



**Objective-C, JavaScript and  
Sketch walk into a bar...**

# A Design Tokens Workflow to Connect Developers and Designers





***An excuse to  
commit crimes  
against nature  
mixing  
Objective-C and  
JavaScript***

# who am I?

Diego Freniche  
@dfreniche

~~Senior~~ Old iOS developer @Teamwork

*(Although I'm doing also Appcelerator development to pay the bills, please don't tell anyone)*

# teamwork.



# The Problem

- Several Android Apps
- Several iOS Apps
- Several Web frontends
- Several Multi platform apps (Windows / Linux / Mac) - Vue.js

But same colors, styles, etc.

## Projects

## Desk

## Spaces

## CRM

## Chat

 iOS  
(Appc)



 Android  
(Appc)



 iOS  
(Native)



 Android  
(Native)



# What we use?

- Designers: Sketch
- Developers: Xcode, Android Studio, Visual Studio Code, Sublime Text, ... and git

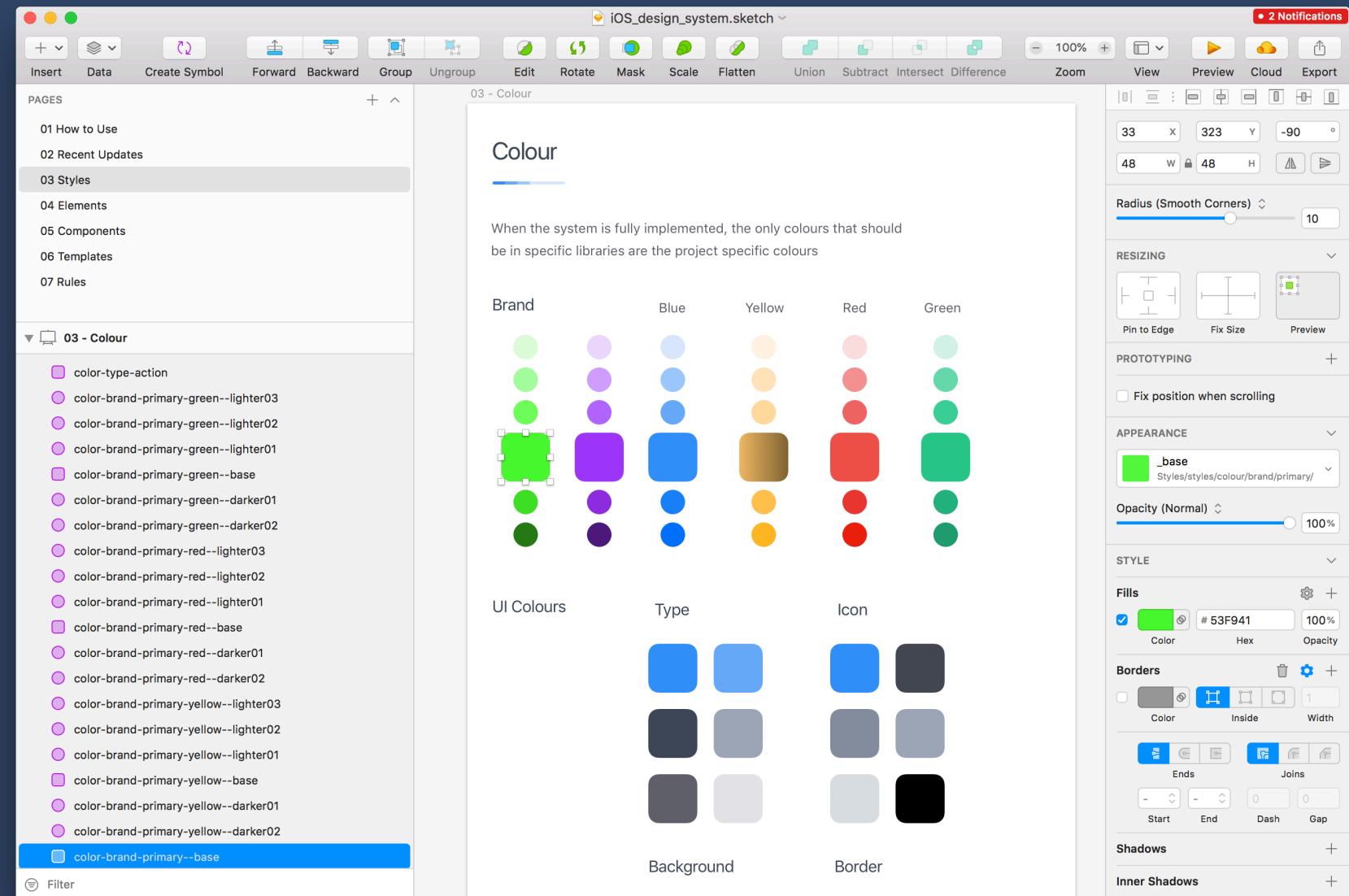
The image shows a Sketch application interface with a dark theme. A large, bold yellow text 'Sketch design file' is centered in the foreground. In the background, there is a grid of seven cards, each representing a different design style category:

- 01 - Legend**: A card showing a legend with color swatches and labels like 'Brand', 'Blue', 'Yellow', etc.
- 02 - Icon**: A card showing a grid of small icons.
- 03 - Colour**: A card showing a large grid of color swatches under sections like 'Brand Colours', 'Event Colours', and 'Fringes Colours'.
- 04 - Typography**: A card showing typography settings including 'Typeface' (SF Pro Text), 'Font Weight' (Bold, Semibold, Medium, Regular), and 'Text Styles' (Screen Title — Default, Secondary Title, Media Title — Default, Section Title, Cell Title, Body 1 — Medium, Body 1 — Regular, Action Text — Small, Action Text — Medium, Action Text — Large, Action Text — Outline, Action Text — Primary).
- 05 - Shadow**: A card showing shadow settings.
- 06 - Border**: A card showing border settings.
- 07 - Border Radius**: A card showing border radius settings.

The left sidebar contains a tree view of pages and components:

- PAGES**
  - 01 How to Use
  - 02 Recent Updates
  - 03 Styles** (highlighted)
  - 04 Elements
  - 05 Components
  - 06 Templates
  - 07 Rules
- 08 - Spacing**
  - styles/spacing/3xl
  - styles/spacing/2xl
  - styles/spacing/xl
  - styles/spacing/l
  - styles/spacing/m
  - styles/spacing/sm
  - styles/spacing/xs
  - styles/spacing/2xs
  - styles/spacing/3xs
- Header**
- 07 - Border Radius**
  - Aa Subheader - Style Sections
    - styles/border radius/l
    - styles/border radius/m
    - styles/border radius/xs
    - styles/border radius/sm
  - Header**
- 06 - Border**
  - Aa L
- Filter**

# All colors are there





## Current Workflow

1. Designer changes colors / fonts in Sketch
2. Developer doesn't get that message
3. Developer builds with wrong / outdated design
4. Designer freaks out "how can't you not see that's coral, not orange"
5. Developer adds / changes colors, rebuilds
6. Another dev needs same colors.  
Reinvents wheel



## Proposed Workflow

1. Designer changes colors / fonts in Sketch
2. Designer clicks on the export plugin
3. Developer gets a PR in Github with the new files / colors
4. Developer builds with the correct *coral* color
5. Profit!

e steps:

ok to make sure any new hardware or software is properly installed. If this is a new installation, ask your hardware or software manufacturer for any Windows updates you might need.

If problems continue, disable or remove any newly installed hardware or software. Disable BIOS memory options such as caching or shadowing. You need to use Safe Mode to remove or disable components. Restart your computer, press F8 to select Advanced Startup Options, and then select Safe Mode.

## Demo time

Technical information:

STOP: 0x00000050 (0xFDB3094C2, 0x0000000000000000)

SPCMDCON.SYS - Address FBFE7617 base at FBFE7617 timestamp 3d6dc



A medium shot of a man from the chest up. He has dark hair and is wearing a light-colored button-down shirt under a dark suit jacket. He is looking slightly to his left with a thoughtful expression, his right hand resting against his chin. The background is a soft-focus indoor setting.

**Details, please!**

# Plugin structure

DesignTokensExporter.sketchplugin

```
└─ Contents
    ├─ Resources
    |   └─ tw.png # icon shown on Sketch's menu
    └─ Sketch
        ├─ DesignTokensExporter.js
        ├─ ( more JS, templates, config files )
        └─ manifest.json
```

<https://developer.sketch.com/plugins/plugin-bundle>

# Plugin structure

- simple
- full blown with Node.js, tests, etc

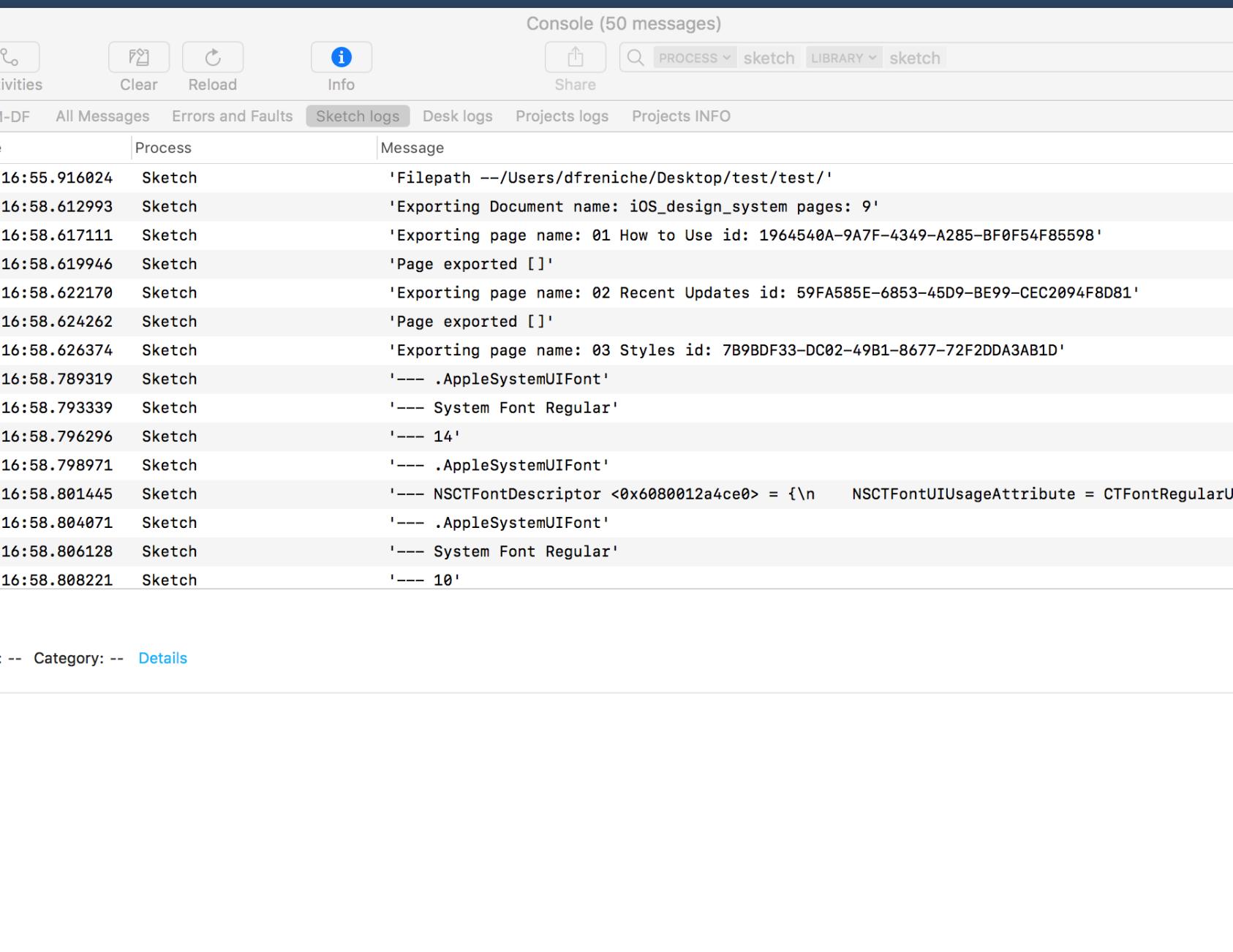
# Debug: advanced techniques



- using `console.log`
- using `Console.app`

Rule: *Using anything that starts with "console"*

# To see console messages



The screenshot shows the 'Console (50 messages)' window in OS X. The title bar includes icons for Activities, Clear, Reload, and Info, along with search and filter fields for 'PROCESS' and 'sketch'. Below the title bar, tabs for 'All Messages', 'Errors and Faults', 'Sketch logs' (which is selected), 'Desk logs', 'Projects logs', and 'Projects INFO' are visible. The main area displays a list of log messages from the 'Sketch' process. The messages detail the export of a document named 'iOS\_design\_system' with 9 pages, the export of pages 01 and 02, and the configuration of system fonts like 'AppleSystemUIFont' at sizes 14 and 10. At the bottom left, there are 'Category:' and 'Details' buttons.

Time	Process	Message
16:55.916024	Sketch	'Filepath --/Users/dfreniche/Desktop/test/test/'
16:58.612993	Sketch	'Exporting Document name: iOS_design_system pages: 9'
16:58.617111	Sketch	'Exporting page name: 01 How to Use id: 1964540A-9A7F-4349-A285-BF0F54F85598'
16:58.619946	Sketch	'Page exported []'
16:58.622170	Sketch	'Exporting page name: 02 Recent Updates id: 59FA585E-6853-45D9-BE99-CEC2094F8D81'
16:58.624262	Sketch	'Page exported []'
16:58.626374	Sketch	'Exporting page name: 03 Styles id: 7B9BDF33-DC02-49B1-8677-72F2DDA3AB1D'
16:58.789319	Sketch	'---- .AppleSystemUIFont'
16:58.793339	Sketch	'---- System Font Regular'
16:58.796296	Sketch	'---- 14'
16:58.798971	Sketch	'---- .AppleSystemUIFont'
16:58.801445	Sketch	'---- NSCTFontDescriptor <0x6080012a4ce0> = {\n    NSCTFontUIUsageAttribute = CTFontRegularUsa
16:58.804071	Sketch	'---- .AppleSystemUIFont'
16:58.806128	Sketch	'---- System Font Regular'
16:58.808221	Sketch	'---- 10'

- Create a filter in Console.app

process:sketch  
library:sketch

The logo for Cocoapods, featuring the word "COCOAPODS" in a bold, white, sans-serif font. The letters are partially cut off by a white rectangular border, which is itself set against a larger white rectangle. The entire logo is centered on a bright orange background that is decorated with several thin, light-orange, abstract organic shapes resembling leaves or petals.

**〈COCOAPODS〉**

# Sketch plugin config: manifest.json

```
{  
  "name" : "Teamwork Sketch Exporter",  
  "identifier" : "com.teamwork.sketch.exporter",  
  "version" : "0.0.2",  
  "description" : "Exports Design Tokens from Sketch into Android & iOS format.",  
  "authorEmail" : "diego.freniche@teamwork.com",  
  "author" : "Diego Freniche",  
  "icon": "tw.png",  
  "bundleVersion": "1.0",  
  "disableCocoaScriptPreprocessor": false,  
  "scope": "document",  
  "appcast": "https://raw.githubusercontent.com/Teamwork/sketch-design-tokens-exporter/master/appcast.xml",  
  "commands" : [  
    {  
      "script" : "DesignTokensExporter.js",  
      "handler" : "onRun",  
      "shortcut" : "cmd alt t",  
      "name" : "🎨 Export all now!",  
      "identifier" : "com.teamwork.export"  
    }],  
  "menu": {  
    "title" : "🚀 Export Design Tokens",  
    "items": [  
      "com.teamwork.export"  
    ]  
  }  
}
```

# Plugin config

- Contents > Sketch > config.json

```
{  
  "colors": {  
    ...  
  },  
  "repo": {  
    ...  
  }  
}
```

# Plugin config: Color template files

```
{  
  "colors": {  
    "android": {  
      "templateHeaderFile": "/templates/header-colors.xml",  
      "templateBodyFile": "/templates/main-colors.xml",  
      "templateFooterFile": "/templates/footer-colors.xml",  
      "outputFileName": "colors.xml"  
    },  
    ...  
  },  
  ...  
}
```

# Plugin config: repo config

```
{  
  ...  
  "repo": {  
    "android": {  
      "url": "https://github.com/dfreniche/test-design-tokens.git"  
    },  
    "ios": {  
      "url": "https://github.com/dfreniche/test-design-tokens.git"  
    },  
    "scss": {  
      "url": "https://github.com/dfreniche/test-design-tokens.git"  
    }  
  }  
}
```

# Templates: We can change generated code!

Contents > Sketch > templates

templates

- └ footer-colors.scss
- └ footer-colors.swift
- └ footer-colors.xml
- └ header-colors.scss
- └ header-colors.swift
- └ header-colors.xml
- └ main-colors.scss
- └ main-colors.swift
- └ main-colors.xml

# Nice things

```
function runCommand(command, args) {  
    var task = NSTask.alloc().init();  
  
    var pipe = NSPipe.alloc().init()  
    task.setStandardOutput_(pipe); // ^_^(ツ)_/^  
    task.setStandardError_(pipe); // Private Methods  
    task.setLaunchPath_(command); // + JS  
    task.arguments = args; // == Peyote.js  
    task.launch();  
    task.waitUntilExit();  
  
    // ...  
}
```

# The hub tool

<https://hub.github.com>

I LIED  
AND GOT  
THE JOB.

YOU'RE  
HIRED!



# Key points (this talk can even be useful!)

- CocoaScript is a strange beast
- Don't be too quick killing Objective-C (yet)
- writing plugins is easy
- It's JavaScript but no need to download the whole Internet using Node
- hub from GitHub
- Designers are also humans

**Closing though**

**undefined + method  
swizzling + calling  
private APIs in the  
same code base**

# Thanks!

I don't have a SoundCloud but...

