CUPID – for joyful coding

Daniel Terhorst-North

@tastapod

motivation: not so SOLID

1. PubConf
   - poking the bear
2. Extreme Tuesday Club
   - accepting a challenge
3. Online conferences
   - working to a deadline!

setting the scene

who are we writing code for?

“Any fool can write code that a computer can understand.
Good programmers write code that humans can understand.”

– Martin Fowler

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Can we do better than understand?

“Habitability is the characteristic of source code that enables [people] to understand its construction and intentions and to change it comfortably and confidently.

“Habitability makes a place liveable, like home.”

– Richard P. Gabriel

habitable sounds better! What about joyful?

Think about a codebase that is joyful to work with

Can we describe what makes it joyful?

What kind of properties does joyful code have?

properties over principles

Principles are rules or guidelines

- They define conditions or boundaries
- Your code either conforms to the conditions or it is wrong

Properties are qualities or characteristics

- They define a goal or centre to move towards
- Your code is only ever closer to or further from the centre

properties for properties

practical

- easy to articulate, easy to assess, easy to adopt

human

- from the perspective of readers as well as writers

layered

- guidance for beginners, nuance for the more experienced

CUPID – for joyful coding

Composable	– plays well with others
Unix philosophy	– does one thing well
Predictable	– does what you expect
Idiomatic	– feels natural
Domain-based	– in language and structure

Composable

Code that is easy to use gets used, and used, and used!

Small “surface area”

- less to learn, less to go wrong, less to conflict

Intention-revealing name and purpose

- easy to discover, easy to evaluate

Minimal dependencies

- “You wanted a banana but you got a whole gorilla” – Joe Armstrong

Unix philosophy

"Make each program do one thing well" – and only one thing

- `ls` lists file details (but it doesn't inspect files!)

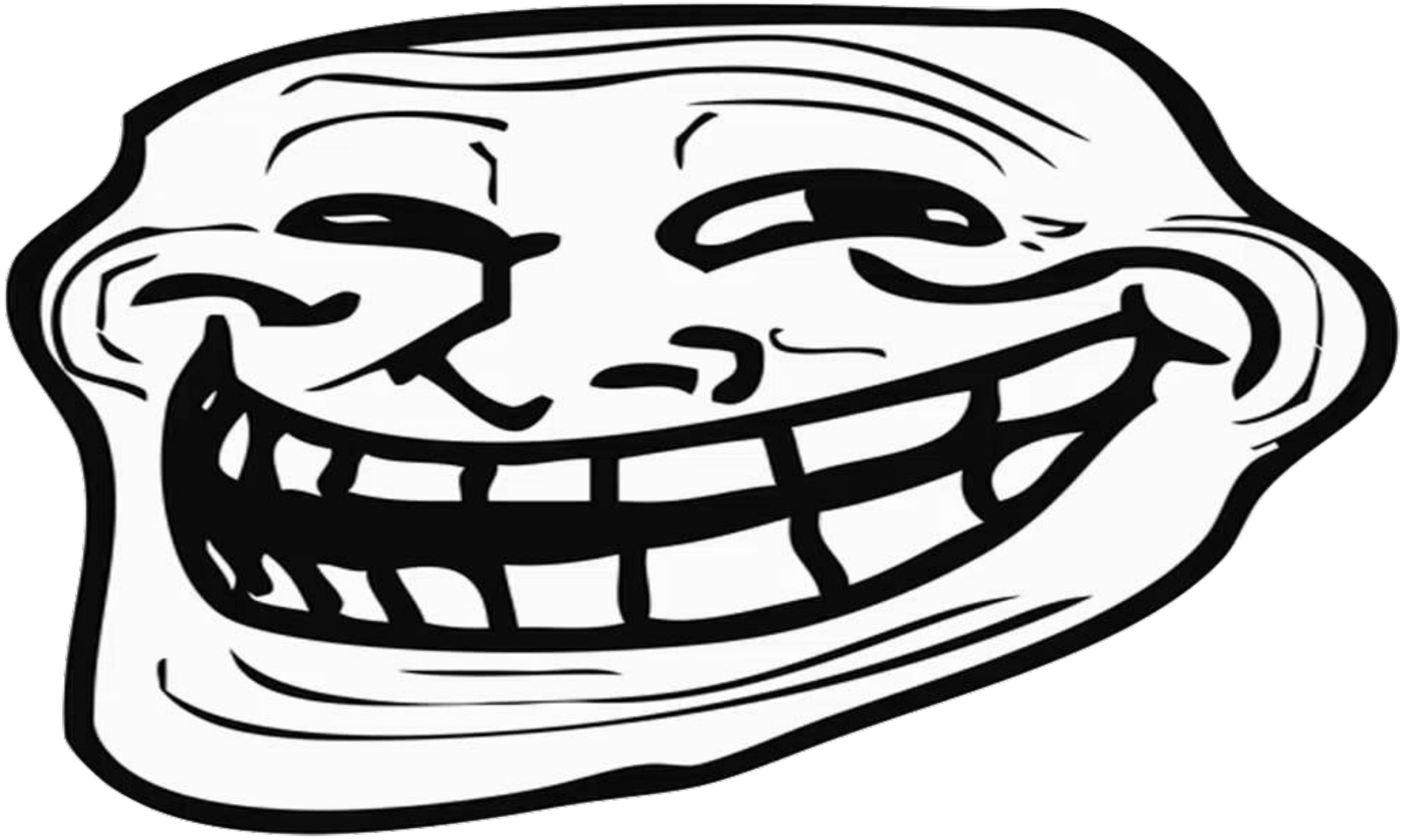
Together with composability, there is nothing you can't do!

- *"Expect the output of every program to become the input to another"*
- `cat | grep | sed | sort | uniq | …`

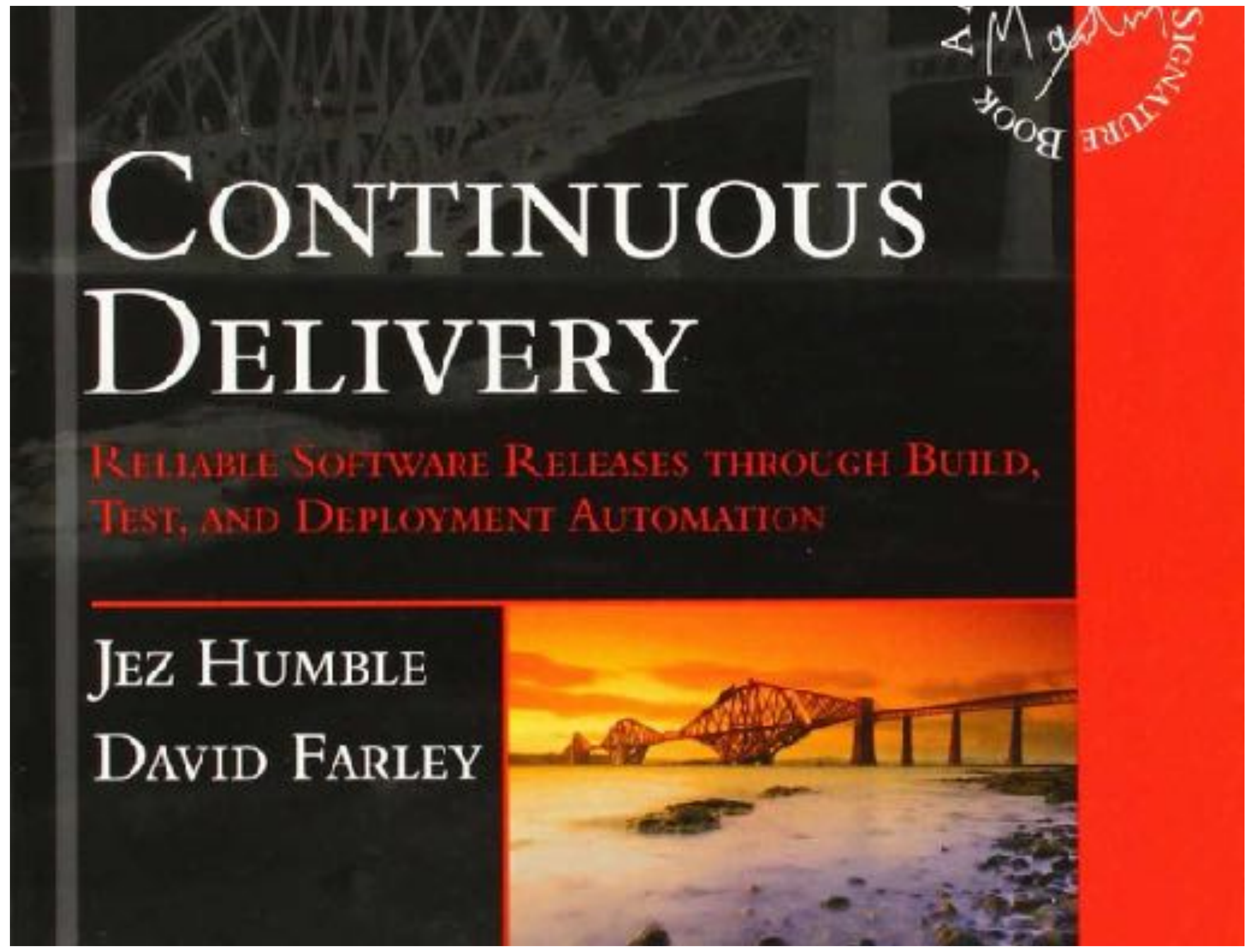
Different from SRP

- about what the code does, not how the code changes

we interrupt this talk…



ageing like wine vs ageing like milk


A Martin Fowler Signature Book
Continuous Delivery
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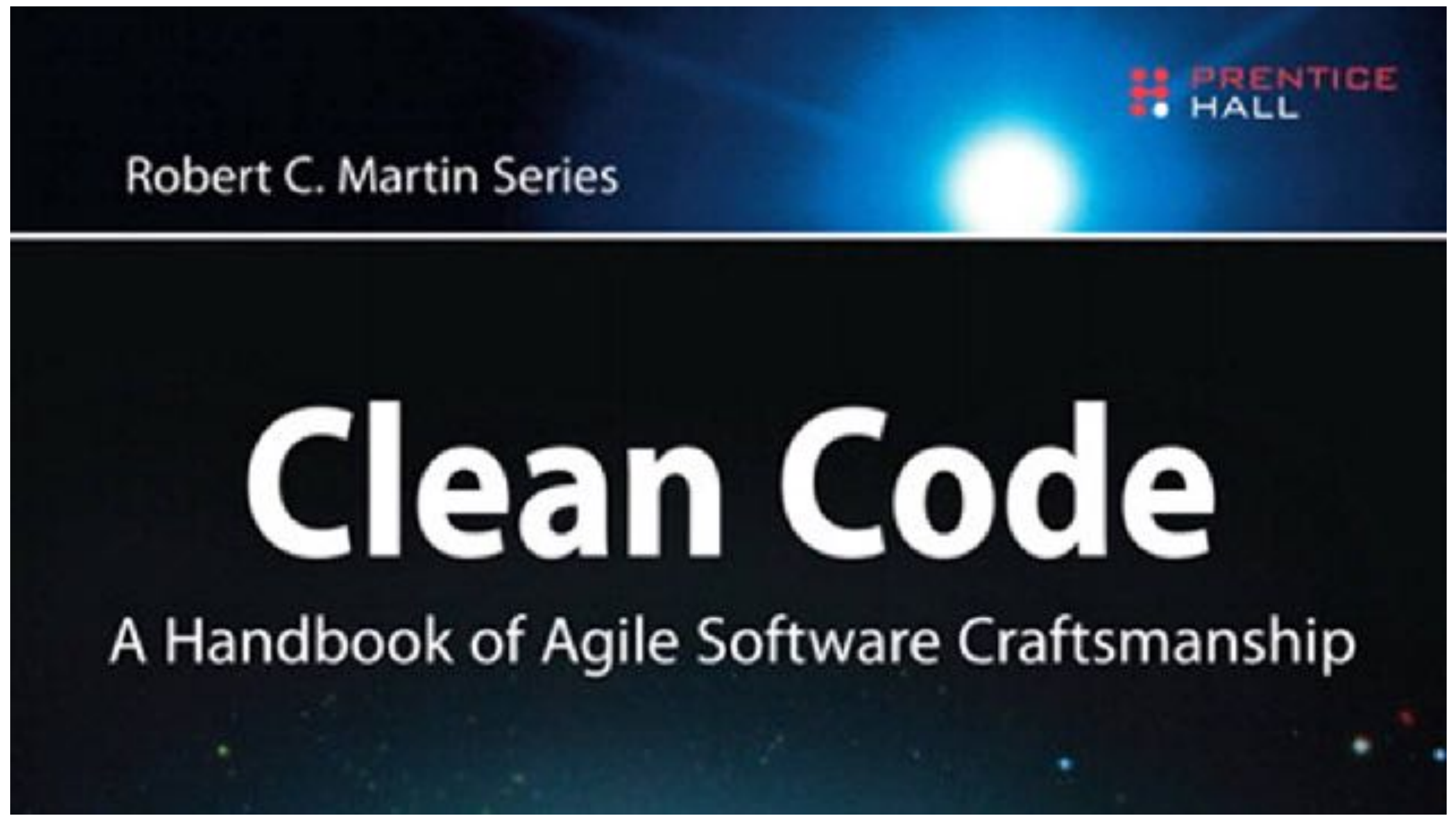

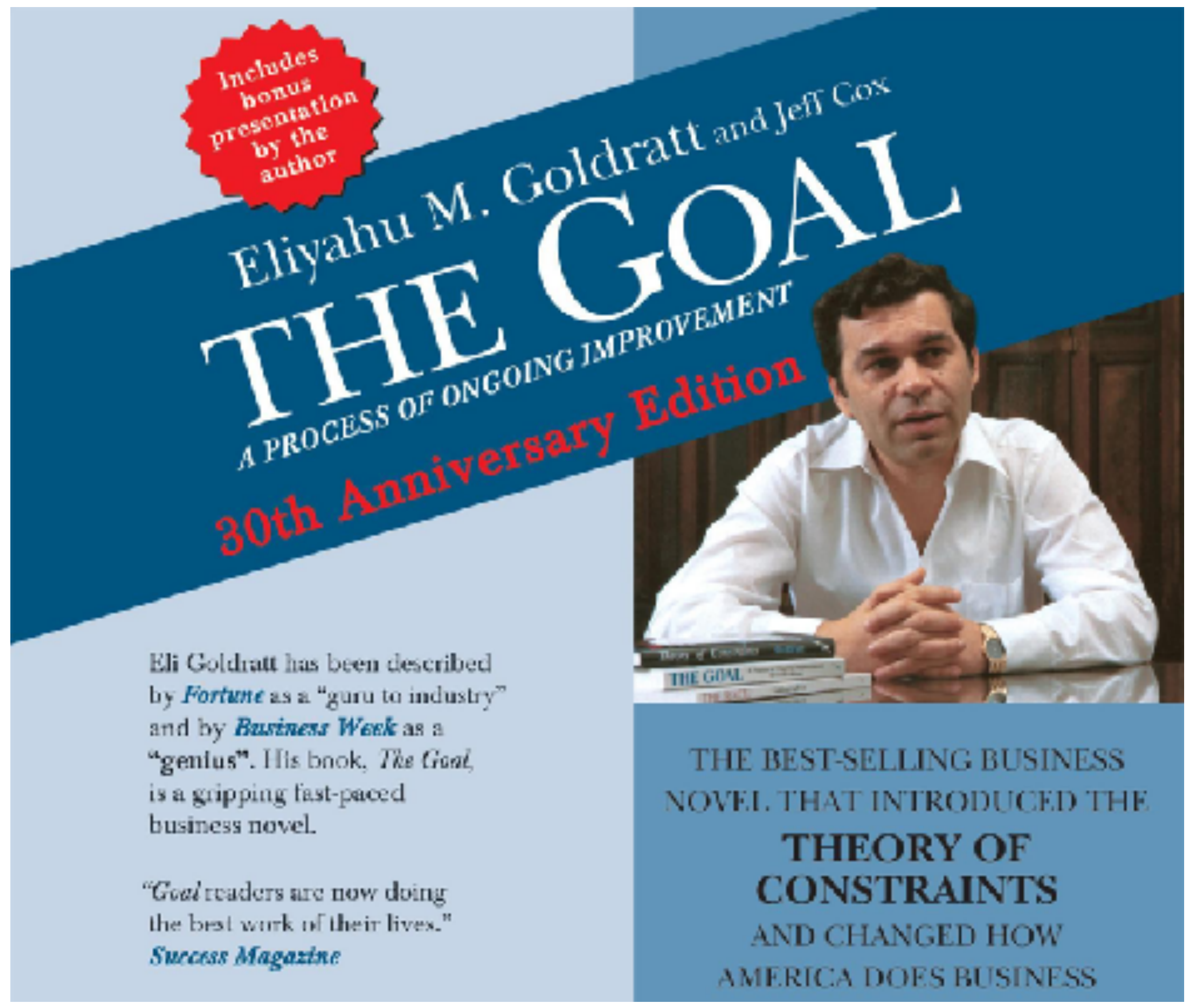
Includes bonus presentation by the author
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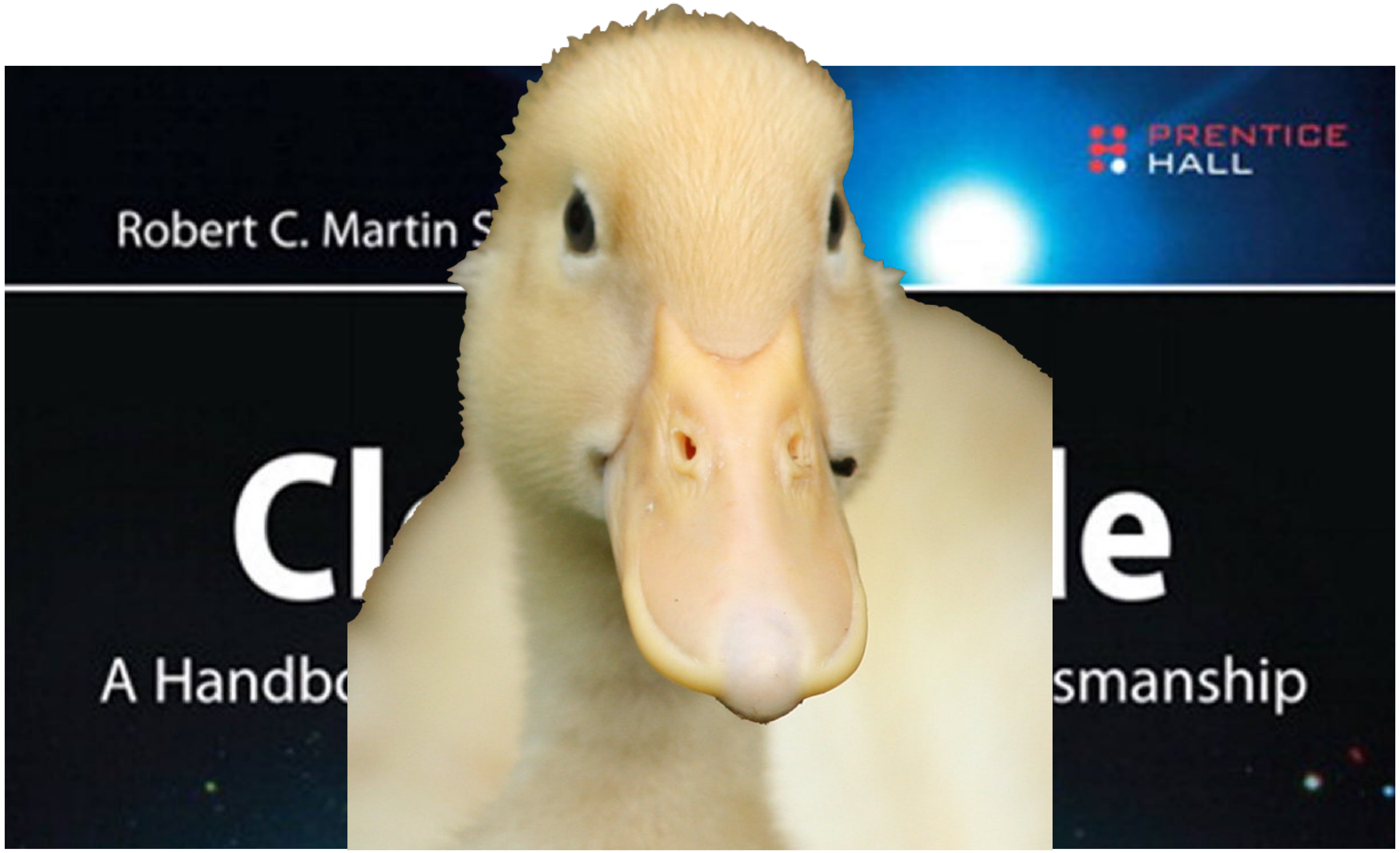
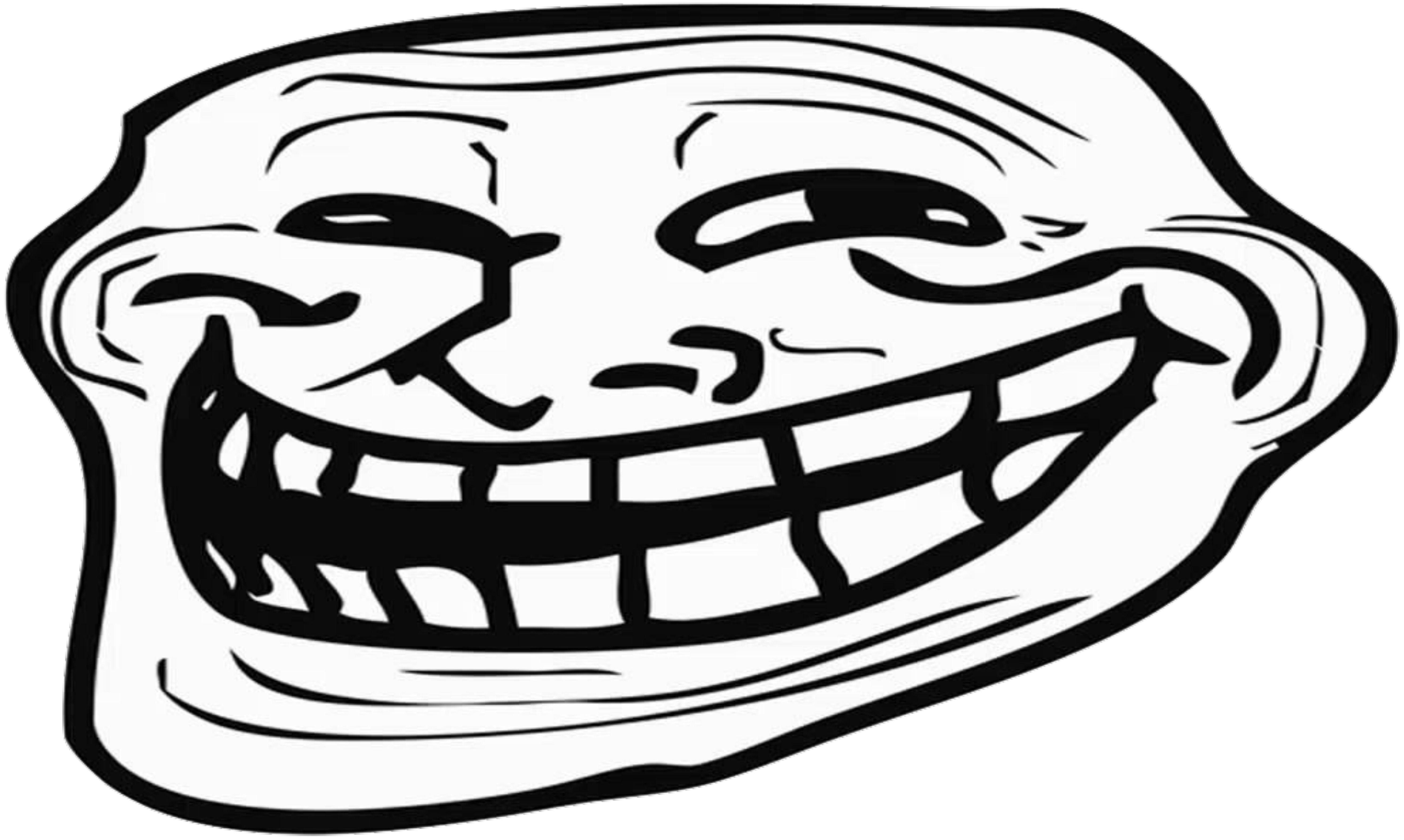
ageing like milk



we now return to your scheduled talk…



Predictable

Behaves as expected, with no surprises

- "Passes all tests" – Kent Beck
- even when there are no tests!

Deterministic

- does the same thing every time
- well-understood operating characteristics

Observable

- in the technical sense – internal state can be inferred from outputs
- instrumentation, telemetry

Idiomatic

Uses language idioms

- standard features, constructs, libraries, frameworks, tools
- feels natural to work with, goes with the grain

Uses local idioms

- house style: coding/design standards*, or *de facto*
- aligned with project, dependencies, platforms, organisation

* caution: may not exist!

You can only write idiomatic code if you learn the idioms!

Domain-based

Uses domain language

- “Code in the language of the domain” – *97 Things* ☺
- and remember, there are multiple domains

Uses domain structure

- Code for the solution, not the framework
- payments, loans, onboarding not models, views, controllers

Uses domain boundaries

- as module boundaries, units of deployment

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CUPID applied

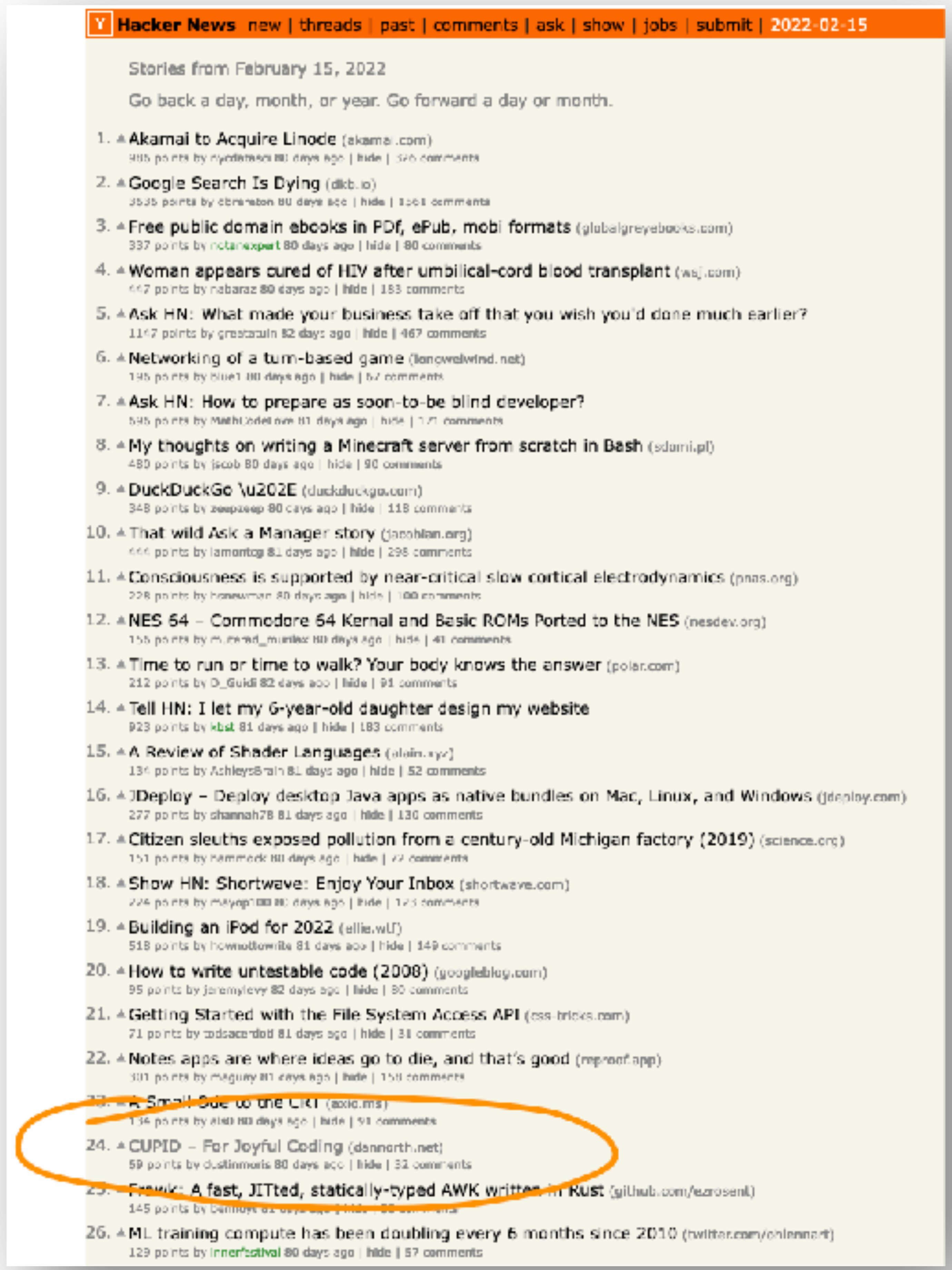
Lens for assessing a codebase

Basis for a “Code Critique”

Deciding where to start with ~~scary~~ legacy code

Syllabus for a programming course

one(ish) year later…



Hacker News new | threads | past | comments | ask | show | jobs | submit | 2022-02-15

Stories from February 15, 2022

Go back a day, month, or year. Go forward a day or month.

1. ▲ Akamai to Acquire Linode (akamai.com)
   [illegible] points by [illegible] days ago | hide | [illegible] comments
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    59 points by dustinmoris 80 days ago | hide | 32 comments
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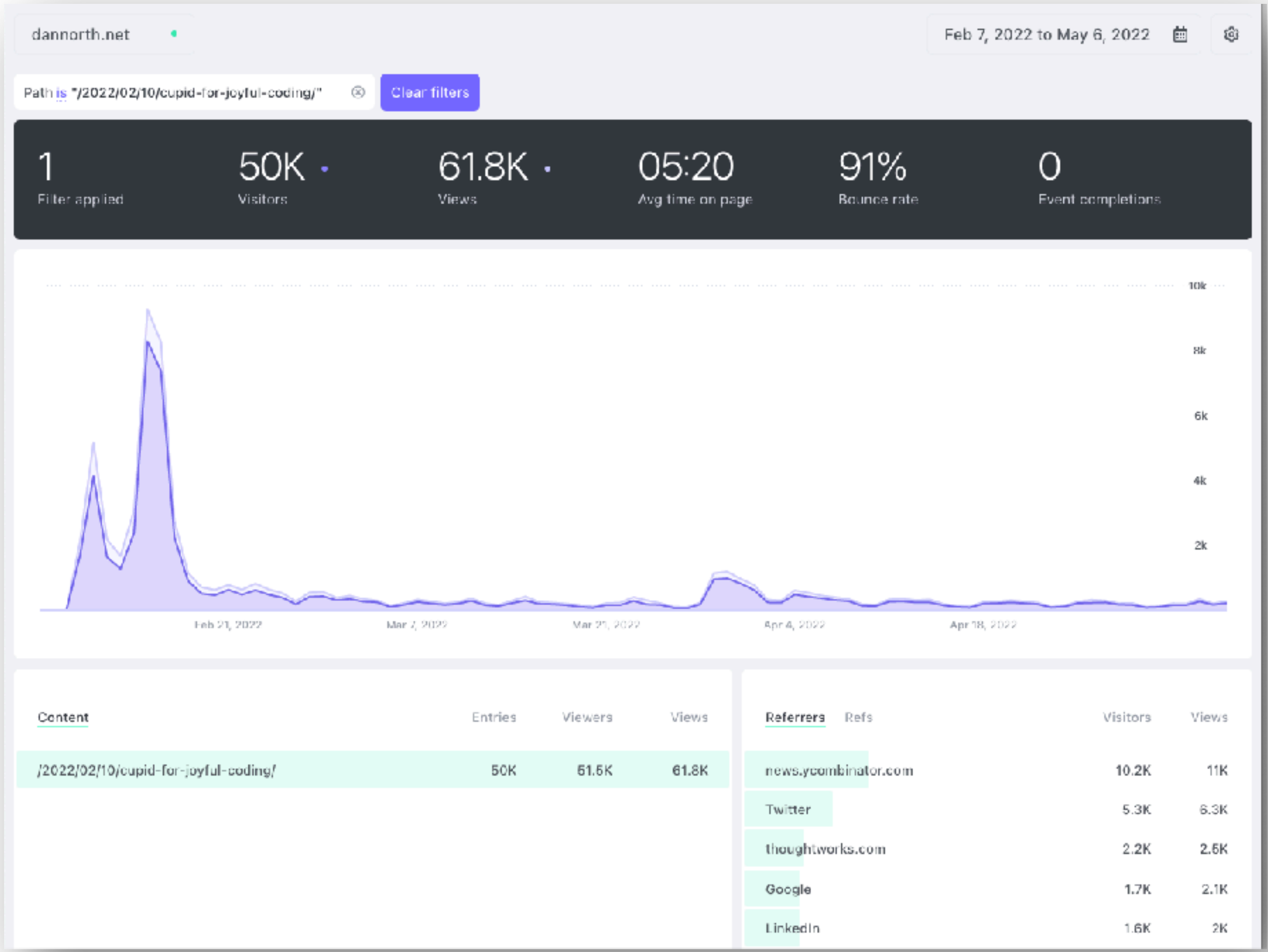
spiky traffic is spiky!



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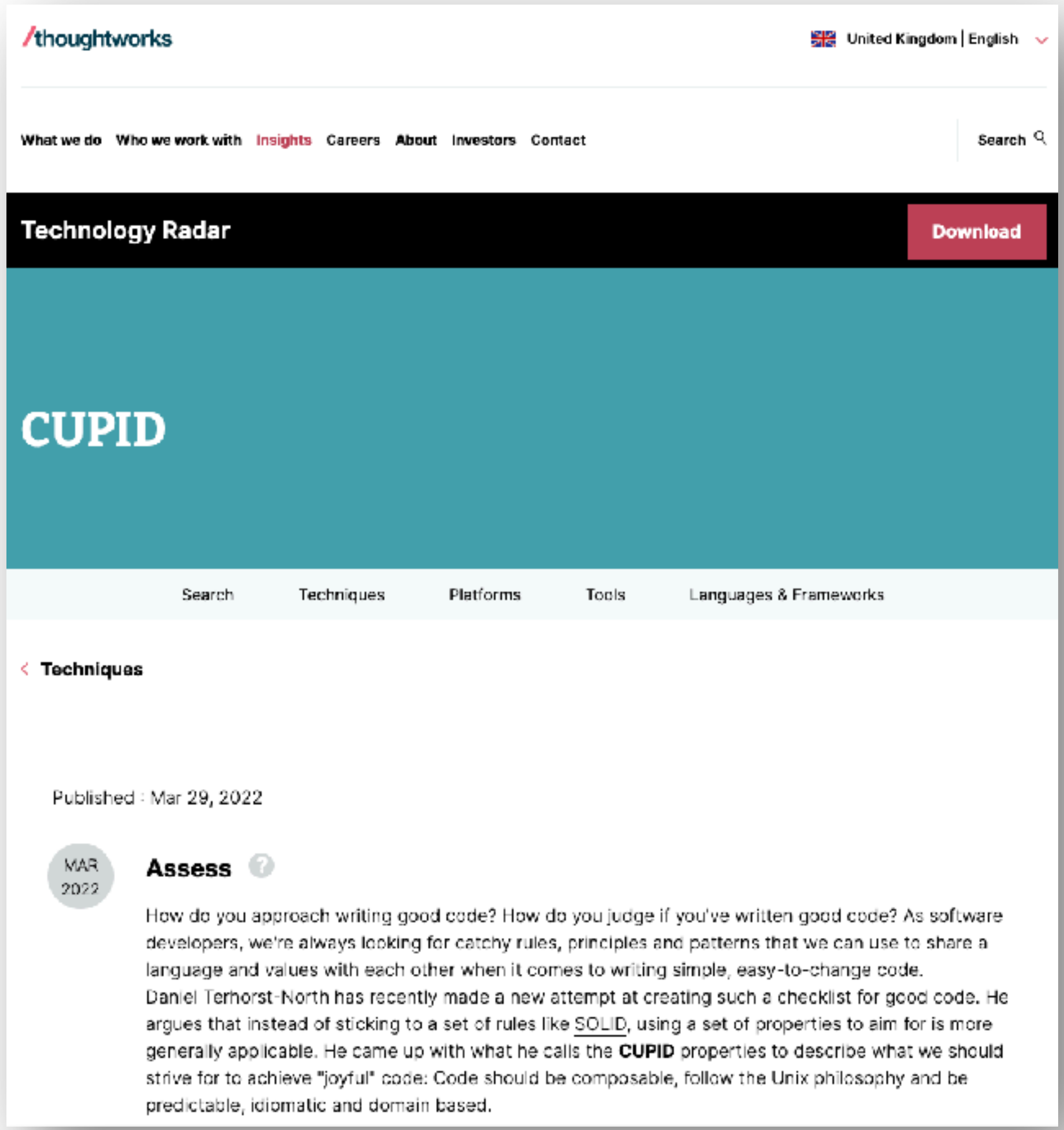
literally on the radar



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MAR 2022

Assess

How do you approach writing good code? How do you judge if you've written good code? As software developers, we're always looking for catchy rules, principles and patterns that we can use to share a language and values with each other when it comes to writing simple, easy-to-change code.
Daniel Terhorst-North has recently made a new attempt at creating such a checklist for good code. He argues that instead of sticking to a set of rules like SOLID, using a set of properties to aim for is more generally applicable. He came up with what he calls the **CUPID** properties to describe what we should strive for to achieve "joyful" code: Code should be composable, follow the Unix philosophy and be predictable, idiomatic and domain based.

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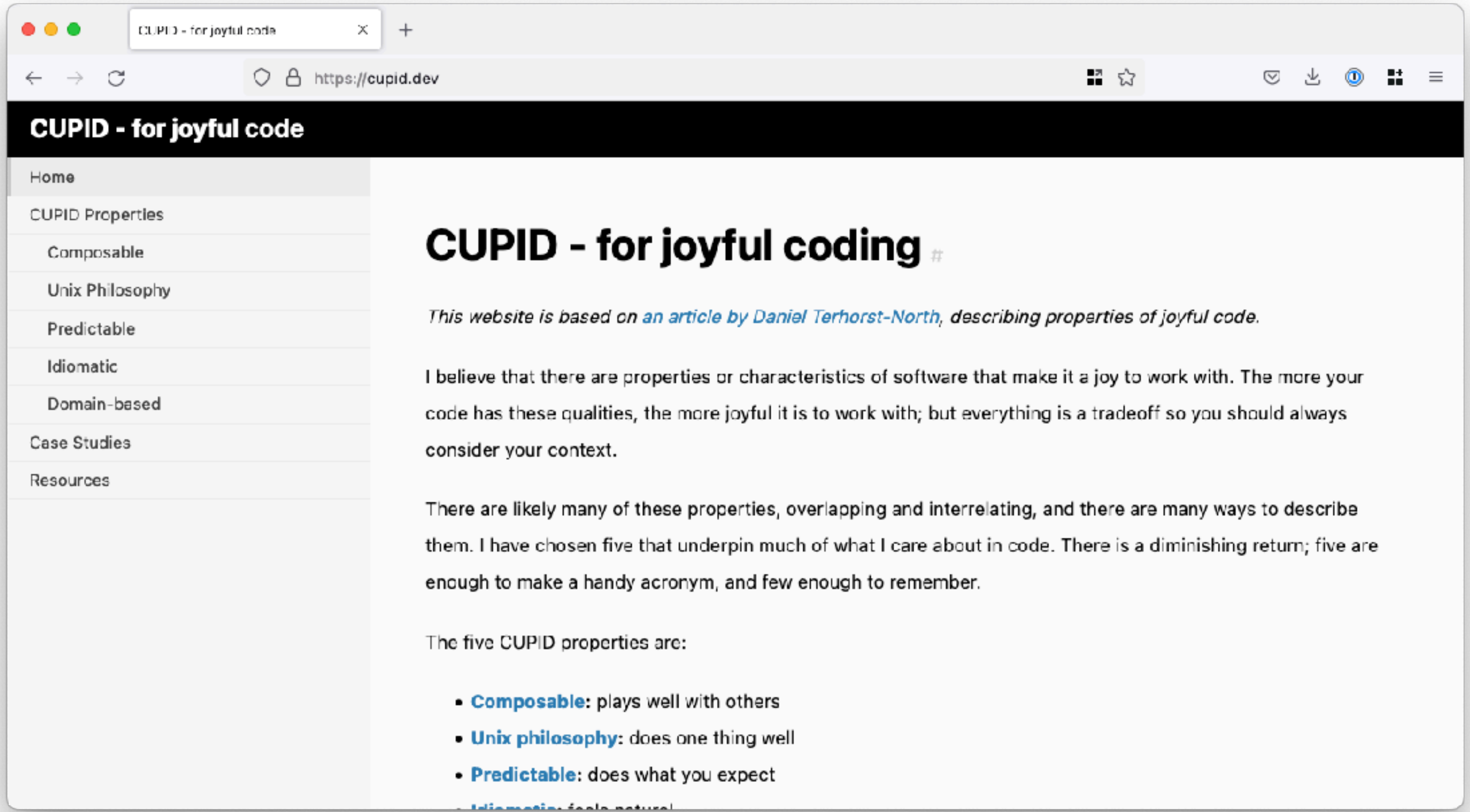
...and we're live! – cupid.dev



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https://cupid.dev

CUPID - for joyful code

- Home
- CUPID Properties
  - Composable
  - Unix Philosophy
  - Predictable
  - Idiomatic
  - Domain-based
- Case Studies
- Resources

CUPID - for joyful coding

This website is based on an article by Daniel Terhorst-North, describing properties of joyful code.

I believe that there are properties or characteristics of software that make it a joy to work with. The more your code has these qualities, the more joyful it is to work with; but everything is a tradeoff so you should always consider your context.

There are likely many of these properties, overlapping and interrelating, and there are many ways to describe them. I have chosen five that underpin much of what I care about in code. There is a diminishing return; five are enough to make a handy acronym, and few enough to remember.

The five CUPID properties are:

- **Composable**: plays well with others
- **Unix philosophy**: does one thing well
- **Predictable**: does what you expect

Join us at https://groups.io/g/cupid-joyful-code

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share your stories!

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