

SYPHA : news

NONLINEAR VIDEO : DIGITAL AUDIO : CAMERAS

The key theme this year is high definition. Both camera and NLE manufacturers are showing more HD products, whether for the highest-quality broadcast and d-cinema, or the emerging market for compressed HD. Following the announcement by Canon, Sharp, Sony and JVC of specifications for high-definition video (HDV) using DV cassette tape, this new option is being promoted as an HD format for personal video - although it has obvious wider appeal. So while JVC launched the first HDV consumer camcorder in the form of the GR-HD1, this was soon followed by the JY-HD10 professional-level HDV camcorder.

It is argued that HDV is very compressed and does not have the colour range of a professional system, however the image is still better than standard DV, and can be edited on a laptop. A number of professional NLE manufacturers have already expressed interest in supporting the format, including Canopus, Adobe, KDDI, Ulead and Sony Pictures Digital.

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Other resources at SYPHAonline.com include the **NLE Buyers Guide**, the **DAW Buyers Guide** and the **Pro Camera Guide**.

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Plug-ins for PC and Mac-based systems are also available from CineForm and Heuris respectively. The CineForm Aspect HD plug-in for example, will be demonstrated with Adobe Premiere Pro and will feature real-time editing with the ability to render the output to both HD and SD resolutions in a range of formats.

DAW Trends

Having also been required to deal with an increasing number of formats in recent years, including CD, SACD, DVD-A, and surround ranging from stereo to 7.1 and beyond, DAW manufacturers continue to offer the ever-more sophisticated features their users demand.

The desire for improved workflow has led to developments such as support for AES31, AAF, and nonlinear video - whether through external control or directly within the DAW. More manufacturers are offering such capabilities as well as faster processing and new control surfaces for integrating live and automated mixing.

Tapeless portable recorders continue to benefit from growing capacities of solid state and removable hard disk media, and improvements in battery technology.

Camera Trends

Building on last year's announcements by Sony of XDCAM and Panasonic of P2 tapeless cameras, both companies have been busy showing how these technologies integrate within the production and post production processes, with both formats being supported by an increasing number of NLEs. Alongside this development is a

new breed of decks designed specifically for quick transfer of recorded material from tape or tapeless camera media to NLEs, without tying up the camera.

There is also an array of new box type cameras from various manufacturers, all offering HD, and generally promoting lighter weight, low power consumption and better picture quality.

NLE Trends

According to Discreet, IT infrastructures are replacing video routing, faster, more flexible CPU/GPU processing is replacing proprietary hardware boards, and RGB data is replacing legacy YCbCr 4:2:2 compressed formats for production. There will be numerous announcements concerning HD, 2k and even 4k additions to NLE and production server product lines for HDTV, d-cinema and digital intermediate (DI) applications. There will also be emphasis on faster processing, multi-resolution editing, and support for HDV tape, as well as XCDAM and P2 tapeless camera formats. Multistream HD editing technology is beginning to emerge, while multichannel HD servers are also being announced.

NLE manufacturers continue to focus on issues of workflow. Avid plans to deliver 'tighter integration, interoperability, and workflow' between its systems, Leitch intends to offer an 'integrated content environment,' Pinnacle aims to become the 'networked solution company,' and Quantel will take 'teamworking and connectivity to a new level.'

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NLE: news

NONLINEAR VIDEO EDITING NEWS

New Products

DVS will present systems for capturing, editing and finishing. The multi-resolution CLIPSTER editor now offers real-time primary colour correction. The new Pronto2K DDR with a newly-designed Windows-based user interface replaces the HDStation DDR, and the high-performance Centaurus PCI-X video I/O board offers OEMs uncompressed SD, HD and 2k.

The new WFMNLE from Tektronix is a software waveform monitor plug-in for the Avid Media Composer Adrenaline, Avid XPress Pro, Media Composer, and Symphony NLE and finishing systems. Designed as an easy-to-use, flexible and non-intrusive tool, the plug-in allows editors to confidently verify signal and picture quality.

New Versions

Quantel will unveil version 2 for generationQ, a platform-wide upgrade that offers 75-250% faster processing and adds a multi-view compositor, unlimited layer compositing, embedded plug-ins, and WM9 and QuickTime background I/O for client review.

The latest versions of Discreet NLE and finishing systems will include smoke 6 running on Intel-based IBM Linux workstations, while for the Mac running OS X, AJA will launch Io LD - a smaller and lower-cost version of Io for SDI systems running Final Cut Pro, and Io LA for analogue component or composite systems.

High Definition

An increasing number of NLEs are offering HD support. Among those making such announcements is Avid Technology, whose enhancements to the Avid DNA family include HD support for the Media Composer Adrenaline system, allowing it to share HD media with Avid DS Nitris systems and the Avid Unity MediaNetwork.

The new Canopus EDIUS HD NLE includes an HD-SDI card and the new EDIUS Pro video editing software for real-time HD capabilities, mixed SD and HD editing and proprietary HD codec technology for video output.

In addition to launching NewsFlash Predator, a low-resolution browser and editor based on the NEXIO server platform, Leitch will unveil VelocityHD, a new HD NLE with an enhanced version of the multi-stream VelocityQ NLE. Multi-stream HD editing technology will also be demonstrated by Matrox in the form of a new Matrox product designed for Adobe Premiere Pro, to be introduced later this year.

Having agreed to rescue Media 100, Optibase will host the Media 100 HD on its booth at NAB 2004. This Mac-based resolution-independent NLE supports native HD and SD and is powered by new GenesisEngine HDX technology. Media 100 will also demonstrate version 3, the Visual Effects Release, of its advanced editing system 844/X.

Tapeless Source Support

As well as introducing Liquid HD, Pinnacle will announce support for Panasonic P2 and Sony XDCAM acquisition formats for tapeless workflow from camera to editor. Sony will announce support of XDCAM by the new Sony XPRI Mobile and Sony XPRI MetaStation that provide field and studio editing respectively.

Servers and Disk Recorders

Two Gee Broadcast Systems Geevs servers will be on the Ross Video booth. One Geevs will be controlled by the Ross OverDrive live production control system, and the other will provide eight playout channels, shared between four production switchers.

Doremi will show the MCS-HD four-channel HD server. This records popular HD formats as well as SD, and provides shared storage for two independent record and two independent play channels via HD-SDI. The Omneon Spectrum now supports all leading HD formats simultaneously, with either QuickTime or MXF as the media wrapper.

In addition to the HD LSM-XT and other HD XT-servers for live slow-motion replay and highlight editing, EVS will also show the CleanEdit NLE in a news configuration that allows multiple formats to co-exist within an edit. Also optimised for live replay and highlights applications is the BUF Technology Sport. This is a miniature full-featured video server built into a high-performance control panel for mobile or permanent installations.

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DAW:news

DIGITAL AUDIO WORKSTATION NEWS

New Products

SADiE will launch the PCM-H64, a multitrack addition to the Series 5 range. The PCM-H64 has fully modular processing and I/O. Inter-card bussing allows complex mixer structures to span multiple processing cards, each of which can handle 64 channels of full surround. I/O options include high-quality analogue, digital and MADI, at standard or higher sample rates. The included SADiE v5.3 software provides audio post-rich features including true multitrack editing, edit group selection, interface to the Yamaha mixer range, 9-pin slave functionality, improved AVI video support (including direct editing of the video stream), and full compliance with AAF V1.2, including the Edit Protocol, with greatly improved import capabilities from other applications.

Merging Technologies will launch an array of new products including a software-only version of the Pyramix Virtual Studio called Pyramix Native, the VCube disk-based video record/player with high definition capability, and a new custom-designed aluminium chassis for housing both the Pyramix and VCube systems. Pyramix Native software is targeted at radio broadcasters, media schools and existing Pyramix users. It runs on any laptop or desktop PC, and offers the same real-time editing, processing and mixing capabilities and range of native plug-ins with support for Direct-X and VST, as the Pyramix VS system.

Integrated Mixing

At the entry-level end of the market, Mackie will show the Spike all-inclusive 24-bit/96kHz compact system for recording, mixing and tracking using the Mac or PC, and the Mackie Control Universal DAW controller.

Among the new Digidesign products is the ICON integrated console for Pro Tools | HD systems. This features the all-new D-Control tactile worksurface, modular HD interfaces for analogue and digital I/O, mixes up to 24-bit/192kHz in 7.1 surround, and full command of the mixing and production process. The Command | 8 small-format surface, provides low-cost tactile control of Pro Tools TDM or LE Windows XP or Mac OS X systems via USB. The AVoption | V10 interface allows Pro Tools users to import and play back virtually any Avid video file. Finally, the new Pro Tools 6.4 software provides features to support these new products, while introducing new ones such as Automatic Delay Compensation, TrackPunch (dubber mode) and more.

Another company integrating the DAW and mixer console is AMS Neve with its new DFC Gemini. Aimed at sound for picture, the DFC Gemini partners with the new CineFile stand alone dubber. This is based on the new AudioFile SC/X card and supports 48 tracks at 96kHz or 96 tracks at 48kHz per unit. It offers a number of innovative features including the WavTrak display of audio track data by channel.

Portable Recording

Nagra-Kudelski will show three new recorders. The ARES-PII handheld uses compact flash card or IBM microdrive and supports linear 48kHz stereo, 16-bit PCM recording in a robust, professional and lightweight package with built-in loudspeaker, separate line and headphone outputs, switchable 48V phantom power, a new low-cut filter, and a redesigned battery charger. Its FAT16 BWF format files can be transferred to Windows and Mac OS computers. The ARES-BB is a desktop/over-the-shoulder version with an expanded battery compartment. The new NAGRA V-PP is a 2U rackmountable version of the NAGRA V 24-bit, two-channel, removable hard-disk recorder, developed for use in mobile control rooms and static installations.

Sound Devices will present the new 744T portable digital audio recorder. Using compact flash or hard drive, the four-track 744T supports up to 24-bit/96kHz audio, including pull-up sample rates. It includes next-generation microphone preamplifiers, full timecode functionality, and an on-board standard Sony-compatible L- or M-type Lithium Ion battery. The 744T also supports audio data transfer and backup using Windows and Mac OS computers.

Sonifex will show the Courier portable flash card recorder. With professional connectivity, scrub-wheel editing and built-in ISDN codec, it is aimed at reporters who want to record MPEG or linear audio and then edit it directly with their DAW.

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CAMERA & CAMCORDER NEWS

New Developments

Marketed as an ideal complement to the JVC JY-HD10 professional-level hand-held HD camcorder, the new JVC CU-VH1 recorder/player is designed to allow users to spool HD content from tape to their NLE system of choice, and back again for mastering/archiving, without tying up the camcorder. It supports multi-format (HDV and DV) playback and IEEE-1394 recording of HD using MiniDV cassettes, and features a 3.5-inch LCD monitor, iLink, component outputs, and an SD memory card slot for capturing stills from tape.

Panasonic will show its DVCPRO P2 tapeless product family, including the AJ-SPX800 camcorder, AJ-SPD850 studio recorder, and AJ-P2C004 4GB and AJ-P2C002 2GB capacity P2 cards, and the AJ-PCD10 P2 drive. Designed for high-speed transfer of DVCPRO or DVCPRO50 video into NLE or server systems, the AJ-PCD10 also allows direct access to the contents of the P2 cards. It fits in a standard PC 5.25" drive enclosure, has five P2 card slots and connects to the host via a USB 2.0 interface.

Sony will demonstrate compatibility between Sony XDCAM and Avid native MPEG IMX (30/40/50Mbps) and DVCAM NLE systems, including the Avid NewsCutter and Avid Media Composer.

New Technology

Rockwell Scientific will showcase the ProCamHD 3560 next-generation of high-performance HDTV CMOS image sensors that directly replace CCD imagers in high-

quality HD video applications. Key benefits include superior video signal-to-noise ratio, dynamic range and image sharpness with ultra low noise and low power consumption (lower heat dissipation) at lower cost, in a high-speed, affordable compact package.

DALSA will demonstrate its Origin digital cinematography camera. It has an 8-megapixel, 4k x 2k, film-sized image sensor that is optically compatible with real cine lenses and a reflex (optical) viewfinder, and was used in recent field tests - footage of which will be on show.

Point of View (POV) Box Cameras

The new Hitachi SK-31B low-cost multiformat POV HDTV camera is compact and lightweight. It has a new CCU and digital optical fibre transmission, or can operate in self-contained mode via the camera head's HD-SDI output. It supports native 2/3-inch 720p or 1080i CCDs, real-time up/down converters, and a new control panel. Hitachi will also show the new HV-D15A box-type camera for high-end production.

Sony Electronics has launched the HDC-X300 compact entry-level high definition camera. Aimed at POV, large-screen projection, 24P cinematography and studio automation, the HDC-X300 uses three new 1.5-megapixel, half-inch CCDs, and is switchable between a range of 1080 linear shooting modes. The camera features exchangeable lenses, slow shutter functionality and low power consumption.

The new JVC KH-F870U HD-CMOS box-style HD camera uses three next-generation 2/3-inch CMOS chips to deliver full 1080i or 720p (switchable) output. Aimed at POV for broadcast television, live conferencing, speaker enlargement, remote sporting events, distance learning and more, it offers lower power consumption levels (~200mW - about 20% that of a comparable CCD), similar to those of SD cameras.

Panasonic will debut new ultra low-light convertible cameras and complementary accessories such as a high-speed pan-tilt head, a pan-tilt controller, a signal converter box and an additional card box. The cameras are configurable with up to ten special function cards for applications ranging from studio to surveillance to sports.

Cable and Wireless Transmission

Thomson has added a new hybrid fibre system to the Grass Valley LDK 6000 mk II WorldCam camera that supports high-bandwidth transmission of HD video up to 4000m over fibre-optic cable. In addition, an SDI multi-core camera system provides a compact, flexible solution for Grass Valley LDK 300 and LDK 500 cameras.

Link Research will be showing the LinkXPRV wireless camera system with reverse video and other improvements, including a new antenna. The company will also launch LinkXPe, a low-budget wireless camera system with 4:2:0 video output, one analogue video input and audio input.

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