

HTML, the cockroach of computing.

Not elegance. Endurance. HTML is the format still running after the platforms that patronised it are gone — and the archivists who spent thirty years worrying about this deserve to be quoted.

Every tool we make is one HTML file. That is not nostalgia or minimalism; it is an archival decision, and this page is the evidence behind it. The short version: people warned about digital rot for decades, elaborate remedies were proposed, and the thing that actually survived was the least fashionable option on the table.

The warning, 1995

In January 1995 Jeff Rothenberg published [Ensuring the Longevity of Digital Documents](#) in *Scientific American*, later expanded for the Council on Library and Information Resources as [Ensuring the Longevity of Digital Information](#). It contains the sentence everyone quotes:

"It is only slightly facetious to say that digital information lasts forever — or five years, whichever comes first."

Worth noting, since it is usually misquoted: he wrote *information*, not *documents*. Two years later Terry Kuny gave the anxiety its lasting name in [A Digital Dark Ages? Challenges in the Preservation of Electronic Information](#), presented to the IFLA conference in 1997.

The warning was correct

Here is the part that reads like a joke but is simply a list of dates. Within four years, four different ways of running software inside a browser reached the end of their lives:

- **Adobe Shockwave Player** — discontinued [9 April 2019](#).
- **Java applets** — the Applet API deprecated in Java 9 (2017), removed in Java 11 (2018).
- **Adobe Flash Player** — end of life [31 December 2020](#), with content blocked from running shortly afterwards.
- **Microsoft Silverlight** — support ended [12 October 2021](#).

Each of these was, in its day, the sophisticated choice. Each was backed by a large company. Each was what you used if you were serious. And each took its

documents with it when it went — not gradually, but on an announced date, after which the files simply stopped being software and became rubbish that used to be software.

What didn't die

HTML has never had a version change that orphaned the documents written before it. Not one. [The first website](#), published at CERN in 1991, still renders in a browser released this year — not through emulation or a compatibility mode, just by opening it.

No other application runtime has that record, and none is installed on as many machines. The specification is public and cannot be revoked. There is no vendor whose collapse ends it, because there is no vendor.

Why the boring answer won

The preservation field spent decades proposing serious remedies: emulation of dead hardware, periodic migration between formats, elaborate metadata schemes to describe what a file needed in order to be read. All sensible. All requiring an institution to keep caring, indefinitely, on your behalf.

The thing that actually survived required nobody to care. HTML won by having no owner to lose interest, no licence to expire, and no business model that depended on the next version. It is a cockroach in the compliment sense: unkillable, indifferent to catastrophe, and present in every building.

So we ship one file

It follows fairly directly. If you want software a person can put on a USB stick, lock in a drawer for ten years, and still open, you do not invent a preservation format and you do not ask anyone to maintain a migration path. You write one self-contained HTML file: no installer, no dependency tree, no server, no store, no account, no company whose survival it depends on.

That is what every Blade, every Tool, every [free tool](#), and the [App Factory](#) itself actually is. Vannevar Bush imagined something like it in [As We May Think](#) in 1945 — the memex, a personal archive held in its owner's own desk. It was never a service. Its owner was never a subscriber.

Where to read more

[The App Factory](#) — Make your own single-file apps — free and MIT-licensed.

[The single-file HTML app](#) — What actually lives inside one file, and the honest trade-offs.

What outlives the cloud — The same argument applied to services rather than runtimes.

Aging Software and the Digital Heirloom — The full lineage document, with all fourteen references.

Common questions

Why is HTML considered so durable?

It has never had a version change that orphaned older documents, the specification is public and cannot be revoked, every operating system ships a browser, and no single vendor's failure can end it. The first website from 1991 still renders in a current browser.

What happened to Flash, Silverlight and Java applets?

Shockwave was discontinued on 9 April 2019, the Java Applet API was removed in Java 11 in 2018, Flash Player reached end of life on 31 December 2020, and Silverlight support ended on 12 October 2021. Each took its documents with it.

What is the digital dark age?

A term popularised by Terry Kuny in a 1997 IFLA paper, describing the risk that electronic information becomes unreadable as the formats and systems needed to open it disappear.

Will an HTML file still open in fifty years?

Nothing is certain, but HTML has the best track record available: over thirty years of backwards compatibility, a public specification, and no owner who could withdraw it. It is the most durable executable format a private person can use today.

Do single-file HTML apps need internet?

No. Once the file is on your machine there are no network calls at all. It runs with the Wi-Fi off, and keeps running whether or not the company that made it still exists.

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