



EMBARGOED – All of the information in this document is under embargo until April 14, 2021.

FLAME ADDS AI-ENABLED CAMERA TRACKING, FINISHING TOOLS, AND REMOTE WORK SOLUTIONS

The new Autodesk® Flame®, Autodesk® Flare™, and Autodesk® Flame® Assist provide subscribers with new camera matchmove tracking, augmented by machine learning technology. Flame's integrated finishing toolset also sees significant updates with a new creative LUT Loader and ability to drive Flame's colour grading and effects environment from a tactile colourist control panel. In response to the shift to remote work, artists can also now share full screen, high-quality video, enabled by Network Device Interface (NDI®) video preview streaming.

CHALLENGES

Clients expect more



As client expectations evolve and become more demanding, Flame artists need to be able to adjust and modify color/grades, composite, and do final editorial, interactively. Artists need to efficiently capture their clients' attention and get approvals, in a time sensitive environment, to stay on deadline and budget.

The rise of the Streaming (OTT) vendors and meeting their requirements



Films, TV episodes, and commercial spots used to be created at a predictable pace that could be planned out seasonally. But now, with traditional TV advertising re-inventing itself, many more episodic originals, more places to deliver content, and independent producers distributing online, there is practically no such thing as a standard "season" anymore – it all has to be done now.

Transformation in traditional ad revenue



Traditional viewing is moving from broadcast/cable/terrestrial vendors to online. This in turn has moved ad budgets from the seasonal viewing spectacles of the past, to not just delivering to air but to an ever-increasing number of social and online platforms all with different technical specifications.

Living in an 4K HDR world



As anyone who binge-watches shows online knows, the industry has changed and so in turn have the technical standards that clients are expected to deliver to. 4K/UHD delivery is now the norm, not the exception, with HDR mastering being increasingly asked for.

Commoditization is everywhere



As software has become more accessible, it has enhanced the services and differentiation that Flame owners can offer. Being able to do more services in-house, say 'yes' to the client's request, and always answer the '911' fix it call has become more important than ever to keep the client coming back for more.

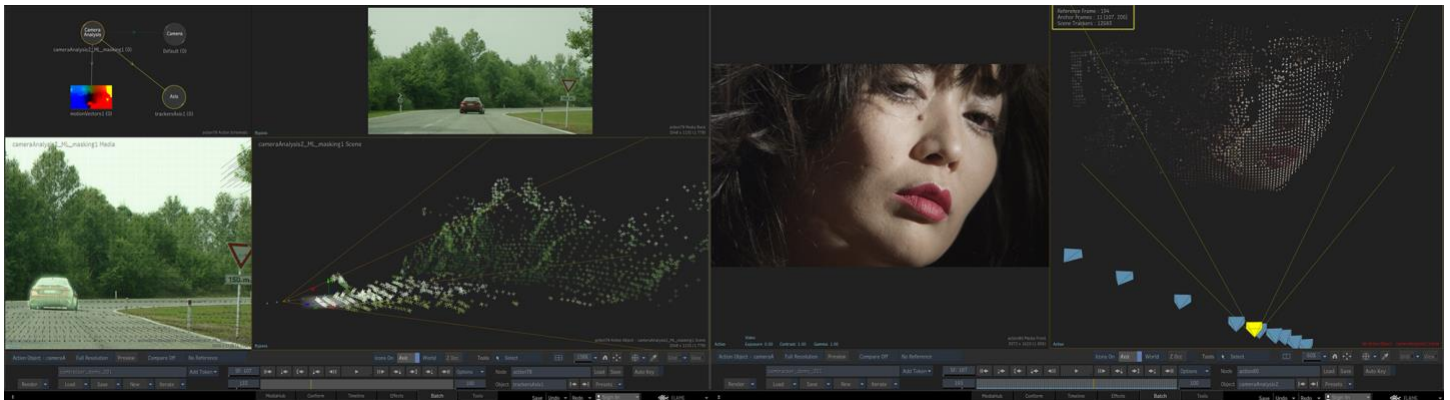
NEW SOLUTIONS

Camera Analysis Node - Motion Matchmove Solver

Flame's new Camera Analysis tool provides busy VFX artists with remarkable, automatic camera solves and 3D geometry output. This new, next-generation camera tracker uses cutting-edge scene reconstruction algorithms similar to autonomous vehicle smart 'vision' and reality capture point cloud reconstruction. Combining Structure from Motion (SfM) and visual simultaneous localization and mapping (SLAM) techniques, this new node produces thousands of accurately tracked points, enabling high-quality results in minutes.

The Camera Analysis node can operate in a manual or all-automatic mode to solve camera field of view (FOV). With machine learning, it discards moving 'bad data' like humans, vehicles, and sky regions that would otherwise have to be manually removed from a standard scene-based solve.

This toolset allows Flame artists to place 3D objects in a moving shot and apply masking for compositing, selective effects or color grading. Macros for re-projection also allow artists to quickly place cleaned up 'patches' or new elements into a scene.



Camera tracking

Integrated Finishing Toolset

Tangent colorist control panel support

Flame gets expanded Tangent colorist control panel support for Tangent Hub's Arc, Element, Wave 2, Ripple, and Element-Vs devices, allowing artists to color grade entirely from a tactile control panel. Tangent colourist control panels and iOS or Android apps can be purchased separately from tangentwave.co.uk.

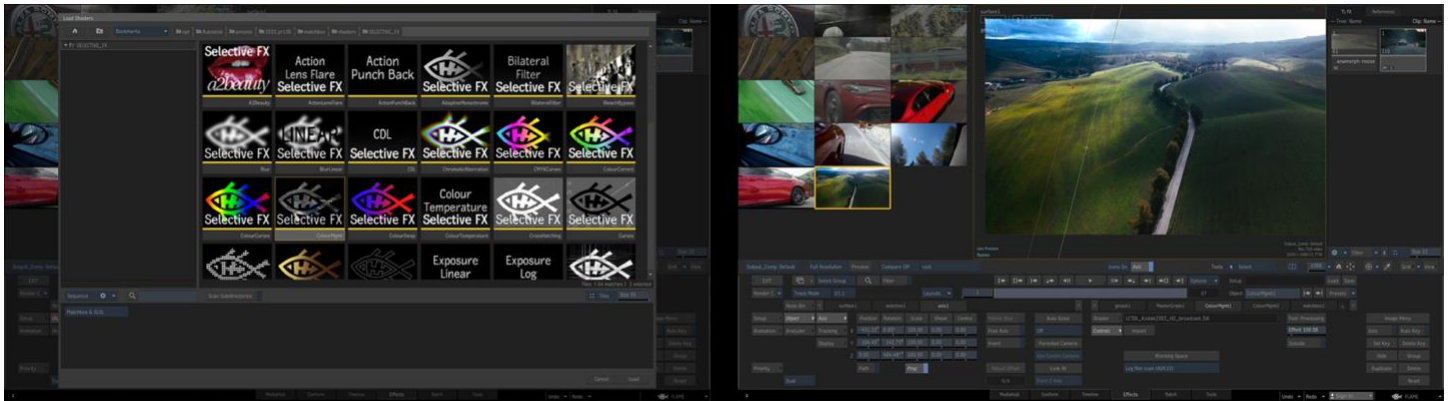


Tangent support

Colour Management LUT Loader Matchbox

A new shader, *ColourMgmt*, lets artists import an external file-based Lookup Table (LUT) or Colour Transform directly inside Action and Image nodes in Flame and Flare. Artists can then apply their 'look' over the entirety or a part of a picture via a Selective, through a traditional or ML-based key and GMask isolation.

Loading previously made, standard Lookup Table (LUT) or Colour Transforms from a wide variety of file formats (.3dl .cube .ctf .ccc) allows for instant creative manipulation of all or part of a picture. Imported LUT files can also be applied in a user-prescribed working colour space.



ColourMgmt shader

Blackmagic RAW Support – Camera Raw Media

Artists can now import Blackmagic Design RAW media in Flame, Flare, Flame Assist, and Lustre. Its default tagged colour space is set to BMD Film / WideGamut Gen5. There is also a scene-linear BMD WideGamut Gen5 CS available in Cameras/BlackmagicDesign.

NDI® – Software Video Preview

In an ongoing effort to provide remote work solutions, artists can now offer a high-quality viewing experience to multiple remote viewers with Network Device Interface (NDI®). NDI® video preview streaming support enables artists to multicast full screen video across an IP computer network in Flame, Flare, and Flame Assist.

NDI® is compatible with webcasting software like OBS studio, Skype, Zoom, Ecamm Live or cloud-based services like [SetStream \(https://setstream.io\)](https://setstream.io). Using these 3rd party tools, Flame video preview can also be streamed to public streaming services like YouTube Live, Facebook, Periscope, and Twitch.

For more details, visit <https://www.ndi.tv/>.

Community-requested Updates

A slew of creative finishing improvements based on community feedback have been added to Flame as well, including a streamlined Linux install and configuration experience, many Gmask legacy features, being made available in the GMask Tracer, a larger curves view in MasterGrade, and an update to Python 3, required for integrating Flame into a modern pipeline.

To learn more about Flame 2022, see the full release notes: <https://www.autodesk.com/flame-whats-new>

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