey Hughes

iPhone® & iPad™ Apps

Secrets to Selling Your iPhone and iPad Apps

Marketing

que biztech

Thanks!

Questions?

Created and edited on Keynote for iPad