Custom Controls from Scratch

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Why?
Show these items on the desktop:
- Hard disks
- External disks
- CDs, DVDs, and iPods
- Connected servers

New Finder windows show:
- douglas

- Always open folders in a new window

- Spring-loaded folders and windows
  Delay: Short | Medium | Long
  Press the space bar to open immediately.
How?
NSWindow
NSTitledWindowMask
NSTitledWindowMask | NSTexturedBackgroundWindowMask
NSBorderlessWindowMask
NSBorderlessWindowMask
-setOpaque:NO
NSWindow
NSWindow

NSView
-[NSWindow contentView]
-[NSWindow setContentContentView:]
-drawRect:
Let’s do that
NSTableView
Hundreds of subviews?
Used by NSView to perform drawing and handle events.
NSView

- (void)drawRect:(NSRect)dirtyRect
NSView

- (void)drawRect:(NSRect)dirtyRect

NSCell

- (void)drawWithFrame:(NSRect)frame
  inView:(NSView *)controlView
Scrolling?
NSScrollView -copiesOnScroll
How do we fix all this?
Core Animation
Introduced in OS X 10.5
Layers
Code?
Layer-backed view

```swift
- (id)initWithFrame:(NSRect)frame
{
    if ([super initWithFrame:frame])
    {
        self.wantsLayer = YES;
    }
    return self;
}
```

CALayer created automatically. Don’t touch!

Layer-hosting view

```swift
- (id)initWithFrame:(NSRect)frame
{
    if ([super initWithFrame:frame])
    {
        self.layer = [CALayer layer];
        self.wantsLayer = YES;
    }
    return self;
}
```

You own the CALayer – do whatever you want.
Layer Properties
backgroundColor
shadow
CAGradientLayer
iOS

Much nicer.
All views are layer-backed.
Table views?

Layer-backed views, stored in a reuse queue.
Performance
Core Animation

This template measures application graphics performance as well as CPU usage of a process via time profiling.
Purchases

SMH
Version 2.1.12
What's New ▼

Pocket Weather...
Version 3.2
What's New ▼

WolframAlpha
Version 1.4.1.3595247
What's New ▼
OS X
Still has the old legacy way.
Using more views is now recommended.
View-based table views
9-slice scaling
Where do you start?

• Sketch on paper
• Mockup in Photoshop
• Separate logical moving pieces
• Bitmaps & CA Layer properties
• Event handling
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