

ASWF OPEN SOURCE
DAYS

PRODUCTIONIZING XSTUDIO

A STUDIO'S JOURNEY FROM FORK TO FLOOR

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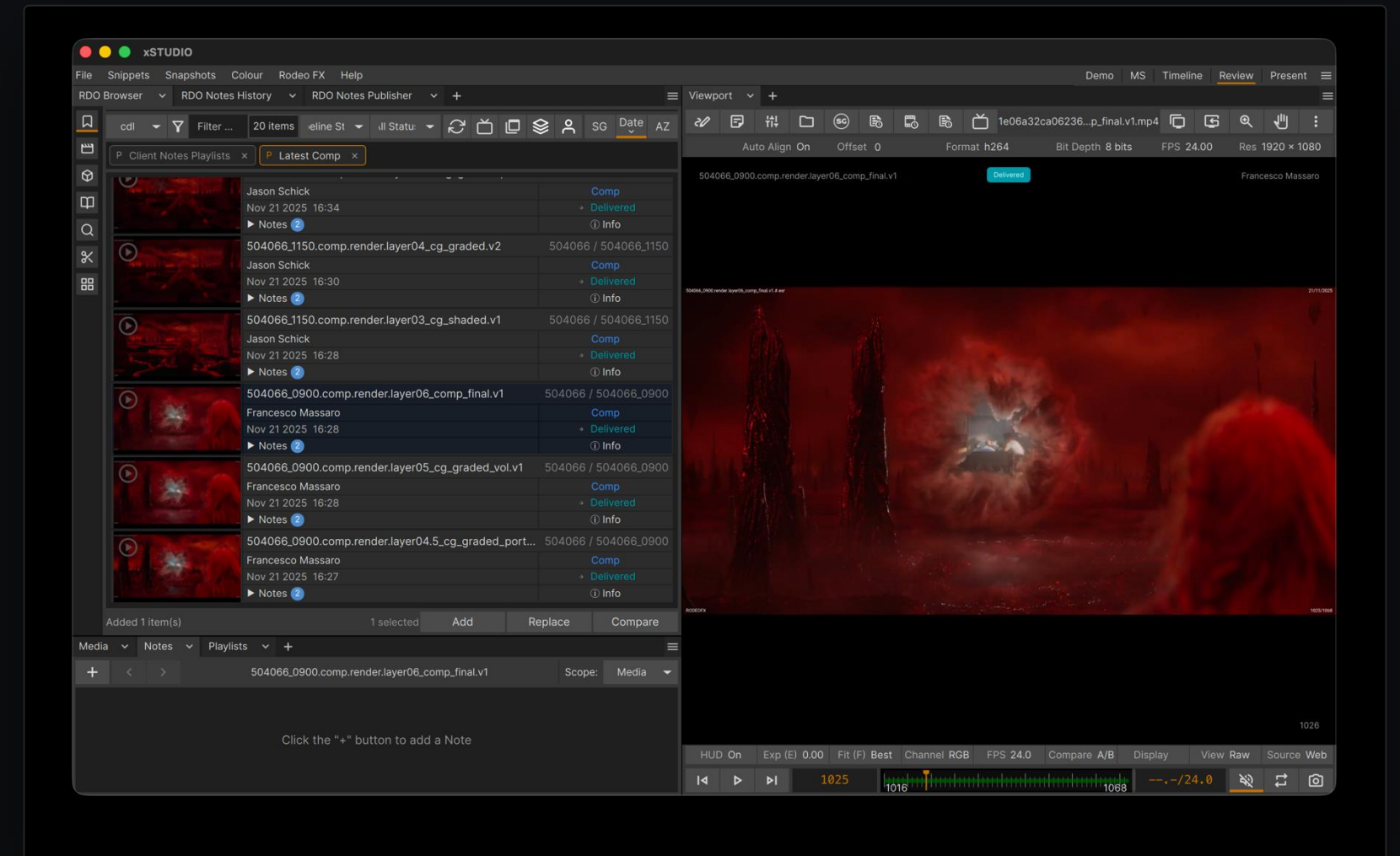
02 — THE GAP

THE LAST MILE

Open-source DCCs ship a core . It's excellent, and general on purpose.

Studios need it **calibrated** — to their pipeline, their shows, their dailies room.

That gap is the last mile. It's where adoption usually stalls.



BUT XSTUDIO IS BUILT TO **EXTEND** — ITS PLUGIN ARCHITECTURE LETS STUDIOS CLOSE THAT MILE TO THEIR EXACT NEEDS.

SMALL TEAMS. DAYS, NOT QUARTERS.

The enabler: AI-augmented engineering — finally fast enough to make this realistic.

The catch: do it [without vibe coding](#).

ADOPTING THE CORE

xStudio — the open-source review player by DNEG, Apache 2.0.

We adopted it as our **foundation** — not a thing to rebuild. Upstream is the floor; we built up.

Two native **C++** pieces — a media hook, and a media loader that collapses dozens of Python round-trips into one fire-and-forget message for instant loading.

14+ PLUGINS · PYTHON
the studio last mile

MEDIA HOOK · C++
OCIO color + cross-platform paths

MEDIA LOADER · C++
Python one fire-and-forget message → instant loading

XSTUDIO CORE
open-source foundation · DNEG · Apache 2.0

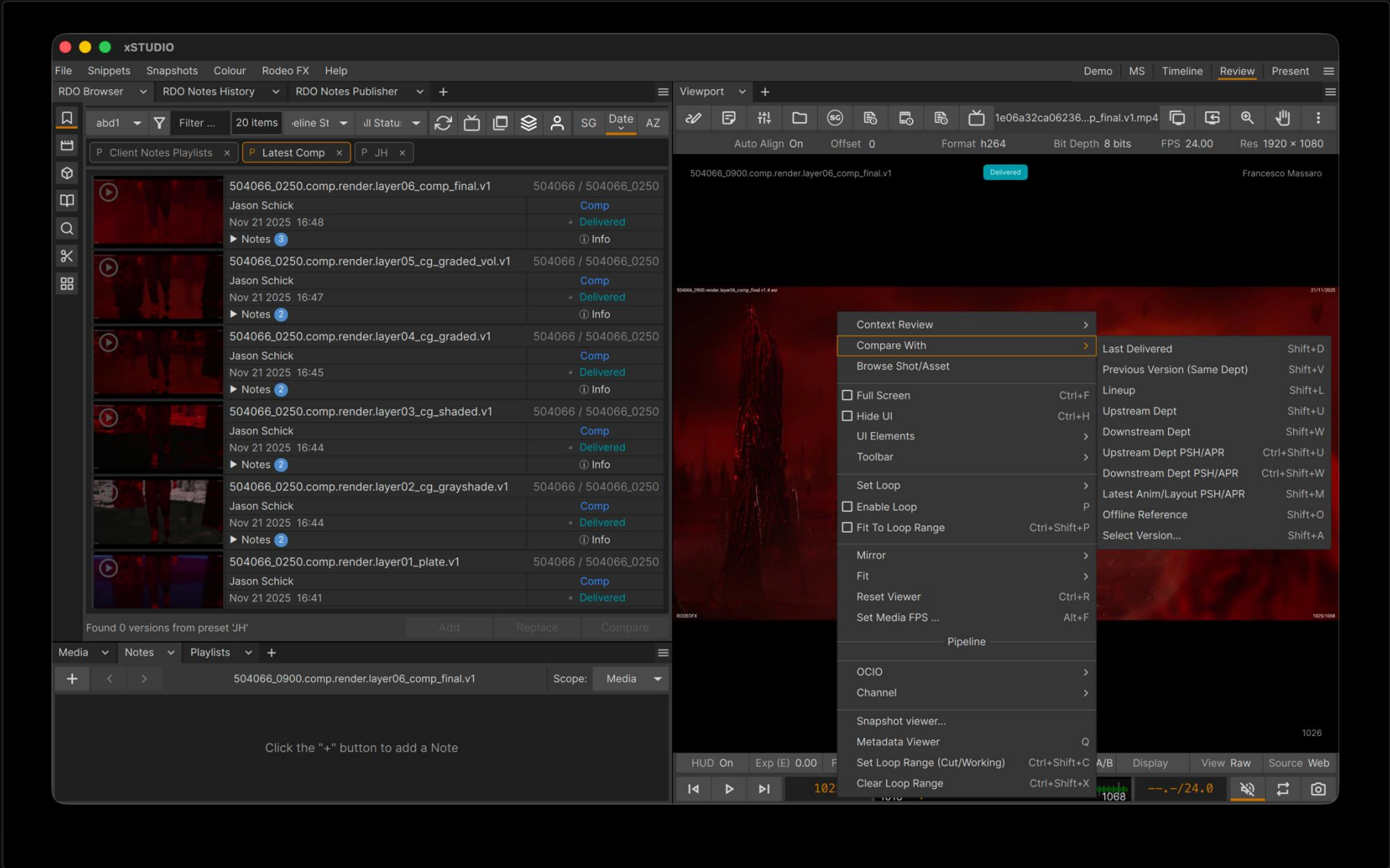
↑ WHAT WE ADDED

WHAT THE STUDIO GOT

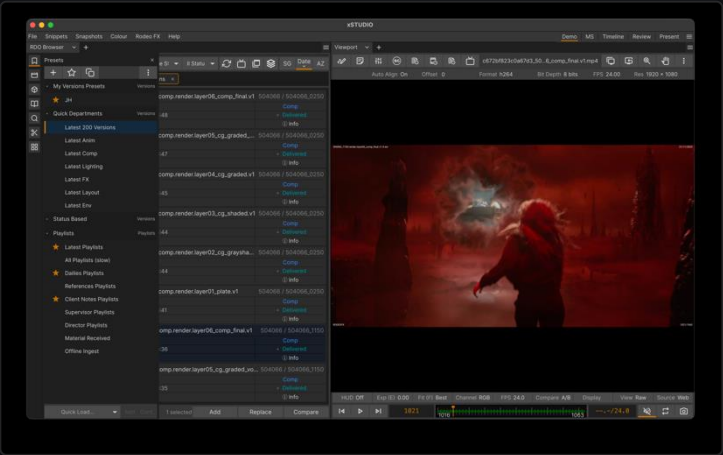
ARTISTS in the dailies room	
BROWSE & LOAD	Any ShotGrid version, without leaving the player.
COMPARE	Against last-delivered, the previous version, or the cut.
NOTES	Read client feedback, publish annotations back — AI-summarized triage.
AUTO-CONFORM	A review timeline built straight from track names.

SUPERVISORS steering the show	
CLIENT NOTES REVIEW	Triage feedback, version by version.
SUPERVISOR ESTIMATE	Assign shot complexity and estimates directly from the timeline.
MILESTONES REVIEW	Track delivery milestones across the whole show.
SEQUENCE GRID	A full-sequence shot grouping grid view — every shot's latest, at a glance.
DAILIES	Broadcast to the room, on-screen overlays — even the projector.

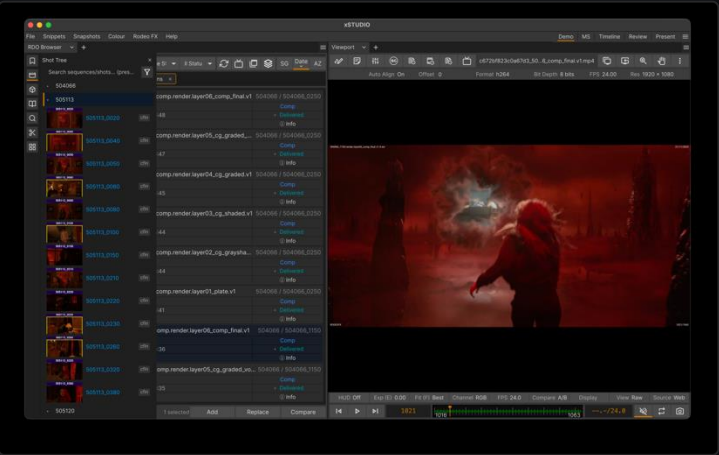
IN THE BROWSER



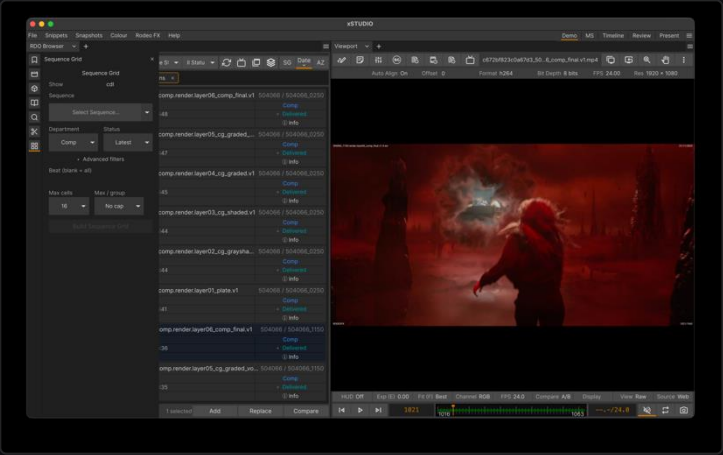
Compare any version — right-click → last delivered, previous version, or the cut.



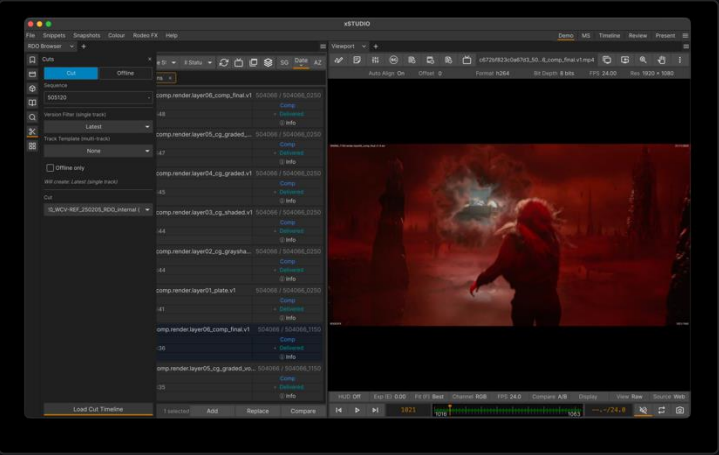
Saved presets — everyone's view, one click.



Shot tree — browse the whole show.



Sequence grid — every shot's latest.



Cuts — auto-conform from editorial.

LED FROM THE FLOOR

We didn't guess from a backlog. A supervisor on the show — closest to the room and the client — drove the list.

Straight to leads and artists, gathering **real feedback and ideas** — no ticket queue, no telephone game.

Then we built what works for most — generalized, not a one-off hack.

25 / MO

That loop spins fast — **25 releases a month** : fixes, features, feedback answered while it's still hot.



SUPERVISOR ON THE SHOW

Closest to the dailies room and the client.



DIRECT TO LEADS & ARTISTS

On the floor — no queue between them and us.



GATHER FEEDBACK & IDEAS

What's actually slowing the work down.



BUILD FOR MOST → SHIP BACK

Generalize it, then return it to the room.

↻ EVERY ITERATION LOOPS BACK TO THE FLOOR

METHODOLOGY · SPEED

WHERE AI CARRIED US

AI handled the volume : UI plumbing, repetitive ShotGrid queries, refactors, first drafts.

A team that isn't dev-heavy could **direct** the work — not hand-write every line.

It made prototyping cheap : try an idea, keep it or kill it — and a prototype was only a couple hours from the final implementation.

~90K

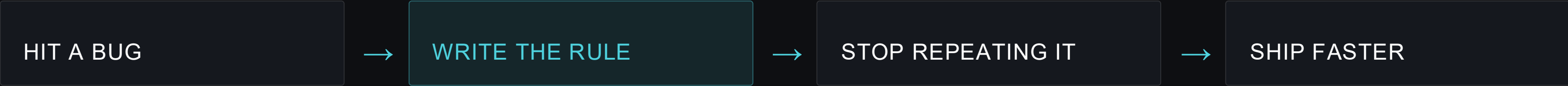
LINES OF CODE SHIPPED

a small team — two engineers · a few months

Python ~58,900 · QML ~29,800

METHODOLOGY · DISCIPLINE

WHY IT WASN'T VIBE CODING



🔗 THE KNOWLEDGE COMPOUNDS — IT DOESN'T EVAPORATE

- | | | | |
|--|--|--|--|
| Every bug becomes a written rule the AI must follow next time. | Reuse proven patterns across all 14+ plugins — don't reinvent. | Custom agents, scoped by domain — one source-code expert, one Python API specialist. | A human owns the architecture and the verification. AI proposes; we decide and test. |
|--|--|--|--|

METHODOLOGY · HONESTY

WHERE IT BIT US

VELOCITY VS. COVERAGE

Moving fast makes thorough checking hard. Unit tests became crucial — UI tests for fast, large-moving scopes are still an open problem.

ASYNC ARCHITECTURE

A Python deque-based timeout didn't fit xStudio's event model — it took real architecture work to make async cooperate with the core.

THE TRADE-OFF

A powerful core means powerful ways to get burned. The hard parts were architectural, not logic bugs.

EVERY FIX BECAME A RULE.

GIVING BACK

Most of what we built is studio-specific — our ShotGrid, our projector. That stays in-house.

But the **general-use plugins** benefit everyone — those are the ones we hope to give back.

Healthy open source = the last mile gets shorter for everyone over time.

ALREADY GIVEN BACK

DECKLINK PLUGIN → MACOS

We ported the SDI broadcast plugin to Mac and contributed it upstream.

GENERAL-USE PLUGINS



XSTUDIO CORE

the next studio starts higher up

ONION-SKINNING HUD

A HUD plugin that onion-skins annotations across frames — given back to the community.

01 The last mile is real — it's where studios live or die on a tool.

02 Small teams + AI can close it at studio cadence — if discipline replaces vibe coding.

03 Adopt the core, extend with plugins, contribute the general-use ones back.

FOR Q&A

APPENDIX

BACKUP & DEEP-DIVE — ONLY IF ASKED

APPENDIX A

BY THE NUMBERS

~88.6K

lines of code · Python ~58,900 + QML
~29,800

14+

Python plugins — and growing toward
~20

2

custom C++ pieces — media hook +
async loader

LINUX + MACOS

artists work across both

SHOTGRID BROWSER

the flagship — ~14K Python + ~15K QML

0 CORE CHANGES

everything is a drop-in plugin

APPENDIX B

PLUGIN CATALOG

BROWSE & LOAD

The whole ShotGrid version database inside the player — project tree, saved searches, one-click load.

HISTORY & COLOR

Every version of the current shot; a grading tool — load CDL, white-balance picker, publish a grade.

COMPARE

Version compare vs last-delivered / previous / the cut, plus a custom full-sequence grid view.

EDITORIAL & DELIVERY

Auto-conform from track names, submit dailies, broadcast to the room, control the cinema projector.

NOTES

Publish annotations back, per-version client notes with AI summaries, note history, project & submission notes.

SUPERVISOR, QOL & HUD

Bid estimates & milestones in-player; hotkeys & menu; 4 HUD overlays — version, client, EXR check, white-balance.