WEB PLATFORM TESTS

HOW WE MADE THE WEB INTEROPERABLE

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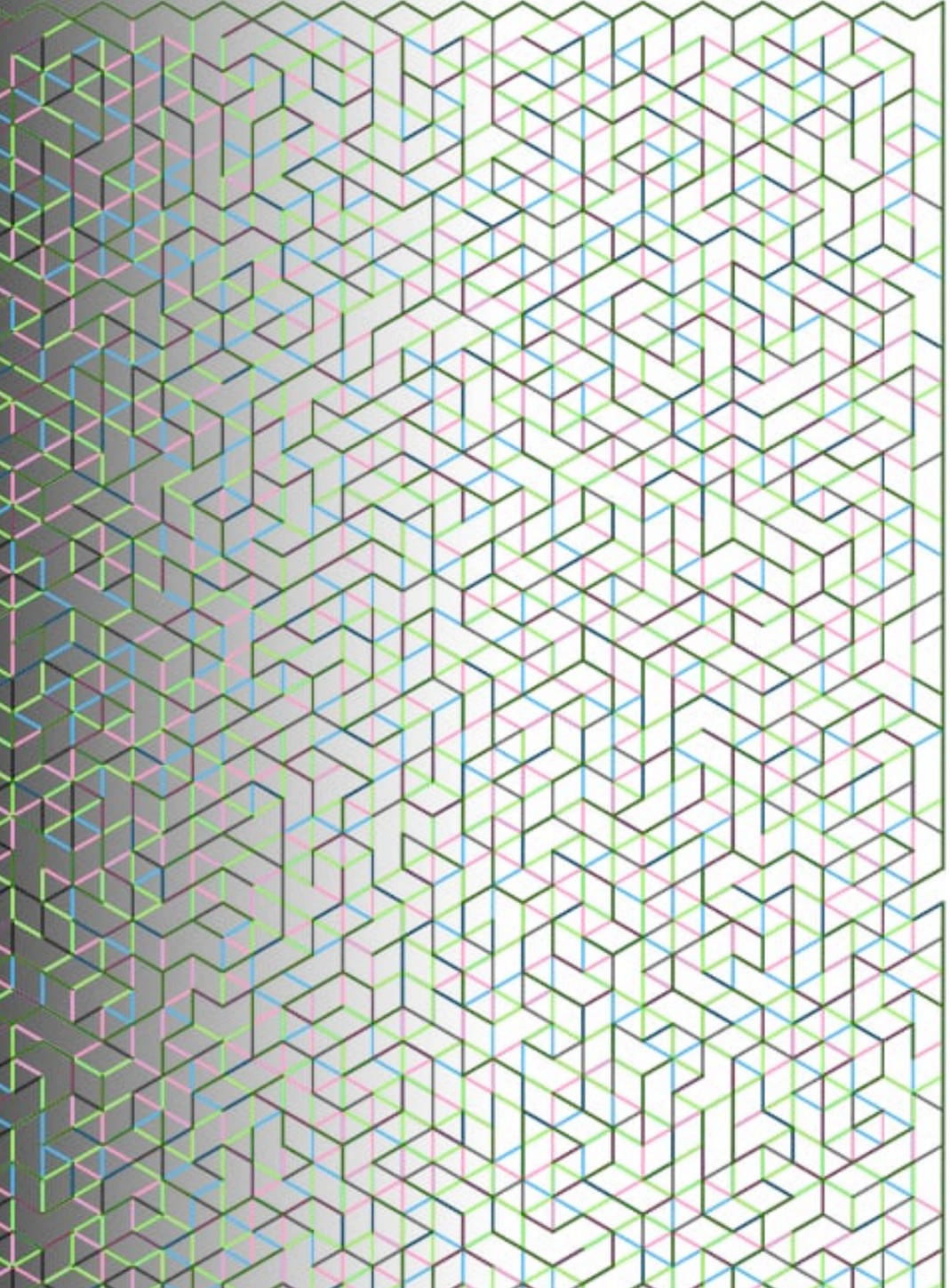
~2010 – THINGS WERE BAD

- Interoperability is key to a massively distributed system like the web. But it wasn't always treated as such.

- Up to the 2010s, it was:
  - **Scattered**, tests all over, different sources and methods per specification.
  - A **checkbox exercice**, most groups had a token number of tests and ran them only once to "prove" interoperability.
  - An **afterthought**, specification weren't written to be tests.
  - **Unresourced and unsupported**, there was no infrastructure for testing.

The result: building for the web was very hard because so little was interoperable, especially new features.



THE THESIS

We will only have interoperability if:

- Specifications are **written to be testable**.
- We have **automated tests** covering as much as possible, ideally everything.
- Tests **run very regularly**, ideally with every change.
- **Adding tests is easy** for stakeholders.
- We are **proactively transparent** about test results.

History: https://www.bocoup.com/blog/wpt-an-overview-and-history

W3C Working Group Note

A Method for Writing Testable Conformance Requirements

W3C Working Group Note 28 January 2010

This Version:
http://www.w3.org/TR/2010/NOTE-test-methodology-20100128/
Latest Published Version:
http://www.w3.org/TR/test-methodology/
Previous version:
none
Editors:
Dominique Hazaël-Massieux, W3C
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The structure of the conformance requirement can be decomposed into the following structural components:

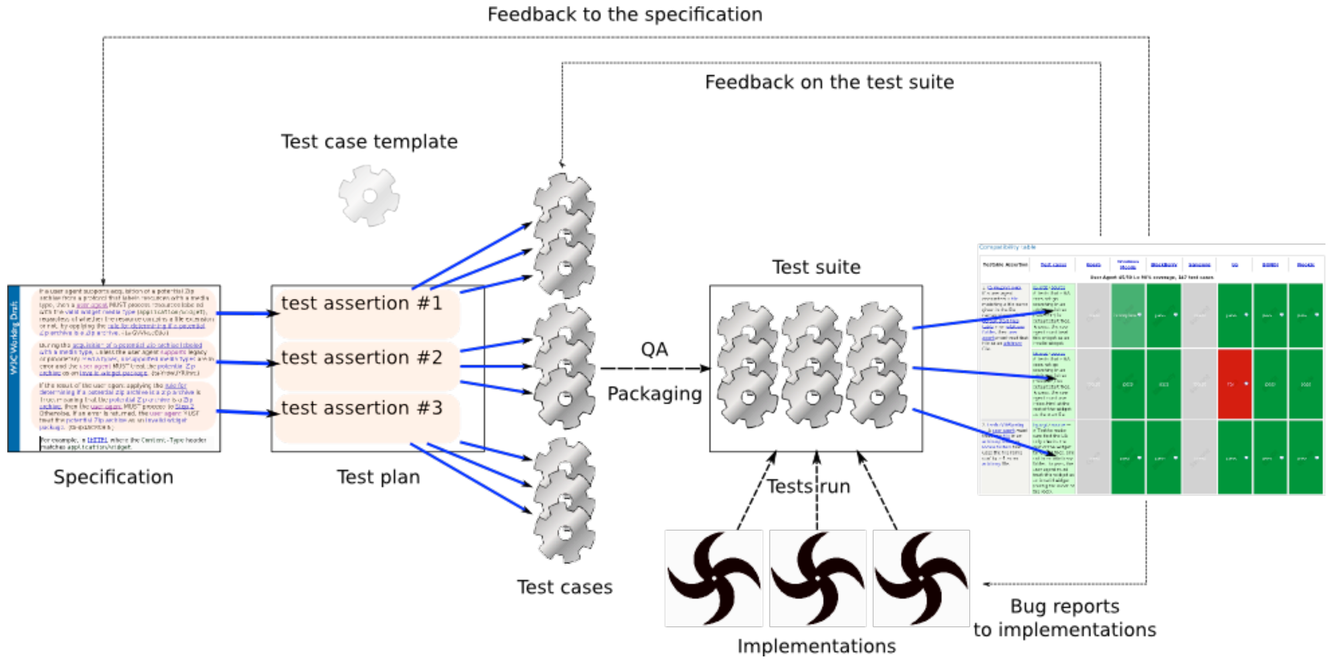
Product
A product that is supposed to follow the requirement — in this case, the “user agent”. (see also the definition of “classes of product” in [QAFRAME-SPEC])

Strictness level
The strictness of the applicability of the requirement to a product — in this case, “the user agent *must*” do something. W3C specifications use the [RFC2119] keywords (MUST, SHOULD, MAY, etc.) to indicate the level of requirement that is imposed on a product.

Prerequisites
An explanation of the prerequisites that need to be in place in order for the requirement to apply — in this case, “if the src attribute of the content element is absent or an empty string”.

Behavior
a clear explanation of what the product is supposed to do — in this case, “ignore this element”.

Terms
Keywords that are relevant to understanding how to apply the desired behavior. For instance, what it actually means to “ignore” (definitively and algorithmically) needs to be specified somewhere in the specification.



https://www.w3.org/TR/test-methodology/

WPT TODAY

- **BIG**. Over 2 million tests from hundreds of collaborators.
- **SHARED**. It cuts across multiple standards organisations (W3C, ECMA TC39, IETF, WHATWG).
- **TRANSPARENT**. Everyone's results are published constantly for anyone to use.
- **CORE**. Every single browser engine uses it as the ground truth.
- **CONTINUOUS**. Browsers run the whole test suite with every change they commit.
- **COLLABORATIVE**. Used to drive cross-browser priorities (and even some friendly competition).

https://wpt.fyi/

THANK YOU

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