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August 2014

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## COVER PHOTO

*This photo is provided by  
Imagine Communications at the  
NAB Trade Show.*

*Photography by Robb Cohen /  
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## Whites Lighting Up Sudbury Film Scene

Toronto-based media production equipment and services provider Wm F. Whites is operating a new location in Sudbury, in partnership with the Northern Ontario Film Studios.

The partners are responding to an increase in production activity in the region, and aiming to boost the entire local film community by providing access to Whites' extensive equipment resources and technical expertise.

Also, through Whites Education and Training program, the collaboration will offer local production professionals access to Whites' popular seminars and workshops – to be held on site at NOFS, with its 20,000 square feet of studio space and turnkey production offices – providing trainees with hands-on experience with new equipment and technologies.

"I'm thrilled to welcome Whites to

the Northern Ontario Film Studios," said David Anselmo, founder and CEO of Northern Ontario Film Studios (NOFS). "This partnership will create a



Northern Ontario Film Studios

Northern presence, putting the resources necessary for Northern productions close at hand, making the region more cost effective and attractive to filmmakers worldwide."

Sudbury will host the Cinefest International Film Festival in September.

## SIM's Merging with Hollywood's Chainsaw

The SIM Group continues to grow and expand with its latest plans to merge with Hollywood-based Chainsaw, bringing together one of the industry's leading production equipment and service providers with a top independent post-production facility.

Founded in 1996, Chainsaw provides creative editorial, editorial finishing, colour grading, visual effects and other services at its integrated digital facilities in Hollywood. It also has a digital intermediate theatre for feature film finishing and a large satellite facility with editorial systems and space for rent.

From its home base in Toronto, The SIM Group now reaches across Canada, into the U.S. and China; adding Bling Digital pushed its post-production services into scripted television series, and now Chainsaw will expand SIM's post-production resources and extend its reach into unscripted and live event television, Chainsaw specialties.

As the newest member of The SIM

Group, Chainsaw founder Bill DeRonde says the company is looking forward to a new chapter, with access to more resources and talent, as well as additional markets for its services.

The SIM Group, founded by Rob Sim in 1982, already has three operating units, SIM Digital, Bling and PS Production Services, providing camera and production equipment, post-production technology and services, and lighting and grip gear, respectively, on *Fargo*, *Suits*, *Pacific Rim*, *Hell on Wheels* and *The Vampire Diaries* and others.

Rob Sim says the two merging companies represent similar cultures and histories, and he expects the integration to proceed smoothly, "We share the same values in terms of servicing our customers," he noted. "We look forward to working together toward our common goal of delivering excellence every day."

Chainsaw will continue to operate under its current name as a unit of The SIM Group, when the merged closes, expected to be next month.

## NABA Supports WBU's Stance on Spectrum

The World Broadcasting Unions (WBU) has released an official joint position on radio spectrum allocation of digital TV and satellite distribution spectrums. As a member of the WBU, NABA fully supports the statement, particularly noting the importance of maintaining the current allocation of UHF frequencies (470-694/698 MHz) used for terrestrial TV broadcasting.

The use of radio-frequency spectrum by broadcasters remains an important vehicle for the efficient and scalable delivery of high-quality media content and emergency alerting services to both fixed and mobile audiences, specifically relying on DTV Broadcasting Services. Without the guarantee of sufficient stable spectrum allocations in the future, innovation and development of new television services including ultra high-definition and mobile television are severely hampered.

NABA's Director-General, Michael McEwen commented that "Our concern is to maintain a constantly improving range of services to the billions of viewers we serve daily around the world with freely accessible signals. Sharing the spectrum or losing parts of the spectrum degrades these services and opportunities for the future. Spectrum is a public resource and should be utilized in directly servicing the public, which broadcasters do every minute of every day."

The WBU statement also outlines support for the preservation of C-band frequencies (3.7-4.2 GHz), which is used for fixed satellite services essential to broadcasters' operations globally. Systems employing this FSS band have been extensively deployed over decades, primarily for the distribution of content from network centers.

The statement is based on spectrum studies of both the UHF and C-band frequencies, which have demonstrated that major interference to broadcast operations would result from sharing these bands with International Mobile Telecommunications (IMT). Limiting the content and quality of transmission creates serious problems for broadcasters and could also lead to unwanted social

*Continued on page 5*

Continued from page 4

and economic consequences if free-to-air broadcasting becomes severely limited. These studies are filed with the International Telecommunication Union (ITU) in Geneva.

NABA is a non-profit association of the most influential broadcasting organizations, both public and private, in the United States, Mexico, and Canada, working to provide a common voice for the North American broadcast community. As a member of the World Broadcasting Unions (WBU), NABA creates the opportunity for North American broadcasters to share information, identify common interests, and reach consensus on issues of an

international nature.

Established in 1992, the WBU is the coordinating body for broadcasting unions who represent broadcast networks across the globe. The broadcasting unions which belong to the WBU are the Asia-Pacific Broadcasting Union (ABU), the Arab States Broadcasting Union (ASBU), the African Union of Broadcasting (AUB), the Caribbean Broadcasting Union (CBU), the European Broadcasting Union (EBU), the International Association of Broadcasting (IAB/AIR), the North American Broadcasters Association (NABA) and the Organizacion de Telecomunicaciones Iberoamericanas (OTI).

## Canon Canada Plans for New Home

Canon Canada has broken ground at its new Canadian headquarters in Brampton, ON, and announced plans to move into the five-storey state-of-the-art building by December 2015.

The new headquarters will replace the company's current office in Mississauga, which has been its home since 1984.

"Our vision for Canon Canada's headquarters goes beyond being an infrastructure investment or a building where our employees work," said Ted Egawa, President & CEO, Canon Canada Inc. "We want our new headquarters to become a community for our employees and for our customers, which aligns with our Kyosei philosophy, which means harmoniously living and working together for the common good."

Built on more than 18 acres, the site is surrounded by green space. It includes a walking trail, drought-resistant landscaping and a naturalized storm water management pond to benefit Canon and the adjacent residential community.

Canon is seeking to achieve Gold certification for its new head-

quarters under the Leadership in Energy and Environmental design (LEED) rating system. Sustainable design elements planned include: the incorporation of lots of natural light, energy-efficient equipment and collecting rain water for reuse.

One of Canada's most celebrated architectural firms, Moriヤマ & Teshima — known for such iconic buildings as the Ontario Science Centre in Toronto and The Canadian War Museum in Ottawa — will lead the design efforts for the new building.



Taking part in the official groundbreaking ceremony for the new Canon Canada corporate headquarters were (L to R): Brampton City Councillor John Hutton, Canon Canada President & CEO Ted Egawa; Japanese Ambassador to Canada, His Excellency Norihiro Okuda; Brampton Mayor Susan Fennell, and Consul-General of Japan, Eiji Yamamoto.

## Emmis Communications Joins NABA

Emmis Communications is the newest Associate Member of the North American Broadcasters Association (NABA), joining other national broadcasters, regional networks, and specialty service broadcasters in defining, debating, and suggesting solutions to the issues and challenges broadcasters face in North America and around the world.

As well, Emmis' CTO Paul Brenner will take on the role of Vice-Chair of NABA's new and expanding Radio Committee (RC), and he'll work alongside Chair Julie McCambley of CBC/Radio-Canada.

NABA's Director-General Michael McEwen noted in his welcoming remarks that Emmis and

Brenner's participation in NABA brings to the RC and the Association wide experience and willingness to challenge traditional thinking. "I am also delighted that Paul has accepted Julie's invitation to be Vice-Chair," he added. "In working with our radio community Paul will bring his exceptional skills and leadership on the diverse challenges the industry faces."

"The globalization of technology has forced companies to look well beyond country-by-country," Brenner observed of his new role. "We must rethink the ways of the past that focused on technology for technology sake or improvements to specific broadcast-related technology and strive to change perceptions of our medium. Think differently. Universal compelling content, whether aural, visual, analog, digital or hybrid solutions that blend bi-directional technologies are goals we should all aspire to accomplish together."

NABA is a non-profit association representing North American broadcasters in global forums on topics including journalism issues, protection of content, spectrum related concerns, the territorial integrity of broadcasters' signals, and digital transmission.

## New Prompter Products from CueScript

Newly-launched CueScript is introducing new software and accessories for its CSM15", CSM17" and CSM19" HD-SDI Broadcast Prompter Monitors, and showing new EMC 15" and EMC17" prompter displays for the educational and corporate markets.

Its new iT Production and iT News software will run on any OS platform, offering clear and quick navigation to key prompter functionality. A new patent pending prompting scroll control to be used with the new software, the CSSC1, is being introduced.

CueScript Education, Media and Corporate (EMC) line of prompter displays do not have as many features as the company's CSM range of monitors; they are offered with lightweight mounting options for all fluid heads.

All CSM prompter monitors feature low energy consumption and a low power start up, with their three-mode adjustable power input includes low (26 watts), medium (30 watts) and high (38 watts). The models also feature an integrated mounting system, low profile design and an increased viewing angle (170 x 16) for easier screen readability.

Built-in LED cue lights come stan-



CueScript

dard with each model, with adjustable brightness and 180-degree viewing features.

## RØDE Announces New and Improved Blimp Windshield

RØDE has updated its Blimp microphone windshield system with new suspension, cabling and design for lighter and more ergonomic operation.

Constructed from a single piece of hard-wearing thermoplastic, the Lyre shock mounting system, now licensed from Rycote, eliminates the need for elastic system recon-figures for heavier microphones, the manufacturer reports, and accommodates a range of microphones without any modification.

The Blimp accommodates most shotgun microphones up to 325mm (12¾"), such as RØDE's NTG1, NTG2 and NTG3. It attaches to any standard boom pole via 3/8" thread attachment, and an optional Universal Blimp Mount is available.

The Blimp's handle has also been



Blimp Windshield

redesigned, and housed inside the grip is a strong Mogami cable which splits via a junction box to a highly-flexible thin cable inside the Blimp to minimize vibration transference to the microphone and reduce overall system weight.

An artificial fur windshield (the Dead Wombat) is included, as is a compact folding hair brush.

## Aframe Video Platform Adds Cloud-Based Auto Transcoding

Aframe's cloud video platform – Aframe 3.0 – now includes a desktop app for automated content upload with a watch folder with automatic file transfer and distribution feature that detects the best connectivity settings before sending the clips to Aframe where it automatically transcodes them to a streamable proxy for previewing on the Web.

Alt also offers cloud-based automatic transcode capabilities for pushing multiple formats into a unified workflow without requiring the purchase of hardware or standalone software: ingested files can be automatically transcoded into a preferred house codec, including popular file type such as Avid DNxHD XDCAM and AVC Intra, or custom transcoded.

HTML5 video player integration in Aframe 3.0 supports files with viewable links from mobile devices, as well as frame accurate metadata records.

## New DPA Mini-Mics



DPA Microphones has new Omni directional Miniature Capsule Microphone systems for designed for specific production situations.

For reality show-type settings, a new Necklace Microphone has a soft rubber "do-it-yourself" mounting necklace designed for use by non-technicians when mounting and consistent audio output are the primary requirements. It comes in black, white and brown and in lengths of either 18.3 or 20.9 inches.

The heavy-duty 4060 and 4061 microphones are designed for more rigorous outdoor and action shooting situations with their stainless steel housing, secure cable relief system and thicker .08-inch cable.

The new 66 and 88 Headset Microphones, for performers who need to move about freely without holding a mic or stand, as well as the traditional 4066 and 4088 Miniature Headset Microphones, offer different sound handling and size options, as well.

## Newest Devices from Sound Devices

Sound Devices newest PIX 270i and PIX 250i products record edit-ready Apple ProRes or Avid DNxHD video files with simultaneous multiple-drive recording and backup capabilities (there are four drives for PIX 270i and two drives for 250i). The audio capabilities include 64 channels of both MADI audio and Dante audio-over-Ethernet for PIX 270i, and PIX 250i's 16 tracks of audio.

PIX records 3G-SDI, 12-bit, 4:4:4 files and can record at numerous (selectable-only for PIX 250i) data rates, from full RGB Apple ProRes 4444 (330 Mbps) down to 36 Mbps proxy files. Files are ready for import directly into popular editing environments, including Avid, Final Cut Pro and Adobe Premiere Pro, eliminating time-consuming transferring and transcoding.

The company has also introduced its first dedicated audio-only rack-mounted solution, the 970, which can record 64 channels of monophonic or polyphonic 24-bit WAV files from any of its 144 available inputs. Inputs available include 64 channels of Ethernet-based Dante, 64 channels of optical or coaxial MADI, eight channels of line-level analog and eight channels of AES digital.

In addition, 32-track recording at 96 kHz is supported.



Sound Devices 970 – Front Panel



Sound Devices PIX 250i – Front Panel



Sound Devices PIX 270i – Back Panel

# FS1-X Spectacular Frame Rate Conversion

AJA's FS1-X is the next evolution in frame synchronization and conversion. Building on the strength of AJA conversion technology, FS1-X is the key to aligning mismatched video standards and managing the ever-increasing number of audio channels and formats.

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FS1-X easily integrates into existing infrastructure. A wide range of functions can be triggered by external GPI's. Configure and control via LAN from any web browser on any platform.



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## Lawo Broadcast Console, Video Stagebox

Lawo is showing its new V\_link4 video-over-IP stagebox, and the mc<sup>2</sup> 56 broadcast production console, with integrated Audio-follow-Video and stereo- and surround-capable AutoMix functionality.

The product offers routing of 8 x 8 3G/HD/SD-SDI signals and 324 x 324 audio channels and features frame syncs, video and audio delays, channel mapping and downmixing all in one compact, cost-effective 1RU frame. Available options include format conversion, colour correction, a quad split multi-viewer with waveform and vector-scope, and an AV sync measurement feature.

Lawo's V\_link4 video stagebox and remote production toolkit provides video-over-IP coding, signal processing and a video/audio delay measuring system in a 1RU chassis.

It supports raw compressed, DiracPro, J2K, Motion JPEG and H.264 codecs, used in various combinations, and has a virtual cabling system that offers MADI, RAVENNA, SDI, 1gigE and 10gigE interconnectivity.



Lawo Video Stagebox

In addition to managing contribution and distribution of audio and video signals over IP-based networks, the V\_link4 also manages transmission of associated metadata and control information, addressed with the HTML-5 based GUI that runs on most standard Web browsers.



Dejero LIVE+ Carrier

## Dejero Adds to LIVE+ Platform

New software and accessories are available for Dejero's mobile broadcast transmission solutions.

A new version 3.0 of the Dejero LIVE+ Core Software with enhanced modem connection information shows carrier transmission mode and signal strength, along with more options for configuring and managing how live video feeds are sent to LIVE+ servers. It also includes enhancements to the Dejero LIVE+ Portal cloud-based transmission management system to set up different distribution routes for videos and files, along with other new video transmission tools and capabilities.

A big new signal booster for bonded

uplink transmissions uses an array of up to 12 high-gain antennas mounted on top of a news vehicle, while a new carrier system is designed to make it easier for one person to carry a portable LIVE+ 20/20 Transmitter. It has an adjustable harness, shoulder straps, a hip belt with support padding, and ways to attach accessory bags and hot-swappable batteries.

Dejero's LIVE+ NewsBook software enables Mac and PC users to transmit live HD video feeds or recorded and edited files with as little gear as possible.

The NewsBook solution, as does the entire LIVE+ Platform, bonds multiple cellular, Wi-Fi, and Ethernet connections to enable the transmission of high-quality, high-reliability, and low-latency video.

The Waterloo, ON-based manufacturer recently completed a relocation of its global headquarters, having moved to a larger facility in the Waterloo Technology Campus. Dejero CEO Brian Cram said the company is now well-positioned to carry out its next phase of market and product development initiatives for IP-based solutions to traditional satellite and microwave-driven field-based newsgathering, as well as cloud-based broadcast workflow solutions, multi-platform content distribution and media transmission.

## WESTERN ASSOCIATION OF BROADCAST ENGINEERS



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## New Master Word Clock Generators from TASCAM

Three new word clock generators for musician, studio, post, and broadcast use – the CG-1000, CG-1800 and CG-2000 – use oven-controlled crystal oscillators (OCXO) for 0.01PPM accuracy and low drift, the manufacturer describes, and come with jitter management and glitch-free relocking circuits.

The CG-2000 is designed for the needs of broadcasting and post production, the CG-1800 for small to large-scale video/audio synchronization systems, and the CG-1000 for recording studios, live sound applications and professional musicians.

The CG-2000 is equipped with an external input connector that supports a 10MHz signal. This allows it to be connected to a rubidium clock or GPS clock for even higher precision.

External clock jitter is reduced using a circuit design that incorporates a high-performance video clock generator engineered with a FPGA\*2 and a PLL (phase-locked loop) circuit with a discrete filter. This enables a stable clock signal to be provided to the video/word outputs - improving system stability. The glitch-free relock circuit prevents noise and skipping sounds caused by master clock dropouts.

In addition to (12) word clock outputs and (4) video outputs, the digital outputs include (2) AES3/AES11 and (2) S/PDIF outputs, making this unit useful for large-scale audio/video synchronization systems, and a wide variety of other applications. Of the (12) word outputs, two also support x2Fs, x4Fs and 256Fs output - enabling them to be used in systems with ProTools and other DAW software.

The CG Series has multiple functions to support maintenance, and the identification of issues if problems occur. The analyzer function measures output device termination, input level measurement (for CG-2000 and CG-1800), and the measurement of input frequencies. These built-in features enable the devices to provide troubleshooting support. Additionally, a logging function enables issues to be listed, and saved to a CSV file format on a USB flash drive.



TASCAM CP-2000 Front and Rear



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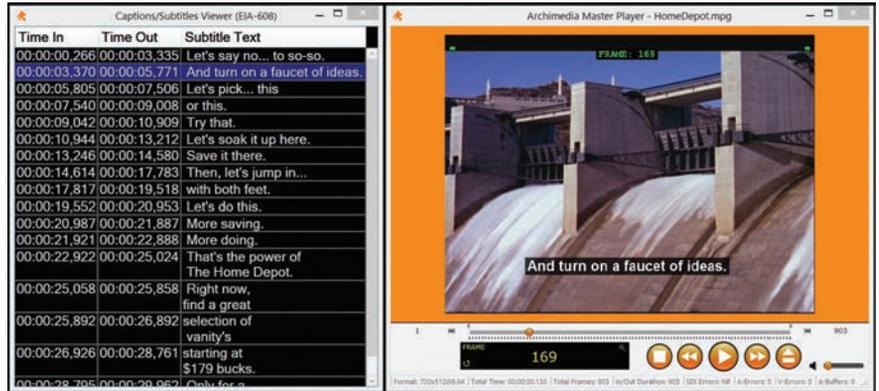
## Archimedia Technology at IBC2014

Archimedia is introducing a new software video player built for everyday business use and a suite of desktop quality-measurement tools to monitor video, audio, and metadata for broadcast, postproduction, A/V, mastering, and distribution.

The Archimedia Enterprise Player runs on a Windows 7 or 8 PC; it handles most professional and consumer video and audio formats (not mastering formats like JPEG 2000, DPX, and 4K/UHD).

It can play captions and subtitles in more than 80 external formats and more than 50 embedded formats, and all video can play to a normal TV over HDMI so that what the user sees is real TV rather than a PC approximation of it. The Enterprise Player also delivers accurate audio in all modes — fast forward, rewind, slow, and scrub.

Working in tandem with the Archimedia Master Player, the Archimedia QuSee Suite brings validation and verification functions to the desktop, allowing users to perform quality tests on files rather than on SDI streams created from files. Its tools include video and audio waveform monitors, vector-



Archimedia Enterprise Player

scopes, and audio phase metering.

The Archimedia QuSee Suite contains a traditional video waveform monitor and vectorscope in a desktop floating window, with support for SD, HD, UHD, and 4K video sizes; standards-based frame rates and video formats. Audio tools support uncompressed PCM and compressed audio formats including Dolby.

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## Roland Multi-Format Matrix Switcher



Roland has introduced products in its XS series for routing and switching HDMI and analog sources and digital displays. The series enables high-speed switching for HDMI, RGB, component, S-video, and composite video, as well as routing for up to four outputs.

The XS series has up to four internal scalers, with individual inputs for HDMI, RGB, component, S-video, or composite video. Scaling can be adjusted in single-pixel increments enabling display of video that fits any screen exactly.

I/O includes eight HDMI and eight RGB/Component/S-video/Composite analog video inputs, along with four HDMI and four HDBaseT switchable outputs.

The product supports up to WUXGA and 1080p resolutions, with built-in scalers.

The unit also has eight stereo line inputs (two mic inputs compatible with 48V phantom) with built-in AD/DA conversion and embedded/de-embedded HDMI audio, and a 16 channel digital audio mixer with audio digital effects (HPF, 4 Band EQ, noise gate/expander, and compressor) and outputs delay.

Using the Roland WNA1100-RL wireless USB adapter enables direct control from an Apple iPad installed with Roland XS Remote. Along with operating the unit, Roland XS Remote can be used to change settings instantly with its memory-recall function.

## Shure Portable Diversity Receiver & Plug-on Wireless Microphone Transmitter



The UR5 and UR3 are designed to deliver the control needed to master the intense pressure of any broadcast environment. UR5 is a portable wireless receiver that features wide band frequency tuning and hands-on navigation. With smart features and an ergonomic industrial design, the UR3 plug-on wireless microphone transmitter is compatible with any wired XLR microphone.

## Axient Wireless Management Network



The live awards show. The halftime special. Some broadcast performances call for solutions beyond everyday wireless. The Axient Wireless Management Network delivers the technology needed to confidently navigate even the most limited spectrum availability. Axient components continuously monitor, evaluate, assign UHF frequencies and are fully networkable, to enable real-time remote adjustments of all transmitter parameters.

## Heads Up: Blackmagic Updates 4K Camera Software

The latest update to the software driving “heads up display” on-screen metering for the Blackmagic Production Camera 4K is also being released for other models of Blackmagic Design cameras.

The Camera 1.9 update can be used to check camera settings like exposure, audio level and the remaining space on their recording disk.

Using the histogram scope, customers can now easily and rapidly set exposure in a shot as the histogram shows the distribution of luminance in their images and if highlights or shadows are being clipped. Images with clipped highlights or shadows make it much harder to colour grade the shots in post production, the manufacturer describes, so having the histogram feature helps DOP’s shoot with confidence. The histogram scope is real time so highlights and shadows can be adjusted interactively with the lens setting, ensuring images are not clipped and maximum detail in tonal ranges is preserved.

Camera 1.9 also includes a new audio metering with peak hold feature to allow setting audio levels for Channels 1 and 2 when using the built in microphone as well as externally connected audio sources. The audio meters make it fast to view audio levels and adjust camera audio gain so that audio is not clipped or distorted.

The new heads up display also includes a recording time remaining indicator that shows remaining space on the recording disk. The time remaining indicator is automatically re-calibrated to ensure an accurate time remaining value if the either the frame rate or codec are changed, and displays red when the disk is getting full.

The Blackmagic Production Camera 4K uses a large high resolution 4K Super 35 mm sized sensor, with support for Ultra HD and 1080HD resolution capture in 23.98, 24, 25, 29.97 and 30 fps.

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## Canon Cine-Servo Zoom Lens

Canon plans to ship its new CINE-SERVO 17-120mm T2.95 zoom lens this month, with an ENG-style Digital Drive handgrip with zoom rocker switch, which can also be detached to allow for manual cinema operation.

The new CINE-SERVO lens uses a three-group inner focus system to help minimize focus breathing and provide a stable angle of view, the manufacturer describes, and an 11-blade iris helps with depth-of-field manipulation.

Designed to work with single-sensor cameras, the lens will be available in either PL- or EF-mount. It can be used with matte boxes, follow focus and other accessories.

With its Canon Digital Drive handgrip unit attached, the CINE-SERVO lens can be used for shoulder mount camera configurations commonly employed in

ENG, broadcast, or cinema shooting. Attaching the Digital Drive unit does not require manual adjustment of the focus, zoom, and iris gears on the lens, and a rubber cap prevents dirt from entering the Digital Drive unit connections when it's detached.

The LCD display on the Digital Drive unit lets users access various digital functions, while a 16-bit high-precision microprocessor in the Drive unit can be used to pre-program focus and zoom position/speed, as well as iris settings.

The microprocessor also enables a very high-speed zoom of 0.5 seconds to a very slow and consistent zoom of 300 seconds, from wide-end to tele-photo-end. Three 20-pin connectors on



Canon Cine-Servo Zoom Lens

the Digital Drive unit enable the use of zoom and focus demands or the precision integration of images from the lens and its accompanying camera into a variety of virtual set systems.

The lens also features a 180 degree focus rotation angle. Both 0.8 type and 0.5 type gear module focus accessories can be used, with the 0.8-pitch gear positioned in front of the focus ring to preclude any interference with the Digital Drive unit or a connecting cord.

## PSM 1000 Personal Monitor System



The PSM 1000 Personal Monitor System from Shure brings personal monitoring to its most advanced level yet. The full-rack, dual-channel, networkable transmitter is ideally suited for the demands of in studio musicians and IFB applications, and the diversity bodypack receiver delivers pristine RF signal and audio quality. Networkability over Ethernet connection enables remote control of transmitter functions and comprehensive frequency coordination via Wireless Workbench software.

## Caption and Subtitle Service in the Cloud

i-Yuno has unveiled an add-on service to its iMediaTrans cloud-based subtitling and captioning tool to streamline the manual processes and intensive manpower associated with captioning and subtitling video content.

Using iMediaTrans SubSearch, customers can automatically load subtitles or captions available on the web (mostly popular dramas and feature films) to their content in perfect synchronization for reference or to use as time code templates.

Sophisticated search robots allow SubSearch to quickly identify subtitles or captions with time code on the Internet (via sites like Torrent, pirated websites, etc.) and add them automatically to the matching video its users upload. The service uses digital fingerprints to automatically match the content as well as synchronize the time-codes of the subtitles to user video.

When iMediaTrans users upload video, matching subtitles or captions are automatically loaded into the project for reference or to use as a template. During the import stage, automatic resynchronization capability (in case user video is a different version from the video collected by the robot from web) is supported as a default. iMediaTrans SubSearch continually updates lists of content and languages that are collected in real-time.

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## CopperHead Transceiver System for End-to-End 4K Production

Miranda Technologies is introducing the Telecast brand CopperHead 3404K camera-mountable fibre transceiver.

The 4K UHD TV-ready CopperHead 3404K transceiver uses two strands of fibre optic cable to carry all bi-directional signals, including four 3Gb/s HD/SDI paths, from camera locations to truck or control room or around a remote production site. The dual-strand bi-directional system enables 4K cameras to be easily multi-purposed for ENG, digital cinematography and studio applications without the constraints imposed by copper connections, the manufacturer describes.

The CopperHead 3404K system includes the camera-mountable transceiver, base station and remote camera control panel, which collectively enable a range of high-end cameras to be fully connected and remotely controlled via SMPTE 311M fiber. The 4K CopperHead has already been instrumental in recent uses for network coverage of major sporting events like professional football, baseball and hockey.

The company has also introduced the NVISION 8500 baseband IP Gateway

cards for broadcast infrastructures in transition from SDI to IP.

The NVISION 8500 IP Gateway converts and packetizes real-time, uncompressed, baseband video using SMPTE 2022-6 for transport over 10 GbE Ethernet networks. Once SDI signals are packetized, they can easily be distributed rack-to-rack, truck-to-truck, between floors of a facility and even between buildings or campuses, over IP networks. All signals support frame accurate switching for use in live production environments. For added efficiency, several uncompressed SDI signals fit into a single IP stream, reducing cabling when used for tielines between routers.

Each of the NVISION 8500 Hybrid series router frames can provide full or partial Ethernet input/output support as required by the user. Once Ethernet tie lines are established, each SDI output is mapped to an IP stream, with multiple IP streams per Ethernet port. This provides the benefits of channelling numerous packetized streams through each port with inher-



Telecast CopperHead 3404K installed on FT-ONE 4K camera from For-A

ent efficiency and extensive flexibility for everything from current production requirements to 4K UHD TV and beyond.

## Comigo Multiscreen TV Platform

Comigo is demonstrating its "Future TV" platform, to open up new revenue and monetization opportunities for pay-TV operators.

Comigo's new multiscreen TV platform is a cloud-based back-end solution that is fully controlled by the operator. The back-end can be easily integrated into different client-based systems as well as into the operator's existing systems.

As an optional advantage, Comigo also provides front-end solutions for smartphones, tablets, and SW solutions for Android-based STBs including STB hardware.

With the system, Comigo says pay-TV operators can offer their TV service via a range of secondary devices, including smartphones and tablets. As well, because the system gathers data on each viewer, it can be used to generate micro targeted campaigns and personalized advertisements, and to monetize premium content offerings, by delivering the most suitable content to each viewer, using Comigo's personal and social-recommendation engine algorithms.

The company also sees increased revenue opportunities from value-added services and apps (e-commerce like), which are relevant to the viewed content.

## AJA CION Ships

AJA Video is delivering its new CION professional video camera, with 4K/UltraHD and 2K/HD shooting capabilities.

The camera creates a lens-to-post Apple ProRes workflow with in-camera recording directly to the Apple ProRes family of codecs, including ProRes 4444, ProRes 422 (HQ), ProRes 422, ProRes 422 (LT) and ProRes (Proxy); as well as 4K (4096x2160), Ultra HD (3840x2160), 2K (2048x1080) and HD (1920x1080).

The camera also supports high frame rate shooting, and the ability to output 4K raw data at up to 120 fps via 4x 3G-SDI outputs.

The camera records to AJA Pak SSD media available in 256GB and 512GB capacities; media can be transferred via Thunderbolt or USB3 with an optional AJA Pak Dock. CION records directly to the AJA Pak SSD media at up to 60 frames per second.

CION features a PL lens mount for compatibility with industry-standard lenses. A built-in filter combines an optical low pass filter (OLPF) to eliminate unwanted aliasing and moiré with an infrared (IR) cut filter to produce appropriate colours.

Additionally, a back focus adjustment means the sharpest image possible can be produced. Also included are several 3G-SDI and HDMI outputs, which are all simultaneously active and supply signal to a variety of 4K/Ultra HD and 2K/HD monitors.



AJA CION Camera

## Broadcast Pix Slo-Mo Replay Option for Top Disk Recorders

Broadcast Pix' new PixPlay software option enables its Broadcast Pix integrated production switchers to deliver slow motion control to a Blackmagic Design HyperDeck or AJA Video Systems Ki Pro disk recorder.

PixPlay can also be used during production for almost any sports application, as the operator can replay video manually, using controls on the front panel of the HyperDeck Studio or Ki Pro. With PixPlay, however, VTR control is ported to the production switcher along with six preset replay speeds. Users can also "scrub" or single step through a scene for better control and functionality.

PixPlay also includes an unlimited number of "in" points as part of a playback EDL, which instantly cues the proper scenes. All scoring plays during a football game, for example, can be selected and cued for instant playback at one of PixPlay's preset replay speeds.



PixPlay Delivers Operator Control

## AXT600 Axient Spectrum Manager

The Axient Spectrum Manager is a powerful tool for calculating, analyzing and assigning compatible frequencies to wireless components. The Spectrum Manager scans the RF environment and uses this data to calculate compatible frequencies for all wireless channels found on the network.

Networked wireless systems can be programmed from the Compatible Frequency List, while backup frequencies are continuously monitored and ranked according to quality. During operation, the Spectrum Manager deploys clear frequencies to receivers when interference occurs. Built-in spectrum monitoring tools provide visual and audio tracking of RF activity.



## Native 4K LCD Production Monitor from Panasonic



The new Panasonic BT-4LH310 31" LCD monitor is designed for 4K, 2K and HD monitoring in the field, in an edit room or on set, as well as live viewing of 4K cameras, graphic devices, and other sources.

Its native 4096 x 2160 IPS LCD panel provides native viewing of 4K DCI content, as well as UHD 3840 x 2160.

Equipped with a production-tough metal frame chassis, the 4LH310 incorporates diverse video inputs (including HD-SDI, 3G-SDI and HDMI) and remote terminals to deliver superb operability in a system configuration, connection with almost any 4K imaging equipment and support of various display modes.

Other features include colour processing with a 3D look-up table (LUT); HD/SD closed captioning with an SDI or video input; 10-bit image processing to each RGB colour, Y-Map display, and Waveform (WFM) and vectorscope (VSC) display in 4K/2K/HD/SD.

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[www.rolandsystemsgroup.com/vr50hd](http://www.rolandsystemsgroup.com/vr50hd)

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- Compositing of PinP and DSK
- Built-In Preview Touch Monitor
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