

**Macoun' | |**



# Gefriergetrocknete Objekte

Uli Kusterer

# Was ist ein NIB?

- Gespeicherter Objektgraph
- Grundbaustein eines GUI-Programms
- Dateiformat von Interface Builder
- Der alte Name für XIB



# Die Magie der NIBs und XIBs

NSWindowController

NSViewController

NSApplication

NSBundle

NSNibLoading

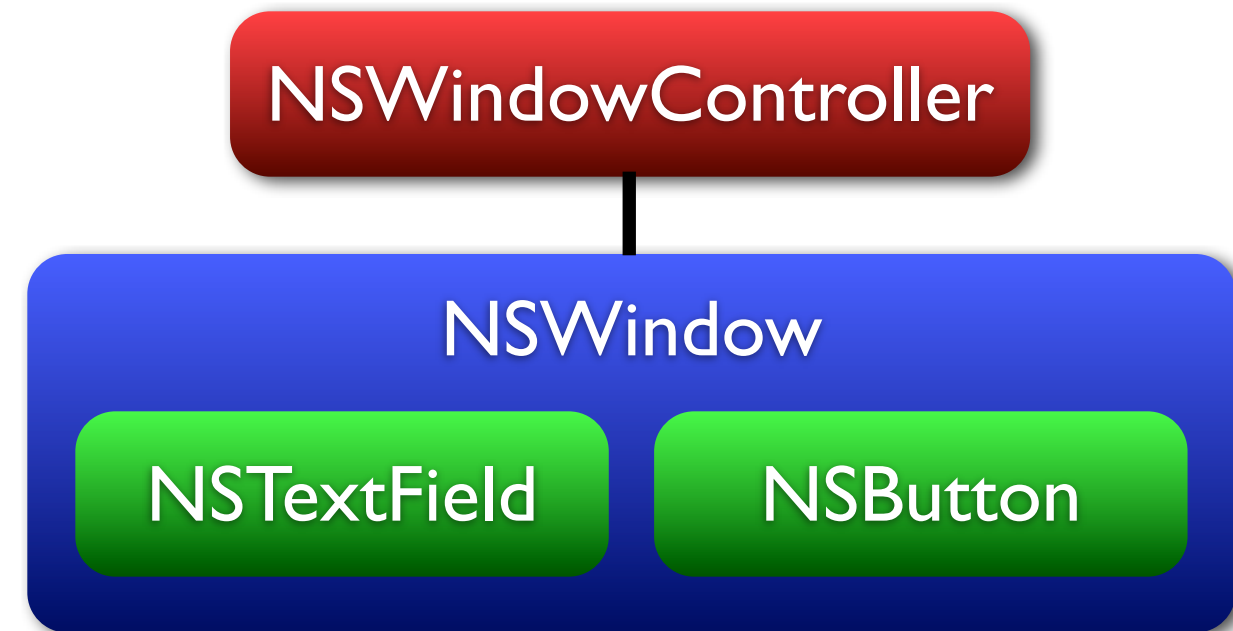
NSNib

NSUnarchiver

NSArchiver

# GUIs zu Oma's Zeiten...

- Controller
- Fenster und Views
- Verbindungen/Beziehungen

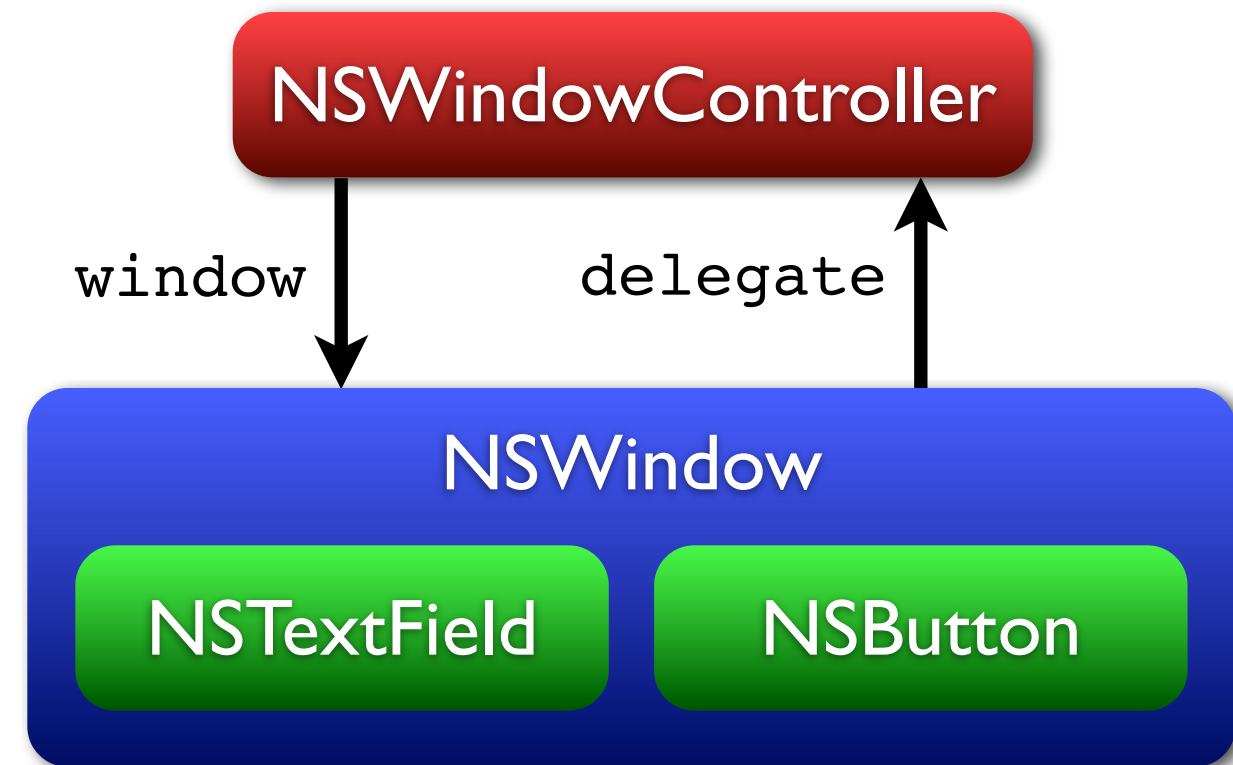


# NSArchiver und NSUnarchiver

- Rekursiv Archivieren

`-encodeWithCoder:`

`-initWithCoder:`

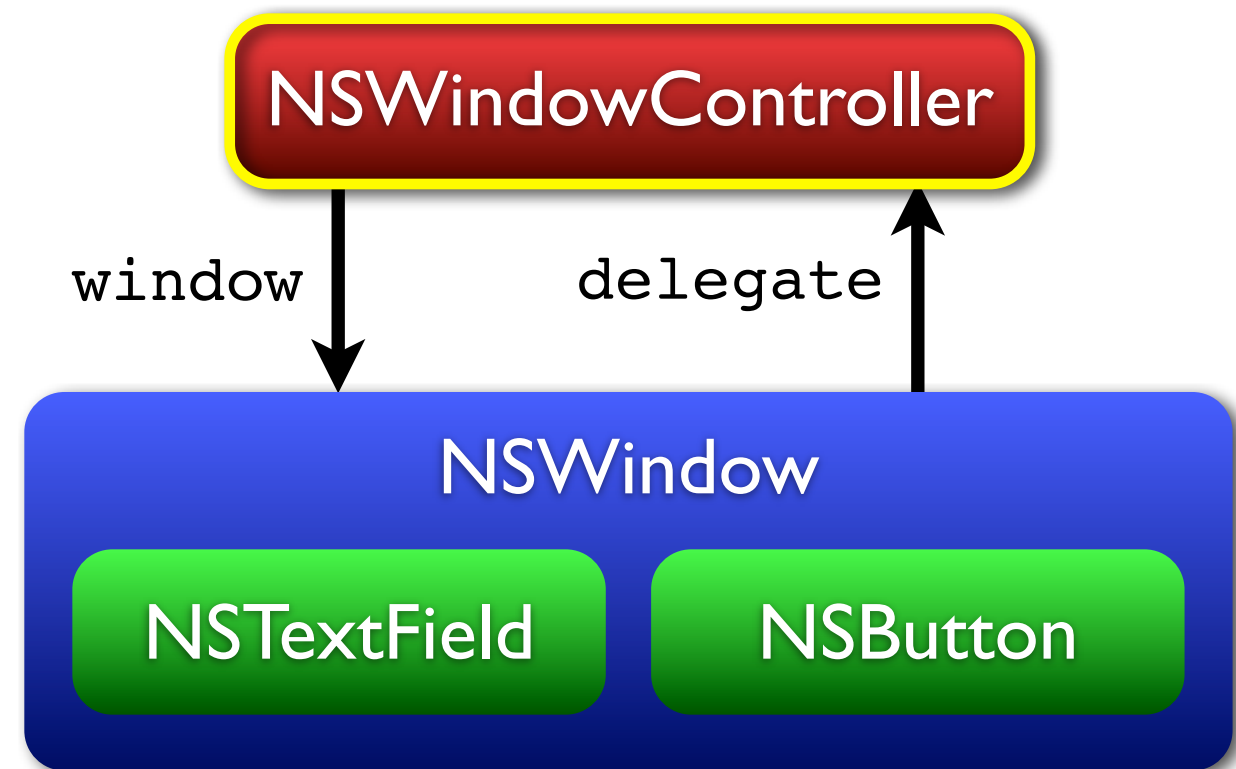


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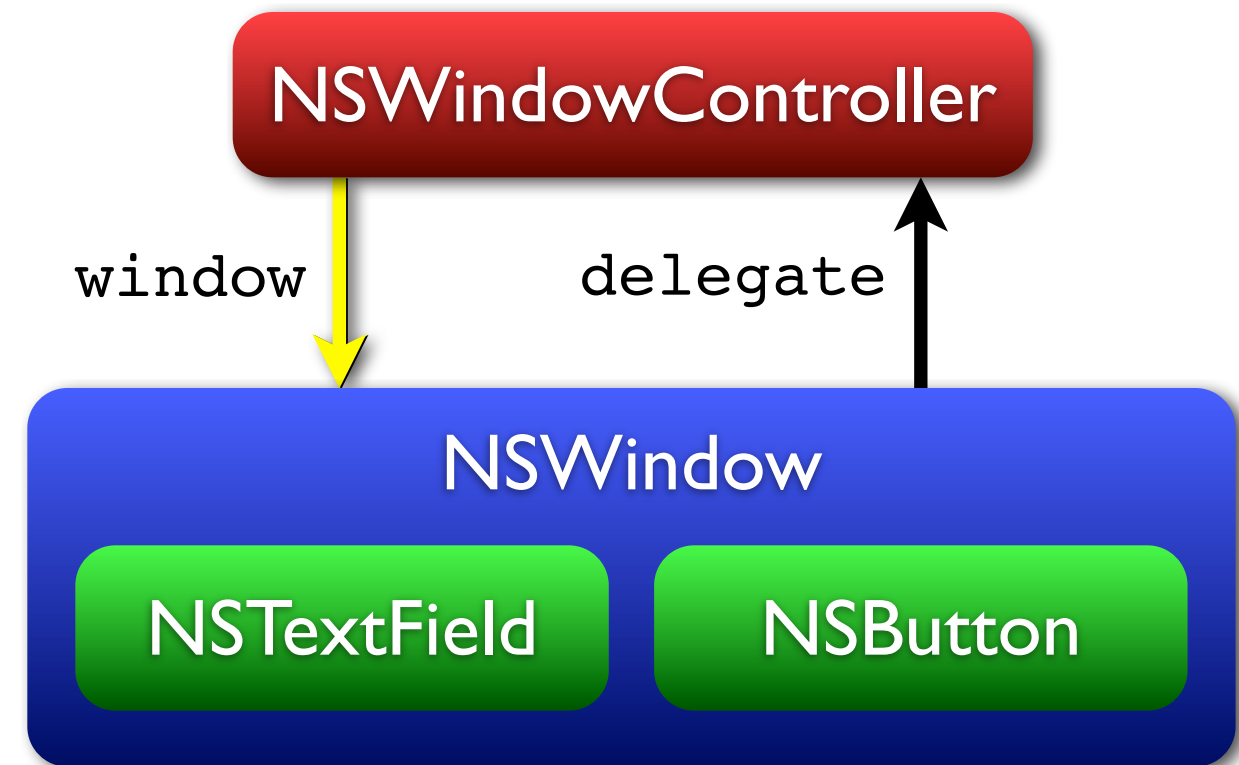


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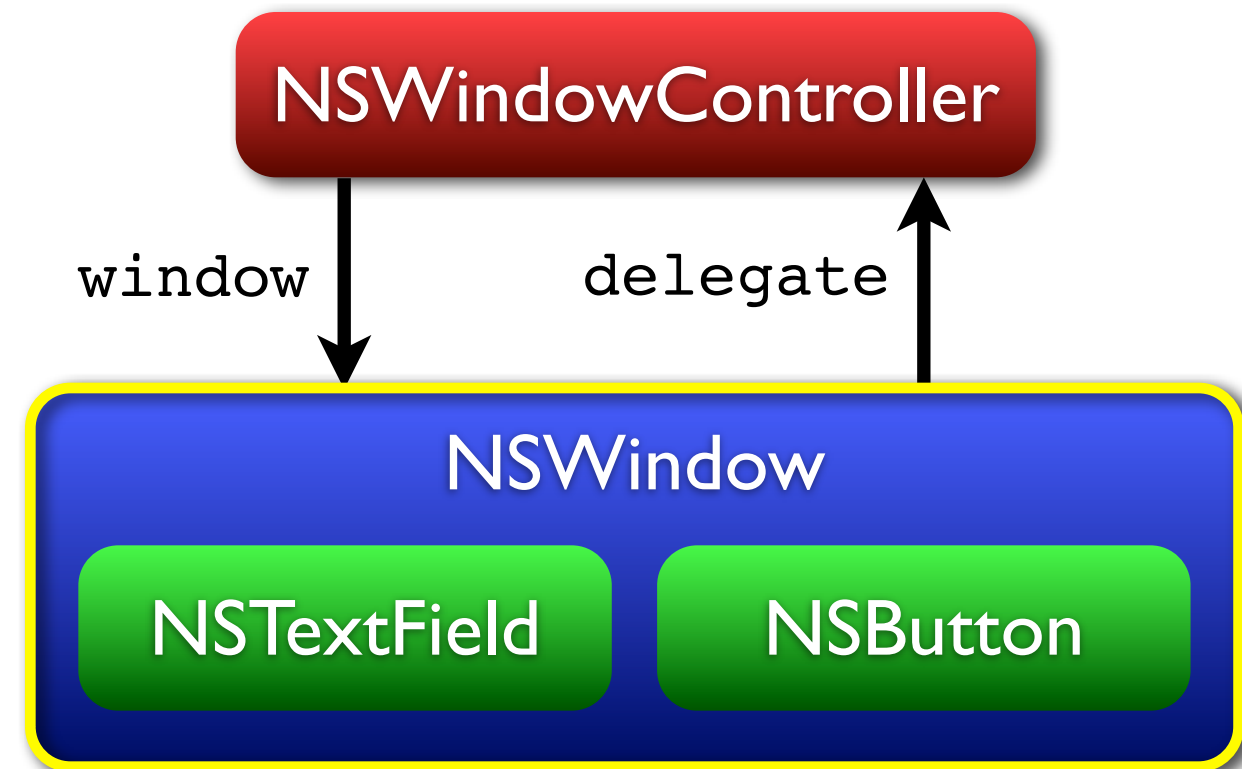


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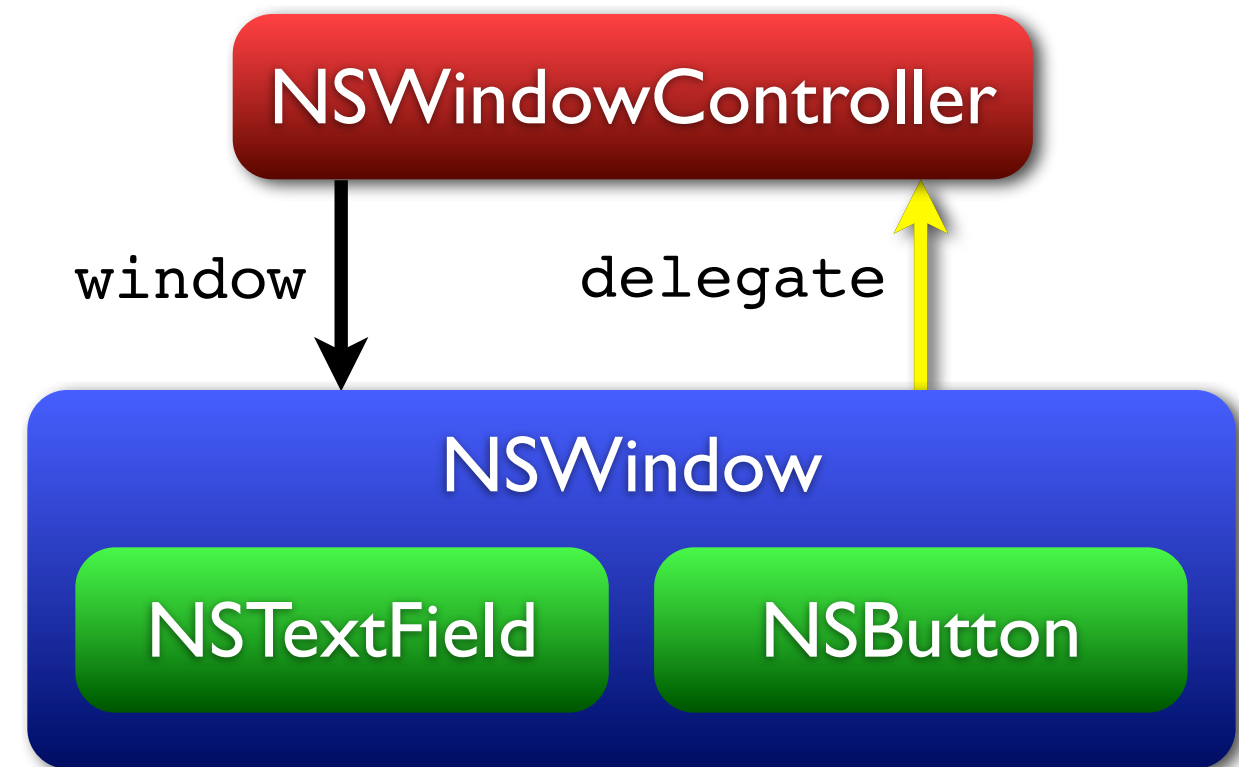


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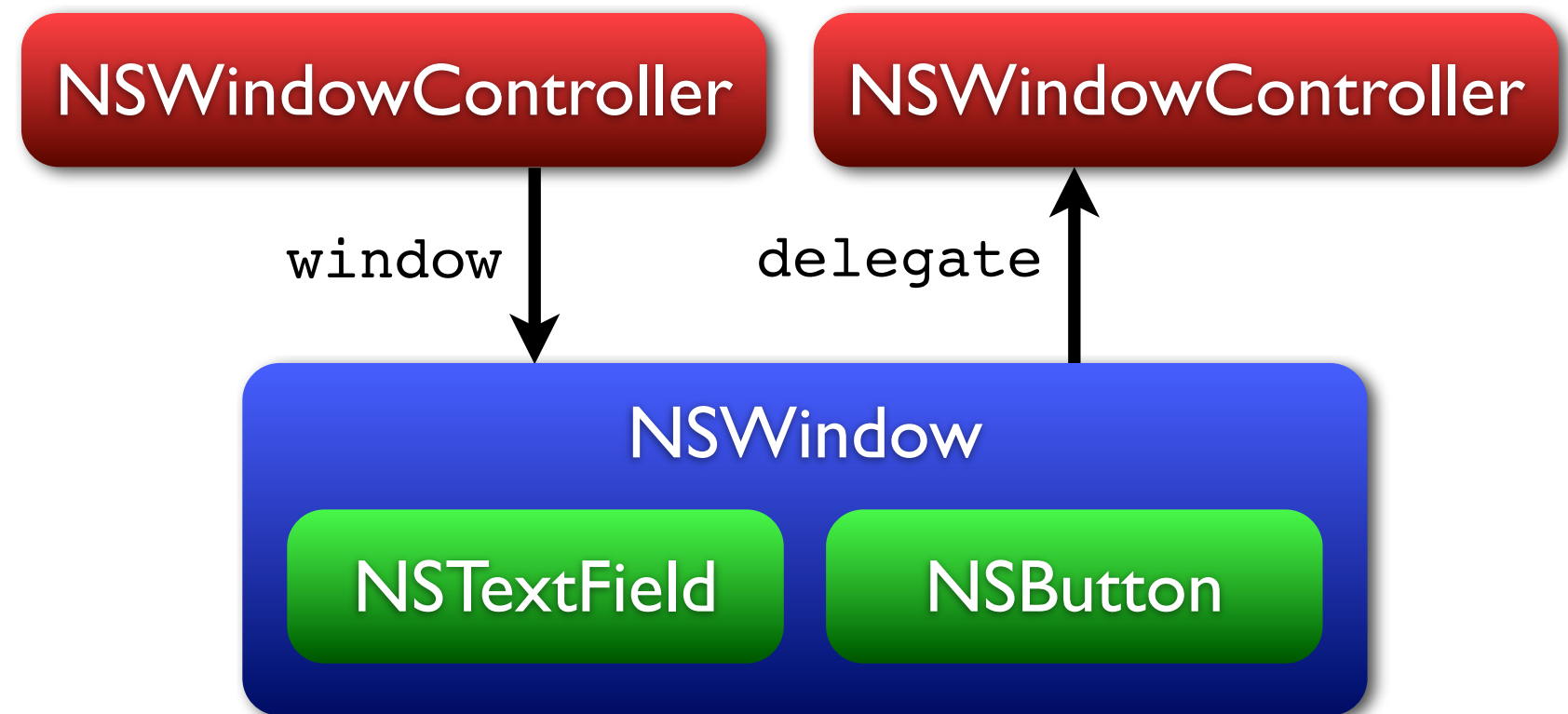


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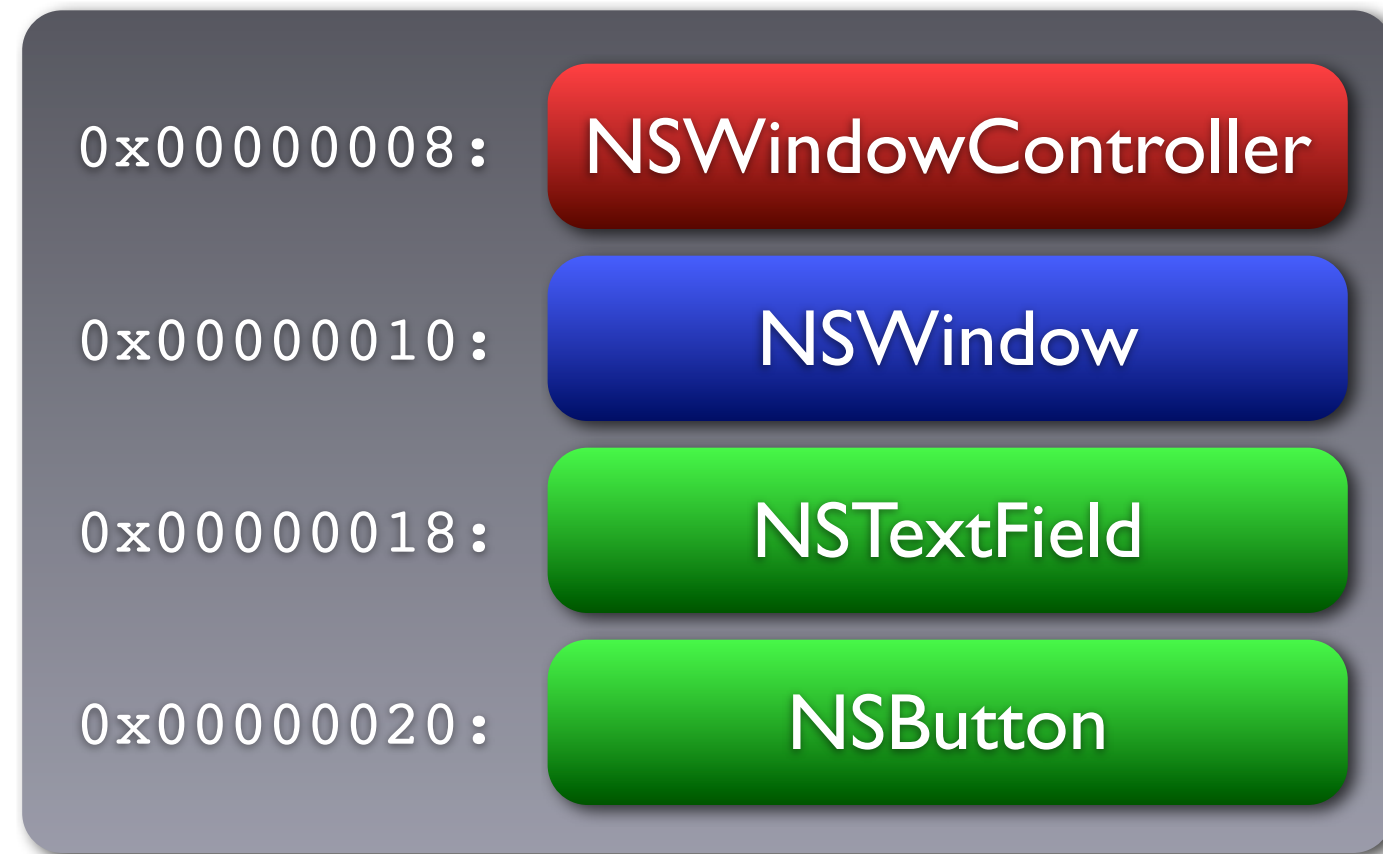
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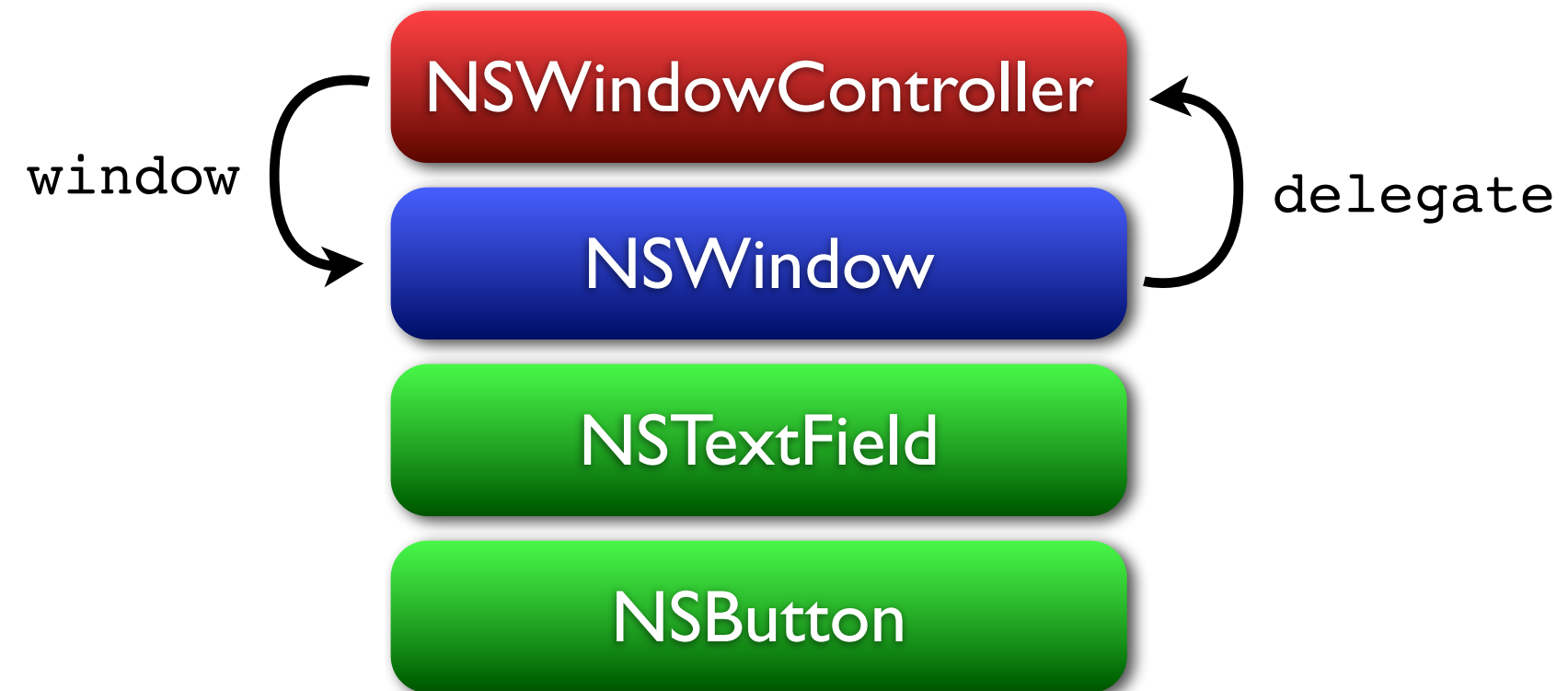
`-initWithCoder:`



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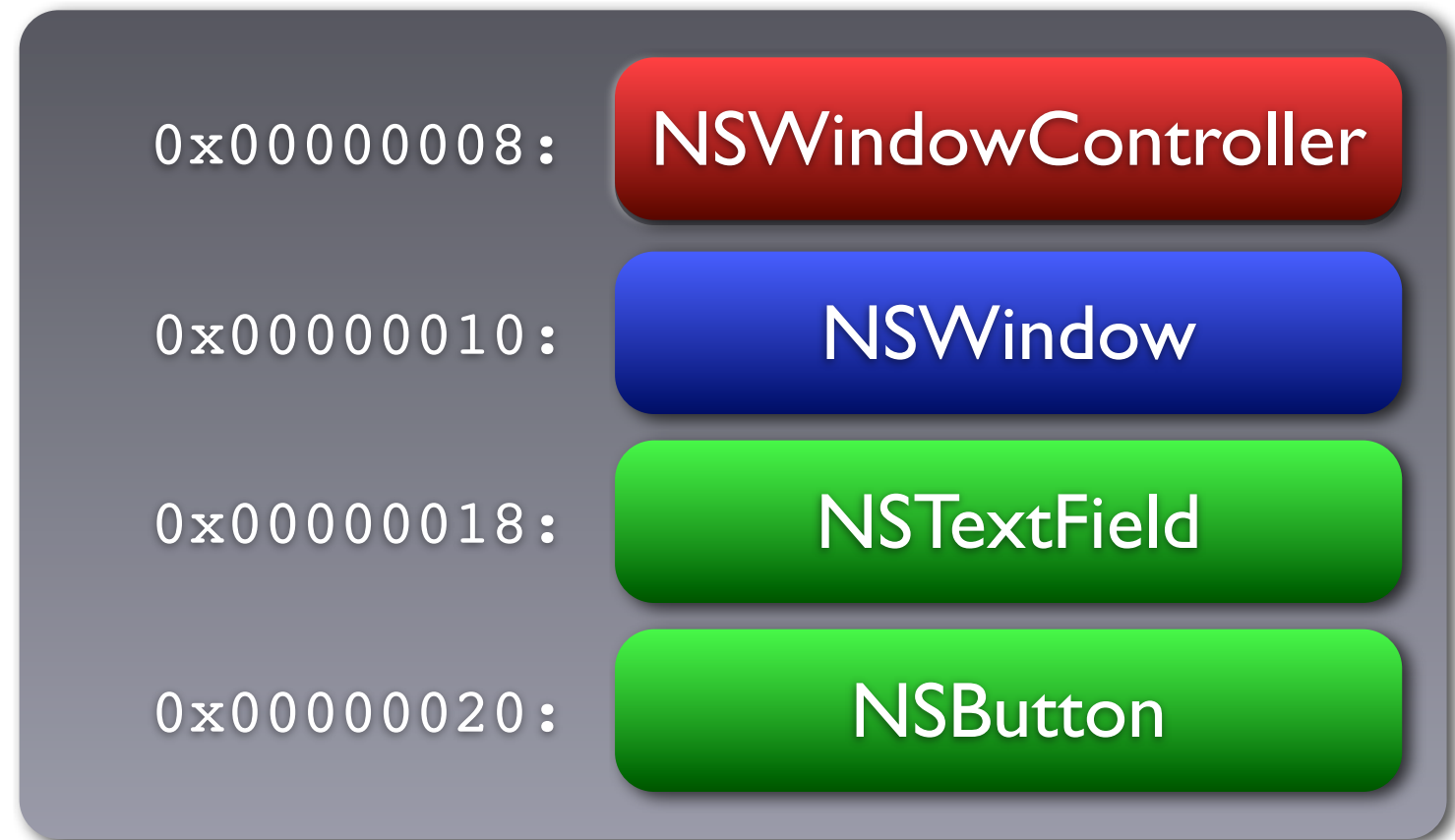


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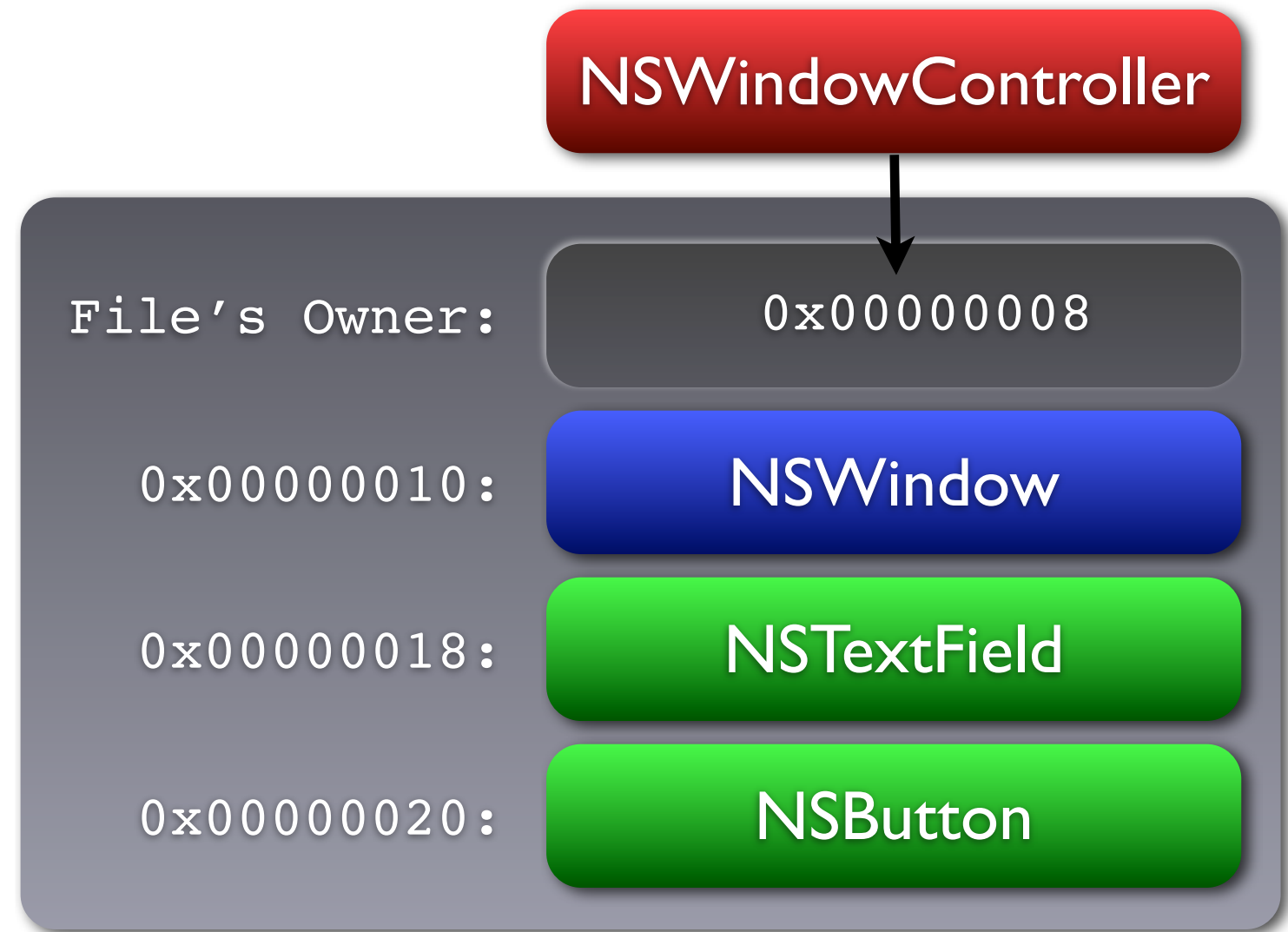
# NSNib

- Objects
- Outlets
- Target/Action
- Bindings
- Constraints



# NSNib

- Objects
- Outlets
- Target/Action
- Bindings
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# awakeFromNib

NSWindowController

- *Nach* allen Outlets, Bindings etc.
- Geht *auch* an externe Objekte wie File's Owner

NSFlanController

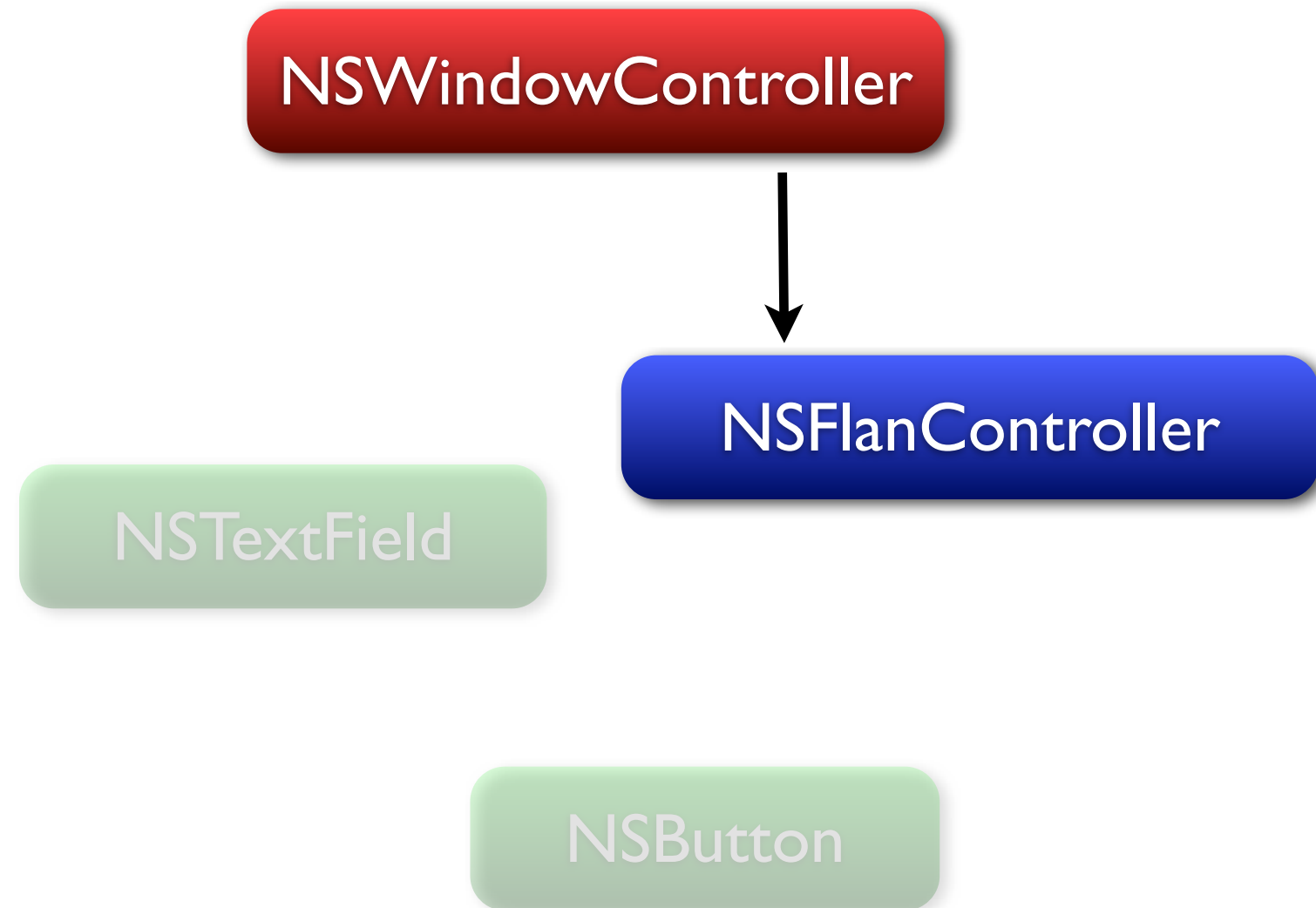
NSTextField

NSButton



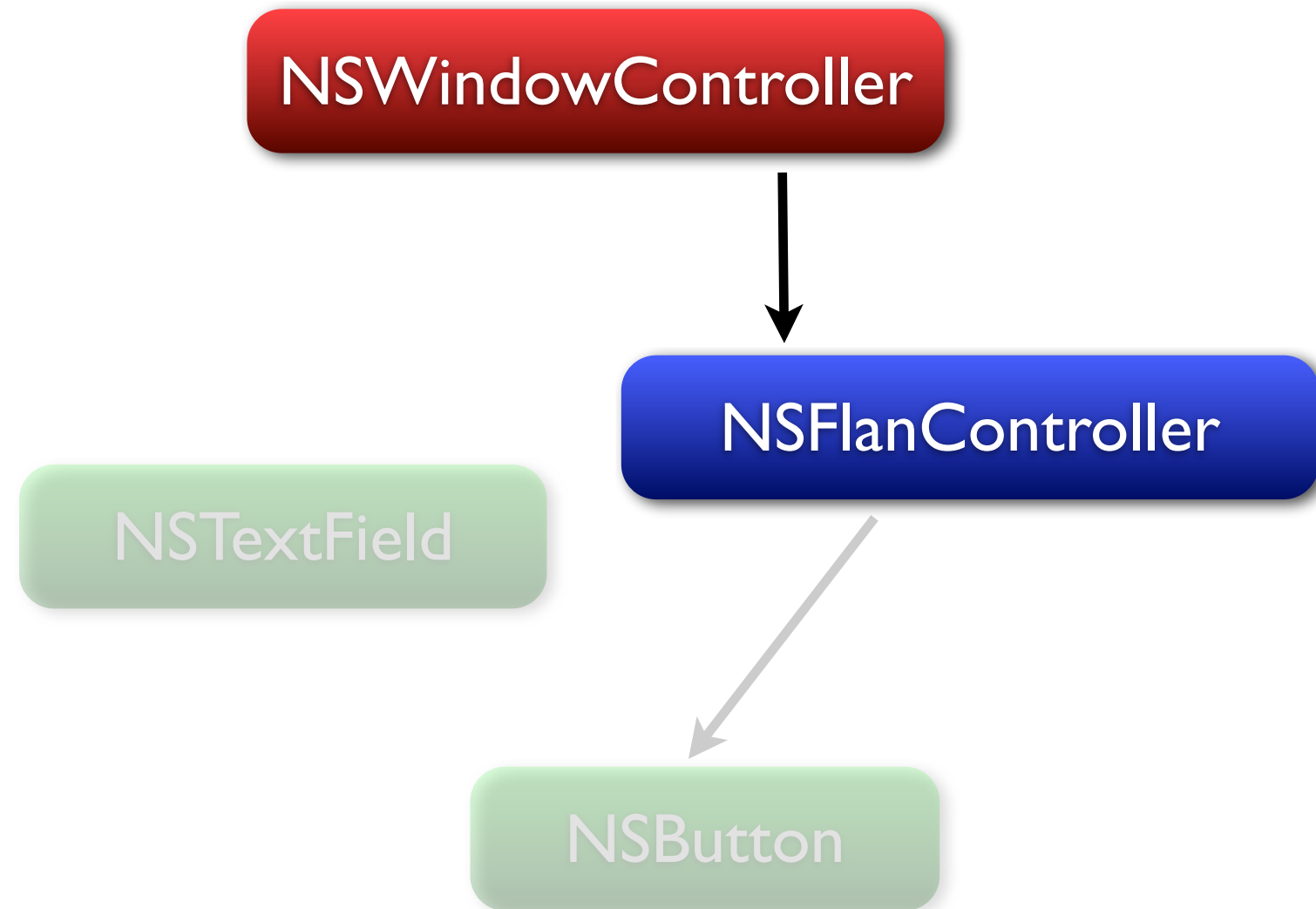
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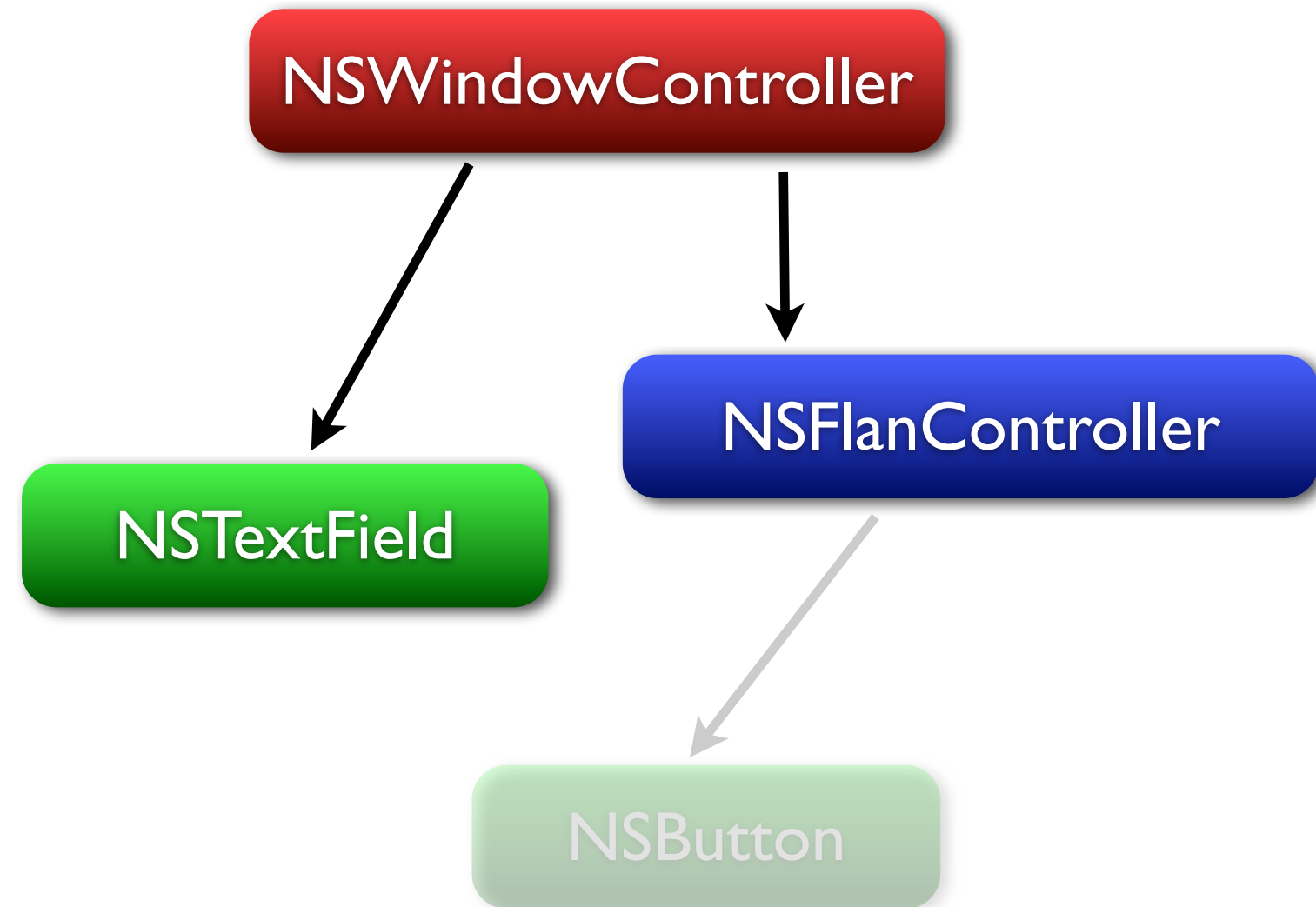
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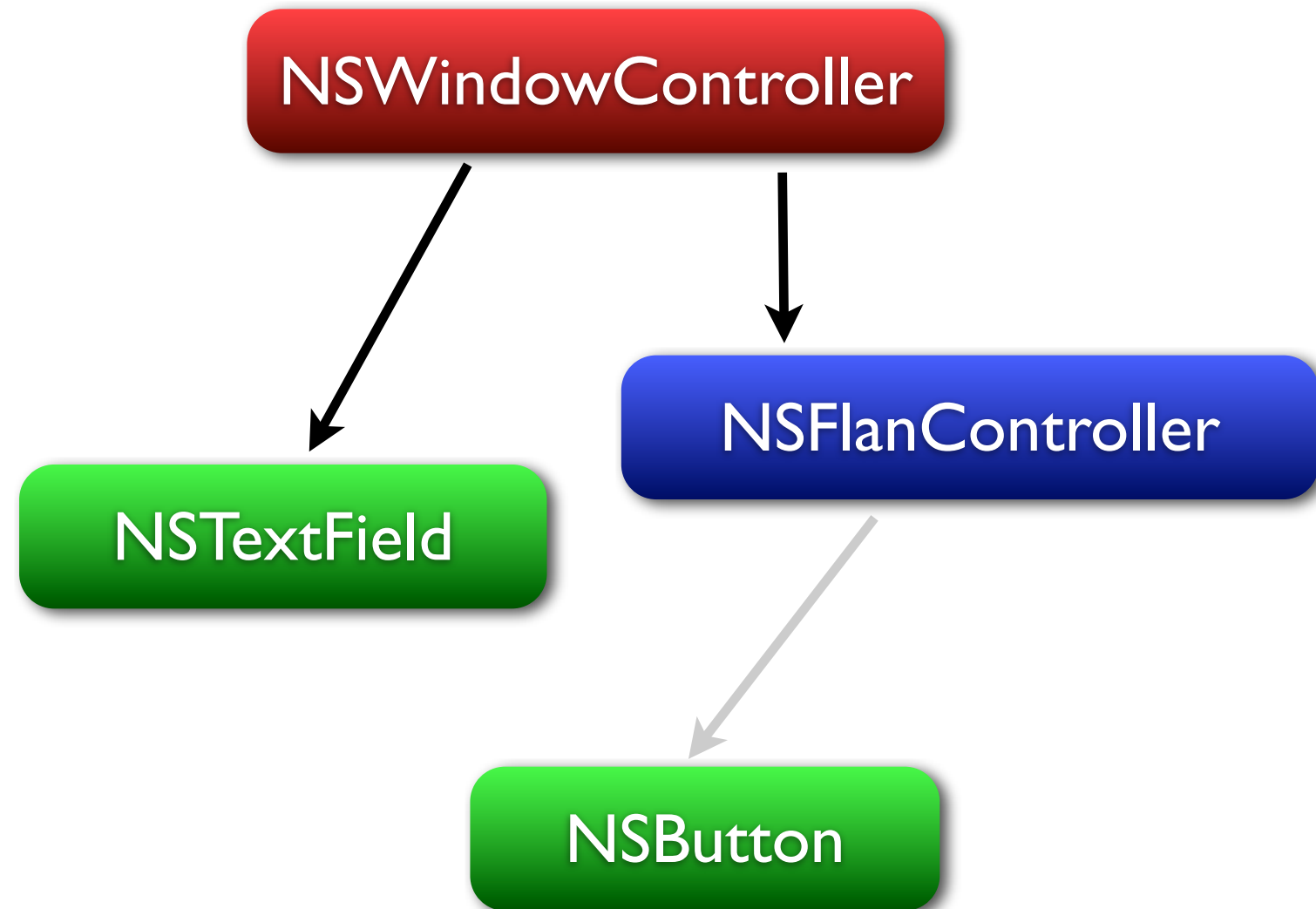
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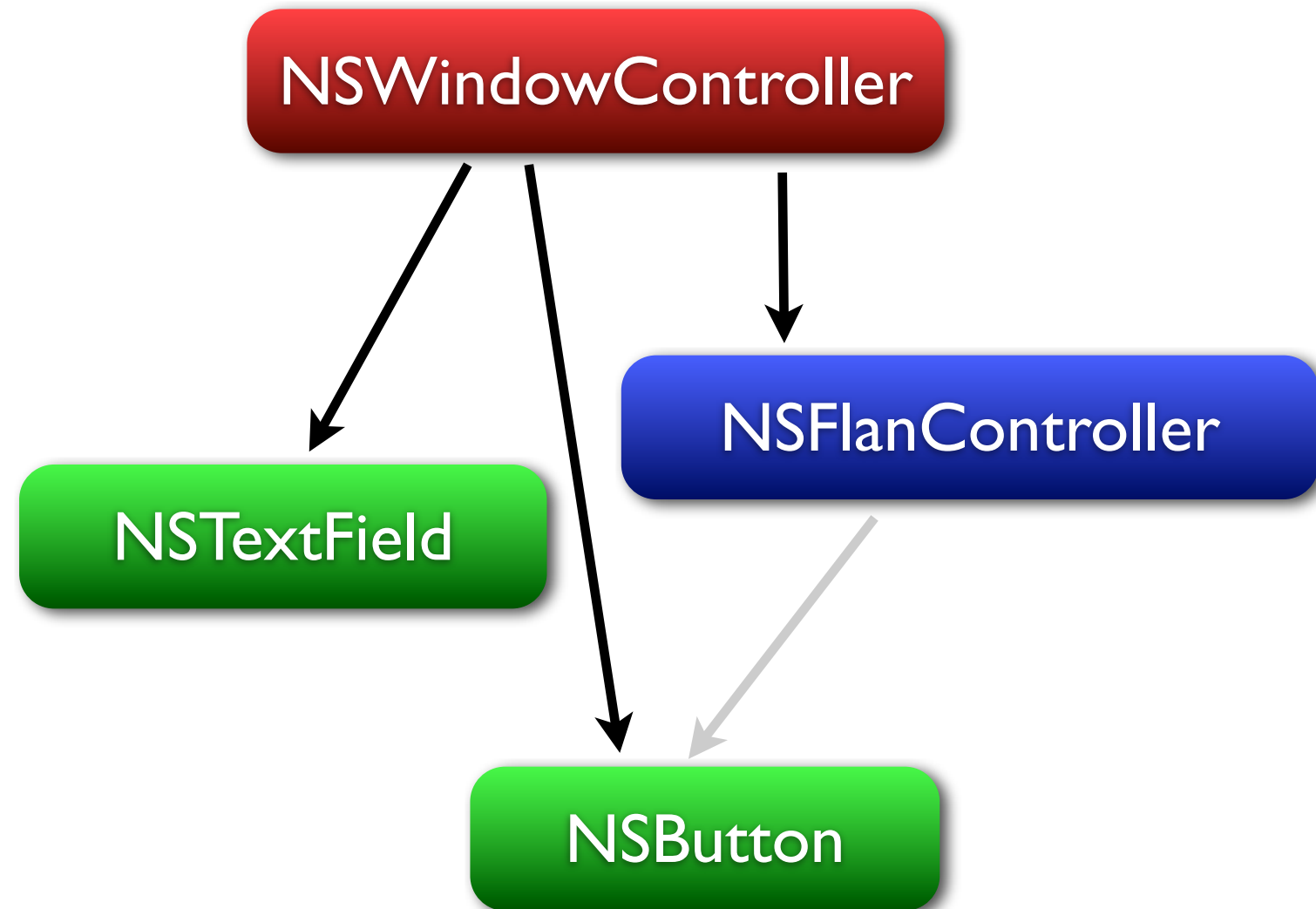
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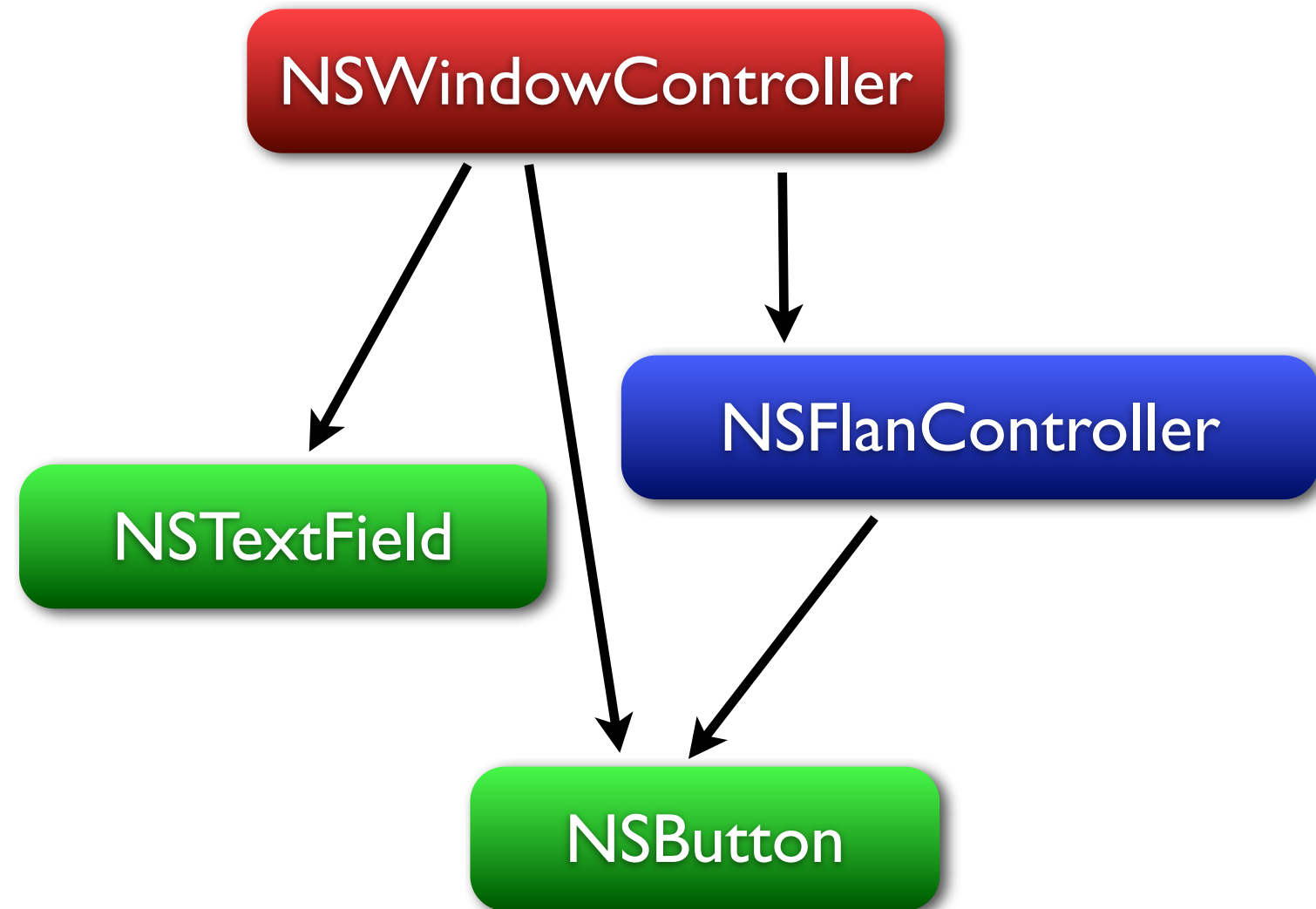
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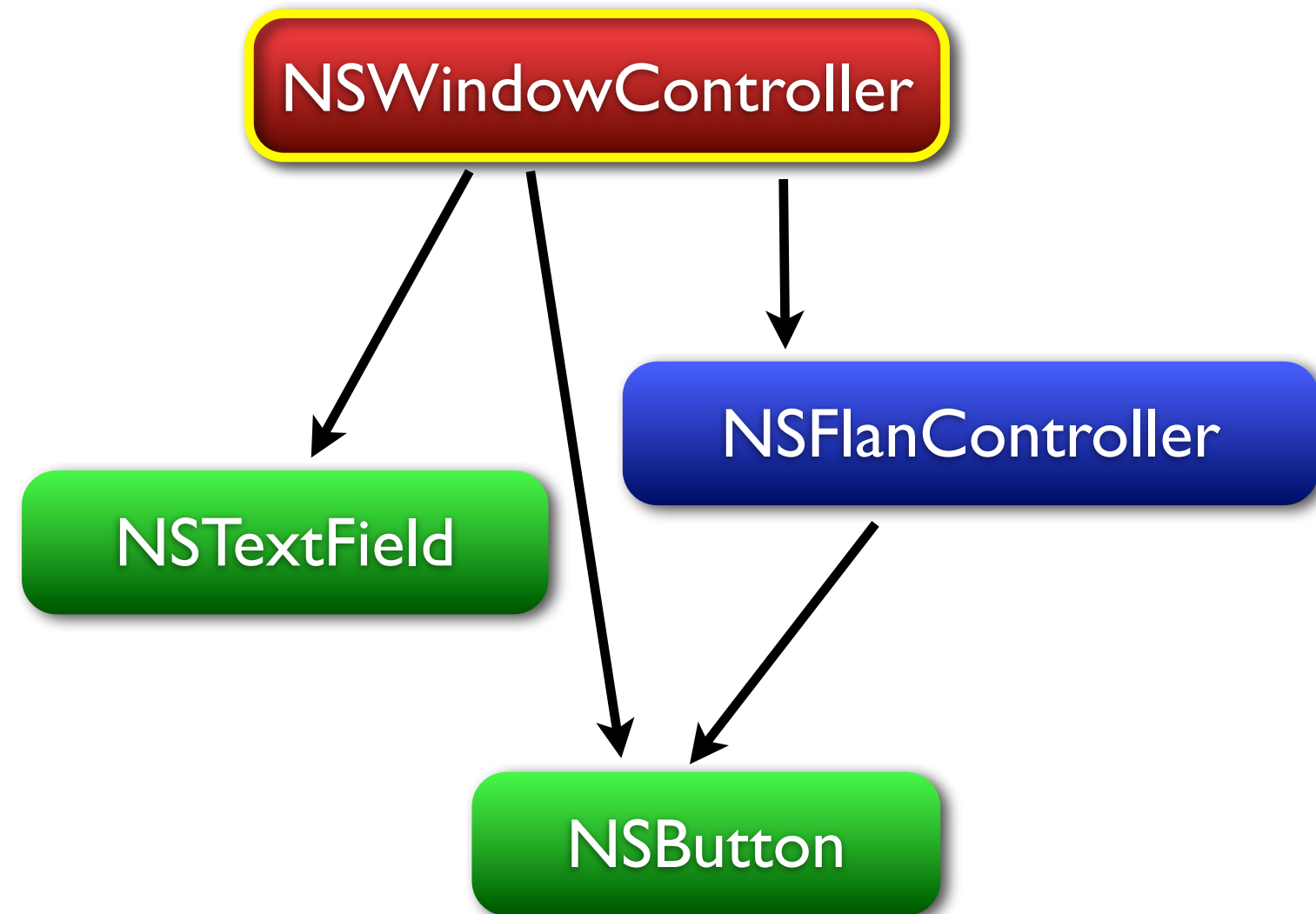
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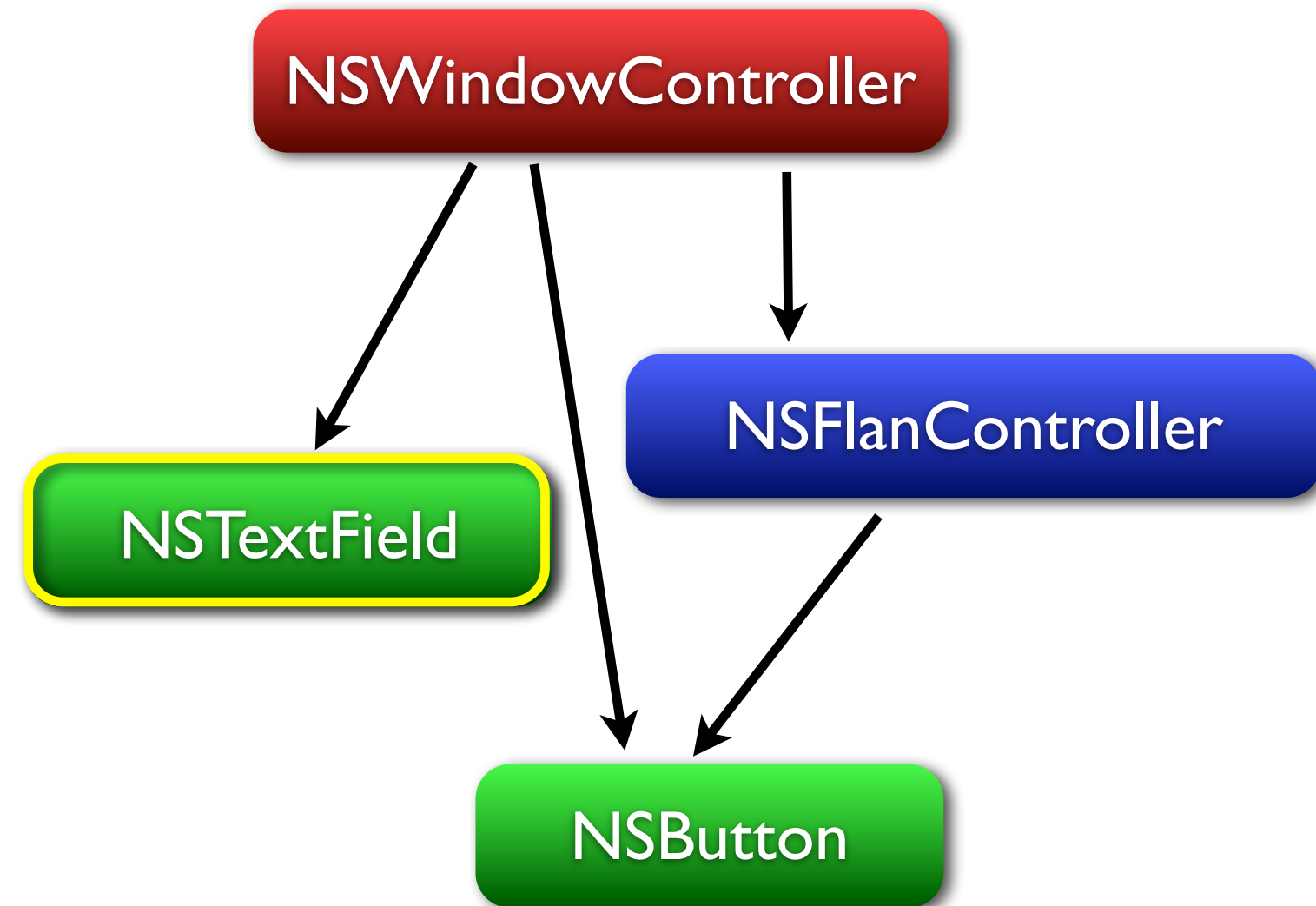
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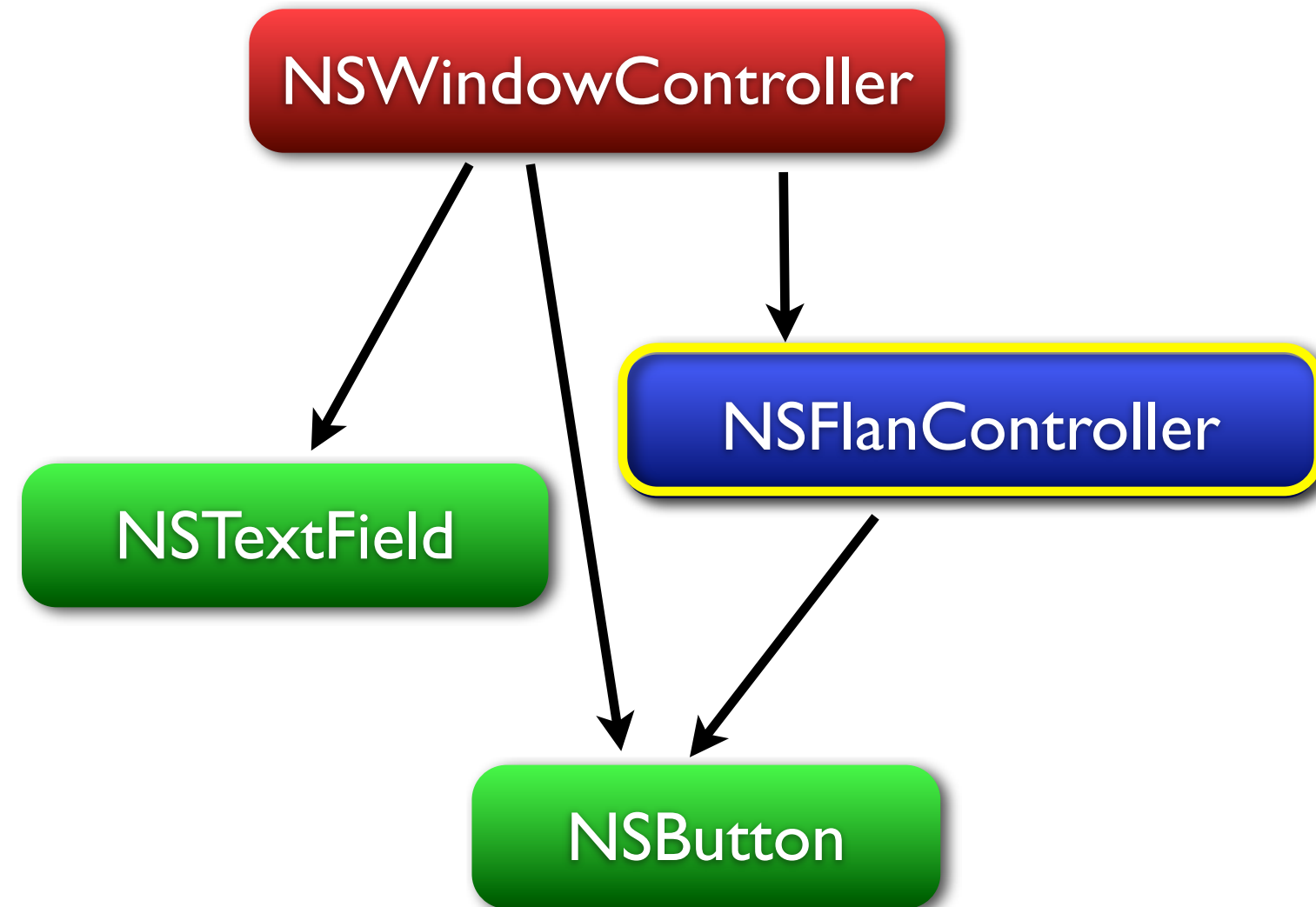
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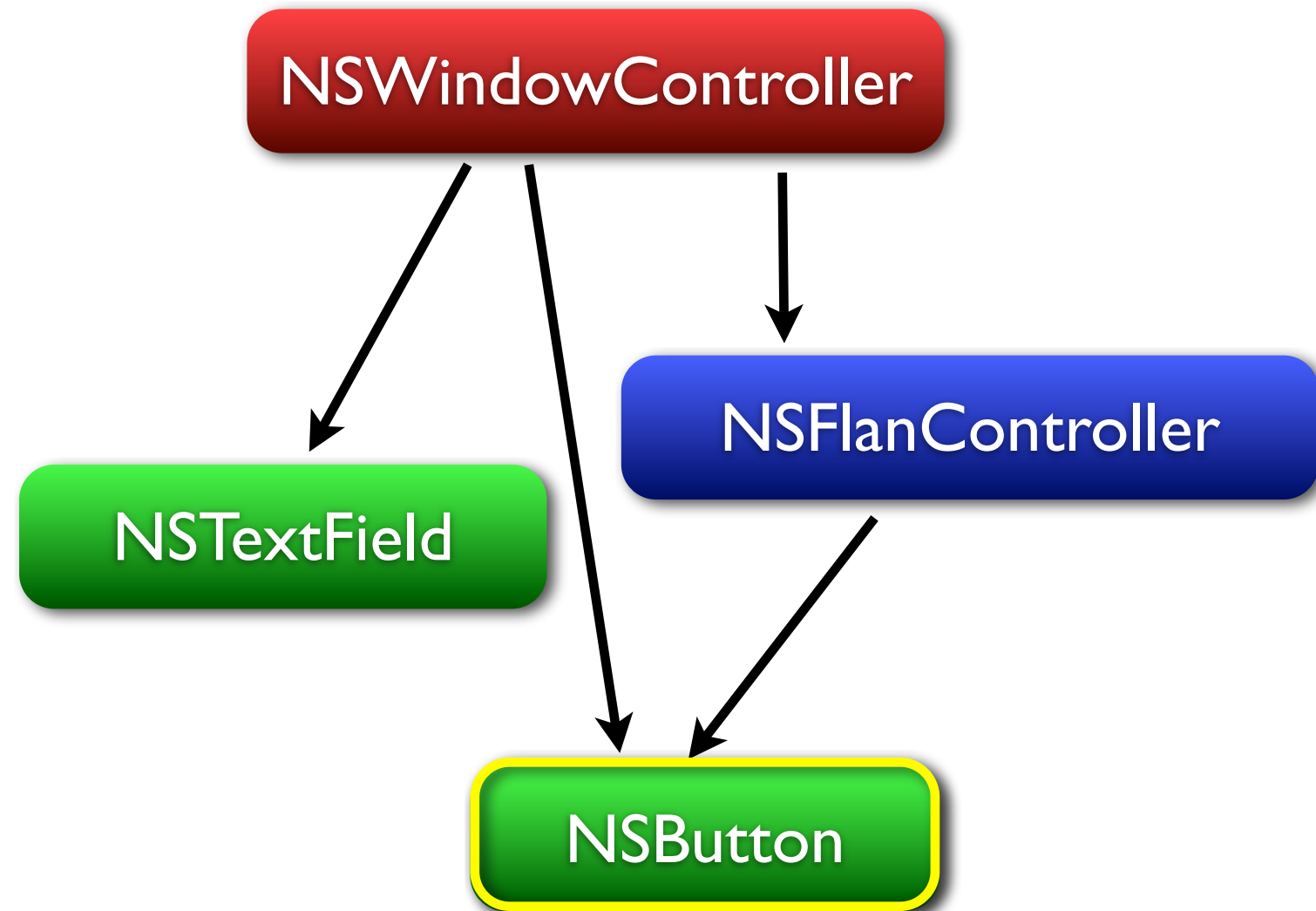
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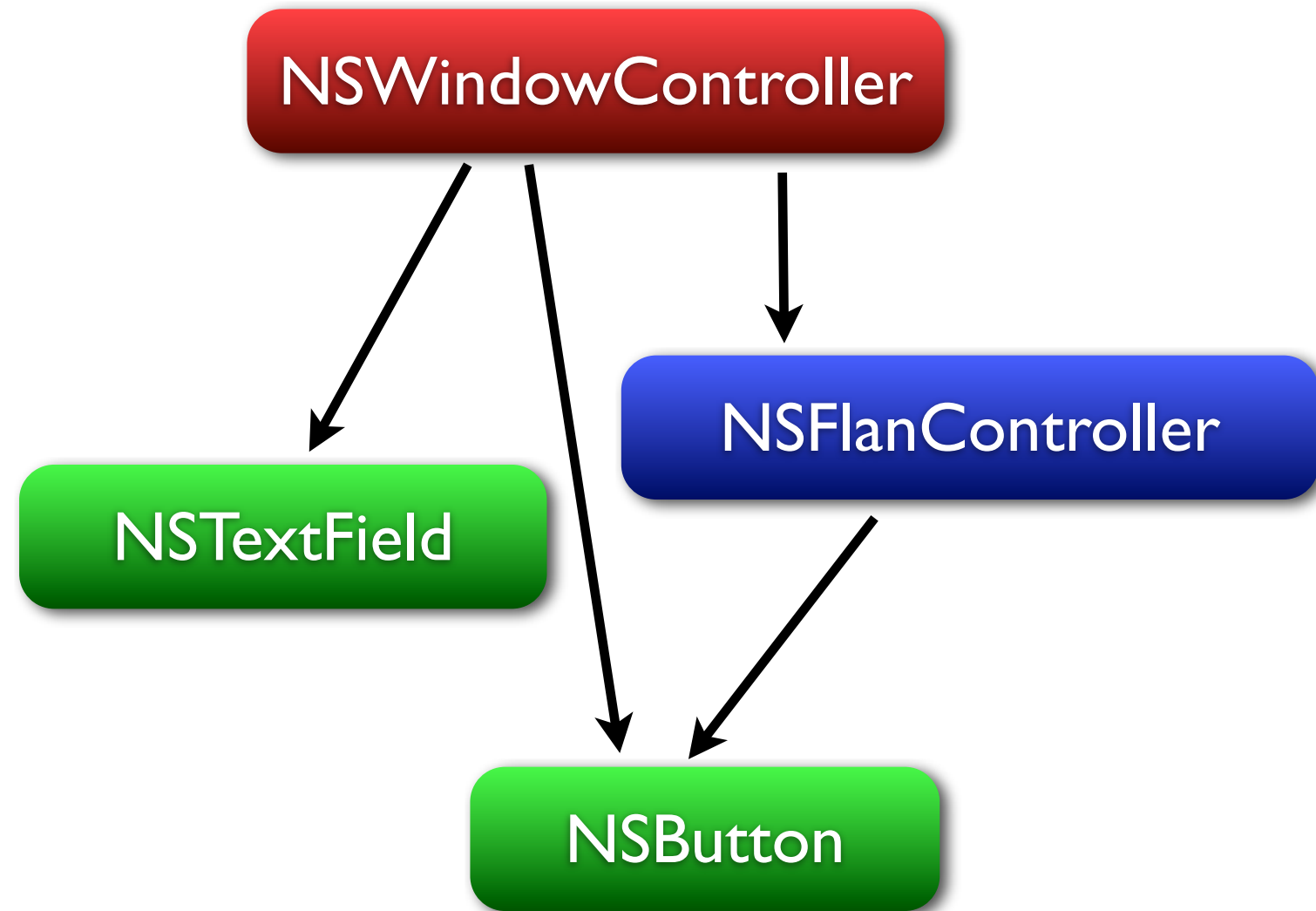
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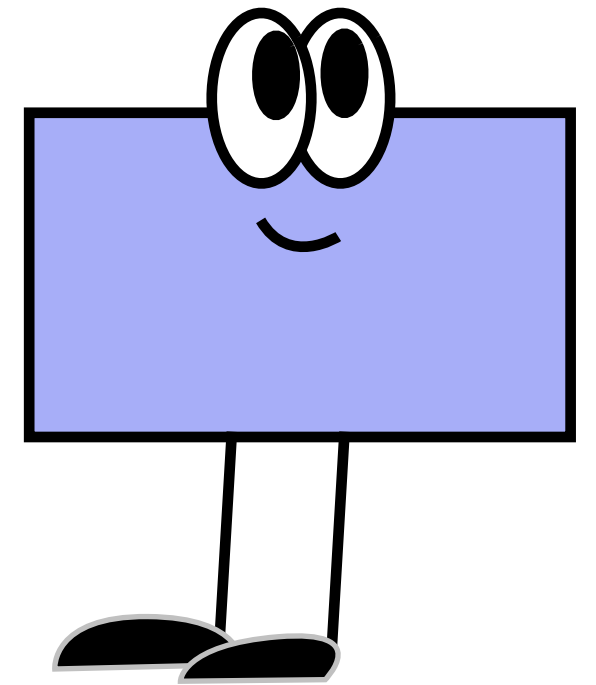
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# Speicherkrum

- Mac: Das Dictionary ist Eigentümer
- iOS: Das Dictionary verschwindet nach dem Laden
- Outlets: Retainen oder nicht ... ?

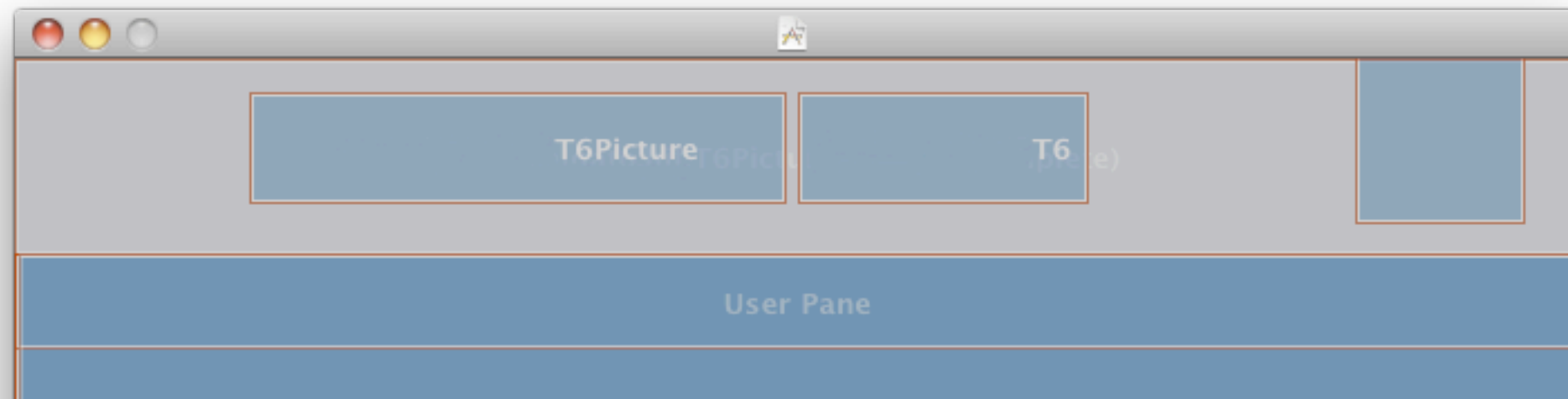


# Mehrere NIBs

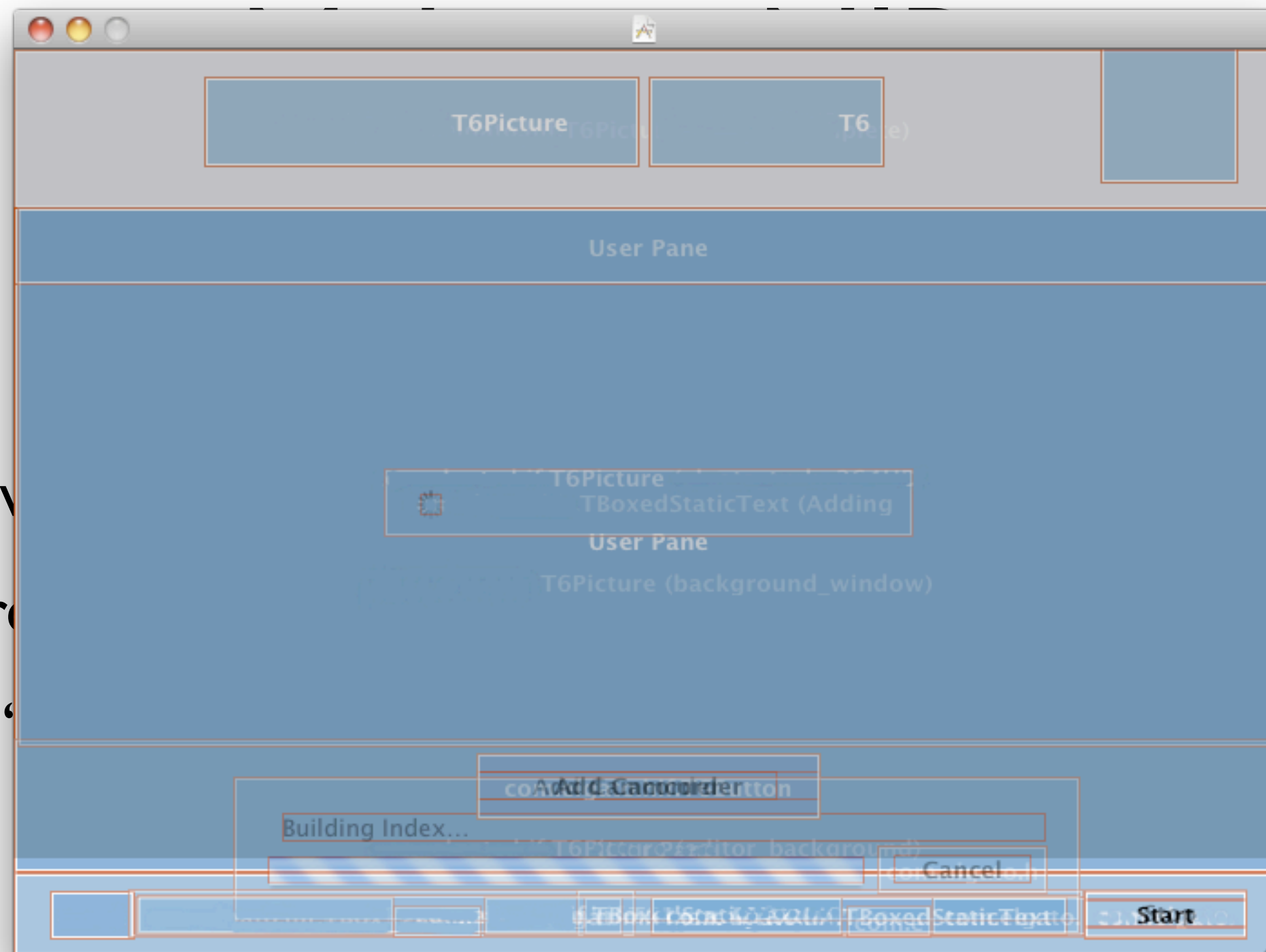
- NSViewController
- Hierarchie, nicht Querverweise
- Views “herausreißen”

# Mehrere NIBs

- NSViewController
- Hierarchie, nicht Querverweise
- Views “herausreißen”



- NSView
- Hierarchy
- Views



# Mehrere NIBs

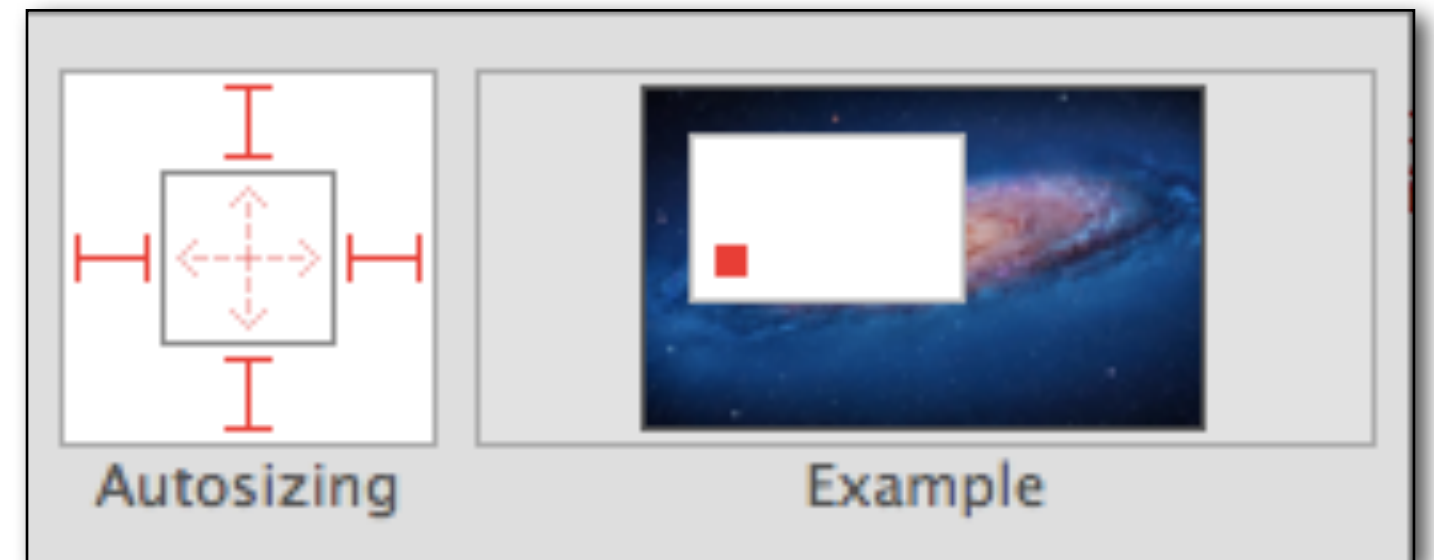
- NSViewController
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# Auto Layout

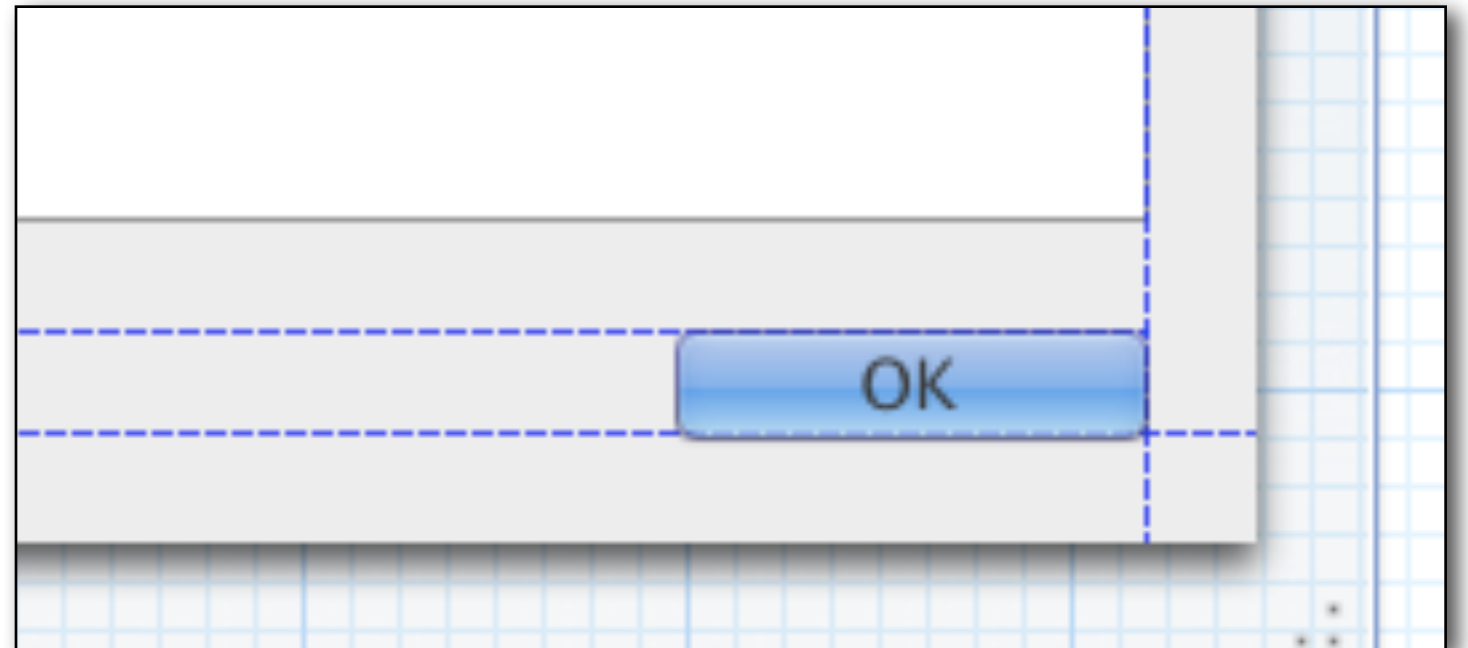
# Was ist Autolayout?

- “Sprungfedern und Streben”
- Persistente IB-Hilfslinien
- Echte Objekte



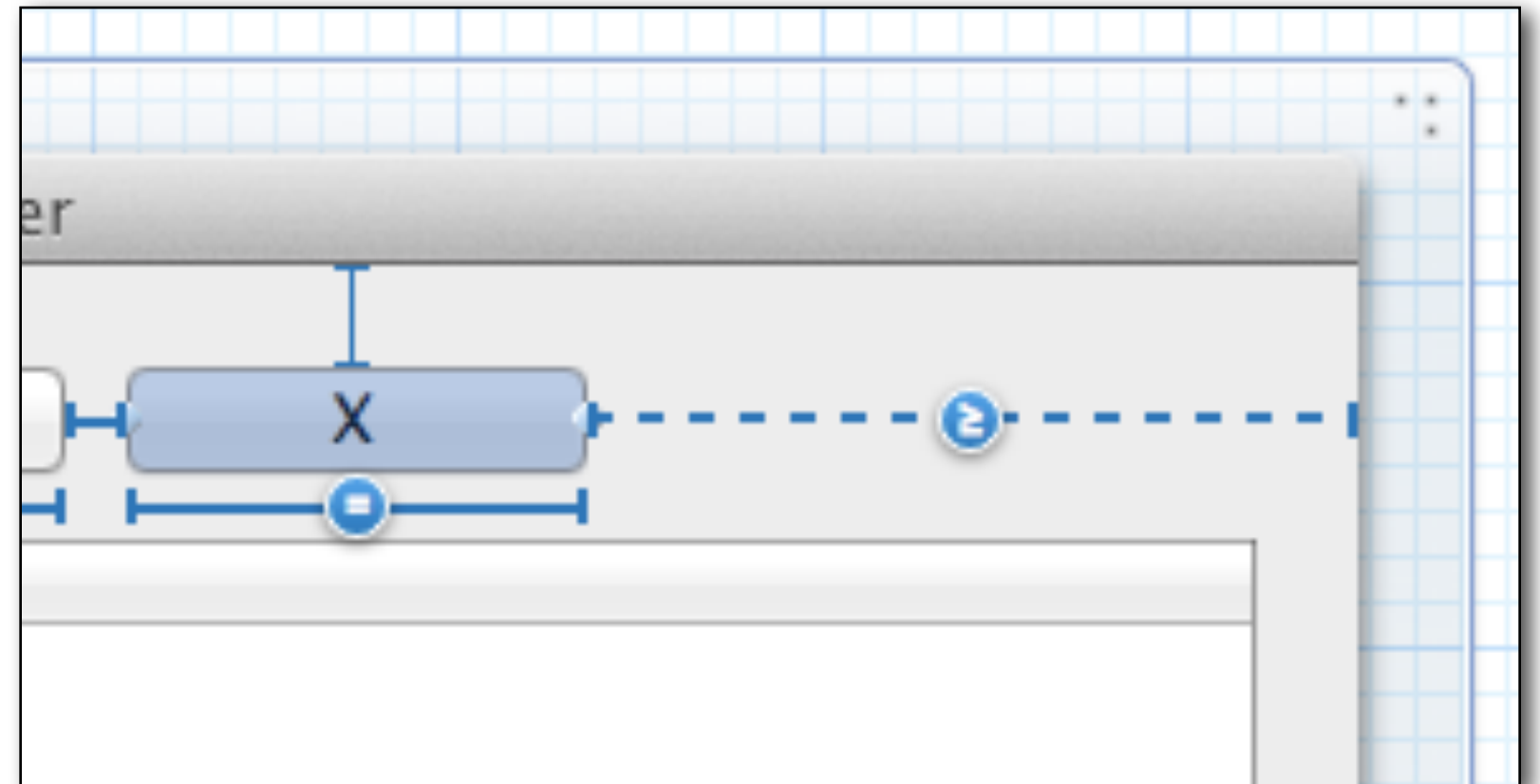
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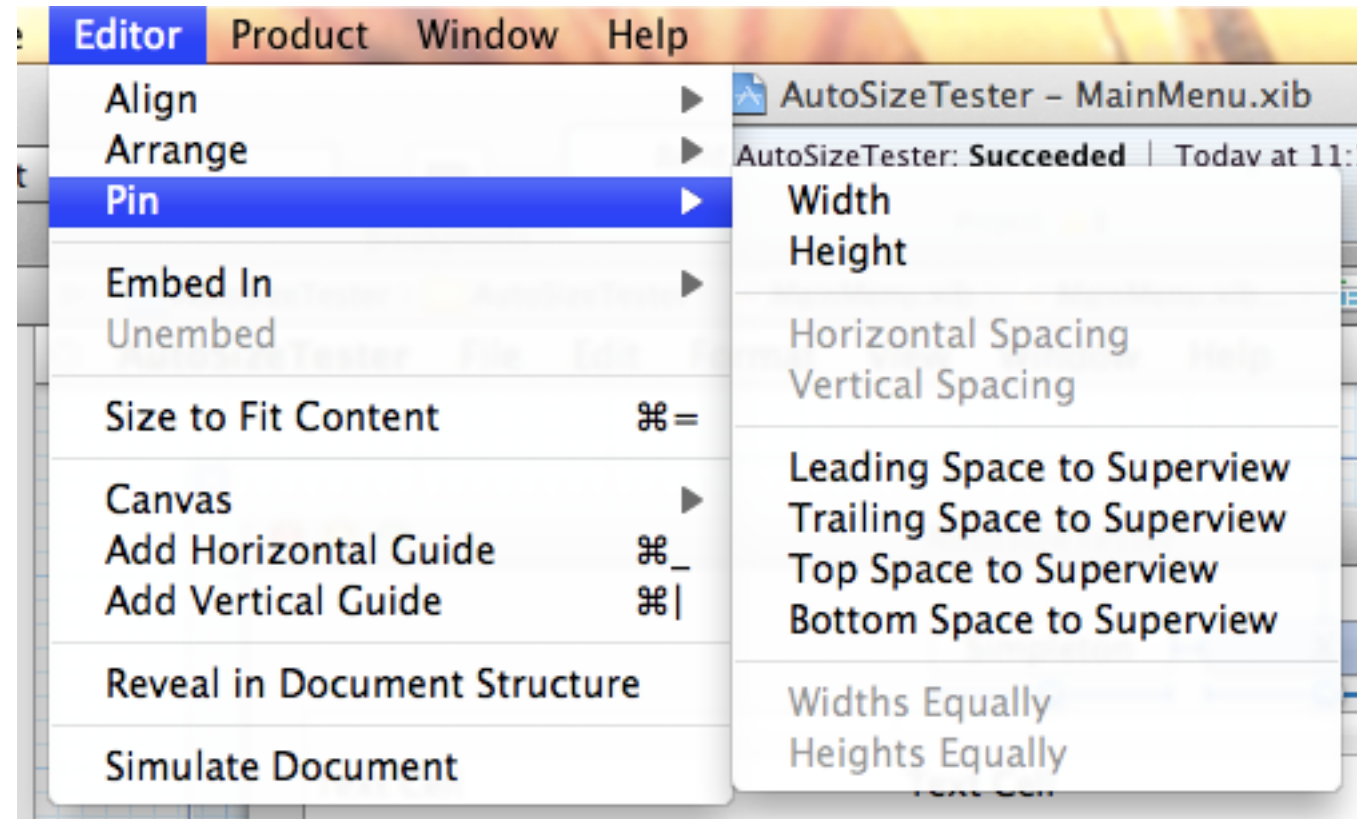
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# Warum Autolayout?

- Weniger Code (für Zentrieren, Dynamisches etc.)
- Wenn Code, dann lesbarer (ASCII-Art, Beziehungen zw.Views)
- Flexibler (Layout-Rechtecke, Text-Grundlinie etc.)
- Lokalisierung

# Wie gebe ich sie an?



- Einfach im NIB
- ASCII-Art (Kurznamen und Views-Dictionary)

# Wie gebe ich sie an?

“|-[zoomableView1]-80-[zoomableView2]“

- Einfach im NIB
- ASCII-Art (Kurznamen und Views-Dictionary)

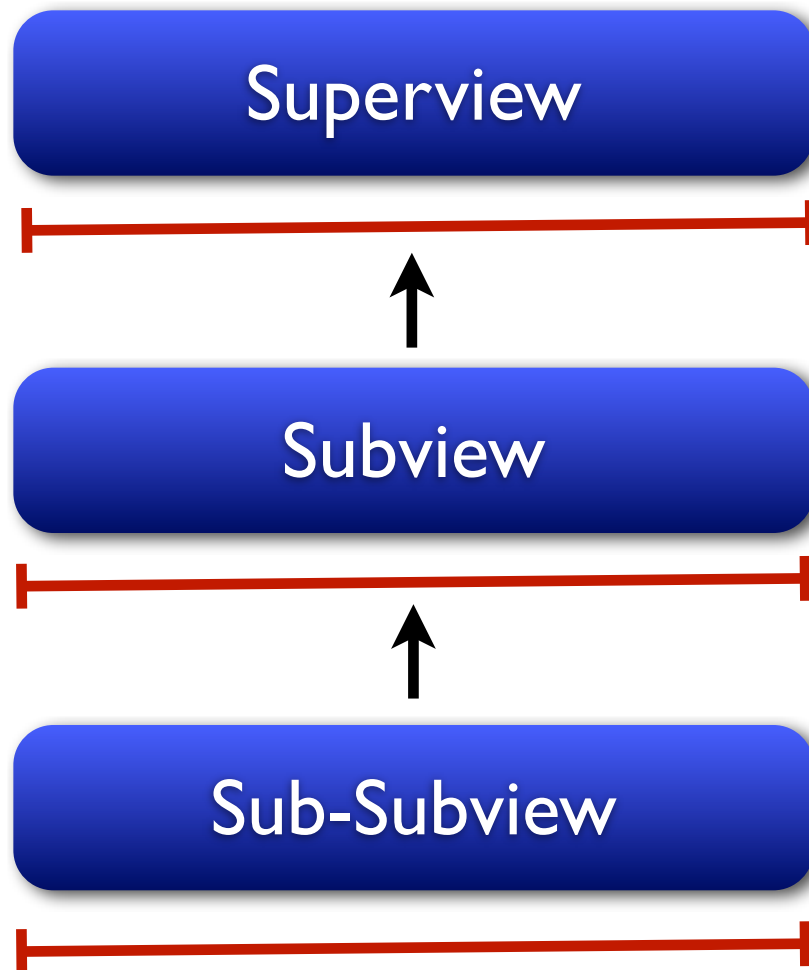
# Constraints von Hand

- NSLayoutConstraint + UIView -addConstraint:
- Constraints hängen wie Unter-Views an den Views
- Constraints *zwischen* Views kommen auf eine Superview
- UIView -setTranslatesAutoresizingMaskIntoConstraints: NO

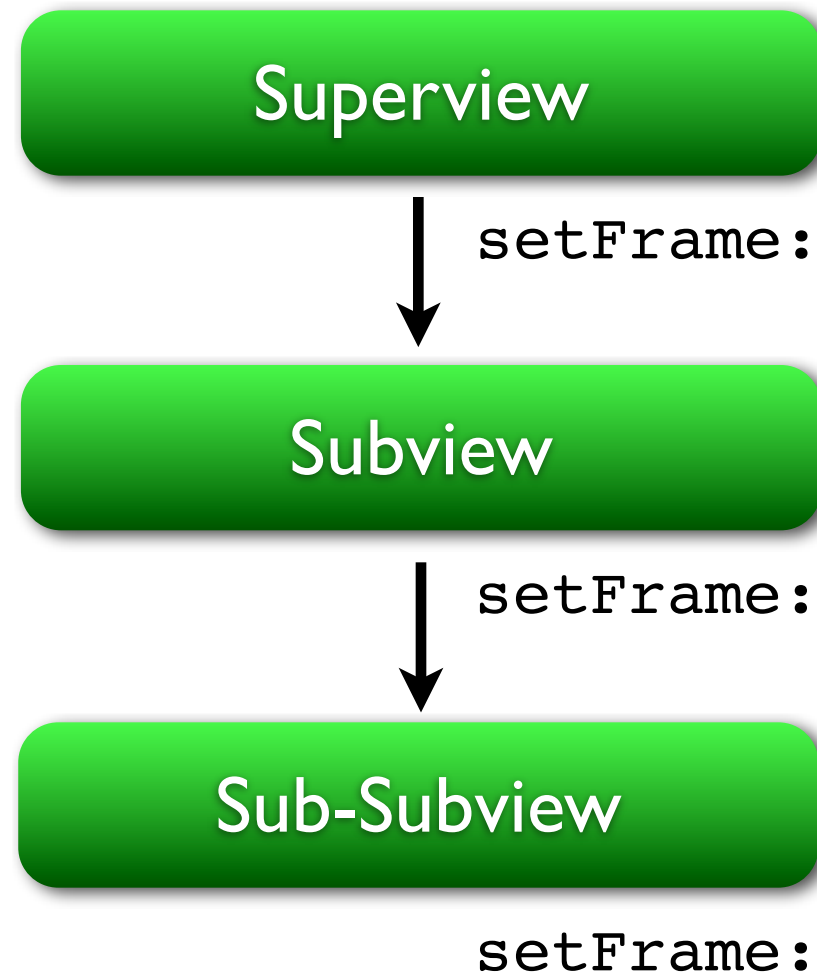


# Was tut Auto-Layout?

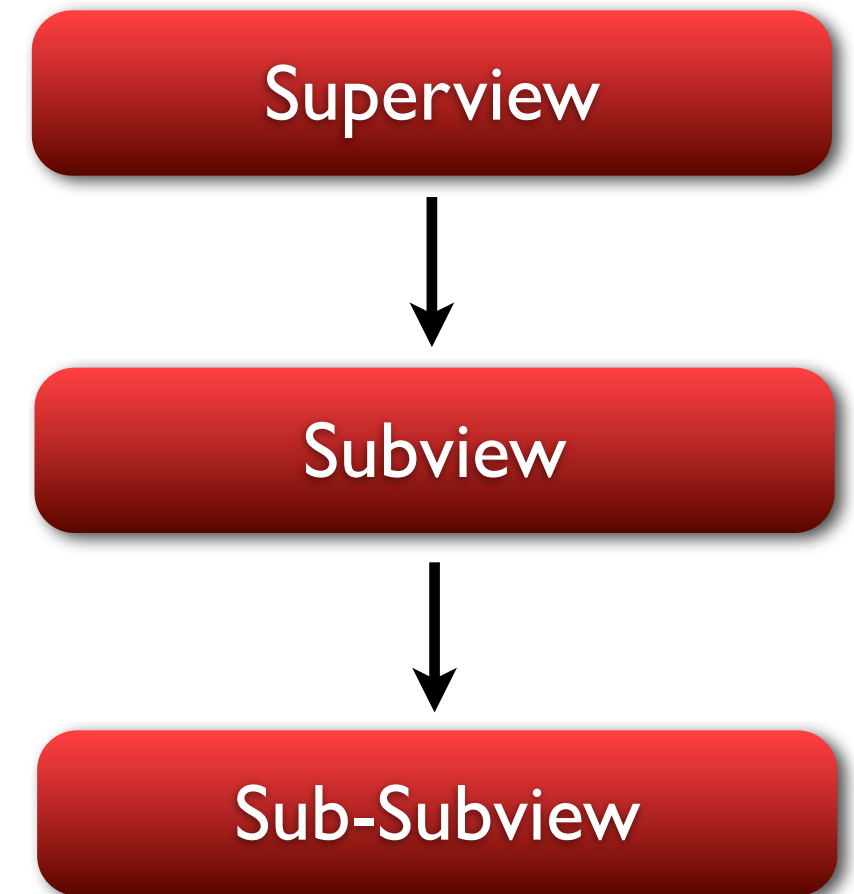
Update Constraints



Layout

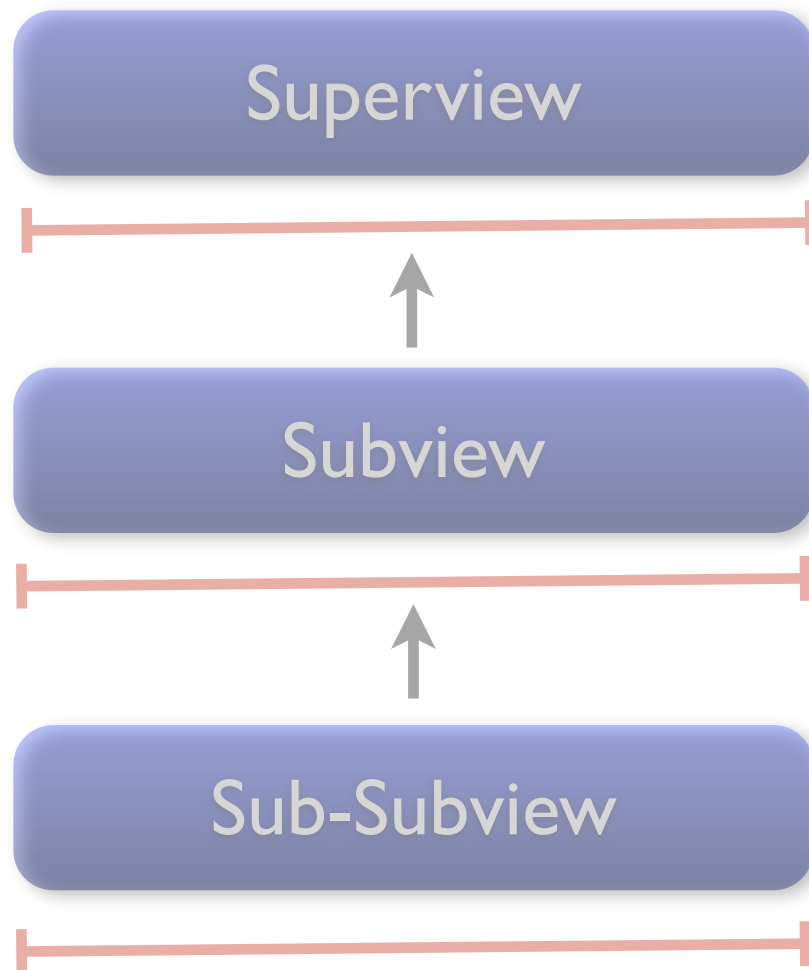


Display

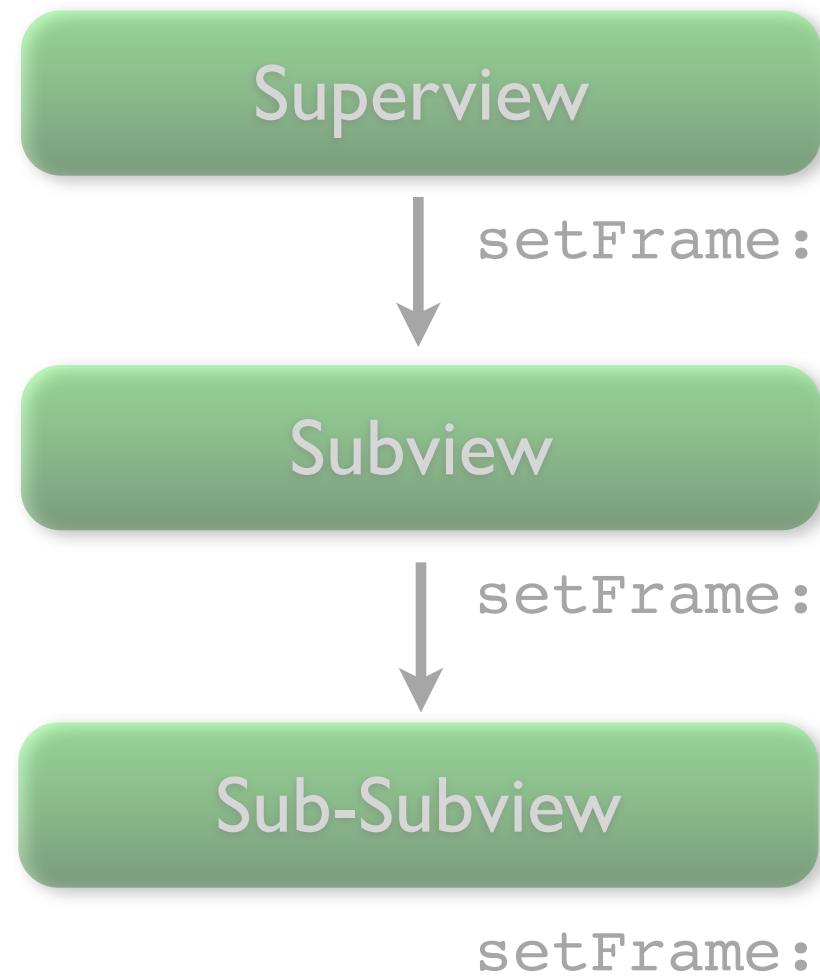


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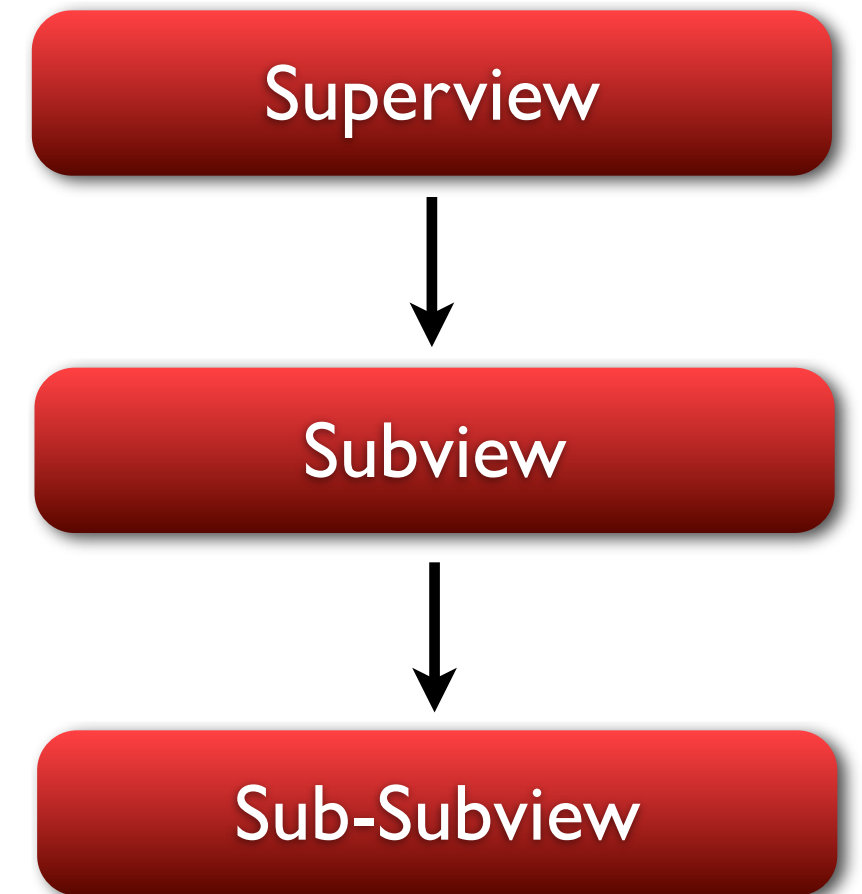
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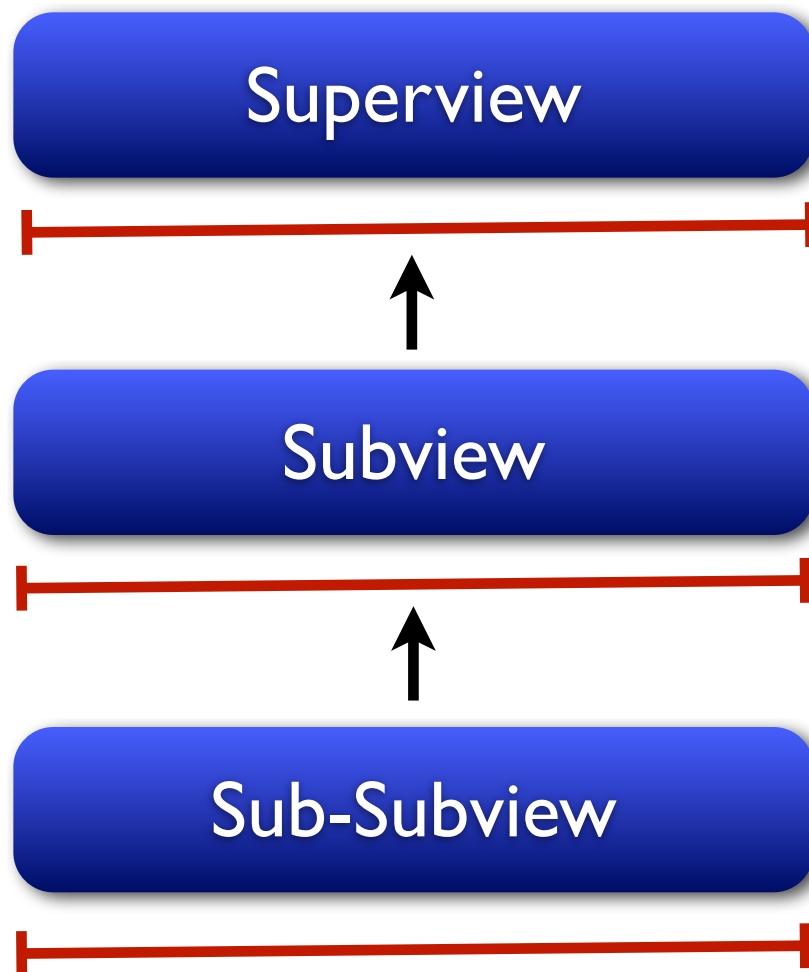


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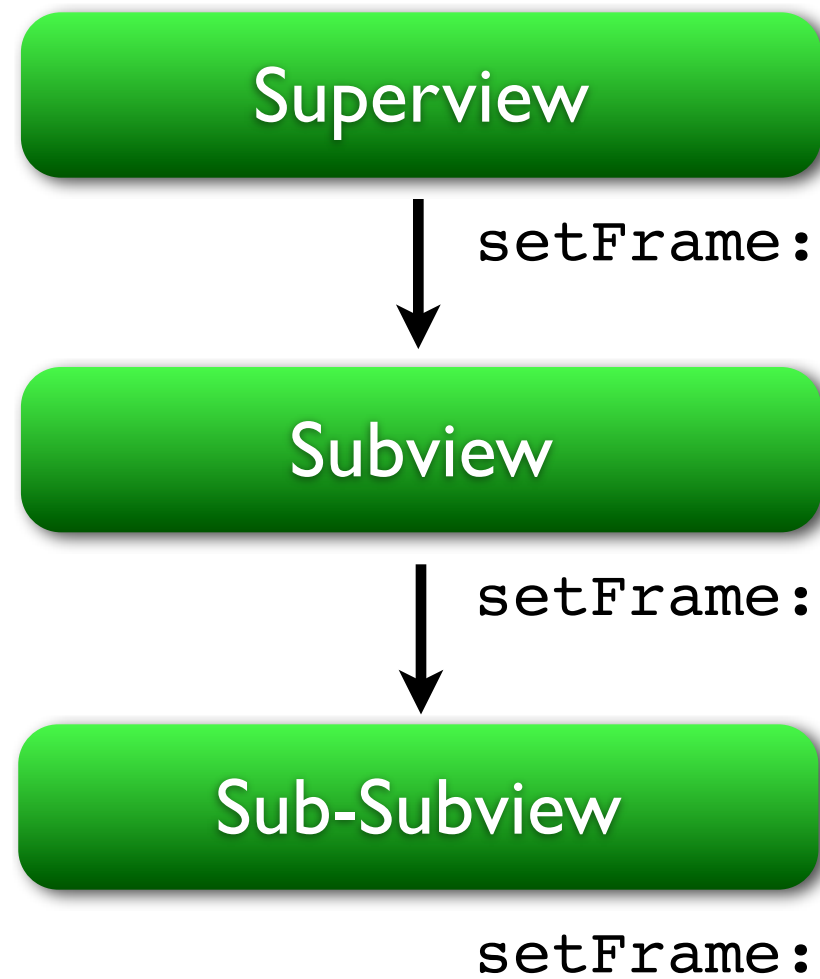


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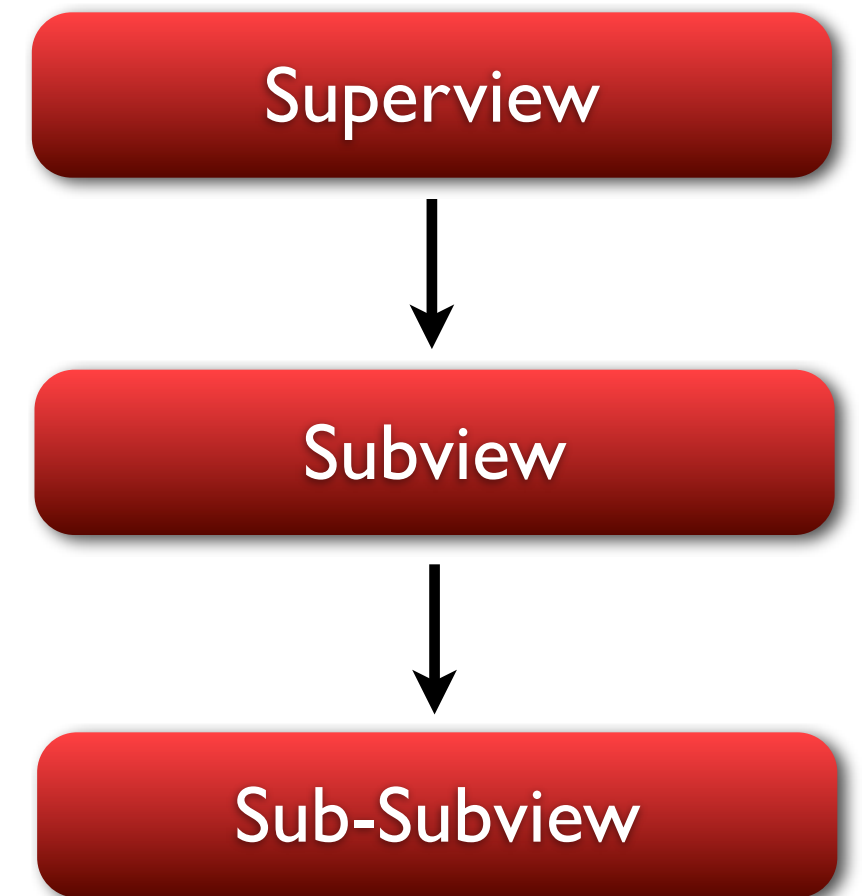
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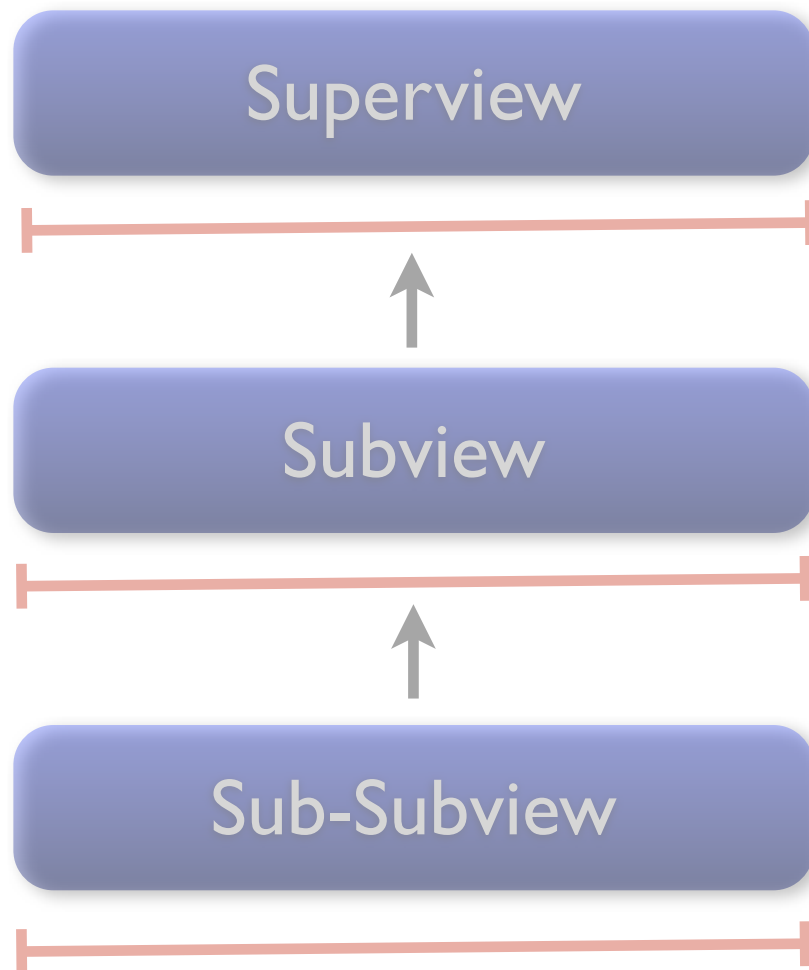


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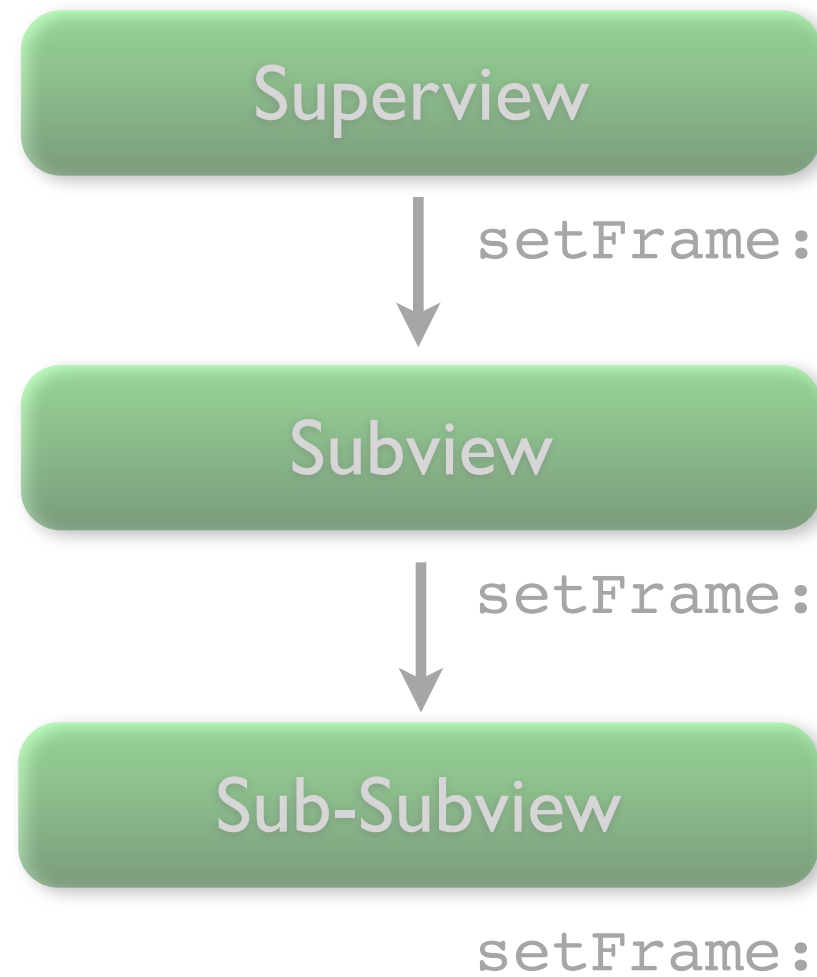


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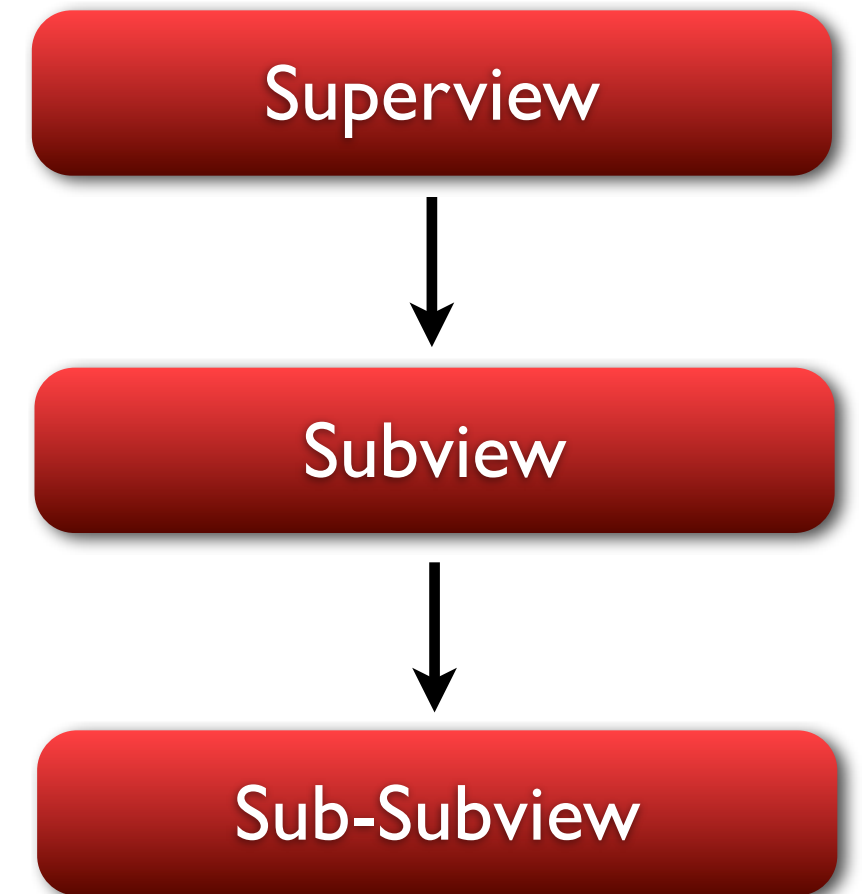
Update Constraints



Layout



Display



# Debug-Tricks

- -NSViewShowAlignmentRects YES und -NSShowAllViews YES
- NSView -\_subtreeDescription
- NSView -constraintsAffectingLayoutForOrientation:  
und NSWindow -visualizeConstraints:
- Instruments template “Cocoa Layout”

Fragen?

# Vielen Dank

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