The Ten Dirty Words and How to Use Them

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About

- Sampler
- Taglines
- An old joke

```
...
maximumLineHeight
maxSize
maxValue
maxVisibleColumns
maxWidth
measurementUnits
Media
MediaHandler
member:
memoryCapacity
menu
menuBarVisible
menuChanged:
menuFontOfSize:
menuForEvent:
menuForEvent:inRect:ofView:
menuFormRepresentation
MenuHandle
...
```

```
...
maximumLineHeight
maxSize
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MediaHandler
member:
memoryCapacity
menu
menuBarVisible
menuChanged:
menuFontOfSize:
menuForEvent:
menuForEvent:inRect:ofView:
menuFormRepresentation
MenuHandle
...
```

"You said 'member'."

```
...
maximumLineHeight
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menuBarVisible
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menuForEvent:
menuForEvent:inRect:ofView:
menuFormRepresentation
MenuHandle
...
```
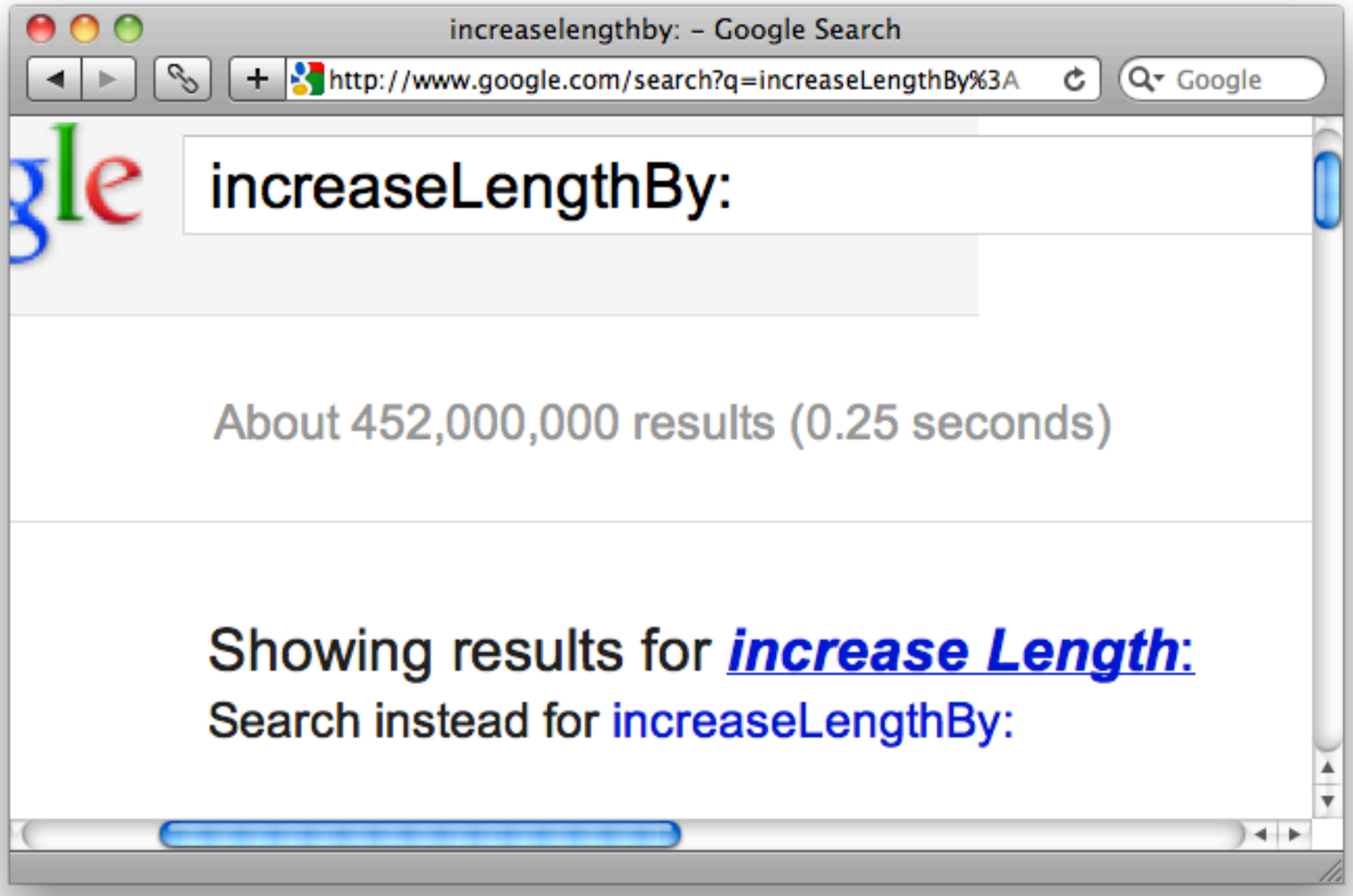

Dirty Word #10

```
increaseLengthBy:
```

`increaseLengthBy:`

- NSMutableData
- To decrease length, use setLength:


increaselengthby: - Google Search
http://www.google.com/search?q=increaseLengthBy%3A
Google
gle
increaseLengthBy:
About 452,000,000 results (0.25 seconds)
Showing results for increase Length:
Search instead for increaseLengthBy:

x increaseLengthBy:

x increaseLengthBy

x "increaseLengthBy:"

✓ "increaseLengthBy"

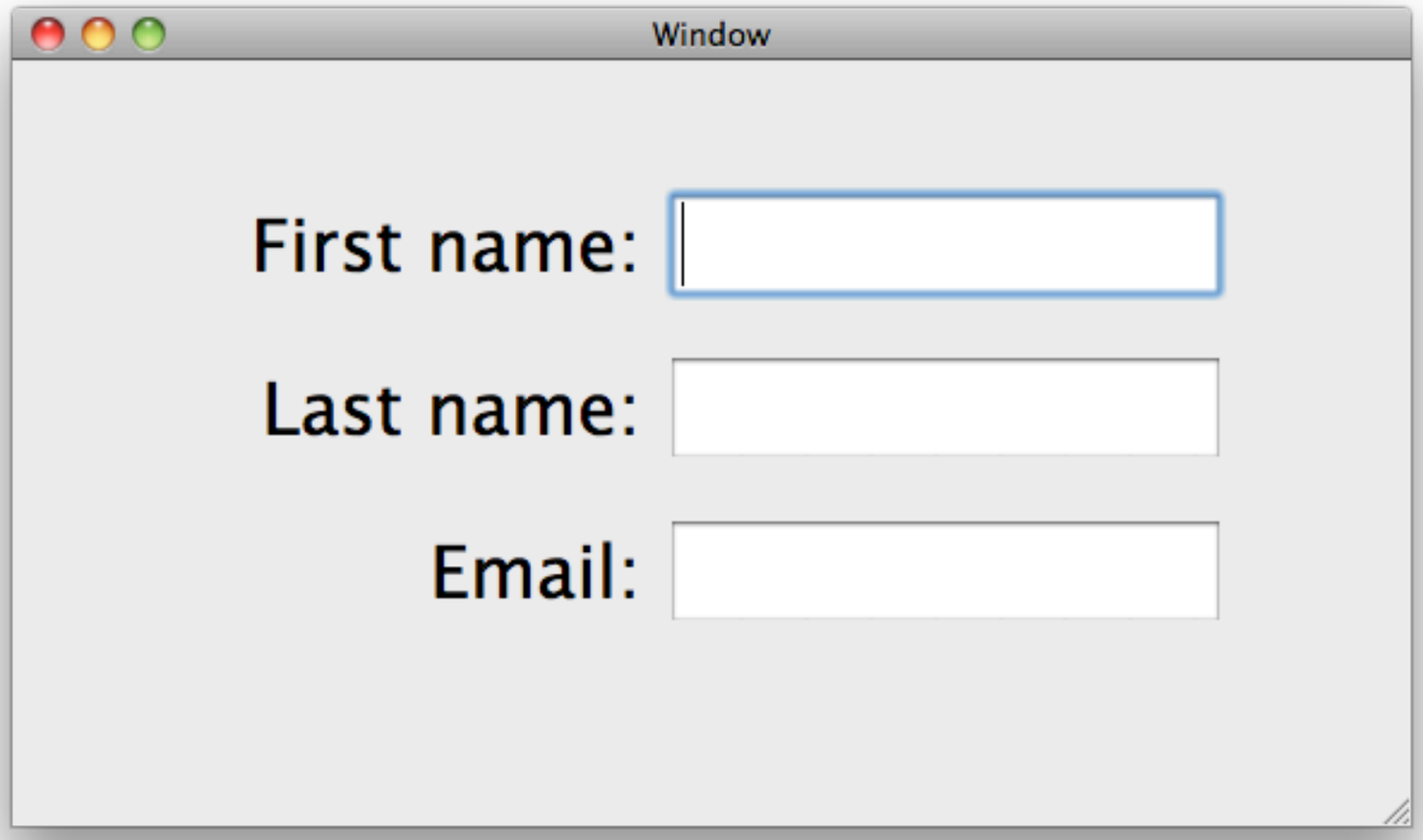
`increaseLengthBy:`

Google with care.

Dirty Word #9

```
insertBacktab:
```

The key view loop



`insertBacktab:`

- NSResponder
- "Keyboard action" methods
  - capitalizeWord:
  - deleteWordForward:
  - moveParagraphBackwardAndModifySelection:
  - etc.

From ⇧→⇥ to insertBacktab:

- -[NSApplication sendEvent:]
  - "What kind of event is this?"
- Lookup in StandardKeyBinding.dict
  - ⇧→⇥ maps to insertBacktab:
- FR gets doCommandBySelector:

See also

- KeyBindingsEditor at cocoabits.com
  - Manual tells where to put your own file
- "Cocoa Event-Handling Guide"
  - "The Path of Key Events"
  - "Text System Defaults and Key Bindings"
- WWDC 2010 #145
  - "Key Event Handling in Cocoa Applications"

`insertBacktab:`

Handle Shift-Tab

Dirty word #8

```
autorelease
```

autorelease

- <NSObject>
- "Release later"

ARC

Stack

```
// From WWDC 2011 #323

- (id)init {
  if ((self = [super init]))
     _array = [NSMutableArray array];
  return self;
}

- (void)push:(id)x { [_array addObject:x]; }

- (id)pop {
  id x = [_array lastObject];
  [_array removeLastObject];
  return x;
}
```

```
- (id)init {
  if ((self = [super init]))
     _array = [NSMutableArray array];
  return self;
}

// Needs dealloc.
```

```
- (void)push:(id)x { [_array addObject:x]; }

- (id)pop {
  id x = [_array lastObject];
  [_array removeLastObject];
  return x;
}
```

How ARC Does It

- Syntax, conventions, and patterns
- Makes local fixes
- Optimizes out redundancy

Invariants

- Pointers keep things alive
- Must have perfect knowledge

Rules ARC enforces

- No retain/release/autorelease
  - And *strongly* advised not to override
- No NSAutoreleasePool
  - @autorelease {} more readable anyway
- No objects in C structs
  - Should use objects anyway
- No arbitrary (id) <-> (void*)

What you do

- Upgrade to Xcode 4.2
- Migrate project if necessary
- Adhere to naming conventions
  - alloc, copy, init, mutableCopy, new
- Think through your object model
  - Zeroing weak references for cycles
- Handle CF-to-object bridging

Must-see

- WWDC 2011 #322
  - Objective-C Advancements in Depth
- WWDC 2011 #323
  - Introducing Automatic Reference Counting

autorelease

Enjoy while you can.

Dirty word #7

```
yank:
```

yank:

- NSResponder
- Another keyboard action
- Comes from emacs (^Y)
- Some apps KIRF wrt emacs
  - ^E = moveToEndOfParagraph:
  - ⌘→ = moveToRightEndOfLine:

yank:

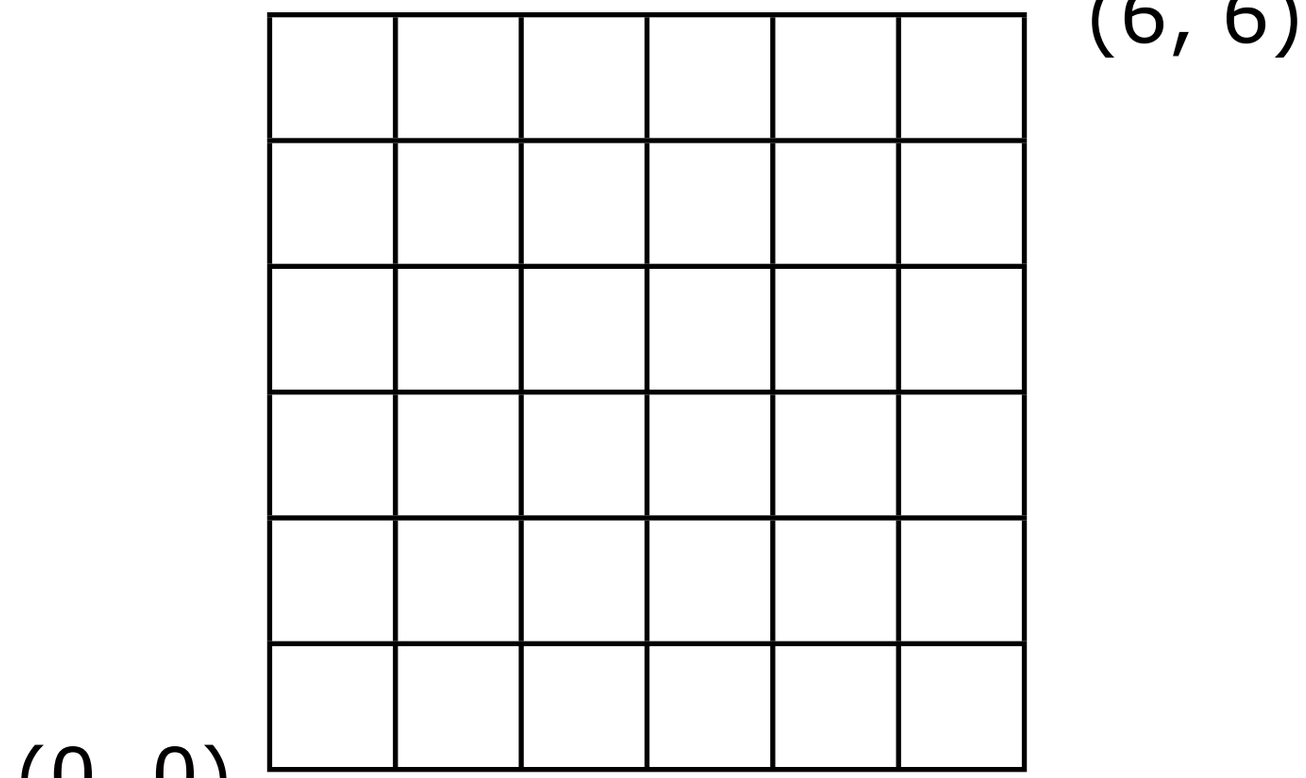
Don't break emacs.

Dirty word #6

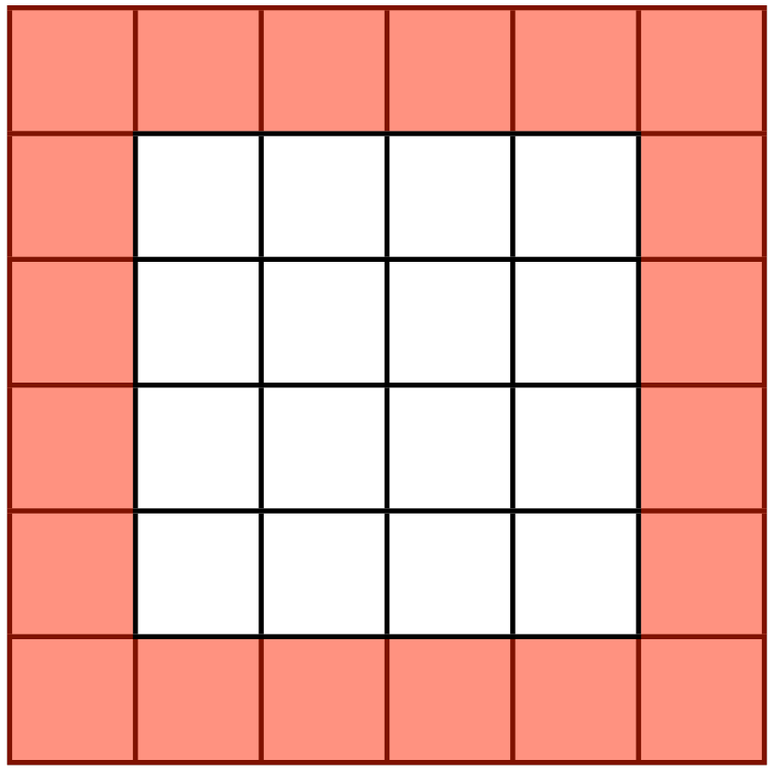
```
stroke
```

stroke

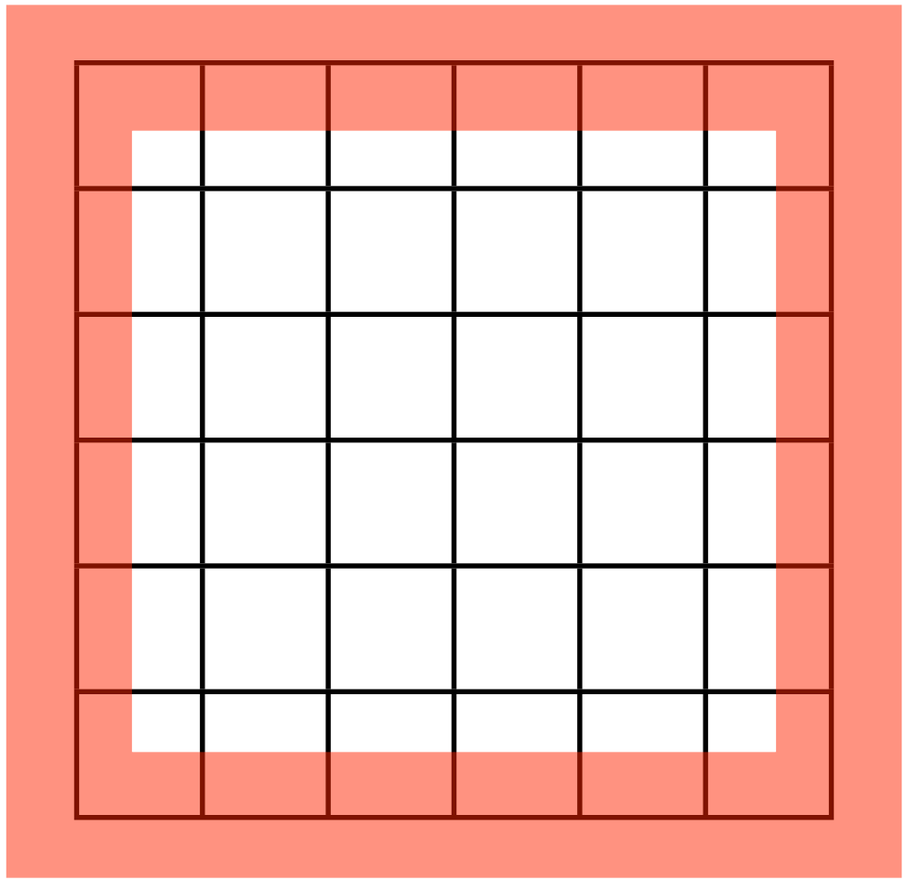
- NSBezierPath
- Current graphics context settings
- Straddles the path it draws



(Mac) Coordinates vs. Pixels



NSFrameRect



-[NSBezierPath stroke]

stroke

Straddles the line.

Dirty word #5

```
member:
```

`member:`

- NSSet
  - Returns element that isEqual: to obj
- NSHashTable
  - Equality depends on "personality"
- Should be memberEqualToObject:

```
member:

memberEqualToObject:.
```

Dirty word #4

```
NSRectFill
```

NSRectFill

- AppKit function
- Common pattern:

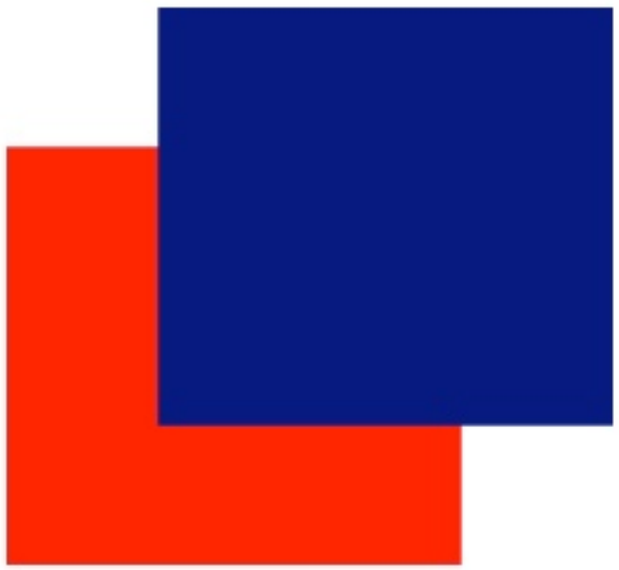
```
[myFillColor set];
NSRectFill(rect);
```

No alpha

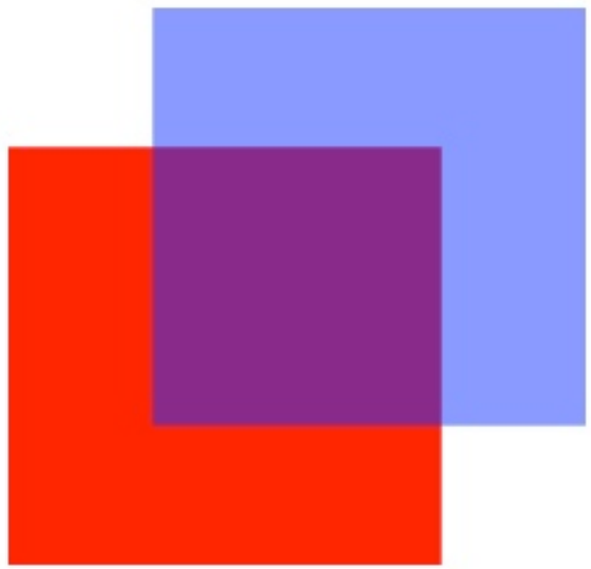
- NSRectFill is shortcut for

```
NSRectFillUsingOperation(
                        rect,
                        NSCompositeCopy)
```

- Workaround:
  - Use NSCompositeSourceOver
  - Or +[NSBezierPath fillRect:]



NSRectFill



NSRectFillUsingOperation w/
NSCompositeSourceOver, or
+[NSBezierPath fillRect:]

NSRectFill

Doesn't do alpha.

Dirty word #3

```
NSInsertionPosition
```

NSInsertionPosition

- Enum used by NSPositionalSpecifier
- A Cocoa scripting thing
- Odds are you'll never need it
- How many...?

```
typedef enum {
  NSPositionAfter,
  NSPositionBefore,
  NSPositionBeginning,
  NSPositionEnd,
  NSPositionReplace
} NSInsertionPosition;
```

NSInsertionPosition

Five is all you need.

Dirty word #2

```
toolTip
```

toolTip

- NSView, NSToolbarItem, NSStatusItem, NSTabViewItem, NSMenuItem (!), PDFAnnotation
  - Spotlight menu
- Setters, IB, bindings, delegates

NSToolTipOwner

- Informal delegate protocol
  - -[NSView addToolTipRect:owner:userData:]
  - view:stringForToolTip:point:userData:
    - Defaults to description
- Rare (only?) case of N delegates

User trick

```
defaults write -g NSInitialToolTipDelay -int 10000
```

toolTip

Tricky to remove.

Dirty word #1

```
knobThickness
```

knobThickness

- NSSlider and NSSliderCell
- Cell drawing pattern
- Basically returns a constant
  - setKnobThickness: is deprecated
- Oops: *can* customize knob drawing
  - knobRectFlipped: and drawKnob:

knobThickness

Everybody misjudges.

`increaseLengthBy:`
Google with care.

`member:`
memberEqualToObject:

`insertBacktab:`
Handle Shift-Tab.

`NSRectFill`
Doesn't do alpha.

`autorelease`
Enjoy while you can.

`NSInsertionPosition`
Five is enough.

`yank:`
Don't break emacs.

`toolTip`
Tricky to remove.

`stroke`
Straddles the line.

`knobThickness`
Everybody misjudges.

serendipity

counterargument

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