# Build Layout Smartly
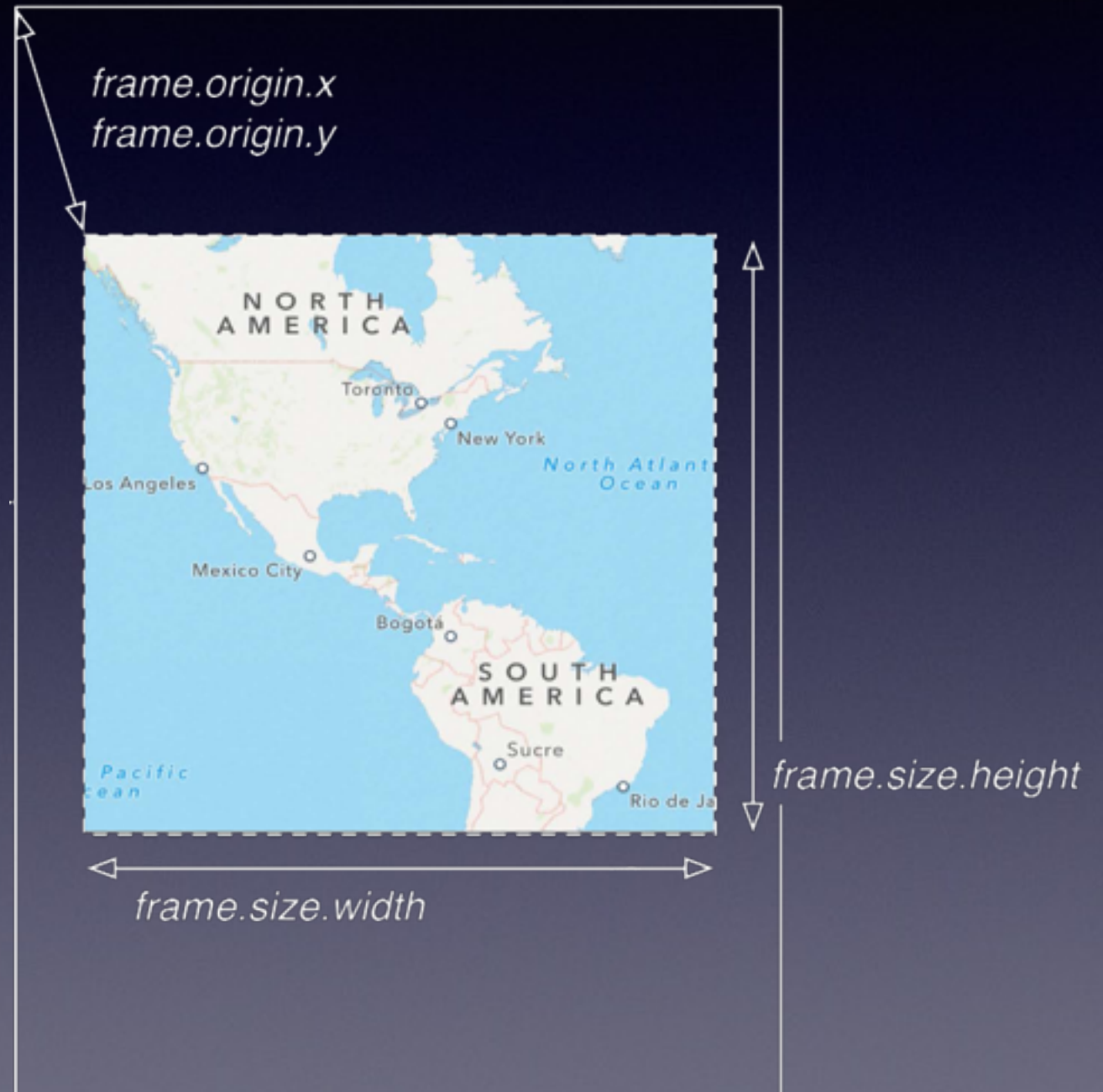
# Layout Concepts

- (CGRect)view.frame

- (UIViewAutoResizing)view.autoResizingMask

- Auto Layout (iOS 6)

- UIStackView (iOS 9)

# view.frame

- { position: absolute; } // CSS

- x, y, height, width

- override -layoutSubviews

- * frame v.s. bounds



frame.origin.x
frame.origin.y

frame.size.height

frame.size.width

# UIViewAutoResizing

- UIViewAutoresizingNone

- UIViewAutoresizingFlexibleLeftMargin

- UIViewAutoresizingFlexibleWidth

- UIViewAutoresizingFlexibleRightMargin

- UIViewAutoresizingFlexibleTopMargin

- UIViewAutoresizingFlexibleHeight

- UIViewAutoresizingFlexibleBottomMargin
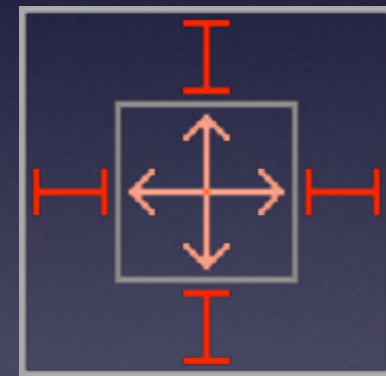
# Auto Layout

- "Full" constraints without conflicts

- Tools

  - NSLayoutConstraint instances

  - NSLayoutAnchor

  - Visual Format Language (VFL)

    - "H:|-10-[view1]-[view2(==view1)]-10-|"

  - Third-party: PureLayout, etc.
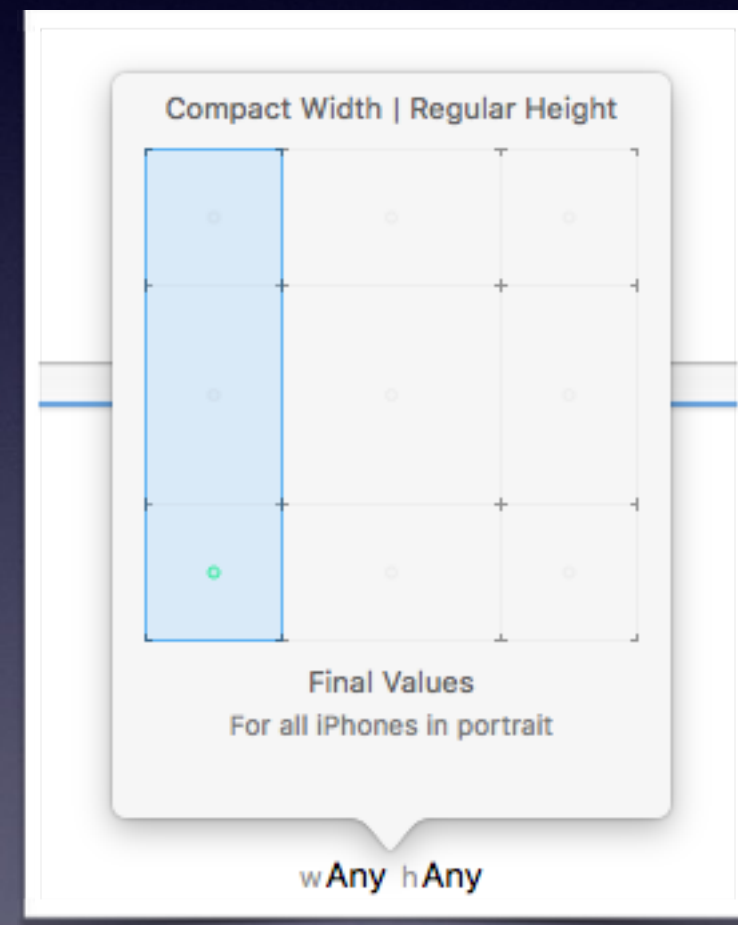
  - Interface Builder
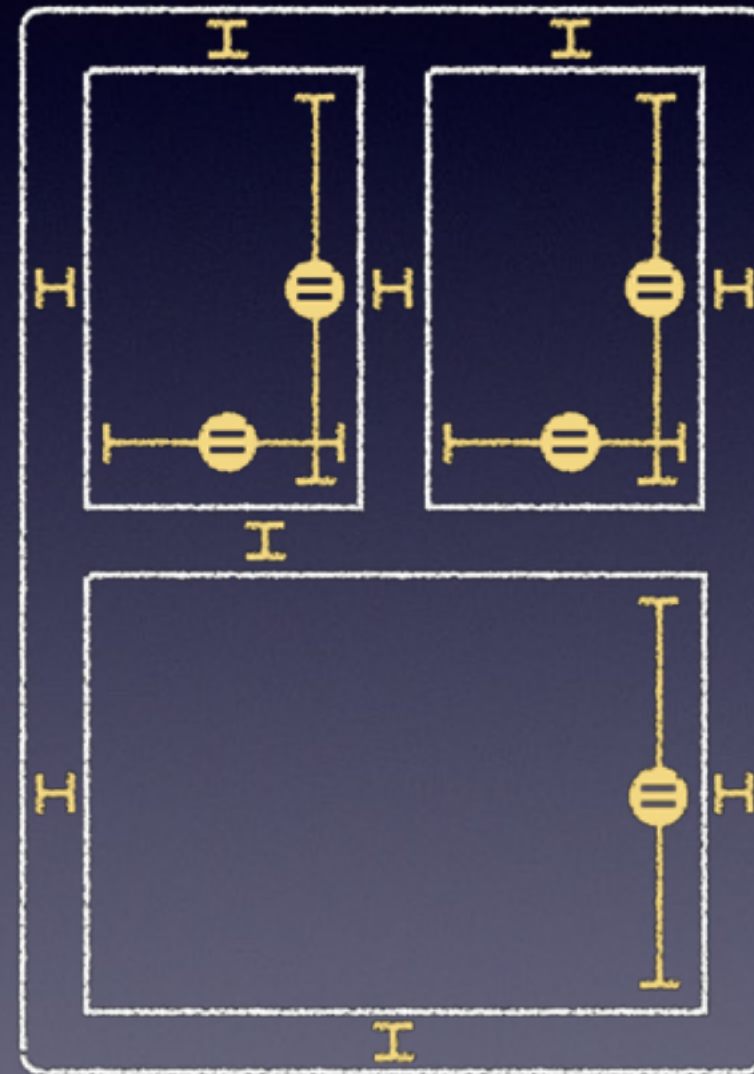
# ContentHugging / ContentCompressionResistance

- Priority of Constraints

- Hugging => content does not want to grow

- Compression Resistance => content does not want to shrink

- intrinsicContentSize

# Size Classes

- UIUserInterfaceSizeClass

  - Unspecified (Any)

  - Compact

  - Regular

- e.g. Different layout constraints for iPad / iPhone

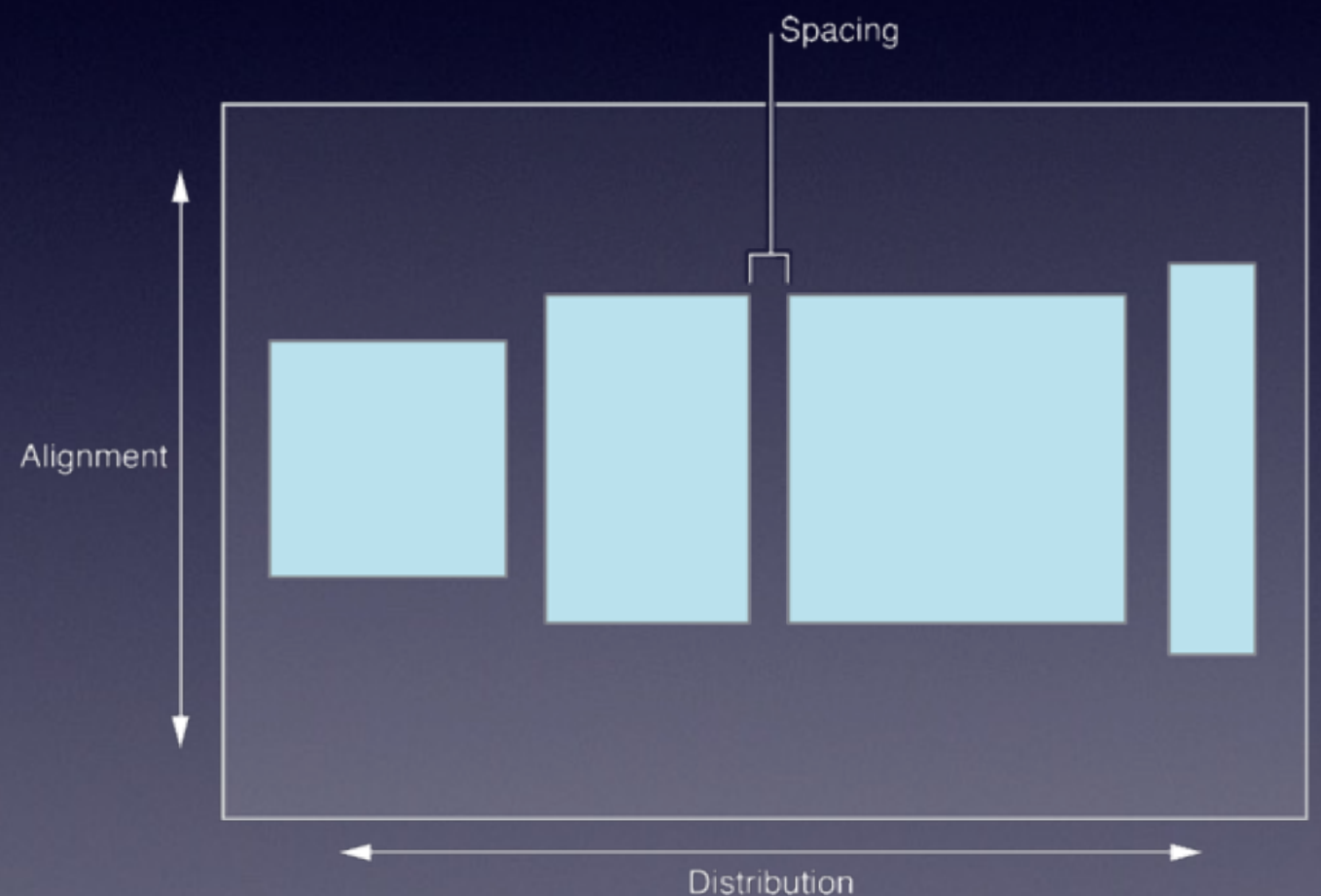

Compact Width | Regular Height

Final Values
For all iPhones in portrait

wAny hAny

# Size Classes



**w**Compact **h**Any



**w**Regular **h**Regular

# UIStackView

- (Android) LinearLayout

- Assistant tool for creating auto layout constraints

- not rendered, e.g. setBackground won't work

- * Interface Builder

Spacing

Alignment

Distribution

# Example – Login View

# Example – News Card

# Example – Splash Ad

# Example – Read More

**LAB INITIUM**

| Demo Project | Recruitment | iOS Developer |
|:---:|:---:|:---:|
| git.io/vVXX6 | join.init.im | Full-time / Intern |