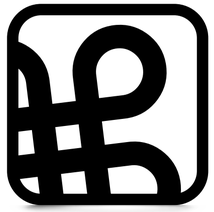


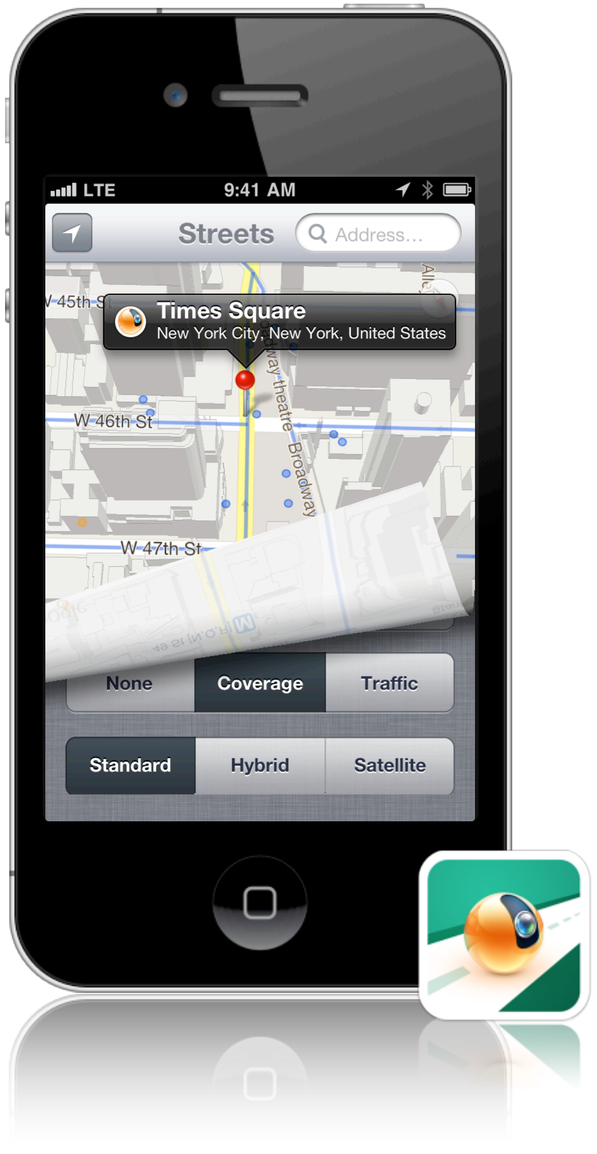
Macoun

FutureTap
Smart iPhone Apps

Einblick in die Trickkiste

Ortwin Gentz
@ortwingentz
αortwin


3G
9:41 AM
Where To?
Food & Drink
Favorites
Categories
Recents
EXIT


LTE
9:41 AM
Streets
Address...
Times Square
New York City, New York, United States
W 46th St
W 47th St
Broadway
None
Coverage
Traffic
Standard
Hybrid
Satellite

Photoshop ⇢ UIKit

Bildgrößen

- JPEG für Hintergründe
- JPNG: github.com/nicklockwood/JPNG
- PDF: github.com/mindbrix/UIImage-PDF
  ShrinkIt: www.panic.com/blog/2010/02/shrinkit-1-0/Hyperlink

Kompromisse

- Wiederverwendbarkeit durch Resizability
  - Noise/Patterns entfernen
- Zerlegung von Ebenen in PNGs:
  - Was tun mit Ebeneneffekten?

Tools

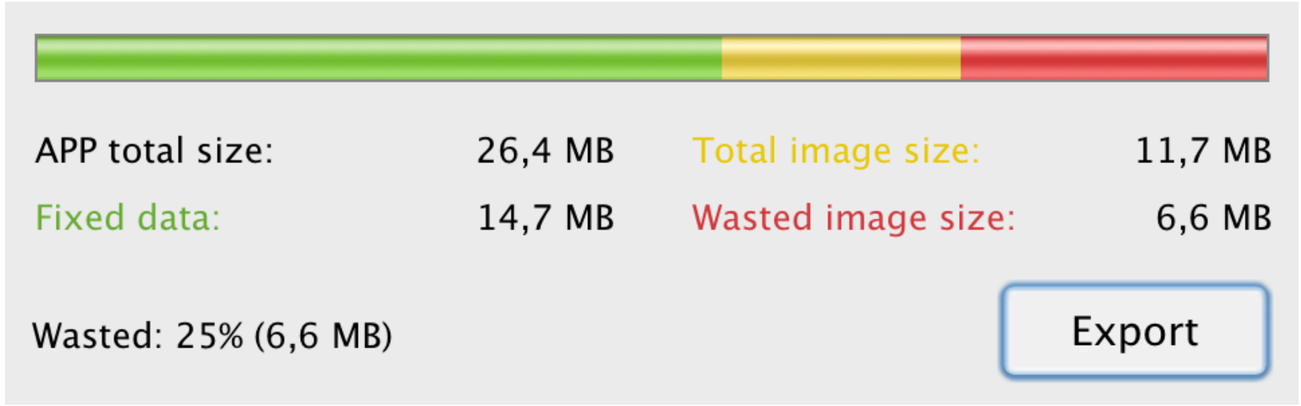
Tools

Name	Wasted
Art	Programm
Größe	1,5 MB
Erstellt	Samstag, 8. Juni 2013 23:11
Geändert	Samstag, 8. Juni 2013 23:11
Zul. geöffnet	Heute 10:52
Version	2.5

Wasted

PNGs aus IPA oder
.xarchive eindampfen
http://wasted.werk01.de

kostenlos



Tools

Name	Pixel Slice
Art	Programm
Größe	1,4 MB
Erstellt	Samstag, 11. Mai 2013 03:16
Geändert	Samstag, 11. Mai 2013 03:16
Zul. geöffnet	Gestern 17:25
Version	1.0

Pixel Slice 3,59€

Erstellung resizable Images
für Buttons, Rahmen etc.
über Mac App Store

Tools

Name	Pixel Slice
Art	Programm
Größe	1,4 MB
Erstellt	Samstag, 11. Mai 2013 03:16
Geändert	Samstag, 11. Mai 2013 03:16
Zul. geöffnet	Gestern 17:25
Version	1.0

Pixel Slice 3,59€

Erstellung resizable Images
für Buttons, Rahmen etc.
über Mac App Store

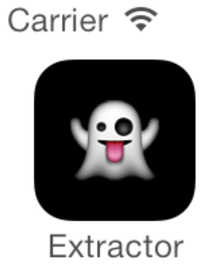
Name	Slicy
Art	Programm
Größe	4 MB
Erstellt	Freitag, 6. September 2013 01:13
Geändert	Freitag, 6. September 2013 01:13
Zul. geöffnet	Montag, 30. September 2013 17:05
Version	1.1.5

Slicy 29 $

Export von Ebenen in
@1x/@2x Bilder
http://macrabbit.com/slicy/

Vom OS übernehmen

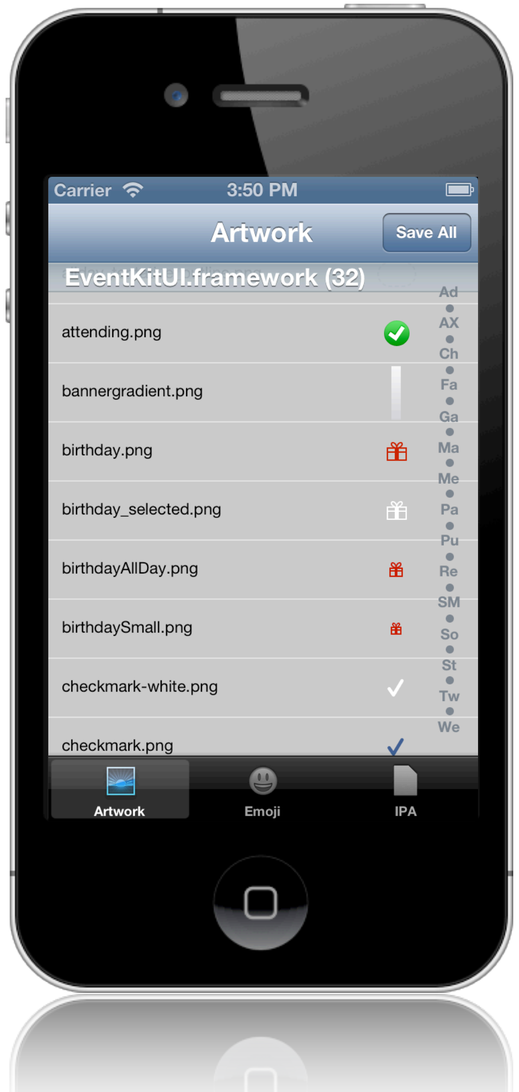
Vom OS übernehmen



Extractor

Bilder aus iOS Frameworks und 3rd party App IPAs extrahieren

github.com/0xced/iOS-Artwork-Extractor



UIAppearance

UISS (UIKit Style Sheets)

```
[[UIButton appearance] setTitleColor:[[UIColor whiteColor]
  colorWithAlphaComponent:0.800]
                              forState:UIControlStateNormal];
[[UIButton appearance] setTitleColor:[UIColor whiteColor]
                              forState:UIControlStateHighlighted];
[[UIButton appearance] setBackgroundImage:[[UIImage imageNamed:@"button-
  background-normal"]
resizableImageWithCapInsets:UIEdgeInsetsMake( 0.0,10.0,0.0,10.0)]
                                    forState:UIControlStateNormal];
[[UIButton appearance] setBackgroundImage:[[UIImage imageNamed:@"button-
  background-highlighted"]
resizableImageWithCapInsets:UIEdgeInsetsMake(0.0,10.0,0.0,10.0)]
                                    forState:UIControlStateHighlighted];
[[UILabel appearanceWhenContainedIn:[UIButton class], nil] setFont:[UIFont
 fontWithName:@"Copperplate-Bold" size:18.0]];
[[UIButton appearance] setTitleEdgeInsets:UIEdgeInsetsMake(1.0, 0.0, 0.0,
 0.0)];
```

UISS (UIKit Style Sheets)

```
{
    "UIButton":{
        "titleColor:normal":["white", 0.8],
        "titleColor:highlighted":"white",
        "backgroundImage:normal": ["button-background-normal",
[0,10,0,10]],
        "backgroundImage:highlighted": ["button-background-highlighted",
[0,10,0,10]],
        "titleEdgeInsets": [1,0,0,0],
        "UILabel":{
            "font":["Copperplate-Bold", 18]
        }
    }
}
```

UISS (UIKit Style Sheets)

- Verständliche JSON-Syntax
- Live Updates per HTTP
- UIAppearance-Code kann generiert werden
- github.com/robertwijas/UISS

Layout

```
CGRect frame = self.label.frame;
[self.label sizeToFit];
frame.size.width = self.label.frame.size.width;
frame.origin.x = CGRectGetMaxX(self.label.superview.frame) - 5 -
 frame.size.width;
self.label.frame = frame;
```

```
CGRect frame = self.label.frame;
[self.label sizeToFit];
frame.size.width = self.label.frame.size.width;
frame.origin.x = CGRectGetMaxX(self.label.superview.frame) - 5 -
 frame.size.width;
self.label.frame = frame;
```

```
[[self.label.po_frameBuilder setSizeToFitWidth]
 alignRightInSuperviewWithInset:5];
```

```
CGRect frame = self.label.frame;
[self.label sizeToFit];
frame.size.width = self.label.frame.size.width;
frame.origin.x = CGRectGetMaxX(self.label.superview.frame) - 5 -
 frame.size.width;
self.label.frame = frame;
```

```
[[self.label.po_frameBuilder setSizeToFitWidth]
 alignRightInSuperviewWithInset:5];
```

```
[[self.label.po_frameBuilder centerInSuperview];
```

```
CGRect frame = self.label.frame;
[self.label sizeToFit];
frame.size.width = self.label.frame.size.width;
frame.origin.x = CGRectGetMaxX(self.label.superview.frame) - 5 -
 frame.size.width;
self.label.frame = frame;
```

```
[[self.label.po_frameBuilder setSizeToFitWidth]
 alignRightInSuperviewWithInset:5];
```

```
[[self.label.po_frameBuilder centerInSuperview];
```

github.com/podio/ios-view-frame-builder

Constraints animieren

```
self.originXConstraint.constant = 20.0f;
[UIView animateWithDuration:0.5 animations:^{
  [self.view layoutIfNeeded];
}];
```

View Debugging

```
(lldb) po [webView recursiveDescription]
$1 = 0x0bb81c50 <UIWebView: 0xb945720; frame = (2 2; 320 548); lay
   | <_UIWebViewScrollView: 0xb94c360; frame = (0 0; 320 548); cli
   |    | <UIImageView: 0xb94dd00; frame = (0 0; 54 54); transform
   |    | <UIImageView: 0xb94dc70; frame = (0 0; 54 54); transform
   |    | <UIImageView: 0xb94dbe0; frame = (0 0; 54 54); transform
   |    | <UIImageView: 0xb94da10; frame = (0 0; 54 54); alpha = 0
   |    | <UIImageView: 0xb94d980; frame = (-14.5 14.5; 30 1); tra
   |    | <UIImageView: 0xb94d8f0; frame = (-14.5 14.5; 30 1); tra
   |    | <UIImageView: 0xb94d860; frame = (0 0; 1 30); transform
   |    | <UIImageView: 0xb94d7d0; frame = (0 0; 1 30); alpha = 0;
   |    | <UIImageView: 0xb94d740; frame = (0 518; 320 30); alpha
   |    | <UIImageView: 0xb94d5a0; frame = (0 0; 320 30); transfor
   |    | <UIWebBrowserView: 0xc29bc00; frame = (0 0; 320 548); ge
```

```
(lldb) po [webView explode]
   {{0, 20}, {320, 548}} UIWebView:UIView (<UIWebView: 0xb945720;
   {{0, 20}, {320, 548}} -_UIWebViewScrollView:UIWebScrollView (<_
     {{0, 20}, {54, 54}} --UIImageView:UIView (<UIImageView: 0xb94
     {{0, 20}, {54, 54}} --UIImageView:UIView (<UIImageView: 0xb94
     {{0, 20}, {54, 54}} --UIImageView:UIView (<UIImageView: 0xb94
     {{0, 20}, {54, 54}} --UIImageView:UIView (<UIImageView: 0xb94
{{-14.5, 34.5}, {30, 1}} --UIImageView:UIView (<UIImageView: 0xb94
{{-14.5, 34.5}, {30, 1}} --UIImageView:UIView (<UIImageView: 0xb94
      {{0, 20}, {1, 30}} --UIImageView:UIView (<UIImageView: 0xb94
      {{0, 20}, {1, 30}} --UIImageView:UIView (<UIImageView: 0xb94
   {{0, 538}, {320, 30}} --UIImageView:UIView (<UIImageView: 0xb94
    {{0, 20}, {320, 30}} --UIImageView:UIView (<UIImageView: 0xb94
   {{0, 20}, {320, 548}} --UIWebBrowserView:UIWebDocumentView (<UI
```

github.com/futuretap/
FTAdditions

~/.lldbinit

```
command regex rd 's/^[[:space:]]*$/po [[[UIApplication
sharedApplication] keyWindow] recursiveDescription]/' 's/^(.+)$/po
[%1 recursiveDescription]/'

command regex re 's/^[[:space:]]*$/po [[[UIApplication
sharedApplication] keyWindow] explode]/' 's/^(.+)$/po [%1
explode]/'
```

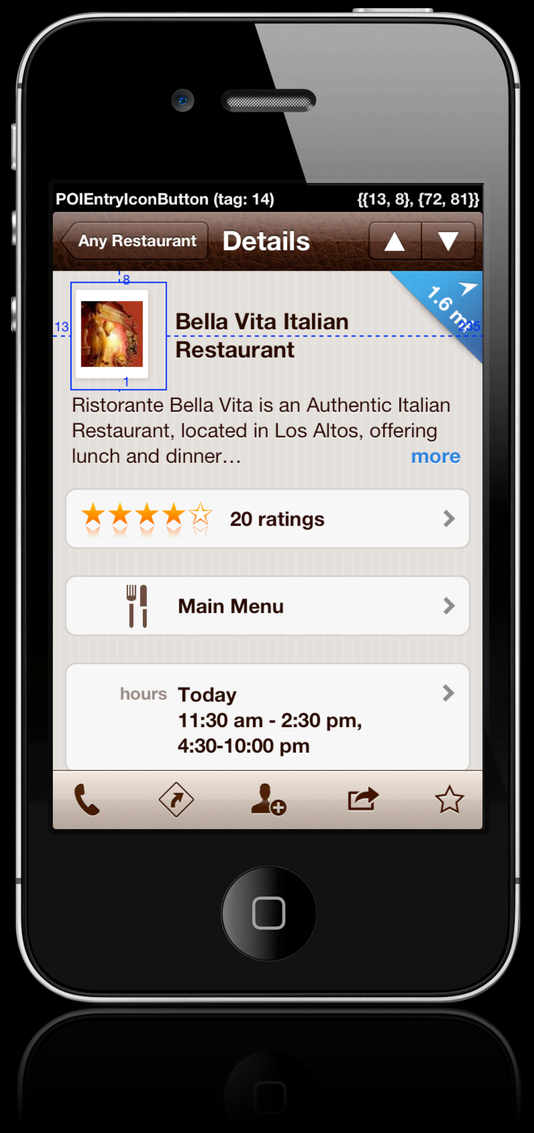
```
(lldb) rd
(lldb) re
(lldb) rd webView
(lldb) re webView
```

DCIntrospect

- Interaktives Debugging von Views
- Feintuning
- github.com/cbess/DCIntrospect

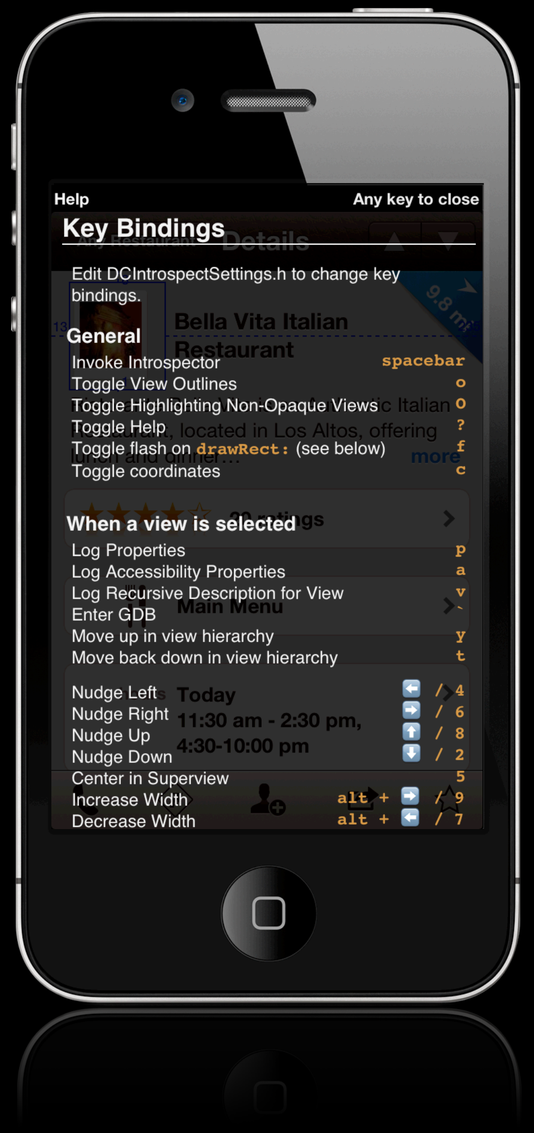
DCIntrospect

- Interaktives Debugging von Views
- Feintuning
- github.com/cbess/DCIntrospect



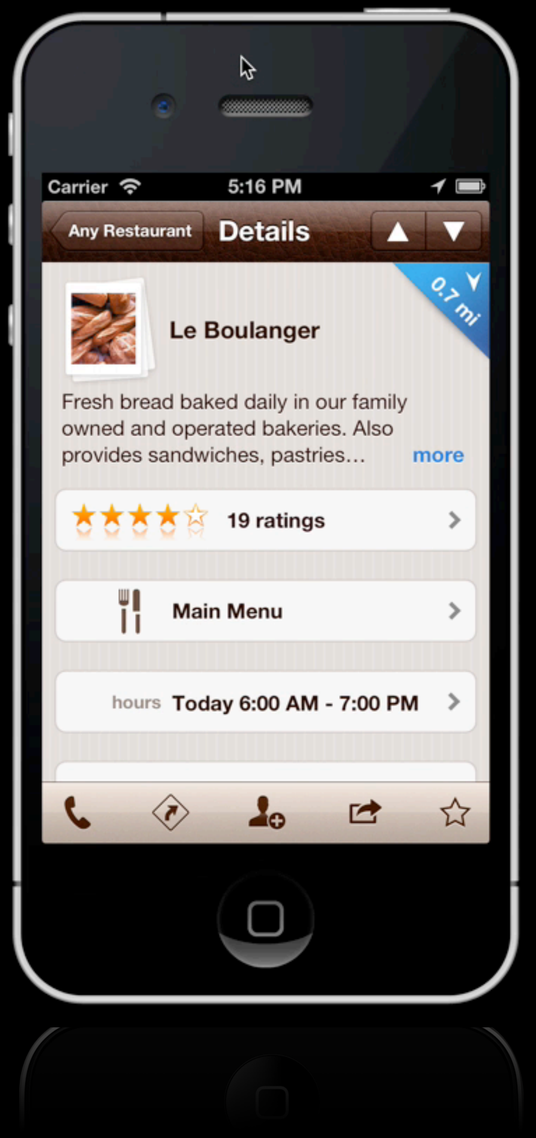
DCIntrospect

- Interaktives Debugging von Views
- Feintuning
- github.com/cbess/DCIntrospect



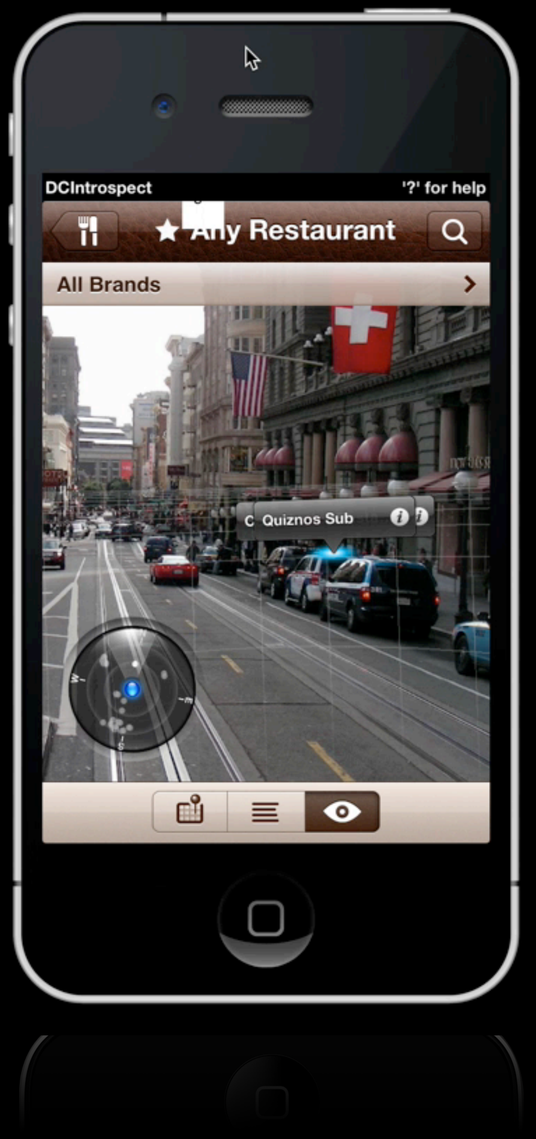
DCIntrospect

- Interaktives Debugging von Views
- Feintuning
- github.com/cbess/DCIntrospect



DCIntrospect

- Interaktives Debugging von Views
- Feintuning
- github.com/cbess/DCIntrospect



Tools

Tools

Reveal
View-Hierarchiedarstellung in 3D
revealapp.com

Tools

Name	Reveal
Art	Programm
Größe	26,5 MB
Erstellt	Dienstag, 3. September 2013 14:40
Geändert	Dienstag, 3. September 2013 14:40
Zul. geöffnet	Montag, 16. September 2013 15:59
Version	0.9.1

Reveal

View-Hierarchiedarstellung in 3D

revealapp.com

Open Beta

Tools

Name	Reveal
Art	Programm
Größe	26,5 MB
Erstellt	Dienstag, 3. September 2013 14:40
Geändert	Dienstag, 3. September 2013 14:40
Zul. geöffnet	Montag, 16. September 2013 15:59
Version	0.9.1

Reveal

View-Hierarchiedarstellung in 3D

revealapp.com

Open Beta

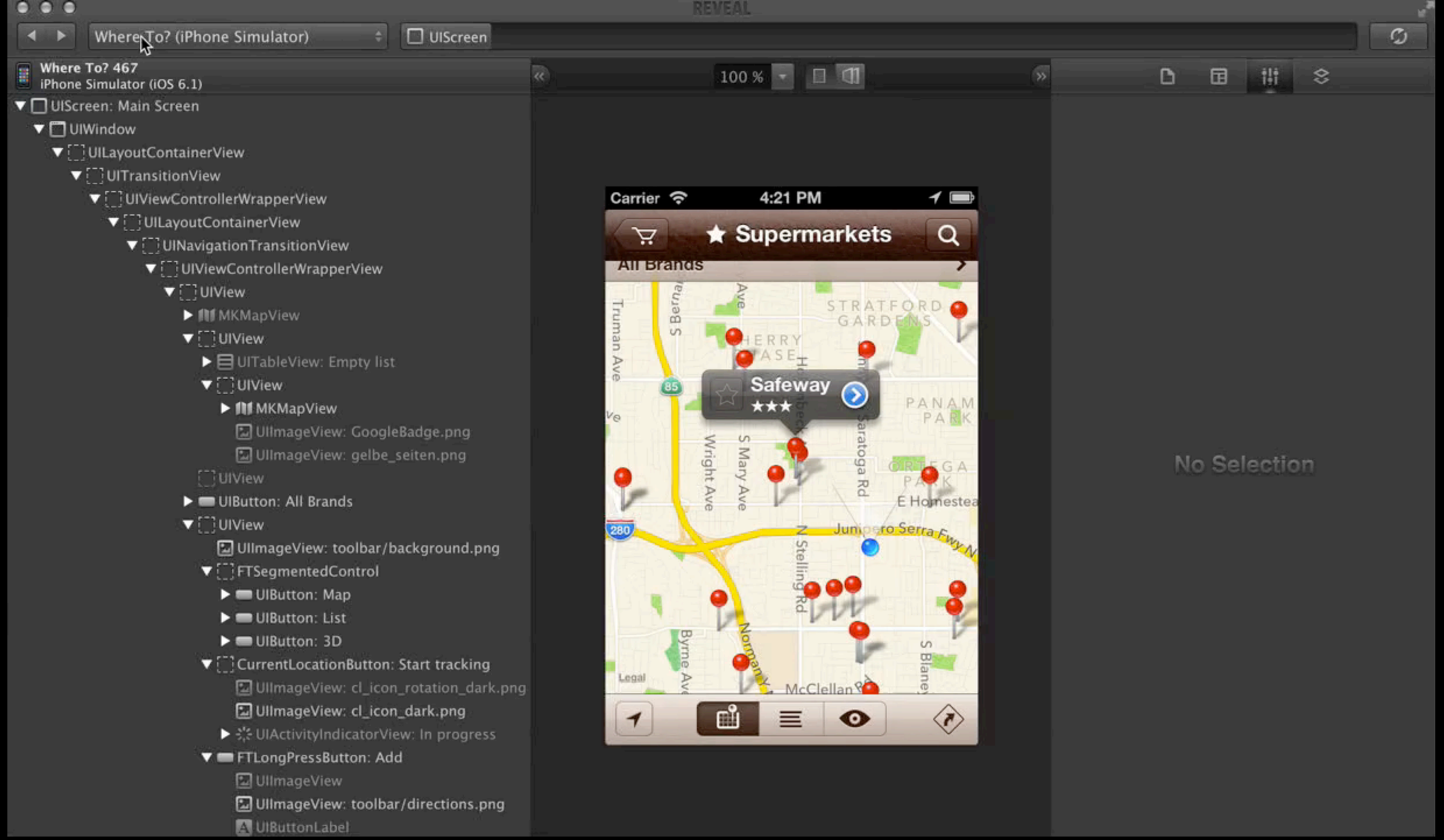
Name	Spark Inspector
Art	Programm
Größe	17,2 MB
Erstellt	Freitag, 20. September 2013 04:43
Geändert	Freitag, 20. September 2013 04:43
Zul. geöffnet	Gestern 16:56
Version	1.0.13

Spark Inspector

View-Hierarchiedarstellung in 3D,
Notification-Debugging

sparkinspector.com

€ 30,35


REVEAL
Where To? (iPhone Simulator)
UIScreen
Where To? 467
iPhone Simulator (iOS 6.1)
100 %
UIScreen: Main Screen
UIWindow
UILayoutContainerView
UITransitionView
UIViewControllerWrapperView
UILayoutContainerView
UINavigationTransitionView
UIViewControllerWrapperView
UIView
MKMapView
UIView
UITableView: Empty list
UIView
MKMapView
UIImageView: GoogleBadge.png
UIImageView: gelbe_seiten.png
UIView
UIButton: All Brands
UIView
UIImageView: toolbar/background.png
FTSegmentedControl
UIButton: Map
UIButton: List
UIButton: 3D
CurrentLocationButton: Start tracking
UIImageView: cl_icon_rotation_dark.png
UIImageView: cl_icon_dark.png
UIActivityIndicatorView: In progress
FTLongPressButton: Add
UIImageView
UIImageView: toolbar/directions.png
UIButtonLabel
Carrier
4:21 PM
Supermarkets
All Brands
Safeway
STRATFORD GARDENS
PANAM PARK
ORTEGA PARK
E Homestead
Truman Ave
S Mary Ave
Wright Ave
N Stelling Rd
Saratoga Rd
Byrne Ave
Legal
McClellan
85
280
No Selection

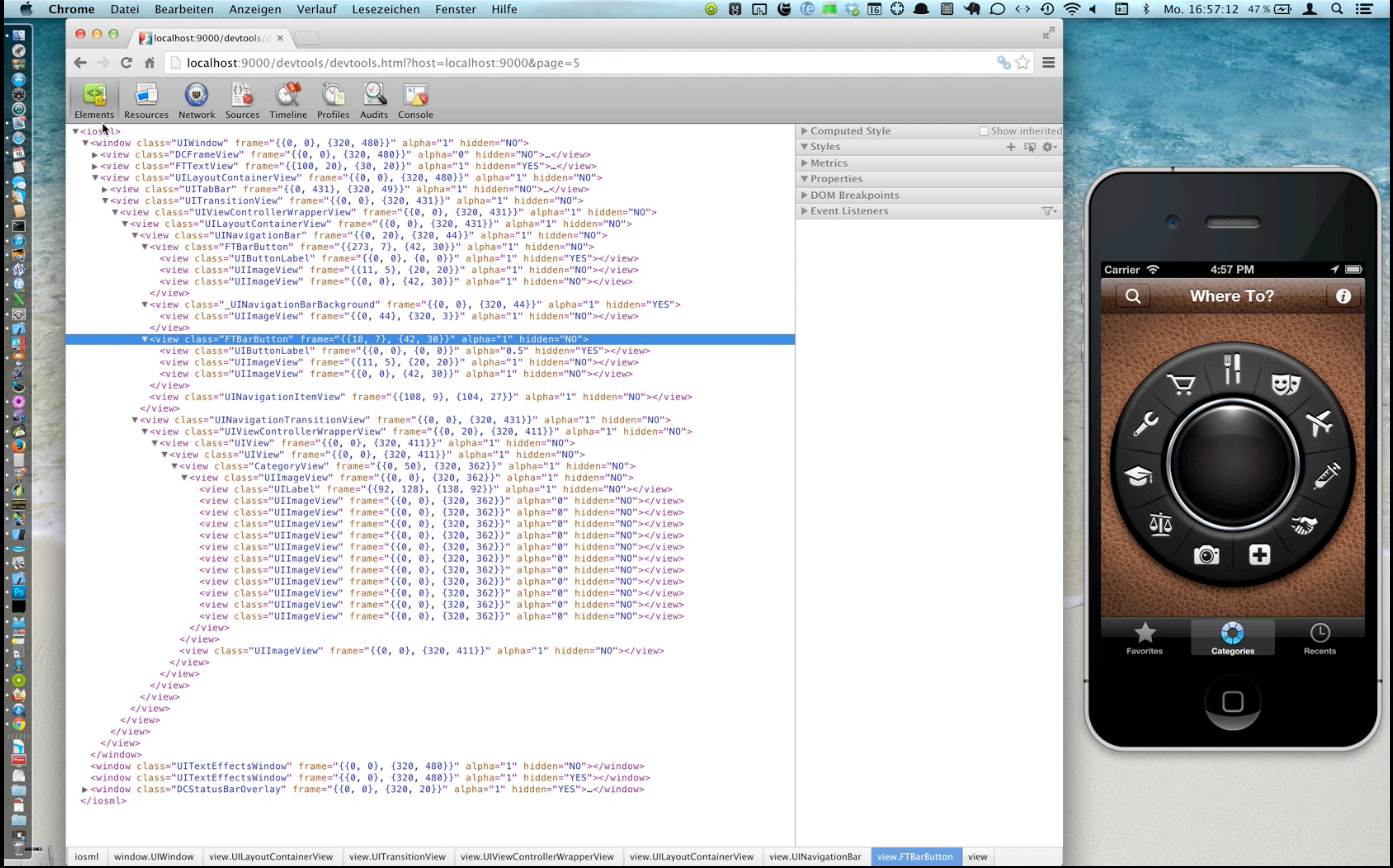
Tools

PonyDebugger Apache License

UI-, Netzwerk-, Core Data-Debugging

basierend auf Chrome Developer Tools

github.com/square/PonyDebugger



Chrome Datei Bearbeiten Anzeigen Verlauf Lesezeichen Fenster Hilfe
Mo. 16:57:12 47 %
localhost:9000/devtools.html?host=localhost:9000&page=5
Elements Resources Network Sources Timeline Profiles Audits Console
<iosml>
<window class="UIWindow" frame="{{0, 0}, {320, 480}}" alpha="1" hidden="NO">
<view class="DCFrameView" frame="{{0, 0}, {320, 480}}" alpha="0" hidden="NO">…</view>
<view class="FTTextView" frame="{{100, 20}, {30, 20}}" alpha="1" hidden="YES">…</view>
<view class="UILayoutContainerView" frame="{{0, 0}, {320, 480}}" alpha="1" hidden="NO">
<view class="UITabBar" frame="{{0, 431}, {320, 49}}" alpha="1" hidden="NO">…</view>
<view class="UITransitionView" frame="{{0, 0}, {320, 431}}" alpha="1" hidden="NO">
<view class="UIViewControllerWrapperView" frame="{{0, 0}, {320, 431}}" alpha="1" hidden="NO">
<view class="UILayoutContainerView" frame="{{0, 0}, {320, 431}}" alpha="1" hidden="NO">
<view class="UINavigationBar" frame="{{0, 20}, {320, 44}}" alpha="1" hidden="NO">
<view class="FTBarButton" frame="{{273, 7}, {42, 30}}" alpha="1" hidden="NO">
<view class="UIButtonLabel" frame="{{0, 0}, {0, 0}}" alpha="1" hidden="YES"></view>
<view class="UIImageView" frame="{{11, 5}, {20, 20}}" alpha="1" hidden="NO"></view>
<view class="UIImageView" frame="{{0, 0}, {42, 30}}" alpha="1" hidden="NO"></view>
</view>
<view class="_UINavigationBarBackground" frame="{{0, 0}, {320, 44}}" alpha="1" hidden="YES">
<view class="UIImageView" frame="{{0, 44}, {320, 3}}" alpha="1" hidden="NO"></view>
</view>
<view class="FTBarButton" frame="{{18, 7}, {42, 30}}" alpha="1" hidden="NO">
<view class="UIButtonLabel" frame="{{0, 0}, {0, 0}}" alpha="0.5" hidden="YES"></view>
<view class="UIImageView" frame="{{11, 5}, {20, 20}}" alpha="1" hidden="NO"></view>
<view class="UIImageView" frame="{{0, 0}, {42, 30}}" alpha="1" hidden="NO"></view>
</view>
<view class="UINavigationItemView" frame="{{108, 9}, {104, 27}}" alpha="1" hidden="NO"></view>
</view>
<view class="UINavigationTransitionView" frame="{{0, 0}, {320, 431}}" alpha="1" hidden="NO">
<view class="UIViewControllerWrapperView" frame="{{0, 20}, {320, 411}}" alpha="1" hidden="NO">
<view class="UIView" frame="{{0, 0}, {320, 411}}" alpha="1" hidden="NO">
<view class="UIView" frame="{{0, 0}, {320, 411}}" alpha="1" hidden="NO">
<view class="CategoryView" frame="{{0, 50}, {320, 362}}" alpha="1" hidden="NO">
<view class="UIImageView" frame="{{0, 0}, {320, 362}}" alpha="1" hidden="NO">
<view class="UILabel" frame="{{92, 128}, {138, 92}}" alpha="1" hidden="NO"></view>
<view class="UIImageView" frame="{{0, 0}, {320, 362}}" alpha="0" hidden="NO"></view>
<view class="UIImageView" frame="{{0, 0}, {320, 362}}" alpha="0" hidden="NO"></view>
<view class="UIImageView" frame="{{0, 0}, {320, 362}}" alpha="0" hidden="NO"></view>
<view class="UIImageView" frame="{{0, 0}, {320, 362}}" alpha="0" hidden="NO"></view>
<view class="UIImageView" frame="{{0, 0}, {320, 362}}" alpha="0" hidden="NO"></view>
<view class="UIImageView" frame="{{0, 0}, {320, 362}}" alpha="0" hidden="NO"></view>
<view class="UIImageView" frame="{{0, 0}, {320, 362}}" alpha="0" hidden="NO"></view>
<view class="UIImageView" frame="{{0, 0}, {320, 362}}" alpha="0" hidden="NO"></view>
<view class="UIImageView" frame="{{0, 0}, {320, 362}}" alpha="0" hidden="NO"></view>
<view class="UIImageView" frame="{{0, 0}, {320, 362}}" alpha="0" hidden="NO"></view>
<view class="UIImageView" frame="{{0, 0}, {320, 362}}" alpha="0" hidden="NO"></view>
<view class="UIImageView" frame="{{0, 0}, {320, 362}}" alpha="0" hidden="NO"></view>
</view>
</view>
<view class="UIImageView" frame="{{0, 0}, {320, 411}}" alpha="1" hidden="NO"></view>
</view>
</view>
</view>
</view>
</view>
</view>
</view>
</window>
<window class="UITextEffectsWindow" frame="{{0, 0}, {320, 480}}" alpha="1" hidden="NO"></window>
<window class="UITextEffectsWindow" frame="{{0, 0}, {320, 480}}" alpha="1" hidden="YES"></window>
<window class="DCStatusBarOverlay" frame="{{0, 0}, {320, 20}}" alpha="1" hidden="YES">…</window>
</iosml>
Computed Style
Show inherited
Styles
Metrics
Properties
DOM Breakpoints
Event Listeners
iosml window.UIWindow view.UILayoutContainerView view.UITransitionView view.UIViewControllerWrapperView view.UILayoutContainerView view.UINavigationBar view.FTBarButton view
Carrier 4:57 PM
Where To?
Favorites Categories Recents

UIButton Touch-Bereich

- Touchable Bereich manchmal zu klein
- Überschreiben: `-hitTest:withEvent:`
- Superview muss groß genug sein
- github.com/futuretap/FTAdditions

UIButton selected state

- Für eigene Zwecke nutzbar
- Besser als `-setImage:forState:`
- selbst setzen: `button.state = UIControlStateSelected`
- `UIControlStateHighlighted` | `UIControlStateSelected` nur in Code!

UIWebView

Transparente UIWebView

Transparente UIWebView

```
webView.opaque = NO;
webView.backgroundColor = [UIColor clearColor];
```

Transparente UIWebView

```
webView.opaque = NO;
webView.backgroundColor = [UIColor clearColor];
```

```
<body style="background-color: transparent;">
```

highlighted nachrüsten

highlighted nachrüsten

```
- (void)setHighlighted:(BOOL)highlighted {
  _highlighted = highlighted;

 NSString *colorString = highlighted ? @"0000ff" : @"000000";
 NSString *js = [NSString stringWithFormat:
@"document.getElementById('main').style.color = '#%@'",  colorString];
 [self stringByEvaluatingJavaScriptFromString:js];
}
```

Graue Schatten entfernen (iOS 6)

Graue Schatten entfernen (iOS 6)

```
[self hideGradientBackground:webView];


- (void)hideGradientBackground:(UIView*)theView {
  for (UIView *subview in theView.subviews) {
    if ([subview isKindOfClass:[UIImageView class]])
      subview.hidden = YES;

    [self hideGradientBackground:subview];
  }
}
```

Touches abfangen
in UIWebView subclass

Touches abfangen in UIWebView subclass

```
-(void)hitTest:(CGPoint)point withEvent:(UIEvent*)event {
  _responderView = [super hitTest:point withEvent:event];
  return self;
}

//override touch events
- (void)touchesBegan:(NSSet*)touches withEvent:(UIEvent*)event {
  //your stuff
  [_responderView touchesBegan:touches withEvent:event];
}
```

Content-Höhe abfragen

Content-Höhe abfragen

```
- (void)webViewDidFinishLoad:(UIWebView*)aWebView {
    CGRect frame = aWebView.frame;
    frame.size.height = 1;
    aWebView.frame = frame;
    CGSize fittingSize = [aWebView sizeThatFits:CGSizeZero];
    frame.size = fittingSize;
    aWebView.frame = frame;

    NSLog(@"size: %f, %f", fittingSize.width, fittingSize.height);
}
```

TableView Performance

Performance-Aspekte

- Höhenberechnung
- Cell Drawing

Höhenberechnung: Ansätze

Höhenberechnung: Ansätze

- ~~`-sizeWithFont:`~~ `sizeWithAttributes:` & friends

Höhenberechnung: Ansätze

- ~~`-sizeWithFont:`~~ `sizeWithAttributes:` & friends
- `-[UITextView sizeThatFits:]`

Höhenberechnung: Ansätze

- ~~`-sizeWithFont:`~~ `sizeWithAttributes:` & friends
- `-[UITextView sizeThatFits:]`
- Komplettes Pre-Rendering

Höhenberechnung: Ansätze

- ~~`-sizeWithFont:`~~ `sizeWithAttributes:` & friends
- `-[UITextView sizeThatFits:]`
- Komplettes Pre-Rendering
- Nachträgliche Änderung (z.B. bei `UIWebView`)

Cell Drawing

Cell Drawing

- Transparenzen vermeiden

Cell Drawing

- Transparenzen vermeiden
- Core Animation shadows mit `shadowPath`

Cell Drawing

- Transparenzen vermeiden
- Core Animation shadows mit `shadowPath`
- Komplexe `-drawRect:` vermeiden

Cell Drawing

- Transparenzen vermeiden
- Core Animation shadows mit `shadowPath`
- Komplexe `-drawRect:` vermeiden
- Bilder per `UIImageView`, nicht `-drawInRect:`

Cell Drawing

- Transparenzen vermeiden
- Core Animation shadows mit `shadowPath`
- Komplexe `-drawRect:` vermeiden
- Bilder per `UIImageView`, nicht `-drawInRect:`
- In gecachte `UIImages` zeichnen, Darstellung per `UIImageView`

Fragen?

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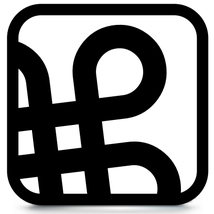
Vielen Dank



Macoun