COMBINE

STRV

TOMÁŠ ČEJKA (CJ)

-
- iOS lead dev @ strv
- https://www.strv.com/events
- Questions?!

COMBINE

- What is FRP?
- Combine
- Operators
- Subjects

FRP

01

FRP

- Functional

FRP

- Functional
- Declarative

FRP

- Functional
- Declarative
- Input

FRP

- Functional
- Declarative
- Input
- Async methods

LIVE CODING

STRV

COMBINE

02

COMBINE

- Value over time

COMBINE

- Value over time
- Observing

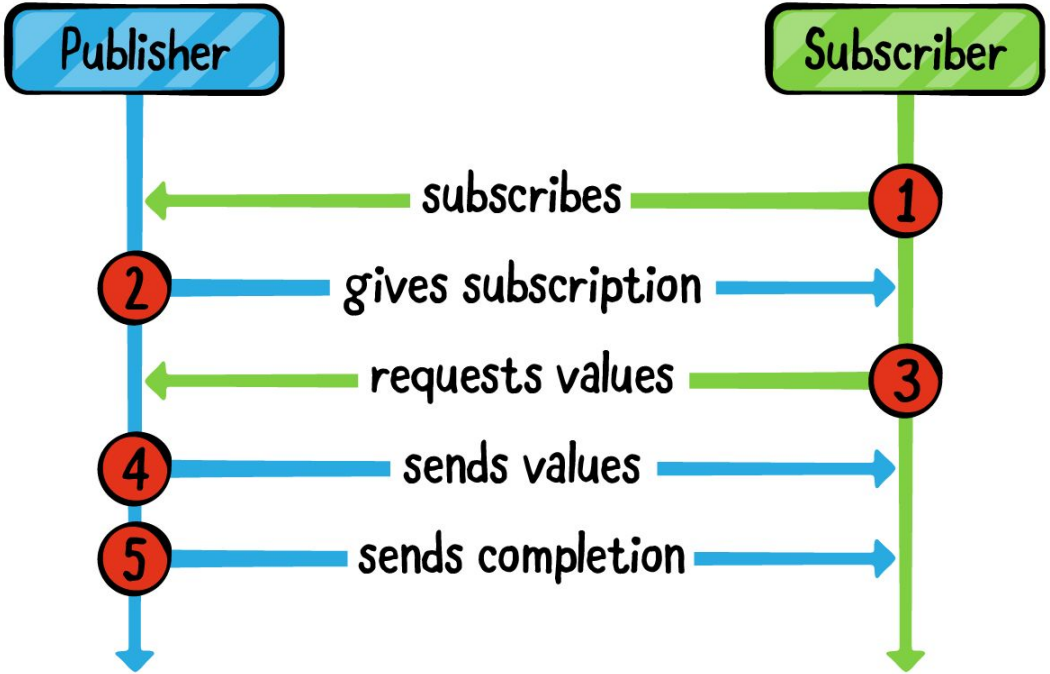
COMBINE

- Value over time
- Observing
- Binding

COMBINE

- Value over time
- Observing
- Binding
- RxSwift, ReactiveSwift

COMBINE



raywenderlich

PUBLISHER

```
// MARK: Publisher protocol

public protocol Publisher {
    // 1 Value type
    associatedtype Output

    // 2 Failure type (Never)
    associatedtype Failure : Error

    // 4 Implementation of subscribe call this method to attach subscriber
    func receive<S>(subscriber: S)
    where S: Subscriber,
          Self.Failure == S.Failure,
          Self.Output == S.Input
}

extension Publisher {
    // 3 Subscriber calls this method to attach to a publisher
    public func subscribe<S>(_ subscriber: S)
    where S : Subscriber,
          Self.Failure == S.Failure,
          Self.Output == S.Input
}
```

SUBSCRIBER

```swift
// MARK: Subscriber protocol

public protocol Subscriber: CustomCombineIdentifierConvertible {
  // Value type
  associatedtype Input

  // Failure type
  associatedtype Failure: Error

  // Receive subscription from publisher
  func receive(subscription: Subscription)

  // Receive value from publisher
  func receive(_ input: Self.Input) -> Subscribers.Demand

  // Receive from publisher information that publisher finishes sending values
  func receive(completion: Subscribers.Completion<Self.Failure>)
```

SUBSCRIPTION

- Limit values
- Cancellable
- Sink
- Assign

LIFECYCLE

- Completion
- Cancellation

LIVE CODING

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PUBLISHERS 03

PUBLISHERS

- Just

PUBLISHERS

- Just
- Fail

PUBLISHERS

- Just
- Fail
- Empty

PUBLISHERS

- Just
- Fail
- Empty
- Sequence

PUBLISHERS

- Just
- Fail
- Empty
- Sequence
- Future

PUBLISHERS

- Just
- Fail
- Empty
- Sequence
- Future
- AnyPublisher

PUBLISHERS

- NotificationCenter.publisher
- URLSession.dataTaskPublisher
- SHA256Digest.publisher

LIVE CODING

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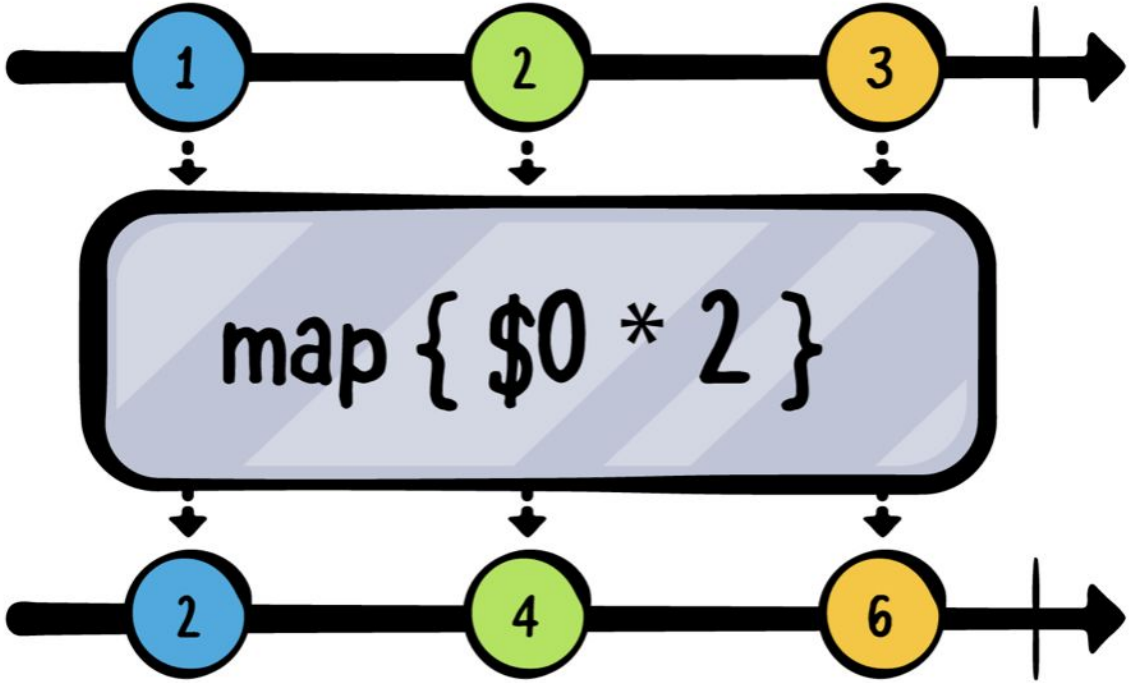
OPERATORS 04

OPERATORS

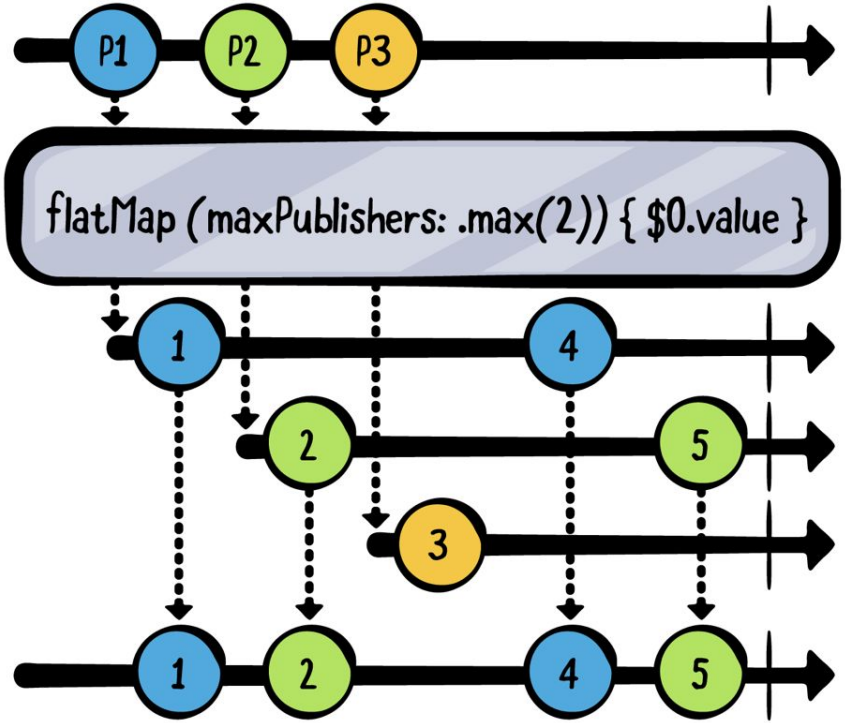
```
extension Publishers {
    struct Map<Upstream: Publisher, Output>: Publisher {
        typealias Failure = Upstream.Failure

        let upstream: Upstream
        let transform: (Upstream.Output) -> Output
    }
}
```

```
// Operator Construction
extension Publisher {
    func map<T>(_ transform: @escaping (Output) -> T) -> Publishers.Map<Self, T> {
        return Publishers.Map(upstream: self, transform: transform)
    }
}
```

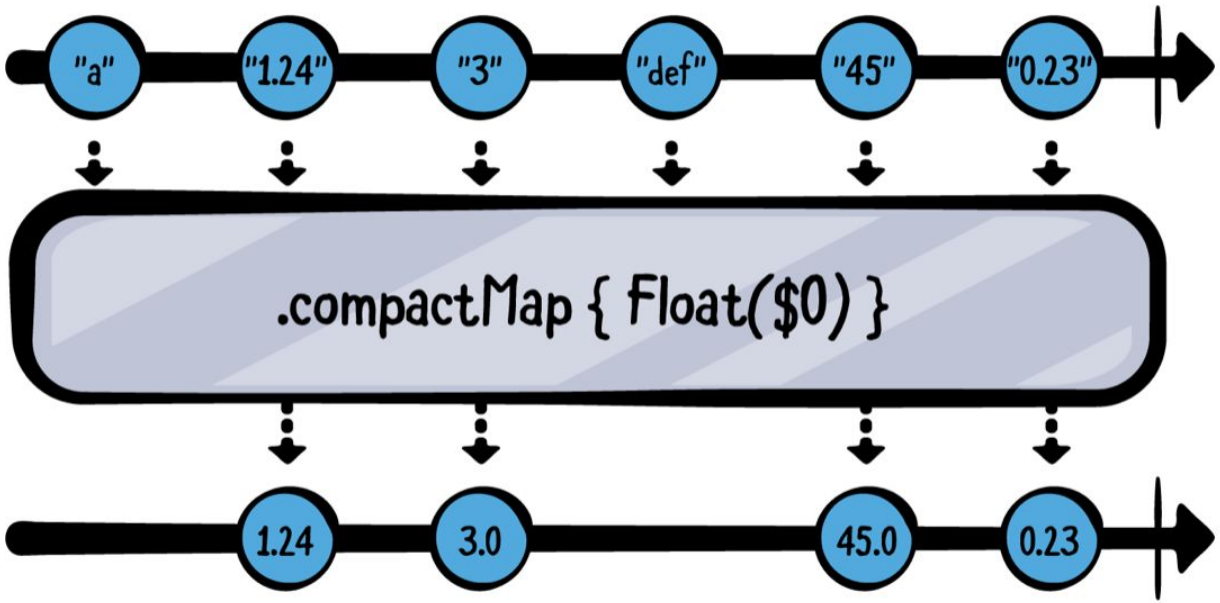
MAP



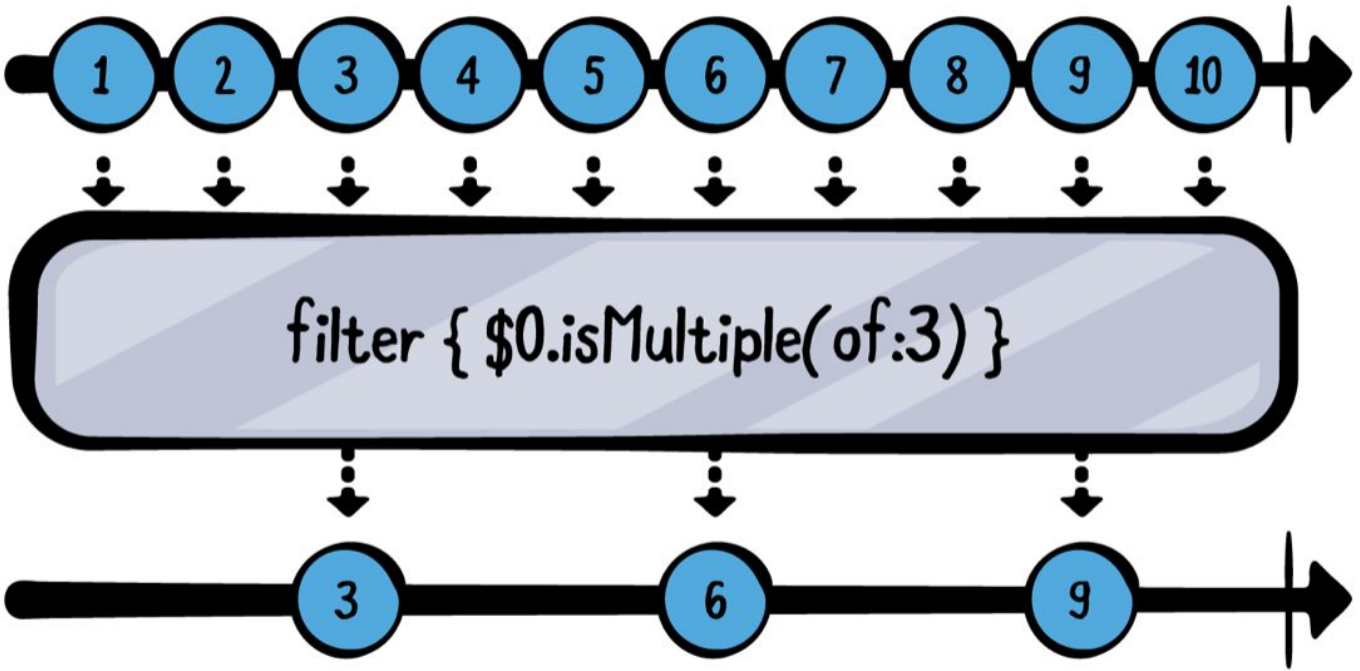
FLATMAP



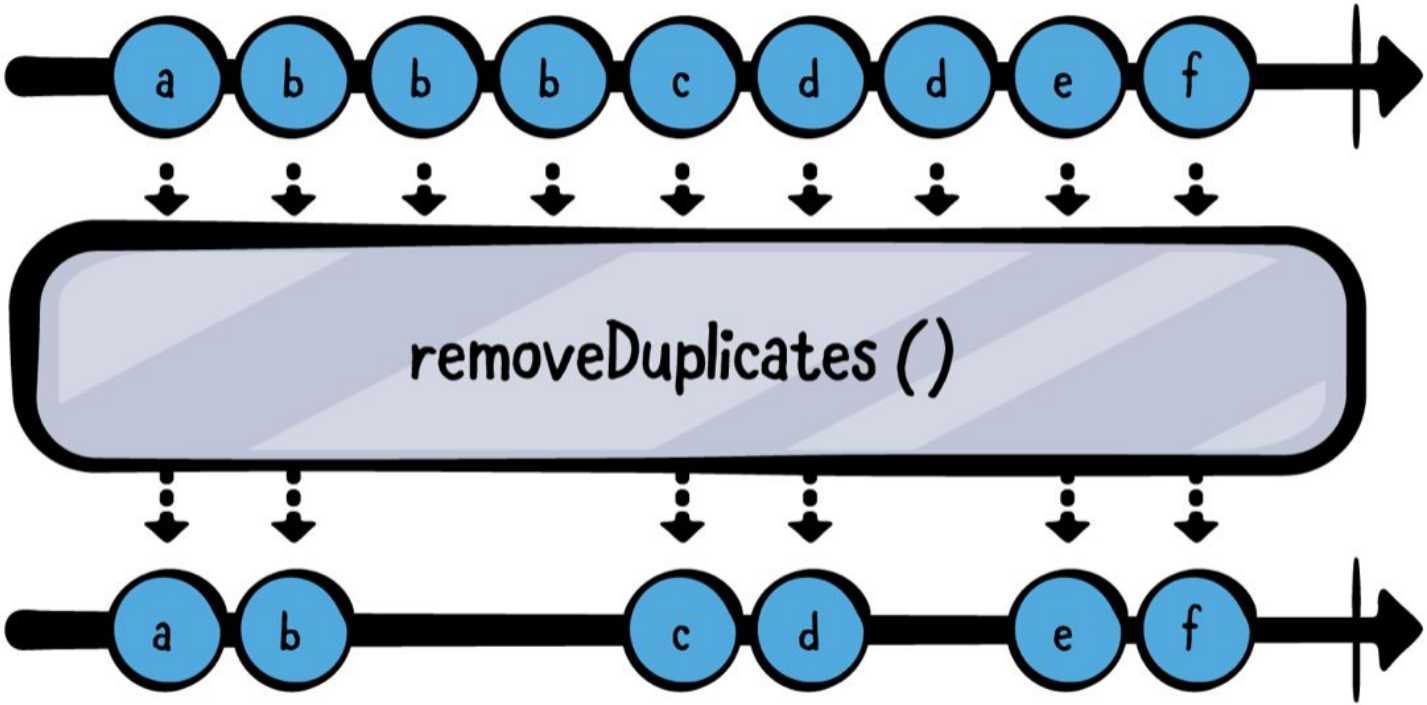
COMPACTMAP



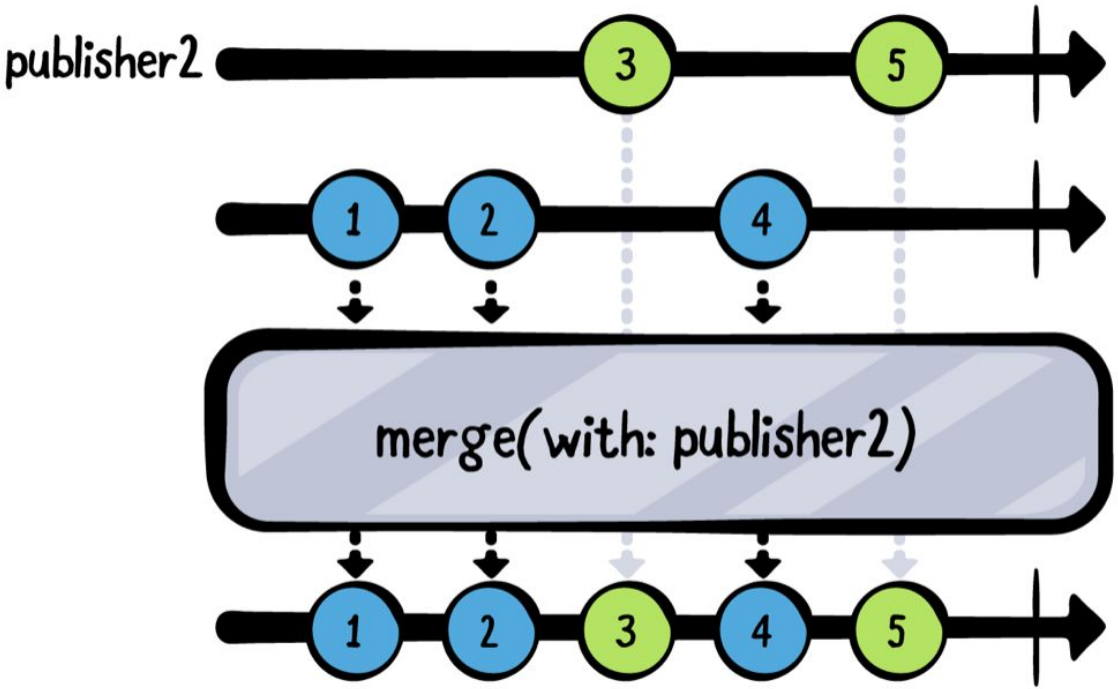
FILTER



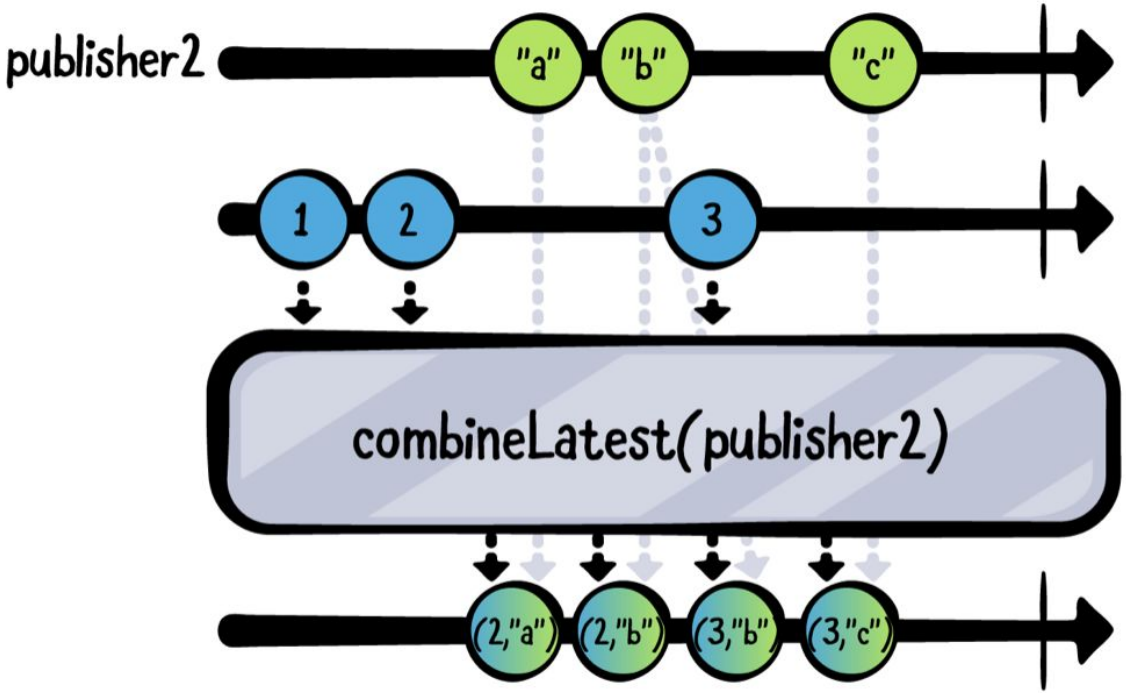
REMOVEDUPLICATES



MERGE



COMBINELATEST



OTHERS

- Retry
- Print
- Delay

LIVE CODING

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SUBJECTS 05

SUBJECTS

- Publisher from value
- Allows sending value into the stream

SUBJECTS

- PassthroughSubject
- CurrentValueSubject
- @Published

LIVE CODING

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SOURCES 05

SOURCES

- Online combine book
- WWDC 2019 videos
- Hackingwithswift
- Raywenderlich operators

QUESTIONS

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THX!

Tomáš Čejka / tomas.cejka@strv.com

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PRESENTATION TITLE WITH TWO LINES

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PRESENTATION TITLE WITH TWO LINES

[Name][Surname], [Position] at STRV

STRV

SECTION TITLE

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SECTION TITLE 01

SECTION TITLE WITH TWO LINES

01

TEXT SLIDES

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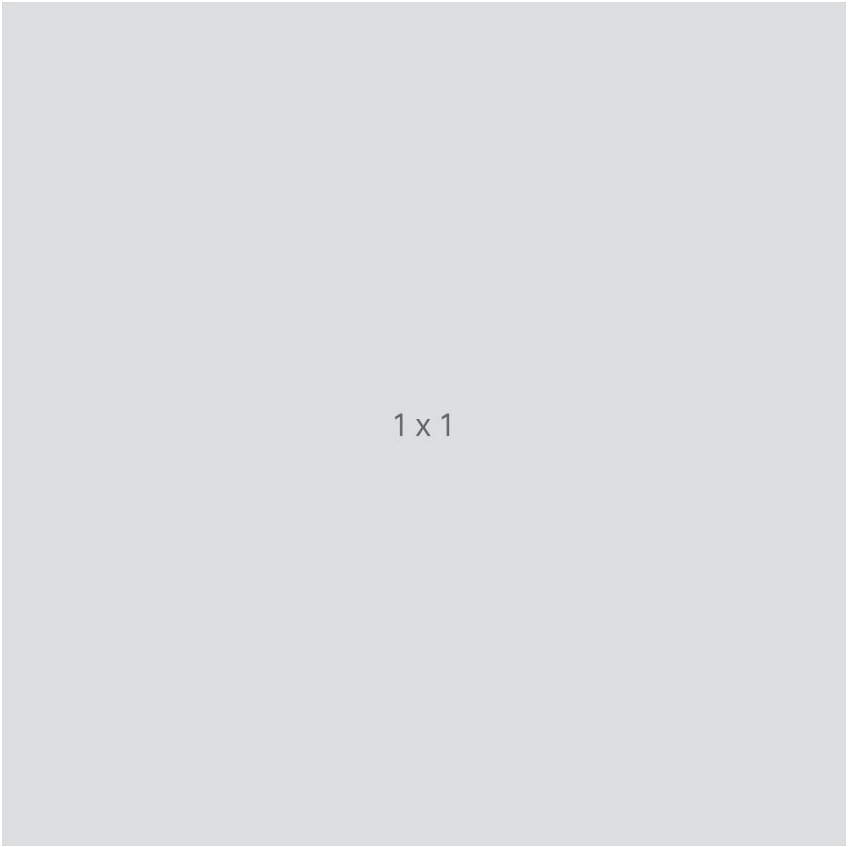
SLIDE TITLE

- This is the most basic text content slide int, or use a full sentence to highlight something
- Go straight to the point, or use a full sentence to highlight something like this
- Use only one-line texts, beware of splitting text into two rows
- Don’t overload text screen too much, 6-8 points are enough
    - You can also use second level
    - Describe more stuff more in detail if necessary

SLIDE TITLE

- Don’t let this text overlay your image
- Always choose the image wisely
- Try to not split your point into two rows
- 6-8 points are enough



SLIDE TITLE

75%

Client leads increase

34K

Daily Active Users

3

Total Devs (mo)

SLIDE TITLE

You can also start your content screen with a paragraph before you introduce a couple of bullet points. But stick with 2-3 rows top here so the text isn’t too long.

- Now you can use bullet point list
- Points out some highlights
- And use 3-5 points max.

SLIDE TITLE

First section subtitle

- Use this in case you need to have some sections
- Keep section titles short and clear
- 2-3 points are enough

Second section subtitle

- You can also use 2-3 points in this section
- This slide is nicely structured
- With 6 points in total

SLIDE TITLE

First section subtitle

- You place two list next to each other
- Make sure there is not too much text
- It does not look that pretty
- Only use this when necessary
- Otherwise choose a simple option

Second section subtitle

- You place two list next to each other
- Make sure there is not too much text
- It does not look that pretty
- Only use this when necessary
- Otherwise choose a simple option

SLIDE TITLE

- Describe your code here
- I have no idea what this router shit means

```
1  Import { Router, Route } from ‘react-router’
2  ReactDOM.render(
3    <Router>
4      <Route component={App} >
5        <Route path=”/user” component={User} />
6        <Route path=”/user/:id” component={User} />
7      </Route>
8    </Router>
9  )
```

SLIDE TITLE

```
import React, { Component } from 'react'
import { connect } from 'react-redux'

class LineupList extends Component {
  render() {
    return (
      <h1>LineupList</h1>
    )
  }
}

function select(state) {
    return {
        lineups: state.lineups
    }
}

export default connect(select)(LineupList)
```

```
import React, { Component } from 'react'
import { connect } from 'react-redux'

@connect(
  state => ({ lineups: state.lineups })
)
export default class LineupList extends Component {
  render() {
    return (
      <h1>LineupList</h1>
    )
  }
}
```

CONTENT SLIDES

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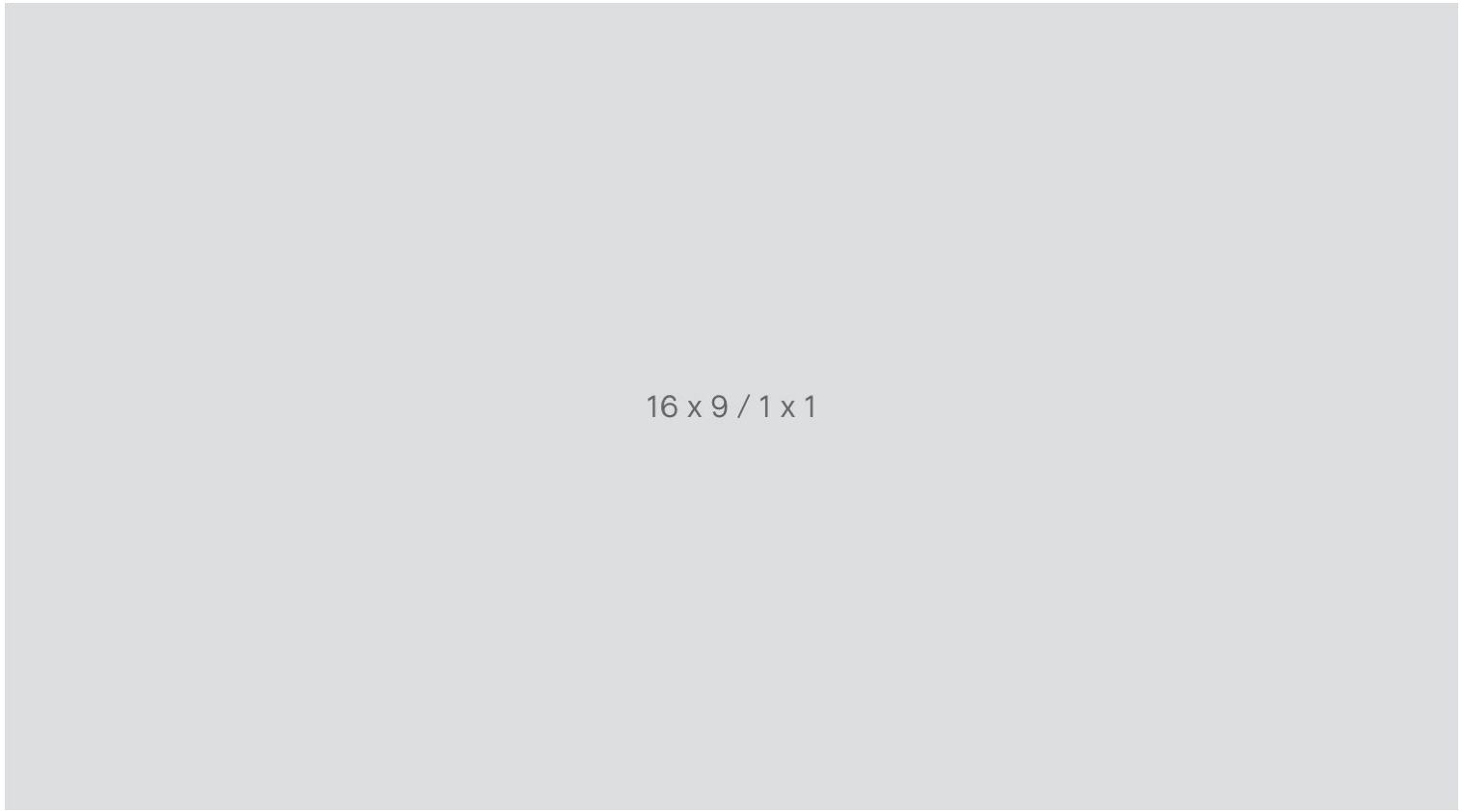
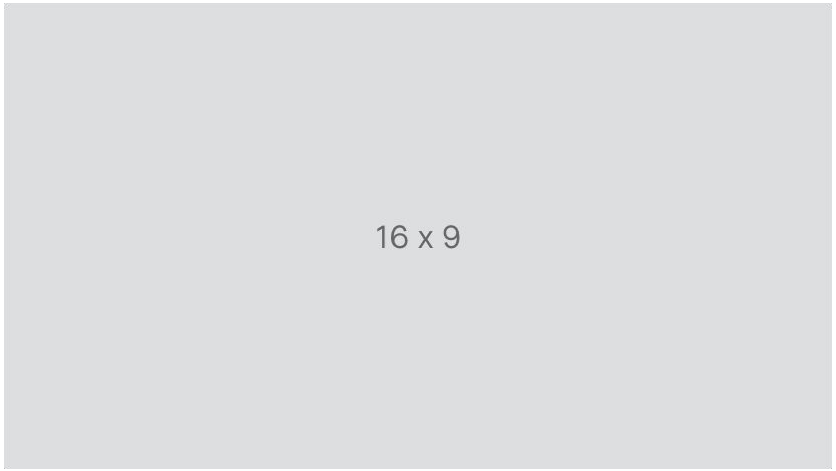

16 x 9 / 1 x 1


16 x 9

16 x 9

16 x 9

16 x 9

16 x 9

iPhone X - Black
364 x 790 px

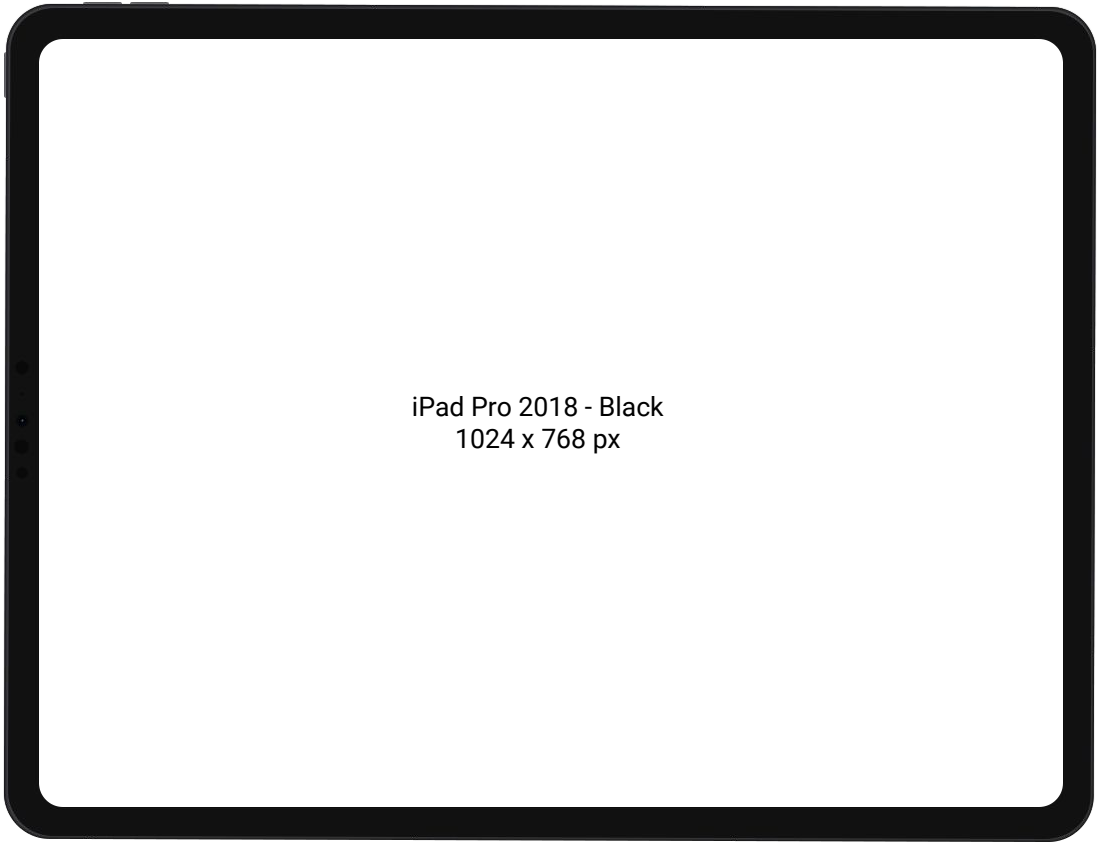
iPhone X - Black
364 x 790 px

iPhone X - Black
364 x 790 px

iPhone X - Silver
364 x 790 px

iPhone X - Silver
364 x 790 px

iPhone X - Silver
364 x 790 px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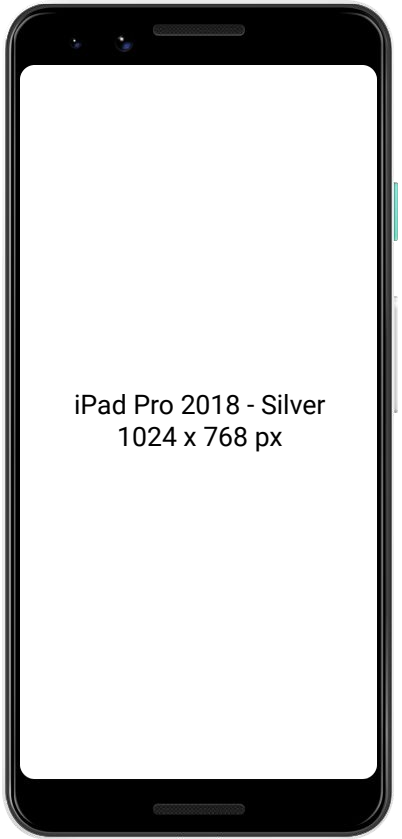
1024 x 768 px

iPad Pro 2018 - Silver
1024 x 768 px

Google Pixel 3 - Black
357 x 714 px

iPad Pro 2018 - Black
1024 x 768 px

iPad Pro 2018 - Black
1024 x 768 px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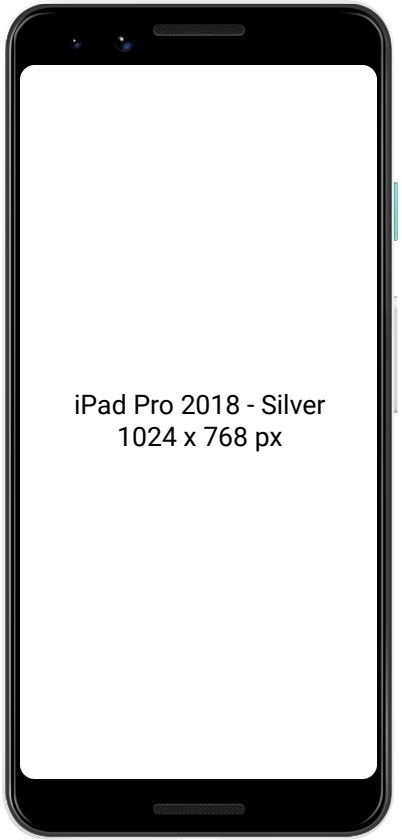
1024 x 768 px


iPad Pro 2018 - Silver
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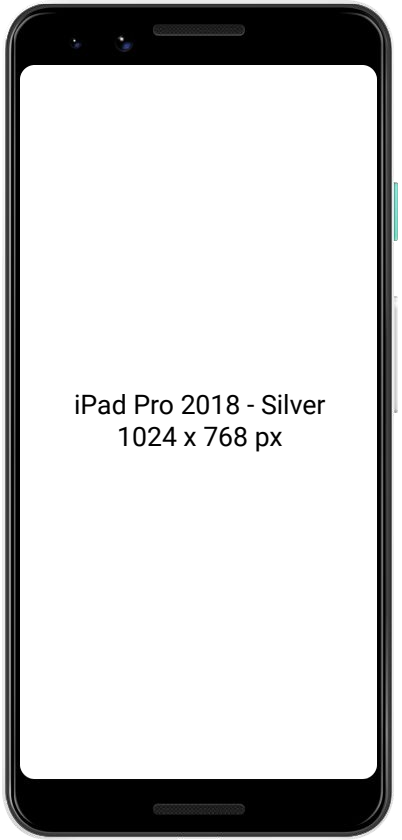
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1024 x 768 px

“Creativity is putting your imagination to work, and it’s produced the most extraordinary Results in human culture.”

Ken Robinson, Designer at STRV

FINISH

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THANK YOU!

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THANK YOU!

Ales Nesetril / ales.nesetril@strv.com

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QUESTIONS

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ADDITIONAL SLIDES

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- Offices in the US and Europe
- More than 190 experts on our side

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ONE-LINE MESSAGE

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