React Native WebView

by Jamon Holmgren

INFINITE RED

About Me

Jamon Holmgren
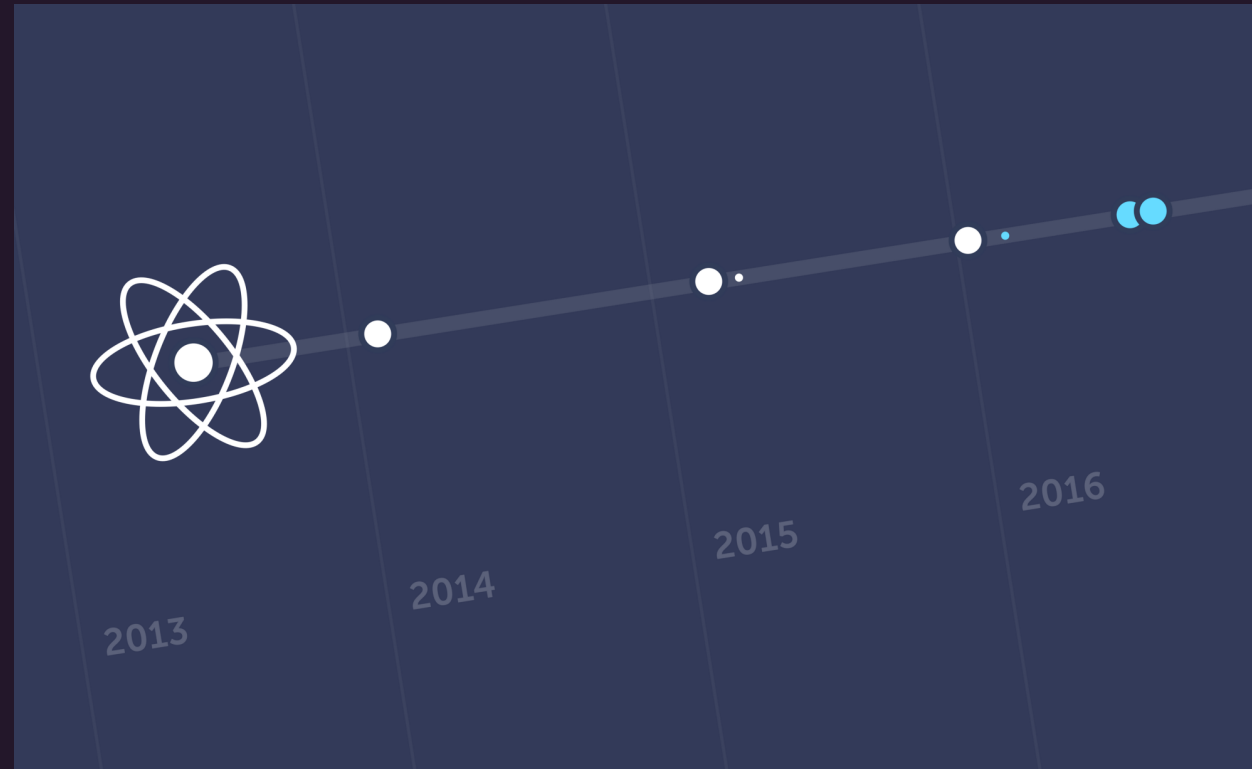
Co-founder/CTO of Infinite Red

Twitter: @jamonholmgren

infinite.red

History of

WebView

- Early 2015: React Native announced

- 2015-2018: Many third-party forks

- September 2018: WebView extracted

React Native Adoption at

Infinite Red

- Android released Sept. 2015

- 15 React Native developers

- Ignite - github.com/infinitered/ignite

- Reactotron - github.com/infinitered/reactotron

- Chain React - infinite.red/ChainReactConf

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React Native at

Facebook

- Market Place tab

- Monorepo

- 5+ other internal and external apps

React Native

Pull Request

- How does it get merged?

- Facebook's needs?

- Stagnation (it was bad -- 700+ unmerged pull requests, thousands of open issues)

- Many WebView-related issues

React Native

A Better Solution...?

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React Native

The Slimmening

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React Native

The Slimmening (aka Lean Core)

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Community

- github.com/react-native-community

React Native

New Repo for RFCs

- github.com/react-native-community/discussions-and-proposals

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React Native

RFC0001

react-native-community / discussions-and-proposals

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<> Code   ⊙ Issues 28   ⑂ Pull requests 5   📊 Insights

Proposal 0001 - Extract WebView From Core #3

⑂ Merged   axe-fb merged 4 commits into react-native-community:master from jamonholmgren:proposal-0001   on Sep 1

💬 Conversation 62   ⊙ Commits 4   ✅ Checks 0   📄 Files changed 1

jamonholmgren commented on Jul 31, 2018   Member +☺ ⋯

This proposes that we extract the current WebView implementation from React Native Core and move it into a third party package.

👍 5   ❤️ 8

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React Native

RFC0001

- Simple drop-in replacement

Summary

Extract the current WebView implementation from React Native Core and move it into a third party package.

Basic example

Currently, WebView is included in React Native core:

```
import { WebView } from 'react-native';
```

This would move it to an external package, like so:

```
import { WebView } from 'react-native-webview';
```

(Where this third-party package will live is an open question. See below.)

Motivation

The current WebView implementation is used by Facebook internally but not actively updated. This leads (understandably) to a lack of first-class support for this core API. By moving the component to a third party that is more invested in supporting it, there will be better support.

Additionally, with this component no longer included in core, there will be an opening for alternative third party WebView implementations, should anyone else wish to provide one.

React Native

Extracting WebView

- iOS - Objective-C

- Android - Java

- Working with core WebView -- not yet extracted

- Maintaining compatibility

React Native

Stability Improvements

- 165 merged pull requests

- 71 releases

- 57 contributors

- Follow my co-maintainer, Thibault Malbranche: @titozzz

React Native

Facebook + Community

- Working much closer with the React Native community

- ~50 open pull requests and dropping

- Under 500 open issues

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React Native

Lean Core

- ~50 components

	Component	Platforms	React-native-windows	Github open issues/PRs	Current State	AirBnB Usage Report	OSS Recommendation
2	StatusBarIOS		N/A				Deprecate
3	Share					6	Move to community Module
4	Settings		Not Started				
5	PushNotificationIOS		n/a	2 issues		3	Deprecate for community
6	NetInfo		Missing functionality to detect metered networks (#539).	4 issues		8	Move to community module
7	ImageStore	iOS, Android	Not Started	1 issue	Backed by native implementation		Move to community module
8	ImagePickerIOS	iOS	N/A	-	Backed by native implementation		Move to community module
9	ImageEditor	iOS, Android	Not Started	1 issue	Backed by native modules		Move to community module
10	Geolocation	iOS, Android, Windows	Ready	5 issues, 2 PRs	Uses native modules		
11	DatePickerAndroid	Android	n/a	-	Only supports android, backed by native code	2	Merge with DatePickerIOS, move to community module
12	CameraRoll	iOS, Android	Not started #183	1 PR, 3 ISsues	Requires linking RCTCameraRoll	4	Move to community repo
13	BackHandler	Android, TVos	Implemented	1 Issue	Event handler to detect back button. Not doctumented well	2	Is there a better API for this ?
14	BackAndroid	Android, Windows-	(#538).	1 Issue	Deprecated,	7	Remove
15	AlertIOS	iOS	N/A	-	Not a separate component, just a file inside Alert	4	Merge with Alert
16	ActionSheetIOS	iOS	N/A	1 PR	Most people use JS expo package.	10	Move native code to expo repo.
17	ImageStylePropTypes						Move this to a separate folder
18	TextStylePropTypes						Move this to a separate folder
19	ViewStylePropTypes						Move this to a separate folder
20	ViewPropTypes						Move this to a separate folder
21	Shadow Props						
22	Layout Props		Working on integration of facebook/css-layout				
23	VibrationIOS		N/A			1	
24	Vibration		Ready			4	
25	ToastAndroid		N/A			2	
26	TimePickerAndroid		N/A			1	
27	StyleSheet		Ready			845	
28	PixelRatio		Ready	2 issues		56	
29	PermissionsAndroid			2 issues			Is there a better way ?
30	PanResponder		Missing functionality to block native responders (#306).	6 issues		8	
31	Linking		Ready			46	
32	LayoutAnimation		Partal			28	
33	Keyboard	iOS, Android	#159, not started		Component with Keyboard methods and keyboard avoiding view	31	Move to community module
34	InteractionManager	iOS, Android, Windows	Ready	6 issues		25	keep in core
35	Easing		Ready	Issues related to	Mostly used by animations	25	Possibly move to npm, depend on 3rd party. Should this exposed as a separate API under a namespace ?
36	Dimensions	iOS, Android, Windows	Ready			165	Core component, leave as is
37	Clipboard	iOS, Android, Windows	Source.	1 Issue		8	Move to community repo
38	AsyncStorage	iOS, Android, Windows	Source	8 Issues, 3 PRs	Recommendation to use other abstractions on top of this	2	Move to community Repo ?
39	AppState	iOS, Android, Windows	Source	-	Docs broken, used mostly with Push, backed by native module. Also used with other modules like react-native-redux-appstate	15	Leave in Repo, but move under components
40	Animated	iOS, Android, Windows	Source.		Source with examples and docs	116	Leave in Repo
41	Alert	Android, iOS, Windows	Source.	-		97	Once docs merged with AlertIOS, ensure that iOS specific properties are exposed properly. Potentially move to react-community
42	AccessibilityInfo	Android, iOS+, Windows-	#918, only partial implementation	2 Issues			Make this a repo in community

Thank You!

Thanks to React Helsinki and Smartly.io for hosting!

Follow me on Twitter: @jamonholmgren

Infinite Red: https://infinite.red

Come to Chain React! https://infinite.red/ChainReactConf

See you at React Finland?

Questions?