IBC 2004

By Alison Johns and George Jarrett / November 1, 2004

Brave New Start-ups, Really Phat HD Editing, and a Laptop Production Assistant

HD Steps Forward, from View-finders to RAM Recording

It wasn't so long ago that tapeless recording devices for high-end digital cinematography cameras were as big as car engines. Much progress has been made in the last two years, culminating in a portable recording device that, believe it or not, fits neatly on the back of any of the cameras now in use. Baytech Cinema's president, Jack Krooss, calls the CineRam recorder a "streamlined camera buffer" because it dumps YUV or RGB signal onto a FireWire drive. (It is currently in use on production of LazyTown, a new Nickelodeon series.) The buffer itself is about the size of a 1980s car radio and is available in 8, 16, and 32 GB configurations. The 32 GB version, for example, can record 10 minutes of 720p/24; at the other end of the scale is the 8 GB version, which can handle a 2 1 / 2 -minute shot.

Video is uploaded from RAM to FireWire as DPX files and the recorder can be configured to write two streams at a time for back up. An 80 GB USB drive would hold 25 minutes of 720p/24. "The upload capability has come a long way since NAB, where the buffer was introduced," said Krooss. "It's completely hands-free, which is important because you don't want to require another skilled person on-set to operate it."

CineRam is available for rental at Plus 8, Abel Cinetech, and Fletcher Chicago. It's distributed in the United States by Band Pro and ranges in price from $19,000 to $39,000, depending on the configuration.

Matrox ratcheted up the HD capabilities of Premiere Pro editing with its new Axio platform, delivering impressive features like color-correction on top of uncompressed HD. That means that, for an investment of $11,000, you've got an NLE you can offline and master on. Axio will handle two layers of 10-bit HD (1080i at 29.97) plus two layers of graphics in real time and at full resolution.

"In the past we had plug-ins to Premiere Pro," said Tony Manolikakis, senior product specialist at Matrox. "Now we have Premiere Pro interfaces." Doing a real-time chroma key is that much easier. And add to that primary and secondary color-correction tools, as well as the ability to do a 3D DVE in HD (or four or more in SD), and you're talking real power. Bucking the OpenGL trend, Matrox soups up real-time performance with a dedicated graphics coprocessor for rendering. Offline can be done in

compressed MPEG-2 I-frame for HD.

Matrox Axio, which is available in an upgradeable SD version, is slated to ship in the first quarter of 2005. Pricing is $7,495 for the SD version and $11,495 for the HD version.

Pinnacle showed Version 6 of Liquid Edition, which allows multiple streams of compressed HD to be edited with real-time effects. "I could do a fully shared project with three editors looking at the same bins at 25 to 50 Mb/s levels," said senior product manager Patrick McLean. The HD-capable version of Liquid Edition runs on an Intel Pentium 4 computer. "We're positioning ourselves in more of an IT model, where industry people can build a solution from vendors that are the best of class in their categories," said McLean (with a breakout box, Pinnacle Liquid Edition Pro can take advantage of a variety of IO options).

Other strengths of the new version are its resolution independence and surround-sound capability. Version 6's support for a variety of codecs means that editors can work in native HDV and DVD formats. Implementation of Steinberg technology soups up the audio mixer, supports surround sound and allows users to stretch audio. Liquid Edition 6 and Liquid Edition Pro are slated to ship this fall at $500 and $999, respectively.

Thomson's Grass Valley Group surprised cinematographers with the unexpected appearance of a new optical viewfinder for the Viper. This one, according to GVG's Viper wrangler Mark Chiolis, fits neatly inside the front housing of the camera, unlike P+S Technik's previous version, which proved too bulky for many DPs. Focus ability, Chiolis reported, has also been improved with "only a single stop of sensitivity loss." The electronic viewfinder is necessary in order to use the camera's menus and could be moved to the camera's rear mount or to the handle. P+S will modify Vipers with the $16,000 viewfinder starting in the first quarter of next year.

Plug-ins and Other Cool Software

"There's a large underserved audience with content out there," said Red Giant partner and co-founder Sean Safreed, noting that documentary producers and post outfits are priced out of automated film restoration. So the company is aiming straight at them with Film Fix, a $1,995 set of plug-ins for After Effects and Digital Fusion, available first for Windows.

Designed by the Irish academic and restoration expert Anil Kokaram, Film Fix stabilizes pictures, reduces noise and grain, and removes brightness fluctuation between frames. Repair of tears is also possible for the first time in an automated system. Safreed says Film Fix excels at removing moirà© patterns, which frequently plague kinescopes (recordings of TV shows made to film). This isn't Kokaram's first commercial venture, by the way; he also put in time at Snell & Wilcox.

New Product Close-Up

Assimilate Scratches its Way into DI

By George Jarrett

Big technology events would be pretty dull without the constant stream of start-ups that come out of left field. They can eventually grow to be as muscular as an Avid or Discreet, and they always seem to hold a tantalizing edge over established rivals. IBC's most ambitious newcomer was Assimilate, which came to the show with a real-time 2K DI workflow solution and a fascinating backstory complete with plot points including the demise of 5D and the desire of Cyborg architect (and Assimilate's CTO) Gerk Huisma to build something completely new.

Huisma- in partnership with VP, Sales, Nacho Mazzini and CEO Jeff Edson- privately showed an alpha version of Scratch during NAB, when former Integraph boss Jim Meadlock (now company chairman)

stepped in with the funding that gave the product its legs. Introducing a core feature set that includes simultaneous, real-time, multi-resolution review/playback, assemble/edit, conform, primary color grading, scratch audio, an open API for effects, and final mastering to film, Edson said, "We see a need in the market for a real-time 2K digital film production process, one that is not centered on color grading." (Assimilate will rely on third parties to provide plug-ins for secondary color correction.)

"Today's processes have become pretty convoluted, difficult, and expensive, primarily due to point products. The time has come when you can really do it all in an open architecture system that is always native format. We believe that we are developing technology that will enable a whole new market," he said. "All of them are in the process of defining and implementing a digital film production workflow and process. We provide them a way to go from scan to scan in an open environment, which means they can build a workflow around Scratch, or they can integrate it into their existing workflow to augment it."

The IBC demo made crucial use of the OpenFX API, but did not include any compositing, which triggered questions about the stability of the API and upgrades that Assimilate is planning. "We have not seen any issues with stability regarding OpenFX, and we will support many more metadata formats as we go forward," said Edson.

"Our road map is being driven quite heavily by users, so there are many things that are natural additions that we expect to deliver over the next year. We did not want or expect to develop it all, which is why we deliver an open API with the base product. We expect users to take advantage of the smart people and great point tools out there, and develop their own unique solutions based upon their IP and pieces that easily fit into Scratch. You can expect to see some of our partners- Boxx Technologies, Nvidia, AMD, IBM, The Foundry, and SpeedSix- delivering expanded functionality with Scratch very soon," he added.

What is the company's competitive edge? "There are other people providing technology to the DI market, but each has taken its own specific approach to it. They have all gone after a traditional view of DI through color-correction," Edson said. "We see the issue as being one of a simple, straightforward, native-resolution digital film production process. We are not developing point products to just do certain things."

Prices for Scratch range from $35,000 to $55,000 (fully configured with 1.4TB of high-speed disk storage). Users will need a basic dual-processor workstation with at least 3GB of memory plus an Nvidia FX4000 graphics card. Data storage will typically be RAID-striped U320 SCSI drives (eight minimum, totaling 1.5 TB).

Safreed noted that Avid users have commented that they'd like to run Film Fix on Avid DS. "We have enough expertise in [the] Avid AVX environment that it would be easy for us to do it, but that would be a more expensive package." Final Fix was slated to ship in October for After Effects on Windows, in November for Digital Fusion, and in early 2005 for an After Effects Mac OS X version.

DV Rack from Serious Magic is going to save a lot of video by making a few tools already beloved by engineers accessible to the DV crowd- and all from their laptops. Imagine a digital video recorder with an interface that crams onto one screen a waveform monitor, a vectorscope, video and audio analyzers, a frame grabber, auto camera set-up, field and quality monitors (that show compressed video), and a shot timer. While the idea that you don't need to batch-digitize is attractive enough, the

geeky stuff (the signal monitoring for audio and video) is a potential life-saver, marking pops and blown-out areas.

The system was designed to work on a baseline of a 1.4 GHz Windows computer with 256 MB of RAM. "I don't know any Best Buy where you can buy a computer that slow," deadpanned Serious Magic CEO/President Mark Randall. "With this, a laptop is your remote unit and your production assistant." DV Rack sells for $495.

New Players in Digital Film Workflow

Two ambitious companies packing considerable technical talent, Assimilate and Iridas, are targeting the DI space, but with a new angle. Both say there's room to play below the A-list pictures now serviced by a handful of houses in LA and New York. They see the growth particularly in digitally acquired content that will be enhanced and then printed out to film. "You can't get into one of the top 10 colorists unless you're James Cameron," said Jeff Edson, Assimilate's CEO. Assimilate's new Scratch DI system (see sidebar, page 48) is designed to be used by a "digital artist, although we're not doing anything that alienates a high-end post house."

If you don't know the company Iridas yet, it may be simply because you're not in the CG business, where the company has built a foundation with a product that filled a niche quickly, very quietly and almost completely. Company President and active coder Lin Kaiser built FrameCycler to play back uncompressed film-resolution CG files out of RAM. At first it was a flipbook app posted as shareware. Now Kaiser is leveraging FrameCycler DDS as a digital data system, which serves as an architecture for new products for digital dailies and, most recently, DI work.

SpeedGrade DI is a non-destructive color grading system that exploits the shader technology that's now delivered on graphics cards. Color-correction is only applied in the graphics adapter and that information is stored as 4 or 5 KB of XML. (In other words, Iridas is not storing color decisions in proprietary formats.) The RAM version is intended for use by DPs to grade primaries or secondaries in non-realtime on-set. Nevertheless, Kaiser says, "The whole concept of grading on-set is ridiculous. It's a battlefield. All you really want to do is create a look." A real-time version of SpeedGrade (using a RAID array) was test-driven on the set of The Matrix to comp together up to nine layers. So the software is, in essence, not just a grader but a high-end pre-vis tool.

Intended for a full-blown post workflow is Speed Grade DI, a finishing and grading system with editing and significant compositing capability, such as mask animation. The DI system refers to two products, the realtime 2K grader and FrameCycler Professional, which allows other seats to access, review, and assemble. SpeedGrade DI, shipping this December in a Windows version, will cost about $50,000; the renderer, $10,000; and seats of FrameCycler, $249.

By introducing the Arrilaser HD, Arri is also acknowledging that not all digital intermediate projects start or grade in film. This system prints to camera negative stocks rather than to intermediate, which require great power output and, therefore, higher-priced equipment. The Arrilaser HD will deliver in 2004 at about $300,000 and is upgradeable to higher-end models.

IO, IO, It's Off to Work We Go

Blackmagic Design started out making tools for one-man bands that need to do it all, but at this show the company acknowledged that these rugged individuals might want to collaborate. So CEO Grant Petty unveiled a new product that he calls a "training router": the Workgroup Videohub. It's a 12×24 routing switcher that allows mixing and matching of HD and SD equipment. This $5,000 router integrates a real-time video processor that could allow upgrades to offer downconversion, mixing, and

logo keying. (Need dual-link RGB quality? Run a pair in parallel.)

The company also announced the DeckLink Multibridge, an analog converter/breakout box designed to connect legacy analog decks to SDI digital systems. It's available in an SD version for $1,495 and an SDI version for $1,995.

AJA has turned its attention back to SD with a new digital/analog SD capture card designed for G5s running Final Cut Pro. Kona LS is slated to ship this month for $995. Filling out a series of four new debuted at IBC. Designed for LCD or plasma monitors, the HDP HD-SDI/DI to rter sizes 4:3 or 16:9 HD or SD inputs to DVI-D monitors, also adapting input frame rate. It sells for $790.

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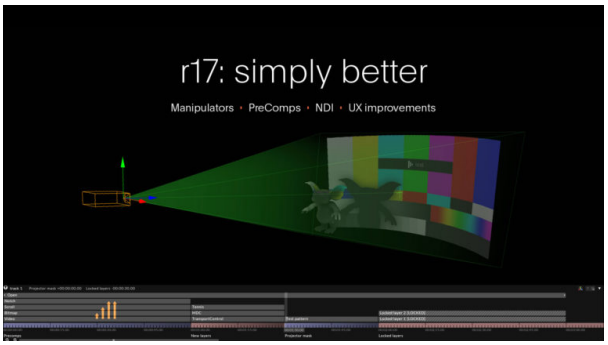

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