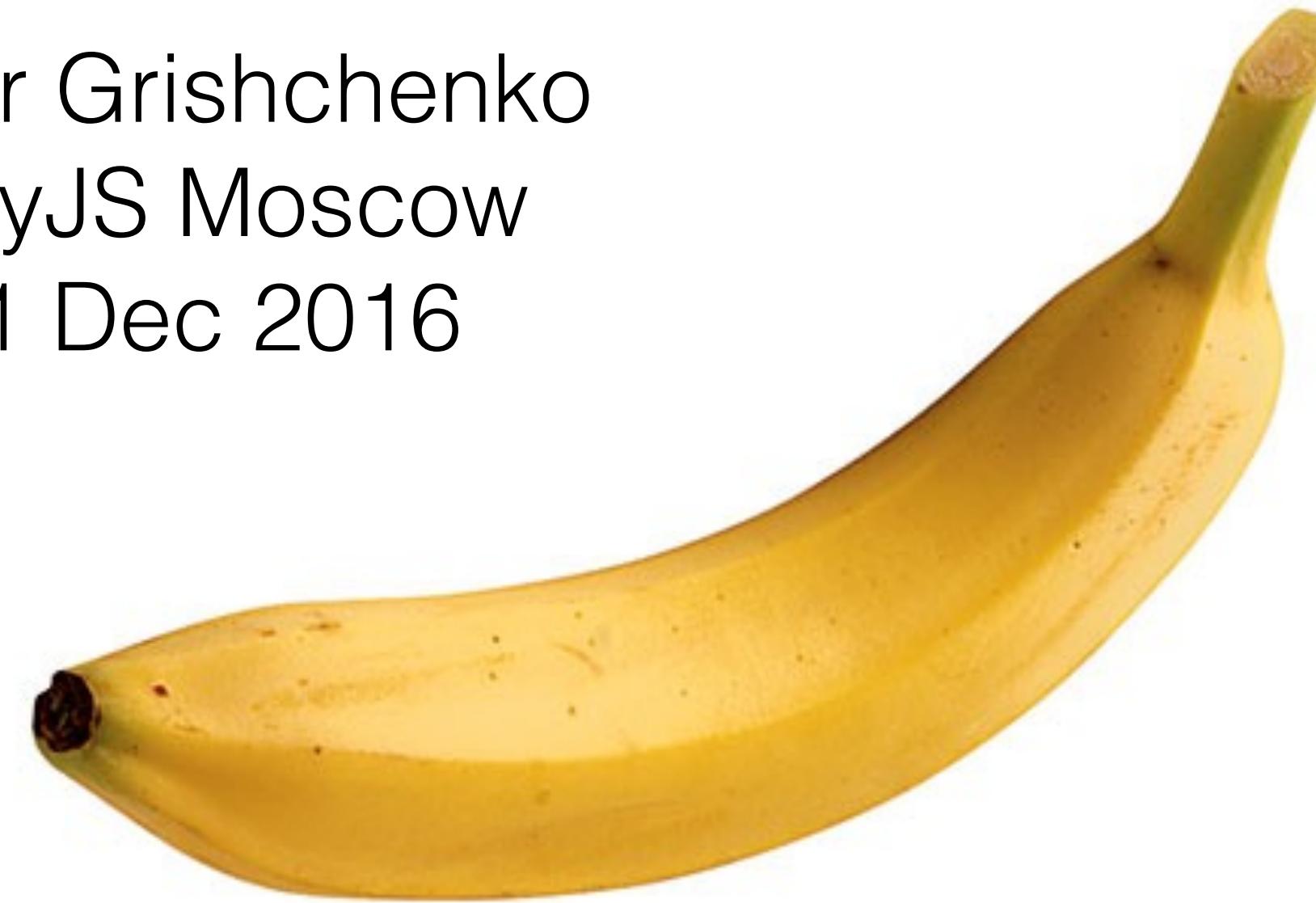


Bananas and boxes

Victor Grishchenko

HolyJS Moscow

11 Dec 2016





**You wanted a banana but what you got was a gorilla
holding the banana and the entire jungle.**
— Joe Armstrong

[Code](#)[Issues 1](#)[Pull requests 1](#)[Projects 0](#)[Wiki](#)[Pulse](#)[Graphs](#)

pipe together two shell commands full duplex

[3 commits](#)[1 branch](#)[1 release](#)[1 contributor](#)[MIT](#)

Branch: master ▾

[New pull request](#)[Create new file](#)[Upload files](#)[Find file](#)[Clone or download ▾](#) substack package.json whatever

Latest commit f0be03a on 9 Oct 2014

 bin	docs, usage	2 years ago
 example	working example	2 years ago
 LICENSE	package.json whatever	2 years ago
 package.json	package.json whatever	2 years ago
 readme.markdown	docs, usage	2 years ago

[readme.markdown](#)

dupsh

pipe together two shell commands full duplex

Given two shell commands `a` and `b`, pipe the output of `a` to the input of `b` and the output of `b` to the input of `a`:

```
a.stdout.pipe(b.stdin);
b.stdout.pipe(a.stdin);
```

```
gritzko@think:~/tmp$ npm i dupsh
/home/gritzko/tmp
└── dupsh@1.0.0 extraneous

npm WARN EPACKAGEJSON tmp No repository field.
npm WARN EPACKAGEJSON tmp No license field.
gritzko@think:~/tmp$ ls node_modules/
array-filter array-map array-reduce dupsh jsonify minimist shell-quote
gritzko@think:~/tmp$ find node_modules -name package.json | wc -l
7
gritzko@think:~/tmp$ find node_modules/ -name "*.js" -type f -exec cat {} \; | wc -l
2160
```

```
1 #!/bin/bash
2 coproc $1;
3 $2 >&${COPROC[1]} <&${COPROC[0]}
```

LoC Efficiency: $2/2160=0,00092592593$





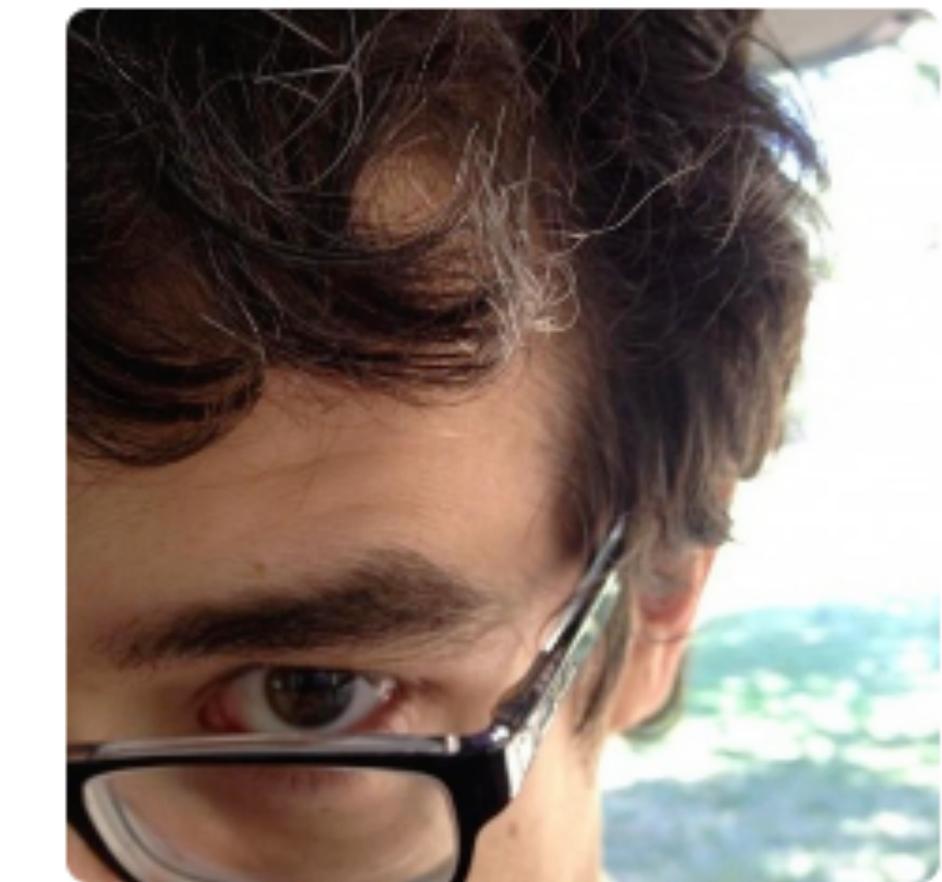
[Home](#)
[Testing with TAP](#)
[Producers](#)
[Consumers](#)

Test Anything Protocol

TAP, the Test Anything Protocol, is a simple text-based interface between testing modules in a test harness. TAP started life as part of the test harness for Perl but now has implementations in C, C++, Python, PHP, Perl, Java, JavaScript, and others.

Here's what a TAP test stream looks like:

```
1..4
ok 1 - Input file opened
not ok 2 - First line of the input valid
ok 3 - Read the rest of the file
not ok 4 - Summarized correctly # TODO Not written yet
```



isaacs

isaacs

npm inventor and CEO. Early contributor and former BDFL of Node.js. Author of many JavaScripts. Been making internets for a pretty long time.

Testing with TAP

- [Testing with TAP](#) - How to run TAP based tests in your language of choice

```
gritzko@think:~/tmp$ npm i tap  
/home/gritzko/tmp  
└─ tap@7.1.2 extraneous
```

```
gritzko@think:~/tmp$ ls node_modules/ | wc -l  
116  
gritzko@think:~/tmp$ find node_modules/ -name  
package.json | wc -l  
310
```

LoC Eff = 36/310=0,11612903225806



```
└─ prebuild@4.2.2
    └─ async@1.5.2
    └─ expand-template@1.0.2
    └─ ghreleases@1.0.5
        └─ after@0.8.2
        └─ ghrepos@2.0.0
        └─ ghutils@3.2.0
            └─ jsonist@1.2.0
                └─ hyperquest@1.2.0
                    └─ duplexer2@0.0.2
                        └─ readable-stream@1
                            └─ isarray@0.0.1
                        └─ through2@0.6.5
                            └─ readable-stream@1
                                └─ isarray@0.0.1
                └─ simple-mime@0.1.0
                └─ url-template@2.0.8
                └─ github-from-package@0.0.0
                └─ minimist@1.2.0
                └─ mkdirp@0.5.1
                    └─ minimist@0.0.8
                └─ node-gyp@3.4.0
                    └─ fstream@1.0.10
                    └─ graceful-fs@4.1.6
                    └─ nopt@3.0.6
                        └─ abbrev@1.0.9
                    └─ osenv@0.1.3
                        └─ os-tmpdir@1.0.1
                    └─ path-array@1.0.1
                        └─ array-index@1.0.0
                            └─ debug@2.2.0
                                └─ ms@0.7.1
                            └─ es6-symbol@3.1.0
                                └─ d@0.1.1
                            └─ es5-ext@0.10.12
                                └─ es6-iterator@2.0
                    └─ request@2.74.0
                        └─ aws-sign2@0.6.0
                        └─ aws4@1.4.1
                        └─ bl@1.1.2
                        └─ caseless@0.11.0
                        └─ combined-stream@1.0.5
                        └─ delayed-stream@1.0.0
                    └─ extend@3.0.0
```

```
└─ forever-agent@0.6.1
    └─ form-data@1.0.1
    └─ har-validator@2.0.6
        └─ chalk@1.1.3
            └─ ansi-styles@2.2.1
            └─ escape-string-regexp
            └─ has-ansi@2.0.0
                └─ ansi-regex@2.0.0
            └─ strip-ansi@3.0.1
            └─ supports-color@2.0.
        └─ commander@2.9.0
            └─ graceful-readlink@1
        └─ is-my-json-valid@2.13
        └─ generate-function@2
        └─ generate-object-pro
            └─ is-property@1.0.2
        └─ jsonpointer@2.0.0
        └─ pinkie-promise@2.0.1
            └─ pinkie@2.0.4
        └─ hawk@3.1.3
            └─ boom@2.10.1
            └─ cryptiles@2.0.5
            └─ hoek@2.16.3
            └─ sntp@1.0.9
        └─ http-signature@1.1.1
            └─ assert-plus@0.2.0
            └─ jsprim@1.3.0
                └─ extsprintf@1.0.2
                └─ json-schema@0.2.2
            └─ verror@1.3.6
            └─ sshpk@1.10.0
            └─ asn1@0.2.3
            └─ assert-plus@1.0.0
            └─ bcrypt-pbkdf@1.0.0
                └─ tweetnacl@0.14.3
            └─ dashdash@1.14.0
                └─ assert-plus@1.0.0
            └─ ecc-jsbn@0.1.1
            └─ getpass@0.1.6
                └─ assert-plus@1.0.0
            └─ jodid25519@1.0.2
            └─ jsbn@0.1.0
            └─ tweetnacl@0.13.3
        └─ is-typedarray@1.0.0
```

```
└─ isstream@0.1.2
    └─ json-stringify-safe@5.
    └─ mime-types@2.1.11
        └─ mime-db@1.23.0
    └─ node-uuid@1.4.7
    └─ oauth-sign@0.8.2
    └─ qs@6.2.1
        └─ stringstream@0.0.5
    └─ tough-cookie@2.3.1
    └─ tunnel-agent@0.4.3
    └─ semver@5.3.0
    └─ tar@2.2.1
        └─ block-stream@0.0.9
    └─ which@1.2.10
        └─ isexe@1.1.2
    └─ node-ninja@1.0.2
    └─ noop-logger@0.1.1
    └─ npmlog@2.0.4
        └─ ansi@0.3.1
        └─ are-we-there-yet@1.1.2
            └─ delegates@1.0.0
        └─ gauge@1.2.7
            └─ has-unicode@2.0.1
            └─ lodash.pad@4.5.1
            └─ lodash.padend@4.6.1
            └─ lodash.padstart@4.6.1
        └─ os-homedir@1.0.1
        └─ pump@1.0.1
            └─ end-of-stream@1.1.0
        └─ rc@1.1.6
            └─ deep-extend@0.4.1
            └─ ini@1.3.4
            └─ strip-json-comments@1.0.4
        └─ simple-get@1.4.3
        └─ unzip-response@1.0.0
        └─ tar-fs@1.13.2
        └─ tar-stream@1.5.2
            └─ bl@1.0.3
            └─ readable-stream@2.0.6
            └─ core-util-is@1.0.2
            └─ isarray@1.0.0
            └─ process-nextick-args@1.
            └─ string_decoder@0.10.31
            └─ util-deprecate@1.0.2
```

\$ make

```
leveldb$ time make > /dev/null  
ar: creating archive out-static/libleveldb.a  
ar: creating archive out-static/libmemenv.a
```

```
real 1m38.052s  
user 1m22.489s  
sys 0m8.304s
```

```
leveldb$ ls -sk out-static/libleveldb.a  
512 out-static/libleveldb.a
```

```
gritzko@think:~/tmp$ du -sh node_modules/  
27M node_modules/
```

LoC Eff = 512/27160=0,01885125184094



Frontend Boilerplate

A boilerplate of things that mostly shouldn't exist.

Contains

- [Webpack](#)
- [React](#)
- [Redux](#)
- [Babel](#)
- [Autoprefixer](#)
- [PostCSS](#)
- [CSS modules](#)
- [Rucksack](#)
- [React Router Redux](#)
- [Redux DevTools Extension](#)
- [Redux effects](#)
- [TodoMVC example](#)

<https://github.com/tj/frontend-boilerplate>

```
└─ webpack-hot-middleware@2.12.2
    └─ ansi-html@0.0.5
    └─ html-entities@1.2.0
    └─ querystring@0.2.0
```

```
gritzko@think:~/Projects/frontend-boilerplate$ du -sh node_modules/
71M node_modules/
gritzko@think:~/Projects/frontend-boilerplate$ find node_modules -name
package.json | wc -l
511
gritzko@think:~/Projects/frontend-boilerplate$ find . -name "*.js" -type f
-exec cat {} \; | wc -l
596633
gritzko@think:~/Projects/frontend-boilerplate$ find . -name "*.js" -type f
-exec cat {} \; | wc -c
21726735
```

600KLoC
.js 20MB+

LoC Eff = ???





**We can solve any
problem by introducing
an extra level of
indirection... except for
the problem of too many
levels of indirection**

Fundamental theorem of
software engineering

M

SQL

AJAX

REST

GraphQL

db

V

HTML

DOM

CSS

vDOM

fn

C

JavaScript

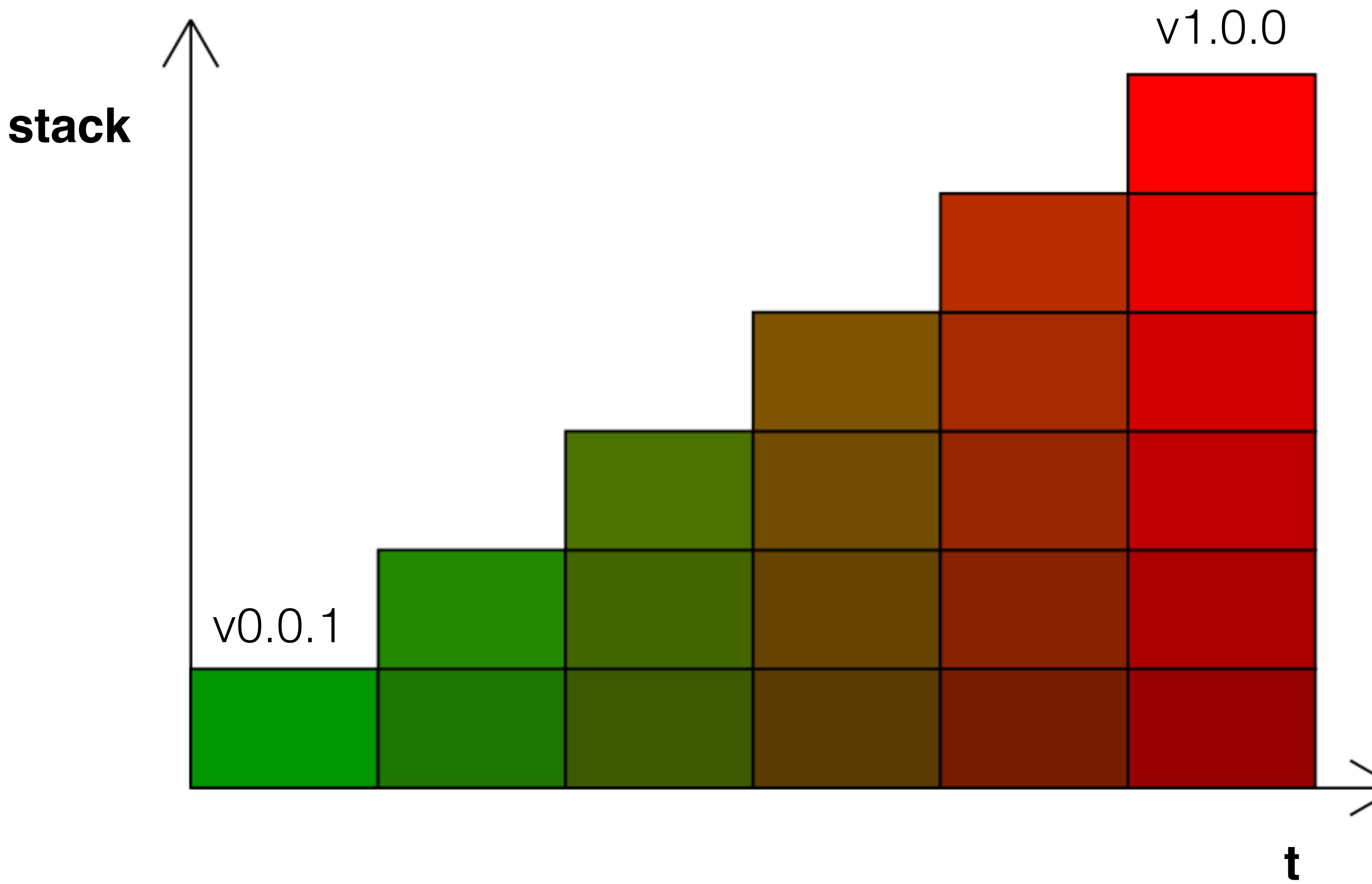
CoffeeScript

TypeScript

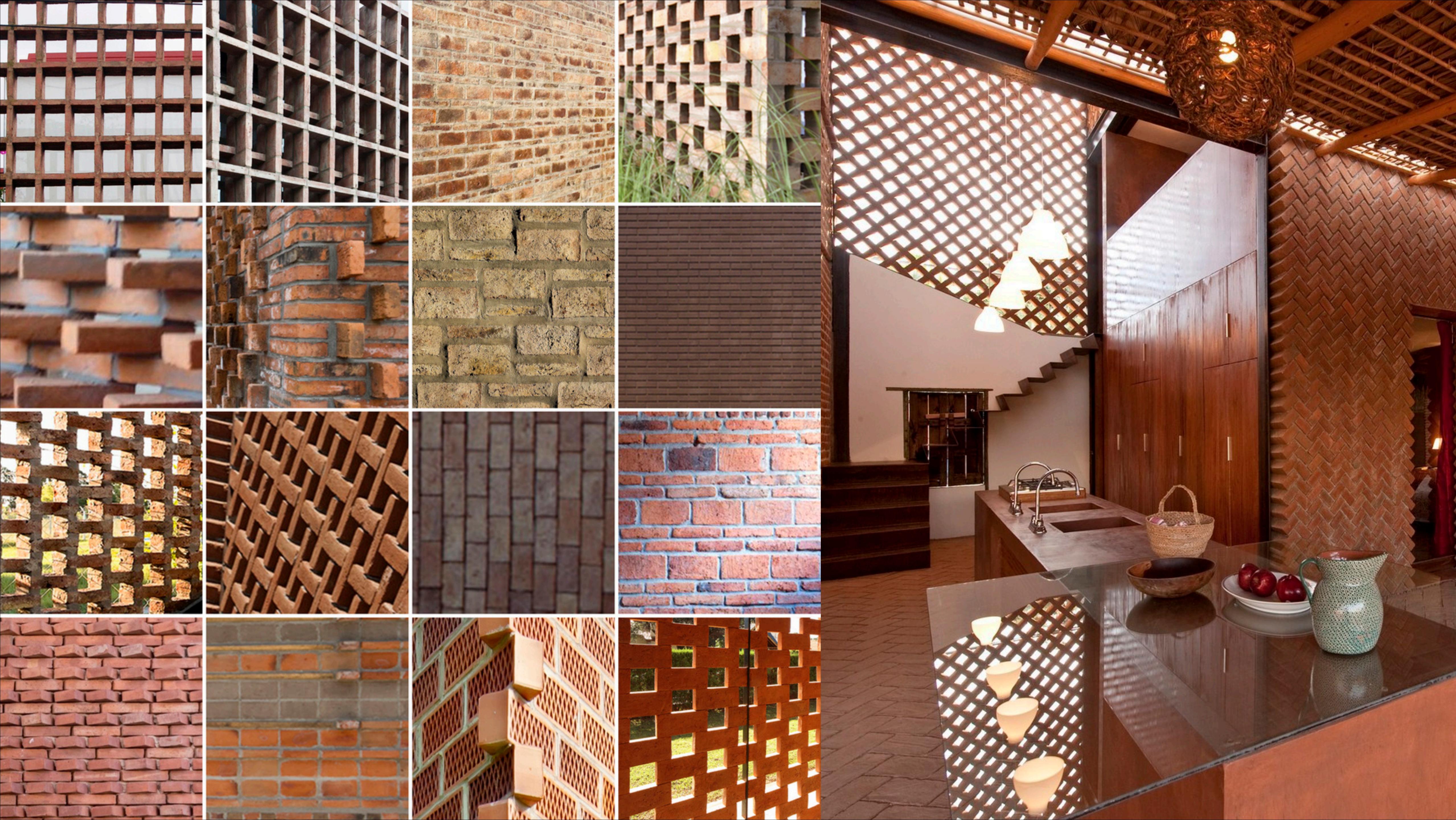
ES6

JSX

fn

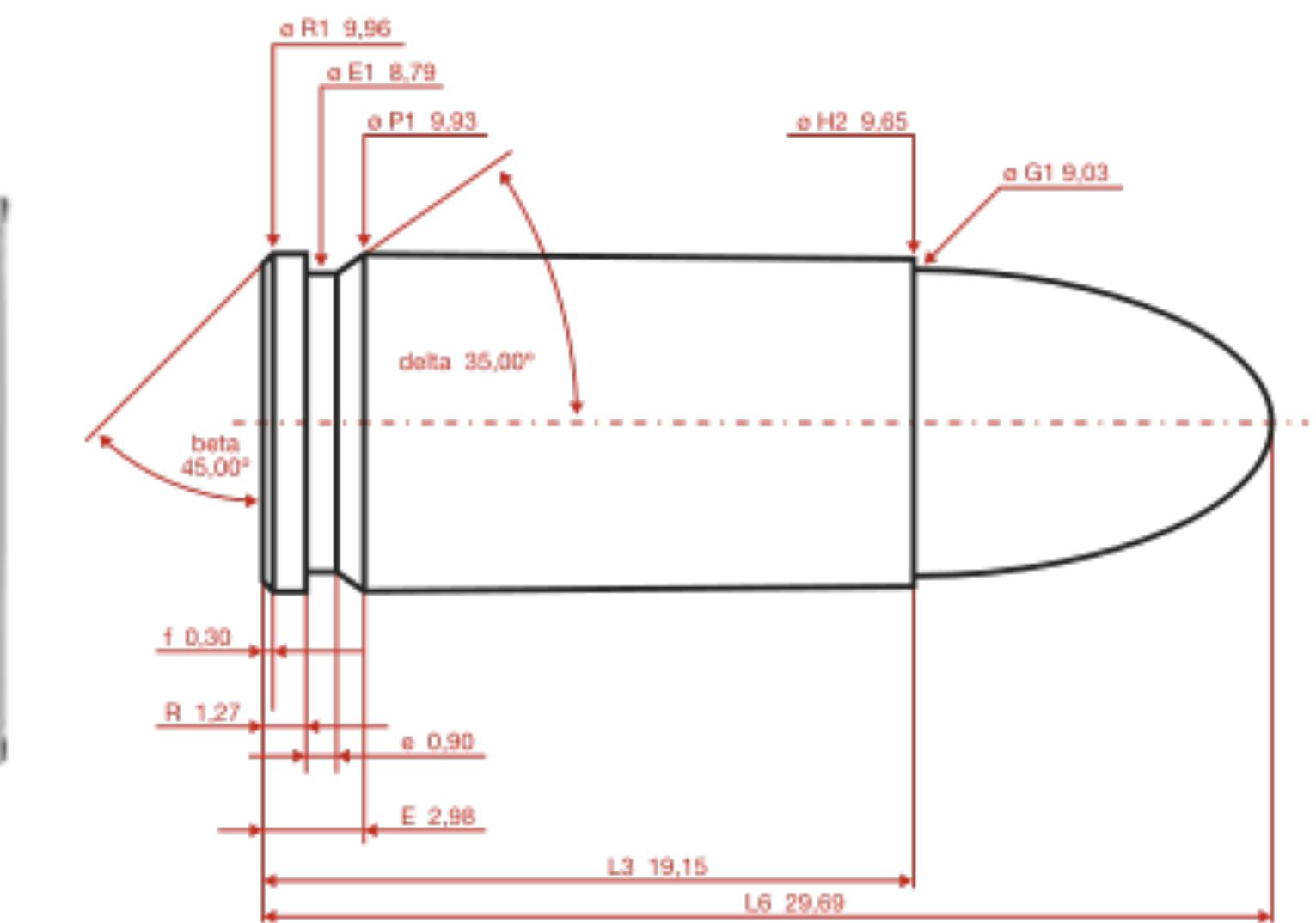




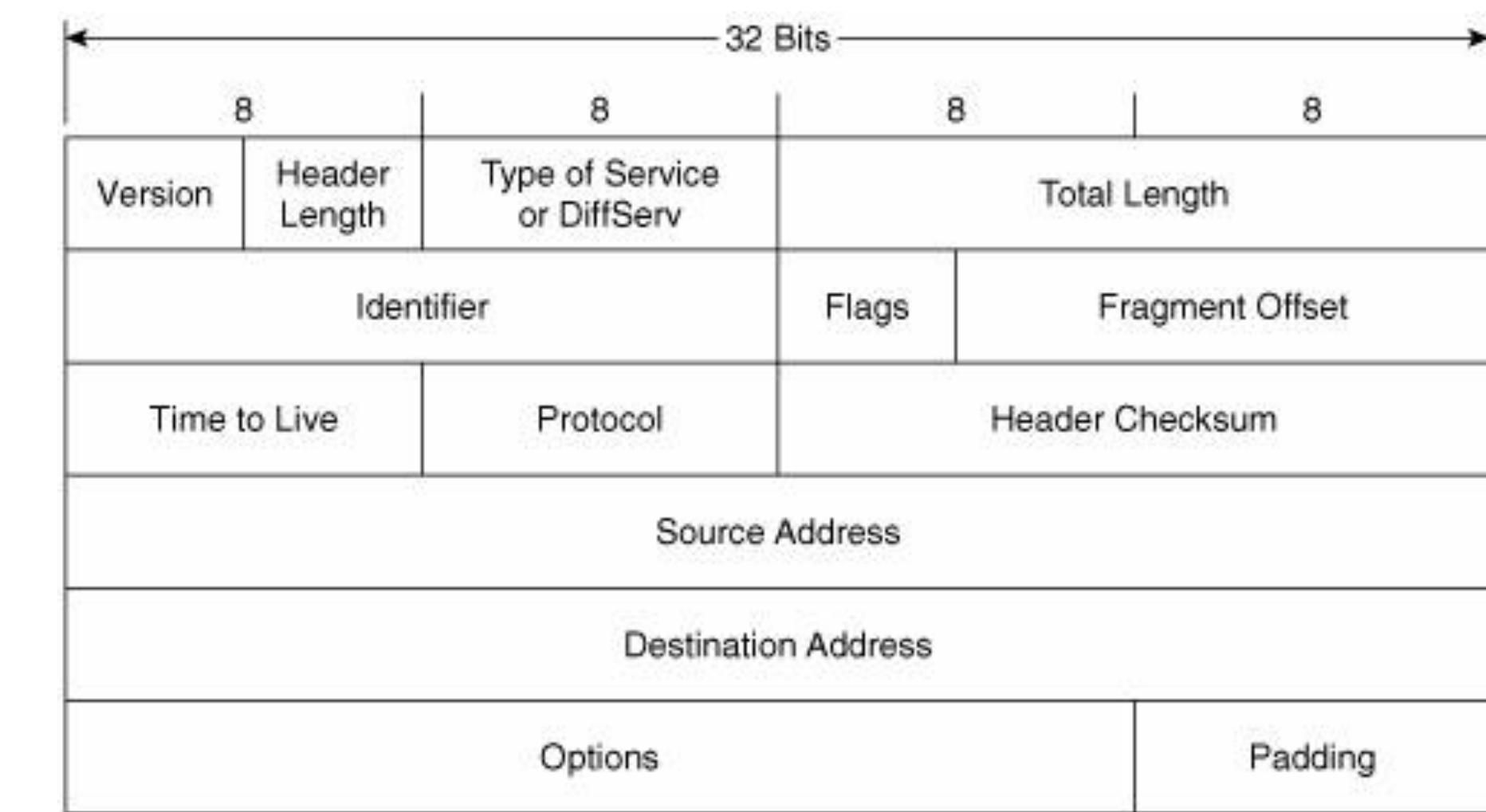








法

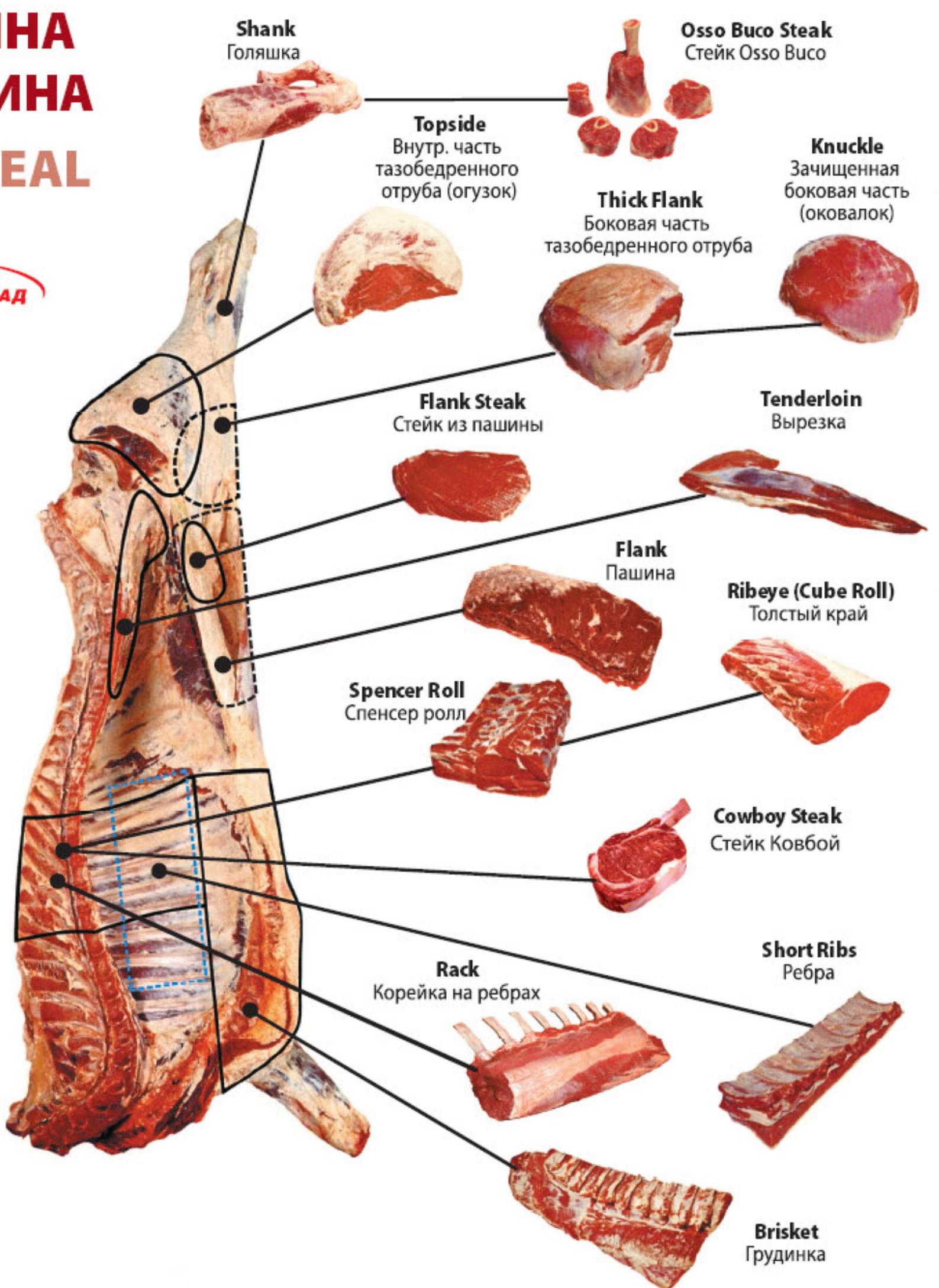
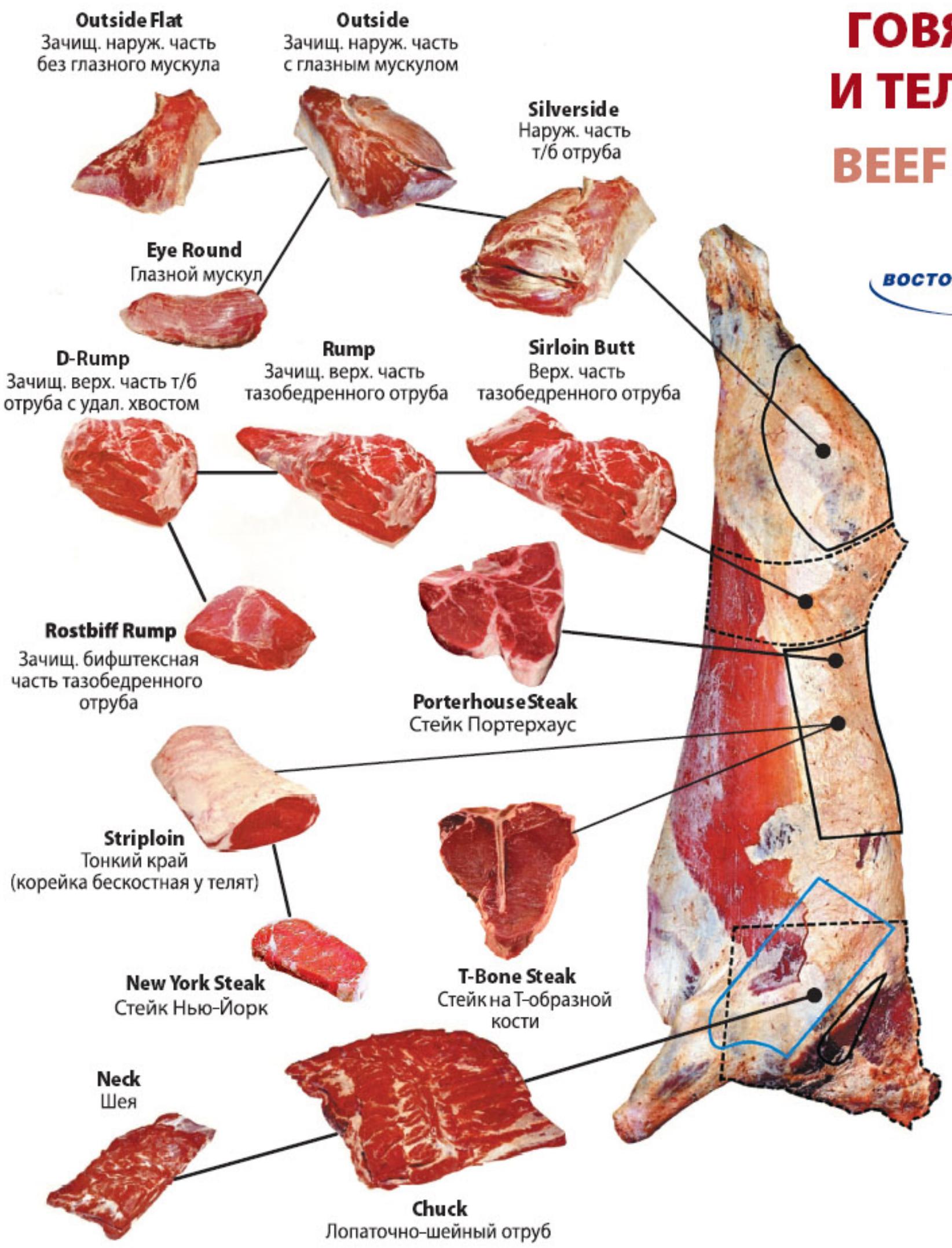
A large, bold, black Chinese character "法" (Law).



ГОВЯДИНА И ТЕЛЯТИНА

BEEF & VEAL

ВОСТОК  ЗАПАД



* Пропорциональность размеров отрубов не соблюдена

v *R* *B*
d → **v** → **h** → **p**

Context

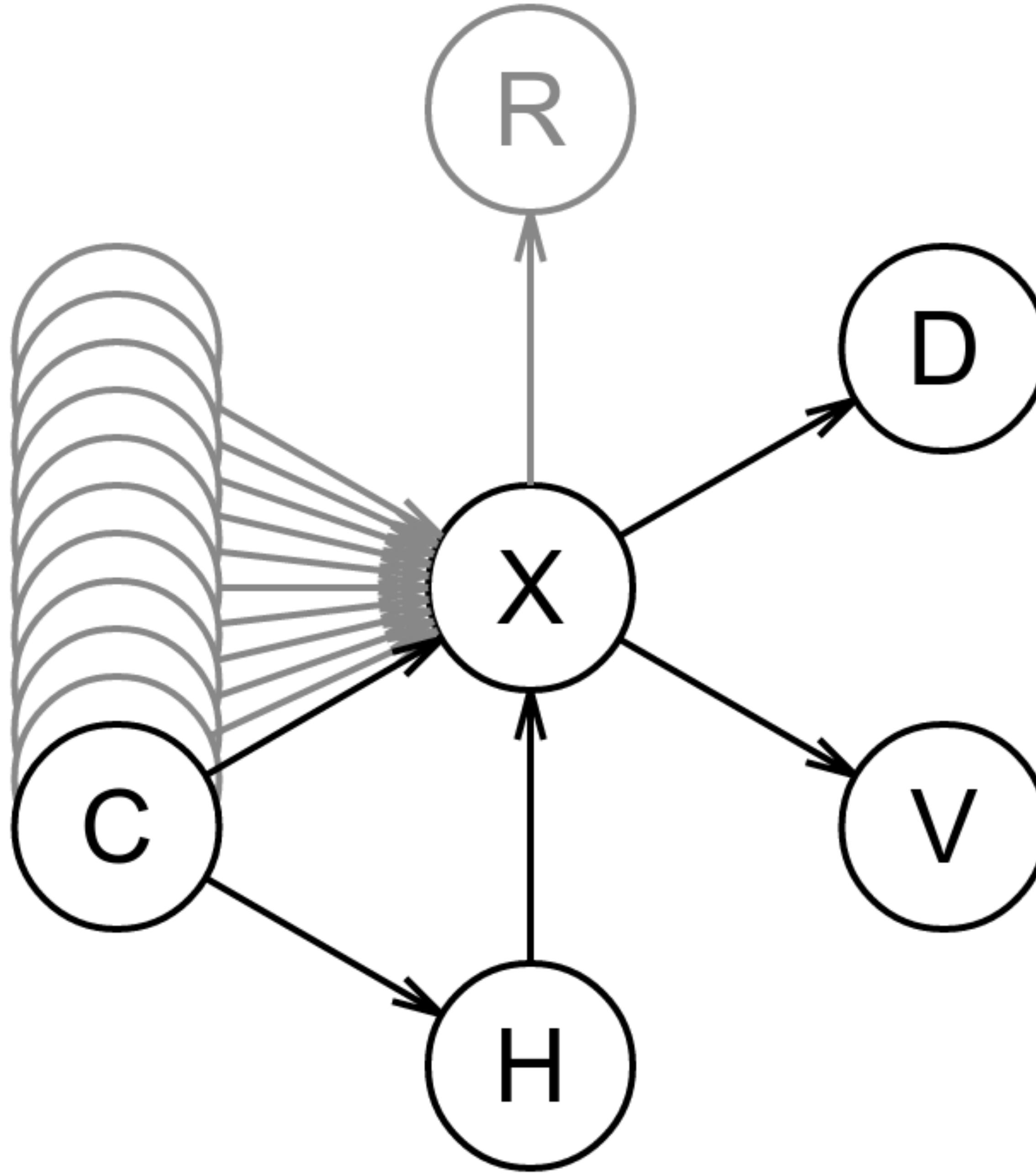
Side effects

#1JA6Ue-Rgritzko01 .json @1JA6Uz-Rgritzko01 .done false

#1JA6Ue-Rgritzko01 .json @1JA6k-Rgritzko01 .ref #1JA1u-Rgritzko01.json

#1JA6Ue-Rgritzko01 .json @0 .~on { "load" : "ref/*" }

#1JA6Zu-Rgritzko01 .fn #1JA6Zu-Rgritzko01 .js (x) => "" + x + ""



@gritzko

