

# PIRANHA HD

VISUAL EFFECTS SYSTEM



## Piranha Effects

Piranha Effects has a palette of over 50 image processing filters, advanced color correction and compositing features, and an extensive array of transform and warp effects. Standard features include keying, image tracking, color correction, and flexible spline-based roto tools. The compositing interface allows for easy manipulation of multi-layer compositing tasks. Blend layers with varying opacities, toggle layer visibility, and tweak keys and mattes in real-time while you work.

## Piranha Paint

Piranha Paint is based on Amazon Paint, the industry standard in 2D paint systems. It has been used on such films as Monsters Inc, Shrek, Fight Club, and The Matrix. It features an extensive palette of tools, full rotoscoping, 64 bit color, and 3D paint capability.

## Piranha HD

The Piranha HD option provides the online facility with uncompressed video capture and layoff capabilities as well as direct playback to standard and high definition recorders. Piranha currently supports every HDTV format and can mix them interactively as well as generate a down res conversion to any of the HDTV formats.

## Piranha Preview

Real-time uncompressed playback of 2K film and 1080i/p HDTV image sequences with synchronized multi-track audio. Interactive zoom and pan controls along with a sophisticated clip management system make previewing film and HD content a pleasure.

## Piranha Edit

Piranha Edit provides full non-linear editing capabilities for HD, film and standard NTSC/PAL footage in a fast multi-track non-destructive environment with real-time dissolves and wipes. Piranha Edit has tools that let you shoot in any format, and deliver to any format. It's that simple. EDL I/O with auto-conform lets you cut the edit once, and convert with ultimate quality to any frame rate or resolution. Piranha includes advanced tools that allow you to get the most out of your source and onto screens around the world.

### Preview

- direct from disk HDTV/film resolution playback
- synchronized multi-track audio
- pan and zoom controls
- custom field charts and slate overlays
- standard file systems and image formats for interoperability

### Compositing

- 12 bit per channel hardware compositing for film
- interactive real-time 3D transforms
- resolution independent with proxy support
- hardware-based 3D travelling matte
- boolean roto and matte operations

### Tracking

- unlimited tracking points
- stabilization and match moves
- corner pinning
- automated garbage mattes
- tracker data usable in expressions

### Keying

- Primatte 3D keyer
- RGB and HSV keyer
- spill suppression and matte control tools
- RotoSpline garbage matting on unlimited layers

### Color Correction

- fast hardware-based color correction
- control of shadows, midtones, and highlights ranges
- pedestal, gain, gamma, and hue rotate adjustments
- hue corrector
- color tracking for flicker removal and matching scene-to-scene color matching

### Warping

- cornerpin
- 2D/3D displacement
- real-time mesh warper
- 3D texture projection onto arbitrary geometry
- spring and damper dynamics-based warping

### 3D Support

- 3D camera
- 3D rotoscoping
- 3D object import
- displacement
- lighting
- particle system with dynamics
- environment mapping

### Paint

- tablet pressure-sensitive brushes
- sub-pixel painting
- 16 bit per channel RGBA support
- over 20 paint effects
- customizable anti-aliased brushes
- multi layer clone brush
- paint through with frame offset
- linear crossfade wire removal
- animatable or tracker controlled spline-based drawing tools
- 3D paint

### Text and Character Generation

- anti-aliased font rendering
- per-character kerning
- Postscript and TrueType font support
- unicode text support for international character sets
- 3D text

### Time

- automatable Timewarp and Frame Rate effects
- 3:2 pulldown
- interlace/deinterlace and fields tools
- stobes and freezes
- frame averaging

### Input and Output

- real-time uncompressed 601 and HD (SMPTE 274M/296M) I/O
- CMX EDL import/export and conforming
- RS422 serial deck control
- over 30 image file formats supported along with QuickTime movies
- telecine and film scan workflow for DPX and Cineon

### Scripting

- All effects controllable from expressions and user-defined functions
- TCL byte-compiled language interpreter
- Extensions for development of custom interfaces
- Network control interface

### Audio Support

- up to 32 channels of digital audio
- audio waveform scope
- frequency and level-based audio trackers for driving video effects parameters
- ADAT, AES/EBU digital audio
- capture and record four track audio for Sony and Panasonic decks

### Effects

- imaging filters
- motion blur
- image warping
- particle systems
- animatable splines for matte creation

### Edit

- unlimited number of video tracks
- overwrite, insert, and replace with fit-to-fill and ripple
- trimming, rolling, and slipping
- layer grouping
- real-time wipes, dissolves, and superimpose
- complete integration with effects, paint, and compositing
- intelligent effects caching for real-time playback
- user-configurable editing environment

### Rendering

- field and frame based motion rendering
- letterbox, fill + crop, and anamorphic rendering
- support for log and linear 10 bit Cineon files
- 3:2 pulldown
- batch rendering
- network rendering over shared filesystems

### Required Hardware

Piranha runs on SGI workstations with IRIX 6.5 or later, and now Intel and AMD x86 processor equipped Linux workstations.

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