



Designing Apps with Scroll Views

You don't have to write your own. Really.

Josh Shaffer and Eliza Block
iPhone Frameworks and Applications Engineers

Configuration

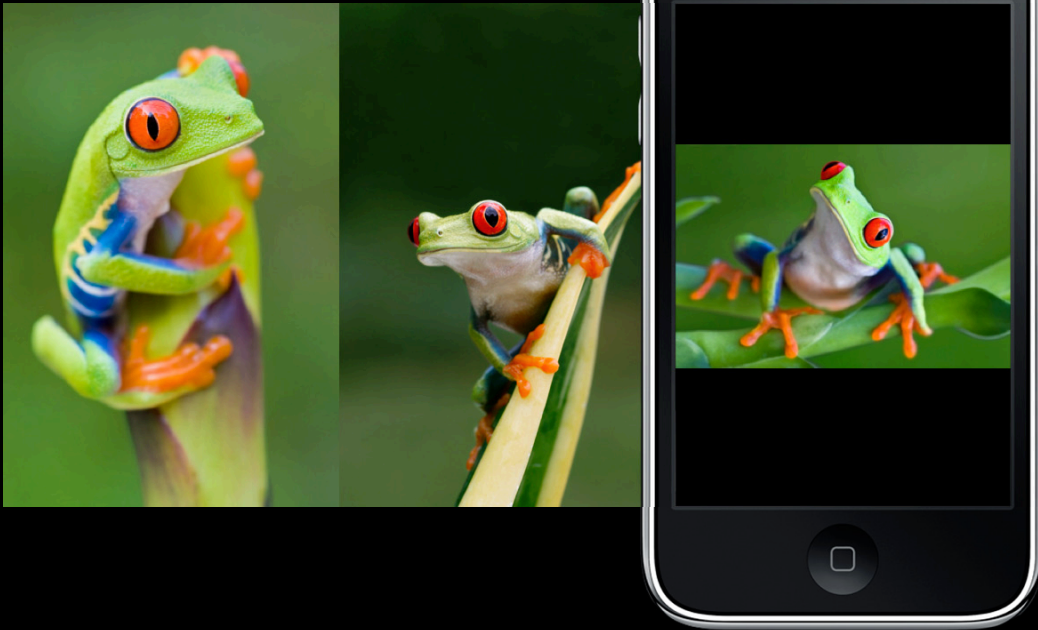
Zooming and paging



Zooming and Paging



Zooming and Paging



Zooming and Paging



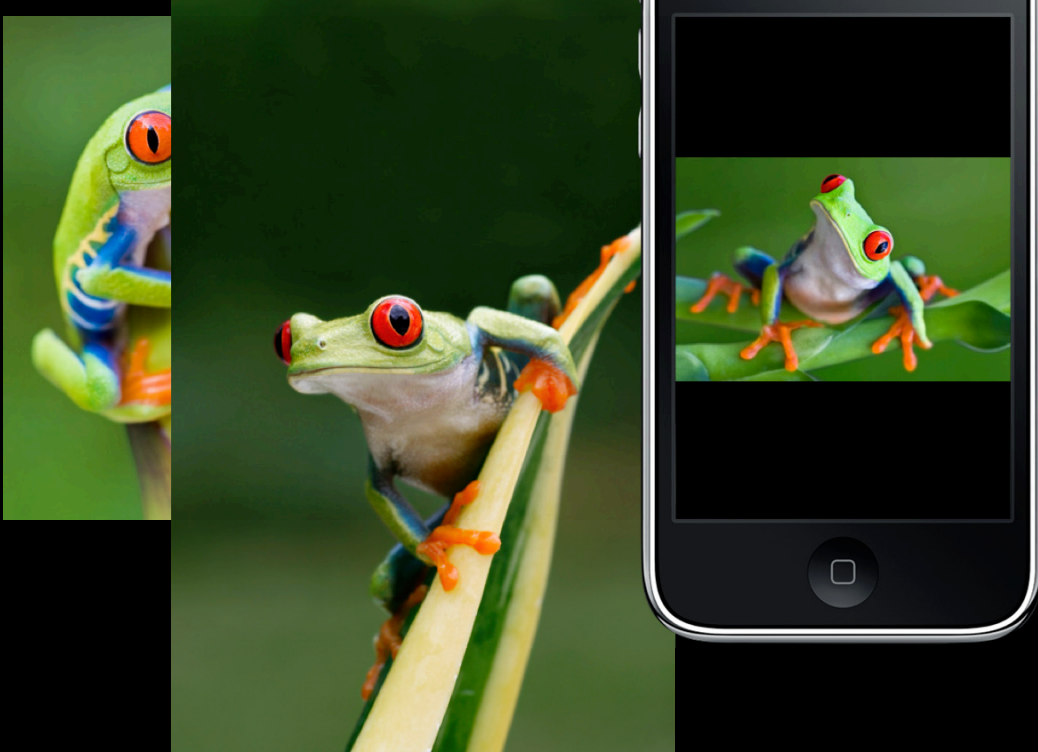
Zooming and Paging



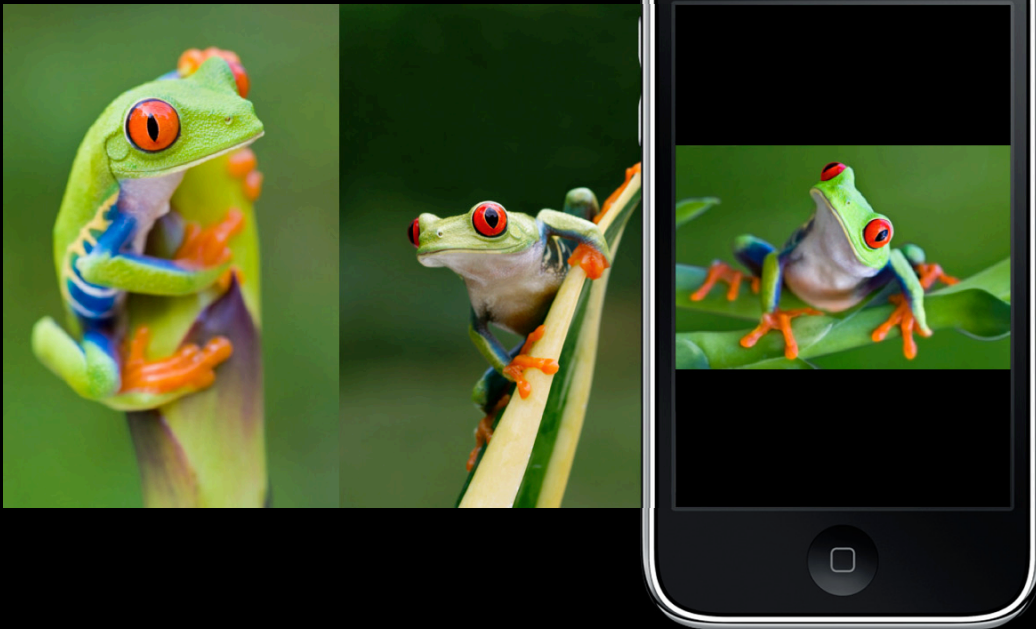
Zooming and Paging



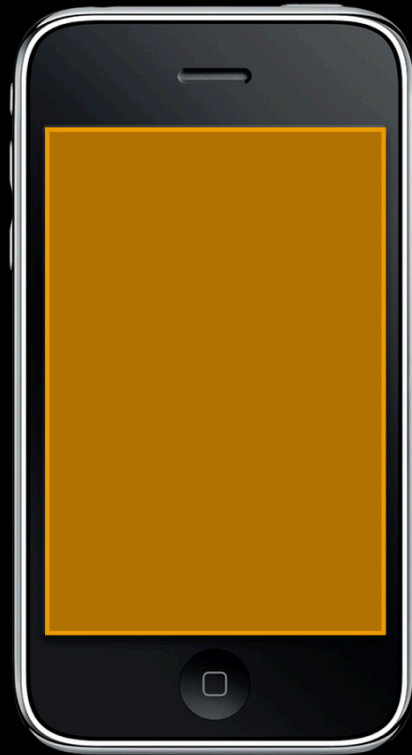
Zooming and Paging



Zooming and Paging

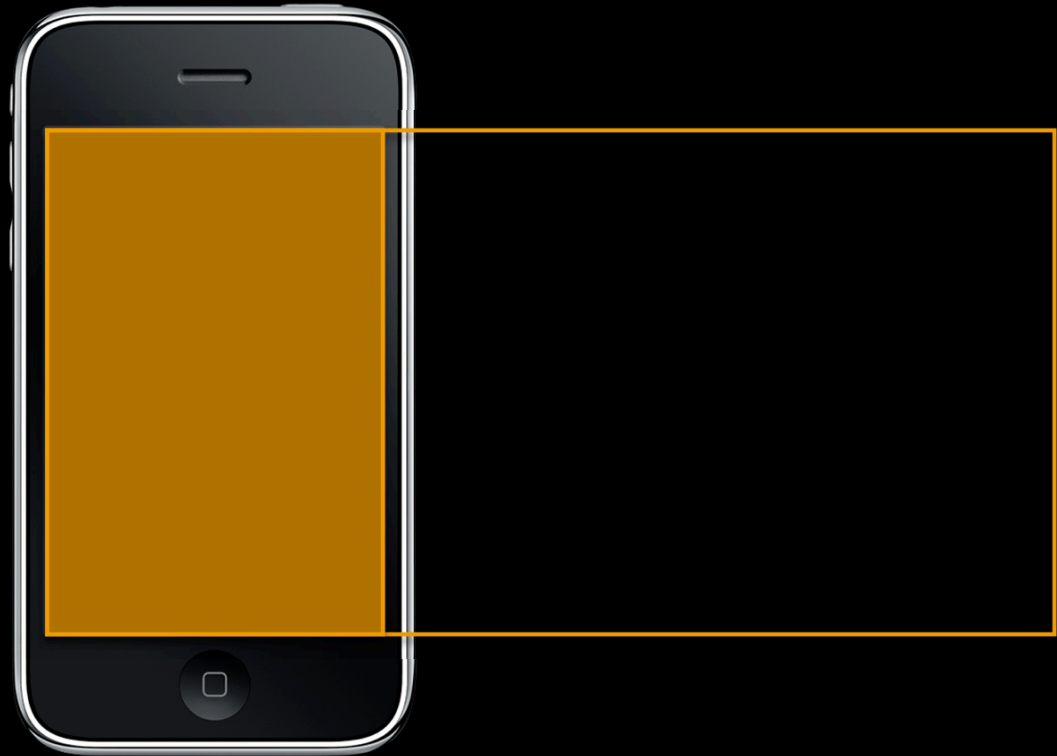


View Configuration



View Configuration

`setContentSize`



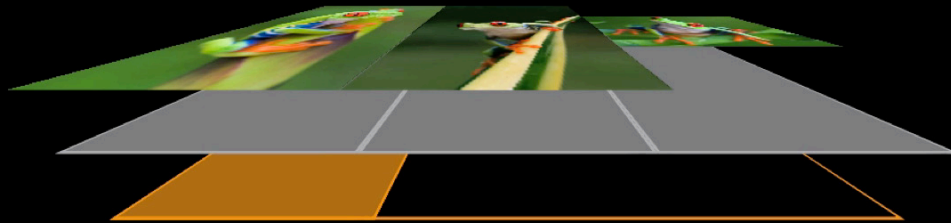
View Configuration



View Configuration



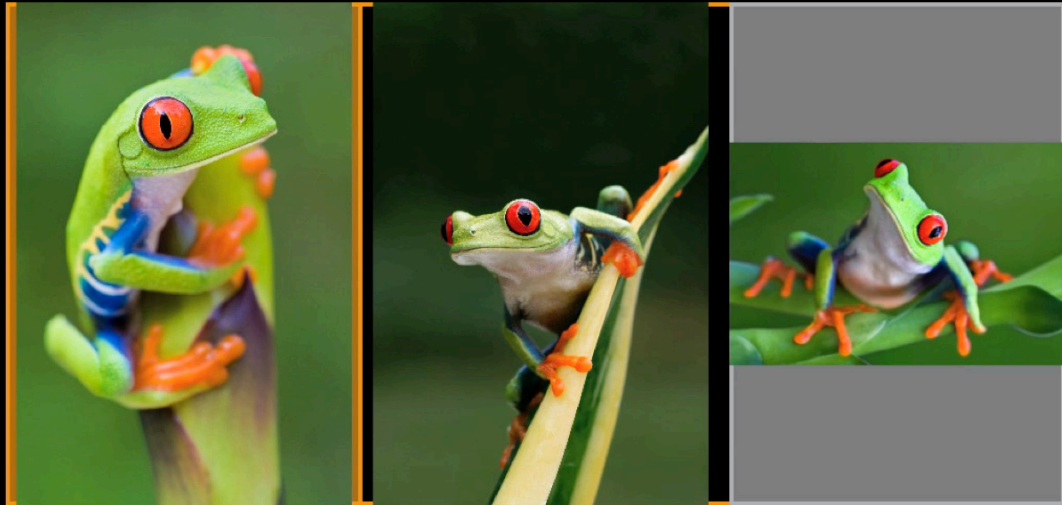
Page Spacing



Page Spacing



Page Spacing



Page Spacing

Paging — 340 points



Zooming — 320 points



Page Spacing



Demo

Eliza Block
iPhone Applications Engineer

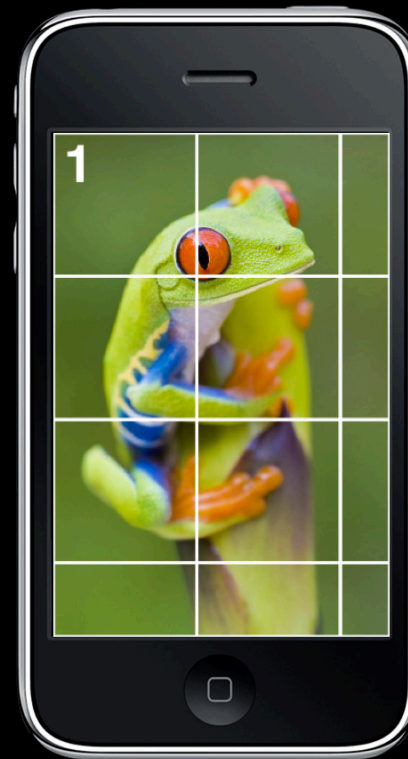
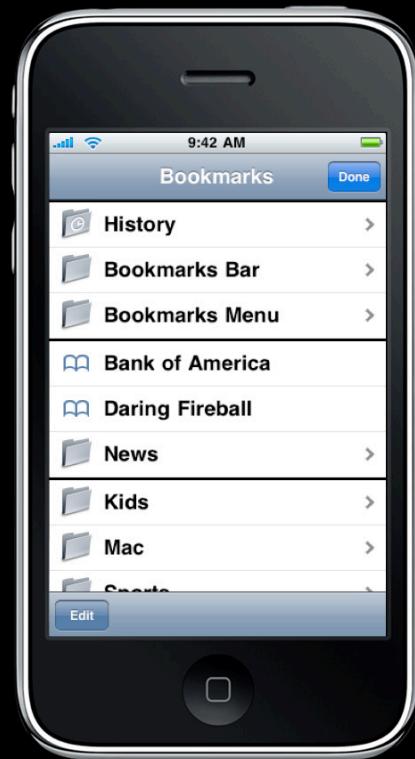
Experience

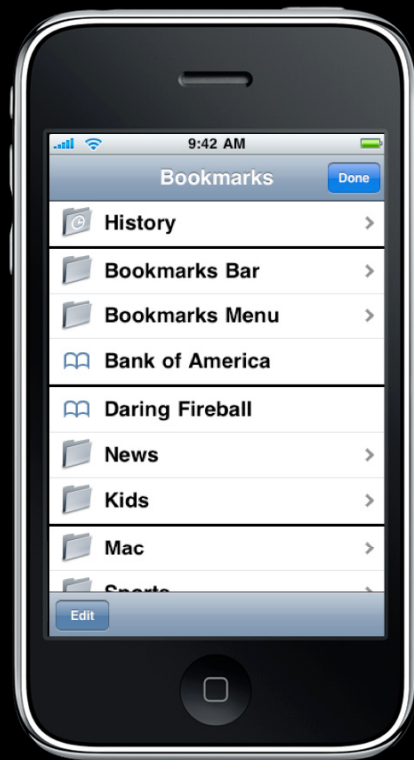
Load time and memory usage

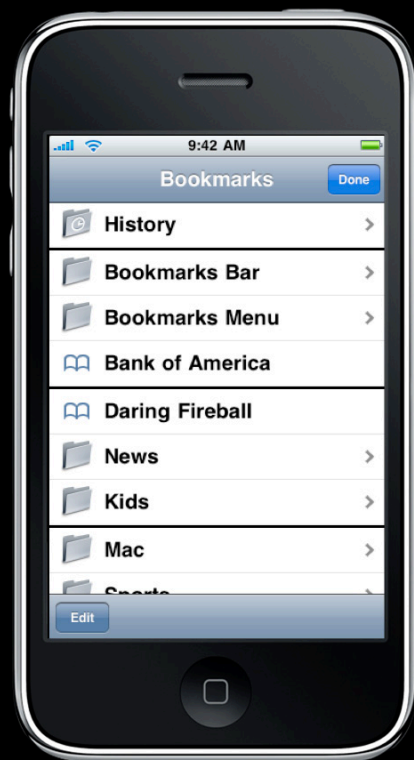
Why Tile?

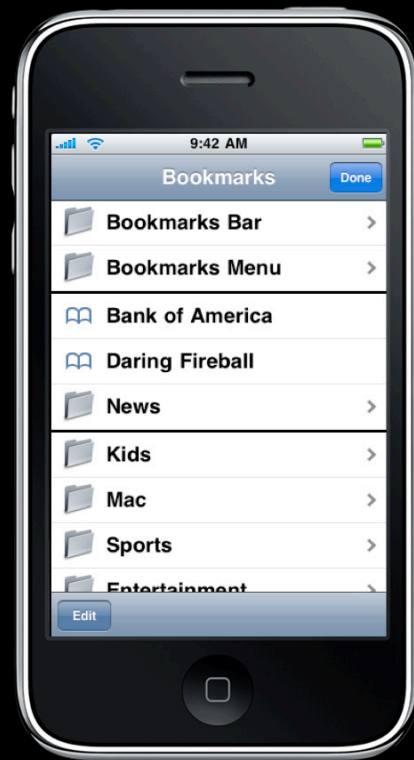
- Display more than will fit in memory
- Download pieces of content as needed
- Improve load time

Tiling Techniques

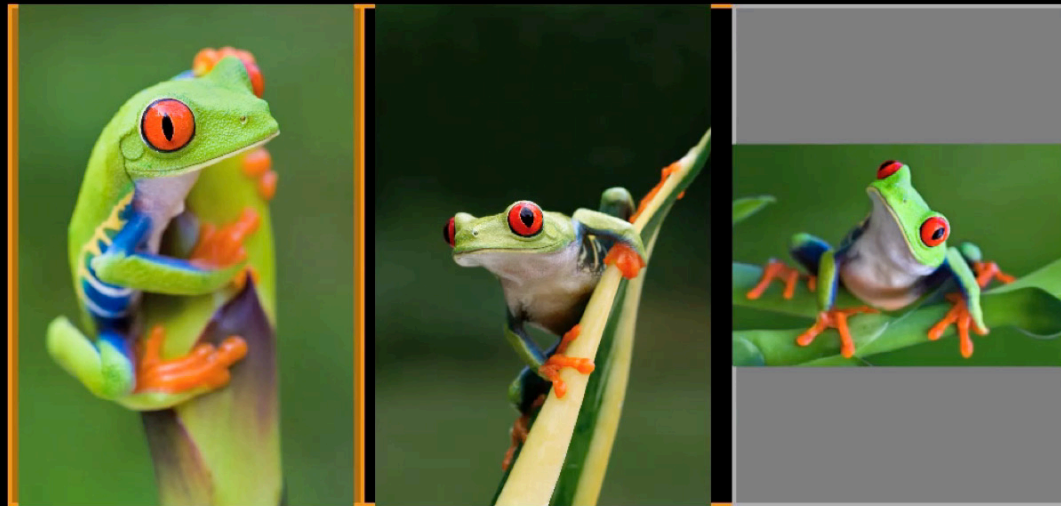




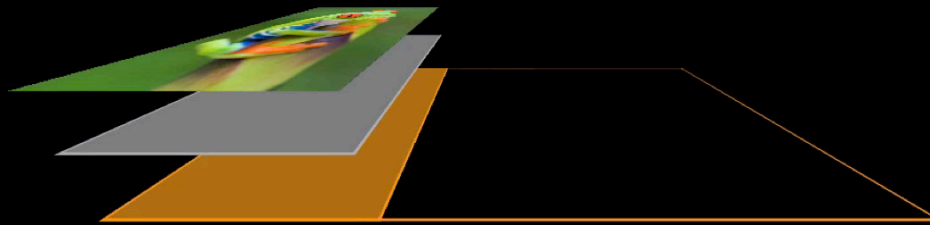




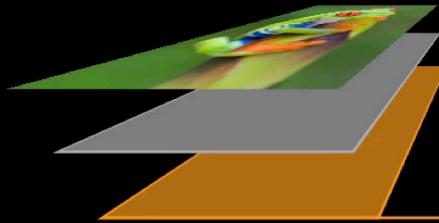
Paging and Zooming



Paging and Zooming



Paging and Zooming



Where to Tile

UIScrollViewDelegate

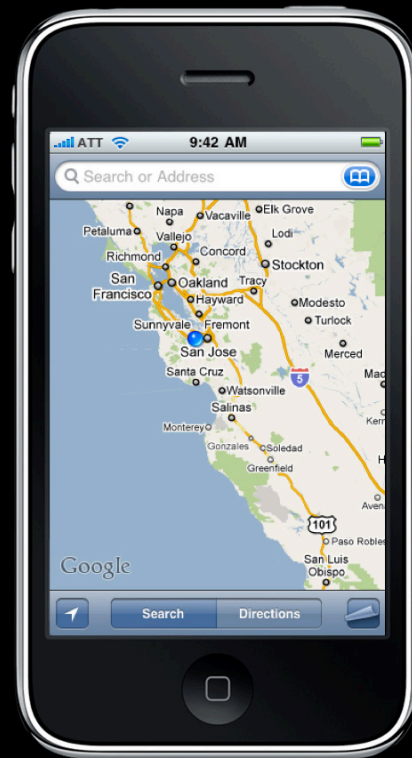
```
- (void)scrollViewDidScroll:(UIScrollView *)scrollView;
```

Demo

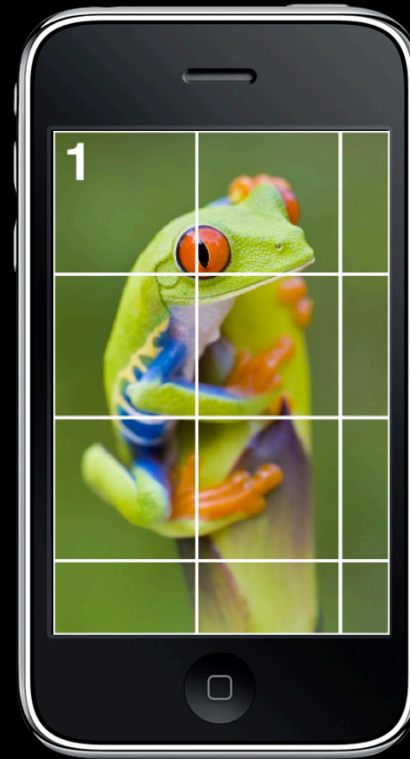
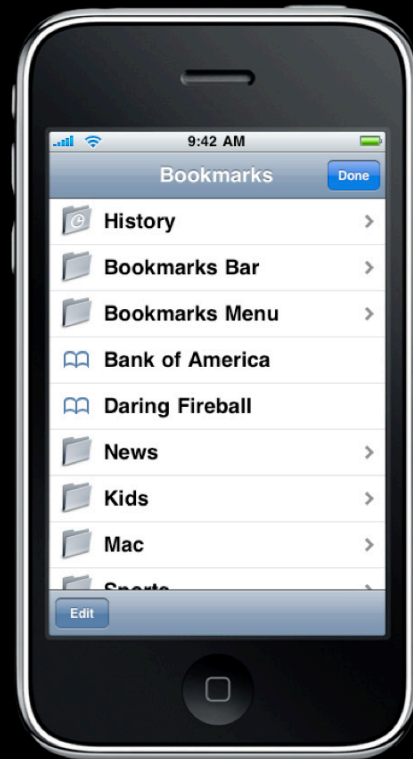
Eliza Block
iPhone Applications Engineer

Responsiveness

Tiling with CoreAnimation



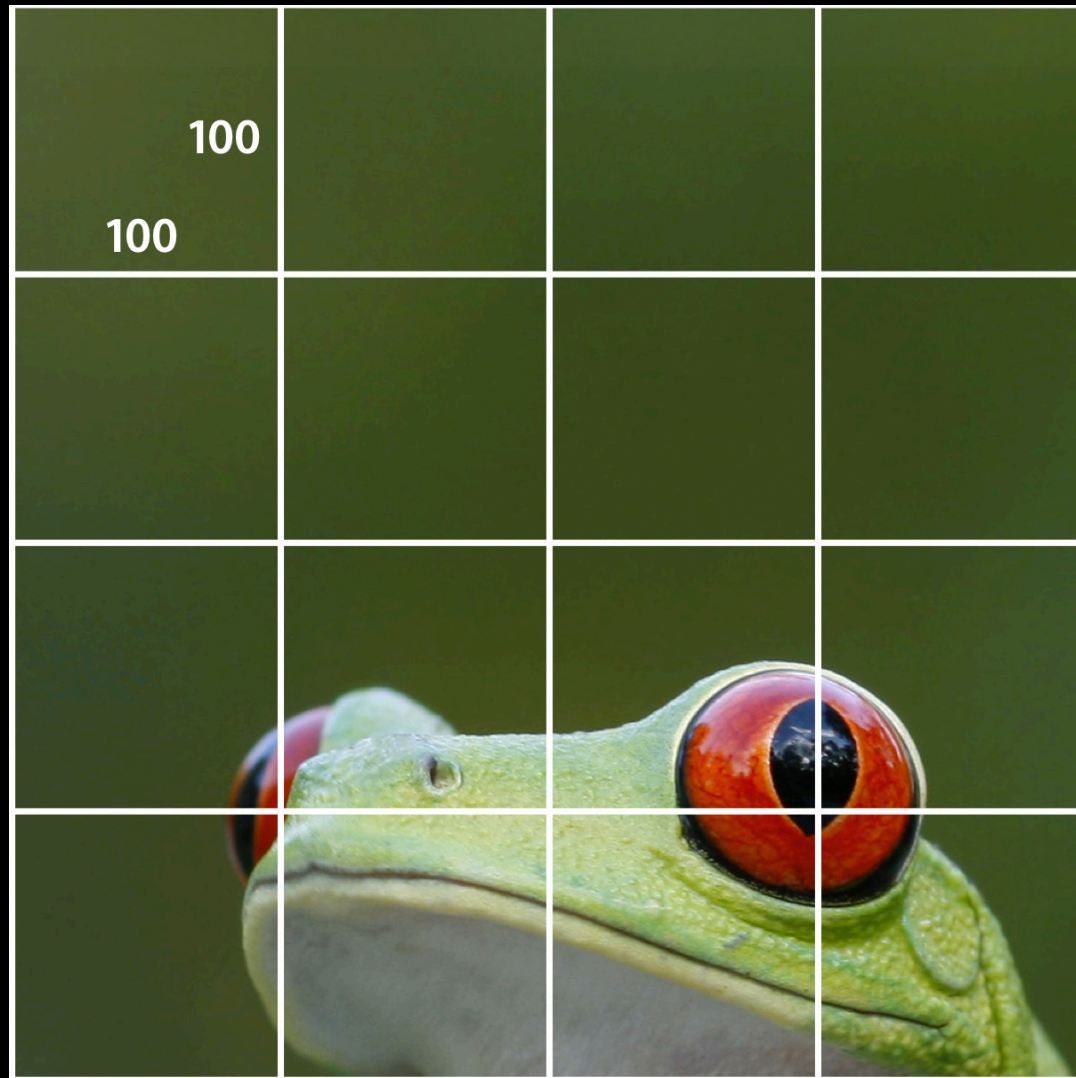
Tiling Techniques





100%

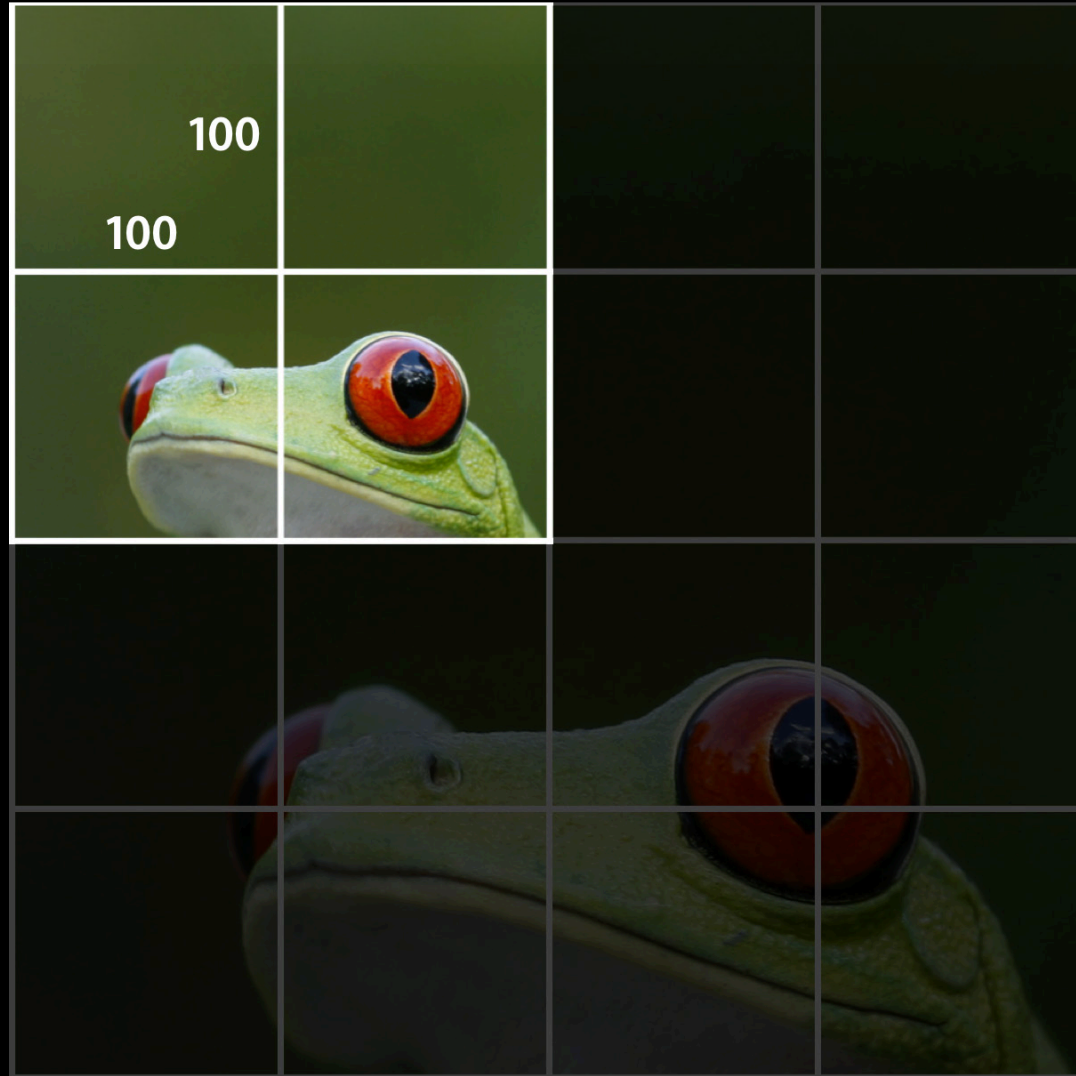
400



400

50%

400



50%

400

100

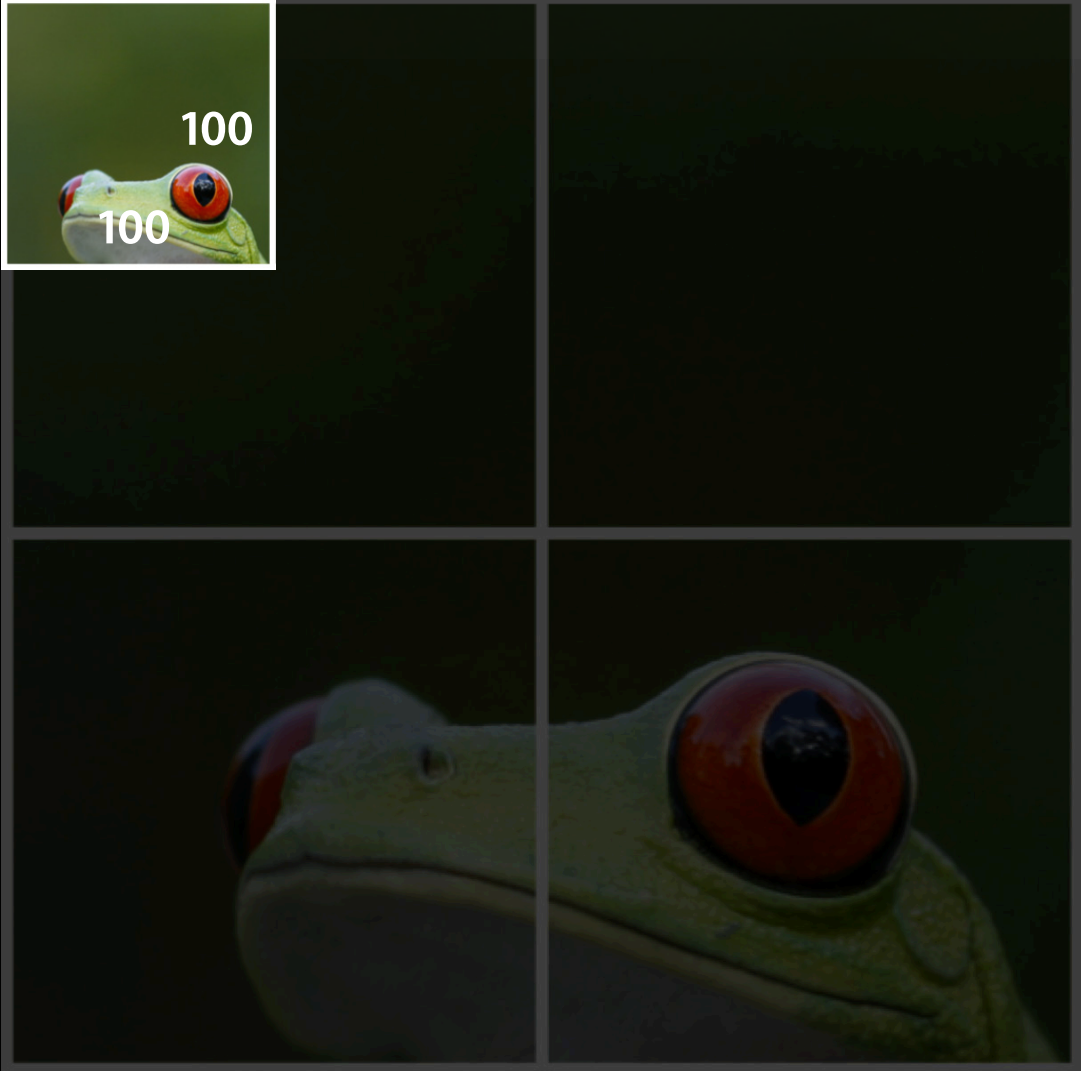
100

400



25%

400



400

25%

400

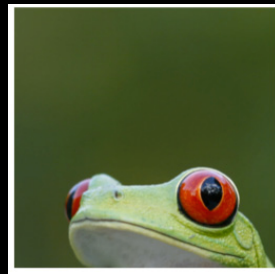
400

100



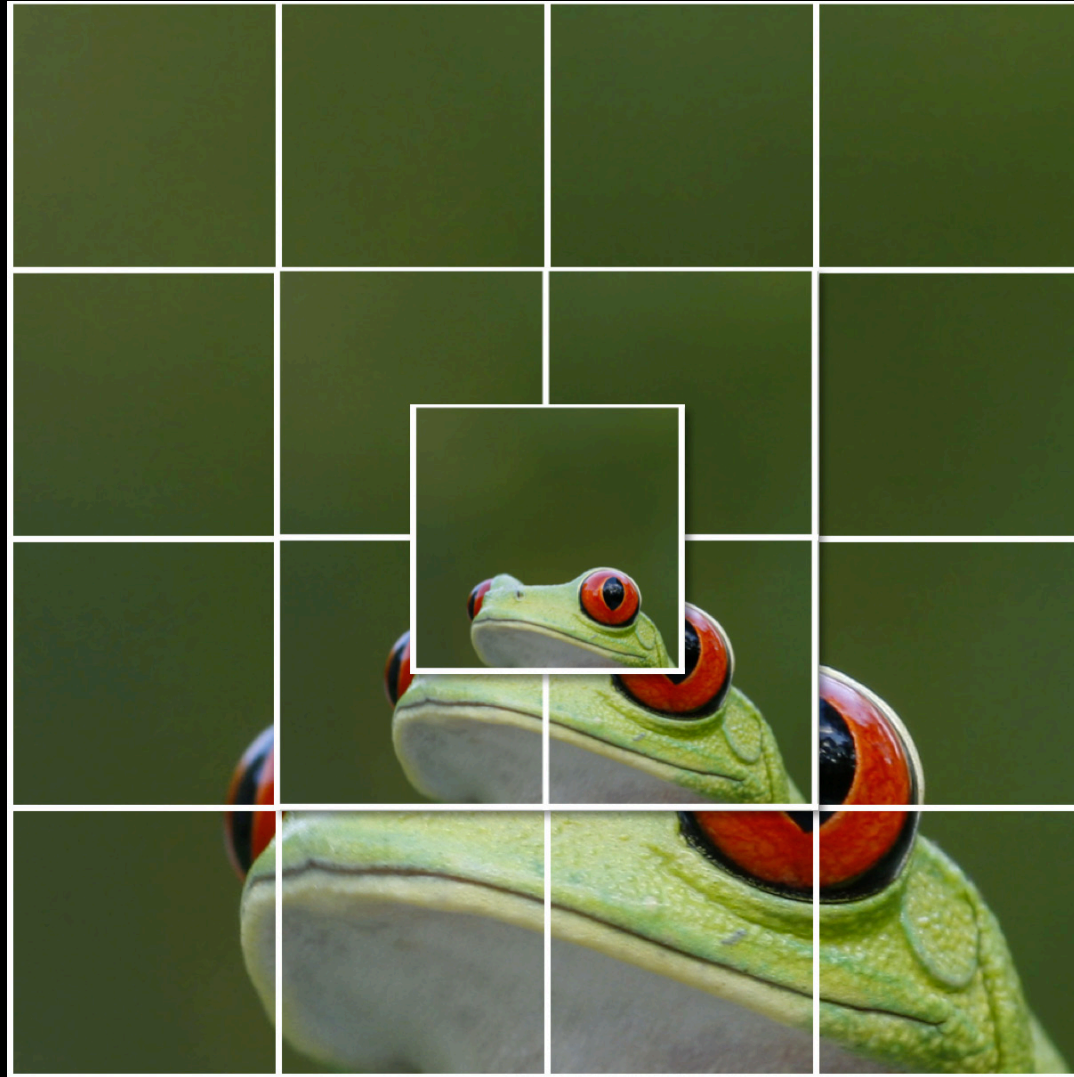
100

25%



100

100



CATiledLayer

Two methods

```
+ (Class)layerClass {  
    return [CATiledLayer class];  
}  
  
- (void)drawRect:(CGRect)rect {  
    CGContextRef      context = UIGraphicsGetCurrentContext();  
    CGAffineTransform transform = CGContextGetCTM(context);  
    CGFloat           scale    = transform.a;  
  
    /* draw tiles here */  
}
```

Thread Safe UIKit Drawing

- UIGraphicsGetCurrentContext
- UIImage
- UIColor
- UIFont

<http://developer.apple.com/iphone/library/qa/qa2009/qa1637.html>

Demo

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iPhone Applications Engineer

More Information

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Application Frameworks Evangelist

dudney@apple.com

Documentation

UIScrollView Class Reference

http://developer.apple.com/iphone/library/documentation/UIKit/Reference/UIScrollView_Class/Reference/UIScrollView.html

Apple Developer Forums

<http://devforums.apple.com>

Related Sessions

Simplifying Touch Event Handling with Gesture Recognizers

Pacific Heights
Wednesday 3:15PM

Mastering Table Views

Pacific Heights
Thursday 11:30AM

Labs

Cocoa Touch Lab	Application Frameworks Lab D Tuesday 2:00PM
Scroll View Lab	Application Frameworks Lab A Tuesday 2:00PM
Cocoa Touch Lab	Application Frameworks Lab B Wednesday 11:30AM
Cocoa Touch Lab	Application Frameworks Lab C Thursday 9:00AM
Cocoa Touch Lab	Application Frameworks Lab C Friday 9:00AM
Scroll View Lab	Application Frameworks Lab B Friday 11:30AM

Summary

- You don't have to write your own
- Really



