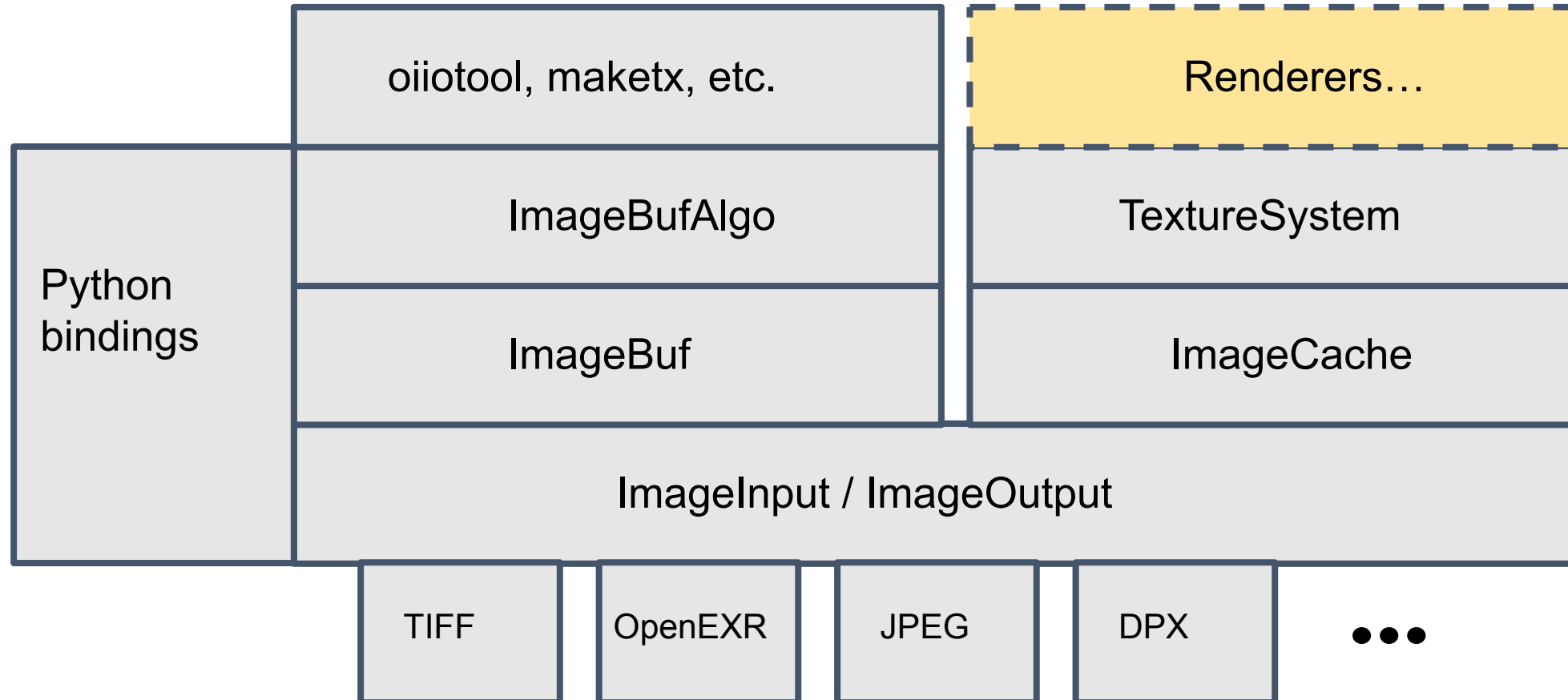# Annual Review for

OpenImageIO

Mission

OpenImageIO is a toolset for reading, writing, and manipulating image files of any image file format relevant to VFX / animation via a format-agnostic API with a feature set, scalability, and robustness needed for feature film production.
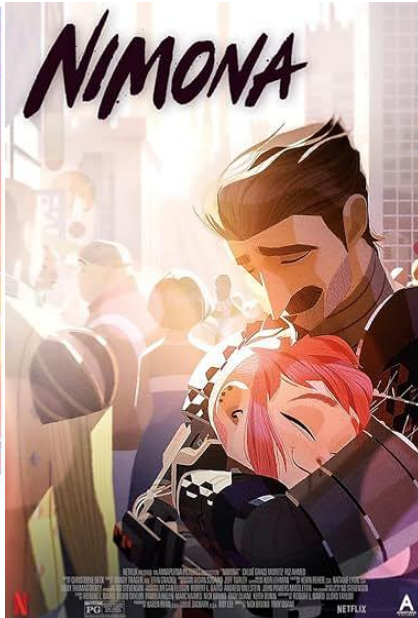
Major OpenImageIO Components

Python bindings	oiiotool, maketx, etc.	Renderers…
	ImageBufAlgo	TextureSystem
	ImageBuf	ImageCache
	ImageInput / ImageOutput	

| TIFF | OpenEXR | JPEG | DPX | • • • |

Tiny sampling of 2023 awardy productions

First ASWF year highlights

- 334 git commits, by 41 different contributors, 29 of which are first time contributors.

- License change to Apache-2.0: 99.86% LOC, 93% of files

- OpenImageIO 2.5 release

  - Improved color management, especially with OCIO 2.2

  - oiiotool –parallel-frames

  - TextureSystem color management

  - Hundreds of fixes and enhancements

- Dev Days: 8 contributions

- OpenSSF: 100% passing, 87% Silver, 65% Gold

Commits Since March 2023 - By User

- Aaron Colwell (*)
- AdamMainsTL
- alexguirre (*)
- Andy Chan (*)
- AngryLoki (*)
- Anton Dukhovnikov (* *)
- Aras Pranckevičius
- Aura Munoz (*)
- Benjamin Buch (*)
- Brad Smith
- Calvin (* *)
- Chaitanya Sharma (* *)
- Chris Hellmuth (*)
- Christopher Kulla

- Curtis Black (*)
- D-Spirits
- Danny Greenstein (* *)
- David Aguilar (* *)
- Dominik Wójt (*)
- Edoardo Dominici (*)
- EmilDohne (*)
- Eric Mehl (*)
- Fabien Servant @ TCS
- jasonbaumeister (*)
- Jeremy Retailleau (* *)
- Jesse Yurkovich (*)
- jreichel-nvidia
- kaarrot (*)

- Larry Gritz
- Loïc Vital (*)
- Mikael Sundell
- Nicolas (*)
- Peter Kovář (*)
- Ray Molenkamp
- Scott Wilson
- Sergio Rojas (*)
- Shootfast
- Vic P (*)
- Vlad (Kuzmin) Erium (* *)
- xiaoxiaoafeifei (*)
- Ziggy Cross (*)

* dev days contributor

* first time contributor

Roadmap: 3.0 release this fall

- new mins: C++17, gcc9, python 3.7, OpenEXR 3.1, more
- Deprecate a lot of old cruft (3.0 == can break compat)
- Got rid of boost!
- Self-build many dependencies if missing
- Rust bindings, Python wheel (we hope?)
- New file formats: JXL, RED
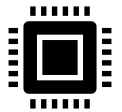- Hundreds of other improvements from the past year

Roadmap: Long-term goals

- Color management improvements
  - Collab with OCIO + color interop forum
- Metadata strategy cleanup
- GPU:
  - Cuda/OptiX implementation of TextureSystem
  - Direct read of images into GPU mem (collab w/ OpenEXR?)
- Get our security act together
- Overdue overhauls of: RAW, Movie files, HEIC

What's working?

- Used as extensively as ever, growing
- Essential part of the VFX software ecosystem
  - Hard to find a DCC or studio pipeline that doesn't use it
- New features still being added / improved
- TSC / meetings / extra eyes & hands

Engineering contributions

- Lots of "drive-by" contributions (OIIO has > 200 contributors)

- Very few people with sustained, dedicated time

- What percentage of "fully resourced" are we?

  - 30-50% maybe?

Specific shortfalls (all part-time, 10-20% FTE)

- Ongoing part-time:
  - Support, issue investigation, dependency wrangling, CI, security, releasing (ongoing)
  - Windows

- Short term more work, then less ongoing:
  - Metadata strategy cleanup
  - Color management
  - DSLR raw overhaul

- Several months of big work, then less ongoing?
  - GPU stuff

Parting wish: Mackerel!

Not asking for entire FTEs

If 5-6 big companies who use OIIO extensively…

- Each had just 1 person dedicate **consistent** 20% time to OIIO…
- Mostly doing things their own company will use (plus a little maintenance)…

That would probably double or triple the development velocity of OpenImageIO

TAC Open Discussion