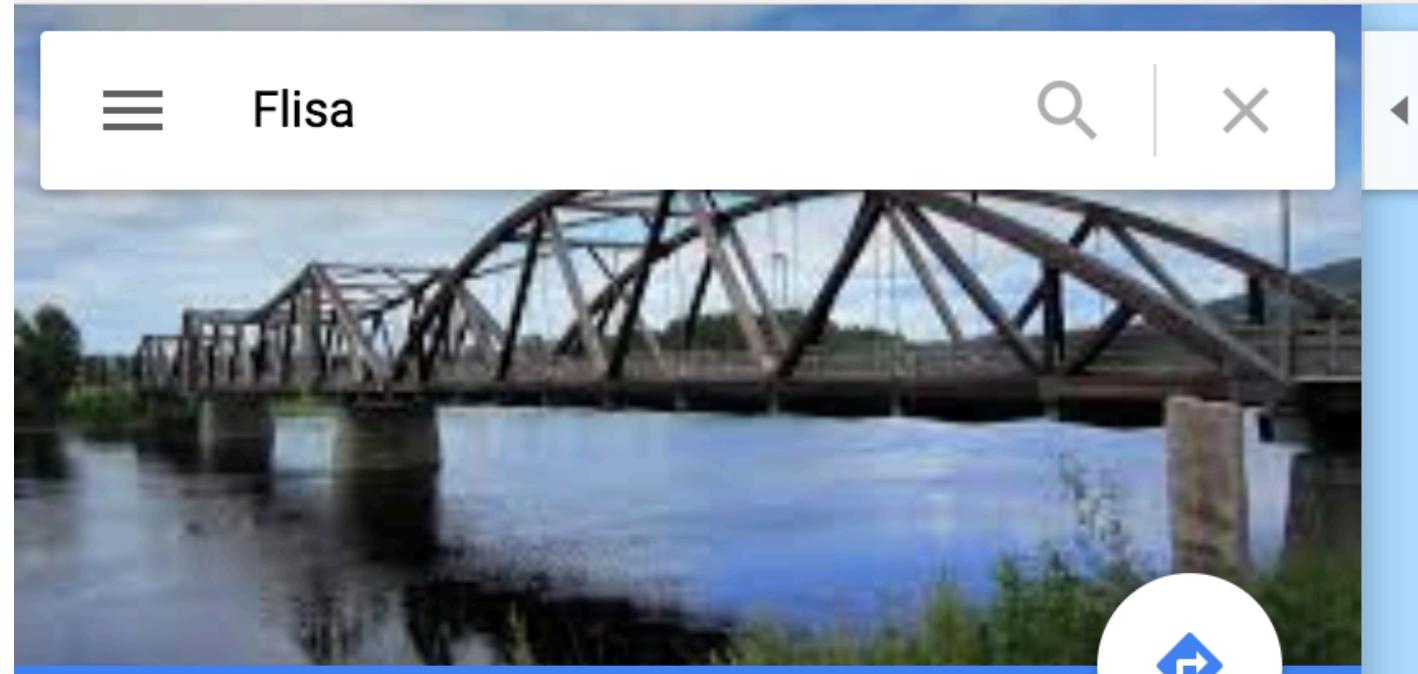


Full Metal Config Jacket

Or not, I'm not a cop.

Flisa



Flisa
2270
Cloudy · 6°C
11:36 AM

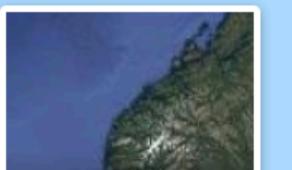
Directions 

SAVE  NEARBY  SEND TO YOUR PHONE  SHARE 

Photos 

Quick facts

Flisa is a small town in south-eastern Norway, and the administrative centre of Åsnes municipality. Its population as of 1 January 2012 is 1,623. For some time the log driver statue was the town's only landmark. [Wikipedia](#)









webpack

«I'm not an expert.»

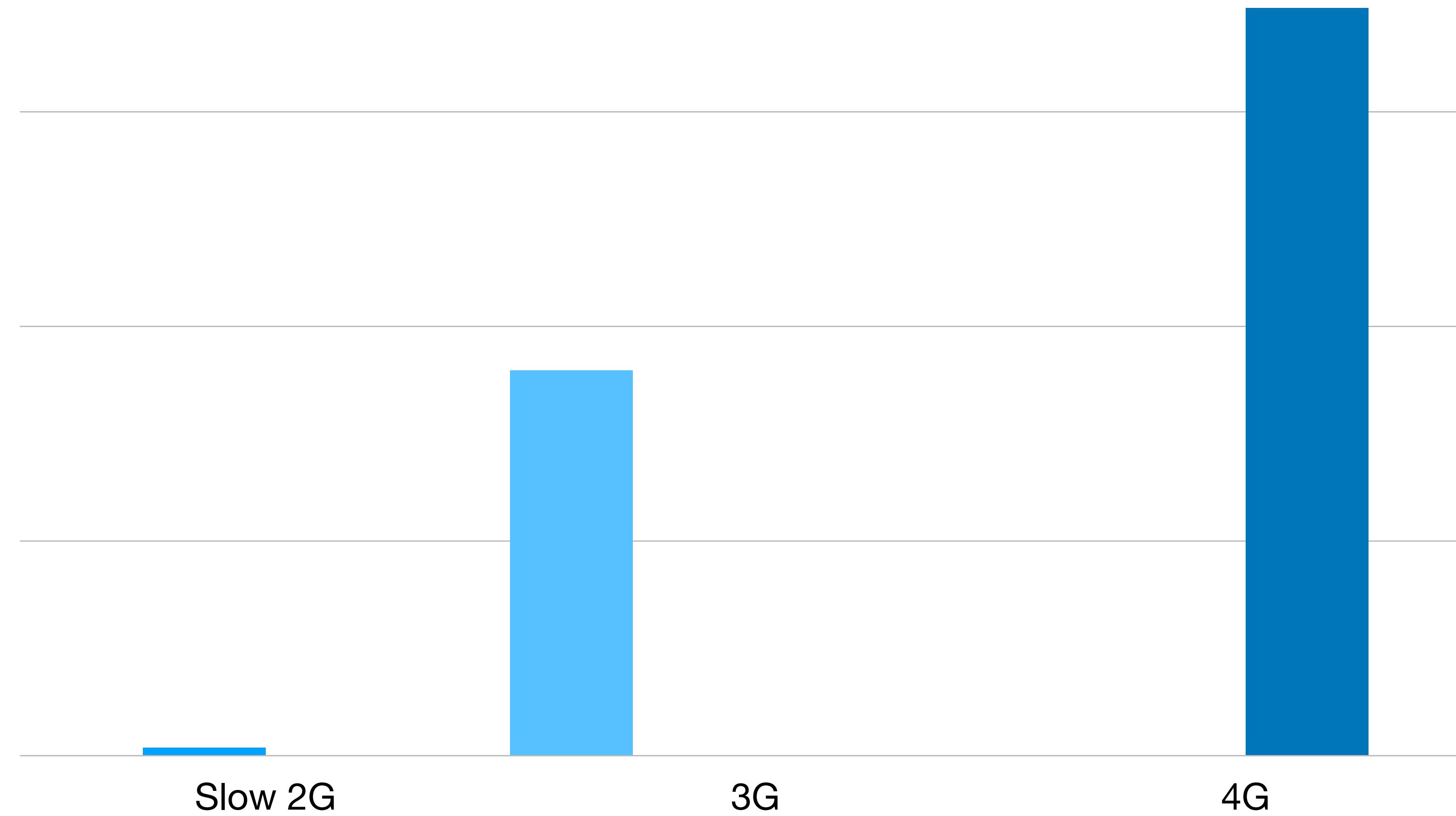
– *Even Stensberg*

- Creating the fundament for a Command Line Interface
- Abstractions & how to use them in your advantage
- Reducing entry requirements for new users

Creating a good baseline
for a Command Line
Interface

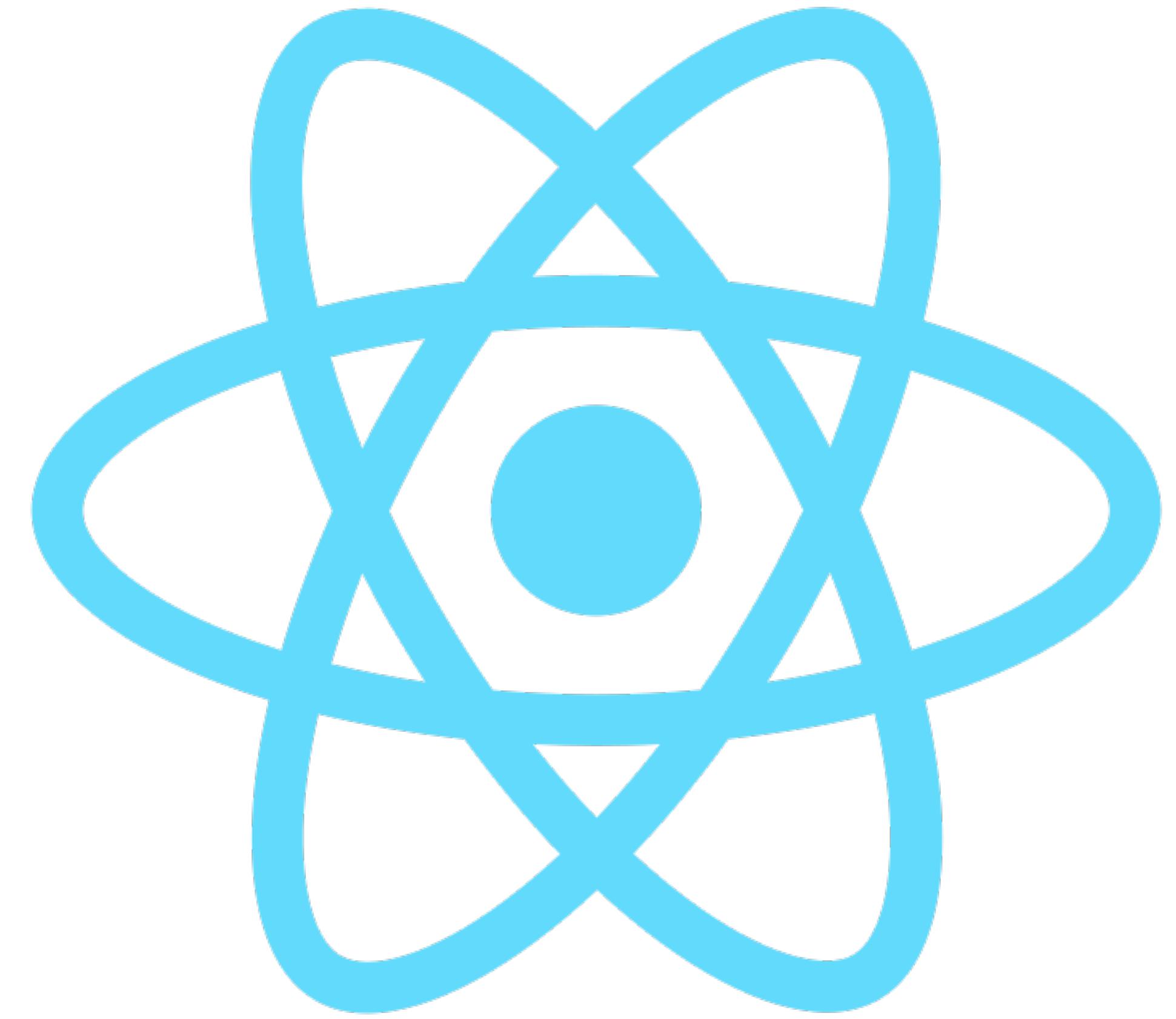
- What am I trying to accomplish?
- Could I achieve it without excessive dependencies?
- If I need any particular dependency, is it needed?

(Rough estimate) Desktop Users March 2018



Our goal is to make
libraries less hard to
implement & use

A well established project
increases chances of
success with OCJS



Define the goal of
your projects

- Sets the baseline of your project
- Design Documents helps you to limit your project to its goal
- What is the first thing the user should see/do when they use my tool?
- Clarity in vision is less configuration - **If the developer doesn't know how to set good defaults, how should the user know?**

Features definition v1

Sean Larkin edited this page on 5 Feb 2017 · 3 revisions

Overview

In this page, we draft out the direction in which we want to go in each of the features we will build for webpack-cli. This document will serve to guide us through the feature building.

Initial draft for tasks definition.

Compiler cli

Goal: Have the current compiler cli options in the webpack-cli repo, living together with the new features.

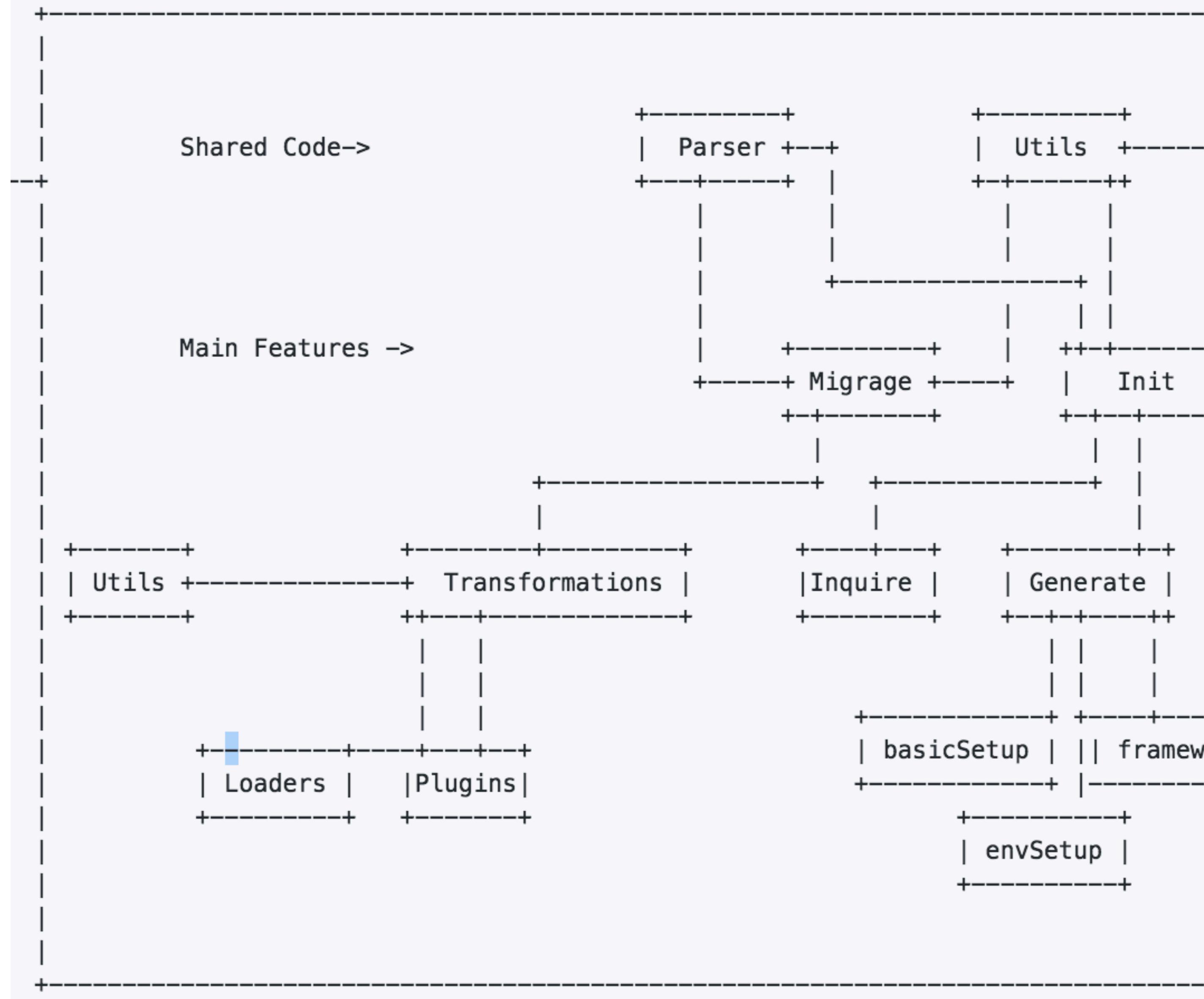
Next steps

- Write tests.
- Add documentation in webpack.js.org

Transformations:

Goal: Read a given JS file, parse into AST, run transformations, write again into JS.

Webpack-Cli



Structure-wise

- Polymer parses its commands to a handler
- Handler runs a generator relative to its command



```
$ polymer
```

**Polymer-CLI**

The multi-tool for Polymer projects

Usage: `polymer <command> [options ...]`

Available Commands

analyze	Writes analysis metadata in JSON format to standard out
build	Builds an application-style project
help	Shows this help message, or help for a specific command
init	Initializes a Polymer project
install	installs Bower dependencies, optionally installing "variants"
lint	Identifies potential errors in your code.
serve	Runs the polyserve development server
test	Runs web-component-tester

Global Options

--env <i>type</i>	The environment to use to specialize certain commands, like build
--entrypoint	The main HTML file that will be requested for all routes.
--shell <i>string</i>	The app shell HTML import
--fragment <i>string[]</i>	HTML imports that are loaded on-demand.
--root <i>string</i>	The root directory of your project. Defaults to the current working directory.
--sources <i>string[]</i>	Glob(s) that match your project source files. Defaults to `src/**/*`.
--extra-dependencies <i>string[]</i>	Glob(s) that match any additional dependencies not caught by the analyzer to include with your build.
-v, --verbose	turn on debugging output
-h, --help	print out helpful usage information
-q, --quiet	silence output

Run `polymer help <command>` for help with a specific command.

May the Abstractions
be ever in your favor

```
ev1stensberg at dhcp1202-stud2.wifi.uit.no ~
```

```
$ brew upgrade gdb
```

```
==> Upgrading 1 outdated package, with result:
```

```
gdb 8.0.1 -> 8.1
```

```
==> Upgrading gdb
```

```
==> Downloading https://homebrew.bintray.com/bottles/gdb-8.1.high_sierra.bottle.tar.gz
```

```
==> Downloading from https://akamai.bintray.com/43/43a6d6cca157ef70d13848f35c04e11d832dc0c96f5bcf53a43330f524b3ac40?__gda__=exp=152353163
```

```
#####
##### 100.0%
```

```
==> Pouring gdb-8.1.high_sierra.bottle.tar.gz
```

```
==> Caveats
```

```
gdb requires special privileges to access Mach ports.
```

```
You will need to codesign the binary. For instructions, see:
```

```
https://sourceware.org/gdb/wiki/BuildingOnDarwin
```

```
On 10.12 (Sierra) or later with SIP, you need to run this:
```

```
echo "set startup-with-shell off" >> ~/.gdbinit
```

```
==> Summary
```

```
🍺 /usr/local/Cellar/gdb/8.1: 53 files, 9.9MB
```

```
ev1stensberg at dhcp1202-stud2.wifi.uit.no ~
```

```
$
```

```
1 warning generated.  
ld: can't write output file: indexer for architecture x86_64  
clang: error: linker command failed with exit code 1 (use -v to see invocation)  
make: *** [indexer] Error 1
```

- Functional programming might work
- It might not work
- Balance the weight between imperative and functional programming

Good

```
1  /**
2   * Copyright (c) 2013-present, Facebook, Inc.
3   *
4   * This source code is licensed under the MIT license found in the
5   * LICENSE file in the root directory of this source tree.
6   * @flow
7   */
8
9  import type {RefObject} from 'shared/ReactTypes';
10
11 // an immutable object with a single mutable value
12 export function createRef(): RefObject {
13   const refObject = {
14     current: null,
15   };
16   if (__DEV__) {
17     Object.seal(refObject);
18   }
19   return refObject;
20 }
```

Bad (*Nested functions, 200LOC++*)

```
37  export default function YamcsPlugin(options) {
38
39    const host = options.host || 'localhost';
40    const port = options.port || '8090';
41    const instance = options.instance || 'simulator';
42
43    const TELEMETRY = getDictionary().then(function(dictionary) {
44      return dictionary.map(function(param) {
45        return param;
46      });
47    });
48    function getDictionary() {
49      return axios
50        .get(`http://${host}:${port}/api/mdb/${instance}/parameters`)
51        .then(response => response.data.parameter);
52    }
53  
```

- Reusability is key
- 3rd party dependencies can reuse your code
- Abstractions reduce entry requirements for maintainers
- **more time to fix bugs & to tweet about it**

Developer Centric Feedback & Intuition

Create React App

- Sets Good Defaults
- Promotes Good Practice
 - Wrapper Suite
- ***Feedback forms longer than your tax report*** (which is good)

The `sw-precache-webpack-plugin` is integrated into production configuration, and it will take care of generating a service worker file that will automatically precache all of your local assets and keep them up to date as you deploy updates. The service worker will use a [cache-first strategy](#) for handling all requests for local assets, including the initial HTML, ensuring that your web app is reliably fast, even on a slow or unreliable network.

Success! Created `my-app` at `/Users/ev1stensberg/Documents/my-app`
Inside that directory, you can run several commands:

`yarn start`

Starts the development server.

`yarn build`

Bundles the app into static files for production.

`yarn test`

Starts the test runner.

`yarn eject`

Removes this tool and copies build dependencies, configuration files and scripts into the app directory. If you do this, you can't go back!

We suggest that you begin by typing:

`cd my-app`

`yarn start`

Happy hacking!



Performance



Progressive Web App



Accessibility



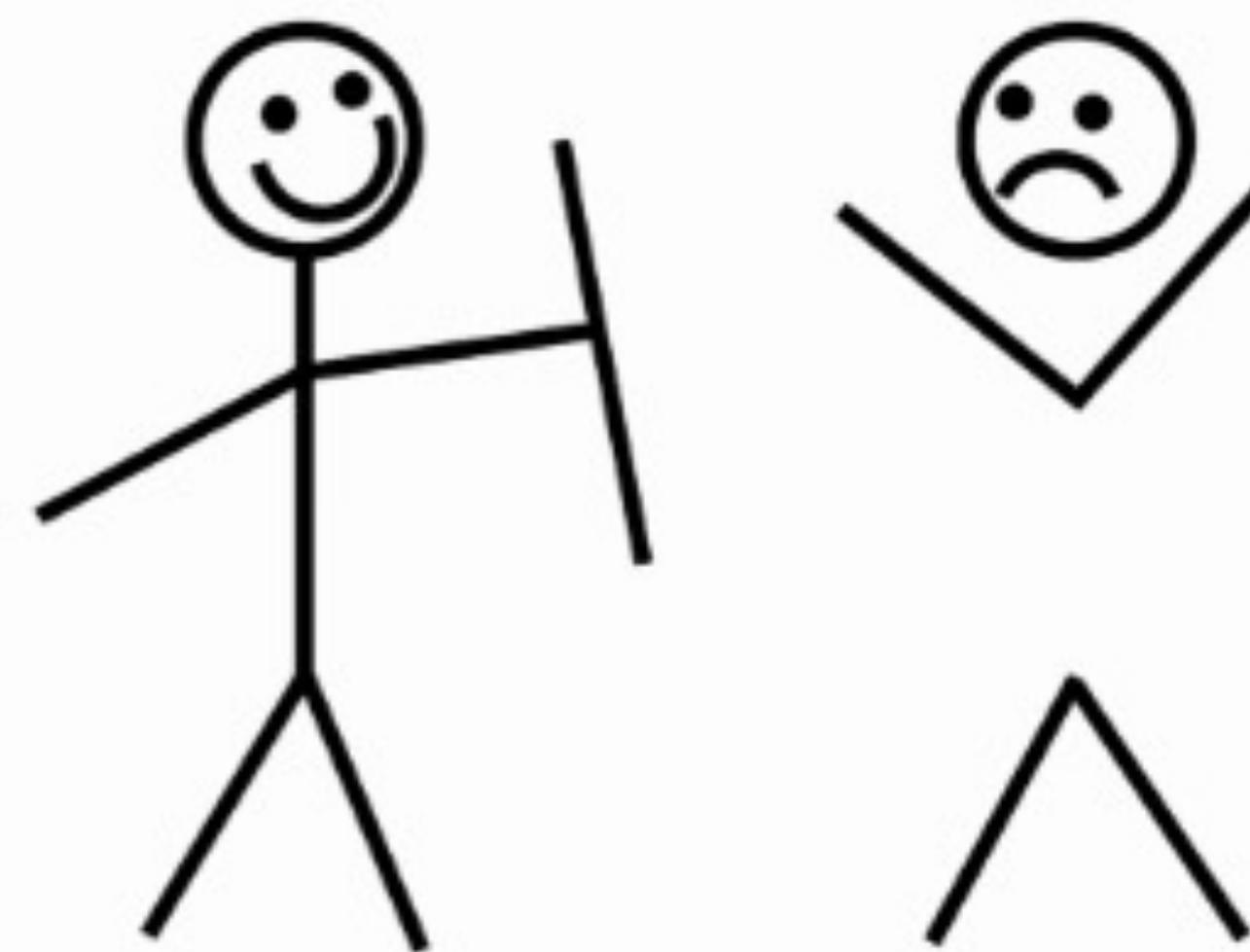
Best Practices



SEO

- What did we do bad ? **What !**
- How can we make this better ? **How !**
- Did you struggle with our interface ? **Why !**
- Why did you find the tool hard to use ? **How come !**
- **⚠️ User stories** - put yourself in the user's perspective and deduct

DON'T WORRY BRO,



I GOT YOUR BACK!

Don't be stubborn, developers can save time at GUI's, example -> GH desktop etc

Intuitive tools are often the most helpful

<=> Visual tools are often the most
intuitive

Log

```
Failed to compile.

Error in ./src/components/home.js
Syntax error: /Users/kenwheeler/Projects/Formidable/react-app-starter/src/components/home.js:
Unexpected token (4:19)
  2 | import { Link } from 'react-router';
  3 |
> 4 | import styles from './home.css';
   | ^
  5 |
  6 | const Home = () => (
```

Status

Errors
Operation
idle
Progress

Modules

Name	Size	Percentage
react	645.42 KB	56.8%
react-router	101.96 KB	8.97%
lodash	94.77 KB	8.34%
html-entities	57.38 KB	5.05%
history	49.02 KB	4.31%
warning	1.76 KB	3.60%
<self>	47.26 KB	96.4%
fbjs	33.59 KB	2.96%
react-proxy	21.75 KB	1.91%

Assets

Name	Size
static/js/bundle.js	1.34 MB
0.11e27e5498cc6915b174.hot-update.js	3.28 KB
11e27e5498cc6915b174.hot-update.json	43 B

Platform Agnostic Tools

Ecosystems that enforce abstractions could hide complexity

- Yeoman



- Babel



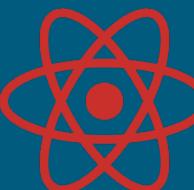
- NPM



- OpenMCT



- **literally every React component there is**



No Need to Reinvent
The Wheel

- Commander - **maintainers** 
- Inquirer - **developers** ?
- V8-Compile-Cache - **performance** 
- **Or just browse Sindre Sørhus's libraries at GitHub**





Even Stensberg

@ev1stensberg



Adding v8-compile-cache for webpack
v.4.0.0-alpha-1 on "minor source code":

webpack add (definePlugin):

no v8: 11492.589ms

v8: 6979.034ms

webpack-lighthouse-plugin demo
(production mode, no plugins):

no v8: 1416.967ms

v8: 1385.388ms

7:27 AM - 21 Dec 2017

Reducing Entry Requirements

- Good defaults 
- Minimalistic starting point 
- Simple & intuitive interfaces 
- Scale complexity (*if ever needed*) over time 

Before

```
1 const webpack = require('webpack');
2 const path = require('path');
3
4 module.exports = {
5   entry: './src/index.js',
6   output: {
7     path: path.resolve(__dirname, 'dist'),
8     filename: '[name].bundle.js'
9   },
10  module: {/*...*/},
11  plugins: [
12    new webpack.optimize.UglifyJsPlugin(),
13    new webpack.optimize.commonChunkPlugin({
14      // ....
15    })
16  ]
17};
```

After

```
1 const webpack = require('webpack');
2
3 module.exports = {};
```

We've been here
before, haven't we?

OCJS is good for
starting a project

But...

You lose visibility

Users might end up
with a Black Box

The diagram consists of three horizontal bars. The first bar is dark green and ends at the 'OCJS' point on a scale. The second bar is medium green and ends at the 'Full Config' point. The third bar is light green and ends at the 'Sweet Spot' point. Arrows point from each label to its corresponding bar end. The 'Sweet Spot' bar has a small upward-pointing triangle above it.**OCJS**

Full Config

Sweet Spot

OCJS isn't only about
no configuration

It's about educating the developer so that he/she doesn't need to use a boilerplate to know what best practice is

«We believe that ~~transparency~~ configurations are
needed to create ~~trust~~ visibility, and it's also needed
to ~~create a dialogue~~ educate developers.»

– Julie Sweet

Summary

- Think about the project - **Don't over-engineer it**
- OCJS is important - **But so is visibility**
- Reuse modules - **People use them**
- Use/Create ecosystems when you can - **Abstractions hide complexity**
- All this = **Low tech debt + Educating developers**