CLIPSTER®



THE HEART OF YOUR DI

CLIPSTER

DVS

CLIPSTER

the heart of your DI

"I don't think people realize how revolutionary the DVS CLIPSTER® is."

Ted Schilowitz, "Leader of the Rebellion" RED®



Among other prestigious prizes, CLIPSTER® was honored with the Hollywood Post Alliance's Engineering Excellence Award.

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The award-winning CLIPSTER® DI workstation is the perfect solution for any DI workflow. A complete hardware and software turnkey finishing system, CLIPSTER® equips users with a robust toolset to tackle any challenge and enhance the post production of film and broadcast projects. Use the advanced DVS system for a large variety of DI steps, ranging from capturing to mastering in several digital distribution formats. CLIPSTER® already meets the challenges of the future, enabling digital deliveries from RAW camera files, the creation of mezzanine formats like IMF (Interoperable Master Format) packages and DCI cinema projects (even in 3D), and the conforming and editing of uncompressed 4K data in real-time.



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THE CORE OF YOUR DI WORKFLOW IN ONE PACKAGE

CLIPSTER® is feature-rich for use in all facets of post production. A complete package, CLIPSTER® enables the capturing of any video format including high-resolution film data; real-time processing of RAW camera data and comprehensive conforming and editing of the RAW data; scaling and color correction features; interaction with color correction tools by third-party vendors; versioning in various formats and stereoscopic DCI Mastering. The DVS DI workstation efficiently handles the core tasks in the DI workflow in one box, eliminating time-consuming pre-processing and copying. CLIPSTER® excels with amazing flexibility and openness and integrates easily into new or existing film and broadcast post production workflows. By consistently following up on its upgrade paths, DVS offers its clients CLIPSTER® as a state-of-the-art workstation that is designed to meet tomorrow's challenges today.

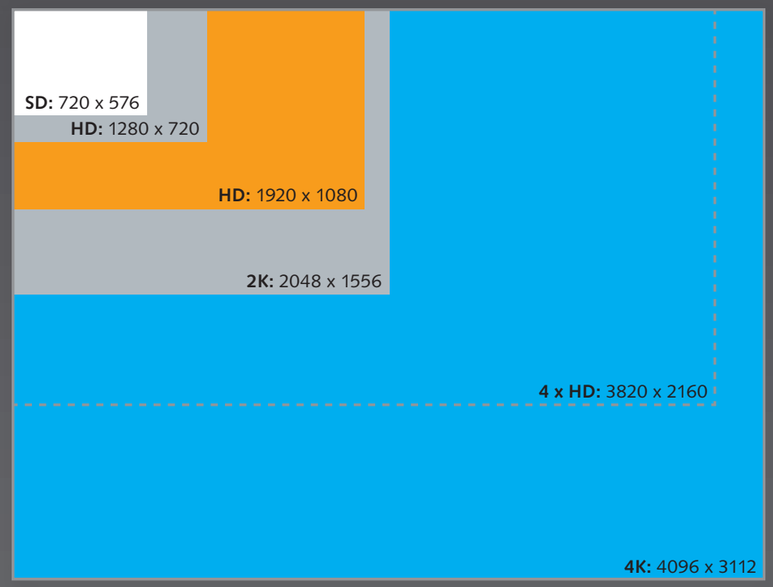
REAL-TIME SAVES YOU REAL TIME

Say goodbye to lost time waiting for vital DI processing steps to be completed. CLIPSTER's real-time features include RAW processing, conforming, editing, color correction and versioning. The DI workstation converts image data to any given format and easily handles any data, from SD, HD and 2K up to 4K. Benefit from CLIPSTER's real-time features, and use the time savings to optimize the creative workflow.

UNCOMPRESSED DATA

CLIPSTER® is the only system worldwide to process uncompressed data, rendering artifacts and defective results a thing of the past. CLIPSTER® effortlessly handles uncompressed graphic file sequences like DPX or TIFF in 8, 10, 12, or even 16 bit RGB 4:4:4 – all in real-time, even up to 4K.





DPX, TIFF, PNG, BMP, JPEG2000, R3D, ARI, Cineform, MXF, QuickTime, Windows Media®, MPEG 1/2, Panasonic DVCPRO® and AVC-Intra, Sony XDCAM®, Avid DNxHD®, and lots of other formats

ANY QUALITY, ANY FORMAT

No matter the format or resolution – CLIPSTER® can handle it all. In addition to DPX, Cineon®, TGA and TIFF, this powerful workstation supports more than 100 other graphic formats for project use. CLIPSTER® also handles other formats such as JPEG2000, QuickTime®, Windows Media®, MXF, MPEG 1/2, RAW data coming from digital cameras such as RED®, ARRI, Phantom or Silicon Imaging. Each resolution has its benefits – which is why CLIPSTER® supports them all. Work in real-time with SD-, HD-, 2K- and even 4K material, either truly uncompressed in RGB 4:4:4 or compressed.

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PREMIUM SOFTWARE MEETS POWERFUL HARDWARE

In a unique combination, our hardware and software are perfectly optimized for each other. We develop these two components together to be able to offer our clients the perfect tools for outstanding project performance ranging from excellent batch capturing to comprehensive and convenient conforming to color correction of uncompressed, high-resolution file sequences in real-time.

ANY IN, ANY OUT

When workflows change with every new project, clients demand high flexibility, or project data requires complete re-processing to be delivered in formats ranging from video tapes to mezzanine formats like IMF and DCP Packages, turn to CLIPSTER®. The DVS DI workstation easily satisfies your individual needs, offering multi-format in-timeline processing in real-time. No matter what video resolution is in your timeline, no matter what bit depth, color space or file format - CLIPSTER® is capable of processing a large variety of formats in real-time without pre-conversion. The CLIPSTER® software has proven itself over many years of use and assists with any conforming, editing and versioning steps. The hardware features 20 video interfaces, from HD-SDI dual-link to RGBS to DVI.





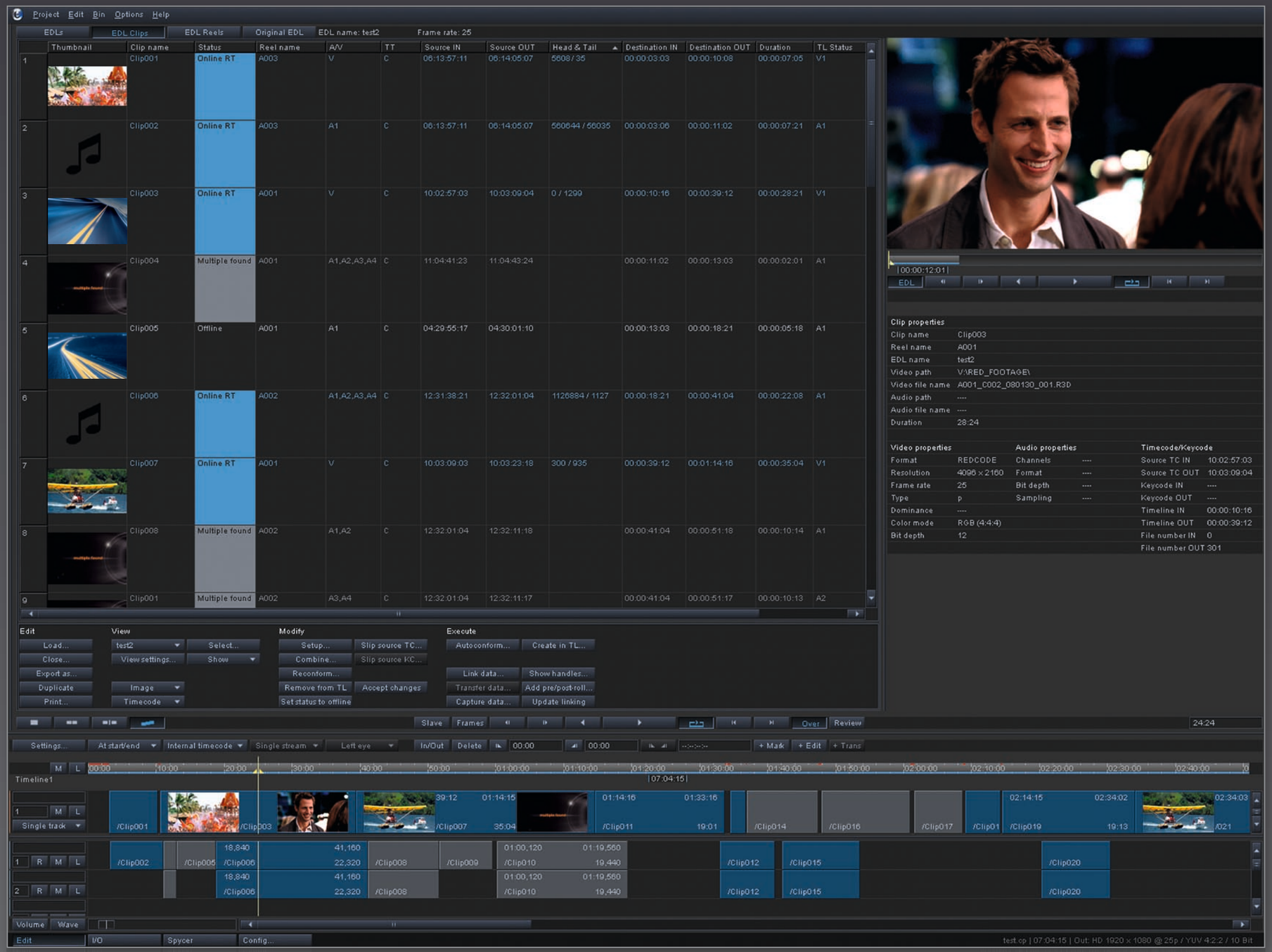
Real-time primary color correction in SD, HD, 2K, 4K

CLIPSTER

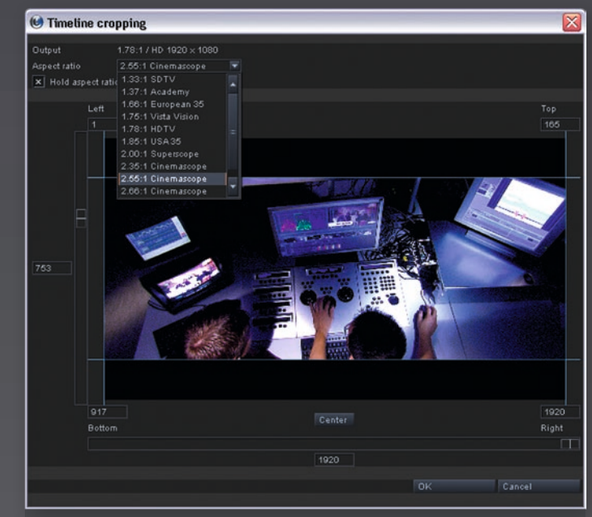
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INTUITIVE GUI FOR CREATIVE FREEDOM

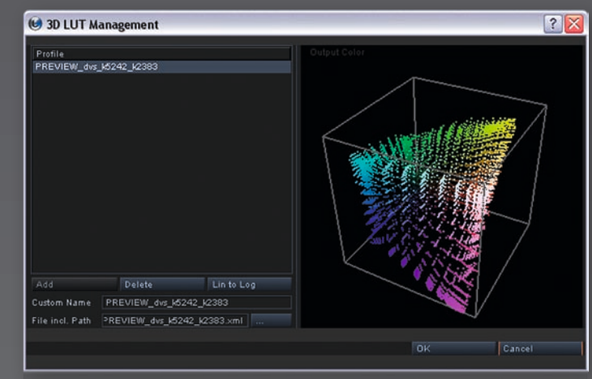
Hundreds of buttons for one workflow? CLIPSTER® will not obscure your vision: The GUI is designed for intuitive operation, with specific user guidance to support your creativity. Use CLIPSTER® to implement innovative ideas in your projects – always in maximum image quality.



Sophisticated conforming with CLIPSTER®



Comfortable cropping thanks to CLIPSTER®



Real-time 3D LUT displayed in a color cube

CLIPSTER® – UNLIMITED POSSIBILITIES



OPENNESS, CERTIFICATES AND AWARDS

An open system, CLIPSTER® provides excellent interoperability with third-party systems. Its flexibility, Windows® NTFS, SAN connectivity, and OpenFX enable its use for a wide range of video processing, broadcasting, and digital cinema applications. CLIPSTER® is certified regularly by other vendors and has also won prestigious prizes including the Hollywood Post Alliance's Engineering Excellence Award and the Digital Cinematography Award. CLIPSTER® is a valuable partner in any workflow and quickly establishes itself as an excellent, indispensable team player.

"What we appreciate about CLIPSTER® is its fascinating multi-functionality. You can process almost any kind of file format immediately and that for either play-out, finalizing, conversion and brilliant conforming. It is a true time saver and the new DCP module is a big plus for our worldwide projects."

Gunter Puszkar, Head of Post Production / Visual Effects Supervisor at PostFactory

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"Anyone who understands RED® workflows and sees this solution will not want to live without it. Bottom line: No other product compares. We are fully committed to being at the cutting edge of all things RED®, and the CLIPSTER® is, hands down, the most powerful RED® workflow tool available today."

Mark L. Pederson, CEO OFFHOLLYWOOD

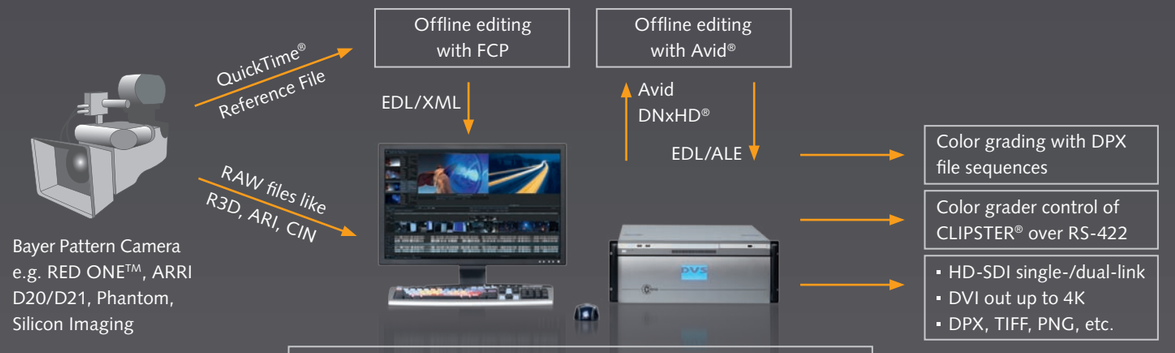


RAW WORKFLOW WITH CLIPSTER®

PROCESS FULL UNCOMPRESSED 4K RAW FILES

Shooting in RAW mode provides the highest quality content and delivers the utmost flexibility from acquisition through post production. The new CLIPSTER® hardware accelerator board easily processes RAW content in real-time. CLIPSTER's integrated hardware decodes and demosaics in high speed, preventing a loss in performance. It also provides the ability to work with a full resolution RAW file in 4K 12 bit RGB mode just like the RED ONE™ camera uses. Simply drag and drop the RAW files directly into the CLIPSTER® timeline and press "play." No preprocessing or background rendering is required. In addition to the video stream, audio and all metadata are utilized in this workflow. A sophisticated toolset lets you view the camera parameters, granting ultimate picture control to achieve just the right look.

- **Real-time demosaicing and decoding of RAW files (RED®, ARRI, Phantom or Silicon Imaging) enables fast DI workflows**
- **Control the image processing requirements for developing RAW data**
- **Quickly create high-quality digital dailies with comprehensive burn-ins from RAW files**
- **Sophisticated conforming of RAW files**
- **FCP XML and Avid ALE support**



- Real-time demosaicing and decoding of RAW files in full 4K resolution
- Generate digital dailies with sophisticated burn-ins
- Powerful conforming of RAW files with EDL, XML and ALEs
- Color grade in a typical DI workflow controlling CLIPSTER® over RS-422
- Generate DPX file sequences in 4K RGB 16 bit in high speed

THE REAL-TIME RED® WORKFLOW

Process RED® camera data in real-time. Offline RED® material can be accessed as QuickTime® reference files or as CLIPSTER-processed offline streams. CLIPSTER's unique Conforming Tool easily manages and conforms original RAW content via EDL, FCP XML or ALE. CLIPSTER® creates a master thanks to timecode and reel number information coming from the header data. Use a split screen to compare the 4K RAW 12 bit material with the offline proxies. CLIPSTER® color corrects or scales each format in real-time. DPX file sequences used in third-party color grading software are generated in high speed. With the original R3D files in the timeline you can control CLIPSTER® with your preferred color grader via an RS-422 interface in highest quality.

RAW TO DAILIES IN HIGH-SPEED

Create offline editing content on-the-fly with CLIPSTER's brand new burn-in feature set. Digital dailies are generated easily with RAW material coming directly from a RED®, ARRI, Phantom or Silicon Imaging camera, eliminating time-consuming data processing sessions. CLIPSTER® gives you the formats needed for your offline workflow. The powerful CLIPSTER® engine generates offline formats in HD/SD or QuickTime®, Avid DNxHD® or other commonly used compressed formats with the metadata and header information burned into the picture.

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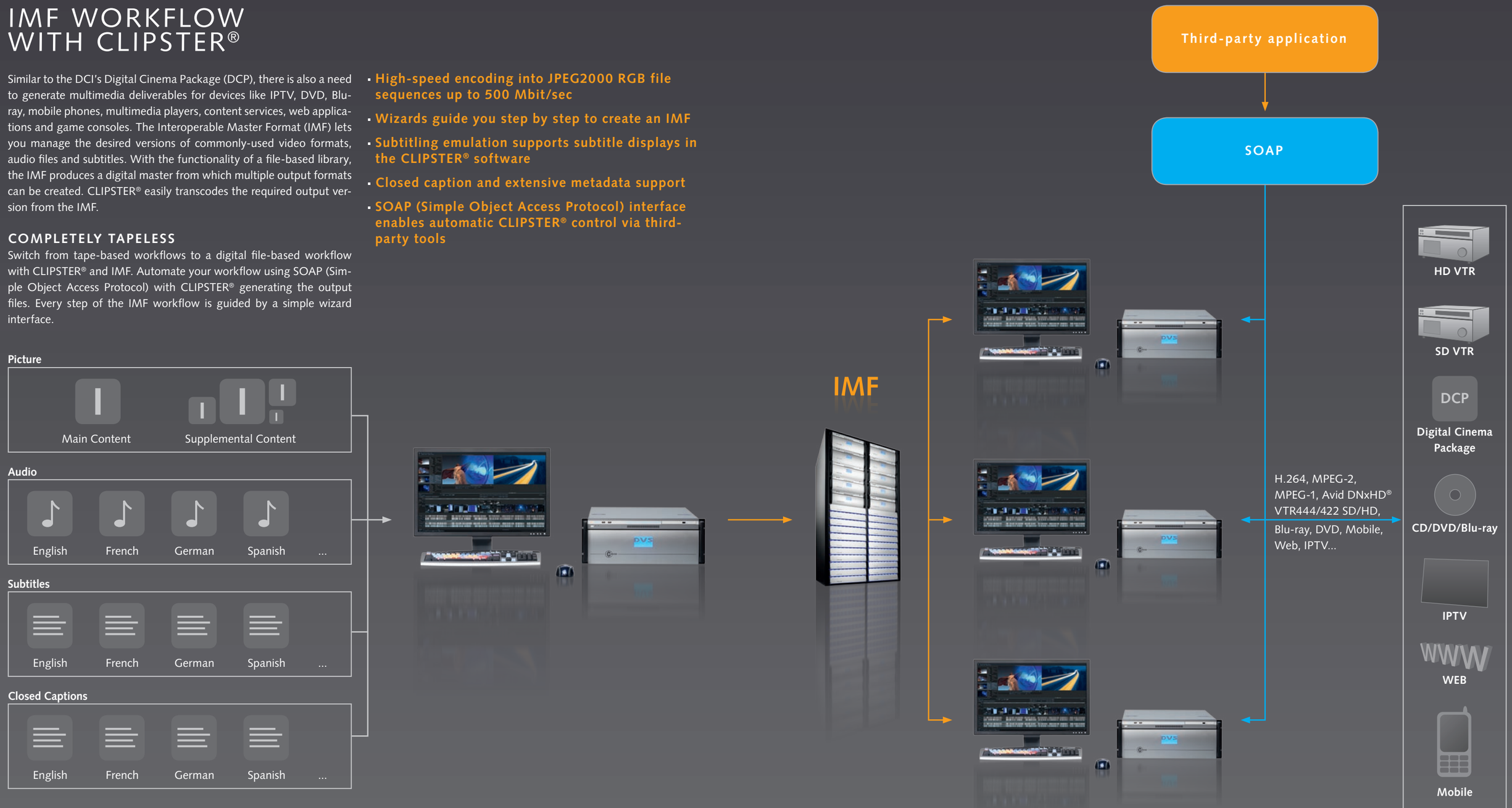
IMF WORKFLOW WITH CLIPSTER®

Similar to the DCI's Digital Cinema Package (DCP), there is also a need to generate multimedia deliverables for devices like IPTV, DVD, Blu-ray, mobile phones, multimedia players, content services, web applications and game consoles. The Interoperable Master Format (IMF) lets you manage the desired versions of commonly-used video formats, audio files and subtitles. With the functionality of a file-based library, the IMF produces a digital master from which multiple output formats can be created. CLIPSTER® easily transcodes the required output version from the IMF.

COMPLETELY TAPELESS

Switch from tape-based workflows to a digital file-based workflow with CLIPSTER® and IMF. Automate your workflow using SOAP (Simple Object Access Protocol) with CLIPSTER® generating the output files. Every step of the IMF workflow is guided by a simple wizard interface.

- **High-speed encoding into JPEG2000 RGB file sequences up to 500 Mbit/sec**
- **Wizards guide you step by step to create an IMF**
- **Subtitling emulation supports subtitle displays in the CLIPSTER® software**
- **Closed caption and extensive metadata support**
- **SOAP (Simple Object Access Protocol) interface enables automatic CLIPSTER® control via third-party tools**



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3D STEREOSCOPIC AND DCI MASTERING WITH CLIPSTER®

ENTER THE 3RD DIMENSION

CLIPSTER® enables you to generate DCI Masters with stereoscopic content. By following the DCI specification CLIPSTER® gives you the ability to create fast and secure stereoscopic Digital Cinema Packages (DCP). CLIPSTER's DCI Mastering Wizard lets you easily perform all steps of the stereoscopic DCI Mastering process including interleaving, encoding, encryption and wrapping into MXF files. With CLIPSTER's unique hardware accelerator, this process can be accomplished in real-time.

3D CONFORMING

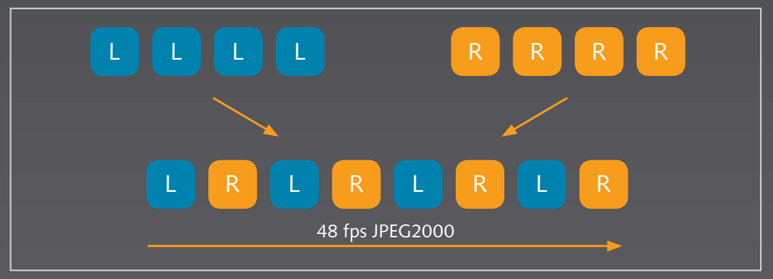
Conforming 3D content is painless with CLIPSTER's sophisticated conforming tool. Just drag and drop the left- and right-eye stream EDL into the timeline and the stereoscopic images are created. Stereo tracks can be edited as regular video tracks. Once both streams are synchronized, there's no need to edit left and right eye separately. Play out and control both streams simultaneously over HD-SDI or DVI. A routing feature lets you define where the left and right eye outputs should be. Control depth using two projectors or a special 3D panel.

QUALITY COMES FIRST

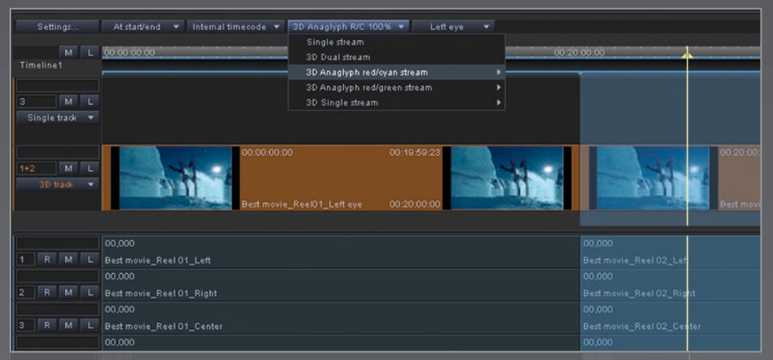
Quality parameters like picture depth are important in the creation of perfect 3D experiences. In anaglyph-emulation mode, the image depth can be controlled on one screen or directly in the CLIPSTER® software – this eliminates the need to use two projectors during the editing phase. With D-Cinema player emulation, you can easily control the quality and confidently view the integrated subtitles of the final DCP.

THE STEREOSCOPIC DCI MASTERING PROCESS

Two separate video streams – one for each eye – are merged together when mastering a 3D stereoscopic DCP. The final DCP is comprised of an interleaved stream having at first the picture for left eye and afterwards the right eye. This follows the DCI specification. The frame rate of this stream must be 48 frames per second and encoded into JPEG2000 file sequences in X'Y'Z' color space.



Interleaved stereoscopic DCP as specified by DCI



3D stereoscopic timeline with anaglyph-emulation mode

"With relation to DCI Mastering, we were looking for a system that was capable of editing the timeline of the composition playlist with ease. We found that CLIPSTER® was able to perform this task, and it exceeded all of our expectations regarding DCI Mastering."

Ian Bidgood, Technical Director Park Road Post

- **Left and right eye streams are easily conformed into the timeline**
- **Edit a stereo track as a normal video track**
- **CLIPSTER® supports all major stereoscopic methods where two streams are needed (e.g. polarization, anaglyph red/green, anaglyph red/cyan, Infitec®, etc.)**
- **Anaglyph-emulation mode checks the proper 3D picture depth**
- **Two streams of uncompressed file sequences in DPX, TIFF, BMP, PNG, etc. can be merged together into one stereo track in the timeline**
- **Hardware accelerated stereoscopic DCI Mastering encodes JPEG2000 X'Y'Z' files in high speed**
- **All stereoscopic DCI Mastering steps can be performed easily using CLIPSTER's DCI Mastering Wizard**
- **Check the final 3D stereoscopic DCP using CLIPSTER's D-Cinema emulation including subtitling**
- **DCI Mastering now includes support for supplemental DCPs – various DCPs in different languages can be generated easily**



The DCI Mastering Wizard

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KEY FEATURES >>> KEY FEATURES

TIMELINE & TIMECODE & CONFORMING

- Multi-format timeline
- Multiple video tracks and video formats
- Stereo tracks for 3D editing
- Full editing features
- EDL and FCP XML for exchange and conforming
- Comparison between offline and online version
- Burn-in for customizable text, timecode, keycode and frame numbers
- Subtitling and closed caption
- Timecode or frame readout
- Finalizing: creation of new clips from the project in different formats
- Digital Cinema Delivery Tool for DCI Mastering
- Timeline archiving function

EFFECTS

- Format conversion in real-time
- Zooming (up- and downscaling) in real-time with multiple scaling algorithms
- Panning in real-time
- Rotation and flip/flop
- Scaler and EDL-control for color correction systems
- Real-time cropping
- Color processing for RED® RAW files
- Primary color correction in real-time
- Secondary color correction with shapes
- 6 vector color correction
- 3D look-up tables for color management
- Dissolves and SMPTE wipes in real-time, also between different formats
- Color space conversion in real-time (YUV ↔ RGB ↔ X'Y'Z')
- Key framing for effects

SPYCER®

- Automatic metadata extraction of clips in watch folders
- Search function with several search parameters
- Search in local drives or in the whole network
- Defragmentation of volumes or file sequences
- Renaming function for image sequences
- Metadata and DPX header editing
- Support of more than 100 graphic file formats

I/O TOOL

- Manual capturing
- Interval capturing for time-lapse video
- Log and capture via RS-422
- Batch capturing and autoconform (EDL)
- Capture list creation from an EDL, logging or importing Excel files
- VTR emulation mode
- 3:2 pull-down creation and removal
- Recording directly on the NTFS Windows® file system
- Multi-format recording on a single partition

AUDIO

- Audio sampling frequency: 48 kHz
- Sample rate conversion and time stretching
- Unlimited audio tracks for editing
- Sample and frame-based editing
- Supports WAV, AIFF and QuickTime®

I/O, SYNC AND REMOTE CONTROLS

- SD-/HD-SDI input and output in YUV(A) or RGB(A) 8/10/12 bit (single/dual link)
- DVI output
- Analog RGBS/YUV output, DVI connector
- SD down-converted output in PAL/NTSC
- 16 channels of 24 bit digital audio, 48 kHz I/O (AES/EBU and embedded audio)
- 2 analog stereo monitor outputs
- RS-422 in & out





VIDEO FORMATS

SD

525i/59.94	720 x 486 (D1)	960 x 486 (D5)
625i/25	720 x 576 (D1)	960 x 576 (D5)
625i/24	720 x 576 ('Slow PAL')	

HD

1280 x 720p	/23.98/24/25/29.97/30/50/59.94/60
1366 x 768p	/50/59.94/60/90/120
1920 x 1035i	/29.97/30
1920 x 1080i	/23.98/24/25/29.97/30
1920 x 1080psF	/23.98/24/25/29.97/30
1920 x 1080p	/23.98/24/25/29.97/30/50/59.94/60

HSDL

2048 x 1556psF	/14.99/15/19.98/20
4096 x 3112psF	/5

2K

2048 x 1080psF	/23.98/24
2048 x 1080p	/23.98/24
2048 x 1556psF	/23.98/24/25/30
2048 x 1556p	/23.98/24/25/30

4K

4096 x 3112
4096 x 2160
3860 x 2400
4096 x 1714

DCI

1998 x 1080psF	/23.98/24
2048 x 1080	
2048 x 858psF	/23.98/24
3996 x 2160	
4096 x 1716	

EDITING

SOFTWARE

- Capturing, editing, processing, conforming, versioning and managing tools
- DCI Mastering tools for generating encrypted DCPs (Digital Cinema Packages)
- Any resolution from SD to 4K
- Video formats in 8/10/12/16 bit
- Export to WMV, QuickTime®, MXF and JPEG2000
- Support of more than 100 graphic formats
- Intuitive GUI

HARDWARE

- 24 GB RAM
- Quad-Core CPUs
- Networking with up to 1000 Base-T (Gigabit Ethernet)
- DVD writer
- Mouse and keyboard
- Internal RAID-5 video/audio storage, e.g. 1100/2300/4800 GB
- 2K | 54/108/222 min | (2048 x 1556/24 fps/10 bit/4:4:4)
- HD | 124/249/512 min | (1920 x 1080/24 fps/10 bit /4:2:2)
- 20 video interfaces

OPTIONAL HARDWARE

- CLIPSTER® color correction panel
- Additional RAID protected storage
- Interfaces for DVS-SAN and third-party SAN

SERVICE

Offering superior service for our entire product portfolio is integral to the DVS philosophy. The DVS support and service team is comprised of engineers who consider first-class, professional customer service their first priority.

DVS offers optimum support and service, with service packages tailored to clients' specific needs. Our service team can assist onsite or perform services quickly and reliably via remote control. DVS also has a service website, complete with detailed technical documentation to provide current updates, upgrades, and relevant information.

Our services reflect the quality of our products: Our clients benefit from individualized support and reliable service.

Our service team is available to you at service@dvs.de

TRAINING

Learn in-depth about your new DVS product! With our comprehensive training program, we offer the opportunity to become completely at home with your DVS equipment. We're also happy to support you with the implementation and setup of your system.

The authorized DVS Education Center offers individual training programs on-site and is ready to assist you with relevant information on each workflow. We'd also be happy to welcome you at the DVS headquarters for a hands-on training session with your new equipment. You will receive concise training courses for various product updates, allowing you to immediately familiarize yourself with new developments.

Our friendly and professional training courses provide you with the detailed knowledge to make the most of your equipment.

Ask about our training packages at training@dvs.de

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