AI-Assisted Software Reimplementation: The Adobe Case Study

Independent Public-Source Assessment · October 10, 2026

Public-source analysis, not an attorney opinion or an Adobe-commissioned assessment. No original software testing, proprietary-code comparison, or confidential forensic investigation was performed.

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Competition can move quickly. A claim still needs evidence.

In early October 2026, public reporting drew attention to ArtCraft: a family of open-source projects positioned as alternatives to Adobe creative applications. Tom's Hardware reported Claude-assisted development and a developer ambition to reach full feature parity within a month. That ambition is not an established result. The repositories describe clean-room development; this report has not independently verified that process. Tom's Hardware reporting PhotoCraft documentation

> **Preliminary position: a competitive development, not a proven IP violation.**
> The reviewed sources establish public projects and published claims. They do not establish stolen Adobe source code, improper access, complete product parity, or infringement.

The commercial implication

AI assistance may compress the effort needed to implement some familiar features. For an established software business, that suggests a shorter window to assess a new competitor and differentiate its product. It does not establish equivalent reliability, customer adoption, replacement economics, or lost revenue. This is a business inference, not a measured market-impact finding.
The useful executive question is which assets the business owns, which rights may protect them, and what evidence could distinguish ordinary competition from actionable misuse.

The public record, with its limits attached.

Evidence key: A — directly verified public record; B — attributed claim; C — analytical inference; D — unresolved or excluded. Confidence describes the stated observation, never the likelihood of infringement.

September 30

Repository creation

PhotoCraft's metadata records this creation date; it is not proof of a launch or development start. PhotoCraft repository metadata

October 7–8

Independent reporting

Phoronix and Tom's Hardware cover the emerging projects and developer claims. Phoronix reporting Tom's Hardware reporting

October 10

Public-source snapshot

PhotoCraft v0.6.0 has a public release entry. Documentation is pinned to reviewed commits. PhotoCraft v0.6.0 release

Public evidence ledger — checked October 10, 2026

Record / source	Date or version	Observation	Confidence / limitation
Public repositories PhotoCraft repository metadata	Created September 30; checked October 10	PhotoCraft has a public repository and a creation timestamp. Seven project documentation snapshots are listed below.	A · High confidence in the record; creation date does not date all development.
Public release PhotoCraft v0.6.0 release	v0.6.0 · October 10, 02:51 UTC	GitHub records a published PhotoCraft release with this tag and timestamp.	A · Metadata verified; functionality and readiness untested here.
Technical structure PhotoCraft Cargo manifest	Commit 87f74cc · October 10	PhotoCraft's manifest declares a Rust workspace, version 0.6.0, and MIT OR Apache-2.0 licensing.	A · Configuration verified; no build or execution performed.
Clean-room account PhotoCraft documentation	Commit 87f74cc · October 10	The README attributes development to public specifications and observed behavior, denying use of proprietary code or assets.	B · Statement verified as published; underlying truth unverified.
AI assistance and ambitions Tom's Hardware reporting	Published October 8	Reporting attributes development assistance to Claude and describes a developer target of full parity within a month.	B · Attributed account; contributions, labor savings, and goal completion not independently established.

Record / source	Date or version	Observation	Confidence / limitation
Independent coverage Phoronix reporting	Published October 7	Coverage identifies PhotoCraft, FilmCraft, and LightCraft and discusses AI-coding and clean-room claims.	A for publication; B for reported claims. Coverage is not technical validation.

REA is a separate technology reference.

REA's documentation describes agent-driven inspection of binaries and applications through analysis tools. None of the sources reviewed establishes that REA was used to build ArtCraft. It is excluded from the case's causal account. A tool's availability is not evidence that a particular developer used it. REA documentation

The supplied X post could not be authenticated during research and is not relied upon for factual findings. Repository text can change; the source notes link to reviewed commit snapshots.

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Seven projects. Documented features. Unproven equivalence.

The table summarizes each project's own documentation, not independently observed performance. Adobe products identify the comparisons the projects make; they do not imply Adobe sponsorship.

Developer-documented capabilities at the October 10 snapshot

Project / stated reference	Developer-reported functionality	Status and verification limit
PhotoCraft documentation **Photoshop**	Layers, masks, adjustments, typography, PSD read/write, and command or agent interfaces.	Early alpha. Documentation disclaims professional daily replacement; generative features, typography depth, and plug-in compatibility remain gaps.
LightCraft documentation **Lightroom**	Photo catalogs, albums and ratings, RAW development, color adjustments, and masking.	Alpha. Camera calibration, RAW variants, AI and HDR functions, and specialist output workflows have documented limitations.
FilmCraft documentation **Premiere Pro**	Multitrack editing, trimming, color and audio tools, titles, and export workflows.	Alpha. Documented format gaps include AV1 export and camera RAW. Feature listings do not prove reliable editing parity.
VectorCraft documentation **Illustrator**	Paths, Bézier editing, artboards, SVG and PDF workflows, PDF-compatible AI files, gradients, and boolean operations.	Active development. Readiness is self-assessed; PDF-compatible AI handling is not universal Illustrator-file compatibility.

Project / stated reference	Developer-reported functionality	Status and verification limit
PdfCraft documentation **Acrobat**	PDF viewing and organization, annotations, forms, and signing functionality are described.	Alpha. Documentation reports ongoing crash hardening and no side-by-side rendering-quality comparison. No safety certification is inferred.
EffectCraft documentation **After Effects**	Compositions, layers, keyframes, effects, 3D features, and render-queue workflows.	Alpha. A broad feature inventory does not establish professional rendering quality or compatibility.
DesignCraft documentation **InDesign**	Pages and spreads, frames, text composition, and styles for page-layout workflows.	Pre-alpha. Professional publishing readiness has not been independently established here.

Directly documented

Repositories, README statements, PhotoCraft's release record, and its Cargo workspace and license files were inspected. They establish artifacts and declarations, not successful operation.

Not independently tested

IPDefense ran no application or benchmark. No reviewed source supplied a reproducible, independent full-suite parity test. Reported capabilities and future parity goals remain qualified.

PhotoCraft's manifest declares Rust, a workspace, and dual MIT/Apache-2.0 licensing. Open-source licensing does not establish the provenance or legal status of every component. PhotoCraft Cargo manifest PhotoCraft MIT license PhotoCraft Apache license

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What could Adobe—or any software owner—protect?

These are potential U.S. legal frameworks, not conclusions about Adobe or the developers. Jurisdiction, ownership, conduct, exceptions, and available evidence require qualified counsel's review.

Copyright: identify the expression

Original software expression can qualify for protection. Ideas, processes, systems, and methods do not become protected merely because they appear in a program. Similar features alone cannot resolve a copying claim.

Evidence needed: Ownership, relevant versions, lawful comparison materials, and an analysis distinguishing original expression from functional or shared elements. 17 U.S.C. § 102

Trade secrets: establish secrecy and acquisition

A claim requires qualifying secret information, value from secrecy, reasonable protective measures, and the relevant acquisition, use, or disclosure facts. Federal definitions exclude reverse engineering and independent derivation from improper means; separate contractual or other questions can remain.
Evidence needed: Identification of the alleged secret, protective measures, access chronology, and evidence of improper acquisition or use. None was available here. 18 U.S.C. § 1839

Contracts: identify who agreed to what

Adobe's published terms contain reverse-engineering and recreation-related restrictions. Their existence does not establish that a particular developer accepted an applicable version or breached an enforceable obligation.
Evidence needed: The actual agreement and version, assent records, parties, conduct, governing law, and any overriding statutory rights or exceptions. Adobe General Terms of Use

Anti-circumvention: identify a control and conduct

Section 1201 may raise distinct questions when technological access controls are circumvented. Its conditions, exceptions, and applicable exemptions require fact-specific review. This report identified no established circumvention event.
Evidence needed: The protected work, specific control, access conditions, conduct, purpose, and applicable exception or exemption. 17 U.S.C. § 1201

Patents: compare actual claims

Patent questions depend on particular claims and accused conduct, not general product resemblance. Independent development does not, by itself, resolve patent exposure.
Evidence needed: Ownership, patent status and validity analysis, territorial facts, and a claim-by-claim comparison with an accused implementation. 35 U.S.C. § 271

Trademark and trade dress: assess source confusion

Branding or presentation can raise separate questions about confusion over source, sponsorship, or affiliation. Product identification alone is not a finding of confusion. Trade-dress analysis also requires attention to protectability and nonfunctionality.
Evidence needed: Actual names, marks, presentation, market context, rights, and evidence relevant to confusion and defenses. 15 U.S.C. § 1125

The gap between a public observation and a defensible finding.

All case-specific legal conclusions remain undetermined. These next steps are proposed work, not investigations performed for this report.

Investigation evidence matrix — preliminary and non-scored

Issue	Publicly available evidence	Evidence unavailable to this review	Potential legal significance	Recommended investigation step
Code provenance	Repositories, manifests, and license texts.	Complete development inputs, authorized comparators, and contributor records.	Ownership, permissions, and origins of specific expression remain unresolved.	Preserve commits and builds; map dependencies and authorship against authorized records.
Functional similarity	Developer feature descriptions and product-reference claims.	Controlled tests on specified versions and representative workloads.	Shared function alone does not establish unlawful copying.	Define a reproducible comparison; separate behavior from implementation and expression.
Protected expression	Public project materials; no proprietary Adobe code comparison.	Authorized comparators and a basis for identifying protectable elements.	No copying conclusion follows from feature lists.	Compare defined material and test shared-source explanations with qualified practitioners.
Independent development	Published clean-room assertions.	Contemporaneous instructions, segregation, development records, and input provenance.	An assertion is not proof of an independent process.	Review evidence supporting or contradicting independent creation.
Trade-secret access	No reviewed source establishes access to Adobe secrets.	An identified secret, secrecy measures, access logs, and acquisition facts.	Secrecy and improper acquisition cannot be inferred from competition.	Define the alleged secret with counsel and review authorized access records.
Licenses and contracts	Dual-license declaration; Adobe's public terms.	Dependency compliance, accepted agreements, and party-specific conduct.	Published terms do not establish assent, breach, or enforceability.	Map licenses, assignments, accepted terms, versions, and applicable-law questions.
Branding and presentation	Public names and Adobe product references.	Complete presentation record, market evidence, and confusion analysis.	Source-confusion questions are distinct from code-copying questions.	Preserve presentation; assess rights, context, functionality, and defenses with counsel.

Build an evidence advantage before a dispute.

A CTO and General Counsel can turn concern about AI-assisted competition into a practical readiness program. These recommendations are analytical applications of the evidence gaps above.

1. **Inventory the assets that matter.** Identify original code, distinctive content, models, interfaces, confidential workflows, and the business functions each supports.

2. **Connect ownership to evidence.** Keep employee and contractor assignments, acquisition records, licenses, and dependency inventories with the relevant releases.

3. **Keep a development history that can be explained.** Preserve source-control context, contribution records, build inputs, and AI-assisted development policies. Record uncertainties instead of reconstructing a convenient narrative.

4. **Protect actual secrets.** Define confidential information, restrict access proportionately, and document protective measures. A label alone does not establish secrecy.

5. **Plan lawful preservation.** Have counsel and engineering agree who preserves authorized records, how integrity is recorded, and how routine deletion is addressed.

6. **Coordinate the response.** Assign an engineering lead and legal decision-maker. Evaluate lawful competition, shared dependencies, licensing, and independent development before escalating.

Related preparation: software IP research and preservation resources; IP Exposure Assessment; IP Defense Sprint.

What a scoped investigation would actually deliver.

A real assessment begins with conflict screening, confirmation of qualified professionals, and an agreed written scope. It should identify a business decision and a stopping point, rather than promise an infringement finding.

Proposed investigation scope — not performed for this public case study

Workstream	Concrete deliverable	Boundary
Authorize and preserve	An inventory of versions and lawfully obtained artifacts, with collection records, hashes, provenance, and custody history.	No unauthorized collection or access to another party's systems.

Workstream	Concrete deliverable	Boundary
Establish rights	An ownership and permissions map covering assignments, dependencies, secrecy measures, and agreements.	Legal interpretation and privilege decisions belong to qualified counsel.
Compare and test alternatives	A reproducible comparison plan separating functionality, shared components, and potentially protectable expression.	No automated similarity score substitutes for legal analysis.
Evaluate access and development	A chronology of authorized access records and development materials, including evidence supporting independent creation.	Relevant records and lawful access must be established.
Support the executive decision	An evidence register, limitations, counsel-coordinated options, and a recommendation to stop, investigate further, or consider a proportionate response.	No litigation, unlimited investigations, recovery, or outcome is implied.

What this case study did—and did not—do

We reviewed public documentation, metadata, release and license records, reporting, and legal sources. We did not run applications, inspect Adobe source code, interview developers, authenticate a clean-room process, obtain private development or access records, compare protected expression, or commission an attorney opinion.
Availability, deliverables, responsibilities, exclusions, timing, and fees must be agreed before an engagement. A request does not establish an attorney-client relationship.

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The Question Isn't Whether Software Can Be Recreated. It's What You Can Prove.

AI-assisted development is changing how quickly competitors can produce alternatives. Protecting software IP requires understanding your rights, preserving evidence, and knowing when similarities warrant further investigation.

Start with the product, the business concern, and the decision you need to make. Keep source code, confidential evidence, and detailed incident narratives out of this initial request.

Request an IP Exposure Review or discuss a suspected IP violation at IPDefense.law/sample-assessment. Business-fit review and conflict screening precede a confirmed consultation.

What has been verified?

- A — Repositories, pinned documentation, PhotoCraft creation and release metadata, Cargo declarations, and license texts were directly inspected. This verifies records, not runtime capabilities.
- B — AI assistance and the one-month parity ambition are attributed to reporting. Clean-room development, feature support, and readiness are attributed to project documentation. Complete parity is not asserted.
- C — Competitive implications, enterprise lessons, the evidence matrix, and proposed investigation scope are analysis, not measured commercial outcomes or liability findings.
- A / C — Statutes and public terms supply legal frameworks. Applying them to these parties requires qualified counsel, jurisdictional facts, and additional evidence. No attorney approval is claimed.
- D — Code theft, secret access, circumvention, infringement, damages, professional parity, and a REA–ArtCraft connection are not established and are excluded as findings. The inaccessible X post is not relied upon.

Source notes

All sources accessed October 10, 2026. Documentation links are pinned to reviewed commits. Reporting is not technical validation. A document's existence and the truth of its claims are separate questions.

1. PhotoCraft documentation — Primary documentation; commit 87f74cc, October 10. Developer claims, not independent testing.
   https://github.com/storytold/photocraft/blob/87f74cc8d286e565ae3804fac7eae894e84811ed/README.md
2. LightCraft documentation — Primary documentation; commit 964d933, October 10.
   https://github.com/storytold/lightcraft/blob/964d9338bafac524146ecf24a1fab54bd22b052e/README.md
3. FilmCraft documentation — Primary documentation; commit 4a81aa1, October 10.
   https://github.com/storytold/filmcraft/blob/4a81aa17423444088d769d7b64b37bb9ddf571ee/README.md
4. VectorCraft documentation — Primary documentation; commit 2ddbd92, October 10.
   https://github.com/storytold/vectorcraft/blob/2ddbd9293f5c65d95f072e5ab00584491e62aa65/README.md
5. PdfCraft documentation — Primary documentation; commit b8ddf71, October 10.
   https://github.com/storytold/pdfcraft/blob/b8ddf71e30959dc8a5ca4b66c40b8fcaea68cf76/README.md
6. EffectCraft documentation — Primary documentation; commit d024a16, October 10.
   https://github.com/storytold/effectcraft/blob/d024a16cf0da9ab595a946ab48c23deb556d3444/README.md
7. DesignCraft documentation — Primary documentation; commit a127c6d, October 10.
   https://github.com/storytold/designcraft/blob/a127c6d5c3576972bbd60445f26d893db071eef3/README.md
8. PhotoCraft Cargo manifest — Rust workspace and declared license inspected; no build executed.
   https://github.com/storytold/photocraft/blob/87f74cc8d286e565ae3804fac7eae894e84811ed/Cargo.toml
9. PhotoCraft MIT license — License text at the reviewed commit.
   https://github.com/storytold/photocraft/blob/87f74cc8d286e565ae3804fac7eae894e84811ed/LICENSE-MIT
10. PhotoCraft Apache license — License text at the reviewed commit. Licensing is not a provenance finding.
    https://github.com/storytold/photocraft/blob/87f74cc8d286e565ae3804fac7eae894e84811ed/LICENSE-APACHE
11. PhotoCraft repository metadata — GitHub created_at: September 30, 2026, 13:37:48 UTC, observed October 10. Live metadata may change.
    https://api.github.com/repos/storytold/photocraft

12. PhotoCraft v0.6.0 release — Published October 10, 2026, 02:51:42 UTC. A release entry does not establish professional readiness.
https://github.com/storytold/photocraft/releases/tag/v0.6.0

13. Tom's Hardware reporting — Jhet Borja, October 8, 2026. Reported AI assistance and developer ambitions; not a forensic finding.
https://www.tomshardware.com/software/video-editing-graphic-design/solo-developer-rebuilds-adobe-creative-suite-in-rust-using-claude-releases-it-free-to-all-targets-100-percent-parity-in-one-month-despite-piracy-claims-and-safety-warnings

14. Phoronix reporting — Michael Larabel, October 7, 2026. Independent reporting of projects and claims; not a full-suite benchmark.
https://www.phoronix.com/news/Photocraft-Filmcraft-AI

15. REA documentation — Separate tool documentation. No ArtCraft development connection established.
https://github.com/morluto/rea/blob/95a77b6e25420b3879bd0e32bdbb14d452b38776/README.md

16. 17 U.S.C. § 102 — Copyright subject matter and exclusions.
https://www.law.cornell.edu/uscode/text/17/102

17. 18 U.S.C. § 1839 — Trade-secret and improper-means definitions.
https://www.law.cornell.edu/uscode/text/18/1839

18. Adobe General Terms of Use — Section 17 includes reverse-engineering and recreation-related restrictions. Applicable version, assent, and enforceability undetermined.
https://www.adobe.com/legal/terms.html

19. 17 U.S.C. § 1201 — Anti-circumvention framework and conditional exceptions.
https://www.law.cornell.edu/uscode/text/17/1201

20. 35 U.S.C. § 271 — Patent infringement framework; no case-specific claim analysis performed.
https://www.law.cornell.edu/uscode/text/35/271

21. 15 U.S.C. § 1125 — Source-confusion framework; unregistered trade dress also requires attention to nonfunctionality.
https://www.law.cornell.edu/uscode/text/15/1125

22. Supplied X discussion (unverified) — Inaccessible during research; not authenticated or relied upon for findings.
https://x.com/Pirat_Nation/status/2108437553615425881

Assessment limitations

Independent, primarily U.S.-focused educational analysis of a time-limited public record. This is not legal advice or a legal opinion, and no professional-review credential is claimed. Adobe did not commission or approve this report. No representation of Adobe, confidential investigation, or proven violation is asserted. No conclusion about commercial equivalence, safety, clean-room compliance, infringement, or damages follows from the material reviewed. Adobe product names are used for identification.
