NSLog? Build&Run much?

And otherwise?

Pit Garbe, 11.07.2013

UI Debugging

- instead of logging und iteratively changing the UI
- better use the helicopter vantage point
- be able to change parts of the UI in a running App
- (sometimes) even pull in the changes into code
- find mistakes, bugs, potential performance issues

How do you do it?

- in the beginning there was NSLog, or more advanced: CocoaLumberjack (DDLog)
- to log something different, you'd often have to build and run
- to log UI stuff, you'd have to write inconvenient, long log statements, that are hard to read in code as well as in their output
- sometimes quite useless (debugging graphics with text??)

NSLogger

- https://github.com/fpillet/NSLogger
- nice performance log client, that also displays images, NSData, log level, markers and does remote logging (look mom, no cable!)
- there is a bridge to send all your DDLog lines to NSLogger
- still mostly text based, needs many build & run cycles if you want to log new stuff

NSLoggerClient 1.0 (iPhone OS 4.3.2) @ 192.168.0.2 (disconnected)

Open Save Export | Run 3 of 3 (Application Runs) | Preferences | Quick Search

Application Sets

Default Set

CommandFusion (iOS)

Filters for "Default Set"

All logs

Data blocks

Images

Text messages

Client connected: NSLoggerClient 1.0 (iPhone OS 4.3.2)
Hardware: iPhone Simulator
UDID: 18BB9BAF-1BD3-53B4-B126-BAA32B7A6CAC

09:33:45.538	Main thread network	test log message 0 - Random characters follow:
09:33:45.738 +200ms	Main thread video	test log message 1 - Random characters follow: ,#6-6105!21736!)40447) *-7 ($ 5*04!0(5$8,8+!6:.("+4&!(9:30$7
09:33:45.938 +199ms	Main thread main 1	test log message 2 - Random characters follow: 8$'9*!+$(*1*!#(-:$ &'*177*4*,020,:& '52(6:78)9/7,&367!$/8'(/.69)432# #:8&4)/4,6#., 31:4""95"".,$((2
09:33:45.938 +0ms	Thread 3 transfers	message 3 from standalone thread
09:33:46.141 +203ms	Main thread image	Log Image 1
09:33:46.341 +199ms	Main thread image	Log Image 2
09:33:46.538 +197ms	Main thread main	test log message 4 - Random characters follow: #5:&)#.$*6'"-#&0,:#1/ (&&# -/--'&(/$.*8:7#'*"4/046.868#90:36&&$, 4+9#&*)'(838,+35$$+-18:&(-# +8*8-6:317&0
09:33:46.738 +200ms	Main thread video 2	test log message 5 - Random characters follow: 35..8#2+:40!"9249#"# +&940'('73!83/!4:')+(5",2($#*0,).3'5(0*))
		Custom "marker" inserted in log flow
09:33:46.938 +199ms	Main thread main 1	Raw data, 950 bytes: 0000: 61 70 3c 50 f9 03 c3 e9 85 b3 b4 8d 52 21 eb 3d 'ap<P R! =' 0010: 21 78 54 93 e3 53 38 63 c8 d3 65 a2 65 0f 90 b6 '!xT S8c e e ' 0020: 29 bd 4d 8c 2d f5 de 6f 88 9a b3 da 6b 42 ed db ') M - o kB ' 0030: 64 cd 07 d8 1f a2 34 30 03 42 7d 8e 3c 03 15 68 'd 40 B} < h' 0040: 67 ee 6a 24 d4 75 21 a6 46 f5 9c eb 3b 44 ed 55 'g j$ u! F ;D U'

31 messages | All Levels | All Tags

DCIntrospect

- https://github.com/domesticcatsoftware/DCIntrospect
- oldest tool I'm aware of (~ 2 years)
- to be used in the running App (in the Simulator)
- controlled by keyboard and touch input
- `pod 'DCIntrospect', '~> 0.0.2'`

DCIntrospect

In `AppDelegate.m`

```
#import <DCIntrospect/DCIntrospect.h>
```

in `appDidFinishLaunching…`,
after `makeKeyAndVisible:`

```
#if TARGET_IPHONE_SIMULATOR
    [[DCIntrospect sharedIntrospector] start];
#endif
```

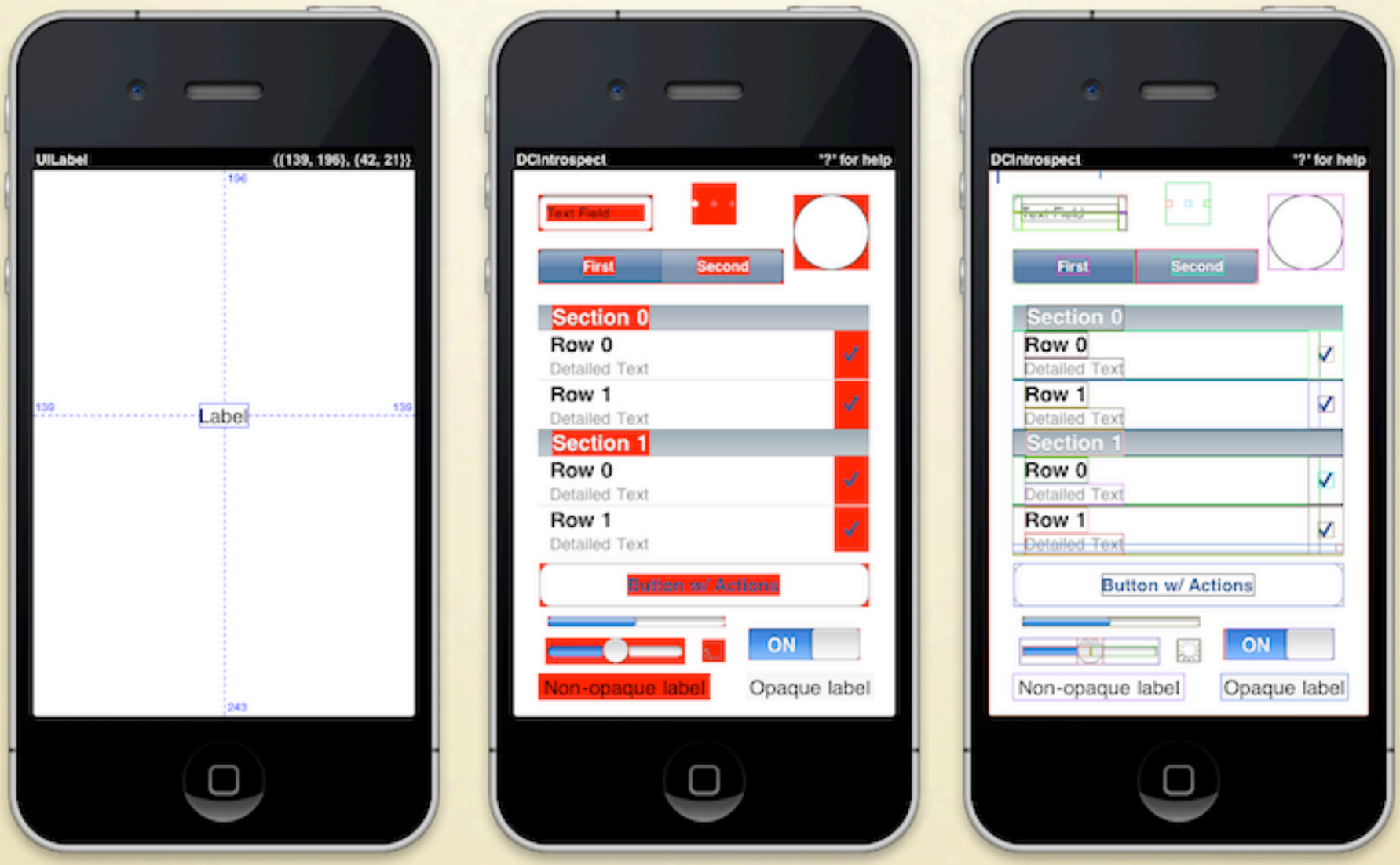
The rest will be explained in the OSD help screen.

DCIntrospect

- to be used mostly in the Simulator becaus of keyboard input
- but some parts can be used on the device
- highlight views, show views origin & size (with distance to window)
- move views around, change their sizes
- log view properties (incl. subviews, actions, targets)
- log accessibility properties
- manuelly call setNeedsDisplay, setNeedsLayout and reloadData
- highlight all the view outlines
- highlight all transparent views
- warn of misaligned views
- print view hierarchy

- free
- a lot of forks on GitHub, that are much younger (no idea, which to use)

DCIntrospect



PonyDebugger

- https://github.com/square/PonyDebugger
- `pod 'PonyDebugger'`
- with Chrome Developer Tools
- View Hierarchie (as XML), editable
- analyze network traffic
- remote logging and introspection (like NSLog but with expandable objects that don't clutter the screen unless you want to)
- Core Data browser
- iOS 5 +
- free

Spark Inspector

- http://www.sparkinspector.com/
- 3D presentation of view hierarchy
- show (all) notifications (can be filtered of course), can resend them
- live updating the current screen of the App
- all views and their properties, all the way down to CALayer transform can be edited on the fly
- uses swizzling (App Store safe, but you don't want to leave it in anyway)
- OS X 10.8+, iOS 5+
- $ 39.99 or 30 day trial

Spark Inspector

- assistant helps to setup with your project (if you don't like that, use CocoaPods)
- Device or Simulator
- system views can be hidden
- rotation of 3D view can be attached to device orientation
- can disable clip to bounds, i.e. myou can see outside the screen border and also see how much a view renders but ultimately clips away

Spark Inspector

Trial Period: 26 Days Left!

Local Simulator – haecviz

Target

View Stack

Notifications

View

CA

haecviz (72)
618 views

- UIWindow <0x98f97c0>
  - UIView <0x9ce4d80>
    - CenteredScrollView <0x98447b0>
      - UIView <0x9ce4240>
        - HaecView <0x9844200>
          - UIImageView <0x9844030>
          - LocationView <0x98f7ff0>
          - LocationView <0x9c39b20>
          - LocationView <0x9c219c0>
            - UIImageView <0x9c27a20>
            - FXLabel <0x9c1ef60>
            - ServerView <0x9c1d980>
              - UIImageView <0x9c1...
              - HaecView <0x9c1d690>
                - UIImageView <0x9...
                - BoardView <0x9c1...
                - UIImageView <0...
                - SocketView <0x...
                - UIImageView...
                - FXLabel <0x9...
                - CoreView <0x...
                - UIImageVie...
                - UIImageVie...
                - CoreView <0x...
                - UIImageVie...
                - UIImageVie...
                - FXLabel <0...
                - SocketView <0x...
                - UIImageView...
                - FXLabel <0x9...
                - CoreView <0x...
                - UIImageVie...
                - UIImageVie...
                - CoreView <0x...
                - UIImageVie...
                - UIImageVie...
                - MemoryView...
                - UIImageVie...
                - UIImageVie...
                - FXLabel <0...
                - BoardView <0x983...
                - UIImageView <0...

Show System Views
Show Invisible & Hidden Views
Rotate with Device
Disable Bounds Clipping

Update Now

Automatic Updating (Slower!)

No Selection

Twitter Facebook

2D 3D Zoom to Fit

Reveal

- http://revealapp.com
- `pod 'Reveal-iOS-SDK'`
- 2D/3D presentation of view hierarchy
- no live updating, only manual snapshot
- change view properties on the fly
- collapse subviews for less clutter, where you need it
- good for accessibility, VoiceOver tests
- Device or Simulator
- currently in Beta, try for free
- OS X 10.8+, iOS 6


REVEAL
Alien Blue (rMBP)
UIWindow
Alien Blue 2.1.1
iPad Simulator (iOS 6.1)
67%
Close
UIWindow
UIView
NotificationBar
UIImageView: ABSkin.bundle/en.lproj/images/c
UILabel:
JMFNWrapperView
UILabel:
JMFNPagingScrollView
UIImageView: ABSkin.bundle/en.lproj/images
JMFNContainerView
JMFNContainerView
UIView
UIView
JMOutlineTableView: Empty list
PostsHeaderView_iPad
OverlayViewContainer
UIView
UIView
JMGalleryPagingView
UIScrollView
JMGalleryPageContainerVie
JMGalleryImageScrollVie
JMOverride_0xa96d8
UILabel: NSFW
JMGalleryPlaybackBut
JMGalleryPageContainerVie
JMGalleryImageScrollVie
JMOverride_0xa95fef
UILabel: NSFW
JMGalleryPlaybackBut
JMGalleryPageContainerVie
JMGalleryImageScrollVie
JMOverride_0xa95f8f
UILabel: NSFW
JMGalleryPlaybackBut
UIButton: canvas ipad grid butto
UIButton: canvas ipad close butt
JMGalleryToolbar
UIImageView
UILabel: Retro Daft Punk Delc
UILabel: wallpaper • 6c • 178
Retro Daft Punk Delorean, one of my favorite wallpapers (1920 x 1080)

Spark Inspector VS Reveal

	Spark Inspector	Reveal
min iOS version	**iOS 5**	**iOS 6**
3D	**Yes**	**Yes**
change distance of layers	**Yes**	**Yes**
hide system views	**Yes**	–
Notifications	**Track all, send selected again**	–
disable clipping	**Yes**	–
Live Updating	**Yes**	–
Uses Swizzling	**Yes**	**No**
Price	**$ 39.99 (30 day trial)**	**Beta, free**

XRay Editor (+Probe)

XRay Editor http://mireus.com/xrayeditor/

- change view properties in running App
- can show a design overlay
- $24.99 Launch Sale
- 14 day trial

“Lite Edition”:

XRay Probe http://mireus.com/xrayprobe/

- show layout of running App (2D)
- $11.99 Launch Sale
- 14 day trial

XRay Editor (+Probe)

```
pod 'XRay', '~> 1.2'
```

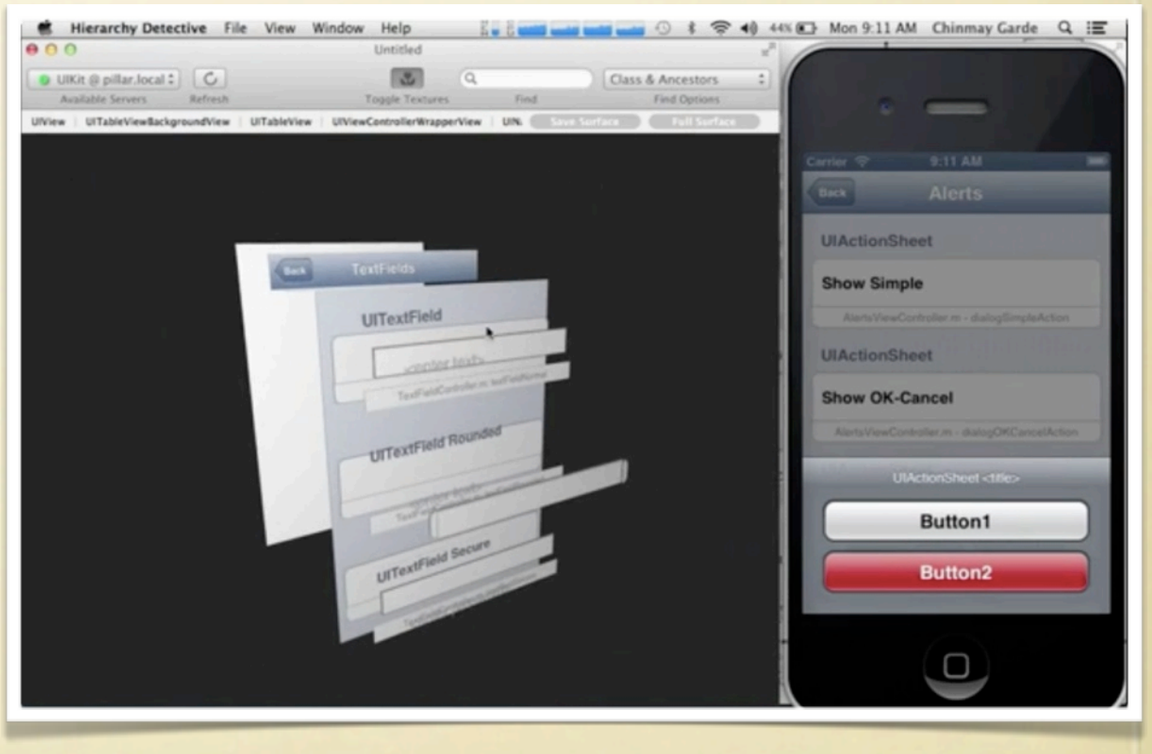
insert in AppDelegate:

```
#import <XRay/XRay.h>
```

- didn't work with CocoaPods, worked manually
- scrolling inside big UIScrollview upsets XRay Editor (in a strange and interfering way)
- works on device as well
- iOS 5+
- there is an Xcode plugin, that allows to insert the changes you made to the running App into your code

Hierarchy Detective

- http://hierarchydetective.com
- https://github.com/chinmaygarde/hierarchydetective
- designed to be extended by modules, currently supports UIKit, CALayer, cocos2d
- In the Wiki you can find info how to support more view hierarchy types
- didn't try it yet



Demo