

どうやってECMAScript 6
を学び始めるか



azu

azu

Tokyo/Japan

info@efcl.info

<http://efcl.info/>

Joined on 7 years ago

312

Followers

4k

Starred

204

Following

Organizations



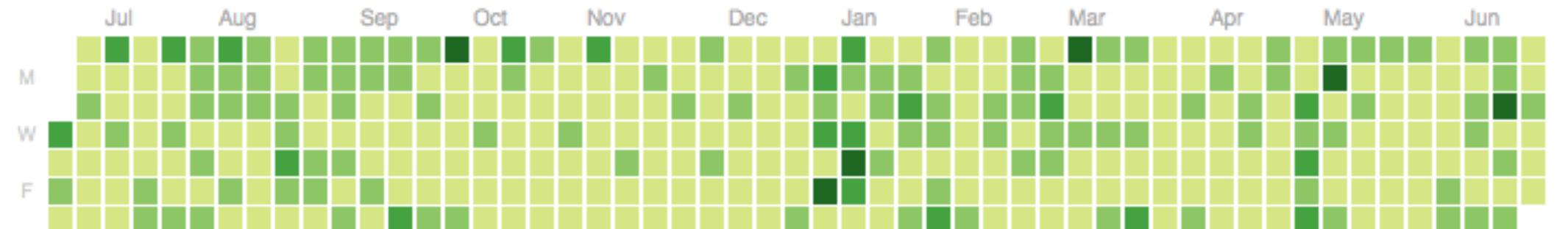
Popular repositories

promises-book	JavaScript Promiseの本	298 ★
awesome-commit-english	コミット英語についての記事まとめ	255 ★
NSDate-Escort	NSDate utility library that is compatible with NSDate-Extensions API.	182 ★
github-reader	[node-webkit] GitHub client app - Viewer for Notifications and News Feed.	92 ★
textlint	The pluggable linting tool for text(plain text and markdown).	54 ★

Repositories contributed to

jserv/jserv.info	JSer.infoのデータリポジトリです	80 ★
efcl/efcl.github.io	Web Scratchブログのリポジトリ	24 ★
jserv/jserv.github.io	JSer.info のブログリポジトリ	17 ★
meta-ecmascript/es6-draft-revision	ECMAScript 2015(ES6) revision repository.	5 ★
power-assert-js/espower-babel	power-assert instrumentor for babel(6to5) + mocha.	43 ★

Contributions



Contributions in the last year

6,632 total

Jun 25, 2014 – Jun 25, 2015

Longest streak

598 days

November 6 – June 26

Current streak

598 days

November 6 – June 26

ECMAScript 5を知る

ES6 の前に ES5 大丈夫?

- Property Descriptor
- Object.create()
- Strict Mode
- [Thinking About ECMAScript 5 Parts - Tech.pro](#)

O'REILLY®



Speaking JavaScript

JavaScript

AN IN-DEPTH GUIDE FOR PROGRAMMERS

Dr. Axel Rauschmayer

なぜ ES5 が大事か?

- (恐らく)学ぶ過程でBabelのようなTranspilerに手を出してしまう
- TranspilerはES5の機能を使いきって実装されている
- JavaScript Transformation - JSConf 2015 // Speaker Deck

ES6の概要を知る

今すぐ活かす! 取扱
vol.
87
2015

JavaScript

WEB+DB PRESS Vol.87

進化した仕様 ECMAScript 6 をまるごと解説

[速習] Google Cloud Platform
世界一のインフラで
サービスを動かす!



 [Clone In Desktop](#)

 [Download ZIP](#)

Introduction

ECMAScript 6, also known as ECMAScript 2015, is the latest version of the ECMAScript standard. ES6 is a significant update to the language, and the first update to the language since ES5 was standardized in 2009. Implementation of these features in major JavaScript engines is underway now.

See the [ES6 standard](#) for full specification of the ECMAScript 6 language.

ES6 includes the following new features:

- arrows
- classes
- enhanced object literals
- template strings
- destructuring
- default + rest + spread
- let + const
- iterators + for..of
- generators
- unicode
- modules
- module loaders

git.io/es6features

実行環境

実行環境を揃える

- Browser(JavaScriptエンジン)
 - MSEdge、Firefox、Chrome、Safari(WebKit JSC)
- Babel(Transpiler)

Browserへの実装状況

Please note that *some of these tests represent existence, not functionality or full conformance.*Sort by number of features?

Show obsolete platforms

Show unstable platforms? V8 SpiderMonkey JavaScriptCore Chakra Carakan KJS Other Useful feature (1 point) Significant feature (2 points) Landmark feature (4 points)

Feature name	Compilers/polyfills														Desktop browsers						
	60%	59%	71%	31%	18%	25%	17%	4%	14%	63%	34%	60%	61%	62%	41%	CH 43, OP 30	FF 31 ESR	FF 38	FF 39	FF 40	CH 43, OP 30
proper tail calls (tail call optimisation)	0/2	0/2	1/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
default function parameters	3/6	3/6	5/6	4/6	0/6	3/6	0/6	0/6	0/6	3/6	3/6	3/6	3/6	3/6	3/6	3/6	3/6	3/6	3/6	3/6	3/6
rest parameters	4/5	4/5	4/5	2/5	3/5	3/5	0/5	0/5	0/5	5/5	3/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5
spread (...) operator	12/12	12/12	12/12	2/12	1/12	2/12	0/12	0/12	0/12	10/12	8/12	12/12	12/12	12/12	12/12	12/12	12/12	12/12	12/12	12/12	12/12
object literal extensions	6/6	6/6	6/6	4/6	5/6	5/6	0/6	0/6	0/6	6/6	0/6	6/6	6/6	6/6	6/6	6/6	6/6	6/6	6/6	6/6	6/6
for..of loops	6/8	8/8	8/8	5/8	1/8	2/8	0/8	0/8	0/8	5/8	4/8	6/8	6/8	6/8	6/8	6/8	6/8	6/8	6/8	6/8	6/8
octal and binary literals	4/4	2/4	4/4	2/4	0/4	2/4	0/4	0/4	0/4	4/4	2/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
template strings	3/3	3/3	3/3	3/3	3/3	3/3	0/3	0/3	0/3	2/3	0/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
RegExp "y" and "u" flags	1/2	1/2	1/2	0/2	0/2	0/2	0/2	0/2	0/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
destructuring	23/32	26/32	29/32	16/32	12/32	21/32	0/32	0/32	0/32	0/32	17/32	23/32	23/32	23/32	23/32	23/32	23/32	23/32	23/32	23/32	23/32
Unicode code point escapes	0/2	1/2	1/2	1/2	0/2	1/2	0/2	0/2	0/2	2/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2

ECMAScript 6 compatibility table

[Info](#) [choose Browsers](#)
Use sql whildchars (%) / case sensitiv!

ANGLE_instanced_arrays

ActiveXObject

AesGcmEncryptResult

AnalyserNode

Animation

AnimationEffectReadOnly

AnimationEffectTiming

AnimationEvent

AnimationPlayerEvent

AnimationTimeline

AnonXMLHttpRequest

AppBannerPromptResult

ApplicationCache

ApplicationCacheErrorEvent

AriaRequestEvent

Array

ArrayBuffer

Atomics

Attr

Audio

AudioBuffer

AudioBufferSourceNode

AudioContext

	Android 4.3	Chrome 45.0.2444.0	Firefox 38.0	Firefox 41.0	IE 8.0	IE 9.0	IE 10.0	IE 11.0	IE / Edge 12	Mob Safari 8.0	Opera 12.17	Safari 8.0.5	All Browsers	Specification	Tests
ANGLE_instanced_arrays					f	f	f	u			+	?			
ActiveXObject								o			+	?			
AesGcmEncryptResult									f	o	o	+	?		
AnalyserNode					f	f	f				+	?			
Animation					f	f	f				+	?			
AnimationEffectReadOnly					?	f	f				+	?			
AnimationEffectTiming					?	f					+	?			
AnimationEvent					f						-	✓			
AnimationPlayerEvent											-	✓			
AnimationTimeline											+	?			
AnonXMLHttpRequest										f	+	✓			
AppBannerPromptResult						?	f				+	?			
ApplicationCache						f					+	✓			
ApplicationCacheErrorEvent							f				+	?			
AriaRequestEvent								f			+	?			
Array					f	f	f	f	f	f	f	+	✓		
ArrayBuffer					f	f	f	f		f	f	+	✓		
Atomics								o				+	?		
Attr					f	f	f	f	o	o	o	+	✓		
Audio					f	f	f	f	f	f	f	o	+	?	
AudioBuffer					f	f	f	f	f	f	f	o	+	?	
AudioBufferSourceNode					f	f	f			f	o	o	+	✓	
AudioContext					f	f	f			f	o	o	+	?	

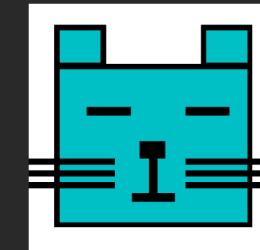
Big JS-Compatibility-Table

Status Page

- それぞれのブラウザ持ってる実装ステータスページ
- The WebKit Open Source Project - Web Platform Status
- Developer Resources : MSEdge Dev
- Chromium Dashboard

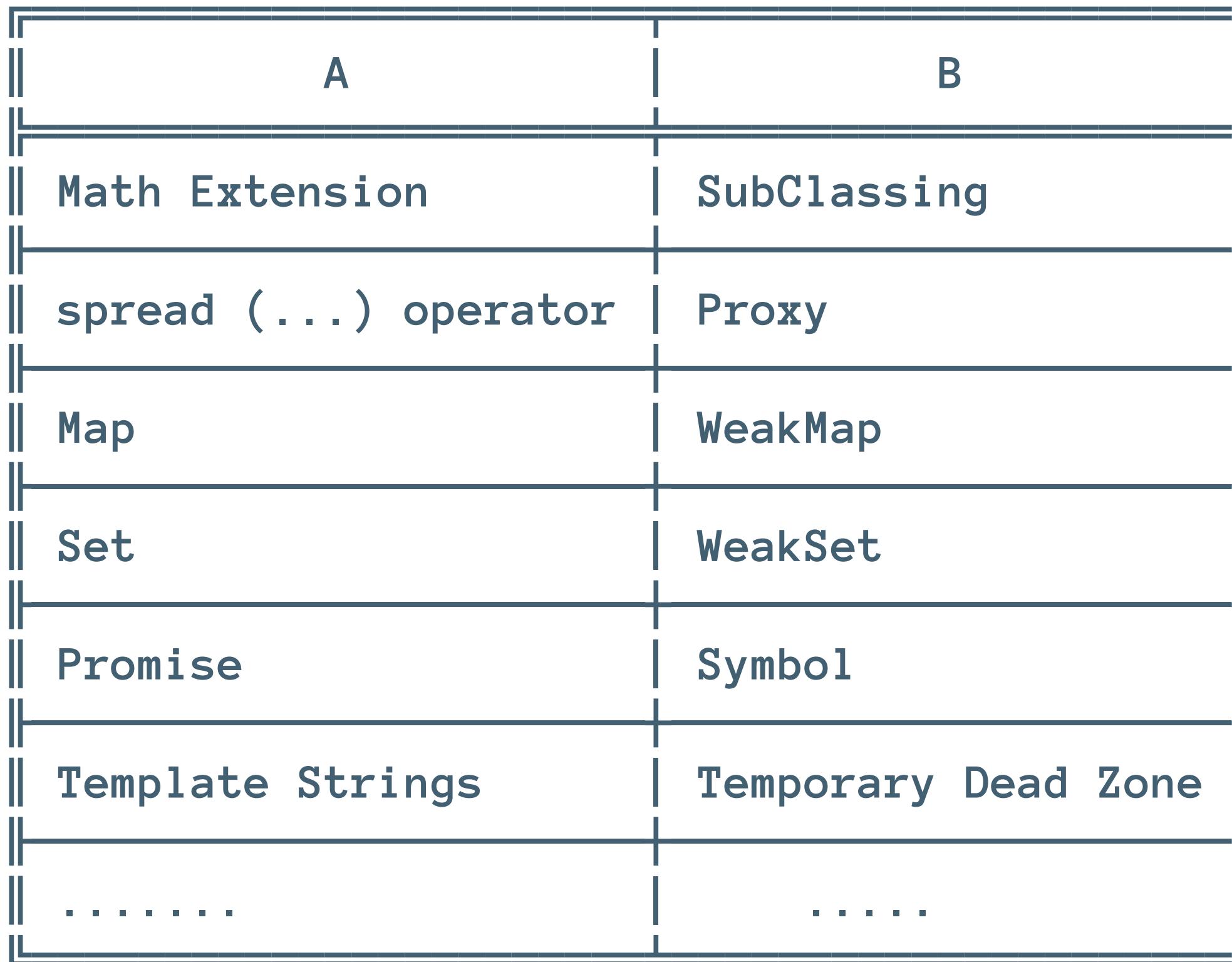
Transpilerを使う前に

Do **not** use transpilers as a basis to learn
new language features



Transpiler is not Learning Tool

- 次の分類が何を基準にしてるか分からぬ場合は
Transpilerで学ぶのは危険が伴う





ES6を学ぶ前に

- ES5がわからない
 - => ES5を学ぶ
- Transpilerの動作原理がわからない
 - => ブラウザが対応してる機能を優先して学ぶ
- Transpilerができないことも理解してる
 - => 容量用法を持って正しく使いましょう

ES6を学ぶ

Constants

Constants

Scoping

Block-Scoped Variables

Block-Scoped Functions

Arrow Functions

Expression Bodies

Statement Bodies

Lexical this

Extended Parameter Handling

Default Parameter Values

Rest Parameter

Spread Operator

Template Strings

String Interpolation

Custom Interpolation

Raw String Access

Extended Literals

Binary & Octal Literal

Unicode String & RegExp Literal

Enhanced Regular Expression

Regular Expression Sticky Matching

Enhanced Object Properties

Property Shorthand

Computed Property Names

Constants

Constants

Support for constants (immutable variables).

ECMAScript 6 — syntactic sugar: [reduced](#) | [traditional](#)

```
const PI = 3.141593
```

```
PI > 3.0
```

ECMAScript 6 — syntactic sugar: [reduced](#) | [traditional](#)

```
// only in ES6 through the help of object properties  
// and only in global context and not in a block scope
```

```
Object.defineProperty(typeof global === "object" ? global : window, "PI", {  
    value: 3.141593,  
    enumerable: true,  
    writable: false,  
    configurable: false  
})  
PI > 3.0;
```

your journey to
start coding in ES6 now !!

EXPLORING ES6

Upgrade to the next version of JavaScript

Exploring ES6



Dr. Axel Rauschmayer

Ecmanauten

getify/You-Dont-Know-

JS

DOM

CSS

ES6を書く

Tower of Babel

Learn ES6 features using babel

» BABEL_SETUP	[COMPLETED]
» CLASS	[COMPLETED]
» CLASS_EXTEND	
» MODULES_WITH_NAME	
» MODULES_DEFAULT_EXPORT	[COMPLETED]
» BLOCK_SCOPE	
» ITERATOR_FOR_OF	
» GENERATOR	
» DESTRUCTURE	
» ARROW_FUNCTION	[COMPLETED]
» rest_and_spread	[COMPLETED]

[tower-of-babel](#)

HELP

EXIT

書く

- Learn ES2015・Babel
- ライブラリをES6で書いて公開する所から始めよう
- NW.jsやElectronで動くアプリを書く
 - io.js(V8)が入ってる

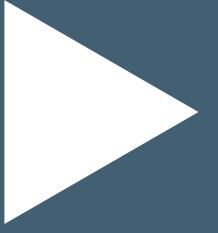
仕様を読む

Standard ECMA-262

ECMAScript仕様書を読む

• Issue #47 • azu/azu

ECMAScript 6 ドラフトの
Diff検索用リポジトリを
作った「Web Scratch」



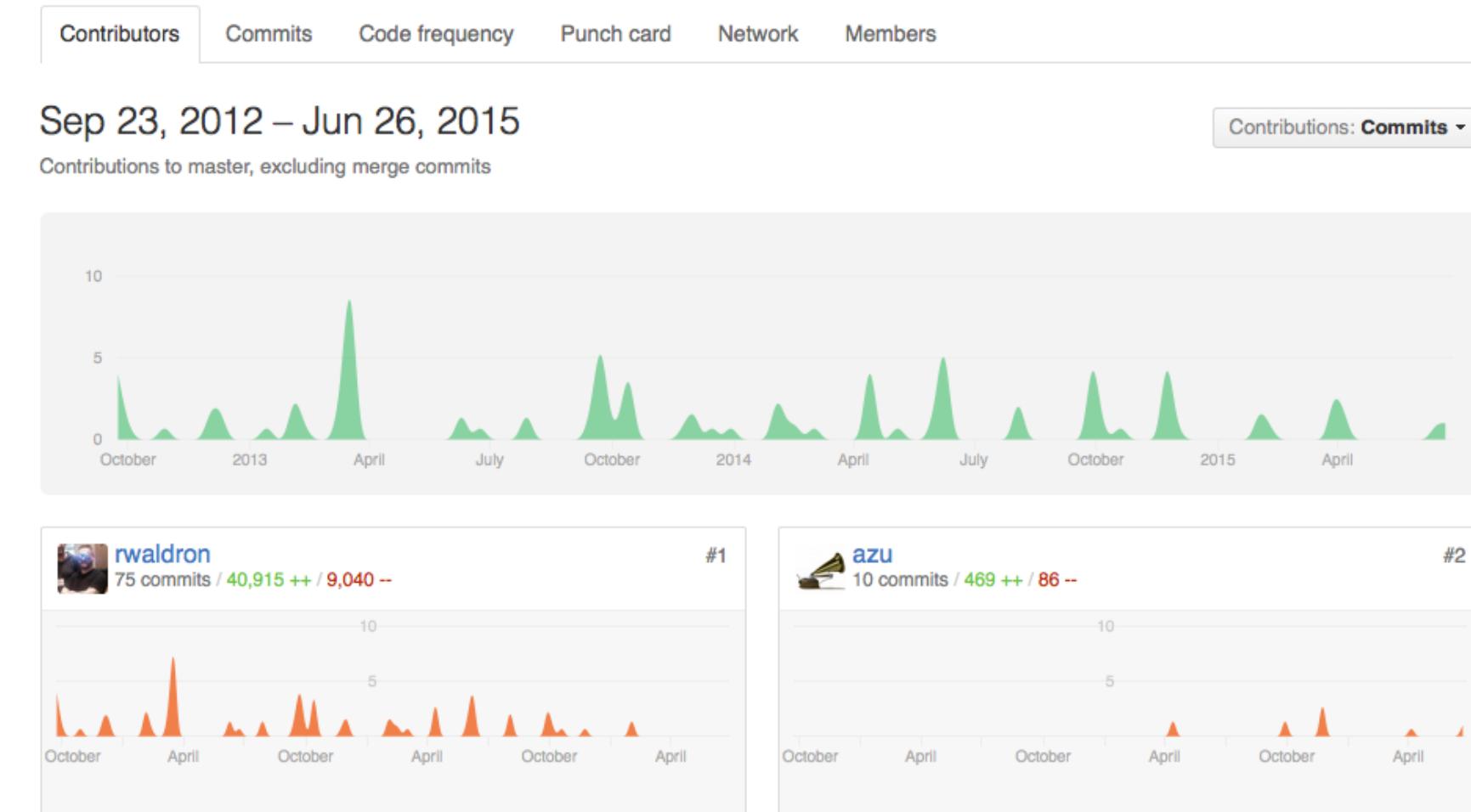
ECMAScript Next

プロポーサル一覧

- [tc39/ecma262](#)
- [Stage 0 Proposals](#)
- ecmarkupでプロポーサルを書き、GitHubに置く
 - + [ES Discuss](#)
 - 議論の場所を議論中: [Move es-discuss to discuss.webplatform.org?](#)

tc39/tc39-notes

- ECMAScriptを作成する委員会(TC39)のミーティングノート
- 大体3ヶ月に1度開催
- #TC39MTGで一人読書会をやっています
- ミーティングに参加していないけどコミットしている



明日には使えなくなるES7トーク

- 賞味期限まで後
- ES7以降の仕様策定の流れ
- Stageって何か?

まとめ

- WEB+DB PRESS Vol.87で概要を把握
- es6-features.orgで簡単にどんな機能が増えたのかを見る
- tower-of-babelで実際に書いてみる
- もっと深く知りたい場合はExploring ES6を読む