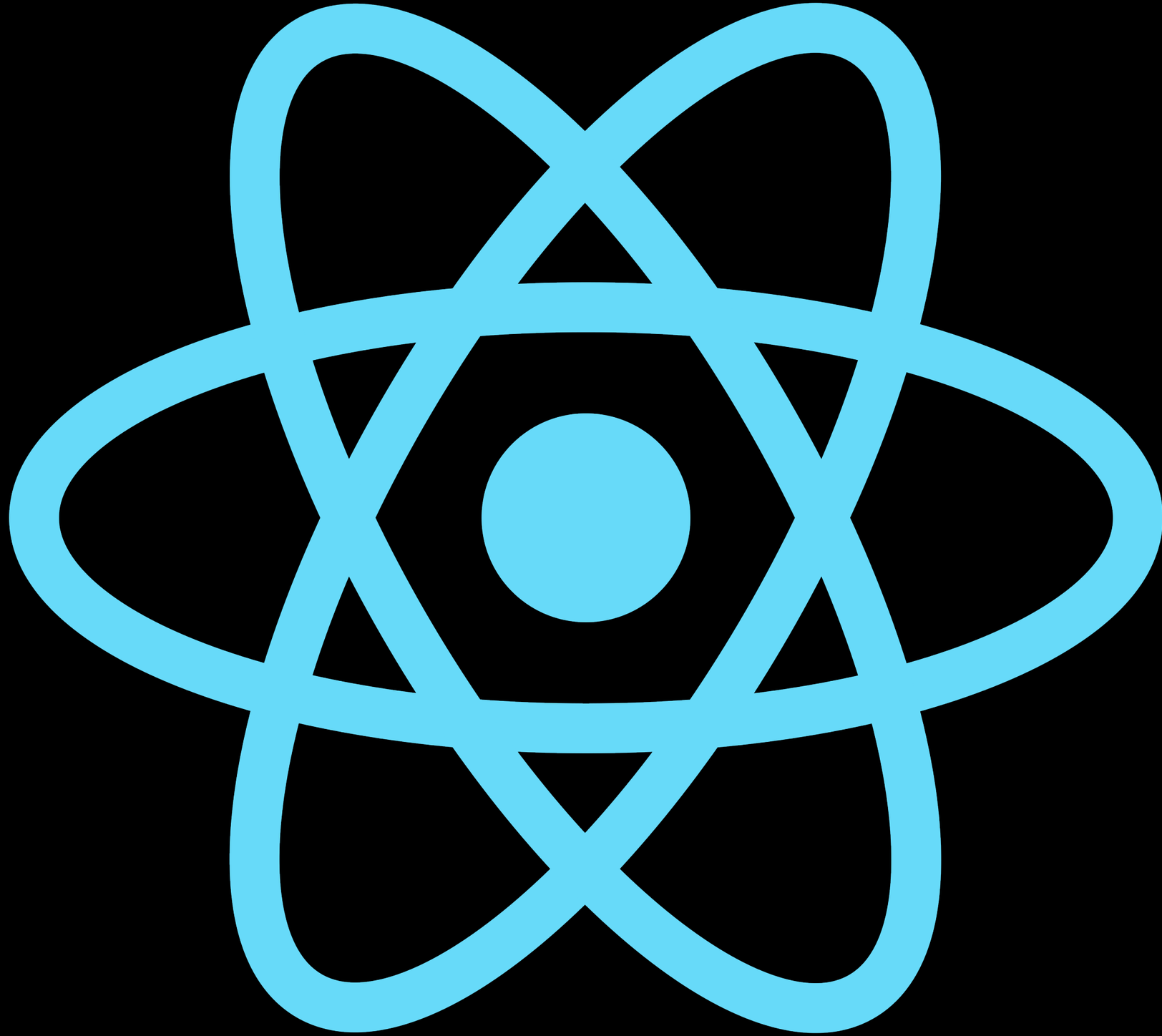
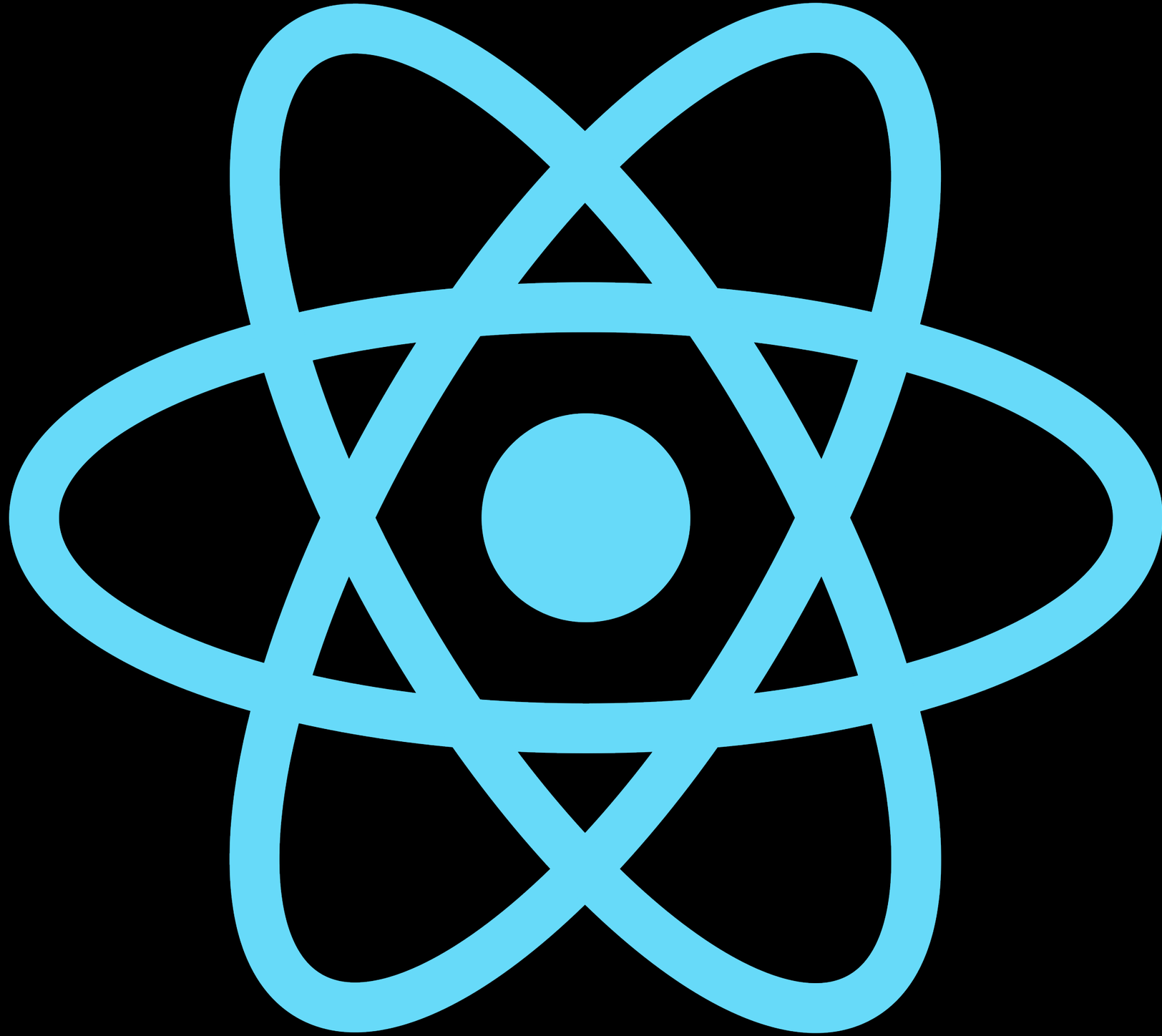
preparation:
for the first demo I would like you to install
https://expo.io on your phone.

LOVOO



LOVOO



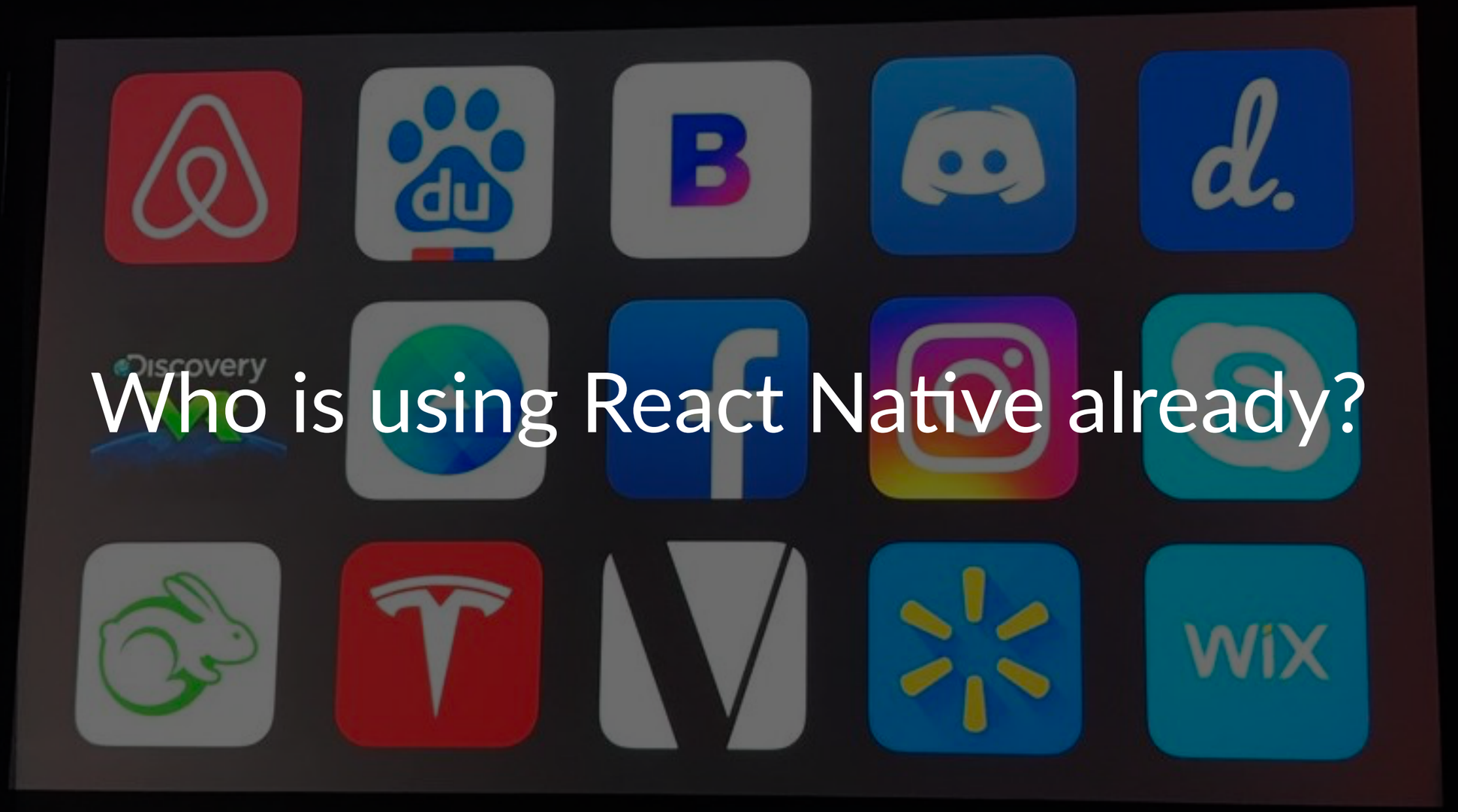
React native

Learn once, write anywhere:
Build mobile apps with React

What is it?

- ReactJS for native apps
  - component based UI architecture
  - state driven UI
- native apps
- abstraction layer over UIKit and Android.UI
  - evaluated at runtime by React framework

Who is using React Native already?



OSS: https://github.com/ReactNativeNews/React-Native-Apps

What does it do?

- fast feedback cycle
- shared code base
  - website & mobile apps
- wraps native APIs

Why should I use it?

Any application that *can* be written in JavaScript, *will* eventually be written in JavaScript.

\- Atwood's Law


Tools
MacBook Pro

- macOS
- ubuntu
- windows

How to set it up?

```
$ brew install node
$ brew install watchman # file watching
$ yarn add global react-native-cli # main tool

$ react-native init AwesomeProject
$ cd AwesomeProject
$ yarn [start|ios|android]
```

or just

```
$ yarn add global create-react-native-app
$ create-react-native-app AwesomeProject
$ cd AwesomeProject
$ yarn [start|ios|android]
```

or just visit
https://sketch.expo.io

What technologies are being used?

- Javascript / Typescript
- ES6
- nodejs
- flexbox
- components
- Cocoapods

advantages	**drawbacks**
development on speed	no strong compiler
faster editor	no 'IDE'
lightning fast apps	for complex stuff native bridging needed
Javascript	Swift > Javascript
flexbox / css	
components	
	BIG dependency
	license *confusion*

license

- blog post about react license
  - 'Your license to use React.js can be revoked if you compete with Facebook'
- great discussion on Github
  - license FAQ

tl;dr:

- Does the additional patent grant in the Facebook BSD+Patents license terminate if I create a competing product?
  - **No.**
- Does the additional patent grant in the Facebook BSD+Patents license terminate if I sue Facebook for something other than patent infringement?
  - **No.**
- Does the additional patent grant in the Facebook BSD+Patents license terminate if Facebook sues me for patent infringement first, and then I respond with a patent counterclaim against Facebook?
  - **No**, unless your patent counterclaim is related to Facebook's software licensed under the Facebook BSD+Patents license.
- Does termination of the additional patent grant in the Facebook BSD+Patents license cause the copyright license to also terminate?
  - **No.**

How to use it in existing projects?

```
{
  "name": "AwesomeProject",
  "version": "0.0.1",
  "private": true,
  "scripts": {
    "start": "node node_modules/react-native/local-cli/cli.js start"
  },
  "dependencies": {
    "react": "16.0.0-alpha.4",
    "react-native": "0.43.0-rc.2"
  }
}
```

```
yarn install
```

```
source 'https://github.com/CocoaPods/Specs.git'
platform :ios, '8.0'
use_frameworks!

target 'AwesomeProject' do

  react_path = './node_modules/react-native'
  yoga_path = File.join(react_path, 'ReactCommon/yoga')

  pod 'React', :path => react_path, :subspecs => [
    'Core',
    'RCTText',
    'RCTNetwork',
    'RCTWebSocket', # needed for debugging
  ]
  pod 'Yoga', :path => yoga_path

end

pod install
```

```
enum Component {
        case highscore(user: [String: String])

        var raw: String {
            switch self {
            case .highscore(_): return "Highscore"
            }
        }

        var data: [AnyHashable: Any]? {
            switch self {
            case .highscore(let user):
                return user
            }
        }
    }
```

```swift
class RNViewController: UIViewController {

    let bridge: RCTBridge
    let component: Component

    init(bridge: RCTBridge, type: Component) {
        self.bridge = bridge
        self.component = type
        super.init(nibName: nil, bundle: nil)
    }

    override func viewDidLoad() {
        super.viewDidLoad()

        let v = RCTRootView(bridge: self.bridge,
                            moduleName: self.component.raw,
                            initialProperties: self.component.data)
        v.frame = view.bounds
        v.autoresizingMask = [.flexibleHeight, .flexibleWidth]
        self.view.addSubview(v)
    }
}
```

```
import React, { Component } from 'react';
import { Text } from 'react-native';

export default class Highscore extends Component {

  render() {
    return <Text>{this.props.name}</Text>
  }

}
```

Communication with native code

More information

```objc
// CalendarManager.h
#import <React/RCTBridgeModule.h>
@interface CalendarManager : NSObject <RCTBridgeModule>
@end

// CalendarManager.m
@implementation CalendarManager
RCT_EXPORT_MODULE();
RCT_EXPORT_METHOD(doSomething:(NSString *)event) {
  RCTLogInfo(@"Pretending to do something: %@", event);
}
@end
```

```
import { NativeModules } from 'react-native';
var CalendarManager = NativeModules.CalendarManager;
CalendarManager.doSomething('foobar');
```

Callbacks

```
RCT_EXPORT_METHOD(findEvents:(RCTResponseSenderBlock)callback) {
  NSArray *events = ...
  callback(@[[NSNull null], events]);
}

CalendarManager.findEvents((error, events) => {
  if (error) {
    console.error(error);
  } else {
    this.setState({events: events});
  }
})
```

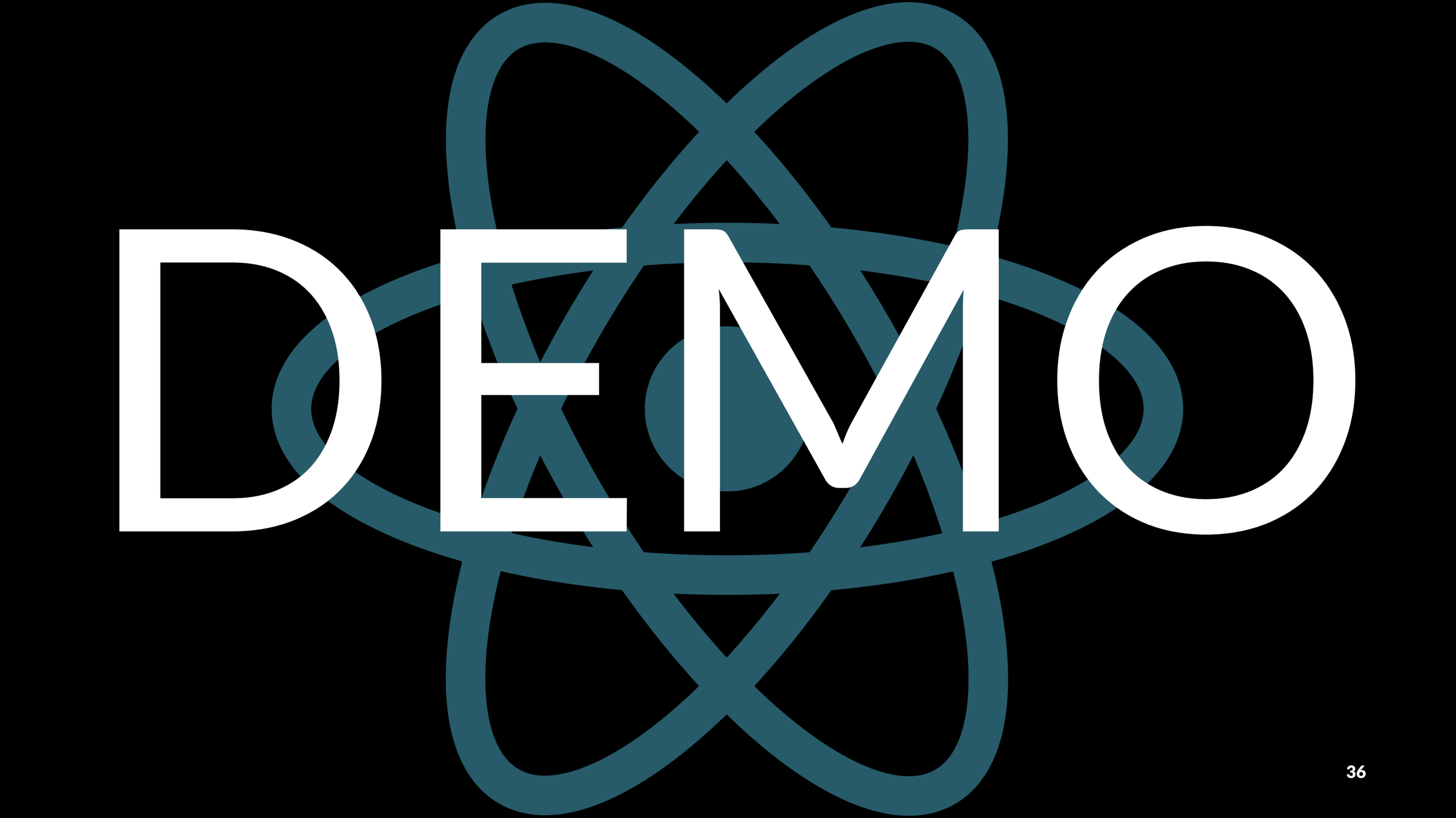
Promises

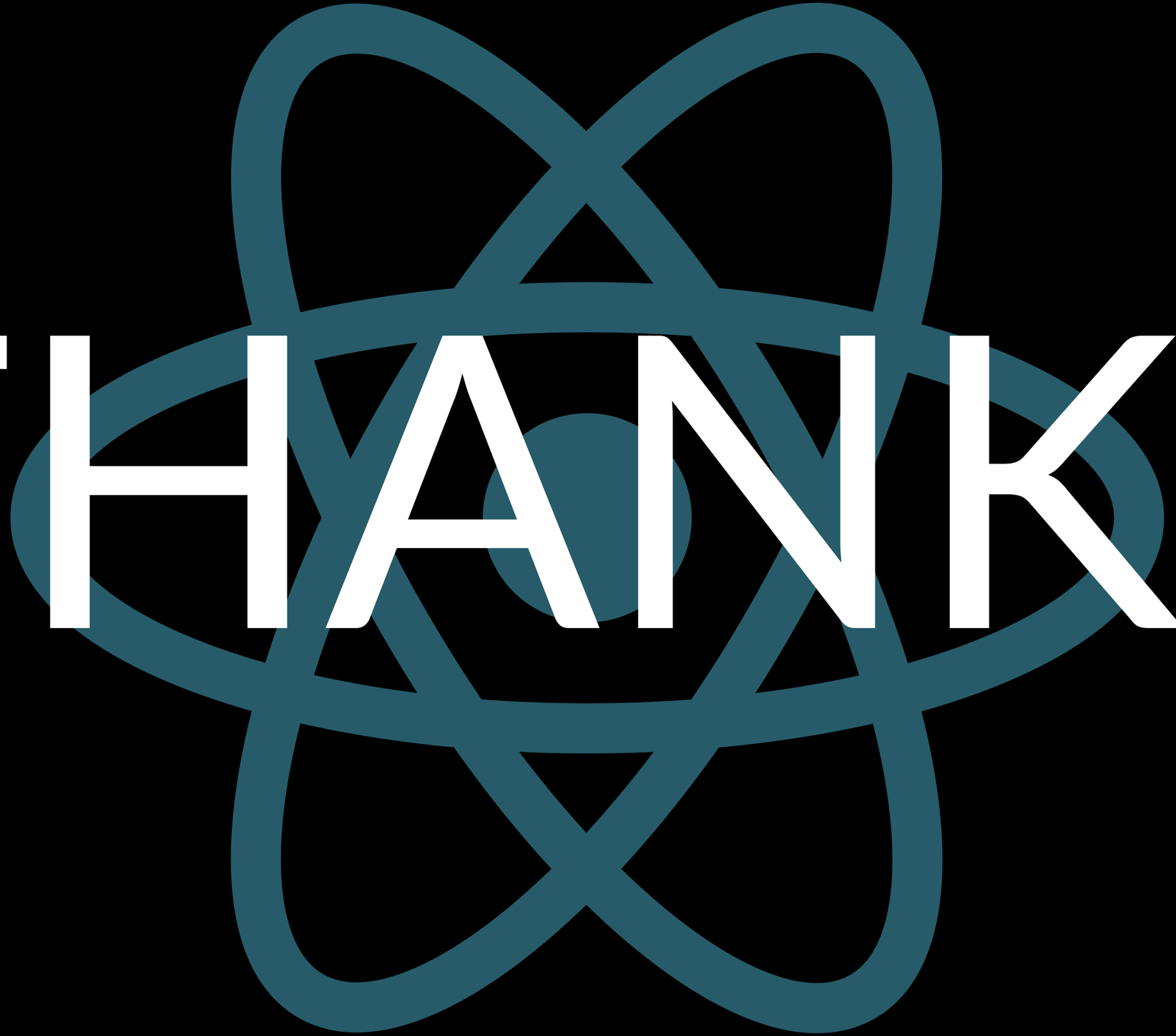
```
RCT_REMAP_METHOD(findEvents,
                 resolver:(RCTPromiseResolveBlock)resolve
                 rejecter:(RCTPromiseRejectBlock)reject) {
  NSArray *events = ...
  if (events) {
    resolve(events);
  } else {
    NSError *error = ...
    reject(@"no_events", @"There were no events", error);
  }
}
```

Promises

```
async function updateEvents() {
  try {
    var events = await CalendarManager.findEvents();
    this.setState({ events });
  } catch (e) {
    console.error(e);
  }
}

updateEvents();
```


DEMO


THANKS

contact

https://blog.benchr.me

https://twitter.com/BenchR

https://facebook.com/benschr