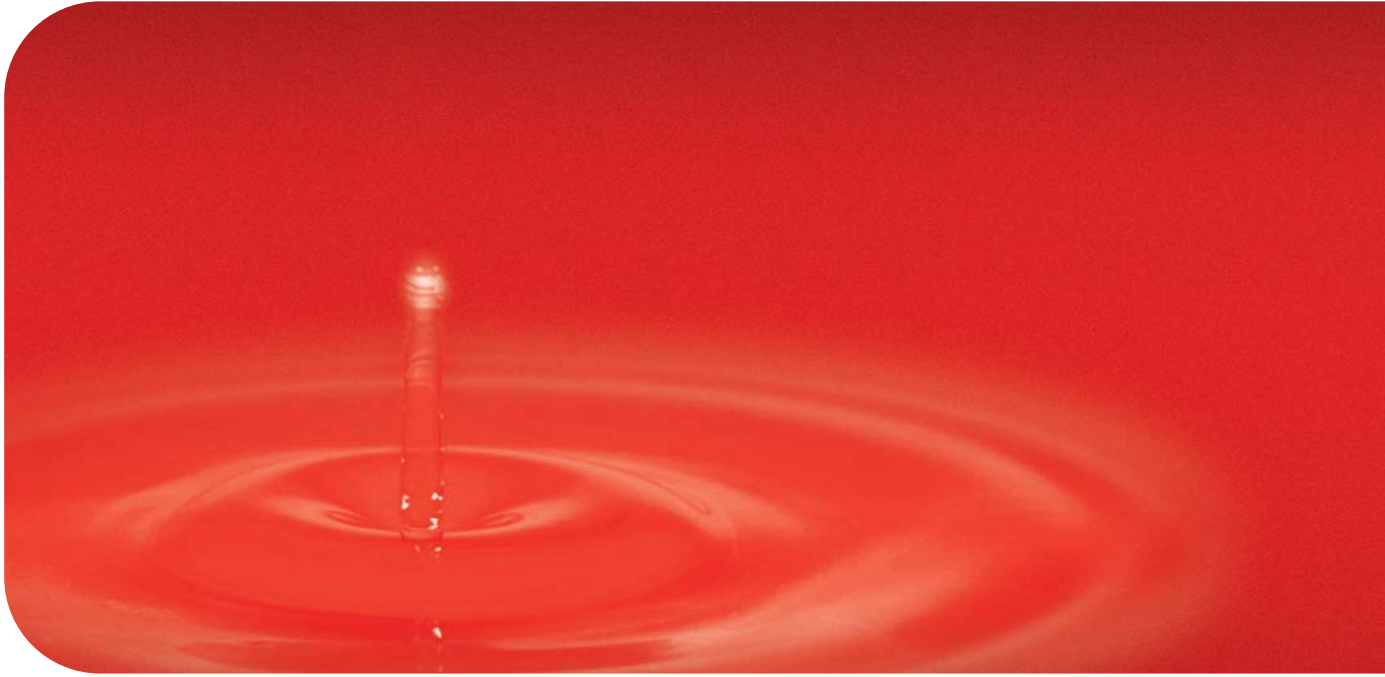# Networked Editing Solutions
Pinnacle Liquid Family

LIVE
PRODUCTION

EDITING

CONTENT
DELIVERY

01010

NEWS
PRODUCTION

NEWS

SPORTS
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OEM
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PINNACLE
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Networked Editing
PINNACLE LIQUID FAMILY

The Pinnacle Liquid family of professional editing solutions scales to fit the unique needs and requirements of everybody from independent videographers to the world's largest broadcasters. Liquid is used in broadcast stations worldwide where customers require reliable, full-featured, plug and play networked editing solutions. Pinnacle Liquid combines ease-of-use, format flexibility, superior image quality and remarkable price performance all within one fully scalable product line. Pinnacle Liquid is the most integrated application on the market – combining truly professional editing tools with DVD authoring, titling, audio editing, compositing and a wealth of output options from tape through DVD to the Web. With an ever expanding user base, Liquid is redefining the way editing is done everywhere.

Liquid offers the world's most advanced software for non-linear editing. Underneath the comprehensive editing toolset is Liquid's SmartRT technology. SmartRT is a format-independent real-time effects engine that harnesses the full power of your computer's on-board central processing unit(s) (CPU) and graphics processing unit (GPU) to perform 1,000's of amazing format independent broadcast quality 2D and 3D real-time effects. Moreover, Liquid's SmartEDIT technology lets users edit in the native capture and/or output format. SmartEDIT even supports MPEG-2 IBP, the format of choice for HDV, DVD and many servers. With SmartEDIT, users can actually mix and match codec types and HD/SD formats on the same timeline.

The Liquid family presents unique advantages to facilities looking for networked, tapeless workflow solutions. All Liquid editing products provide integrated support for shared media storage and a powerful set of tools to exchange media and project data with ingest stations, servers, and asset management solutions. Liquid features can be accessed across the entire product family and projects can be fully shared between multiple Liquid workstations using the Liquid Project Server.

The Liquid family offers the perfect solution to any facility looking for a fully integrated workflow friendly solution that is powerful and flexible enough to address the most complex projects and rigorous image quality standards.
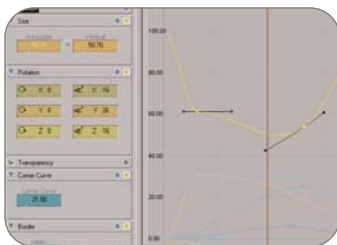
Liquid Feature Focus

Liquid Essentials
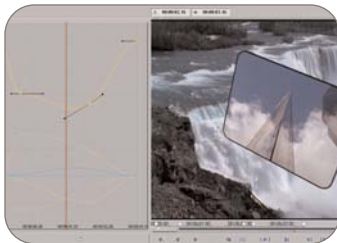
SmartRT Powered Effects

Real-time Control

Intuitive Interface

Integrated DVD Authoring

Professional Audio Tools

HD Editing Everywhere

Pinnacle Liquid shatters the barrier to HD with integrated and truly affordable HD support across the entire product line. All Liquid projects are resolution independent and can contain multiple timelines from NTSC and PAL to HD at 720p and 1080i. Furthermore, each timeline can include multiple formats. Every Liquid product supports full HDV native editing with plug and play HDV I/O over off-the-shelf FireWire (IEEE 1394) support. Liquid SmartEDIT's unique native MPEG-2 IBP editing support provides HDV editing without the needless time-consuming and damaging transcoding required by others. And, Liquid's SmartRT harvests the inherent resources of off-the-shelf hardware to power through the most complicated multi-layered HD effects in real-time. For more advanced users, the all new Liquid chrome HD product provides HD-SDI I/O to complement the 1394 HDV support so that users can capture and record back from any professional broadcast HD deck.

Integrated DVD Authoring

Pinnacle Liquid offers unique integrated DVD authoring. Editors can create titles, chapter points and interactivity directly in the editing timeline. Menus can either be authored in the application, or chosen from dozens of easy to use templates. Why wait for lengthy rendering times when with Liquid, previewing the full DVD interactivity is always instantly available. Also, avoid long delays during the final encoding stage with Liquid SmartEDIT's support for native MPEG-2 IBP editing. Lastly, Liquid's integrated burning capabilities mean that users can directly burn to DVD/VCD/S-VCDs without ever leaving the application.

Open Networking

Pinnacle Liquid is built for open networking from the ground up. Liquid's file I/O is optimised for efficient performance on both NAS and SAN network architectures. Liquid's media management allows multiple Liquid workstations to work off of the same network storage array, and Liquid's unique project structure allows projects to be stored on a networked drive and fully shared. Users sharing projects can even send SMS messages to each other to aid in group collaboration. Liquid offers XFind – a built-in function that allows for fast and efficient network wide clip searches from any workstation.

Professional Integrated Audio Tools

Liquid's new Steinberg-based advanced audio engine offers a wealth of features for advanced audio editing. The audio mixer offers features such as integrated surround sound authoring, send busses, VST plug-in support, audio Timewarp and advanced mixing capabilities. Now, editors can seamlessly edit audio and add top-level effects with the industry-leading audio tools without ever having to leave Liquid.

Pinnacle Liquid Benefits

All-format Editing from SD to HD with SmartEDIT
Includes expanded native support for just about any SD and HD format (DV, MPEG-2 IBP, MPEG-2 I-Frame, HDV and even uncompressed) in the same timeline. This eliminates the need for untimely and damaging transcoding for HDV output and DVD authoring.

1,000's of Real-time SD and HD Effects with SmartRT
Advanced multi-layer keyframeable 2D, true 3D, colour correction and chrome/luma key effects are just a few of the SmartRT powered real-time SD and HD compositing effects available to bolster, not hamper your creative workflow.

Integrated DVD Authoring
Wizard based DVD/VCD/SVCD creation with motion menus, motion buttons and automatic links using the same intuitive easy to use interface directly from the Liquid timeline.

Broadcast Quality Effects
CX Colour Correction with both secondary and selective colour correction, Dynamic Slow Motion and a host of other resolution independent high precision, sub-pixel software effects are included.

Advanced Multicam Support
A new and powerful resolution independent Multicam feature ensures that even the most complex multi-camera productions can be edited in a breeze.

Advanced Audio Editing with Surround Sound and VST Plug-in Support
Pinnacle's Steinberg inspired new audio effects engine commands an advanced audio mixer and full surround sound and VST plug-in support.

Background Processing
Continue to drive your creativity while you are rendering high quality format and resolution independent SD and HD output transparently in the background.

Instant Save
Don't risk losing your work – Liquid's unique InstantSave technology ensures that every step you take is immediately and automatically protected. You can even drop back to an earlier version of your project by using the Undo History palette.

Network Native
Map networked drives on SAN and NAS architectures so that multiple users can view and access the same media. Liquid uniquely offers the ability to share not only media across a network, but also to share projects for multi-user workgroups, and even communicate by SMS between users.

Accessible
New Windows' friendly user interface options make Liquid more accessible and easy to use than ever. Add to this, import and export wizards, a highly configurable keyboard and interface layout, and a Liquid programmable jog/shuttle control for fast and tactile control of the media and you are in editing heaven.

Liquid Key Features

- Fully featured broadcast editor with source record monitors, multi-layer timeline, comprehensive media management, extensive effects, and advanced capture and publishing tools

- 1,000's of 2D and 3D resolution independent SD and HD real-time effects powered by Liquid's SmartRT

- Efficient and quality conscious native editing in HDV and the format of DVD's fueled by Liquid SmartEDIT

- Integrated, timeline-based DVD authoring with MPEG encoder and more than 40 templates included

- Export to DVD/S-VCD/VCD with editable presets for CBR and VBR MPEG encoding, burn to multiple discs and disc capacity calculator

- Integrated Pinnacle TitleDeko character generator for broadcast quality titles

- Advanced audio mixer with full support for surround sound, VST plug-ins and send busses

- Full Multicam editing support

- XSend to other applications for seamless integration to compositing, web authoring and audio applications, servers and asset management systems

- InstantSave technology means that you never lose your work

- Integrated networked media management

- XFind network clip browsing option

- Background processing of effects means no waiting for rendering

- Customisable user interface and programmable keyboard shortcuts

Liquid in Use Around the World

Liquid is the professional's choice around the world. Users looking for a powerful editor that can be used in an open systems environment have turned to Liquid for their needs in News, Production, Post-Production and Events.

Liquid and Panasonic Go for the Gold

The Olympics not only set the standard for sports; broadcasters worldwide look to the Games as the bellwether for future broadcast operations. So when Panasonic decided to introduce tapeless workflow by bringing P2, its eagerly anticipated solid state media to the Games, they needed an advanced editor that was ready to go with the very latest technologies.

Pinnacle's extensive experience with tapeless workflow and the fact that Pinnacle Liquid is a fully tested and shipping P2 solution made it the obvious choice. In fact, Pinnacle Liquid was the only reliable, professional native P2 editing solution ready for the Olympics.

Liquid with P2 was used to deliver worldwide coverage of several marquee events. More importantly, the successful combination of P2 and Pinnacle Liquid at the Olympics paved the path to greater efficiency at every level of the entire broadcast.

TF1 Goes Mobile to Offer the Best Olympics Coverage

In August 2004, France's TF1 dispatched teams of journalists with one mission – deliver the best Olympics coverage its viewers had ever seen. To meet that goal, TF1 armed the teams with powerful Pinnacle Liquid laptops.

Pinnacle Liquid software on laptops is particularly well adapted to the tight constraints the TF1 teams of reporters confronted on the ground. The systems allowed the crews of journalists and camera operators to remain completely autonomous. They assembled their stories on location, ensuring powerful, timely stories. Moreover, editing the material before delivery cut down on the amount of satellite time.

TF1's Liquid editing systems integrated seamlessly with the Vortex news system TF1 uses at its headquarters. As soon as the uploaded field material began to arrive in the central server, desktop-based editors combined it with event footage and other materials to produce complete packages that conformed automatically at airtime.

Pinnacle Liquid Family

Liquid Edition
Liquid Edition is the software application at the heart of the Liquid family, offering full SmartEDIT multi-format codec support, both SD & HD timelines, and SmartRT advanced real-time effects in a software only package for FireWire® (IEEE 1394) equipped computers.

Liquid Edition PRO
Liquid Edition PRO adds IEEE 1394, analogue composite and component I/O and surround sound output capabilities using an all-new plug and play professional USB-2 based breakout box.

Liquid Edition Broadcast
Liquid Edition Broadcast is for those looking for advanced interoperability and networking directly from the Liquid Edition editor, and includes support for MXF*, MPEG-2 4:2:2*, DVCPR050* codecs as well as Panasonic P2 and Sony XDCAM connectivity support.

Liquid chrome HD
Liquid chrome HD is the successor to the award winning Liquid chrome product. Liquid chrome HD is a hardware/software package that offers all of the broadcast quality SD and HD I/O options including HD-SDI I/O, to complement the native FireWire support. With Liquid chrome HD, you can seamlessly connect to a variety of professional breakout boxes as well as output SD and HD to tape simultaneously.

Liquid blue
Liquid blue is Pinnacle's advanced broadcast editor that works in demanding environments and offers such unique features as multi-speed SDTI capture, background capture and DVCPR050 support. Liquid blue will also offer advanced real-time effects powered by Liquid SmartRT.

Image courtesy of BLM National Training Center in Phoenix, Arizona

Image courtesy of Video Graphics West

Liquid Edition Product Comparison

	Liquid Edition	Liquid Edition PRO	Liquid Edition Broadcast	Liquid chrome HD	Liquid blue
Formats/Codec Support					
DV25/DVCPR025	■	■	■	■	■
DVCPR050			■*		■
MPEG-2 4:2:0 I/IBP	■	■	■	■	■
MPEG-2 4:2:2 I/IBP			■*	■	■
Uncompressed SD	■	■	■	■	■
Uncompressed HD				■	
MPEG IMX					■
MXF			■*	■	■
I/O support					
IEEE 1394/DV/HDV	■	■	■	■	■
Composite		■	■	■	■
S-Video		■	■	■	■
Component		■	■	■ (10 bit)	
SDI				■	■
SDTI					■
HD-SDI				■	
Genlock				■	■
P2/XDCAM			■	■	■
Stereo Out		■	■	■	■
Surround Out		■	■	■	
SPDIF		■	■	■	
AES Audio				■	■

* Support for edit and fuse only