

We've come a long way from the early days of color correction, with the current trends leading toward Digital Intermediate (DI). So how will you cross the bridge to DI, gaining the benefits of non-linear operation using existing infrastructure while maintaining compatibility with existing workflows? For this transition da Vinci created Splice™ – a “virtual telecine” which allows a linear color corrector to operate as a non-linear device.



**SPLICE™. VIRTUAL TELECINE FOR  
NON-LINEAR IMAGE PROCESSING**

from the genius of **da vinci**

Operating as a server based front end for the da Vinci 2K, Splice provides colorists with the types of image processing controls normally associated with a telecine environment, like real-time pan tilt zoom and rotate.

fig. 01 \_ [ SPLICE ]  
WORK STATION / SPLASH SCREEN



Colorists will make a seamless transition to Splice with its familiar interface on the da Vinci 2K Plus.

#### “VIRTUAL TELECINE”

da Vinci offers colorists the advantages of non-linear color correction and in-context grading with Splice, a new “virtual telecine” for the 2K® and 2K Plus™.

Operating as a server based front end for the da Vinci 2K, Splice appears as a new device on the 2K interface and provides operators with a familiar real-time operating environment while maintaining their existing color enhancement toolsets.

Powered by da Vinci's exclusive Transformer image processor, Splice offers real-time optical quality pan, tilt, zoom and rotate, coupled with 4:4:4 uncompressed storage and processing for the ultimate in image quality.

#### ADVANCED CONFORM CAPABILITIES

Sharing key technologies with da Vinci's Resolve Digital Intermediate Mastering Suite, Splice conforms clips on a virtual timeline for playback under 2K control. Combined with a

2K, Splice provides conform enhancements for EDL handling, switching on the fly between source and record order and an add handles function for deliverables. Splice is integrated with ColorTrace and the 2K to manage grades, matching editorial changes with color decisions, thereby making reconforming editorial revisions painless.

Splice allows colorists to conform, transform, grade, arrange, and deliver images in real time at unsurpassed quality.

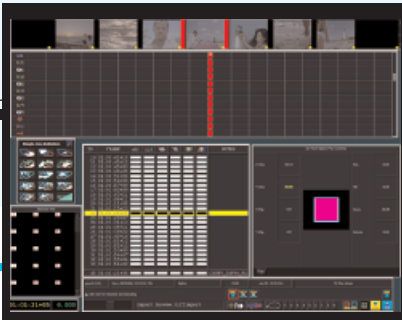


splice

SPLICE BROWSER

fig. 02 \_ [ INTERFACE ]

SPLICE ON THE 2K USER INTERFACE



### LEVERAGING YOUR INVESTMENT

Splice incorporates key technologies from da Vinci's Resolve® DI Mastering Suite to allow new and existing da Vinci 2K/2K Plus users to expand and leverage their equipment investment, bridging them into the realm of non-linear processing from a previously traditional workflow.

A 2K combined with Splice maintains compatibility with existing facility infrastructure such as telecines, VTRs and DDRs, eliminating the need for additional

equipment purchases. For greatest flexibility, a suite configured for Splice can quickly and easily be reconfigured for traditional workflows like dailies and tape to tape, and can easily handle that last minute roll of film.

Existing equipment is revitalized by the benefits of a nonlinear workflow, ensuring that colorists can continue using their 2K systems for many years to come. Splice is the ideal solution for colorists who want non-linear access to material with the benefits of in-context grading and who also need to

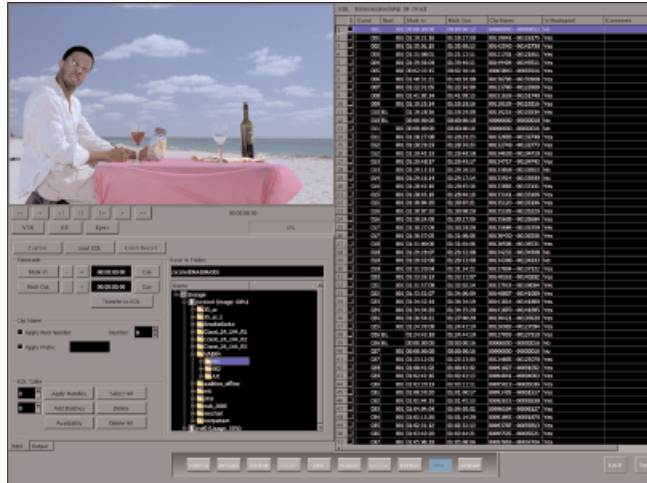
control the devices commonly found in the telecine suite.

### ACCESS TO MATERIAL IN ANY ORDER AT ANY TIME

Operating from Splice, a server based system, colorists have instant access to all material, in any order, and can "splice" together images in storyboard order, according to the offline EDL.

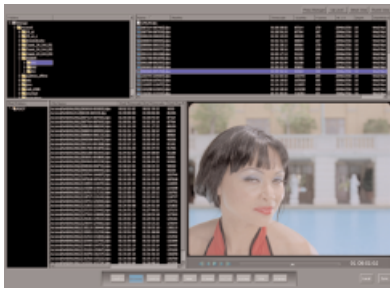
From there they can grade in context, eliminating the guesswork and constant

fig. 03\_ [ INTERFACE ]  
VTR INTERFACE



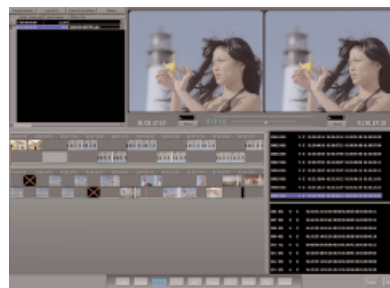
**SPLICE BROWSER**

fig. 04\_ [ INTERFACE ]  
BROWSE SCREEN



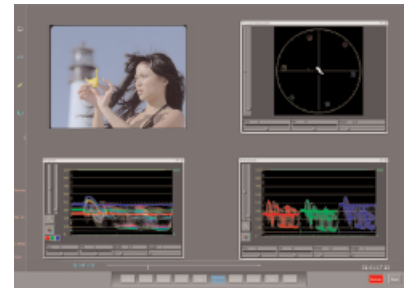
**MULTIPLE EDLS**

fig. 05\_ [ INTERFACE ]  
CONFORM TOOLS INTERFACE



**EASY MONITORING**

fig. 06\_ [ INTERFACE ]  
VIEWER WITH WAVEFORM MONITOR



shuttling and reel-changing required in a linear tape-to-tape or telecine-based workflow. Material can be sorted to source-order to facilitate bulk grading, then switched back to record-order for trimming. This gives colorists the power to easily match looks from scene to scene. Because there is no time waiting for film or tape to shuttle, clients will experience an unbroken creative flow in the session.

For deliverables, material can also be sorted in source order and played out with graded

handles, making the transition to non-linear seamless for clients. Facilities can better optimize colorists' time and produce more effective results for their clients.

**OPEN FILE SYSTEM - NO IMPORT AND EXPORT REQUIRED**

Splice supports Open File Systems where sufficient bandwidth allows users to browse and select and play images directly from a LAN, SAN, or local storage. With this direct access, iterative workflows are possible with minimal resulting time impacts and no need

for copying or moving data or making proxies like other systems. That translates into big cost savings both in time and storage space, while delivering creative freedom, time efficiencies, and collaborative processing.

Splice offers compatibility with SAN interfaces to both ADIC®- and SGI® CXFSTM-based storage networks.

fig. 07 \_ [ WORKFLOW ]

### LINEAR WORKFLOW FOR FILM



Open architecture affords workflow flexibility

In a short form linear workflow, each roll of film is graded separately. Selected shots are interspersed with many shots that are not needed, but the telecine must shuttle through them regardless. Shots can only be seen in film order, and the colorist must rely on still stores for grade matching. Revising a grade requires reloading the film and searching again to the selected shot. Time is spent changing rolls and searching for shots rather than grading. With all this shuttling, there is a high potential for film damage or dirt contamination.

In long form linear workflow, grading can take place from film or tape, but the order is locked and there is no convenient way to apply grades to groups of shots. In the case of tape, repositioning for artistic or formatting purposes is difficult, and grading is restricted due to the compressed nature of videotape.

fig. 08 \_ [ WORKFLOW ]

### NON-LINEAR WORKFLOW FOR FILM



In a non-linear workflow, images are scanned prior to the grading session. During the session, images are viewed and graded in-context. The required shots are available without searching through multiple rolls of film and are played in their final order so that grading can produce a faster and more precise result. 2K with Splice can further accelerate this process by sorting shots to source order so they can be graded together and then reassembled for a trim pass. When deliverables are for

finishing elsewhere, Splice can add graded handles for final conform flexibility.

When editorial changes are made, the session can be updated immediately. Existing grades will be retained to match the editorial changes, even if shots are extended, shortened or reordered. No time is wasted on manual list updating, so both the colorists and system can be more productive.

# Splice™ Data Sheet

## Highlights

- ▶ Virtual telecine front end for the da Vinci 2K® /2K Plus™
- ▶ Provides a non-linear grading solution for the 2K user, combined with all the color enhancement of the 2K
- ▶ Single box player with optional local attached or SAN storage
- ▶ Includes da Vinci's exclusive Transformer™ for real-time pan, tilt, zoom with rotation at unparalleled image quality
- ▶ Play out up to 2k resolution source material as HD, SD or HSDL to 2K for grading, controlled by 2K Plus
- ▶ Controlled by the da Vinci 2K using RS-422 serial control and Ethernet connections, easily shared between multiple 2K's on a job-by-job basis
- ▶ Internal source displays for picture, waveform, vector, parade and histogram

## Conforming Features

- ▶ Conform EDL either locally or from the 2K to create record mode in-context timeline
- ▶ Conform mixed resolutions on the same timeline
  - Mix 2k, HD and SD sized DPX files
  - Playback of RGB 4:4:4 at standard selected by the 2K
- ▶ Stand-alone conforming features independent of 2K Plus:
  - Ingest offline clip, compare visually with conformed EDL
  - Automatic Scene Detection of pre-conformed material – up to 5x real-time – splits material into separate clips, updates list to the 2K
  - Load capture EDL, add handles, ingest from tape locally to Splice on a reel-by-reel basis

## Non-linear Workflow Integration with 2K

- ▶ Integrated ColorTrace™ for 2K to provide:
  - Interactive A mode / C mode list sorting
    - Switch to source mode on the fly to apply grades to similar shots
    - Use 2K ripple functions to grade groups
    - Switch back to record mode to grade in context
  - Add handles function generates deliverables
    - Graded user specified handles, supports edit preroll for final conform elsewhere
    - Playout in C mode with source timecode to tape
  - Re-conform to match complex editorial changes
    - Manage 2K sessions through editorial changes so color decisions remain locked to material
    - Provide grade matching for user defined effects shots using clip name, with or without timecode match
    - Advanced clip name matching supports effects revisions with retained grades
- ▶ Grade in context, visualize the final product, instant access to shots, use 2K cueing functions
- ▶ Server based system provides flexible non-linear access using Resolve® technology to conform and manage timeline under the 2K colorist's control

## Workflow Benefits

- ▶ Bridges da Vinci 2K systems into non-linear working environments - extending the useable life of any 2K investment
- ▶ Identical toolsets, minimal learning curve
- ▶ da Vinci 2K / 2K Plus supports both existing linear and now non-linear workflows
  - Dailies, film to tape, tape to tape
  - Last minute roll of film
- ▶ Removes telecine from grading session, with high quality Transformer sizing

## System Requirements

- ▶ da Vinci 2K or 2K Plus with v4.1 or later software
- ▶ Appropriate 2K Plus I/O options for HSDL/HD/SD integration
- ▶ ADIC® or CXFS™ SAN-based file systems or ADIC-based local storage file system

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