

How to Succeed Writing Mac Software

**Or, How to Make a Zillion Dollars and Not Lose
Your Soul**

Introduction

I'm going to babble about writing and selling software for Mac OS X

- It's easy
- It's fun
- It's lucrative
- Moms like it, because it's good for you

This talk is not endorsed by Apple

- Everything I say reflects only my own personal thoughts
- Nobody at Apple checked or approved this speech
- My feelings aren't necessarily those of my company
- They may not even be my feelings
- I could just be yanking your chains

Why would you listen to me?

- I've started two Macintosh software companies
- I've been in the business for 20 years
- I roll in a totally pimp ride
- Food won't be served for another hour
- I promise you success

“Follow my advice and I promise that you will be successful, happy, fulfilled, and drive a hot car.”

Wil Shipley, just now

Five parts

Part Un: Why Mac?

Part Deux: Get a Job

Part Trois: Starting Your Own Business

Part Quatre: Programming Tips

Part Cinq: Think for Yourself

Part Un: Why Mac?

“It was a rilly good paper... it was kind of a bummer.”

“Why don’t you port to Windows?”

- Windows has 95% market share (for now)
 - That’s, like, 20x the market of Macs
- All the other kids are doing it
- Come on, how bad can it be
- I heard this one guy ported to Windows and he made, like, a million dollars or something

My response:



“Doing what ‘everyone else’ is doing is the surest route to failure.”

Wil Shipley, just now

Mac people *use* their computers

Windows people *put up w t* their computers

- Check your coffee shops
- Remember institutional buyers

Windows users

- Have demonstrated they like going with the market leader
 - Like the “safe” choice
 - *That's not you*
- Don't want to spend more for higher quality
 - So they're going to buy crapware knock-offs of your idea
- Don't stay upgraded
 - Win98? Win2K? Win XP? Win XP Home? Win XP Reduced? WinCE?
 - You *survive* on upgrade revenue
- Are afraid to install software
 - Every piece of software junks up their desktop, makes their machine less stable, and opens holes for virus.

Windows users only ever use three apps

Word, IE (for e-mail), and iTunes

- Are you writing those apps?
 - No?
 - THEN THEY WON'T USE YOUR SOFTWARE, EITHER
 - Yes?
 - THEN YOU WILL BE CRUSHED BY FREE COMPETITION

Mac users

Possibly the finest people on Earth

- Organized and connected
 - Tell each other about great software
 - It's not hard to get your message out
 - Delicious Library
 - \$54,000 profit
 - *the first day*
 - *with no advertising*
- Love upgrades
- Love to get "the best"

Windows: 20x market, 30x programmers

You're competing with *too many* other companies

- Your product will be lost in a sea of similar crapware.
 - It'll be cheaper than your product
- You can't get your message out
 - Everyone is yelling to be heard
- You'll spend a fortune in advertising
 - The popular magazines are *huge*
- You'll spend a fortune trying to get shelf space
 - "Pay to play"

Cocoa is 10x easier to program

You will go bankrupt before you ship on Windows

- 70% of all software projects fail
- On Cocoa, you have time to innovate
 - On Windows, you'll spend your time getting buttons to redraw correctly
- iTunes for Windows
 - Necessary but sad

Seriously? Cocoa is 10x easier?

Examples written by yours truly, in chronological order

- **Omn e** was written with three engineers, against a team of 50-100 IE programmers
 - We had more market share than IE
 - Took Safari to bump us off (much respect, yo)
- **Omn D** was written by me, alone, in a month
 - It's one of three independent PDF implementations in the world, and got me a job offer from Adobe
- **Omn Gra e 3** was written by three engineers in seven months, including full **so** import and export
 - Made several million dollars
- **De c ous rary** was written by me in eight months
 - Has made us a small fortune in its first six months

Part Deux: Get a Job

“Sha na na na, sha na na na na,
Yip yip yip yip yip yip yip yip
Mum mum mum mum mum mum...”

Work for The Man, or for yourself

You gots to decide



Working for The Man

Upsides

- You can often go home at night and stop worrying about your job
 - You aren't "on-duty" 24x7
- You don't have to think up projects yourself and then sink or swim
- You get a paycheck whether your product sells or not
 - Within limits
- People don't call you at home at 7 AM on a Saturday and say, "Hey, I have this charge on my credit card from 'Delicious' and I don't know what it is..."

Working for The Man

Downsides

- Don't get to pick your projects
- Don't get to decide how you do them
- Don't get to design the application
- You get paid essentially the same whether the product takes off or not
 - You're never going to be a millionaire
- You might get stuck in a cubicle in the basement writing Cobol for an ancient accounting system on a text-only terminal for the rest of your miserable life

Pick a company you like, and go for it

The worst that can happen is they laugh at you and take out ads about what a loser you are on every Mac website

Keep pestering, over and over and over and over

It worked for Mike!

- Trade shows
- Through friends
- E-mail a resume
- Call me afterwards
- Follow up

It's not how you say it, it's what you say

- Know *everything* about my company
- Know *everything* about me
 - Read my stupid blog
 - Ask about my cats, Murray & Shmop
 - Mention you know a girl, up with whom you could set me
- Make it clear you're a huge fan
- Tell me it's your life's dream

Why the heck would I hire you?

Because I like you

- I'm going to have to work with whomever I hire, every day
 - I want to enjoy my days
- ∴ Therefore, I'm going to hire someone I like

“I’m a poet!”

But nobody knows it

- I don’t much care where you worked before
- I don’t much care about your college degree*
- Write code if you want to impress me

***Don’t tell your mom you dropped out of school because I said so.**

Part Trois: Starting Your Own Business

What are you, crazy?

Starting your own company

- Do you hate being told what to do?
- Do you like to lead?
- Do you like eating rice and beans?
- Do you mind living in a box, down by the river?
- You might be an entrepreneur!

“Forming a Company is Easy!”

Me, again

Step 1: Create an LLC

“Limited Liability Company”

- Very simple taxes for LLCs
- Incorporating keeps you from being sued and losing everything
 - You *will* get sued
- Incorporating keeps your books clean
 - You *will* get audited by the state
- File forms on-line, save a ton of money
 - You can form an LLC for about \$150

Step 2: Open a business bank account

Do *not* use your personal account

- Some banks focus on businesses
 - You *really* want to use one of these banks
- Ask to speak to a business banker
 - You're going to start a relationship with this person
 - This person might end up being your best asset
 - Good business bankers say:
 - "Your account is overdrawn; should I just cover it?"
 - "Want some money?"
 - "Need credit cards?"
 - "Want those fees reversed?"

Step 3: Find accountants

- Accounts don't *keep your books*
 - You're still going to have to track sales and expenditures yourself, every day
 - Use QuickBooks
 - **KEEP YOUR BOOKS CLEAN**
 - Every penny you earn or spend has to be categorized
 - The beauty is you get to write off some expenses when tax-time comes
 - Omni wrote off giant TVs, pool tables, and pinball machines
- Accountants do:
 - Give you advice on husbanding your money
 - File your taxes
 - Tell you what tax agencies you need to pay, and how to pay them

Taxes Suck

- State of Washington
 - WA B&O - Business and Occupation
- City of Seattle
 - Seattle Business License
 - Seattle Occupation
- King County
 - Monorail
 - King County Occupation
- If you have employees
 - Federal
 - FUTA - Federal Unemployment
 - FICA - Federal Income Tax
 - Medicare
 - Medicaid
 - State
 - SUIWA - State Unemployment
 - WA L&I - Labor and Industries (disability)

Step 4: Retain some lawyers

Again: you will be sued

- Talk to friends and associates, get a recommendation
- Don't have them form the company for you; that's a waste of \$1000
- Don't pay them a lot up-front
 - If they want a \$5,000 "retainer," then walk
- Find someone young and hungry
 - Less than \$100 / hour scares me
 - More than \$300 / hour scares me, as well
- I like finding young people at big firms
 - Big firms are famous
 - When you send nastigrams, they stick

So, you're getting sued?

Relax, they're usually bluffing... unless they aren't

- Some nastigrams you might get
 - Nastigrams for mentioning someone's name
 - Nastigrams for patent infringement
 - Nastigrams for copyright infringement
- Some nastigrams you might send
 - Nastigrams for nonpayment
 - Nastigrams for copyright infringement
 - Nastigrams for slander/libel
- Usually they want to negotiate a settlement
 - *Nobody* wants to go to trial

Employees

Ungrateful wretches, or useless wastes of space?*

- Don't hire them before you can afford them
 - You can't jerk them around
 - Have a potential employee's entire year's worth of salary saved up
- Realize that they're going to have their own ideas about where to take the company and how to do things
 - How willing are you to fight for your vision?
 - How much are you interested in compromising
- **IMPORTANT:** The more employees you have, the less the company will reflect *your* vision

* Statement does not apply to employees of Delicious Monster Software, LLC, or Apple Computer, Inc.

They gots to get paid

Pay them a fair wage, give them great benefits

- Don't pay them too little or they spend their lives waiting for the big score
- Don't pay them too much or you can't make it through the rough spots ahead
- Remember, if the going gets tough, *you* don't get paid, *they* do

Don't give stock options

The bubble has burst

- I've tried it both ways
- Stock options cause infighting and unrealistic expectations
- Play the "Partner Game"

Part Quatre: Programming Tips

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Be a code samurai

The biggest problem facing programmers...

- It's **NOT** that it's hard to write new code
- It's **NOT** that it's hard to optimize existing code
 - Processors are amazingly fast, and they get faster every year
- It **IS** that it's hard to write extensions, find bugs, and refactor algorithm

Code is very hard to read and maintain

Less code is better code

∴ No code is the best code

- **DO** go back and rewrite methods when you think of ways to make them smaller
- **DO** clean code as you go
- Do **NOT** write a new method unless you're sure it's not in Cocoa already
 - **DO** write your methods on top of Cocoa's lower-level methods

Optimization is for LATER

AFTER your code works

- DO think about computer science theory
 - Is this method $O(N)$? Is $N < 1000$? Then WHO CARES?
 - Is this method kind of slow, but called only once per second? Then WHO CARES?
 - Is this a $O(N^2)$ method? Fix it!
- Do NOT try to optimize when you first write code
 - The compiler is smarter than you
- Do NOT optimize without sampling first
 - Shark is your best friend; learn it, live it, love it
 - Do NOT pick some random method and make it faster for no reason
 - Unless it gets smaller
 - You're going to break it, and feel like an idiot

Style matters

- No abbreviations in variable names

```
int i = 0; // NO! NO! NO!  
int mediaIndex = 0; // YES! YES! YES!
```

- Use lots of words to give lots of meaning

```
NSArray *someMedia; // NO!  
NSArray *mediaAwaitingLookupInThisThread; // YES!
```

- Declare variables “just in time”

```
float thingNumber = [self _nextThingNumber];  
int processResultCode =  
    [self processThingNumber:thingNumber];  
if (processResultCode != noErr) ...
```

Style matters (part 2)

- Try to use class / variable names ending in the superclass / variable type name

```
@interface UserHandlingWindowController :  
    NSWindowController  
{  
    IBOutlet NSTextField *firstNameTextField;  
    IBOutlet NSMatrix *userTypeMatrix;  
}
```

- Don't write idiotic, completely self-evident comments

```
int mediaCount = [self _mediaCount]; // sets  
    'mediaCount' to be the number of media we  
    currently have
```

Part Cinq: Think for Yourself

“We are all individuals.”

“Don’t listen to me.”

Wil Shipley, just now

Use your brain

Not mine

- Don't follow the crowd
 - Crowds are, in aggregate, stupid
 - People will stand in a line without asking what the line is for
- Don't fish from the most popular fishing hole
 - It's fished out, duh
- People are always going to chastise you for going your own way
 - My Dad used to call me every week to tell me Apple was going under
 - Until I started making a lot more than him
 - Then he asked if he could borrow \$100,000 for his new trawler

Fight for the underdog

- The guy on top wants to *maintain the status quo*
 - *Status quo* is that you don't have any power, and they do
 - The guys on top want to stay on top
- The underdog wants to disrupt the current order
 - And change things for the better
 - During the revolution, there will be lots of opportunities for you to end up on top

Follow *your* passion

Success will come

- Don't pick a field because there's money in it
 - Pick a field because you love it
- Work your butt off
- Innovate
- You *will* get famous
 - And you'll make good money
- You may not be *rich* rich
 - But you'll be happy

Q&A

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