



July 30, 2009

Grass Valley at IBC 2009 –

“Innovation, Performance, Passion – It’s Gotta Be A Grass”

At IBC 2009, **Grass Valley™** will present yet another strong showing of technologies and systems demonstrations that support a wide range of innovative broadcast and professional production applications and give users high performance, value, and a fast return on investment.

The company’s exhibit stand (#1.D.11) will spotlight a number of product introductions and new product enhancements—many to be seen for the first time by European audiences.

HD Live Production

New! Now Shipping! Kayenne™ Video Production Center and Kayenne XL Package

The new Grass Valley Kayenne series of vision mixers, unveiled for the first time in April in the U.S. offers many new groundbreaking features that once again puts Grass Valley at the forefront of switcher innovation. This next-generation product line offers a range of configurable mainframes that can include from 1.5 to 4.5 mix/effects (M/Es).

It also features a newly designed panel with definable color change RGB buttons and a menu navigation system optimized for touchscreen use. All Source and function name displays use organic LEDs with high contrast and 178 degree viewing angles. An array of new features is included in this new interface that gives the user unique tools to better manage live production workflows. Grass Valley has applied the new Kayenne technology to the popular Kayak HD vision mixer family providing a new range of control panels for the mixer – 1 M/E through 4 M/E. This Kayenne XL Package adds new features to the user interface that are found only in Grass Valley vision mixers.

New! LDK 3000 HD Camera

Grass Valley introduces the LDK 3000, the latest addition to the renowned LDK family. This multi-format (720p/1080i switchable) camera system offers great flexibility and high picture quality combined with a favorable cost of ownership. Three in-house designed Xensium™ CMOS imagers, featuring DDS—Double Digital Sampling—and dual integrated A/D converters create high-quality, razor-sharp pictures. The LDK 3000 is also compatible with most LDK accessories and the C2IP control system.

Now Shipping! K2 Dyno™ Replay Controller

The Grass Valley K2 Dyno replay controller, coupled with the new K2 Summit™ production server, are both designed to help sports producers and other professionals capture live events in crystal-clear HD resolutions and instantly play them out at variable speeds for critical analysis during fast-paced events.



K2 Summit Production Client

The K2 Summit production client is the first server to provide four HD/SD bi-directional channels that can include DV, DVC CAM, DVCPRO and MPEG 2 (including IMX) compression for SD and the three most commonly used HD compression formats—DVCPRO HD, AVC-Intra 50/100, and MPEG-2 (including XDCAM HD)—in a compact 2 RU enclosure. The addition of these formats with seamless agile playback, up, down and cross-conversion and full ancillary data support—including comprehensive AFD processing—enables the K2 Summit to handle the most demanding production and transmission application or end-to-end file-based production workflow.

Also on Display:

The Grass Valley LDK 8300 Sport Elite 3X HD Super Slo-Mo camera, the LDK 8000 Elite—the first system camera with full 1080p50/60 capabilities from the base station, and the LDK 4000 Elite single format HD camera. These unique dockable HD cameras will be demonstrated with HD triax, HD fiber, and HD wireless transmission systems. Also the versatile Infinity Digital Media Camcorder will be on display. More than 20 Grass Valley HD cameras will also be on display throughout the show floor at various partner booths.

Integrated Production Systems

New! Grass Valley Ignite Software (v5.3)

The Grass Valley IBC 2009 exhibit stand will feature a real-world demonstration of Ignite, version 5.3. This new version of Ignite is completely new and adds significant capability and functionality to the industry's leading production and control room automation solution. Today's challenging economic circumstances require broadcasters to find effective ways to dramatically reduce production expenses, but at the same time maintain or improve their on-air look, add more revenue-producing shows, and repurpose content to the web and mobile devices. No other available solution is as effective at providing this efficient, technically advanced end-to-end functionality as Ignite, for production automation, and the option of MediaFUSE® for content repurposing.

Also on display: The Grass Valley **MediaFUSE** Automated Content Repurposing Platform will be demonstrated running the latest software (version 1.1). MediaFUSE, a hardware and software option for Grass Valley's Ignite™ Integrated Production System, is designed to make the process of repurposing live over-the-air and extended play content for Web and mobile distribution a much more efficient and profitable proposition for content creators.

MediaFUSE version 1.1 includes powerful new features, such as enhanced textual story editing, the ability to automatically "stitch" multiple pre- and post-roll clips to repurposed content, enhanced options for drag-and-drop automatic repurposing of extended-play and raw content (which typically never makes it to air), improved pre-production newsroom metadata markup functionality, enhanced post-production and content approval operation, powerful slide-show creation tools, and improved interfaces with WorldNow Producer and Internet Broadcasting (IB) Phaedra content management



systems.

New! HD News/Production Editing Functionality

IBC 2009 will see new versions of Grass Valley's Aurora™ (7.0) and EDIUS® (5.1) HD editing software packages, complete with new features and functionality that will streamline the editing process and make editors more productive. This includes new integration with the Grass Valley K2 media server family and improved workflow for Final Cut Pro users due to a unique integration with the K2 server at the file level with QOS.

New! EDIUS 5.1 Nonlinear Editing Software

EDIUS 5.1, the latest version of the Grass Valley EDIUS multi-format/multi-resolution nonlinear editing software package, now includes tighter integration with the Grass Valley **Aurora™** digital production workflow, as well as a variety of new features that help users improve productivity and get the most from their investment. These new features include output to Blu-ray disc from the timeline, download partial digital clips captured with P2 solid-state or XDCAM optical disc media, audio normalize tool, management of reel names, and viewing of clip markers on the EDIUS timeline.

Grass Valley ContentShare² (CS²) Platform

CS² is a digital asset management software solution designed to interconnect new and legacy IT-based systems, as well as third-party solutions. This helps tightly integrate a facility's digital workflow into a single, sophisticated, streamlined solution. Its reliable and highly customizable asset management framework tracks ingest, movement, and manipulation of content across its entire lifecycle.

HD Infrastructure

Trinix™ NXT Digital Video Routing Switcher

Grass Valley continues its support of 3 Gb/s infrastructures across its Trinix routing platform and GeckoFlex™ modular products. At IBC, the Grass Valley Trinix NXT router will have its European introduction, with full demonstrations showing the superior signal performance at demanding 3Gb/s rates and other improvements that will make it even more reliable than it is today. Trinix 3 Gb/s routing technology passes all SMPTE 424M specifications and exceeds the spec in many cases, including reaching 140m of cable equalization for 7 mm SDI coaxial cables (Belden 1694A or equivalent.) Trinix NXT boards are compatible with existing Trinix frames, making for a seamless 3 Gb/s upgrade path for the hundreds of existing Trinix users. The company will also show a **new GeckoFlex 3G-SDI Distribution Amplifier.**

Also new for IBC are control panels for **Encore and Jupiter Routing Control Systems.** Encore now supports a multi-level, 100 button panel ideal for outside broadcast vans and other applications where many sources are needed quickly. Jupiter now supports 2 new LCD button panels – one is a 1 RU version with 16 buttons and the other is a 2 RU version with 48 buttons. Each LCD control panel supports a scroll wheel and multiple operating modes for a variety of applications making it ultra-flexible during both re-configuration and operation.



Digital Signage

New! MEDIAEDGE®4 Content Distribution System

Grass Valley will demonstrate the latest version of its MEDIAEDGE digital signage and on-demand content delivery platform, with new support for the MPEG-4 (H.264) compression standard. This enables the MEDIAEDGE4 platform to store and distribute more high-definition content from a single server than it could previously. In addition, a new HDMI output on the system's set top player allows it to display HD images on more screens than ever before.

Ideally suited for corporate training, corporate communication and distance learning, incorporating powerful decision support, and media asset management tools, the Grass Valley MEDIAEDGE system makes content easier to locate, schedule, and play out for a variety of video-on-demand and point-of-presence display applications—all while leveraging the cost advantages of an end-to-end IPTV infrastructure.

Master Control

Grass Valley is also showing significant updates to the **Maestro™ Master Control Switcher** for channel branding and video effects processing. With the most flexible video keying architecture, Maestro is now capable of adding file-based stills, animations and text video keys—up to 32 elements at a time—upstream or downstream along with a two-channel DVE to be able to create a wide variety of options for channel branding and presentations. All of this is done without the need to add a separate graphics process chassis.

HD and SD Encoding and Processing

New! EM3100 MPEG-4 HD Encoder

The ViBE EM3100 MPEG-4 4:2:2 encoder and ViBE iRD3100 MPEG-4 4:2:2 decoder are designed for fixed and mobile applications and are ideally suited for demanding live broadcasts, such as sports. The ViBE EM3100 and iRD3100 contribution codec are both housed in a compact 1 RU chassis, ideal for installation in constrained areas such as satellite or outside broadcast vans. The ViBE EM3100 also offers input switching redundancy.

They have been developed with functionality particularly tuned to live broadcasting, including low latency – in the range 350 to 850 ms – with a very low boot time of less than 15 seconds; which compares very favorably with current technology that takes two to three minutes to get back on air following a power failure.

New! Combined MPEG-2/MPEG-4 Encoding

To further boost encoding quality and operational efficiency, Grass Valley has added next-generation MPEG-2 processing to its popular ViBE SD (EM1000/2000) and HD (EM3000) MPEG-4 encoders to allow users to select between MPEG-2 and MPEG-4 encoding. The new models leverage the power of our in-house developed Mustang encoding technology to implement a new 14-loop, triple-pass encoding algorithm for maximum quality at minimum bit rates for MPEG-2 encoding.



Also on Display: The latest software innovation for the ViBE EM3000 HD encoder advances the ViBE family's performance further, with the implementation of the MPEG-4/AVC High Profile toolset. The High Profile toolset is critical to deliver the full bit rate gain and premium picture quality of the MPEG-4/AVC compression algorithm. In particular, it provides enhanced visual contours and improved uniform areas.

The audio encoding performance of the ViBE EM3000 HD encoder also now supports Dolby E to Dolby Pulse transcoding. Developed in partnership with Dolby Laboratories, this functionality offers HE-AAC surround sound encoding with guaranteed audio levels for a more enhanced greater audio experience.

Post Production

Now Shipping! EDIUS XRE (eXternal Rendering Engine)

The new Grass Valley **EDIUS XRE** is a new conform/render server that allows editors to be more productive when working in a K2 shared storage area network (SAN) environment and using Grass Valley Aurora 7.0 and EDIUS 5.1 HD editing workstations. The new PC server is ideal for fast-paced, multi-client production environments developing a wide variety of content from multiple SD and HD sources.

The server comes as a turnkey system and lets editors request that a project created with EDIUS systems in an Aurora or K2 Production Storage environment be rendered automatically on a separate dedicated workstation while they go on to the next job. There's no delay or tying up a valuable edit station while having to wait for that project to be rendered. Serving as a unique and powerful conform server, the EDIUS XRE accepts the various full-resolution project elements and, by selecting "XRE export" on the EDIUS timeline, immediately and automatically creates finished files in the background while the editors go on to the next project.

Now Shipping! K2 Production Storage

Designed to work in tandem with the popular K2 family of servers, the **K2 Production Storage Solution** is available to create more cost-effective SAN systems for production applications, such as news, sports, studio, and editing. As a part of this customizable offering, there will be three EDIUS Workgroup Packages connecting up to 5 or 10 editors in either redundant or non-redundant configurations. Each of these pre-configured packages will include all of the hardware and software required to create a complete SAN editing environment for EDIUS.

Transmission

New! Elite TV Transmission Enhancements

This year, Grass Valley reinforces its transmission technology leadership by introducing a new generation of UHF amplifiers fitted with the latest version of 50V LDMOS transistors. These devices allow further improvements in the power density available in a single 19" cabinet with a total output power up to 9.6 kW RMS for DVB operation and 14.0 kW RMS for ATSC operation, while providing an additional 15% energy savings.



New! DAB Exciter

Already supporting a wide range of modulation standards, the Elite TV transmission portfolio is enriched at IBC with the introduction of DAB to address the fast-growing development of digital radio in the VHF Band III. The DAB exciter, which shares the same hardware platform as all other standards, offers full compatibility with the new DAB+ and T-DMB modes and benefits from unique real-time Digital Adaptive Precorrection (DAP).

Radio Transmission

New! Radio, Data & Moving Pictures with Digital Radio Mondiale (DRM)

The DRM Content Server provides all options DRM offers and all interfaces for a smooth integration into the broadcast chain. This one-box DRM broadcast solution enables the implementation of attractive DRM services: Multi-channel enhanced audio quality transmission extended with text-based features such as Journaline®, traffic information channel, and online program guide. With the introduction of the new multimedia receiver Uniwave it is now also possible to receive moving pictures over DRM on a color display. This new feature is one example of the substantial advantages made possible by digital AM radio systems.

To obtain product photography, please go to <http://www.grassvalley.com/ImageArchive/products.html>

For information about Grass Valley products, please visit www.grassvalley.com.

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